112021

Before the FEDERAL AVIATION ADMINISTRATION DEPARTMENT OF TRANSPORTATION WASHINGTON, D.C. 20591

In the Matter of the Petition of)
Jerry L. Adams, Frank L. Ahern, Andrew A.)
Arthur, David L. Baker, Garry L. Baker, Charles A.)
Bangert III, Robert F. Beagle, Randall L. Bertrand,)
Walter N. Brand, III, Dennis A. Brawford, Donald)
E. Brown, Dallas E. Butler, Willson R. Campbell,)
Guy F. Casey, Eugene R. Cotteen, Arthur A.	j S
Danley, Jeannie C. deLamos, Alan J. De Sa,) ÷2
Robert E. Elwell, Peter R. Fleischhacker,	.1
Woodson M. Fountain, John J. Fucik, Melvin B.	ý s
Fuller, Lowell A. Gilbert, John W. Gilliam,)
Kenneth C. Har, Woodrow M. Hassinger, Baruch	j D
Haviv, John R. Houser, John K. Hubert, Charlie)
E. Huff, David H. Jenkins, Robert D. Johnston,)
Edward E. Kirkpatrick, Walter L. Klaus, David E.)
Laird, Richard H. Laumeyer, Joseph D. Lea,)
David A. Lippard, Kenneth A. MacGillivray, Joe)
R. McCabe, J. Peter McElroy, Edward E. Moon,)
Philip B. Nash, David P. Nazarian, J. William)
Nelson, Michael L. Oksner, Philip J. Orban,	$) a \partial \cap (A - 1)$
Harold Rhodes, Lewis L. Rich, Werner A. Roder,	3 JAA-00-8016-2
Rodney O. Russell, Paul E. Schueler, Richard) 8711
Selph, Laurence E. Senn, William M. Siegel,)
David A. Skilling, Lee Brandon Smithe, Gary E.)
Stamper, Robert D. Stewart, Phil Stotts, William)
Ternes, John R. Ulbinsky, Doyle R. Vaughan,)
Michael L. Waldron, Arthur B. Ward, I. Jay) .
Welch, Donald W. Wetmore, and Bert M. Yetman)
)
For exemption from § 121.383(c) of the Federal)
Aviation Regulations)

PETITIONERS' EXHIBITS 1-23 VOLUME I

Alan M. Serwer BELL, BOYD & LLOYD LLC Three First National Plaza 70 W. Madison St., Suite 3300 Chicago, Illinois 60602 312/372-1121

Attorneys for Petitioners

STATEMENT OF AGE 60 EXEMPTION PANEL

As members of the Age 60 Exemption Panel, we strongly recommend to the Federal Aviation Administration ("FAA"), U.S. Department of Transportation, that exemption from the provisions of 14 C.F.R. § 121.383(c) be granted for the individuals named on Attachment A, subject to the satisfactory completion of the customary operational requirements of the FAA and their respective employers. These include all applicable certification, rating, and proficiency requirements as otherwise would be required if these individuals were under sixty years of age.

The Age 60 Exemption Panel was formed in 1999¹ to develop a comprehensive and realistic protocol to evaluate the medical/neuropsychologic status of pilots seeking to continue their service in airline operations after age sixty. In our judgment, the ability to make individual assessments of physiologic/psychologic status exists in the scientific community, and the methods available for those determinations are well known to the FAA and have been utilized routinely in the evaluation, recertification, and monitoring of pilot personnel.

The protocol we have developed and approved (Attachment B) contains tests and procedures which go well beyond those required for the issuance of a routine First Class medical certificate. However, each test or procedure is one which has been recommended, relied upon, or utilized by the FAA in connection with the certification of airmen under age 60 with various medical conditions. Use of the proposed medical

Dr. Robert N. Butler, President and Chief Executive Officer, The International Longevity Center, USA, Ltd., and former Director, National Institute on Aging, contributed to and approved the protocol and this Statement but was unable to evaluate individual petitioners because of other commitments.



protocol, performed competently, together with other and further testing which may be medically/psychologically indicated, are sufficient to evaluate the fitness of pilots over sixty years of age from a medical/neuropsychologic standpoint.

In developing the attached medical protocol, the Panel relied heavily on tests and procedures which have been extensively utilized in the evaluation and monitoring of pilot personnel. For example, the maximal stress testing adopted and required for each exemption applicant has been used for many years by the FAA in its cardiovascular evaluations. Similarly, the neuropsychological process, including CogScreen and the other procedures employed, have been used by the FAA in its psychiatric/psychological evaluation protocol, including that used for evaluating return to flight duties of recovering alcoholics, those with suspected organic deficiencies, and commercial pilots with significant flight performance difficulties.

The Panel approves, in concept, the FAA's willingness to move forward to apply modern medical concepts and return to flight duties pilots who have been evaluated on an individual basis and determined to be qualified within a reasonable degree of medical certainty.²

For example, the FAA has, with increasing frequency in the past five years, recertified and returned to unrestricted airline pilot positions persons <u>under age sixty</u> with such diagnosed diseases as myocardial infarction, coronary artery bypass surgery, coronary angioplasty, arrhythmias, porcine valve prosthesis surgery, aortic valve disease, alcoholism, drug abuse, depression, various psychiatric disorders (including fear of flying), loss of consciousness, stroke, hypertension, cancer, glaucoma, diabetes controlled by hypoglycemic drugs, muscular dystrophy, cataracts (including surgical lens implantation), deafness (in one ear), blindness (in one eye), orthopedic limitations, and a wide variety of other medical conditions previously believed to be altogether incompatible with flight safety.

The protocol approved by the Panel did not serve as a limitation on the testing

which was performed. As will be noted in the medical reports and laboratory findings for

each applicant, in order to investigate potential false positives and negatives several

applicants were requested to submit additional studies including, for example, myocar-

dial perfusion scans and additional neuropsychological instruments. In screening a

larger group of potential applicants, the Panel has been sensitive to its responsibility to

the FAA, the individual pilots, and the general public.

From a medical/psychologic/operational standpoint, the medical community has

the capability of evaluating pilots over sixty years of age on an individual basis. New

information, techniques, lifestyle changes, and understanding of the aging process as

separate and distinct from disease indicate that there are many airline pilots who are

well qualified to continue in their productive careers beyond the arbitrary age of sixty.

In conclusion, we strongly recommend that exemption from the provisions of 14

C.F.R. § 121.383(c) be granted for the individuals named on Attachment A. We urge

the FAA to favorably consider this request.

Dated: April 2000

Robet N. B. Har, M.

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Jerry L. Adams
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David L. Baker
Garry L. Baker

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Arthur B. Ward

Donald W. Wetmore Bert M. Yetman

I. Jay Welch

AGE 60 EXEMPTION PANEL 101 N. Wacker Drive, Suite CM 258 Chicago, Illinois 60606

To: Physician/Psychologist Selected by Age 60 Rule Exemption Applicant

Re: Examination and Testing

The pilot providing this memorandum intends to promptly seek an exemption from the Federal Aviation Administration's age 60 limitation [14 C.F.R. § 121.383(c)] for service as a pilot in air carrier operations. With respect to the medical portion of the examination, we request that you conduct, or have conducted under your overall supervision, the medical testing, examination, and evaluation described on the enclosed protocol in order to facilitate review. With respect to the psychological examination, we request that the evaluation be conducted entirely by a licensed psychologist. In addition to a report on the results of the required testing, we request a narrative summary of the state of the applicant's health as well as your assessment of his fitness from a medical/psychological standpoint to continue as a pilot in air carrier operations. If the pilot is determined to be qualified based on FAA First Class Standards as ascertained through completion of the enclosed protocol, we intend to recommend to the FAA that exemption from 14 C.F.R. § 121.383(c) be granted.

Costs of testing are to be borne by the applicant. Attached is a list of the Age 60 Exemption Panel members. Questions, if any, on the medical portion of the examination should be directed to Dr. Mohler. Questions on the psychological portion of the examination should be directed to Dr. Elliott. All medical test results, including blood chemistry, ECG and stress testing reports and tracings, and all underlying data, should be sent, together with your narrative evaluation, to the address shown above. All psychological protocols and results, together with a summary report, should be forwarded directly to Dr. Elliott at 629 - 27th Street, Manhattan Beach, California 90266.

Sincerely,

The Age 60 Exemption Panel

AGE 60 EXEMPTION PROTOCOL

MEDICAL HISTORY (including medication review)

PHYSICAL EXAMINATION

BLOOD PRESSURE (from left and right arms) and HEART RATE while sitting; BLOOD PRESSURE AND HEART RATE in either arm after one minute standing

CHEM-SCREEN PROFILE, SMAC-24 or COMPARABLE BLOOD CHEMISTRY TESTS (including blood lipid tests)

HEMOCCULT

URINALYSIS

CHEST X-RAY

AUDIOMETRY

VISION TESTS (distant, intermediate and near)

TONOMETRY

RESTING ELECTROCARDIOGRAM

EXERCISE STRESS TEST (Bruce or Balke Protocol) (if positive, then Stress Thallium Scan)

CogScreen: Aeromedical Edition

Wechsler Adult Intelligence Scale-Revised

Rey Auditory Verbal Learning Test

Trail Making Test

Controlled Oral Word Association Test

Paced Auditory Serial Addition Test

AGE 60 EXEMPTION PANEL

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Professor of Medicine
Chief, Geriatrics Section Boston University
School of Medicine
Boston Medical Center
88 East Newton Street, F-4
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Audie Davis, M.D.

Manager, Aeromedical Certification
Division, Federal Aviation Administration
(Retired)
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Norman, OK 73071-7346

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Steven R. Gambert, M.D., FACP
Professor of Medicine, Johns Hopkins
University School of Medicine and Physicianin-Chief, Sinai Hospital of Baltimore
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Science
Gerontology Research Center - Box 13
National Institute on Aging
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Baltimore, MD 21224

Stanley R. Mohler, M.D.
Professor and Vice Chairman of
Community Medicine
Director of Aerospace Medicine, Wright
State University School of Medicine
P.O. Box 927
Dayton, OH 45401

Thomas T. Perls, M.D., MPH
Director, New England Centenarian Study
Beth Israel Deaconess Medical Center
CC-105, 1 Deaconess Road
Boston, MA 02115

Acting Chief, Gerontology Beth Israel Deaconess Medical Center Rabb 417, 330 Brookline Avenue Boston, MA 02215

and

T. Franklin Williams, M.D.
(Professor of Medicine, Emeritus
University of Rochester VA
Distinguished Position)
Attending Physician
Monroe Community Hospital
435 E. Henrietta Road
Rochester, NY 14620

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well qualified to continue in their productive careers beyond the arbitrary age of sixty.

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Dated: March 2000

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Jerry L. Adams United Airlines B-747-400 Captain

Personal History

I was born on November 7th 1939 in Hood River, Oregon and was raised in various small towns along the Columbia River where my Dad worked as a river boat pilot for the Crops of Army Engineers. Through grade school I worked for my Grand Father harvesting fruit and driving tractor & truck. Every summer during high school and college I worked in wheat harvest working on the combines and driving D-6 Caterpillar tractors, wheat trucks and self propelled combines. I attended various public schools in Oregon and graduated from Oregon State University with a BS in engineering specializing in manufacturing and a private pilot's license in 1961. My activities in high school included varsity basketball and baseball and the National Honor Society. My activities in college included intramural sports, Army ROTC, Pershing Rifles Drill Team, Army ROTC Flight Training and house manager of my living group.

I met my wife after graduating from OSU in 1961 and we were married in 1962 while I was serving on active duty in the US Army. We have enjoyed a very active 37 plus years together and our immediate family includes a Son, a Daughter & Son In-law and two very active Grand Daughters. We have lived in Alabama, Kentucky California, New Jersey, and now Mercer Island, Washington. We designed and built our home here 23 years ago. My wife and I have always enjoyed a very physically active life together which included: tennis, biking, skiing, walking, back packing, and some racquet ball. We have made it a priority to maintain our physical fitness at the Bellevue Athletic Club for the past 20 years.

Job History

1950 - 1960 Various Fruit Farms, Wheat Ranches & Diamond Fruit Cold Storage
1961 - 1964 US Army, Army Aviator, 1st Lieutenant, 101st Aviation Battalion
1964 - 1966 FMC Corporation, Industrial Engineer, Manufacturing Airline Equip.
1966 - 1986 Pan Am World Airways, Airline Pilot, International Flight Assignments
1986 - 20? United Airlines, Airline Pilot, International & Domestic Flight Assmts.

Even though I was trained with engineer & business courses that would eventually lead to a position where I would be running a large manufacturing company, I found that my love for flying, natural gifts, talents, and interests were centered around a flying job. It only took me a year at FMC climbing the corporate ladder and a dinner with a TWA pilot to determine that a career change was in order. I very quickly accepted a 50% cut in salary to go to work for Pan American World Airways.



When I joined Pan Am, they were in their hay day having been the first airline to order the Boeing 747. Going to work was like going on vacation every month traveling to all of Pan Am's port's of call around the world. The employment situation, however, became very turbulent when the founder Juan Trippe retired. The financial problems that developed over the years caused me to go through a number of transition & requalification training programs. When Pan Am announced on April 22nd 1985 that they were selling their Pacific routes with airplanes and flight crews to United Airlines, it only took me about one second to make a decision to join United Airlines. The difference was like night and day working for a company that was financially sound.

Pilot Flight Log Summary

Aircraft	Flt Time	CAP	F/O	IRP	FEO	RCO	T/O & Landings
B-707	6098		1054		1790	3254	309
B-727	3551	2246	1305				1284
B-747	6614		910	1526	4178		102
L-1011	204		204				72
B-757	3004	3004					529
B-767	335	335					42
B-747-400	1344	1344					145
Lgt. Airplan	ies 1042						Not Logged
Totals:	22,192	6929	3473	1526	4178	3254	2483

Note: The T/L logged were the ones that I made, I was a Flt. Crew Member on at least 3 times that total and did not log the hundred's of take off and landings that I flew in Light Airplanes.

FAA Flight Certificates

Airline Transport Pilot #1498779 Ratings: Airplane Multiengine Land

B-707 B-720 B-727 B-747 B-747-400 B-757 B-767 L-1011

Flight Engineer #2161754 Rating: Turbojet Powered

Flight Navigator #1709470

I developed a very special love for flying and airplanes at a very young age when my father hired his flight instructor to take my brother and me for a flight in a small Taylorcraft. I built airplane models as a kid and flew powered control line models in college. More recently I have flown radio controlled precision pattern aerobatic models in AMA Competition. It has been this special love for flying that has allowed me to burn the mid-night oil to improve and maintain my proficiency as an airline pilot and to successfully complete 14 transition & requalification training programs at Pan Am & United Airlines.

I have over 38 years of flying experience that has been free of accidents and incidents while I was flying the airplane. I have had a few bird strikes and lighting strikes to write up and have been a crew member on two flights where we shut down engines due to turbine failures and two flights where we shut down engines due to oil leaks. As a Captain at United Airlines for the last 10 years I have never had an engine that required being shut down in flight. On a B-727 flight I had to bring one engine back to idle due to engine vibration and returned to Chicago for a replacement airplane. As a Captain I made three Diversions, the 1st one was due to weather and the closure of Chicago O'hare Airport. The 2nd one was a planned fuel stop to Beijing, China, due to strong head winds. The 3rd was an unplanned fuel stop into Taipei, Taiwan, due ATC traffic on A-1, which resulted in a decent from FL 390 to FL 310, which resulted in insufficient reserve fuel for a landing in Hong Kong.

In conclusion I can state that I have never bent any airplanes or had a passenger or crew member injured while I was personally flying the airplane or in command of a flight. My Idea of a perfect flight is to have a passenger fall a sleep after boarding a flight and have to awaken the passenger to deplane the airplane at the planned destination.

PS: I am scheduled to start my 15th transition training at United on November 15th 1999 where I will continue to provide safe and comfortable air travel for United's passengers as a B-747 S/O.

An Auto Biography Regarding Aviation

by Frank L. Ahern

I was born 6 March 1939 in New York City. I attended grades in Greenville II. ,Seattle Wn. ,and N.Y.C. attending high school at Brooklyn Tech , Andrew Jackson in N.Y. C. and graduating from Bayport High on Long Island in June of 1956. Since my pre school days I've had an interest in aviation and mechanics. I taught myself to weld at age 15 and had my hot rod car ready when I got my license at 16. At age 15 I took one flying lesson but my parents refused permission for me to continue saying I would need my earnings and savings for college.

In Sept. 1956 I entered Seattle Pacific College as a physics major. That fall I took and passed the exams to get into Navy flight training. In June 1958 I had the required two years of college and asked my parents if they would give their required consent. Though they both have graduate degrees they agreed that I was leaving college to get a good education in aviation from the Navy. 20 August 1958 I joined the Navy as a Naval Aviation Cadet and left for preflight at Pensacola Fla. While there I studied hard and played in the cadet band. During the spring of 1959 I started flight training in T-34s. At that time I joined the Navcad Choir as my only extra activity during flight training. I finished primary and basic when I made my first carrier landings in the T-28 the summer of 1959

For advanced training I was given my first choice to train in the A-1 Skyraider at Corpus Christi Tex. During the early part of this training, with only about 20 hrs in type I was climbing from 500 ft to 1500 ft right after take off when the engine failed and seized. I was able to land safely at an abandoned training field. I had one other close shave during training. It was in the final phase while getting ready to carrier qualify in the A-1. I was making a field carrier landing to a full stop when my left brake failed and I went off the right side of the runway. The aircraft nosed over crushing me upside down so I couldn't breath. Before I blacked out I momentarily switched the battery on and lowered my seat enough so that I could breath. It took the rescue crew quite awhile to get me out. The next day at the hearing I was given the choice of waiting for the accident report or taking an unsat. for the flight and continuing to finish on schedule. I chose the later and received my Navy wings and Ensign commission in April of 1960. That one accident and unsat. are the only ones I have had in 41 years of flying.

I spent active duty in Attack Squadron 52 making two cruises on the Carrier Ticonderoga and one on the Lexington. During that time I made over 200 carrier landings of which over 100 were at night. On 1 September 1963 I was released from active duty to attend the U. of Cal. at Berkley. At this time I joined the Navy reserves at NAS Alameda in Attack Squadron 876 flying the A-4 Skyhawk. Most of the rest of my Navy flying was in this squadron. I retired from the Navy about 1974. By that time I had just under 300 carrier landings and about 2500 flight hours.

During the spring of 1964 I was hired as a pilot by Pan Am .By taking a few exams early I was able to start 1 June 1964 .At Pan Am I was a DC-8 and B707 flight engineer until late 1967. I then got my ATP and type rating on the B707 and flew as a first officer. In 1972 I got my rating on the B747 and flew it as first officer. In 1977 I became a B707 Captain at Pan Am and in 1980 I went on the B747 as Captain. I held that position until September 1991 when I received a B727 rating and became a Captain on it in order to apply for transfer to Delta. I was accepted by Delta in that capacity in October of 1991. Since that time I have received ratings on the B757/767 and L1011 and flown them all as a Delta Captain. In March of 1999 I was the senior Delta Captain in New York, flying the B767-300ER on international routes. That month I turned 60 and transferred to Atlanta as a flight engineer on the L1011.

My total pilot time to date is just under 21,000 hours plus about 1,500 hours as flight engineer. At the airlines my last 15 years at Pan Am was as Captain. Flying about 1,500 hours on the B707 and 5,000 hours on the B747. At Delta all my time was as Captain. My B727 time was about 30 hours at Pan Am and 200 hours at Delta. At Delta I had about 4,000 hours of B757/767 time most of it on the -300ER on international routes and about 2,000 hours on the L-1011 all flying internationally. In my entire airline career I have never had an accident and I have never received an unsatisfactory evaluation on any exam, rating ride, check flight or simulator proficiency check.

In my airline career twice before becoming a Captain I was with a crew when we had an engine fire. Both times we handled the emergency correctly and ended the flight safely. As a B747 Captain I have twice had to shut down an engine while crossing the ocean. Once we returned to Gander and once continued to land at Paris. Again the emergencies were handled correctly and the flights ended safely.

I enjoy flying very much and enjoy time spent in training and preparation, which makes the flying safer and more enjoyable.

Aviation biography for ANDREW A. ARTHUR:

My flying career began with my entry into the Naval Aviation Cadet program of the U.S. Navy in 1961. Eighteen months later I received my wings. I was assigned to Transport Squadron 3 (VR-3) at McGuire Air Force Base for the next three an a half years. Within eighteen months after my arrival at VR-3, I was upgraded to aircraft commander on the C-130 aircraft flying worldwide missions, which included flying into Veit Nam during the early stages of that conflict. In May of 1966 I was honorably discharged from the Navy and went to work for Continental Airlines the same month. I have been working for Continental since then flying such equipment as B-707, B-727, B-737, DC-9, DC-10 and was upgraded to captain in early 1969. Since 1 January 1999, I have been working as a B-737 flight instructor in the training department of Continental and continue doing so even though I reached the age of sixty in September of 1999. My entire flying career was accident and violation free.

My parents have said that at the age of two I expressed a great desire to become a pilot. This, of course, was before I can remember anything about it, but as long as I <u>can</u> remember, I have wanted an loved to fly. I was good at it and really hate to give it up so soon.

DAVID LESLIE BAKER

2210 CANNES SQUARE OXNARD, CALIFORNIA

93035-3612

16 November 1999

Biography of David L. Baker:

Born March 9, 1939 at grandparents home in Avella, Pennsylvania. Spent childhood on a small farm in western Pennsylvania and attended the first seven years of school at a country school in Eldersville, Pa. Moved to Pittsburgh in 1952. Attended and graduated from Baldwin High School, Baldwin, Pa. in 1957.

Enlisted in the Marine Corps in 1957. After boot training at Parris Island spent one year in the Fleet Marine Force. Was then assigned to Naval Flight Training at Pensacola, Florida. Graduated from the fighter program in 1960 and joined a squadron at MCAS El Toro, California. Flew fighters with one overseas tour in Japan. Returned to the United States in 1962 and married. Released from active duty, attended Orange Coast College and returned to active duty with an assignment to Pensacola as a primary flight instructor in June 1964. Released in June 1966.

Joined Continental Airlines in 1966 and remained until 1983 when the airline filed for bankruptcy. While at Continental, progressed in the normal career pattern from Flight Engineer to Captain. Last position at CAL was B-727 Captain domiciled at Houston, Texas.

Purchased and ran a small metal distributing company in Oxnard, California. Established new procedures for sales and deliveries and trained a new manager and warehouse team. Business continues to be a success with the same team.

Hired by McClain Airlines, Phoenix, Arizona in 1986 as a B-727 Captain. Unfortunately the airline filed bankruptcy six months later. Hired by Rosenbaum Aviation as a DC-8 Captain in 1987. Remained with Rosenbaum until March 1988. Hired at that time by United Parcel Service as a DC-8 Captain. Also flew as B-767, B-757 Captain at UPS. Still with UPS but now as a B-747 2nd Officer since 9 March 1999.

During the course of my career I have encountered various problems including electrical fires, hydraulic failures, engine shutdowns, bird strikes, lightning strikes, violent thunderstorms, extremely strong crosswinds, heavy icing, language difficulties, unexpected headwinds, passenger illness, and unruly passengers. Because of the quality of training I have received and experience gained throughout the years all were managed without mishap.

I have never had any certificate action taken against me nor have I ever damaged an aircraft. Additionally I have never failed a proficiency check, line check, navigation check, recurrent ground school, single visit training, or flight physical. I was also qualified to conduct Category III landings in the 757/767 aircraft. (Landings with visibility as low as 300 feet runway visual range.) From the enclosed sampling of check forms it is obvious I have conducted my career as a professional.

I note with some irony that my last check as a Captain rated an "excellent line oriented proficiency check" comment from my check pilot but I was forced to vacate the left seat six months later.

Ratings held: ATP, DC-10, DC-8, B-727, B-767, B-757, Flight Engineer Turbojet Powered.

Approximate pilot hours 20,000+. Approximate engineer hours 1000+

Respectfully submitted,

GARRY L. BAKER

I was born on October 17, 1940 in Canton, Ohio. My family moved to Ruskin, Florida when I was five. I attended schools in Ruskin and Sarasota. I then attended and graduated in 1962 from Tulane University with a BS degree in Psychology. I began flying in February 1962 during my senior year at Tulane.

After graduation I attended USAF Officer Training School. Because I was a Distinguished Graduate I was commissioned a Regular Officer in the United States Air Force. My flight training was at Craig AFB, Selma, Alabama. I trained in T-37 and T-33 trainers. After Combat Crew Training in the F-4 Phantom at Davis Monthan AFB, Tucson, Arizona I was assigned to the 431st Tactical Fighter Squadron at George AFB, Victorville, California.

I deployed to Southeast Asia with the Squadron and flew combat missions from Thailand in the F-4 as a co-pilot. I returned to George AFB and upgraded to Aircraft Commander in the F-4. I served another tour in Southeast Asia, based in South Vietnam, as an Aircraft Commander in the F-4. I returned to George AFB as an Instructor Pilot in the Replacement Training Unit that trained F-4 pilots that were enroute to Southeast Asia.

During my tours in Southeast Asia I flew combat missions over North and South Vietnam and the Gulf of Tonkin. On one particular mission over North Vietnam my F-4 was struck by Anti-Aircraft Artillery. I flew the aircraft back to base in South Vietnam with the aid of my co-pilot. I was awarded the Distinguished Flying Cross and Air Medals during my tours. I completed my military service as a Captain working in the 831st Air Division Command Post as Operations Officer. I flew a total of 1500 hours (500 PIC) in the USAF.

I was hired by Continental Airlines in November 1969. After flying for one year I was furloughed because of an airline cutback. I was hired by the Newport Beach Police Department in Newport Beach, California and attended the Los Angeles Police Academy for a period of six months. I was top graduate in a class of 112. I then worked as a Patrol Officer until recalled by Continental. I flew as Second and First Officer on B-707 and B-727 until October 1983. During Continental's first bankruptcy I flew B-727 for Express One Airlines, a night freight charter airline. I was with Express One until March 1990 with a total of 4 000 hours (3500 PIC).

In March 1990 I returned to Continental and flew the B-727, B-737 and MD-80. I am currently flying as Captain on the MD-80. With Continental I have a total of 18,000 hours (8,000 PIC).

During my flying career I have maintained an accident free record and have not had any training failures. All aircraft mechanical failures I experienced were handled successfully according to procedures.

On a personal note I have been married for 32 years. I have four adult sons and five grandchildren. I am in excellent health, which I maintain with an exercise program that includes running and family sports. I love flying and feel very fortunate that I work at a job that I thoroughly enjoy.

CHARLES A. BANGERT III

Even as a young boy I dreamed of flight and tackled, in my mind, some of the problems that surely faced aviators. Then, as now, I read about the Wright brothers and other earlier pioneers.

I challenged myself and self taught tennis, water skiing, snow skiing and unicycling. In 1968 I earned my private pilot licence and specifically practiced accuracy flying to see if I would measure up to professional pilot standards. The problem was that I wanted to be both a commercial air carrier pilot and a fighter pilot.

In 1969 I graduated from Colorado State University having studied psychology. I was particularly interested in human factors in cockpit design and accident prevention. Additionally the psychology of learning fascinated me.

Then, what thrilled me and changed my life was my acceptance into Naval Aviation as a student pilot. I threw myself into this opportunity and soon was on the Captain's List for academic achievement. I set my sights on flying the fabulous F-4 Phantom.

When I earned my Navy Wings of Gold in December 1971, however, Vietnam was winding down and no pilots from my class were needed in fighters. I opted for a short over-seas assignment and flew the venerable old DC-3 at NAS Bermuda. I became a civil flight instructor and instructed part time in the Naval Station flying club. The governor of Bermuda awarded me for piloting an air-search that brought about the rescue of a yacht lost at sea.

Next I instructed in the Navy TA-4 Skyhawk in Texas. In my spare time I taught in twin engine propeller planes and at the local glider field. I worked in the aviation safety office at my squadron and with the glider club's safety program. Flying had truly become my profession, my recreation and by life.

Finally in 1975 I reported to San Diego, California and started training in the Navy's F-4 Phantom. This flying polished many skills and especially, my favorite; landing on aircraft carrier flight decks. We made careful study of all facets of day and night landings at sea. What a thrill!

Not all aspects of flight were initially easy or went as planned. As a new student, formation flight and my very first carrier landings were rough. With some concern and dedication I learned the nuances that led to later perfection. Also I have had several engine and flight control failures.

My student was flying a low level route when we hit a large buzzard. I took the flight controls in the back seat of our single engine jet and maneuvered, without throttle, to a safe landing. The engine had produced some thrust but was found unreparable. Twice I have had flaps jam and once I had blocked aileron travel. All required a precautionary approach to a suitable runway.

Once, shortly after takeoff, one engine quit on a two engine airliner. I took control of the aircraft, set flaps for low drag and turned back to land opposite to the direction of our takeoff. I consider each incident a challenge that provided growth to my ongoing collection of experience as an accomplished aviator.

I take satisfaction in having scored the highest carrier landing grades of any pilot on my ship during maneuvers in the Celebes Sea. Additionally I have several battle "E" (excellence) awards to my credit for missile shooting accuracy.

In 1979 I joined the Naval Air Reserves and continued flying the Phantom while pursuing an air carrier pilot position. Using a good portion of my savings, I entered Boeing 737 Captain training. I completed this FAA required training with complements from the instructor and his recommendation for employment. I was exuberant when I learned I would start with Southwest Airlines in March of 1981.

Flying my company's Boeing 737's is the joy of my life. I continuously hone my skills, pride myself in my landings and take great joy in contributing to our great customer service. Working with and instructing co-pilots is especially gratifying to me. I believe in knowing your limits and staying within one's comfort zone. I actively fly light aircraft, being involved in gliding, seaplanes, test flying and air racing. Its all great fun, an integral part of me, and something I will pursue avidly, one way or another, for many years to come.

ROBERT F. BEAGLE

I was born in Pennsylvania in November 30, 1941 and raised there until I was fifteen. At that time I moved to Charlotte, North Carolina. Upon graduation from high school I attended college at both the University of North Carolina at Charlotte and the University of South Carolina. Immediately after college I went to follow my life long desire to be a pilot. I went into the US Naval Flight Training in late 1962 and graduated at the top of my class of 60 plus. Not only did I finish number one in flight training, I also scored a perfect 4.0 in the physical and athletic performance requirements of training. Following flight training, I was stationed at Moffett Field in the San Francisco Bay Area of California in a transport squadron. At that time it normally did not occur that a first tour pilot would become an aircraft commander. As it turned out, I became the youngest aircraft commander in the history of the so-called peacetime Navy (Vietnam was going on at the time). To make this even more unusual the squadron was decommissioned and these achievements were accomplished in less than a full tour. Among other achievements, I was awarded the Air Medal. The remainder of my first tour was spent as a flight instructor in the advanced training command where I taught everything from instrument flying to aircraft carrier landing. After my first couple of students, I was honored by being chosen the instructor of choice to train the students who where marginal and expected to have difficulty, or possibly fail their training. I am proud that they all, not only succeeded. but did very well. I also headed an aircraft maintenance division.

I left the Navy in 1968 to join Continental Airlines where I have remained to this time. During these 30 plus years I have accumulated approximately 28,000 hours, 15,000 as a pilot in command. During my airline career I've flown the Boeing 707, 727, 737, and 777, and the McDonald-Douglas DC-10 and MD-80. I flew as captain on the 727, 737, MD-80 and presently the 777. I have never had an accident, incident, violation, or waiver. I have never required a retake or extra training on a

check ride or in training. I have never been late or no showed a flight. It took 26 1/2 years before I used my first minute of sick leave and it was due to an injury not illness.

During my Naval and airline careers I have flown throughout the world. I have flown the Atlantic and Pacific including Europe, Asia, North and South America.

I have many other endeavors and interests including skiing, tennis, softball, basketball, biking, and numerous other sporting activities. I have also been involved in writing, cooking, and home remodeling. My first and foremost desires remain in aviation and with my family.

RANDALL L. BERTRAND

I have been involved in aviation for over 33 years. After college, my flying career started with pilot training in the United States Air Force in 1967 and after twenty very successful multifunctional years, I retired as a Lieutenant Colonel. I was an Aircraft Commander/Fighter pilot for most of my Air Force career. My flight experience includes A-1E/H (combat), T-37, T38, T-39, A-7, A-10, F-5 and F-15. I was stationed and flew in Asia, Europe, Middle East and, of course the continental United States. During my accident / incident free Air Force career, I had the occasion first to follow then to lead, manage and instruct. Those skills go a long way in commercial aviation. Finally, during my military career, I successfully completed Squadron Officers School, Air Force Command and Staff College, several formal instructor courses and the Air Force Accident Investigation School. Over 3500 fighter hours of normal and combat flying experience, often under extremely difficult conditions, combined with the classroom instruction laid a perfect foundation for further aviation interests.

I retired from the Air Force in Aug. of 1987 and a month later was hired by Pan American World Airways as a B-727 flight engineer applicant. I completed the training successfully in Miami, Fl and soon was "flying the line". After approximately 10 months on the B-727 I bid and received a B-747 flight engineer award. I flew the 747 panel for nearly a year when a B-727 co-pilot slot with the Pan Am shuttle became available and was awarded. When Pan Am went out of business in 1991, I was flying both domestic and shuttle operations on the 727. I accumulated a total of 1980 hours as second-in-command on the B-727, 510 hours as flight engineer on the B-727 and a total of 590 hours as flight engineer on the B-747.

With Pan Am gone, I sought flying elsewhere. After several difficult months, I was hired by Express One in Dallas, TX as a flight engineer on their B-727. I checked out without problem and was soon assigned to Sen. Al Gore's aircraft during the 1992 presidential campaign. A furlough occurred as the campaign neared its end and I found myself one again unemployed. In December of that year I was hired by United Airlines and a flight officer. My initial assignment with United was as flight engineer on the DC-10. I accumulated over 1500 hours over a 2 1/2 year period on that aircraft. I then received a B-737-300 award and flew the "glass" model or a total of approximately 1500 hours. I then bid the B-767/757 and received the award. I was type rated in both aircraft and went to the line and flew these aircraft for approximately a year and over 600 hours. Finally in November of 1998, I was awarded a Captain bid on the B-737-200 and I am currently flying that position. I completed my annual proficiency check in November of 1999 without difficulty and am currently flying domestic operation.

Not only am I an active aviator, I am an active person. I enjoy many out-door activities including but not limited to, golf, tennis, hunting, fishing and camping. Indoor sports include racquet-ball and hand ball, weight lifting and aerobic exercise. I also enjoy a daily brisk morning walk.

In sum, I have completed a full military career replete with numerous decorations and awards. I have flown successfully with three major airlines and have raised a family and kept myself fit and active. I am proud of my aviation credentials.

Biography of Walter N. Brand, III

5660 N. Greentree Drive Somis, CA 93066 (805) 386-3643

I was born on October 24, 1941 in Ithaca, NY. From 1941 to 1959, I grew up and attended public school there

While in high school, I lettered three years in wrestling and football and one year in swimming. I was active in Student Council and Senior Glee Club (four years). I graduated in 1959.

In 1959, I entered Cornell University, majoring in agricultural engineering. While there, I was a member of the freshman football and wrestling squads.

In December 1960, I enlisted in the U.S. Navy. Upon completion of boot camp, I received orders in June 1961 to flight training as a Naval Aviation Cadet. During training, I maintained sufficiently high flight grades to be selected for and complete training in the jet pipeline. In December 1962, I was designated a Naval Aviator and received my commission as an Ensign.

From January 1963 until June 1967, I underwent training and duty with a Pacific Fleet A4 Skyhawk squadron. During this tour, I made two Far East cruises aboard the USS Ranger and USS Enterprise and participated in combat operations over Vietnam flying 130 missions while accumulating over 300 carrier arrested landings of which approximately 85 were at night. For this service, I was awarded the Distinguished Flying Cross, the Air Medal with 11 oak leaf clusters, the Navy Commendation Medal and numerous campaign ribbons.

My squadron collateral duties included Landing Signal Officer, Weapons Training Officer, Line Division Officer, and Assistant Aviation Safety Officer.

In June 1967, I was released from active duty but continued my Navy career as a Reservist flying the A4 and later the A7 Corsair. I achieved the rank of Commander (0-5) and held a number of department head positions in the squadron. After a 3-year hiatus from 1978 to 1981, I returned to complete 20 years of service, retiring from the Naval Reserve in 1984.

As a Navy pilot over a period of twenty years I accumulated 3100 hours of flight time in high performance jet aircraft, made 435 carrier landings and was never involved in or responsible for an accident or incident.

In August 1967, I was employed as a pilot with Continental Airlines. Up until 1983, I saw duty as a Second Officer and First Officer on the Boeing 707 and DC-10 aircraft. From September 1983 until March 1986, due to Continental's bankruptcy and other difficulties, I held a number of jobs flying the DC-10 and DC-8 for other air carriers.

In 1986, I returned to Continental and have since held positions as Captain of the B737, DC-10 and B777. I have now accumulated over 21,000 hours of flight time without accident or incident.

I was married to my wife the former Brenda Hussain in 1965 and we have three grown children, the youngest of which is 22.

I have always been aggressive in maintaining my physical fitness and well being. I have never smoked and I drink alcohol in moderation. My current regimen consists of alternating days of 4-6 miles of running and one hour of strength training workouts in a gym. I have completed seven 26-mile marathons with a personal best of 3 hours and 10 minutes.

In addition to my fitness regimen, I spend my days off managing our 25 acre avocado orchard, restoring classic Mustangs, and playing an occasional round of golf. I also enjoy doing general handyman type chores around the house and building things. My wife and I actually did most of the construction of our present home.

Biography: Dennis A. Brawford

October 28, 1939, Everett, Washington. The middle son of Hugh B. and Dorothy H. Brawford... Everett's Aircraft industry gave birth to the B-747-400 some years later... my destiny and I were born in the same small town.

I grew up in Everett...boy scouts (eagle) strawberry picking summers, scout camp, junior high... Everett High...The tennis team...working in Don Dawson's union 76 station before school, delivering the Everett Herald after school... saving money for college. High School Graduation, 1957.

Fall 1957 enrolled at the University of Washington in Seattle, age 17, pledged Delta Tau Delta fraternity. My major: Pre Dentistry. Military service was compulsory; advanced AirForce ROTC offered commission and pilot training. I graduated wing commander of Detachment 941 and a second Lieutenant in June 1961.

Pilot training at Williams airforce base near Phoenix was where I found my life's profession...pining on wings of an aviator, 7 December 1962 & taking my FAA commercial and instrument rating, Sky Harbor Phoenix, 8 December 1962.

Charleston, South Carolina was my assignment... Military Air Transport Service, C-124cs...the 3rd Squadron... The squadron flew the "hump" from New Dehli across the Himalayas into China to help Chang Kyshek during WWII. My first trip was to London.

Four years later, Mrs. Brawford and I had son Dan. I was hired by Pan American World Airway in New York. Debora joined us two years later.

26 December 1967, my reserve airforce unit was activated by Lynden Johnson... back to Vietnam.

June 1969 released to Pan Am's Pacific division, February 1986, 430 Pan Am Pilots were acquired by United Airlines. I was in this group. United Airlines purchased all of PanAm's Pacific division.

In 1989 I became a training check airman for the B-747-400 at UALS Training center in Denver.

1992 I transferred to the B-767 as FAA Designee Line check airman and captain, Los Angeles and Seattle.

1997 I began three great years as a line 747-400 Captain, in San Francisco and Los Angeles.

My membership at University Presbyterian Church helps keep me on track.

November 1999 I'm in training to become a flight engineer, second officer, on the B747-200. This is necessary due to the loss of being able to apply for a First class FAA medical cert.

The Acquisition in 1986, gave no additional retirement credits for 21 years in the retirement plan with PanAm... which subsequently went bankrupt, so with 34 years consecutive service and Alpa membership, my retirement is computed for 13 ½, years...

P.S. 39 YEARS OF AVIATION: ALL TESTS PASSED, NO VIOLATIONS, NO INJURIES OR ACCIDENTS. AB

DONALD EUGENE BROWN

I received my Private Pilot-Single Engine Land License in January of 1966. At that time, my boyhood fascination with the romance of aviation, had given way to the realization that I would probably be spending a period of time in the military. This was a little different than the imaginings of a boy born on 14 May 1944, as he absorbed the stories of all the World War II veterans in his life. I elected to accept a four year commitment to the U.S. Air Force. I hoped that I could get through their pilot training program and continue my education beyond my Bachelor's Degree, after the "military assistance" was no longer needed in Southeast Asia. There was never doubt in my mind that airplanes would be a part of my life.

As an academic scholarship student, it was often difficult to maintain the grades needed to retain my stipend, and indulge in flying around in the mountains of Western Montana. I could not refuse the opportunity to gain some flying time, while delivering a needed piece of machinery to a remote airstrip. After receiving my degree in Economics, I entered the USAF as a Distinguished Military Graduate with a Regular Air Force Officer's Commission, to begin pilot training in Selma, Alabama.

During the next twenty years, I flew 8,383 hours in T-37,T-38,C-141A, C/EC/VC-47D,N,Q, B-52D,F,H, C/VC/EC/NKC/-135A,B,E, C/VC-137B,C, C-18A, CT-39A, C-21A aircraft for the Air Force. I spent only three months out of the cockpit during that time. Those months were to attend Squadron Officer's School, where I was selected Outstanding Contributor by my working group. owned and operated a Piper Comanche 250 (PA-24-250), for my personal use, for eight years during that time, flying throughout the U.S. I served as the Operations Program Director for the conversion of purchased, used American Airlines B-707 (C-18A), for military use. As a research pilot in a Test Wing, I did the initial crew flying training in the aircraft as well writing the Aircraft Operating Manual. My understanding of the airline and manufacturing processes were increased by my daily contacts with American and Pan American Airlines and Boeing Commercial Airplane Company. Previously, I had been type rated in the Boeing 707 after training at Trans World Airlines. The Special Air Missions Wing, to which I belonged for seven years, was trained there prior to operating B-707 (VC-137B,C) in service to the White House. I served as PIC, Instructor/Check Airman for international flying with the Vice-President, First Family, Secretaries of State, Defense, and Treasury during that time. Other than combat related incidents, the only documented events I can recall in twenty years, involve: 1. A successful takeoff in a C-141A with an inoperative ouboard engine, from the ice runway in McMurdo, Antarctica, and 2. Landing a B-52D with a partially retracted forward main landing gear with a broken strut. Military records indicate I was awarded two Distinguished Flying Crosses, and four Air Medals for combat events.

After the Air Force, I served as the FAA Designated Check Airman in the Lear Jet for Tempelhof Airways, Berlin, FRG. This was during the time that

Berlin was still a divided city and required great vigilance to prevent international attention. I was instructor and PIC for air ambulance service at Berlin Tempelhof Airport, provided by our airline. After moving to Cincinnati, in 1987, I began employment with my current airline, DHL Airways Inc. I have been a Captain on the Merlin IV-C, B-727, and currently, the DC-8 aircraft. I also served as an F/O on the Merlin and B-727. Though I no longer keep detailed log books, my total time exceeds 12,000 hours, 10,000 in Turbo-Jet, 1500 Turboprop, with approximately 6000 hours in command. I hold Airline Transport Pilot Certificate #1669652, with Type Ratings in B-707, B-720, B-727, LR-Jet, SA-227, L-300, N-265, DC-3, DC-8. During my airline experiences of the last fourteen years, I have experienced only one emergency return. It was to an airfield in Mexico after an indication of smoke in the Cargo compartment and loss of electrical trim. A combination of failures of an indicator and a switch resulted in my only memorable event in the air ambulance service. We broke ground in a typical, very low visibility condition in Berlin, with full rudder trim input. Troubleshooting the problem after we got to a safe altitude, resulted in completing the run. Other airline experiences of flap extension failures and landing gear failures to initially extend, are expected and routine mechanical malfunctions, for which we are trained, and from which experience is gained.

I feel genuinely blessed to have been given the opportunity to earn a living doing that which I truly enjoy. I strive to honor the profession as it has honored me. I hope to contribute to the history of aviation for many years.

DALLAS BUTLER 59001 HOLAWA ST. APT. C HALEIWA, HI 96712 PH 808-638-7190 FAX 808-638-8058 EMAIL DBUTLERHNL@aol.com

Sunday, November 14, 1999

Currently, (at age 61, dob 4/25/38) I am flying as B-747 copilot with Japan Airlines (JAL) and will be allowed to do so until age 63.

Previously, I was a B-747 captain with JAL since September, '92.

While awaiting employment with JAL, I obtained at my own expense a type rating on the B-747-400. This required a period of thirty days at the NATCO training facility in Eagan, MN and \$25,000.

From October '65 I was with Pan American Airways (PAA) to December '91 when PAA when out of business. I amassed approximately 20,000 hours of total flight time with PAA of which 10,000 was PIC. I obtained type ratings in the B-707, 727, 737, 747 and A-300.

Before PAA, I was an aeronautical engineer with Douglas Aircraft at Long Beach, CA. From August '60 to September '64 I served in the USMC and flew the Douglas A4D Skyhawk attack bomber.

September '56 to August '60 I attended Miami University, Oxford, Ohio and obtained a B.S. in aeronautics with a 3.8 grade average.

I have run ten marathons over the last 20 years and daily jog seven miles. I am in excellent physical and mental condition.

WILLSON ROBERT CAMPBELL

I am a 57 year old airline captain employed by Continental Airlines based in Honolulu Hawaii presently flying captain on the DC 10. I recently completed my tenth year as a Boeing 747 captain and prior to that I was a captain on the Boeing 727. I am also rated on the DC-3 and DC-9 aircraft. I began my airline career in 1967 and have accumulated more than 25,000 hours. I have flown as pilot in command for the past sixteen years and have had no accidents, incidents or training failures. During three decades of flying I have had two emergencies consisting of an engine failure on a Boeing 747 and a surface control emergency on the Boeing 727. I hold certificates as a turbojet flight engineer, instrument flight instructor as well as an advanced and instrument ground instructor, aircraft dispatcher and an A & P mechanic.

GUY F. CASEY Date of Birth 12/20/38

I have over 38 years of diverse and successful experience as a FAA qualified Proficiency Check Airman...Flight Instructor...Captain...First Officer...Second Officer...USAF Instructor Pilot.

AVIATION EXPERIENCE

AIRLINE TRANSPORT PILOT

CAPTAIN - A-320, B-747-400, B-777, DC-10, B-727, LR-JET

F/O - A-320, B-747-400, B-747, B-777, DC-10, B-707-720-320, DC-9

S/O - B-727, DC-10, B-707-720-320

USAF - T-38, T-37, T-33

TOTAL TIME 15000 PILOT IN COMMAND 9300

CHECKPILOT/INSTRUCTOR

A/C & SIMULATOR 6000

CO-PILOT 5000

EMPLOYMENT HISTORY

3/61 - 4/66 USAF - Flight Instructor T-33, T-37, T-38

4/66 - 5/86 Continental Airlines Capt. B-727

3/89 - Present United Airlines Standards Captain/Pilot Instructor

Capt. A-320

During the time interval between Continental and United Airlines I worked as a Captain/Checkpilot for three small airlines that went out of business. I also started, developed and sold two small businesses.

When I was hired by United Airlines I was assigned to the Flight Training Center to instruct and conduct Flight Engineer checkrides on the DC-10. After I was selected to be in the initial group of Pilot Instructors for the introduction of the A-320 and the B-777, I was promoted to a Standards Captain on the A-320 to conduct Transition checkrides, Proficiency checkrides and Initial Operating Experience flights.

In my career I have experienced one USAF T-37 dual engine failure and one T-38 engine failure during a night formation takeoff. I also have had engine failures three times on the DC-10, one hydraulic failure on a B-727 and one precautionary bomb threat evacuation due to a passenger with mental problems. These situations were properly handled with no undue effects.

I have never had any accidents, incidents, violations or failed a checkride. I feel I can best contribute to the aviation industry using my experience and skills by continuing to fly as a pilot in command.

EUGENE R. COTTEEN

I was born in San Diego, California January 1st, 1940, and grew up in the Southern California area. During my formative years I had a very keen interest in aviation and participated in model airplane construction and flying, which I pursued into my High School years. However it wasn't until my junior year at San Diego State University that I actually took my first flight; through an introductory program offered by Cessna Aircraft Company. After that first flight I became very interested in pursuing a career in aviation, and acquired a Commercial, Multi-Engine, and Instrument Ratings before completing my Bachelor Degree. In addition to my Pilot Ratings I also acquired Flight Instructor Ratings for Commercial, Instrument, and Multi-Engine Airplane Land, before graduating from College. I was able to work in the San Diego area as a freelance instructor and charter pilot which helped finance additional flying experience and ratings including my initial Airline Transport Multi-Engine Rating.

In May, 1967 I was hired by Pacific Southwest Airlines as a Professional Flight Instructor training Lufthansa, and Japan Airline Pilots, and worked in this position for the next next two years. August, 1970 Texas International Airlines offered me a position as a First Officer on the Be-99 and CV-600 aircraft. Unfortunately, in March 1971, economic conditions required that Texas International furlough my class and a number of additional pilots. I was hired at Johns Manville Corporation in May 1971 as an Executive Pilot, initially assigned to the Gulfstream II. For the next five years I was Captain on the Falcon 20 and Falcon 10 aircraft flying Domestic and International operations for Johns Manville out of Denver, Colorado.

Happy Days....in May, 1977, I was recalled by Texas International Airlines, and returned to Airline flying, initially on the DC-9 as First Officer. I was asked to join the training department in August 1978 as a Proficiency Check Airman on the DC-9. For the next few years I remained in the Training department conducting Check Airman duties (P/C's, Line Checks, and loft training).

During the Texas International/Continental Airline merger in August 1982, I applied for and was offered the Assistant Chief Pilot position managing the DC-9 operation in Denver Colorado. Over the next ten years I remained in Denver as the Assistant Chief Pilot and managed the DC-9 and MD-80 Fleets as well maintained proficiency check airman status on the B-727 and DC-10.

In 1994, I applied for and was selected for the Los Angles Chief Pilot position. In1995, I returned to Line Pilot status operating as Captain and Line Check Airman on the DC-10 in the Newark, N. J. base. January 1996, I returned to the Continental Airlines Training Department where I am currently a Line Check Airman, Proficiency Check, and Initial Operating Experience Check Airman and Air Crew Designee on the DC-10.

Over the past thirty years I've logged over 20,000 hours of accident free flying in both Domestic and International operations. I've enjoyed the opportunity to function both as a Corporate Pilot with Johns Manville and as a Line Pilot and Management Pilot in both the Training and Operational sides of Continental Airlines. During my professional career I've held and currently hold numerous Check Airman Certificates, and have represented the company in various management positions. I also currently hold a Aircrew Program Designee DC-10 certificate with Continental Airlines and the FAA.

I currently reside in Hudson Ohio, which is a suburb of Cleveland, with my wife of 23 years, Trish. My son Scott, lives in California and is currently a Sergeant, with the California State Highway Patrol, and is a rated pilot with them. Scott and his wife, Tina, have two sons, Jonathan and Joshua. Both young boys already have a great love for flying.....must be in the gene's.

ARTHUR A. DANLEY

1820 Spruce Creek Blvd., Daytona, Florida 32124 904-760-1380 <u>aidanley@aol.com</u> 207-395-4605

fax 760-1540

fax 395-2823

Professional Licenses: United States; Airline Transport Pilot - Airplane Multiengine Land

Ratings: B-707 B-720 B-727 B-737 B-747 DC-9 B-757 B-767 L-1011 N-265

Commercial Privileges: Airplane Single Engine Land & Sea Glider Flight Instructor - Airplane Single & Multiengine Instrument Airplane

Flight Engineer - Recip and Turbojet Mechanic: Airframe and Powerplant

Professional Licenses: Other; Kingdom of Saudi Arabia-Ministry of Defense and Aviation: Airline

Transport Pilot- Airplane Multiengine Land: B-707 B-720 B-727 B-747 DC-9

Japan-Ministry of Transport: Airline Transport Pilot-B-747

Iceland - CAA Validation of U.S. ATP License

Flying Experience:

Total Flying Time - 22,200 hours. Total PIC Multiengine Jet - 15,050.

Total widebody -10100. Glass cockpit - 2200. Instructor/Check Airman - 6600.

No accidents, incidents, or violations.

Summary of Flying Time by Types

B-747 L-1011 B-767 B-727 B-707 B-737 DC-9

Capt	5520	423	2200	3674	928	932	721
F/O	1625				1624		
F/E					1232		

Misc. General Aviation - 5195

Flight Engineer - 1228

Work History:

1963-present: Trans World Airlines; Served as flight engineer on Lockheed Constellation and B-707, first officer on B-707 and B-747, and captain on B-707, B-727, DC-9, L-1011, B-767, and B-747. Initial up-grade to captain on B-707 in 1968. Served as FAA designated Line Check Airman for a total of nine years (5400 hours) on the B-727, B-767, and L-1011. Currently flying B757/B767 equipment as Line Instructor Pilot.

Completed a two-year special assignment with Saudi Arabian Airlines. Served one year as Line Check Airman and was appointed Manager Flight Training – B-737. Duties included conducting full aircraft proficiency checks, flight simulator instructor, and performing acceptance flights of new aircraft and delivery to Saudi Arabia.

October 1990 to January 1999: Special assignment to Nippon Cargo Airlines as B-747 captain on Pacific, North American, and European routes. Appointed Class 1 Training Captain September 1994. Duties included conducting Initial Operating Experience for up-grading copilots and transition captains.

April 1996 to October 1998: Captain on B-747SP for worldwide VIP charter company. Clientele included professional sports teams, rock stars, far eastern royalty and high government officials.

Education:

Saint Louis University - Parks College of Aeronautical Technology

Major: Aircraft Maintenance Engineering Minors: Mathematics and Meteorology

Age 57. Born May 16, 1942- Westfield, Massachusetts. Married - four children. Hobbies: boating, skiing, building

experimental aircraft...

Jeannie deLamos 4723 Moa Street Honolulu, HI 96816 (808) 732-3288

DOB: February 9, 1942, Berkeley, California

SSN: 562-50-7715

Certificate (Pilot License) Number: 562507715

Air Transport Pilot, Airplane Multiengine Land

G-159, LR Jet, N-265 Commercial Privileges

Airplane Single Engine Land and Sea

1973: Began aviation career; accomplished all licenses/ratings

as quickly as possible; spent one year as flight instructor CFI and CFII. Completed: Flight Engineer written exam

with 98% score, Lear Jet rating, Sea Plane rating.

1978 - 1979: Acquired turbine engine time in King Air E90 with

Pharmaceutical Company, Morristown, NJ based.

1979 - 1986: Hired by International Telephone and Telegraph

Corporation: flew Gulfstream I, Sabreliner 65, Gulfstream II, Gulfstream IIB; La Guardia, NY based; routes to major

U.S. cities throughout all U.S. and Caribbean.

1986 - 1988: Joined New York Air; flew DC-9 and MD80; Newark, NJ

based; northeast corridor, high density flying.

1988 - present: Joined Continental Airlines and upgraded to DC-10 First

Officer in 1989; Honolulu, HI based; Pacific routes,

International long haul flying.

Total flying time: 14,000 hours

FAA record: clear of any accidents/incidents

Aviation is my life and Continental is my family.

I have high hopes to continue flying!

Captain Alan J. De Sa

I was born on July 5, 1941 in New York City, at the age of 6 my parents, brothers and sisters and I moved to a farm outside of Buffalo, New York. While growing up on the farm, in addition to grammar school and high school, I worked as a caddy and a cook at the local country club, to help meet expenses. While in high school I was able to be on the scholastic honor roll, most of the time

In 1959 I received an appointment to the United States Merchant Marine Academy. The Academy is one of the five Federal academies run by the government. During this four year training program, cadets are prepared to serve as deck and engineer officers on merchant ships. After graduating in 1963, I started a career as a deck officer, on various types of merchant ships, sailing throughout the world. As a graduate of the Academy I possessed a B.S. in Nautical Science, a Naval reserve commission as an Ensign and a 3rd Officers license, any oceans, any tonnage issued by the United States Coast Guard.

In 1964 while sailing on merchant ships, I decided to start flying. After several years of training, while still sailing on container and passenger ships I was hired by Eastern Airlines as a pilot. My seniority date at Eastern was January 3rd, 1967.

After nearly 23 years as a pilot with Eastern Airlines, I transferred to the Trump Shuttle in 1989, when Eastern sold the "Shuttle" to Donald Trump. After three years as the Trump "Shuttle" the airline became associated with US Airways. At the present time I am an Airbus-320 Captain on the US Airways Shuttle.

During these many years I have continued to raise my merchant marine license and I have also continued to sail on merchant ships. At the present time I possess a current Coast Guard license as limited Master and Chief Officer, any oceans any tonnage. I have sailed over the years during periods of time off from the airline. I sailed during the Vietnam conflict as well as during the Gulf war. I raised my Naval Reserve commission and retired after many years from the Naval Reserve.

During my 33 years as a pilot I have flown many types of aircraft including the Boeing 727, 757 and 767, the Airbus A-300 and A-320, and the Douglas DC-10. At the present time I have almost 14,000 flight hours in all seats, with 6,000 hours as pilot in command. At no time in my career have I been involved in any type of accident or enforcement procedure. During my career I have had only one in-flight emergency, which was an engine failure on the "Shuttle" with 140 passengers on board. We were all back on the ground in 10 minutes.

While flying for Eastern, Trump and US Airways I have been a Check Airman and Simulator instructor on the 727. I am certified to give flight checks, line checks and gave IOE for several years. While at the "Shuttle" when we were flying charters on the weekends, I was in charge of the Omega over water navigation program. I presently have made application to US Airways Training Department to instruct on the Airbus A-320. As a merchant marine officer I have continually updated my education in the maritime field and my license was renewed in 1998 and is current until 2003.

I have kept very active in my private life, running and cycling. In 1990 I ran the Marine Corps Marathon in Washington, D.C. in 3:40. In 1995 I ran the New York Marathon in 4:00 in the rain. My wife and I cross country cycle and in 1999 we cycled across the state of Wyoming (480 miles) in six days. crossing the continental divide five times. I possess an FAA 1st class physical, with a near vision limitation. I am 170 pounds and in excellent health. I play the piano and have several active hobbies

During the last 36 years, while pursuing dual careers in the nautical and aeronautical fields I have command and instructing experience in large turbo-jet aircraft as well as knowledge of the day to day operation of merchant ships to 1000 feet and thousands of tons. During my careers I have always had the responsibility of leading, teaching, motivating and directing air and sea crews of all abilities and in all phases of aircraft and vessel operations with success

Robert Edgar Elwell Biographical Notes

Born:

- July 23, 1941
- Alice, Texas
- Father, Leonard Shuter Elwell, age 70, emigrated to the U.S. from England in 1902 at age 31.
- Mother, Katherine Vitula Edgar Elwell, age 41, her family migrated to Texas in the first year of the Republic of Texas, 1837, and received a land grant.

Education:

- Elementary school in Corpus Christi, Texas
- Seventh grade in Robstown, Texas
- Eighth grade through high school at The Masonic Home and School of Texas in Fort Worth, Texas. Salutatorian of graduating class and honored with the Memorial Trophy presented to the Outstanding Masonic Home Boy for citizenship, sportsmanship and scholarship.
- Texas A&M University, September, 1959 to August, 1961. Won Outstanding Freshman Drill competition
- USMC Pre-flight and Primary Training, September, 1961 to April, 1962, Pensacola, Florida. First solo in a T-34B.
- Texas A&M University, July, 1963 to May, 1965. Earned BBA in accounting. Elected to the Student Senate.

Military:

 Served U.S. Marine Corps from September, 1961 to July, 1963. Entered as a Marine Aviation Cadet and honorably discharged as a Lance Corporal early to return to Texas A&M University.

Employment:

- Humble Oil Company, January, 1965 to December, 1965. Oil production accountant/management trainee.
- American Airlines, Audits and Security, December, 1965 to November, 1968. Management trainee for one year and then internal auditor.
- LTV Corporation, Missiles and Space Division, November, 1968 to March, 1970. Internal Auditor.
- American Airlines, Flight Department, March, 1970 to December, 1972. Supervisor of Training Performance. December, 1972 to 1979, Flight Officer (Flight Engineer). First Officer 1979 to 1986. Captain 1986 to present.

Aviation licenses: • Commercial, instrument, airplane single and multi-engine land

- Certified Flight Instructor
- Certified Flight Instrument Instructor
- Ground Instructor Basic
- Ground Instructor Advanced
- Ground Instructor Instrument
- Radio, telephone operator's license
- Boeing 727 Flight Engineer
- Boeing 707 Flight Engineer
- Airline Transport Pilot
 - DC-10
 - Boeing 727
 - DC-9
 - Boeing 757
 - Boeing 767
 - Boeing 777

Flight Crew Experience:

- Flight Engineer
 - Boeing 727
 - Boeing 707
- First Officer
 - Boeing 727
 - DC-9
 - DC-10 International
- Captain
 - Boeing 727
 - DC-9
 - Boeing 757 International
 - Boeing 767 International
 - Boeing 777 International

Accidents and incidents:

None

Miscellaneous:

• Suspended in November, 1993 two days prior to the American Airlines Flight Attendant strike for refusing to violate FAR's which required the company to operate with the highest regard for the safety of the flying public and required the captain to see that it did. The company tried to put five 10 day wonder flight attendant trainees to be strike breakers to work and be trained onboard my airplane with four union flight attendants. I saw this as Robert Crandall's intimidation campaign and refused to take them. Onboard an airplane was no place for this. I was eventually given an

ultimatum to carry them or be suspended with a hearing the next morning. To me they were demanding that I violate the FAR's which I was unwilling to do. After the strike was over I was reinstated with pay for the trips I missed and nothing entered into my file, further proving that it was nothing but an intimidation campaign and an attack on captain's authority by our management. As much as I love to fly, I would give up my career rather than yield to these attacks.

Personal:

- Father died in 1954, age 82, when I was 12 years old.
- Older brother and I went to live at the Masonic Home and School of Texas.
- Brother contracted polio at age 19 months a few days prior to my birth.
- Brother died in a house fire at age 46.

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- Mother died in 1995, age 95.
- I have three healthy, over achiever children, ages 26, 32 and 33.

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Biography

PETER FLEISCHHACKER

Native of Austria, lived in Austria, Germany, Brazil, then United States

Naturalized US citizen in 1962

Fluent in English, German, Spanish, Portuguese

Graduated from High School in South Milwaukee, Wisconsin

Top 5% of my graduating class

Graduated from the University of Wisconsin 1962

B. S. Electrical Engineering

Electrical Engineer, 1962-63

General Electric, São Paulo, Brazil

San Diego Gas and Electric Co., San Diego, CA

U. S. Air Force 1964-81

Pilot in F-100, F-101, F-102, Mirage III, F-4, T-38, Sabreliner

180 combat missions in Vietnam

Distinguished Flying Cross and 9 Air Medals

Exchange officer with Royal Australian Air Force

Air Force Reserve/Air National Guard 1981-88

Graduate School, Trinity University, San Antonio, Texas

Masters program - Engineering Physics

Pilot, atmospheric research, part-time, summers 1981 – present

Thunderstorm penetrations near Socorro, NM

Lightning research for NOAA, NASA, and Office of Naval Research

Elected Alderman, City of Shavano Park, Texas, 1995-97

Airlines:

PeoplExpress 1985-86

Continental 1986-present

Flew B-727, MD-80, B-747, DC-10, B-757

14,000+ hours total

No accidents or violations

First Class medical, no waivers

Woodson M. Fountain 7017 Weston Circle Edina, MN 55439 (612)941-4422 (612)941-5929(F)

AIRLINE POSITIONS

Northwest Airlines

1997-Present	Captain, 747-200
1993-1996	Captain, Airbus A320
1989-1992	Captain, 757
1987-1988	Captain, 727
1986-1987	First Officer, 747-200, DC-10
1985-1986	First Officer, 757
1983-1985	First Officer, 727
1982-1983	Second Officer, 747
1979-1982	Second Officer, 727
1971-1978	Furloughed
1969-1970	Second Officer, 727

RELATED AVIATION EXPERIENCE

Northwest Airlines

1989-1992	FAA Aircrew Program Designee, A320
1989-1990	Member of Initial Cadre for Development of Airbus A320
1985-1989	Simulator and Classroom Instructor, 757
1989-Present	Team member for sourcing, recruiting and
	hiring pilots
1982-1985	FAA Flight Engineer Examiner

Dec 17 99 11:15a Jean Fountain (612)941-4878 p.3

United States Air Force

1965-1969 Instructor Pilot, T-37, Vance AFB, OK

1964-1965 Undergraduate Pilot Training,

Laredo AFB, TX

1962-1964 Flight Test Engineer, Edwards AFB, CA

MANAGEMENT EXPERIENCE

1971-1978 Construction engineer, mortgage banker,

marketing representative

EDUCATION

1979 St. Thomas University, MBA

1962 Howard University, BS, Mechanical Engineering

Aviation Biography John J. "Jack" Fucik

10Mar1962	Entered United States Marine Corps as Marine Aviation Cadet.
16Sep1963	Received Commission as 2nd Lieutenant
17Sep1963	Received Naval Aviator "Wings of Gold"
xxOct1963	Joined VMF-115 (F6A)
xxJan1964	Transitioned to VMFA-115 (F4B)
15Oct1965	
16Apr1966	Transferred to Iwakuni MCAS as Logistics Officer
xxSep1966	Honorably Discharged from USMCR active duty
10Oct1966	Joined Pan American World Airways (B707 Copilot-Navigator)
xxMay1972	Transitioned to B707 Flight Engineer
xxSep1976	Elected National Secretary-Treasurer- Flight Engineers' Int'l Assoc. Pan Am Chapter (1yr)
xxMar1978	Transitioned to B747 Flight Engineer
xxMay1986	Transitioned to B747 Co-Pilot
xxApr1988	Transitioned to B727 Captain
31Oct1991	Joined Delta Shuttle as B727 Co-Pilot
31Jan1993	Transitioned to B767ER Co-Pilot
01Apr1994	Transitioned to MD-11 Co-Pilot
01Nov1995	Transitioned to MD-88 Captain
01May1996	Transitioned to B727 Captain
01Sep1999	Transitioned to B737-800 Captain

I have 11,000 pilot hours + in the various aircraft I have flown in the past 37 years. I have 1700 navigator hours in the B-707. I have accumulated 9000+ hours as a Flight Engineer in B707 and B747 aircraft.

My most memorable moments in my career are my first solo, my numerous bombing runs in the Southeast Asia theater in 1965-1966, and a very close call in Boston on November 13,1988.

I grew up as a tenant farmer's son in Texas during the forties and early fifties. I entered my senior year in high school at the age of 15. During that year I won the Texas Farm Tractor Driving contest as a member of the Future Farmers' of America. My college education was begun in 1957 at Wharton County Junior College, as it was the most economical. I worked summers and into the fall in the cotton ginning business. I would go back to school in the spring semester and repeated this process until 1961. In September of 1961 I attended the fall semester at Texas A&M. While I was there I saw the USMC recruiter and signed up for the Marine Aviation Cadet program. My first airplane ride was from Easterwood Field at Texas A&M to Love Field in Dallas aboard a DC-3 for the purpose of taking my aviation physical at the NAS Dallas. My second ride was back to Easterwood at Texas A&M. The third was from Houston to Pensacola. The fourth was my first hop at NAS Saufley as a new student.

My journey through Navy flight training took me to NAS Saufley Field(T-34B), NAS Whiting Field (T-28B, T-28C) and NAS Chase Field(F-9, F-11).

After completion of Flight Training I returned to Texas A&M on recruiting duty for two weeks. I was then assigned to VMF-115, MCAS Cherry Point, as a pilot in the F6A-Skyray. It was previously known as a F4D and simply called "The Ford". I only flew the aircraft for 50 hours as the squadron transitioned to the F4B-PhantomII in January of 1964. As an early Phantom Squadron operations were slow and aircraft problems many; therefore, not too many sorties were flown by the junior Lieutenants. The squadron went to NAS Atsugi, Japan in July, 1965; was there only a month and transferred to MCAS Iwakuni, Japan. In October of 1965 the squadron embarked for Danang, South Vietnam. During the ensuing six months, I flew 138 combat missions from Danang. Eighty percent were in the South as attack missions and the remainder

were fighter cover for nightly ECM reconnaissance aircraft. My last three months in South Vietnam were with VMFA-314—The Black Knights. Our Commanding Officer was Major Chuck Sewell, who had been my executive officer with VMFA-115. When VMFA-314 was assigned as replacement squadron for VMFA-115, Major Sewell became its Commanding Officer. One of his first request was that myself, along with First Lieutenant Dave Levine, remain in country to be indoctrination pilots for his new squadron. After two weeks we were permanently assigned to VMFA-314. About a month after VMFA-314 came in country, Major Sewell began to fly "Special Missions". He had previously been assigned to the Navy Test Squadron at NAS Patuxent. The missions entailed "field trials" of ordinance that generally was obtained from Aberdeen proving grounds. He asked me to be his wingman which I still consider to be a great honor, as after his retirement he became a test pilot for Grumman in the X-29 program.

After leaving South Vietnam in April, 1966 VMFA-314 returned to MCAS Iwakuni, Japan. I remained with the squadron until Major Sewell was called back stateside to attend War College. I was then transferred to MABS 11 as Logistics Officer. It was a position normally filled by a Major but as a First Lieutenant I found it very challenging but rewarding. It was here that my first lessons in CRM were learned. These early lessons would serve me well in the future. In August of 1966 I returned to MCAS El Toro for out-processing. September found me with an acceptance telegram to join Pan Am's Pacific Division on October 10 as a Boeing 707 Co-pilot/Navigator. For the following five years I flew the world on the Boeing 707 as either the relief co-pilot or navigator—sometimes both on the same leg.

With the improvements in Doppler Navigation, Flight Navigators were phased out in 1971-72. I became a flight engineer on the Boeing 707 in June 1972. In July 1978 I moved up to the Boeing 747 in the flight engineer's seat. I would remain there until 1986 when Pan Am sold the Pacific Division to United Air Lines. At this point of my pilot career, I was once again behind the yoke. I received my first ATP checkout in the B-747. 1988 found Pan Am closing the pilot base in San Francisco so I moved to my first Captain's slot in New York, primarily flying the new LGA-BOS and LGA-DCA shuttle. Flying the BOS-LGA Shuttle on the night of November 13, 1988 my crew escaped a potential disaster when on our takeoff roll another aircraft taxied onto the runway at a mid-field intersection. The procedures to avoid CFIT practiced in the Pan Am simulators were utilized and the incident left the aircraft with minor damage to the number two engine thrust reverser pneumatic line fairing, as well as a tail skid strike. The aircraft was rotated to 20+ degrees nose up to avoid the small commuter plane that had been erroneously cleared into the midfield position on our takeoff runway.

The crew was lauded by the FAA for their performance. Each of the cockpit crewmembers was awarded Pan Am's distinguished aviator award. In addition to this award the crew also received ALPA's Superior Airmanship award. Pilots from several airlines later informed me that our cockpit recorder tapes, from that memorable flight, were utilized by their companies during their CRM training. The NTSB investigation found the cause of the incident to be an error by the tower controller.

I have flown various aircraft at Delta since coming over to them in the Pan Am Shuttle transaction of 1991. B727 Copilot, B767ER Copilot, MD11 Copilot, MD88 Captain, B727 Captain, and am currently a B737-800 Captain in Atlanta. One of my greatest assets utilized during these 37 years of flying has been the counsel of my wife, Eileen, for the past 31 years. Her advise is very much in sync with the principles learned in CRM, which is perhaps one of the most important safety factors in today's commercial aviation.

My journey has come a long way from the little barefoot farm boy who would climb to the peak of the barn roof to get a better look at the Ag plane as it dusted our neighbor's cotton fields. Then to a career which saw me at the controls of a Navy T-34B trainer on my fourth ever flight. To South Vietnam where I flew 138 combat missions, to a career of 25 years with Pan Am in which I flew over most of the world, and my present assignment as a Captain in a "Next Generation" Boeing 737-800 aircraft. I love to fly and have a son who is currently "following in my footsteps". I would love to continue to fly for Delta past the age of sixty. My career has had no stumbling blocks-no accidents, no FAA violations, a smooth training record, and one incident(Boston-Nov1988) that had a very good ending due to the excellent training and crew coordination exhibited by my crew.

Melvin B. Fuller Date of Birth 2/13/1943

RE: Biography

My interest in aviation started at a fairly young age. Although I could not afford flying lessons, I bought books and magazines on flying. While in high school, I joined the Civil Airpatrol and managed to fly some with the men who had their own airplanes. My interest in flying was more along the lines of military flying, especially flying jet fighters. I knew that I needed to go to college and get a degree before I could get into military aviation. Therefore, after high school I went to a four-year college planning to major in engineering and joining the military afterwards. However, my desire to fly was greater than my desire to go to college. In the spring semester a Navy recruiter came to campus. Although he wasn't supposed to, he told me about the Naval Aviation Cadet program, which only required two years of college. I decided to transfer to a junior college for the next year so that I would be able to meet a Naval Aviation Cadet recruiter. In the spring a Navy recruiter came to the college. I liked what he had to say about the cadet program so I applied, was accepted and entered Naval Aviation training in September 1963. During the summer before I went to Navy flight school, I was able to take some flying lessons. I soloed and worked toward my private pilot license but wasn't able to finish before I went into the Navy.

While in the Training Command, I flew the T-34, T-28, TF-9J & AF-9J and the F-11A. I completed training in March of 1965 and received my Wings and Commission as an Ensign on the same day. From the Training Command, I was assigned to VA-22 flying the A-4C light attack aircraft. I completed my transition training in the Replacement Air Group in Lemoore, California and was then sent to the Pacific to join my squadron aboard the USS Midway. I completed two cruises in Vietnam flying about 145 combat missions. My first cruise was aboard the USS Midway and my second cruise was aboard the USS Coral Sea. I made over 200 carrier landings while in the Navy. I received numerous Air Medals and the Navy Commendation Medal three times. When I left the Navy in September 1968 I had attained the rank of full Lieutenant.

Flying aboard an aircraft carrier was an exciting event each and every day, but there were two events that stick in my mind as being more exciting than the usual. The first occurred when the bomb rack that was holding two rocket pods separated from my aircraft on a catapult shot. The rack and rocket pods weighed about 1500 pounds, so that gave me an asymmetrical condition at a low airspeed only 50 feet off the water. I didn't realize that the rack and rockets pods had separated from the aircraft, but I knew something was wrong as soon as I became airborne. I had to put in full right aileron and full aileron trim to keep the wings level. I had the control stick pressed against my right leg and my leg pressed against the right sidewall of the aircraft. I wasn't sure that the left wing was going to stop dropping so I reached for the ejection handle but hesitated just long enough to realize that I barely had control of the aircraft. As my air speed increased,

more control became available. After gaining altitude I was joined by my section leader. He took a look at my wing and determined that everything was normal other than I was missing the rack. We proceeded to the beach area so that I could get rid of the remaining rockets since live ordnance could not be brought back to the ship. Because I waited just long enough, I was able to keep from ejecting and was able to bring the aircraft back safely to the ship.

The other event occurred while returning from a night mission over North Vietnam. There was no moon, so it made for a very dark night without any visible horizon for reference. During the initial portion of my approach from altitude, my vertical gyro stopped working correctly. Without the vertical gyro for reference, I immediately got vertigo. The vertigo caused me to go into a series of unusual attitudes. I basically lost control of the aircraft and was not sure which way was up or down. I became totally confused and was afraid that because of the low altitude at which the vertigo started I might end up flying into the water. I once again reached for the ejection handle but at that time I really wasn't sure if I was upside down or not. If I was, pulling the ejection handle could have fired me into the water. I decided not to eject but instead took my chances of being able to recover. I fought the horrible sensation of the vertigo and reached back to the very basics of flying that I was taught in my early days of Navy training. I reverted to needle, ball and airspeed by freezing the control stick with both hands. I was able to regain control of the aircraft and fly to a higher altitude. My section leader flew up and I joined on him. He lead me back to the ship while I used him as my reference point. I landed safely, once again staying dry and saving the aircraft.

While still in the Navy at Lemore, California, I joined the Navy aero club and became an instructor for the club. I was only able to instruct part-time, but in the time I was there I logged about 200 hours of instruction and successfully recommended several people for their private pilot licenses.

After leaving the Navy, I went to work for Continental Airlines. I started as a flight engineer on the B-707. From there I went to the B-727, DC-9, MD-80 and most recently the B-777. I have flown Captain on the B-727, MD-80 and the B-777. I flew as a flight engineer on the B-707 and the B-727. I flew as a first officer on the B-727 and DC-9. Over the years, since I've been with Continental, I have taken several correspondence courses in electronics and computers. I completed a non-traditional degree in Computer Science from the American Institute For Computer Science.

In my 36 years of aviation, I have logged approximately 28,000 hours of accident free flying. Of those hours, about 10,000 have been as pilot in command. Although I have never had an accident, my commercial flying has not been without a few bumps along the way.

Several years after coming to work with the airline, we left Hawaii on a trip to Guam in a B707. Just about the time we reached our cruising altitude, I noticed that we were loosing the hydraulic fluid in the main hydraulic system. Within a few seconds, it was all gone. Without the main system, we had to return to Hawaii. Since we were well over

our maximum landing weight, it was necessary to jettison fuel to get down to our landing weight. We ran through the abnormal procedure, jettisoned the fuel and had to extend the landing gear by cranking it down manually. The landing in Hawaii was normal.

Five or six years ago, on departure from Philadelphia, the left main landing gear on the B727 that I was flying would not retract. The other gear came up normally. After going through our abnormal procedures, we were able to determine that everything was okay with the landing gear handle in the down position. We turned around and landed without incident in Philadelphia.

On another occasion, I left Houston in an MD80 and none of the landing gear would come up after takeoff. The nose gear strut had been over serviced and would not extend as it should when the weight came off the nose gear on take off. Therefore, the ground shift switches on the nose gear did not work preventing the electronics from shifting to flight mode form ground mode. Since the aircraft did not know it was in flight we had a lot of warnings going off at one time. We had to overcome the noise and confusion that it caused do the abnormal procedure and communicate with the controllers. We landed safely back in Houston.

I have an Air Transport Rating, Flight Engineer rating and a Flight Instructors rating. I am type rated on the B777, B727 and the DC9. I have instructed at Flight Safety International in their simulator program.

I am currently married and to the same person for 32 years. We have 3 grown children and 5 grandchildren. I stay physically active by running a minimum or 3.5 miles 4 to 5 days per week. I also work out at a gym several days per week and during the summer I still water ski. My hobbies have included Amateur Radio, electronics and computers.

Biography:

Name: Lowell A. "Gil" Gilbert

Born: Dec. 4, 1941in Huron South Dakota College: South Dakota State College

Graduated: June 1963

Degree: B.S. Mechanized Agriculture
Military: USAF from Nov: 1903-1414 1970

Graduated number seven in my flying school class.

Assigned to the F4C Phantom II Flew two tours in South East Asia

Three and one-half years at Bitburg AFB Germany flying the F4D

From May 1971 to May 1981 flew the RF4C in the Montgomery AL Air National Guard (while there served as an instructor pilot and Chief of the Standardization and Evaluation section for five years)

May of 1981-Aug 1993 served as an Individual Mobilization Augmentee in the USAF Reserves Assignments included six years in the Tactics and Training Division in the Directorate of Operations at Headquarters USAF in the Pentagon.

From May of 1987 to Aug 1993 served as the Deputy Commander/ Chief of Staff of Special Operations Command Atlantic at Norfolk Naval Air Station (the only reserve to hold that Position in an active duty unit).

Retired in 1993 from the USAFR with the rank of Colonel (06).

Awards and decorations include two Distinguished Flying Crosses and eight Air Medals.

Civilian Experience:

Hired by Eastern Airlines in Oct 1970

Flew many different types of aircraft: L-188 (Electra), B-727, DC-9, L-1011, and B-757.

Hired by United Airlines in July of 1990-just short of my 49th birthday.

At United I have flown the B-727, B737-200, 300 and 500, B-767&757, B747-400 and the Airbus A-320. I am currently flying Capt. on the A-320

I hold ATP's on the following aircraft. The B-767, B-757, B-747-400, the A-320 and the Lear Jet.

I have close to 20,000 hours of accident and incident free flying time.

John W. Gilliam 365 Blue Oak Lane

Clayton, California 94517 (925) 673-7233

> Date of Birth: May 29, 1942 Birthplace: Wheeler, Texas

I was raised in Midland, Texas, the oldest of three children. Graduated from Midland High School in 1960, entered U.S. Army in February 1992. After Basic Training, Advanced Infantry and Jump School, I was assigned to a Parachute Infantry unit at Fort Richardson, Alaska.

The path of my military career took me up through the ranks Non-Commissioned Officer to that of a Commissioned Officer in the Infantry Branch. I served two tours of duty in The Republic of Vietnam. My tour as an aviator was in Northern I Corps assigned to an Attack Helicopter Unit in Da Nang flying AH-1 Cobras. I was unfortunate enough to be shot down once and wounded twice. My duty responsibility was as section leader and fire team leader.

Military Awards and Decorations include the Distinguished Flying Cross 2nd Oak Leaf Cluster, Bronze Star, Purple Heart 1st Oak Leaf Cluster, Vietnamese Cross of Gallantry with Silver Star, Air Medal with 26th Oak Leaf Cluster, various campaign and service decorations, Senior Parachutist, Jumpmaster and Pathfinder qualified.

My flying assignments while still on active duty were as Flight Commander in Training Command at Ft. Rucker, Alabama, Fixed Wing Qualification course and OV-1 Mohawk Transition.Infantry Officers Advanced Course.Honorable Discharge August 19, 1971.

Upon separation from the military, I returned to finish my undergraduate degree. I obtained a B.S. in business and economics with a 3.6 grade point average. I attended graduate school for one year.

My flying experience in the civilian world has been as a Test Pilot at Bell Helicopter working in both Production Flight Test and Experimental Flight from 1975 to 1981. From 1981 to 1990, I worked as a Corporate Pilot flying both domestic and international. In March of 1990, I was selected for hiring as a pilot at Southwest Airlines, upgraded to Captain four years later where I am presently serving assigned to our base in Oakland, California. I am type rated as an Airline Transport Pilot in the following jet aircraft: Lear Jet, Falcon 10, Hawker 125, Beech-400, Mitsubishi-300, Boeing-737 (all series), Bell-206, Bell-214. To the best of my knowledge, I am one of only a few hundred pilots worldwide to hold an Airline Transport Rating in both jet fixed wing aircraft and helicopters. My total flight time is approximately 21000 hours. I hold an Airline Transport Certificate and Instructor Rating. I have no accidents, no incidents, and no violations.

In my 30 years of flying experience, suffice it to say, there has been some very close calls. I have had five engine failures, two total hydraulic failures, and various abnormal malfunctions with all fortunate ending results. Something that is very prevalent to me is that there is absolutely no substitute for experience. My professional skills continue to be honed with all the exposure. I consider myself a better airman each year. One area I really notice is precision flying, especially in low visibility instrument approaches. I, as all of our Captains at Southwest, are Category III qualified to hand fly (not with autopilot) a Boeing 737 to a minimum altitude of 50 feet with a forward visual range of 700 feet. This event is very challenging and always better than the last time. Experience is everything!

≪ Ken Har

 5912 Dodsons Crossroads Hillsborough, NC 27278 (919) 969-7864

Re: Age 60 Exemption Request Biographic Information

Name: Kenneth Cooper Har

SS# 175-32-7847

Date of birth: July 31, 1940 ATP certificate # 1601678

Education: B.S. Degree, US Air Force Academy 1963

Initial Flight Training: USAF Pilot training, Vance AFB Enid Oklahoma 1963-64

Post College Work History: 1963-1969: USAF

1966-1969: Certified Flight Instructor in Honolulu, Hawaii 1969: Certified Flight Instructor and Chief Pilot at

West Chester Airport, Pa.

1969-1970: American Airlines

1970-1972: Furloughed- Worked as a civil engineer for

Prince William County, Va

1970-1885: Pilot UASF Reserve, Andrews AFB, Md

1972-1999: Pilot American Airlines

Aircraft Flown: T-37, T-38, C-124, C-130, B-727, MD-80, B-757, B-767

Numerous small light aircraft

Licenses Held (current or previously): Air Transport Pilot, Certified Flight Instructor,

Flight Engineer.

Total Flight Hours (approximate): Flight Engineer 8,500

Pilot in Command 18,700

Copilot 2,500

Accidents, incidents: None

Training not successfully completed: None

Brief Statement: As a pilot I have flown nearly around the world from Bangkok to Bombay, the long way around, in Europe, Asia, Africa, North America, and South America, as well as many islands in the Pacific. I also saw combat experience in the Viet Nam War, and participated in U.S. Military Special Operations in the Dominican Republic in 1965, Korea in 1968, and Grenada in 1984 (The dates of the special operations are best recollections only, and should be checked against historical data if they are of use in the case

Unusual Flights: In November 1998 while en route from Chicago to Manchester. England I was advised by the flight attendants when we were about 150 miles from Toronto, Canada, that they smelled something unusual in one of the aft lavatories on a B-767-300. Upon investigation I determined that it appeared very possible that the smell was that of a possible electrical fire, and because of the very real possibility of a fire that the aircraft should be landed immediately(this incident occurred shortly after the Swiss Aircraft accident at Halifax, Nova Scotia). We landed in Toronto, and inspected the area, and after investigation believe that the smell was most likely generated by a transformer overheating in the lavatory ceiling. The problem was resolved, and we continued on to England.

Is experience important? I believe that it is crucial to the safe operation of a flight. Whether it is an in flight emergency such as described above, or landing at a fog bound airport, there is absolutely no substitute for experience, which enhances correct decision making. The potential loss of so many lives due to a wrong decision is just not acceptable.

WOODROW M. HASSINGER AVIATION BIOGRAPHY

1960 1961-62 1963 1964 1965-66 1966-67 1967-77	Ski Dive Club Pilot and Aircraft Charter U.S. Army Helicopter School Army Helicopter Pilot - Vietnam Army instructor pilot - Ft. Walters, Texas		
1977-80 1980-86 1986 1986-89 1989-00	FAL CA	CV580 B737 - CAL B737 B727	
Flight Tin	ne:	Total	23,844
		PIC F.O. B727 B737 CV580 Rotor	18,336 5,380 5,319 6,520 5,796 2,096

Forty Years in Commercial Aviation: No accidents, no incidents, no training failures. I have encountered the usual amount of aircraft system failures, all uneventful. I have spent 40 years flying throughout the Continental United States, Carribean, Central and South America, the Micronesian Islands and parts of Asia.

BARUCH HAVIV

I was born in Haifa, Israel on November 7, 1937. After elementary and high school, I served in the Israeli Air Force as a fighter pilot and a flight instructor for seven years. In 1964, I arrived in the United States and enrolled in Columbia University in New York City. I graduate with a B.A. in Mathematics and in 1967 was hired by American Airlines. I was employed for over thirty years as a flight engineer, a co-pilot and captain. I spent about ten years in each position.

I have been married for thirty years and have a son, three daughters and one brother.

JOHN R. HOUSER AUTOBIOGRAPHY

I was born July 22, 1939 in Durango, Colorado. I began my flying career with the U.S. Air Force in December, 1959 by enlisting in the Aviation Cadet Training Program after my sophomore year in college. I was counseled to finish my college career first but I just could not wait to get into this game. I graduated seventh from the top in my pilot training class in April, 1961. This was high enough for me to obtain one of the few coveted fighter assignments available (based upon class standing). I finished the North American F-100 (Super Saber) transition and gunnery school in January, 1962 and was assigned to the 31st Tactical Fighter Wing at George AFB, California. I was immediately deployed to Okinawa with a rotational squadron to fulfill a nuclear alert commitment in Osan, Korea. During this time I completed the Squadron Officers School by correspondence. When my squadron returned to the US in April of 1962, the 31st TFW had been permanently moved to Homestead AFB in preparation for the Cuban Missile Crisis. For about three months, we maintained an alert posture for daytime conventional weapon strikes upon targets in Cuba.

From the summer of 1962 through the fall of 1963, I participated in various firepower demonstrations and operational readiness inspections. I was one of two 31st TFW pilots trained and designated to launch the Bullpen missile at firepower demonstrations. This was an early version of standoff weaponry--a missile guided visually to the target by the pilot after launch. It was expensive, heart pounding and accurate--if you were good at it. I also attended the Army's Airborne Parachutist Course and became a jump qualified forward air controller. The Navy Seals in our Company claimed it was a course for sissies. We fighter pilots thought the Airborne was for animals and the Seals were just plain incomprehensible.

I was then accepted into the Bootstrap program at the University of Omaha. Between November 1963 and June, 1964, I completed my final two years of academic work and graduated with a Bachelor of General Education degree.

In May of 1965, I achieved the Top Gun Award for the 31st TFW for obtaining the best overall scores for delivery of nuclear warheads and conventional bombs, rockets and guns during an operational readiness inspection. Largely as a result of this, I was the only lieutenant to be chosen for the deployment of Tactical Air Command's first jet fighter squadron to Vietnam in June of that year. I still don't know if this was an honor or if the more senior pilots were just trying to get rid of the competition!

Returning from Vietnam in December of 1965, I changed my career officer plans to more closely fit the needs of a growing family. Though I was offered a highly desired position in a squadron being permanently deployed to Torrejon, Spain if I would retract my resignation, I exchanged my Air Force wings for the new hire status of a second officer at Continental Airlines in April of 1966.

In April of 1967, I was awarded a DC-9 first officer position in Denver and flew the F-100 again-this time as a member of the Colorado Air National Guard. This wing was recalled to

active duty in early 1968 as a result of the Pueblo Crises. I was again selected to accompany a squadron of F-100's to Vietnam, this time to Phan Rang--another dubious honor. My third child and only son was born a week after I arrived at Phan Rang by the Sea. I returned to Denver in the spring of 1969 with a total of one Distinguished Flying Cross, seven Air Medals and a Commendation Medal. When not busy flying, I served as the squadron flight scheduling officer and as the awards and decorations officer. I also helped maintain and operate a small fleet of ski boats for the benefit of personnel stationed at Phan Rang.

I returned to Continental to fly DC-9's, B-727's and DC-10's as a first officer until 1974 when I was awarded a position as captain on the B-727. Continental was an exciting place to be during this time; lots of quality people to work with and great prospects for the future. It was as much fun as a person could have and still call it the source of a paycheck. I continued as a B-727 captain until the Continental bankruptcy in September, 1983. This was a difficult period which will probably never be completely understood, even by those who lived through it. I was on strike until February of 1985 when I took my retirement and left the company.

I then took a position as a consultant flight instructor at United Air Lines and was offered a position as a flight officer to be effective at the conclusion of on-going negotiations with the pilot group. Negotiations failed and a strike ensued on May 17, 1985.

I elected to turn down the offer of employment at United during the strike and took a position as a pilot for Pride Air, a start-up airline founded and financed by former Continental pilots. Unfortunately, the company succumbed to a single flaw in key decision making in November, 1985. I was asked to participate as a member of the board of directors shortly before the bankruptcy, However, our efforts at resuscitation were unsuccessful.

I was again offered employment at United and became a second officer there in January of 1986. Between July of 1986 and July 22, 1999, (the date of my 60th birthday) I held a number of line pilot and management positions during which I functioned as a flight operations manager, pilot instructor and pilot evaluator with FAA designee examiner authority. I held a staff position for the purpose of conducting a complete rewrite of the United Flight Operations manual. This is the pilots bible for operational issues (with about the same number of words as the King James). It was at this same time that United became a true international airline by first purchasing the Pan Am Pacific division and subsequently acquiring their European routes. I was responsible for the inception and maintenance of a complete library of Aeronautical Information Publications from every country into or over which United was to fly. It was then necessary to synthesize this data and tailor it for the United Flight Operations Manual. A completely new United International Supplement with all international route and airport information was developed by my office during that time.

I flew the line as a B-767 first officer starting in April, 1990 and was advanced to B-737 captain in April, 1993. I functioned as a Line Check Airman on the B-737, conducting Initial Operating Experience training and checking between August, 1993 and May, 1995. I was then selected as a Standards Captain on the B-767. From then until July 22, 1999, when I achieved the age of 60, I conducted simulator evaluations for pilots requiring recurrent or initial certification on the B-767,

instruction as necessary, line operational evaluations, enroute proficiency checks and Initial Operating Experience instruction and evaluation flights.

I am currently flying as a second officer on the DC-10 at United.

I have compiled over 12000 hours of flying time in civil and military operations, approximately 7000 hours of which are as pilot in command. In my 39 years as a pilot, I have never scratched an airplane or been violated for infraction of flying rules. Indeed, my competence has never even been questioned, nor have I even been requested to answer an inquiry from the FAA or the companies for which I have worked. I have never failed an oral exam or a proficiency test during my airline career. In fact, in over thirty years, I have not even been required to repeat a maneuver for proficiency training purposes. Some might say I have led a charmed life, for I have never experienced an emergency or an incident requiring priority handling in airline operations.

Other business concerns in which I have been involved include the ownership and operation of a successful restaurant and a small Cessna dealership. I currently own half interest in a remote sensing company (conducting airborne photography in a digital format for monitoring and diagnosing the health of vegetation--mainly cash crops).

My first wife succumbed to cancer in 1989. I remarried in 1991. I have three children and six step children, all but one of which are handily making their own way in life.

My charitable interests seem to center upon disadvantaged children. I left the National Guard in 1973 to run a program called High Flight which I founded under the auspices of Youth for Christ International. This effort targeted juveniles at risk with the legal system. Currently, my favorite charity is Cocina del Amor, an outreach to the street children of Guatemala City, Guatemala. Other charitable interests include World Vision and Feed the Children.

My personal interests include physical fitness, reading, writing, water skiing, snow skiing and classic and custom automobiles--and bragging (a social necessity in Texas).

I hope this was good for you; it was for me!

JOHN KARL HUBERT

PILOT CONTINENTAL AIRLINES

OCTOBER 1968 – JANUARY 2000

After attending the University of Washington for three years, I joined the United States Air Force for training as a pilot. I served from 1959 until 1968 when I resigned at age 30 to begin an airline career. This was the maximum age for pilot employment at that time.

Upon graduation from Air Force pilot training, I was assigned to the four reciprocating, two jet engined KB-50 which were used for air to air refueling of Air Force inventory jet fighters. The KB-50 was a difficult aircraft to learn and somewhat dangerous to fly. We always wore parachutes for every flight. This assignment lasted four years and included deployments over the Atlantic and Pacific Oceans. We flew five ship formations and each KB-50 was capable of refueling three jet fighters simultaneously. Refuelings could be and were accomplished at night and in adverse weather conditions. With three fighters connected to the drogues, considerable skill was required to maintain formation within the flight.

In 1964 I asked for and was assigned to a base operations squadron based in Japan. Flying C-54 (DC-4) aircraft throughout Asia, our passengers were normally high ranking general officers and admirals.

My final regular Air Force assignment was flying C-47 (DC-3) airplanes over Viet Nam during 1967 and 1968. Later, in 1970 I trained in and flew C-141 transports as a member of the Air Force associate reserve program. This assignment lasted two years.

My Continental Airlines career began in October 1968 with second officer training on the B-707. After three years, I transferred to the B-727 as second officer flying to and through the Micronesian islands. This flying required better than average skill since the airports had slippery, short coral runways left from the war. I upgraded to first officer and then to captain still flying for Air Micronesia, a subsidiary of Continental.

In December, 1997 having reached 60 years of age, I reverted to the second officer position on the B-727. I am presently flying the B-727 throughout Asia as second officer.

During my 32 years at Continental Airlines, I have experienced no accidents, incidents, or training failures. When I left the captain's seat I was at the top of my form in proficiency and in managing the cockpit. My health continues to be excellent. My records at Continental include several letters of commendation for exceptional performance. Military and civilian total time: 20,500 hours.

CHARLIE E. HUFF

I was born a day before the Japanese attach on Pearl Harbor making me 58 years a mortal on the 6th of December 1999. I was truly born with a yearning to fly with recollections of the fascination with airplanes even before I was two years old. And so the course of my life has pursued that end--to fly--ever since. I did well academically throughout my elementary and high school years, graduating as valedictorian of a class of 465 students, studying diligently to "be prepared" for the day when I would have the opportunity to fly. I entered college on a scholarship, only to leave prematurely to pursue flying by enlisting in the Army at the age of 17 with the promise of Warrant Officer flight school training, only to finish basic training and be informed that there were a surplus of Warrant Officers. So, I savored the lemonade and chose as alternate training aircraft mechanic school in fixed and rotor wing aircraft, graduating second in our class of 53 students, if I recall correctly.

Later while working the flight line on L-19, L-20, H-13, and H-23 aircraft, the Army's staples at the time, I was offered the opportunity to attend the UMSA Prep School at Fort Belvoir, Virginia, after which I received a Service Appointment to the USAF Academy, entering as a cadet of the Class of 1965.

I did complete the Fourth Class year, making it one of the most significant accomplishments of my life, the irony of which was that at year's end, I was deficient in my academic grade level. A "turnback" was offered by my Air Officer Commanding (which would have required four additional years to graduate) so, I suppose, because of my youthful impatience to fly, I turned it down and returned to the Army for six months to serve out the remainder of my enlistment, after which I returned home to Columbus, Ohio. I found employment as a flight lineman at Port Columbus while starting civilian flight lessons. Now that was a great day! Actually, I now consider my failure to graduate from USAFA as likely my most timely and glorious failure.

It then took me nine months to earn my commercial and instrument certificates, during the latter months of that time working at Western Electric as a draftsman to help pay the amassed flying bills. I am also forever grateful to my father who paid the greater portion of that expense with money he had set aside for my college studies, realizing at length how important getting a start in aviation was to my life even though he would have preferred my returning to college.

Since pilot employment at that time (fall of '63) was slim to none for one of little experience, I packed off to A & P school (Airframe and Powerplant Mechanic) at Spartan School of Aeronautics in Tulsa, Oklahoma graduating in January of '65 with a 98% average on the written exams and earned my aircraft mechanic certificates. In the mean time, I had become acquainted with one of the country's great flight instructors, Joe Monterosso, who worked with me to earn my instructor's certificate, after which I went to work for him as a flight instructor.

After graduating from Spartan, (January '65) I returned again East, and after much perseverance, landed employment as a primary flight instructor at a small airfield west of Greenbelt, Maryland, taking up residence with my parents now living in Arlington, Virginia. I enjoyed some great experience while flight instructing, which by then had become a great love of mine.

Later in May of that year, I married my bride, Carol. It has been more that thirty-four years and eight children since we started that sometimes glorious, sometimes not-so-glorious, road together, thirty-three of which I have had the blessing of flying for two great airlines—nearly 18 years at Eastern Airlines, hiring on there as a Constellation (L-1049) flight engineer in September of 1965 and then with Continental Air Lines in 1983 in the midst of a bitter strike. I am now finishing 16 years at Continental. Indeed these 34 years have been more than interesting, having had the opportunity over the years to fly a multitude of aircraft types including the Lockheed 1049, Convair 440, Lockheed Electra, DC-9, Boeing 727 and 737, Lockheed 1011, and Airbus A-300. As of this time, I have accumulated nearly 23,000 hours of flying time, half of which has been as pilot-in-command for either Eastern or Continental. During these years I have stayed active as a Certified Flight Instructor (CFI), adding the Instrument Instructor rating to my certificate a few years ago. Then when we moved to the Crawford, Colorado Airport four years ago, I had the opportunity to teach Carol to fly, she earning her private certificate a couple years later. And, of course, raising a family the size of ours has truly kept us more than busy and has presented us with its own set of challenges and blessing.

As for some aviation statistics and specifics: I have been an active instructor for 35 years, though my choice to commute to my airline flying from rather remote rural homes in Missouri, Washington State, and Western Colorado have precluded my instructing in the airline operations—a work I would surely have enjoyed.

As for incidents and mishaps, I was involved in a rather unique double engine feathering of a Connie while a F/E in 1966 for which a full hearing was conducted and which was ultimately determined by the CAB to be an incident of "undetermined cause"—like I said, an interesting story. Then in 1986 while piloting my personal 1946 Taylorcraft in the Pend Oreille County Fair (Washington State) during a barnstorming routine, I discovered the insidious nature of fatigue while conducting low level aerobatics and contacted the ground prematurely causing substantial damage to me and the airplane. However, ten weeks later, I was back in the left seat of my Continental DC-9, hopefully a little wiser for the experience.

Otherwise, my flying has been a safe place to be over the past 38 years, my check rides and proficiency checks for the most part having been rated as well above average to excellent.

In any event, I have taken care to do the things that promote good health and to avoid those that don't and look forward with enthusiasm to the remainder of my airline career. After my retirement from airline flying, I plan to devote more time to active instructing and will operate a "custom" primary flight school from my home on the Crawford Airport.

Respectfully submitted

Personal and Aviation History

David H. Jenkins 261-50-6285

Name. Address and Other Personal Information

Name:

David Henry Jenkins

DOB

08/16/38

Age:

61

Address:

408 Peachtree Parkway North

Peachtree City, Georgia 30269

(770) 631-3435

Telephone: Facsimile:

(770) 486-8713

FAA Certificate Information

FAA Pilot Certificate Number:

1678133

FAA Flight Engineer Certificate Number:

2110899

FAA Medical

First Class

Type Ratings, Privileges and Restrictions

Airline Transport Pilot

DC-6, B-707, B720, B-727, B-737, B-747, B-757, B-767, L-1011

Commercial Pilot

Airplane Single Engine Land

Flight Engineer

Turbojet

Restrictions

None

Flight Experience

Approximately 20,000 Flight Hours with Command experience in DC-6, B-707, B727, B-737, B-747, B-757, B-767 and L-1011. Six years experience as a Flight Instructor and Check Airman on the B-747 and B-727 aircraft.

Military Aviation Experience

U.S.A.F. Command Pilot – 1959 Graduate T-34, T-28, T-33, RC-121 (Super Constellation)

Approximately 2,800 Flight hours with 1000 hours command in the RC-121. Combined single engine command time of approximately 400 hours.

MASS ANG Pilot with Flight experience in the T-33 and F-84.

Additional Aviation Related Experience

Served as Flight Instructor, Equipment Check Airman, Flight Standards Check Airman, Director Flight Training / Standards and Director of Flight Crew Resource Management. Responsibilities included planning, development, implementation and oversight of all Pan Am Flight Crew ground training and Cockpit Resource Management training.

Ancillary Aviation Experience

Served as a local union representative for two years for the Flight Engineer Association and served for six months as a special assistant to the Senior Vice President Marketing, Pan American World Airways, New York. Wrote, and directed the implementation of, the 1975 Pan Am advertising campaign.

Narrative

My aviation career has been colorful, exciting, rewarding and disappointing - seemingly all at the same time. It all started in a J-3 Cub.

A good high school friend and I were talking one day prior to my leaving for college and out of the blue, so to speak, he said, "Let's go flying." I looked at him to see if he was serious and it appeared he was, so I said, "Let's go!" It was on this flight, my first, that the bug bit me.

I went off to college for my first year and during the summer break that followed another friend mentioned that he was going to apply for Air Force Pilot training. I went with him. No moment in my life has had more impact on me and my life, my career and my happiness than the moment when I said; "I'm going with you."

My class date was delayed almost a year in order that my graduation would take place after my 21st birthday. I entered Aviation Cadet Class 60-B that was scheduled to graduate September 1, 1959, exactly fifteen days after my 21st birthday. I knew nothing of this at the time. All I knew was that I was excited – and that I was going to fly.

On September 3, 1959, two days after my graduation as an United States Air Force pilot and having been commissioned as a 2nd Lieutenant, I walked through the door over which hung the sign which read, "Through This Door Walks The World's Best Fighter Pilots", for the last time. I wasn't a fighter pilot yet, but I was going to be – I was headed for F-100 training. I was so good. All you had to do was ask me.

Disappointment soon followed. As I was about to leave Greenville AFB, the guard at the gate flagged me down and informed me that I was wanted in the personnel office for a change of orders. I was to be re-assigned to the RC-121 (The Super Constellation) at Otis AFB, Falmouth, Massachusetts. I didn't even know where Cape Cod was much less what an RC-121 was. Little did I know how fortuitous this assignment was to be. Not only was I the youngest USAF 2nd Lieutenant for a brief time, I was to become the youngest aircraft commander ever on the RC-121. I wasn't excited, but I should have been.

I flew the "Connie" for a little over two thousand hours, half of it as aircraft commander. I still longed for single engine fighters, but I was pretty pleased with myself anyhow. I was still good. All you had to do was ask me.

I started flying for the Massachusetts Air National Guard during my off days from the Air Force and was fortunate to develop some important relationships and to acquire some additional T-33 single engine flight time. Later, after being hired by Pan Am, I would renew my relationship with the MASS Air Guard and would fly the T-33 and the F-84.

It was upon a return from the Massachusetts ANG that I suffered my next big disappointment. I was involved in an automobile accident that caused me to be grounded. In turn, I requested a release from active duty as it was estimated that I would not fly for two years. There wasn't a single thing wrong – they just wanted to make sure there wasn't. I didn't want to spend two years in Thule, Greenland, waiting.

It nagged at me almost every day that not flying was awful. I couldn't wait until enough time had passed so that I might be able to get a civilian medical certificate and my pilot license. I applied to many of the major airlines, but I really had my eye on Pan Am. How lucky I was. On April 12, 1966, having received my First Class Medical, my Commercial and Instrument Certificates and having successfully passed all the rigorous testing given by Pan Am, I became an employee of Pan American World Airways. I was so good. All you had to do was ask me.

My Career with Pan Am spans all the Continents but one and many different airplanes and assignments. I had the utmost good fortune to fly with some of the best and most colorful airmen that have ever lived. I lived in Hong Kong for my first two years with Pan Am from which I flew as a DC-6 Type Rated First Officer to Vietnam with military troops as passengers. I lived in Berlin, Germany for eight years where I flew the B-727 as a Flight Engineer and Type Rated First Officer. I have been based in New York, Miami, Los Angeles, Honolulu and of course Hong Kong and Berlin as previously mentioned. I have flown the Atlantic, the Pacific and around the world. I have flown Africa, Europe, Asia, South America, the Middle East and the Far East. And since being with Delta, the USA as well. I have flown to the North and to the South, to the East and

West. And I would do it all over again if I could. It was grand in the finest sort of way. I was good. I was Pan Am. All you had to do was ask me.

Being overwhelmingly disappointed and elated at the same time is difficult to imagine. But that is exactly how I felt with Pan Am's demise and my acceptance by Delta Air Lines. My last Pan Am position was Director of Flight Training and Standards. I was at that time operating as a line qualified B-747 Captain and as a line qualified B-727 Captain. I was a qualified and active Check Airman on the B-747 and the B-727. I was additionally responsible for all Flight Crew CRM training. I was a busy guy. But I knew it was about over and I had to be ready. One moment a B-747 Captain – the next a B-727 First Officer. I couldn't have been sadder or happier. I may be good, but I didn't feel good. I felt lucky.

My flying with Delta started with the B-727 as a First Officer in New York. After only a couple of months I transferred to the L-1011 in Atlanta as First Officer. Then I was assigned to the B-767ER, back to the L-1011, back again to the B-767ER and finally to the B-737 as Captain in Cincinnati. This lasted for a year and then I found myself back in Atlanta on the L-1011 as a First Officer. About a year later I received a B-727 Captain assignment in Atlanta, and then as a B-767 Captain. I currently fly as a Flight Engineer on the L-1011 as I have attained the age of 60 and am no longer allowed to fly as a pilot.

I currently hold a First Class medical certificate granted by the FAA without limitations. I am qualified both physically and mentally. I can demonstrate my abilities as I have often done in the past. Nothing other than life and family is more important to me than my return to the cockpit as a line pilot and Captain.

I am good. I am able. I am ready. I would deeply appreciate your giving me the chance.

Thank you.

David H. Jenkins

ROBERT DEAN JOHNSTON

Born – 23 Jan. 1944 – Los Angeles, CA Airline Transport Pilot Type Ratings: B – 727, 757, 767, DC-3, MD-11, DASSAULT DA-20

U.S.A.F. Flight Simulator Instructor (T-37/T-38) 1965-1968

Private Pilot License – 1967

Flight Instructor (Ground, Instrument & Multi-Eng.) 1968-1971

- Created syllabus of instruction in conjunction with Lear-Seigler, Inc. for using general aviation simulators in civilian flight training.
- Instructed in Cessna, Piper, Beechcraft & Citabria aircraft.
- Total flight time approx. 3000 hrs.

Corporate Pilot – Tenneco Inc. – 1971-1985

- Flew Mitsubishi, Beechcraft, Fairchild F-27/227, Viscount Turboprops & Dassault Falcon 20 jet.
- Successfully managed several emergency situations including smoke in cockpit, landing gear failure and engine failure. Which resulted in safe landings with no injuries or aircraft damage.
- Total flight time approx. 9000 hours (6000 P.I.C.).

Airline Pilot – Air California/American Airlines – 1986-Present

- Boeing 727, 737, 757, 767, Douglas DC-10 & MD-11
- Worldwide Oceanic High Terrain All-Weather Experience.
- Successfully managed emergencies including Electrical/Generator Failure, Smoke in Cockpit/Cabin, Flap Failure, Pressurization Failure & Passenger Illness, which resulted in safe landings with no injuries or aircraft damage.
- Total flight time approx. 15,000 hours (10,000 P.I.C.).

Entire 33 year aviation career has resulted in:

- No FAA/FAR citations, warnings or violations.
- No simulator or aircraft checkride failures.
- No aircraft incidents, accidents or damage.
- No physical waivers on Class One Medical Certificate.

Current General Aviation Interests Include:

Active member of Florida Wing, Civil Air Patrol. Current Rank of Captain.

- Duties include Instructor Pilot and Orientation Ride Pilot for Cadet Members Age 13-17.
- Additional duties include arranging aviation field trips and career counseling.

I attribute this blemish free record to excellent physical and mental health, sound judgement and good crew resource management.

EDWARD E. KIRKPATRICK

My interest in flying was cultivated by my father, C. E. Kirkpatrick "Charlton or Charlie". A frustrated but, dedicated WWI admirer of pilots, who placed a 55 gallon oil drum on top of the picnic bench in our backyard, placed a hand crafted wooden machine gun on top of the cut-out/cockpit in the top, added wooden steps so this five year old could manage the leap from table top to mount and, I didn't stand a chance, I was hooked.

With that, after High School and a year of gassing, loading, de-icing and "honey buckets", I decided AFROTC was the way to go (although if you've never cranked up a P-51 at seventeen and taxied around behind the hangar on your night shift, you haven't lived.)

Four inauspicious years later at The University of Missouri, save my AFROTC grades and a love of Art and Handball, I graduated in June 1963. Thanks to Uncle Sam I had earned my Private Pilots License #1558343 and I was off to USAF Pilot Training. Later, at Vance AFB in Enid, OK I graduated "second" in my Class 65-C in flying ability to Mr. Basham, who had already amassed more flying time as a civilian than all sixty three of us put together! Anyway, I managed a "first" in T-38 flying however, I was assigned as a T-37 Instructor ...ah, the wisdom of it all. So, off to Del Rio, TX., with my new bride.

Here, at Laughlin AFB, I accumulated 1,800 hours as an Instructor with stints of duty in Academics, Flight Test and as an Officer Training Instructor in charge of 120 student pilots before I tired of training Vietnam bound pilots and, volunteered to join them in May 1968. I flew a big airplane, the "Spad". The highest attrition rate in the Air Force was tied between the F-105 "Thud" and the A-1E "Spad". The former carried the mail into North Vietnam and the latter, delivered the packages in person. I was delivering my third package, following veteran Rudy Nuhn who had delivered over 300 packages and was going home next week. His veteran roommate Lee Gunster, was sitting next to me on my final check-out mission in the Aschau Valley near Khe Sahn, when they opened up on us with truck mounted quad 50's. I rode it in, ejected, then returned and tried to recover Lee's body from our burning aircraft. The others in our Flight, Hobo 13 and Hobo 14 doubled back and circled the wagons while I straddled our bird. It blew sky high, knocking me off the top and into the jungle, beginning my love affair with helicopters. Lee and Rudy died instantly. A Jolly Green Giant pulled me out and I began a six month recovery to full flight status after being told I would never fly again.

Disappointed with my foreshortened tour in Vietnam I resigned my Regular Commission rather than subject my family to the rigors of another "telegram", as I felt at that time, service in any other way, was unacceptable. Thereafter, I began a B-727 career with Trans World Airlines as a Flight Engineer and Instructor at Breech Training Academy. This ended ten years and three furloughs later however, I had continued my flying in the Missouri Air National Guard (ANG) F-100C's. This coupled with "ferry flying" during furloughs, kept food on the table (as my family grew from one Labrador to three sons) and led to many adventures in and out of the Middle East, Europe and Africa. This was a big boys program and at times, almost as exciting as Vietnam, with more great pilots.

Among many others, I'll never forget Jake Wherli ex (?) CIA, in that high pitched voice so common to the real squeaker, as the engine in his Bonanza quit just 60 miles off the coast of Ireland and between starts and re-starts and up and downs, Sheldon and I tried to get our wings under Jakes and carry him the rest of the way in. Fortunately, it just kept stopping and going all the way to Shannon, where we spent the next two days recovering from a hangover. Going through Beirut when it was the jewel of the Mediterranean and coming back from Tehran next week when it was in flames, the port engines shut-down on our DC-8 to unload, the starboard side whining at idle and all the passengers on the floor again, while I do a little de ja vous a la Vietnam. Revolution in Lagos. Watching for Migs in Guinea, stay north of Bammako! Harley and I off to Paris, just like Lindbergh but, only 14 hours and Steve losing a magneto as we limped onto the beach in The Canary Islands.

My airline aspirations were in tatters but, my ANG and Air Force Reserve (AFRES) career were just beginning. I subsequently flew the "Phantom" and instructed in the "Thud" and "Warthog", rising to Squadron Commander in the latter and the best, A-10 unit of record for two years. Later, I volunteered and was accepted for a Pentagon, XOOTT Fighter Operations, Individual Mobilization Augmentee Tour and became an assistant to the Chief of all Fighter Operations for the USAF. I did analysis and recommendations on operational shortages, evaluated future test aircraft for Edwards AFB, watched us push Kadafi back into his hole (good) and suffered through our hostage crisis in Iran (bad), retiring after 23 years as a Colonel, accumulating about 4,500 hours in fighter aircraft.

Fortunately, the ANG and AFRES schedules allowed me to pursue my airline aspirations concurrently and I landed at Southwest Airlines in 1981. I rose to Captain, in a 225 man airline in 2 1/2 years and accrued over 17,000 hours as Pilot in Command in the B-737-200, 300, 500 & 700 models to date, while we added another 3,000 pilots. I have no accidents or, training failures. I have an excellent record, accruing over 23,000 hours total time, with many additional interests that include Commercial Ratings in corporate jets, helicopters, and seaplanes.

I have experienced engine failures on take-off and on the wing, hydraulic failure during landing, tire failures and anti-skid problems, pressurization problems, windshield failure, lightning strikes and electrical failure, loss of instruments, bird strikes, "near misses" and the normal business of dealing with every kind of rapidly changing weather, CAT III Approaches and wishing I had CAT III! I have delivered bodies, mail and freight and been exposed to every element of student training in and out of the simulator and in and out of or rather, chasing their aircraft. I have witnessed acts of courage upon the parts of my Flight Attendants in the middle of spontaneous fist fights, the calming of the passenger during bouts of severe weather, heart attacks and delivering a baby. If a B-737 doesn't feel right, act right or smell right, I know it and it gives our passengers the edge. But, to be honest, it is still interesting when the weather goes down or, we start dealing with the unusual. Mind you, I appreciate "clear and fifty" and the uneventful flight as much as anyone but, flying can still be as stimulating for me as it is for Jimmy Buffett. I love it.

Walter L. Klaus

Aviation and Personal Biography

I started my aviation career in September 1963 when I enlisted in the US Navy and entered preflight at Pensacola, FL. I trained in the T-34, T-28 and S-2 and received my navy wings and commission in May 1965. I flew the C-118 (DC-6) in the fleet until November 1968. I checked out as navigator, 3rd pilot, 2nd pilot and aircraft commander. I have over 2200 pilot hours of military time and earned two air medals in Viet Nam.

I was hired by Continental Airlines in November 1968 and flew second officer on the B-707 and B-727 and accumulated over 6000 hours. I have checked out as co-pilot on the DC-9, B727 and B737 and have flown over 6000 hours as a co-pilot. I have been rated and flown captain on the LR-jet, MD-80, B-737 and currently on the B-777. I have almost 7000 hours as a captain.

I have flown over 15000 hours and all emergencies were handled according to published procedures without further incident. I have never had an accident or incident nor any irregular violations nor have I let anyone else.

I helped found and served on the BOD of the Mile High Down Syndrome Association. I served as chairman of the hotel committee for local ALPA. I attend the United Methodist Church. I enjoy moderate exercise, fishing, golf and snowmobiling.

DAVID E. LAIRD Aviation Biography

Home address: 120 Cassell Road

Harleysville, PA 19438

Phone number: 215-721-1104

Date of birth: May 14, 1940

Certificates and ratings: Airline transport pilot: multiengine land, ND-262, DHC-7,

A-310, B767, B757, B727

Flight instructor: airplane; single, multiengine, and instrument

Total flight time: 24,050 hours

Total pilot in command: 14,300 hours

Air carrier experience: 1971-1973 Copilot on Beech BE8-T and Nord ND 262

1973-1987 Captain on BE8-T, ND 262, and DeHaviland DH-7

1987-1999 Copilot on Boeing 727, Airbus A-310, and Boeing 767ER

1999-Present Captain on Boeing 727

Current position: Captain on Boeing 727 for Delta Airlines

I began my flying career as a navigator for the United States Air Force on the KC-135. While in the Air Force, I took flying lessons at my own expense. In 1968, I left the Air Force with the rank of Captain having earned a commercial pilot's license with instrument and flight instructor ratings. From 1968 to 1971, I worked as a charter pilot and flight instructor, teaching private, commercial, instrument, and multiengine students. In August, 1971, I started flying as a copilot for Ransome Airlines, a commuter airline based in Philadelphia, which was affiliated with Allegheny Airlines (U S Air). Two years later I was promoted and flew as captain for 14 years. Ransome Airlines was a pioneer in the aviation industry. We were the first Part 135 airline to operate large aircraft. We also developed and operated RNav routes and approaches in and out of Washington National Airport. This was a great benefit to all users by safely increasing the traffic capacity of that airport. In 1986, Pan Am bought Ransome Airlines and allowed the pilots (including me) to switch from commuter flying as captains to mainline flying as copilots with Pan Am. In 1991, Pan Am declared bankruptcy. Delta Airlines bought a portion of Pan Am, which included the aircraft and routes which I was flying. Since that time, I have been flying for Delta Airlines as copilot on the Airbus A-310, Boeing 727, and Boeing 767ER. When my seniority number made it possible, I was able to advance to captain. Since October, 1999, I have been flying as captain on the Boeing 727. I have not had any accidents or incidents during my 36 years of flying. My flight time is equivalent to two years and nine months in the air. I enjoy flying and believe my experience is an asset to my company.

RICHARD LAUMEYER

I learned flying from a cropduster in Montana. Went into the Navy NAVCAD Program in 1960. I made 3 med tours on the Forestall. After my tour, I joined Pan Am World Airways in December 1965. With Pan Am I flew 707, DC-8, 747, and 727s. When Delta Airlines acquired Pan Am in 1991, I transferred over on the A-310. With Delta, I flew the A-310, 727 and currently flying 767-ER, captain based at JFK.

I am 59½ and have no past medical problems and still enjoy the job. I feel fully qualified to continue the job and request to do so.

Joseph D. Lea

DOB: 5/14/43

FLIGHT RATINGS

ATP: Airplane, MEL, Instrument

Written Exams: FEB/FEJ

Commercial Privileges: Airplane SEL Flight Instructor: Airplane SEL

Radio Operators Permit: Restricted FAA Class I Physical: No Restrictions

USAF: Command Pilot, Instructor Pilot, Flight Examiner Type Ratings: B737-300/500, B757/767, DHC-8/300

FLIGHT TIME

Total Flight Hours:

9793

Pilot-In-Command:

3133

AIRCRAFT FLOWN

Jet: B737-300/500, B767, B757, B727, F-4, BAe 146/200, Lear Jet, T-38, T-37

Turbo-Prop: OV-10, DHC-8/300, MU-2, King Air

Multi-Engine Prop: Seminole Single-Engine Prop: Cessna 150/172

SYNOPSIS OF FLIGHT EXPERIENCE

Feb 67 - Mar 68 <u>Undergraduate Pilot Training:</u> USAF, Laredo AFB, TX. Flew the T-37 twin engine primary jet trainer and the supersonic T-38 advanced jet

trainer.

Jul 68 - Dec 68 F-4 Fighter Training: USAF, MacDill AFB, FL. Advanced to First Lieutenant; completed course covering all aspects of fighter operations.

Jan 69 - Nov 69 1st Combat Tour: USAF, Cam Rahn Bay, R.V.N. Flew deep-strike missions into North Vietnam, and close air support missions throughout the R.V.N.

Feb 70 - Aug 70 F-4 Aircraft Commander School: USAF, Davis-Monthan AFB, AZ. Aug 70 - Jun 71 2nd Combat Tour: USAF, Udorn, Thailand. Combat Flight Leader:

flew air interdiction, close-air support, and combat air patrol missions throughout North Vietnam, Laos, and Cambodia.

Aug 71 - Apr 72 F-4 Squadron Pilot: USAF, Seymour-Johnson AFB, NC.

Apr 72 - Jun 72 3rd Combat Tour: USAF, Ubahn, Thailand. Flew strike missions deep into North Vietnam, facing some of the most concentrated enemy anti-aircraft artillery, surface-to-air missiles, and defensive fighter opposition known in modern warfare.

Jun 72 - Aug 75 F-4 Flight Examiner and Instructor Pilot: USAF, Seymour-Johnson AFB, NC. Selected to attend Squadron Officers School, a professional military development course.

Aug 75 - Dec 75 OV-10 Aircraft Commander School: USAF, Hurlbut Field, FL.
Transitioned to the OV-10, and joined cadre of fighter pilots with combat experience needed to bolster the ranks of Forward Air Controllers in Germany.

Jan 76 - Jan 79

OV-10 Major Command Flight Examiner: USAF, Ramstein AB, Germany. Responsible for standardization and doctrine development of close-air support for all USAF European operations. Collateral duties included inspecting all fighter wings in Europe and administering checkrides to all command Forward Air Controllers.

Feb 79 - Apr 79 Central Instructor School: USAF, George AFB, CA.

May 79 - Jul 82 Flight Commander and Assistant Operations Officer: USAF, George AFB, CA. My unit provided fighter training to Luftwaffe pilots, and I was specifically tasked to oversee all functions of the training program.

Jul 82 - Apr 87 <u>Staff Planning Officer:</u> USAF, Tactical Air Command Headquarters, Langley AFB, VA. Retired from the USAF as a Lieutenant Colonel.

Joseph D. Lea

DOB: 5/14/43

Jul 83 - Apr 87	<u>Certified Flight Instructor:</u> Navy Norfolk Flying Club, Norfolk, VA.
-	I helped other pilots obtain their Private Pilot ratings. Because of the
	extensive formal instructor training I received in the USAF, I was often
	given the students who were having difficulties in order to "rescue"
	their flying careers. One such student went on to earn his own CFI
	rating and become a Flight Instructor at Navy Norfolk Flying Club
	himself

Presidential Airways BAe -146/200 F/O Training: British Aerospace,

Hatfield, England.

Jun 89 Presidential Airways DHC-8/300 Captain Upgrade Training:

FlightSafety Canada, Toronto, Ontario.

Jun 91 - Aug 91 United Airlines B727 S/O Training: UAL Training Center, Denver, CO.

Nov 93 - Dec 93 United Airlines B737-300/500 F/O Training: UAL Training Center,

Denver, CO.

Mar 96 - Apr 96 United Airlines B757/767 F/O Type Training: UAL Training Center,

Denver, CO.

Nov 98 - Dec 98 United Airlines B737-300/500 Captain Upgrade Training: UAL

Training Center, Denver, CO.

SPECIAL AWARDS AND DECORATIONS

Jun 87

<u>Distinguished Flying Cross:</u> Awarded for extraordinary airmanship while flying a night, close-air support mission. On that night, a friendly base was under intense hostile attack and was suffering heavy damages and casualties. Despite extremely hazardous weather conditions, restricted visibility, and hostile ground fire, I continued a dangerous attack that resulted in heavy damages to opposing forces and thereby saved many friendly lives and much valuable equipment.

<u>Distinguished Flying Cross:</u> Awarded for extraordinary airmanship while flying a close-air support mission in Laos. Despite marginal weather conditions, restricted visibility due to smoke and haze, and intense anti-aircraft fire, I flew repeated dive bomb attacks, inflicting heavy casualties upon the hostile force.

<u>Distinguished Flying Cross:</u> Awarded for extraordinary airmanship while successfully engaging a North Vietnamese force of Mig-21s who were attacking US B-52 bombers. This mission entailed a 19-minute aerial dogfight over unfamiliar mountainous terrain at night, which resulted in the hostile aircraft breaking off their attack on the friendly aircraft. I received a letter from the Ground Intercept Controller praising my aerial combat skills and crediting me with saving the B-52 strike package.

<u>Distinguished Flying Cross:</u> Awarded for extraordinary airmanship while leading a close-air support mission, supporting a force of US ground troops being overrun by North Vietnamese tanks. This mission entailed successfully penetrating adverse weather conditions (conditions that had turned back numerous previous attempts) to accurately deliver munitions on the attacking hostile forces.

<u>Air Medal</u>: I received this award twenty-one times for specific incidences of superior airmanship during my three combat tours in Southeast Asia.

<u>USAFE Well Done Award:</u> While on a solo instrument mission in my OV-10 in Germany, a part of the control linkage jammed, rendering my aircraft nearly uncontrollable. Through a combination of quick thinking and my ability to stay calm under pressure, I was able to land safely, and was credited thereby with saving the aircraft. I received this award, which recognizes outstanding individual performance in handling aircraft emergencies.

DAVID A LIPPARD

Born March 17, 1941 Married with 7 Children

Military: 4 yr. US Army, Rank Captain, Duty: Aviator, Tour: Vietnam

Education: BA Math MSA Accounting

Synopses

- 1. Entered Military after graduation. 1963
- 2. Frontier Airlines Sept 1967 Getting ready to furlough in Mar 68 Left for
- 3. Pan American Mar 1967
- 4. Furloughed PAA 1970 (18 yr. furlough)
- 5. Worked small jobs in and out of Aviation until Zantop Intl (nonsked night freight) in Sept 1973
- 6 Furloughed Dec 1974.
- 7 Attended Graduate School 1975-1976 MSA Accounting
- 8. Worked Kellogs Co. as accountant 1977 till 1979
- 9. Returned to aviation with Zantop in Dec 1979 Till 1982
- 10. Got an opportunity to fly B727 with passengers with Air One in 1982
- 11. Air One went bankrupt in Dec 1984
- 12. Worked odd jobs till March 1985 when I went to Key Airlines as B727 Captain.
- 13 June 1985 joined United Airlines until present.

Flight Time as of July 31, 1999

A/C	Total	Cap	F/O	Eng.
A320	3900	3900		
B727	4712	2428	668	1616
B737	2523		2523	
B707*	248		248	
L188	3185	16**	3169	
DC6	708		708	
DC3	242		242	
Other	2640	1919	721	
Total	18158	8263	8279	1616

^{*} Time at controls only, i.e. as relief pilot no time riding.

I have never had any training failures and as an airline Captain I have never had an incident, accident, violation, emergencies or significant irregularities.

^{**} Was bumped back to F/O due to loss of contract.

Narrative History

I have wanted to fly since I was a child. I always knew I would be a pilot. Like many kids I built model airplanes. I also used to take out library books on aircraft systems and navigation. Learned to fly in college in 1962 Soloed 11/13/62. Entered the military upon graduation in summer of 1963 as 2nd Lt. Attended Ranger school and flight school at Fort Rucker. I was qualified in fixed wing single engine land, the L19 Birddog and L20 Beaver. Upon graduation from flight school, I was posted to Vietnam (Saigon) Jan 1965. I was shot down once. While taking off from a special forces airstrip in zone D, I was hit with multiple rounds of what was later determined to be 30 caliber armor piercing rounds. Took hits in the cockpit, radios, gas tanks, and seat. I was protected by an experimental plate made up of lead and fiberglass that was placed below my seat cushion. One round entered the plate and went all the way through until it pushed halfway out the top. If not for the plate, I would be dead. However, with the radios out and gas leaking into the cockpit from the holes in the overwing gas tanks, I was able to do a chandelle and land safely back on the airstrip with my passenger in one piece.

Following Vietnam, I was promoted to captain and assigned as the Aviation Detachment Commander to the 6th US Army Corps Headquarters and the personal pilot to the commanding general, Major Gen. De Orsa. During this assignment, on a flight from Fort Knox back to Corps HQ with the General and 3 colonels aboard. we experienced an engine failure in a twin Apache that was being tried as a back up aircraft for the general. After hand pumping the landing gear down, we executed a safe landing at an intermediate airfield. Later, I was given various additional duties as Aid de Camp to the General, and acting corps G-2.

Following the military, I worked for Frontier Airlines in September 1967. I flew F/O on DC-3s. In anticipation of a furlough, I applied and was accepted at Pan American World Airways in March 1968. I flew as a RCO (relief co-pilot) on the B707 to Europe and South America until the layoff in January 1970.

Following the layoff in order to stay in aviation, at my own expense, I obtained my CFI, CFI, CFI Multiengine, and my ATP in an Aztec. I worked many jobs from flight instructor, charter pilot, manager of FBO, to flying scheduled night freight for Zantop in September 1973.

When I joined Zantop, I was initially qualified as F/O on the DC 6 eventually working my way up to F/O on the L188. As a F/O, I experienced many in flight precautionary engine shutdowns to the point it almost became routine. I gained a great deal of experience in how to handle many irregular situations.

In 1975, I was again furloughed. I then decided to quit aviation and get a ""real" job. So I returned to college to get my masters degree. At this time, my father offered to pay all my expenses including tuition and books if I gave up flying, turned down any future recall and went to work for him. Not wanting to give up any chance to return to flying, I turned him down and paid all my own expenses. I went on to graduate from Western Michigan Univ. with a 4.0 average and highest honors with a Masters of Science in accounting. I then worked for Kellogg Company. Although Kellogg was a fine company and I had been promoted 3 times in two years, I missed aviation so much I was willing to take any flying job available. Fortunately Zantop was recalling again, so I went back to flying L188's in December 1979 as an F/O. I later was checked out as Captain on the L188 but before I got to fly we lost our log air contract and I was bumped back to F/O.

When I found out that a company flying B727 flying passengers during the daytime was looking for pilots, I applied. In 1982, I was hired by Air One in the start up class as a B727 F/O. Within six months I was a captain. I flew captain up to the day I showed up for work and the door was padlocked and the planes were repossessed in Jan 1985.

After working odd jobs for 3-4 months I hired on with Key Airlines out of Las Vegas flying Captain on the B727. This company was a terrible company so when United was looking for pilots in 85 I immediately applied and was hired. I started as a flight engineer. on B727, then F/O on B737 and DC-10. I made captain on the B727 in 1990, and have flown captain ever since . I am now on the Airbus 320. I love this company and the flying I do. I have also been active in previous years putting on presentations to kindergarten, 1st and 2nd grade students about aviation.

KENNETH A. MacGILLIVRAY 2813 Timber Neck Trail Virginia Beach, VA 23452 (757) 486-3755

Aviation Milestones

- ♦ First solo, October 1959
- ♦ Commercial, instrument rating, May 1960
- ♦ Aircraft carrier qualified, single engine planes, May 1960
- ♦ Carrier qualified, Multi-engine planes, November 1960
- ♦ Designated naval aviator, December 1960
- ♦ Air Transport Rating, 1963
- ♦ Graduated from US Navy Test Pilot School, February 1972
- ♦ Selected check airman for 121 air carrier, February 1989

Experience

- ♦ 14,500 hours pilot time, all accident free
- ♦ 10,000 hours pilot-in-command time
- ♦ Flew 60 aircraft types, from Cessnas, gliders and transports, to Mach 2 fighters
- ♦ Type-rated in DC-9, BAE-146, YS-11, and CV 240/340/440

Education

- ♦ BA History Villanova University, 1959
- ♦ BS Electrical Engineering U.S. Naval Postgraduate School, 1966
- ♦ Postgraduate study University of San Francisco, Florida Institute of Technology, and Embry-Riddle Aeronautical University

Naval Service 1959-1985

- ♦ Attained rank of Captain (O-6)
- ♦ During 14 service flying assignments, including operations with 5 aircraft carriers, I flew 8800 accident free hours. By volunteering to fly whenever possible, including after hours maintenance, ferry and test flights, I completed 26 years of active duty with more flight hours than any other naval aviator. At retirement I was current to fly 4 aircraft.

MacGILLIVRAY (page 2 of 4)

- ♦ First initial tour pilot in Navy transport squadron to achieve aircraft commander designation 1964
- ♦ Selected Navy's flight instructor of the year 1968
- ♦ Winner of Navy League's David S. Ingalls Award for outstanding flight instruction
- Flew Viet Nam combat missions from USS Bon Homme Richard (CV-31); won award as outstanding squadron aircraft maintenance director among the 10 squadrons embarked 1970
- ♦ Selected for Research, Development, Test and Evaluation (RDT&E) squadron in electronic warfare projects at China Lake, CA 1971
- ♦ Graduated, U.S. Naval Test Pilot School (TPS), Patuxent River, MD -1972
- ♦ Accepted as Member, Society of Experimental Test Pilots 1973
- ♦ Flew as project and lead pilot on numerous test programs involving inflight engine shutdowns
- ◆ Developed inverted flight/zero "g" fuel tank for BlueAngels aircraft after inflight engine shutdowns occurred from fuel starvation; demonstrated safe envelope for all Blue Angel maneuvers including emergency procedures for boost feed pump failure 1974
- ♦ Adjunct lecturer on hazardous testing to Air Force TPS (Edwards AFB, CA) and Navy TPS
- ♦ Commanding Officer of jet squadron 1976-77
- ♦ Wing Commander for 12 squadrons 1981-83
- ♦ Commanding Officer, Naval Air Station 1983-85
- ♦ As CO, the NAS was one of 3 Navy (12 total from all services) bases chosen as a Model Installation by Secretary of Defense
- ♦ Awarded numerous personal medals including Meritorious Service (2) Navy Commendation (3) (combat "V"). Air Medal with 10 Strike Flights device, etc, a total of 16.

Civilian Flying Experience 1985-2000

- ♦ Presidential Airways B-737, BAE-146
- ♦ Airborne Express YS-ll, DC-9, DC-8 (as flight engineer since age 60) Check Airman 1989-93

MacGILLIVRAY (page 3 of 4)

Personal Data - Childhood

- ♦ Born: Philadelphia, PA 1937
- ♦ My father: Gerard Augustine MacGillivray 1904-1989
 MIT trained chemist....died of smoking related emphysema
- ♦ My mother: Elizabeth (Sullivan) MacGillivray 1903-Homemaker...in excellent health, walks daily at 96 years of age
- ♦ My parents married in Boston in 1928 and had 4 children
 - ♦ Jeanne 1929 -widowed; CEO's administrative assistant health excellent
 - ♦ Donald 1933-1987-Type II Diabetes; failed to take timely insulin dose
 - ♦ Kenneth 1937 Health excellent
 - ♦ Elizabeth 1940 Health excellent

Childhood locations

- ♦ Philadelphia 1937 1941
- ♦ Los Angeles 1941 1947
- ♦ Evanston, IL 1947 1959

Secondary Education Evanston Township High School 1951-1955

- ♦ Ranked 5th among 556 graduates
- ♦ Awarded prizes for prose and poetry, nationally published
- ♦ Attended Boys' State
- ♦ Williams College Award for outstanding junior year leadership
- ♦ Swam on 2 state championship swimming teams
- ♦ Placed first in state high school piano competition (3 years)
- ♦ Winner of numerous solo piano contests in Chicago area
- ♦ Performed on WGN television (twice)
- Won scholarship for piano study with Rudolf Ganz, Chicago Musical College president
- ♦ Won Honor "E award for varsity athlete with highest scholastic average
- Accepted at numerous colleges including Harvard, Yale, Princeton, Notre Dame, Amherst, Williams
- ♦ Won NROTC scholarship
- ♦ Held various offices in student council, writers' club, school orchestra, church youth and YMCA clubs

MacGILLIVRAY (page 4 of 4)

 Selected city of Evanston's male teen of the year and awarded 3 day trip to New York City (my first flight experience) June 1955

<u>Undergraduate Education</u> - Villanova University 1955-1959

- ♦ BA in history with minor in mathematics and English
- ♦ Poetry published in collegiate press
- ♦ Stints on rifle and swimming teams
- Held various leadership positions in NROTC, glee club and social organizations
- ♦ Class president
- ♦ University Singers president (2 yrs) and piano accompanist/soloist (4 yrs)
- ♦ ROTC Color Guard as sophomore and company commander as a senior
- One of 5 midshipmen to sail 8 weeks with Secretary of Navy guests from Norfolk via South America to San Francisco
- Ranked first in officer aptitude ranking by peers and superiors
- ♦ Selected for Navy Flight School

Personal

- ♦ Married Una May O'Connor on 29 December 1962 in Syracuse, New York
- ♦ Three children: Theresa (MacGillivray) Evans born 1964
 Beth (MacGillivray) Hoover born 1965
 Kenneth, Jr. born 1967
- ♦ Three grandchildren: Elise Catherine Evans 4 years

 Marie Clare Evans 2 years

 Caroline Anne Evans 6 months

My wife of 37 years, from tiny Wanakena, NY, is a school teacher who job shares so she can also pursue a professional storyteller's career. A graduate of NY's Cortland State, who as a child was taught 8 years in a one room school house, she is a former Teacher of the Year from Virginia Beach's 6000 teachers. She has a Masters degree in Reading and Storytelling Arts from East Tennessee State University near Jonesborough, the storytelling capital of the U.S.

With both of us enjoying our respective careers while looking out for our mothers in their mid-ninety's and assisting 2 generations behind us, we have miles to go before we sleep.

Kenneth A. MacGillivray 355 30 0087 (experience addendum)

Emergencies:

Landed an A-4 Skyhawk on USS INDEPENDENCE at night on a pitching Mediterranean sea with all instruments, flaps, electrical systems failed by lightning stroke. Rain obscured front windscreen and only verbal guidance by landing signal officer got me aboard safely.

Lost engine in an A-7 Corsair II at 33000 ft. above clouds departing NAS New Orleans. One of only a few test pilots authorized for jet dead stick landings, I glided 35 miles to land at Maxwell AFB Montgomery, Alabama. This was catalyst for hot JP-4 (jet fuel) flame out investigation which I headed for the Navy.

On a climb out from Patuxent River in an F-4 Phantom one grey Sunday morning, a glint of flame was observed on a C-130 aircraft. Soon a sheet of flame enveloped its wing. Switching to an emergency frequency, I spoke to the stricken aircraft pilot and the control tower. I assumed on scene commander responsibilities while the aircraft crash landed and the crew of 11 escaped the burning aircraft. I relayed information to base and stayed at site until rescue craft arrived.

At Meridian Mississippi, on a low ceiling (300 feet, 1 mile visibility) day, I took a flight student on top of the clouds at 16,000 feet for instrument flight syllabus training when a power adjustment caused loss of the generator on my single engine T-2A Buckeye airplane. I noted battery power being rapidly depleted and essential instruments failing. Joining a sister squadron's aircraft, I explained my situation with hand signals. Clinging in tight formation, I followed the other plane through thick clouds on a jet penetration and radar approach, matching his every speed brake, flap and landing gear movement. At 200 feet I saw the ground, departed formation, and landed safely.

Returning to a wintry Virginia after a 7 ½ hour over- water flight from Puerto Rico in a VIP configured Convair 440, I lost a generator during descent. At the destination airport the single runway was slick, with freshly plowed snow piled on both sides. With reduced electrical

Kenneth A. MacGillivray

(experience addendum) (page 2 of 2)

capacity, attempting the high amperage draw of reversing both the propellers on landing risked losing all electrical power, re-accelerating the aircraft and skidding off the runway. A similar type aircraft had crashed in the snow bank earlier that day. The winds were North at 30 knots and gusting, while the runway was oriented West. Upon landing I reversed one engine to maintain directional control and prevent weather cocking off the upwind side of runway. The landing and rollout were uneventful. Prior to the approach I had consulted with the senior Navy admiral who had family and distinguished guests aboard, asking if he wished to land at a different airport. "No, he said, I have complete confidence in your ability."

One snowy night, transporting 4 nuclear weapons westward across the Sierra Nevada mountains, an engine failed in our twin- engined Convair 340. Unable to hold the 16000 feet safety altitude, and losing ground in the battle to keep ice off the wings and tail, the aircraft descended off the radar screens of Air Traffic Control at Oakland. (I visited the Hayward, California ARTCC later and controllers felt certain we had crashed). The plane was leveled off at 8500 ft and landed safely in the San Joaquin valley at castle Air Force Base in Merced.

One night in a YS-11 to Memphis above a cloud deck, smoke filled the cockpit. Donning an oxygen mask I continued to fly the aircraft while the other pilot used the electrical smoke and fire checklist. As he isolated more of the aircraft's vital systems by pulling circuit breakers to quell the smoke, I soon had no instruments or lighting to fly with. Holding a small flashlight in my teeth to see airspeed and altitude, I referenced overhead stars and a thin ribbon of sky-cloud horizon to keep the plane upright. Declaring an emergency, we landed safely at Adams Field in Little Rock, Arkansas.

One day, operating in an air show firepower demonstration in the Atlantic off the USS INDEPENDENCE 100 miles off Norfolk, a fuel dump switch stuck open in my A-4 Skyhawk. Suddenly, I had but 6 minutes of fuel remaining. Although flying formation in a 16 plane group (a diamond of diamonds, one of which I was leading), I passed the lead to my wingman and flew behind a tanker plane in a neighboring formation. I asked him to stream his drogue from his tanker package. I then in-flight refueled while the entire group did a fly-by across the ships' watching dignitaries. I returned safely to NAS Oceana wit my 3 wingmen 30 minutes later.

JOE R. MCCABE

Pilot with 33 1/2 years of around the world commercial airline heavy jet experience.

Professional baseball player 1960-1966

Purdue University Graduate - All-Big Ten and Honorable Mention All-American baseball player

Flying Experience:

Pan American World Airways: 4/66 to 2/86

co-pilot, 2nd officer, flight navigator 16,000+ total flight hours

Unites Airlines: 2/86 to present

captain, co-pilot, 2nd officer. 7,120+ total flight hours 4,655 as captain

ATP ratings on: B-707, B-720, B-727, B-737, B-747, B-747-400, B-757, B-767, B-777, DC-10, L-1011

My desire for the educational and physical challenges to fly the equipment is evident by the ATP ratings listed above. I have no accidents, incidents, violations, training failures, with only one emergency while in command (an explosion caused by a fuel hose coming loose from the fuel controller and the fuel spraying around the engine and igniting). The latter resulting in commendations from the company as well as a few passengers.

OBJECTIVE BIOGRAPHY CAPTAIN J. PETER MCELROY 25 JULY 1943

Flying has always been a part of my life. My father, Brooks L. McElroy, started flying in 1927 and actually knew Orville Wright. My mother, Leona McElroy was the first female pilot in Berks county, PA, who incidentally was taught by my father.

My father founded Reading Aviation Service in 1939. It is difficult for me to remember weekends of my youth not spent at the Reading Airport "hanging around" the airplanes. As a result of my exposure, my love of flying was assured. I started flying when I was 6 years old, but due to outside influences, I spent 2 years in accounting working for Price Waterhouse and Arthur Andersen. I then gave up those very lucrative positions to fly for \$80 a week with Suburban Airlines. Since that time, I have flown for TWA, British West Indian Airline (BWIA), in the Arabian Desert for Mobil Saudi Arabia, Piedmont Airlines and US Airways, where I am presently a Boeing 757/767 captain.

In the 33 years I have been flying, I have accumulated approximately 27,000 flight hours including approximately 23,000 hours as pilot in command, never having had an accident or incident, nor failed a check ride. During that time I have had to handle all manner of situations including weather problems, icy runways, engine failures, emergency landings, passenger problems, etc. During my career I have flown everything from Hot Air Balloons to Piper Cubs to Boeing 767's, always receiving high praises on my check rides. Flying continues to be the only career I have ever wanted.

Sincerely, Captain J. Peter McElroy

EDWARD E. MOON

- Born December 14, 1938 and reared in Miami, Florida.
- Graduated from Northwestern Senior High School.
- Attended Hampton University
- Graduated from Tennessee State University. BS Degree in Aviation Education Who's Who in American Colleges and Universities Distinguished Military Graduate, AFROTC
- USAF Tactical Fighter Pilot and instructor in the F-100 Super Saber.
 Awarded the Distinguished Flying Cross and the Air Medal with Four Oak Leaf Clusters.
- Completed US Army Airborne Course.
- District of Columbia ANG Tactical Fighter Pilot in the F-100 and F-105.
- Navigator, Flight Engineer, and Pilot with Pan American World Airways for 25 years.
- Currently DC-10 Second Officer with United Airlines based at ORD (Chicago).
- FAA Licensed Flight Navigator and Flight Engineer.
- Airline Transport Pilot's License with type ratings in the B-707/720, B-727, DC-9, B-747, B-757/767, & B-777.
- Founding member, first Board Chairman, and immediate past President of The Organization of Black Airline Pilots, Inc.

The desire to fly came to me while a young boy, living under the traffic patterns for Miami International Airport and the Opa Locka Naval Air Station. My first flight however, did not occur until I was a student at Tennessee State University. My interest in the interim was fueled by a family friend who had managed to get a Private Pilot's License, but had to stop flying for financial reasons. I had flying as a college course and under the AFROTC Flight Indoctrination Program. Neither permitted me to get a Private Pilot's License.

After graduating from college, I entered U.S. Air Force Pilot Training as a Regular Commissioned Officer. I was first in my class to solo in the primary phase (T-37) of training. Later, I was the youngest pilot in my squadron to become an Instructor Pilot (F-100). In 1966, I was one of twelve finalists for selection to fly with the USAF Thunderbirds. I was told I was not selected because they chose finalist who were applying for the second time. I did learn later, through an unofficial source, that there was quite a heated discussion on whether they were ready to have an African-American Thunderbird.

I joined Pan Am in 1967 as a Relief Pilot/Navigator. In 1968 my Guard unit was activated with the Pueblo Crisis. I was again an Instructor pilot in the F-100. After deactivation, we transitioned into the F-105.

When I returned to Pan Am, I switched over to Flight Engineer (Second Officer) on the B-707. Unfortunately, because of seniority (or a lack there of) I was to spend most of my

Pan Am career as a Flight Engineer. I was also a Flight Engineer on the B-727, L-1011, and A-300. To maintain pilot proficiency, I periodically got type ratings using the "G I Bill" and personal finances. I earned type ratings on the B-707/720, B-727, and DC-9. In 1985 I moved from Flight Engineer on the A-300 to First Officer on the B-747. That position required a type rating. After five years, and just before Pan Am shut down in 1991, I was bumped back to First Officer on the A-300. I flew one productive A-300 trip before shutdown.

In the time between Pan Am and United I flew as a B-747 Reserve Captain and First Officer in a charter operation with Garuda Airlines of Indonesia. We flew Moslem to Jeddah, Saudi Arabia on their pilgrimage to Mecca from Jakarta, Indonesia and back.

Pan Am shut down in December 1991, and I interviewed with United for a pilot position in January of 1992. I was hired in February 1992, but was put in the pool until August '92. I was initially hired as a B-727 Second officer. In March of '93 I moved to First Officer on the B-727. In November '93 I transitioned into and received a type rating in my first "glass" aircraft, the B757/767. In December '97, I entered training as a First Officer on the B-777. The Captain with whom I did my aircraft training wrote complementary remarks in my training report. Apparently he also gave a report to the Chief Pilot at my domicile for he wrote me a letter complementing me on my performance. (Letter attached) In December of '98, after my 60th birthday, I entered training as a DC-10 Second Officer. I am currently performing in that position.

I am ready, willing, and able to resume piloting at any time

PHILIP B. NASH

DOB:

April 4, 1938 Cleveland, Ohio

Raised:

Bristol, Virginia 1947 - 1961

Education:

University of North Carolina, B.A. Political Science, 1961

Dean's List 1960-61

AFROTC: Commissioned June, 1961

AFROTC: Flight Instruction Program 1960 -1961

Military:

United States Air Force, 1961 -1965

Undergraduate Pilot Training, 1961-1962

C-130 Pilot: Charleston AFB, S.C., 1962-1965

Operation Tidal Wave, Viet Nam, 1963

Presidential Unit Citation, 1963

Commercial Aviation: Continental Airlines, 1965 - Present B707 Flight Engineer, 1965-1970

B727 Captain, 1970-1983

Strike against Frank Lorenzo, 1983-1985

B737 Captain, 1986-1993 IXC-10 Captain, 1993-1995 B757 Captain, 1995-1998

B757 Flight Instructor, 1995-Present* DC-10 Flight Instructor, 1996-1997 *

*(Alternately dual qualified as B757 and DC-10 Flight Instructor in Continental Airlines Flight Training Department)

Flight Time:

25,000+ hours including 21,000 hours Pilot in Command time

No accidents, incidents, training failures, emergencies or significant

irregularities.

Age 60 Retirement:

April 4, 1998

Currently:

B757 flight Instructor while holding a DC-10 Engineer position as over 60

down hid pilot.

Certified to administer proficiency checks to pilots and conduct area qualification (international overwater navigation ETOPS) from the jump

seat.

Qualified to flight test Ground school instructor

DAVID P. NAZARIAN

I was born in January 1944. My father was away, getting ready to walk across Europe. He would return, and father 6 more children, a total of 9. My mother, an Irish Catholic, cheerfully (most of the time) raised her brood, while my father worked very hard to provide for us. He was a bakery products deliveryman. Although he was a staunch unionist, he imparted to me a fierce independence and an attitude of self-reliance. My mother, undoubtedly influenced by the writings of Ayn Rand, was close to being a libertarian. It made for interesting dinner conversations.

My studies came rather easily, with a strong interest in the humanities. But it was athletics that took me to college. I loved the feeling of running. This was 1961 – long before Ken Cooper and Jim Fixx. I competed in track and soccer for the 8 years of high school and college, and have been running consistently since 1957. It has served me well. Accomplishments in college include President of the Varsity Club, and fraternal affiliation.

Having been raised in the era of cowboys and Indians, cops and robbers, and GI Kelly, I had a strong identification with justice, right and wrong, and the success of liberty. Also, in those years, service to your country was considered honorable and a duty to fulfill. I became part of the US Marine Corps in 1964, in their 'PLC' program. I had had an inkling that I would like to be a pilot, influenced again by the popular culture, but also by the adrenaline produced by a young man contemplating the thought of going really high and really fast.

I was graduated and commissioned in June; married in July; and started flight school in August of 1965. I was so 'gung ho'; I couldn't get my hair short enough nor do enough pull-ups, sit-ups, or 3-mile runs. My experiences in flight school and Viet Nam changed all that. I completed the Naval Training at Pensacola and other Naval Air Stations, including carrier qualification, in September 1966. I knew, from my first 'hop' at Saufly field in a T-34 that the feeling of flight suited me well; a way to be free, truly "slipping the surly bonds of earth..." It was exhilarating then, and it still is, 34 years later. I still recall how cocky I was, with all of 250 flight hours. While in the Training Command, I flew the T-34, T-28, and H-34, and had a clear record, with no remedial work. The 'needs of the service' required me to go through the helicopter pipeline. While in flight school I had several encounters with fellow Marines who turned out to be self-serving hypocrites. It was a valuable and necessary lesson, but nonetheless disappointing. Those experiences determined that the Marine Corps would not be a career for me.

Viet Nam was also a sobering experience, but more in the area of survival. I checked in to my squadron in October 1966, and was "in country" by December. Less than a week later, one of my flight school contemporaries was killed. Welcome to prime time.

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There were three episodes that occurred in my time there that have had a lasting impact on my views about flying and people. Shortly after the above-mentioned incident, I found myself in a night action, involving a number of aircraft in close proximity, bad weather, and hostile fire. It took me several days to get my heart back down to where it belonged in my chest, but also taught me some very valuable lessons about risk taking while flying. The second experience involved laying down close air support to Marines under heavy enemy fire. I was wingman in a section flying the UH-1E gunship. The lead could not, would not, and did not fire at the targets indicated. I did, repeatedly, and effectively. The ground Marines involved in that action sought me out to recommend a decoration. I declined, knowing that my lead that day was acutely aware of his hesitancy and did not need to have that fact reinforced by me. Knowing when to be assertive in a threatening situation, and being able to sit on your ego were lessons never forgotten. Lastly, being shot down and surviving, both the crash landing and the thankfully rapid rescue, showed me in vivid 3-D the role that luck and good fortune play in all our lives. The people involved in this incident performed flawlessly and demonstrated the inherent bravery of men faced with great personal risk, much to my eternal gratitude. While in Viet Nam, I flew over 200 combat missions.

I completed my one-year tour, and at the end, while in Japan, I transitioned to jets, flying the TF-9J and the TA-4F. When I returned to the US, I completed my obligation, flying the OV-10A, a twin turbo-prop. I left the active Marines a Captain. My collateral duties included flight scheduling officer in Viet Nam and legal officer after I returned. The time was 1969; I had accumulated about 1600 hours and had a clear record in terms of incidents or accidents.

That period in time was one of economic recession, and although I was interviewing with several airlines, the hiring stopped just as I was getting out. In 1968 my son was born, so, with a family to support, and no flying jobs, I went to work as a stockbroker for a regional firm that no longer exists, Bateman Eichler Hill Richards in Los Angeles. I also joined the USMC Reserve at El Toro, flying the OV-10.

Three years later, February 1973, I was hired by American Airlines. There was a 2-year furlough (1974-75), during which I operated and promoted professional tennis events. After recall, my tenure with American has been continuous. The twenty-five years I have been with American have been interesting, challenging, and rewarding. For five years I was F/E on the Boeing 727. This was a valuable time spent watching and learning from senior Captains, many of whom were WW II veterans, absorbing the wisdom they willingly dispensed. Then for five years I was a F/O on the 727, gathering experience and flying all over the US, Mexico and Canada. Next came two years as a F/O on the Boeing 767, one domestic and one international. For the last thirteen years I have been a Captain, five years on the 727 and the last eight on the 767, all but three years flying

international to Europe, the Caribbean and South America. My flight time is nearly 18,000 hours. All of my training and recurrent training have been quite satisfactory. As a matter of fact, after my last visit, I received a letter from the Chief of Training, commending me for my preparedness and fine performance. Quite frankly I didn't feel I had done anything more than what I normally do to prepare for training.

The point is, that as a seasoned, experienced professional, one *brows* what needs to be done, and when. All of the countless hours spent in operations, on the flight line, in the air, give one a perspective not easily achieved except by having put in the time. And for all that time that has been put in, I have not bent any metal, blown any tires or lost any engines (This is where one looks for some wood). In large measure I give credit to fine maintenance, good operations support, well-trained crews to work with, and that certain percentage of good fortune that follows all of us in what we do. Most importantly though, my rock solid foundation in flying is that safety is utmost, and everything is subservient to it. All of the decisions I make as pilot in command are subjected to this risk analysis: "Is it safe?" That has served me well and will continue to do so. Finally, in working with other people, I judge them by their competence and performance. For those that fall a bit short, I try to help them along while not suffocating their self-confidence.

While gaining experience, proficiency and professionalism in my flying career, I have pursued many and varied interests personally. While living in Massachusetts for 12 years (1976-1988), I was instrumental in starting the youth soccer leagues that are so successful there now. I served in various capacities, up to President of the county league and VP of the State organization. I also volunteered in many areas of the Peabody Museum of Salem, a very charming and important maritime museum. Sailing and diving also were activities I enjoyed while living in New England.

I am still married to the wonderful girl that said 'yes' 34 years ago. A move to Virginia in 1988 found us living in the country with a bit of land to have the horses my wife always wanted to return to, and to pursue our love of gardening. Our grounds were included on a garden tour last spring. We have taken up the sport of tennis, playing and competing, often travelling to tournaments in Europe, Mexico and the US. Travelling has always been a large part of our lives. We have visited a number of countries all over the world; being enriched by the experience of different cultures. My interest in the humanities is still quite keen, particularly history and philosophy. I also have a strong interest in Baroque music, especially French Baroque Opera. Our son is living and working in Manhattan as an Art Director in the field of 'New Media.' We are very proud of him.

Life is good.

Biography Of J. William Nelson

Born on a farm outside of Devils Lake North Dakota in 1936, J. William Nelson (Bill) knew shortly after he saw his first airplane that all he really wanted to do was fly. His path to that end took him first to North Dakota State University in Fargo, N.D. and the Air Force R.O.T.C. and from there into the Air Force Aviation Cadets in 1959.

In the Air Force he rose from Second Lieutenant to Captain by 1965 and from copilot to aircraft commander, flying the giant KC-135 tankers for the 905th ARefS at Grand Forks Air Force Base, North Dakota and on TDY assignments to Spain, Turkey and England.

In 1966 Mr. Nelson joined Continental Airlines as a Second Officer on the B707 and became a Captain on the B727 in the Denver base in 1976. He subsequently flew as Captain on the B747 and DC10 in Los Angeles, Honolulu, Houston and Newark, flying primarily international routes.

From 1983 to 1985 Continental Airlines the pilots struck as a result of Continental's use of bankruptcy as a tool to break union contracts. During this time, Mr. Nelson became a real estate broker, to support his family; during this time as well, his and other pilots' retirement funds of the Continental pilots were depleted.

Following the strike, Mr. Nelson returned to work at Continental in 1986. Among his later aviation accomplishments is the successful evacuation mission he captained to Beijing in 1989, bringing diplomats and their families out of China during the upheaval surrounding the student uprising.

Mr. Nelson was married for twenty-three years to Betty Hurtt-Nelson, lived in Denver and had two children who are now grown. After an amicable divorce he moved to Santa Barbara, California where he married his second wife Judy and continues to live with her and his two younger children, ages four and six. For twenty years he has been a disciplined jogger, logging ten or more miles weekly. He is also an avid golfer and enjoys bicycling with his family.

In December of 1996, Mr. Nelson faced mandatory retirement from his position as Captain. Since that time he has maintained his first class medical certificate, and has continued to fly as a DC-10 Second Officer, based in Newark.

RESUME OF JOHN WILLIAM NELSON

535 Flora Vista Drive Santa Barbara, CA 93109 (805) 963-9200

QUALIFICATIONS

Ratings - Air Transport Pilot DC-9, DC-10, B727, B737, B747; Flight Engineer B720/707, DC-10; Flight Instructor single engine land, Cert. No. 1655773.

Hours - Approximately 21,500 total, 11,500 as Captain.

EMPLOYMENT

1966 - Present

Continental Airlines

P.O. Box 4607

Houston, TX 77210

1959 - 1966 United States Air Force

905th ARefS

Grand Forks, AFB. ND 58301

EMPLOYMENT DETAILS

1966 to Present - Continental Airlines

January 1996 to Present flew Second Officer DC-10 from Houston and Newark bases

July 1996 to December 1996 flew Captain DC-10 from Houston base

November 1993 to June 1996 flew Captain DC-10 from Los Angeles base

June 1990 to October 1993 flew Captain B747 from Newark base

June 1987 to May 1990 flew Captain DC-10 from Honolulu base

March 1987 to May 1987 flew Captain B737 from Denver base

January 1986 to February 1987 flew First Officer B727 from Denver base

October 1983 to December 1985 not flying due to corporate bankruptcy and resulting strike

June 1976 to September 1983 flew Captain B727 from Denver base

RESUME OF JOHN WILLIAM NELSON (CONT.)

June 1974 to May 1976 flew First Officer DC-10 from Los Angeles base.

May 1971 to May 1974 Air Transport rated as B727 Captain, flew the line as Captain as needed from First Officer position

August 1969 to April 1971 Air Transport rated as DC-9 Captain, flew the line as Captain as needed from First Officer position

March 1967 to July 1969 transferred to Denver, CO and flew as First Officer DC-9

April 1966 to February 1967 hired and trained as Second Officer B720/707 in Los Angeles, CA. Flew MAC contract and domestic flights. Rated as Check Airman.

1959 to 1966 - United States Air Force

June 1965 to March 1966 Aircraft Commander KC-135 with assigned crew.

March 1961 to May 1965 Copilot KC-135 to 905th ArefS, Grand Forks AFB, ND.

August 1959 to February 1961 Air Force Aviation Cadet Program Lackland AFB, TX and pilot training at Spence AFB, GA and Vance AFB, OK.

GENERAL

Member Air Line Pilots Association; worked on air safety and employee assistance committees.

Member Independent Association of Continental Pilots.

EDUCATION

1954 - 1955 Attended North Dakota State University

and Fargo, ND

1957 - 1958 Aeronautical Engineering

PERSONAL

Born - December 20, 1936, Devils Lake, ND

Health - Excellent, first class medical

Family - Married with both grown and minor children

REFERENCES AVAILABLE UPON REQUEST

Autobiography for MICHAEL OKSNER

Born in Washington, D.C. on April 5, 1944, I grew up in the woods of nearby Montgomery County, Maryland. I finished the University of Maryland, at College Park, MD in 1967 with a diploma in Accounting. That August I joined the Navy. Following OCS and pre-flight training I flew my first training flight in a Beech T-34 Mentor on January 16, 1968 in which I eventually accumulated almost 30 hours. I qualified for and transitioned to jets for the remainder of my training. I flew the T-2A and B Buckeye in basic training for the next few months culminating with my first carrier landings. My advanced flight training was in the T/AF-9 Cougar during which I was selected as "Training Squadron 22 Student of the Month" for December 1968. I was designated a Naval Aviator in February 1969.

For my first tour I was assigned to Training Squadron-22 as an instructor pilot. During that tour I accumulated about 1200 hours in the T/AF-9 instructing student naval aviators in all aspects of their required training. Just prior to transferring to the fleet I was trained to instruct in the TA-4 Skyhawk. I transferred to Virginia Beach, VA for a fleet tour in the F-4 Phantom in April 1971. For the next 3 years I had the joy of engaging supersonic military aircraft in the art of "dog fighting". I had two cruises on board the USS Franklin Roosevelt, both in the Mediterranean Sea, while attached to Fighter Squadron-41. My next, and last, active duty tour was with Fighter Squadron 43 at NAS Oceana, VA. More dog fighting, mixed with some fleet instrument training, but this time in the TA-4 Skyhawk against Navy and Air Force fighters. In 1976 I was released from active duty, but remained affiliated with the Navy Reserves at Oceana with Fleet Composite Squadron-12, still flying the A-4. The Composite mission was varied and included flying target profiles for ships off of the Virginia coast, towing target banners for surface to air and air to air gunnery, and more air to air combat (dog fighting). I remained with VC-12 for the next 4 years when a similar job opened up in Dallas, TX where I lived and worked. The last 2 years of my military flying career were spent with NAS Dallas as an "Adversary Pilot", still fighting other fighters in the air to air arena. I accumulated approximately 3000 hours in military aircraft and about 200 "traps" during my flying days in the Navy, which ended in November 1982 when I advanced to the rank of Commander and consequently out of my flying duties.

In October of 1976 I had the good fortune to be hired by Braniff Airways as a Flight Engineer. Until the demise of Braniff in May 1982 I generated approximately 3000 flight hours in the Boeing 727 as Flight Engineer and First Officer. I spent the summer of '82 trying unsuccessfully to get another airline job. In the fall of 1982 I got a real estate license in Texas and for the next year and a half I sold residential property in Houston and Dallas Texas.

Another stroke of good fortune occurred early in 1984 when Southwest Airlines acquired 6 Boeing-727s which generated the need for qualified flight engineers so in May 1984 I joined the ranks of Southwest Airlines pilots. I flew "sideways" for the first year and a half as a B-727 Flight Engineer and when Southwest unloaded the 727s I transitioned to First Officer on the Boeing-737. In 1989 I upgraded to Captain in the 737, which is the seat in the airplane that I fly as I type this autobiography. I have accrued well over 12000 hours during my tenure at Southwest Airlines.

This past September I had to land my B-737 with one engine at idle at Chicago Midway Airport due to an abnormal indication. Prior to that I've had hydraulic system failures on the B-737 and the F-4, a fire indication on two occasions in F-4s while operating off of the USS FDR. While in the Navy I was tasked to fly numerous "post maintenance flight checks" where one or more normal systems had to be disconnected to check out the backup systems. During my 32 year flying career I have had zero accidents or violations. Except for night carrier landings in bad weather, I've enjoyed every one of those 30 plus years.

The private side of my life is very active. I spend most of my unprofessional time traveling, water skiing, snow skiing, running, scuba diving, hiking and playing tennis. During inclement weather I read, primarily history and science, and create home movies on the PC. I have a wonderful wife with her own professional life who also enjoys the same outdoor life as I.

Philip J. Orban 5 Larson Court North Brunswick, NJ 08902

I began flying at the age of 10, soloing a sailplane at age 15. I have continually pursued my love of flying through civilian general aviation, military flying in the US Air Force and New Jersey Air National Guard, and with American Airlines.

Through part time jobs and summer employment, I earned most of the cost for all of my pilot ratings (private through commercial, instrument and multi-engine) while attending high school, undergraduate engineering school, and graduate school. During this time I gained experience in light aircraft (Cessnas, Pipers) doing whatever necessary to gain flight hours. During graduate school I flew freight at night.

In 1969 I was accepted into the New Jersey Air National Guard in a pilot training slot. During my 2 years active and 10 years part time Air National Guard career, I gained experience in supersonic fighters (F100 & F105's) and transport and air refuelers (C-7's; C-121; C154; KC135's). In 1973 I was hired as a pilot with American Airlines and worked through the ranks of flight engineer, co-pilot and now captain. My equipment experience is on 727's; 707's; DC-10's; A300's and currently MD-11's flying internationally.

Harold Rhodes - Overview of a Professional Pilot – 12/99

Flight Hours

Heli:1,355 F/E:1,757 Total: 18,871 PIC:8,125 Jet:13,404 Turboprop: 553

Note: These hours were accumulated free of any accidents, incidents, F.A.A. violations, failed courses or failed check rides. They represent operations conducted purposefully in a safe, smooth and professional manner. "A superior pilot is one who uses his superior judgment to avoid situations that might require the use of his (or her) superior skills."

Time in Type

B-767/B-757: 2,812 A-310: 4,864 F.A.R. Part 121 B-737: 728 DA10: 1,517 F.A.R. Part 91 DA50: 731 DA20: 1,138

Military 0-2: 1,440 H-21: 1,275 C-130: 553

Aviation Licenses Airline transport pilot (ATP) #1567797; multiengine-land; type ratings in Boeing 767/757, Boeing 737, Airbus A310, Falcon 50, Falcon 20, Falcon 10, Lear Jet, Cessna Citation

Commercial privileges single-engine-land, helicopter; ratings in Lockheed 382, Vertol 44

Flight engineer; turbojet rating

First class medical (12/99)

Professional Experience

Delta Air Lines New York 1991- Present

Pilot B-767/757, B-727, A-310

Flight Engineer B-727 (from 7/99)

International and domestic operations

1986-91, 74-76, 67-70 Pan American World Airways New York/San Francisco

- Pilot A-310, B-737
- Flight Engineer B-707, A-300
- International and domestic operations

1983-1987 Jet Professionals, Inc. Woodbury, CT

- Founder, owner, president and contract pilot.
- Provided contract flight crews, career placements, and management consulting to corporations and individuals operating F.A.R. Part 91 aircraft.
- JPI was the largest business of its type when it was sold in 1987. It is currently owned and operated by Jet Aviation of America under the same name and format.

1977-83 Falcon Jet Corporation Teterboro, NJ

Pilot for the manufacturer in Dassault-Falcon 50, 20, and 10 aircraft. Simultaneous

currency in all 3 aircraft was required and maintained.

- Performed demonstration flying to potential customers, functional flight tests, executive transport, and ferry flights. Operations were domestic and international including North, Central, and South America, Europe, and Japan. Received numerous letters of commendation.
- Prepared operating budgets, manning forecasts and maintenance audits.

1975-85 (part-time)

N.Y. Air National Guard

Newburah, NY

- Pilot and forward air controller in Cessna O-2 aircraft.
- Flying safety officer.
- Liaison officer to Army staff in air logistics and close air support.
- Responsible for training and deployment of special ROMAD unit.
- Liaison officer for U.S. Air Force Academy, assisting and encouraging potential candidates.

1971-74 (part-time)

U.S.A.F. Reserves

Riverside, CA

- Pilot, rescue crew commander in HC-130 (Hercules) aircraft in long-range, overwater, search, rescue and escort operations.
- Pilot in HC-97 (Statocruiser) aircraft with same mission.

1962-67

U.S. Air Force

OK, NV, AK

- Line officer and pilot/instructor pilot/rescue crew commander in H-21 aircraft in search and rescue operations. Received "Air Medal" for offshore rescue in Alaska. Only pilot in Alaskan Air Command authorized simultaneous currency in helicopter and jet fixed-wing aircraft.
- Undergraduate pilot in T-37 & T-33: pilot in T-33, U-6, and H-19 aircraft
- Additional duties included accident investigation and exercise command staff.

Education

1965-66 University of Alaska, Graduate School of Business Anchorage, AK Courses in business and accounting; 4.0 g.p.a.

1958-62 U.S. Air Force Academy Colorado Springs, COBachelor of Science in Applied Science with dual major in Public Policy. Graduated w/ 201 undergraduate credits, a 3.5 g.p.a., and a ranking in the top 25% of class.

1954-57

Washington-Lee High School

Arlington, VA

Personal

Born 7/19/39. Married 1964, 3 children. Residence Woodbury, CT. (203) 263-5118 hwr5@yahoo.com

LEWIS L. RICH

Date: October 8, 1999

Biography

I was born July 5, 1938 in the state of Georgia. I served in the military as a performance engineer/flight engineer for the Air National Guard. This is where my love of flying began. In 1958, I married and have been married for the past 41 years with three grown children. In 1962, I took flying lessons and earned my private pilots licenses, and from that point, I flew as often as I could. My major in college was aeronautical science.

In 1964, I began my career at a major airline as a First Officer on the Viscount. Following a normal career path, I flew as a Flight Engineer, First Officer and Captain in the jets. I have in my possession the following certificates: ATP, B-707, B-720, DC-9, B-727, DC-10, B-747, B-737, and B-757/767. Also, a Flight Engineers certificate, Reciprocating Engine Powered, Turbo Jet Powered, Mechanic certificate-Airframe and Power Plant, Flight Instructors certificate (airplane single and multi engine, instrument airplane), Ground Instructor certificate Advanced, and Medical certificate 1st Class dated 08/12/1999. My total flight hours are 31,520 and my total hours in command are 22,644.

In the mid 1960's, I was one of the pilots selected by my company to prove and certify Pacific flying without a navigator. Again, in the mid 1990's, I was one of the Captains selected by the same company to fly the proven flights for E.T.O.P. certification on the B-757/767 in the North Atlantic.

In 1987 – 1989, I owned and operated a Cessna FBO Flight School at Hooks Airport in Spring, Texas, where I provided ground training and flight training for perspective pilots.

Over the last 35 years, I have accumulated my share of engine failures, systems failures, navigation glitches, engine shut downs and bomb threats. Many years ago (early in the 1970's), I was involved in an incident at O'Hare Airport in Chicago, where my aircraft weather vaned during high winds and icy conditions, resulting in minor wing tip contact with another aircraft.

The only medical waiver I have is vision correction of 20-30. In the 1970's, I had surgery for a minor hernia repair. Other than that, I have only suffered from the common cold, sprained ankle and occasional flu.

I remain employed at the same major airline as a DC-10 Flight and Standards Instructor. At this time I am current in maintaining my DC-10 Captains proficiency. Reaching age 60 was a real milestone, but I enjoyed my aviation career so much, I wish I were young enough to start all over again.

WERNER A. RODER

AVIATION WORK EXPERIENCE:

April 1992 - Present. American Eagle Div. AMR Corp. Captain, Saab 340. F/O, ATR42/72.

Mar. 1988 - Oct. 1991 Pan Am Express Div. Pan Am Corp. F/O deHavilland DHC-7 Four

Engine Turboprop.

Oct. 1986 - Mar. 1988 Holiday Airlines, Inc. Captain, deHavilland DHC-6 Twin Otter.

1964 - 1986 Part Time Positions: Air Freight Pilot, Casa 212-200. Part 135

Charter Pilot, King Air 200, Navajo, Cessna 421, 303. Flight Instructor for Fixed Base Operators and U.S. Army Flying Clubs. Owner/Operator & Pilot for Banner Towing Aerial Advertising Firm.

CERTIFICATES & FLIGHT TIME:

Airline Transport Pilot - Airplane Multiengine Land, SF-340 Commercial Privileges Airplane SEL, Glider

Flight Engineer - Turbojet Powered

Flight Instructor - Airplane Single & Multiengine, Instrument Airplane Ground Instructor - Advanced and Instrument Ground Instructor

Total Time 10200 hours. 7800 Multiengine, 7500 Turbine. No Accidents or Violations. First Solo & Private 1962, Commercial & CFI 1964, Flight Engineer 1980, ATP 1986.

IN-FLIGHT EMERGENCY EXPERIENCES:

- 1991 Hydraulic system failure which caused partial flight control system loss and required emergency Landing gear extension procedure - Pan Am Express deHavilland DHC-7, Philadelphiia International Airport.
- 1989 Engine shutdown and Engine out landing procedure, Pan Am Express deHavilland DHC-7, JFK New York International Airport.
- 1981 Emergency power off landing due to engine power loss. Completed landing with no damage to airplane. Piper PA-18 Aerial Advertising Banner Towing Airplane, Colt's Neck Airport, New Jersey.

NON-AVIATION PROFESSIONAL BACKGROUND;

(Started full time aviation work in 1986 after Thermapatch Corp. Plant Closing)

1980 - 1985 Plant and Engineering Manager, Thermopatch Corp. Bronx, NY

1972 - 1980 Chief Engineer, Polychrome Corp., Yonkers, NY.

1968 - 1972 Engineer for Aircraft & Space Vehicle Mechanical & Navigation Systems. Grumman Aerospace Corp., Bethpage, NY.

MILITARY SERVICE:

1964 - 1967 U.S. Army, First Lieutenant, Field Artillery. Completed training in mechanical assembly and servicing of field nuclear weapons, airborne reconnaissance training, and parachute trooper training.

EDUCATION:

Bachelor's degree in Physics, Minor Mathematics - Hunter College of the City Univ. of NY.

Graduate Courses at NY University, and Cooper Union to qualify for Prof. Engineer's License..

Professional Engineer's License, NY State.

RODNEY O. RUSSELL

Since my Father, Rodney Russell, took me to the North Philadelphia airport in the summer of 1948 where I first saw a big, shiny Douglas DC-3 airplane, I have always had aviation in my blood. When I expressed an interest in flying, my Dad told me that I would have to work hard in school, serve my military obligation, and be lucky enough to maintain the physical condition necessary to pursue such a demanding profession.

Heaven knows I worked hard in school. I graduated in about the middle of my class (1964) at Virginia Polytechnic Institute, Blacksburg, Virginia, with a degree in Business Administration. Maybe the reason I worked so hard but graduated in the middle of my class was that I hung around the VPI airport too much. After my first flying lesson in the back seat of an orange Piper J-3 Cub in the summer of 1963, I knew flying was going to be very important in my life.

My four years of Air Force ROTC training paid off with a Private Pilot's License in 1964 (through the Flight Indoctrination Program) and Air Force Pilot's Wings in 1966 (obtained at Craig AFB, Alabama.) At Craig as a student, I flew the T-37 and the T-33; about 125 hours in each aircraft type. I graduated high enough in my pilot training class to be awarded my first choice of aircraft, the T-37 as an instructor at Craig. During Pilot Instructor Training, I was the first pilot in memory to obtain the grade of "Excellent" on all four phases of the program (Contact, Instrument, Navigation, Formation.) In four years of accident/incident-free flying, I taught about 30 Air Force officers and two allied cadets how to fly from their first military flight through primary jet proficiency. The experience was most rewarding for me, especially when I felt it was time to hop out of the jet and watch each student take off for his first time by himself. Toward the end of my assignment at Craig, I was chosen to perform classroom instruction duties (teaching navigation and instrument procedures) in addition to my flying duties. My total flying time in military aircraft is more than 1600 hours.

While a Lieutenant in the Air Force, I bought a Mooney Mite (M-18c) and flew it coast to coast for a few years until I decided to turn it in on a diamond ring to give to Donna (to whom I'm still married after 31 years) but that's another story. I also obtained FAA ratings of ASEL, AMEL, CFI, CFII, GSI, and Commercial Pilot. These additional ratings allowed me to participate in a busman's holiday at the local

civil airport near Craig where I gave civilian flying lessons to Civil Air Patrol Cadets and Senior Members. Probably the most rewarding day down at the grass strip was the day I sent a CAP Cadet off on his initial solo flight on the first day he was eligible to solo, his sixteenth birthday.

When I was an Air Force Captain, as my military obligation drew to a close, Delta Air Lines, Inc., was hiring pilots. It seemed only logical that I should apply for a job with Delta, since I was living in Alabama and Delta's home office was located in Atlanta, just a four hour car ride away. I was hired by Delta to start a training class on February 13, 1970. I needed to turn down only one other airline job, Northwest Airlines. My accident/incident-free progression at Delta has been quite normal, Second Officer on L-100, DC-8, L1011; First Officer on DC-9, B-727, L-1011; Captain on DC-9, MD-88, B757/767. My training experiences have always been positive with no training failures. My total flying time at Delta is greater than 20,000 hours with more than 10,000 hours acting as pilot in command. In my 30 years of Delta flying, I have had my share of in-flight abnormalities but only four situations when the emergency equipment needed to be alerted. I was performing the duties of First Officer during three engine failures and I was the Captain during one flap malfunction. All procedures were completed properly and there were no additional complications.

My years in aviation have been rewarding in every way. I hope to be able to continue flying as long as I am qualified.

When my son, Rodney Russell, expressed an interest in flying, I told him he would have to work hard in school, serve his military obligation, and be lucky enough to maintain the physical condition necessary to pursue such a demanding profession. After he graduated from The U.S. Air Force Academy, and earned his Air Force Pilot's Wings, all I can say to him now is that I hope he is able to fly as long as he is physically able.

PAUL E. SCHUELER

Graduated from Miami University in 1957.

Graduated from USAF pilot training in 1958.

I was selected from an Air Force wide interview process as one of 85 officers to implement and start the first flying unit of the USAF to go to Vietnam in 1961. While in the Air Force, I attained the rank of Captain prior to an honorable discharge in 1964.

While in the Air Force, I flew the following aircraft: T-34, T-37, T-29, C-47, and the C-46. I was employed by Braniff International from 1965 to 1989. I flew the following aircraft at Braniff: CV-440, BAC-111, B-727, and B-747. Braniff International was dissolved in bankruptcy court in 1989. I was employed by United Airlines in 1990 and continue to fly as a second officer with United to the present.

I have amassed 22,500 hours of total time with 11,000 as pilot in command. In my flying career, I have not had any accidents, incidents or training failures.

CAPTAIN RICH SELPH Date of Birth:

f Birth: Dec. 21, 1939

2301 Scott Street, # 1 San Francisco, CA 94115

Home: (415) 931 5530 fax 931 2075

SUMMARY:

Current UAL 747-400 Captain and Line Check Airman with consistent history of excellence and high standards* seeks part time opportunities as a consultant and team leader, utilizing extensive management and line experience with special expertise in fuel optimization and intra-cockpit discipline/communications. (*UAL Captain of the Year, USMC, Eagle Scout.....)

SKILLS:

Through credibility earned from hundreds of enroute checks and IOE's in the long haul international environment, effectively advocate professionalism and the continuous improvement process in the real world cockpit. Special achievements in fuel optimization and ability to communicate and apply that knowledge to line operations.

- ❖ 38 years of flying (11 @ UAL, 22 @ Pan Am, 5 USMC), over 22,000 accident/incident free hours
- 12+ years as FAA-designated Check Airman
- Arings on 747-400, 747-100/200, 767/757, 727, 737, 707, L1011, Falcon
- Worldwide experience: USA, Europe, Atlantic, Asia, Pacific, China, Australia, South America, Africa
- 4 11 years experience as ALPA Air Safety Rep/Accident Investigator/European Area Air Safety Coordinator

Current position	Captain 747-400, Line Check Airman conducting OE and Line Checks in North & South Pacific
8/92 - 3/96	Captain 747-100/200, Line Check Airman, operating to Europe, South America, Asia
(8/94 - 2/95)	Special Additional Assignment on "Fuel Optimization Task Team", selected as Sub-Team Leader
8/89 - 8/92	Flight Manager, UAL Training Center, almost exclusively conducting Line Checks on 747-100/200 participated in developing and implementing UAL transition from domestic to int'l carrier
11/88 - 8/89	Domicile Flight Manager, UAL, SFO, qualified on 767 responsible for supervising 450 line pilots
2/86 - 11/88	Captain L-1011, Line Check Airman, designated as company expert on operations into China
8/84 - 2/86	Manager of Flying, Pan Am, MIA, responsible for all operational/flying matters, qualified on L1011
4/73 - 8/84	Line Pilot, Pan Am, based in Berlin, Germany, Capt.//F/O, 727/737
(1974 - 1984)	ALPA Air Safety Rep/Accident Investigator, European Area Air Safety Coordinator
1/65 - 4/73	Line Pilot, Pan Am, based in JFK, F/O, Navigator, Flt Engineer, 707
AWARDS:	1995 Leadership Award, UAL (for Achievements in Fuel Optimization) 1987 Captain of the Year, UAL
PERSONAL:	Captain, US Marine Corps, active and reserve, C-130, DC-6 US Navy Flight School, Dartmouth College, Eagle Scout 32 years of marriage, 4 kids, working knowledge of German language, hobbies: sailing and skiing

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LAURENCE ELLIOTT SENN

BORN

22 APRIL 1940 EUGENE, OREGON

Captain Delta Air Lines 679036

Airline Transport Pilot Certificate #1597510
Flight Engineer Certificate #542407195
Flight Navigator Certificate #001908462
Restricted Radiotelephone Operator Permit
Medical Certificate First Class

1945-1952 CONDON GRADE SCHOOL

1952-1955

ROOSEVELT JUNIOR HIGH SCHOOL

1955-1958

SOUTH EUGENE HIGH SCHOOL

National Honor Society

Track
3 year letterman

Football 2 year letterman

_

Basketball 1 year letterman

President, Letterman's Club

Eagle Scout

1958-1962

UNITED STATES NAVAL ACADEMY

150# Football
3 year letterman
Vice-President Letterman's Club
Bachelor of Science Degree – Marine Engineering
Regular Commission in the United States Navy

1962-1963 Navy Flight Training Naval Aviator Designation

LAURENCE ELLIOTT SENN

1964-1967

Patrol Squadron NINE Moffett Field, California

Assistant Administrative Officer - Top Secret Control Officer

Okinawa

Commanding Officer's Patrol Plane Commander
Flight Line Operations Officer
Squadron Check Pilot – Squadron Test Pilot
Vietnam Operations

NAVY AIR MEDAL

1967-1968

Naval Air Training Command T28 Training Squadron Flight Instructor – Transition, Precision, Aerobatics

1968-1991

PAN AMERICAN WORLD AIRWAYS

Navigator
Flight Engineer
First Officer
(furloughed 1970-1987)

1991-Present

DELTA AIR LINES

Flight Engineer First Officer Captain

FLIGHT EXPERIENCE

NAVY

	Training	
T34		

T2 120 S2 200

30

Fleet

P3 1500 P3 (Nav) 1000

T28 (Instructor) 500

LAURENCE ELLIOTT SENN

PAN AMERICAN WORLD AIRLINES

707 (F/O) 150 707 (Nav) 175 727 (Engineer) 500 727 (F/O) 2000 A310 (F/O) 1000

DELTA AIR LINES

A310 (F/O) 775 727 (Engineer) 1000 L1011 (Engineer)300 737 (CAPT) 2500

(Above flight hours are approximate)

WILLIAM MORRIS SIEGEL

DOB: 6 September 1943, New York City. Raised: Tulsa Ok

Undergraduate: US Naval Academy Annapolis Md., graduated 1965 BS Naval Science Postgraduate: US Naval Postgraduate School, Monterey Ca., graduated 1978 MS

Aeronautical Engineering/Avionics.

Other: Graduated US Air Force Aerospace Research (Test Pilot) School Edwards Air

Force Base Ca 1970, Engineering Test Pilot

After USNA graduation in 1965, I attended Naval Flight Training in Pensacola,Fl Meridian Miss and Kingsville Texas receiving my Navy Jet Wings in Oct 1966. I was assigned as an A4 Attack Pilot and completed 2 Vietnam combat tours with Attack Squadron 55 aboard the USS Constellation and USS Hancock amassing 208 combat attack missions over North and South Vietnam, Laos and Cambodia. Subsequently I had a one year tour as an A7 jet attack instructor followed by Air Force Test Pilot School. I was then assigned as a combat weapons system test pilot for 3 years at the Naval Weapons Center China Lake Ca and completed a 3 year tour as a pilot with Air Wing 5 aboard the aircraft Carrier USS Midway home ported in Japan participating in the evacuation of Vietnam in 1975. I applied and was accepted as an Aeronautical Engineering Duty Officer and acted as a staff officer and pilot for the Navy Strike Fighter Wing in Lemoore Ca.. I completed my 20 years in the Navy with the rank of Captain (O6) retiring as a Commander (O5) in 1985 as Director of the Aeronautical Engineering Curriculum at the Naval Postgraduate School in Monterey.

After the Navy I acted in the capacity of Flight Instructor, Charter Pilot and Chief Pilot for the Hanford Flight Center, Hanford Ca (while a full time stock broker). In 1991 as a participant in the successful Equal Employment Opportunity Commission (EEOC) age discrimination class action law suit against Northwest Airlines, I was chosen in a competitive process for employment as a Northwest Pilot as one of the 38 hired out of the 1000 claimants. Since that time I have been a 727 Second Officer (1 month), a DC 10 Second Officer (3 1/2 years), DC 10 First Officer (2 years) and finally a 747-200 First Officer for 2 years until the present time.

I have over 12000 hrs of fight time with 8500 hrs pilot in command time in Navy attack jets, Navy transports and training aircraft, as well as civilian light aircraft and the DC 10 and 747-200. As a squadron pilot and aircraft carrier combat pilot with 208 combat missions and 695 carrier landings, Navy jet test pilot and later transport pilot my accident record is clean in spite of a normal amount of aircraft emergencies and combat damage occurrences which resulted in normal landings. I have received the Distinguished Flying Cross, 18 Air Medals, 2 Navy Commendation and 2 Navy Achievement Medals with Combat V's, and numerous campaign and unit citation medals and ribbons. As a military pilot, civilian pilot and now an airline pilot, all my training experiences and check rides have been successful and all flying has been accident free. Currently I am a 747-200 international co-pilot with Northwest Airlines based in Honolulu anticipating upgrade to Captain in the near future seniority permitting.

DAVID A. SKILLING

AVIATION EXPEIENCE: Long and varied flying and teaching background. Over 10,300 accident free hours of military and airline flying. First soloed at age sixteen. Flew fighters and a transport aircraft in the US, Europe, and Asia for nineteen of twenty-two years in the US Air Force. Served for twelve years, and continue to serve, as an airline pilot and instructor for Northwest Airlines.

USAF experience included thirteen months of fighter combat flying (325 sorties, 515 hours) in Southeast Asia, Fighter Weapons School graduate and later instructor, operations squadron commander, and commander for four years of the unit responsible for the standardization of weapons loading and flying tactics of all non-US strike units in NATO. The standardization involved active tactical flying as pilot in command and check pilot with the fighter units on twelve bases of seven NATO allied air forces on a regular basis.

Airline experience has included continuous service as a line pilot since December 1987, with additional duties for most of that time as a ground school and simulator instructor and as check airman. Currently, I am serving as a B-727 line captain, simulator instructor, and check airman. I have served as a FAA designated examiner (as a B-727 second officer). In 1998, I was chosen to lead a team that rewrote the Northwest Airlines B-727 simulator training program. The new course included the use of fixed based simulators for the first time, and incorporated new training events, a greatly revised timeline, and updated instructional methods.

EDUCATION: Bachelor of Science, US Air Force Academy, 1963; Master of Business Administration, University of Utah, 1979; USAF Academic Instructor Course, Air Command and Staff College, Air War College; Northwest Airlines Instructor Course.

PERSONAL: Married for 34 years. One adult daughter. Hobbies are jogging, hiking, racquetball, and restoring houses.

AVIATION RATINGS: FAA Air Transport Pilot, type ratings in the B-727 and N-265 (Sabreliner), FAA Flight Engineer, FAA Commercial Single- Engine and Multi-Engine Land.

AIRCRAFT FLOWN: Pilot in command: numerous light planes for training and recreation, B-727, T-37, T-38, F-100, F-104, O-2 (militarized Cessna 337), T-39 Sabreliner. As other crew: B-747 (second officer), B-727 (second officer, first officer), F-4, F-15, F-105, SA-16, B-52, AT-37, C-130, A-1, CF-104, HH-43.

OTHER SALIENT WORK EXPERIENCE: Two years as Chief of the Luke Air Force Base Recurrent Instrument Training Course. Senior US Air Force Liaison Officer to the US Army's 82d Airborne Division for two years. Three years as Chief of the USAF Tactical Air Command's Air Land Programs Office, in charge of negotiating joint tactics and procedures with the other US services. After retiring from the Air Force, I worked

for two years at the Lockheed California Company "Skunk Works" as a weapons integration engineer for the F-117 fighter and as a proposal designer for the F-22 fighter. Although this was fascinating and satisfying work adjacent to an aircraft manufacturing line, I missed actually flying, and moved to Northwest Airlines as a pilot in 1987. The piloting profession has been my goal from an early age, and I hope to continue my long flying experience well into the future.

DAVID A. SKILLING

Supplement to Aviation Experience Summary

In 1987, I was one of the first four "older" pilots hired by Northwest Airlines. This was a result of a class action lawsuit brought by the Equal Opportunity Employment Commission against Northwest Airlines for age discrimination in hiring practices. I was 46 years old at the time. In was shown in testimony that Northwest had an unwritten maximum age of 32 prior to this lawsuit.

BRANDON SMITHE

My flying career began when I was 20 years old, learning to fly PA-18s and Cessna 150s in an AFROTC program at Virginia Tech. After graduation in 1961, I entered USAF Pilot Training. A year later I was awarded my wings and subsequently became an instructor pilot. I instructed in T-37s and T-38s. During my fifth and final year, I also instructed in academics. At the end of my AF tour, I went to work for Continental Airlines. I was hired as a second officer on December 7, 1966. I flew second officer on B-707, B-727, and DC-10; first officer on B-727 and DC-10; captain on B-727. In 1985, during the protracted strike, I left Continental (along with a large number of ex-Continental pilots) and started an airline. Unfortunately, Pride Air only lasted four months. I then accepted a flight engineer position with People Express. This was a temporary job, contracted through Pride Air. After five months, I accepted a job with Air Cal as B-737 first officer. One year later, American bought Air Cal. I worked for American until forced to retire at age sixty. During my tenure at American, I flew first officer on B-737, MD-80, DC-10, B-757, B-767, and MD-11. I flew as captain on B-727, B-757, and B-767.

During my flying career, I accumulated over 22,000 hours, all of which were free from accident and violation. In that time I faced numerous critical situations requiring quick and proper action. These situations ranged from engine failures and fires; complete hydraulic failures; communication failures; diversions in third world countries when the weather at both the destination and alternate went below minimums.

I have been commended for both my actions and my skill in the aircraft I have flown and in the many simulator checks I have taken. In my entire flying career of over 38 years, I have never been counseled or reprimanded for anything. I received letters and certificates of appreciation for perfect attendance. Upon retirement, I had over 152 days of unused sick leave remaining.

As a second officer (flight engineer) at Continental, I was recognized as a cooperative, highly competent crewmember and was selected as a B-727 second officer check airman. I acted in that capacity for a year until upgrading to first officer. During that time, I made a number of suggestions which were incorporated in a newly formed second officer manager's office.

In 1986, I accepted a job with People Express as a B-727 flight engineer. At that time I was 46 years old. At People Express I flew with dozens of crews. All were young, and some of the co-pilots inexperienced. I found it quite easy to cooperate with all of them and enjoyed the experience. When I left, their Chief Pilot offered to be used as a reference for my job application at Air Cal.

I am exceptionally healthy, largely due to a passion for fitness and nutrition. I exercise five days a week (aerobic and weight training), eat a healthy diet and take nutritional supplements. My blood pressure is 110/65; resting heart rate is 56; cholesterol 155; and body fat content 12 percent.

Obviously, I would prefer to continue flying as a Captain . . . who wouldn't? Since that's not allowed, I would like to continue to fly as a flight engineer. I would be competent, efficient and enthusiastic. I agree with the idea that there are no small jobs, just small people.

Gary E. Stamper

3620 S.W. Eleventh Street Topeka, KS 66604 (785) 271-6315 GESstamper@AOL.com

EDUCATIONAL BACKGROUND

University of Kansas, Lawrence, KS Bachelor of Arts 1963 Washburn University, Topeka, KS Juris Doctorate 1965

TWA EXPERIENCE

DC9/MD80 Captain Line Instructor/Check Airman --August 1996-present MD80/DC9 Captain MD80/DC9/727 First Officer 707/727 Flight Engineer Flight Safety Instructor--December 1969-April 1970 Hired November 1968

MILITARY EXPERIENCE

Kansas Air National Guard 1965-1994
USAF Pilot Training-Reese AFB, TX December 1966-1967
Squadron Pilot 1967-1994. B57A, EB57, B57C, B57G, KC135A, KC135E
Instructor Pilot KC135A, KC135E
Squadron Commander January 1993-November 1994
Active Duty for Desert Storm December 1990-April 1991
Additional Duties: Group Sagety Officer 1974-1976, Chief Disaster Preparedness 1982-1983

MILITARY EDUCATION

Squadron Officer School--1971 Maxwell AFB, AL
Institute of Aerospace Safety and Management 1973 University of Southern California
Air Command and Staff College--1977
Air War College--1994

RATINGS AND MEDICAL

ATP DC9 B707/720 PIC Time 7000 hrs MD80/DC9 PIC Time 3500 hrs First Class Medical As a brand new military pilot, I felt supremely confident of my flying skills and wondered why the wing commander cautioned us to beware until we had a 1000 hours. Every time I changed airplanes in the military there always seemed to be those who could do it better because they had more experience. In my commercial experience, line captains performed more efficiently and effectively than I did as a brand new first officer. As a captain, the company applied some restrictions to all new captains for the first 1000 hours and then closely monitored the first 500 hours of pilot in command time on each new airplane. Now, as a line captain instructor, I look at new captains and new first officers who are my students and wish that I could breathe 30 years of experience on them. Every aspect of military and commercial flying is impacted significantly by experience. It is always the critical factor that expresses itself either in the dramatic or the sublime. The reason is because human factors play a very significant role in the safety of aviation.

Reliable equipment, emergency procedure checklists, advance communications and high technology have reduced pilot workload, but have not replaced experience as the most critical factor in decision making.

Acquiring experience requires time and appropriate circumstance that are not always part of every young pilot's resume. I have had the opportunity to instruct in both the military and with the airline and I have flown overseas as well as in the U.S.

Essential factors in building useful experience are redundancy, proficiency and challenges. For example, flying 85 hours per month into domestic airports, under changing weather conditions, contributes to all pilots proficiency but sometimes requires an approach or a missed approach or a diversion that only the captain is authorized to make. The longer a captain is allowed to fly, the greater will be his exposure to the more difficult approaches and the likelihood that his proficiency will be enhanced and performance refined. Experience is definitely cumulative and the learning curve in aviation never stops. There are so many variables that each leg of the schedule and every airport presents a different challenge. The growth of aviation makes the industry environment more complex each year.

My personal comfort level in the cockpit has grown over the years and it is undeniable that my military and commercial experiences have impacted my operational skills, refined my problem solving techniques and shaped my judgement and decisions. I have flown long and short flights in all kinds of weather. I have experienced in flight emergencies and emergency landings. In addition to actual flying experiences, I have worked in training and attended professional courses pertaining to aviation. Throughout all my flying, I believe each experience has contributed to those developmental skills that make me a safer pilot today than ever before.

Part of becoming safer and more professional each day has been my good health. My recent physical indicates that my health is excellent. This is a great comfort to me and gives me the confidence that I can continue to perform at the high level required in commercial aviation. It enables me to do my job well and to pass on to others a good example. It confirms my belief that mandatory retirement at age 60 is wrong. It prematurely deprives the passenger of some of the safest pilots and terminates the legacy of experience that can be passed on to other pilots. Passengers frequently remark that seeing an older, experienced pilot is reassuring.

A more detailed description of my aviation career is available on the attached resume.

Very truly yours,

Robert D. Stewart PMB 225, 930 Tahoe Blvd.#802 Incline Village, NV 89451 775 831 6291

shado@compuserve.com

Sequoia High School	19581961
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U.S. Marine Corps	19611964 Hon Discharge
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College of San Mateo	19651967 A.A.Deg

Pilot's Licenses
1

Pvt. pilot Comm. License Inst. Rating Multi Eng. Rating Flt. Instr. Rating Inst. Flt. Instr. Rating Multi-Eng. Instr. Rating Mult-Eng. Instr. Rating

Heald Engineering College 1969--1962 BSEE Elect. Eng.

	Dean's list.
U.S. Navy, Aviation Officer Candidate School	1973 Grad. Second in class
U.S. Navy Flight Training	1975 Appointed Naval Flt. Officer
Fighter Squadron VF-114	1978 Hon. Discharge USNR
Achieved the rank of Lieutenant.	
In charge of the Airframes/powerplant Division,	

(Three Cruises USS Kitty Hawk CV-63)

Critical Air Medicine & Executive Air Service 1978---1986 Director Flt. Operations

FAR 135 Flt.Ops. Started Company.
President and General Manager.
The operation grew to be one of the largest
FAR 135 Air Taxi operations in San Diego.

responsible for maintenance on (12) F-14 aircraft

Pacific Aviation 1989---1992 Owner/Operator Full service FBO at Brown Field, San Diego

United Airlines 1979---Present, Captain on B-767/57

Ratings and Certificates

(Awarded a bid on B-747)

Flt Engineer Cert.

Airline Transport Pilot

I have accrued approximately 15000 flt hours with no major emergencies or incidents. I have been a Captain since Feb. of 1991 with United Airlines and have logged approximately 6000 hours pilot in command on several aircraft in that capacity. I have flown almost every model and

make of General Aviation aircraft as a flt. Instructor, Check airman and Director of Flt. Operations with companies that I owned.

Activities;

Avid Snow Boarder in the winter season and Wake boarder in summer season. Physical fitness includes routine weightlifting and running 15 mi. per week. Hobbies;

Started playing piano in 1994. Play keyboards and piano for recreational enjoyment. Active in Ham Radio, and at present studying for general class license. Also enjoy working with computers and restoring classic cars.

Phil Stotts Biography

I started flying in 1968 with the goal of just having fun. I was enjoying my work as a marine technician at Scripps Institution of Oceanography and didn't foresee a career in aviation. I bought a Cessna 140 and continued my flying lessons, earning my commercial, instrument, and multi-engine ratings.

In 1979 I decided to give commercial aviation a try, and took a job in Utah with an environmental research group. The job involved flying around Nevada and Utah counting wild horses and antelope, and flying through the river canyons to locate radio tagged fish. I was hooked.

In 1981 I acquired a Cessna 206 which I flew up to Alaska for the purpose of buying salmon from the Eskimos in remote villages, and transporting the fish to distribution centers.

This was seasonal work, so I returned to Utah where I began flying overnight freight in Navajos, Beech-99s, and Metro IIIs. I continued this until 1986, at which time I was hired by DHL Airways.

I started at DHL in the Metro IV, then went into the Boeing 727. After working as a Flight Engineer and First Officer, I made Captain in 1993, which is the position I am currently enjoying.

Because I started my aviation career about ten years later than most pilots, I think have ten more years worth of enthusiasm for flying than most pilots do. I want to keep flying until I am at least 65.

Here are the vital statistics.

ATP, of course Type ratings in B-727 and SA-227 Turbojet Flight Engineer rating Dispatcher License

Flight time: 12000 total 3000 PIC in 727

My hobbies include bicycling, photography, and hang gliding. I am active on our local ALPA council's newsletter, training, pilot assistance, and aeromedical committees.

I am happily married with one wife, one daughter, and one dog.

Captain William Ternes

October 10, 1999

The following is a brief biography of my aviation career from 1966 to present.

My career consists of many different jobs which are mostly based on flying positions from 1970 to my present position as a Boeing 727 Captain.

I was employed with Braniff Airlines from 1966 until 1970 as a electronic technician in Dallas Texas. I started flight training in Dallas in 1967 and soloed in a cessna 140 on a grass strip called Whiterock airport in east Dallas. I received my private, commercial, Multi-engine, instrument & instructor ratings in 1968 and did part time flight instruction until 1970 when I was employed as a First Officer on a Learjet in Iowa.

From 1970 until 1997 I received type ratings on the following aircraft including Learjet, Hawker jet, Jetstar, Challenger, Gulfstream1, Cessna Citation & Boeing 727. During this time I accumulated 15,000 flight hours.

In 1987 I accepted a position with Ryan Airlines as a Boeing 727 Flight Engineer and eventually First Officer on UPS aircraft before they became their own airline in 1988.

In 1989 I accepted a position with Braniff #2 as a First Officer on B-737. This position expired when Braniff ceased operations in October 1989.

After Braniff I did some contract flying in corporate aviation until July 1990 when I accepted a corporate pilot position with Navistar International in Chicago flying as a captain on their Hawker jet. Unfortunately Navistar closed their flight department in 1992 and then shortly after that I accepted a position in Wisconsin flying a Hawker jet for a machine tool company.

Finally in July of 1994 I was accepted as a First Officer on B-727 with American Trans Air. I remained on the 727 for two years as a First Officer, then First Officer on L-1011 Tristar and finally upgraded to my current position as Captain on B-727.

I don't have any horror stories to tell. The most serious incident happened recently on final approach into Midway airport in Chicago when we lost "A" system hydraulics which normally operates the flaps, landing gear, half the spoilers, ailerons, elevators & lower rudder. The main thing in this type of situation is CRM (cockpit resource management) Leadership and experience. Since "B" system hydraulics was normal, we still had ailerons, elevators and upper rudder powered by "B" system.

The first thing we did was abort the approach and requested a holding clearance for additional time to do checklists. Loss of "A" requires less then normal flaps for landing and flaps have to be extended using an alternate electrical system and landing gear has to be cranked down. We required a longer runway then Midway (6500') since we had higher then normal speeds for landing due to less then normal flap extension. So after declaring an emergency (which is a normal thing to do in a case such as this) we diverted to ORD where runways are nice and long. After landing we were towed to the gate since we had no nosewheel steering due to loss of hydraulics.

My current position is by far the most satisfying and rewarding so far in my career. I stay healthy by jogging 4 to 5 miles a day plus working out & playing golf.

WILLIAM TERNES
3031 North Civic Center Plaza, #3
Scottsdale, AZ 85251
(602) 947-1247 BT727@MSN.COM FAX:(602)947-1247

OBJECTIVE:	A career position as A Flight Officer
ODODCIIVE.	11 0m1001 p 00

-	-	
F.A.A. FLIGHT	Γ RATINGS AND LICENSES:	
Airline Transport		Commercial Privileges: Airplane S.E.L.
Type Ratings: B-	727, CL-600, L-1329,	Flight Instructor: Airplane S.E.L
	A-227, HS-125 ,Learjet,	Flight Engineer: TurboJet
	159, CE-650	Airframe and Powerplant License
General Radio T	Selephone License	First Class Medical: No Limitations
	•	
TOTAL FLIGHT	TIME 15,000 13,000	CL-600/601
Pilot in command.	13,000	BAE-800/7002,500
Jet time		L-1329/Learjet2,200
	011,3,500	Multi-Engine 13,000
		-
PROFESSIONAL	<u> EXPERIENCE:</u>	
July '94/Present	American Trans Air	Captain B-727&F/O L-1011
	Indianapolis, IN	Domestic & International
May '92/Mar '94	Giddings & Lewis	Captain BAE-700 & SA-227
-	Fond du Lac, WI	_
Jul '90/Feb '92	Navistar Corporation	Captain BAE-800
	Chicago, IL	-
Sep '88/Sep '89	Braniff Airlines	First Officer Boeing 737
•	Kansas City, MO	•
Mar '87/May '88	Ryan Airlines	F/O&F/E Boeing 727
•	Wichita, KS	· ·
Aug '82/Mar '87	HAC, Inc.	Captain CL-600 & BAE 800/700
•	Louisville, KY	Domestic & International Operation
Jan '80/Aug '82	Celanese Corp.	Captain LearJet & G-159
	Charlotte, NĈ	Domestic & International
EDUCATION:	,	
1990	Pacific Western University.	Bachelor of Science Degree
	Los Angeles, CA	2
	Aviation Management	
SPECIAL TRAIN		
1997	B-727 Captain upgrade	American Trans Air (NATCO)
1996	L-1011 Initial Training	American Trans Air
1994	B-727 Initial Training	American Trans Air(NATCO)
1970/1994	L-1329, CL-600, Learjet	Flight Safety International: Type
	G-159, HS-125, CE-650	Ratings and recurrent training.
1987	B-727 F/E Rating	Simulator Training Inc. Seattle, WA
1967/1968	Airframe/Powerplant	Dallas, TX
1966/1970	Comm, ME, CFII	Flight Proficiency Inc. Da

PERSONAL DATA: H/W 5'7"/155lbs. M.S. Single Health: Excellent JOHN R. ULBINSKY 229 Chatham Drive Colorado Springs, CO 80906 (719)527-0134

AUTOBIOGRAPHY

I was born on November 18, 1941 at New Market Iowa to a family of farmers. In 1951, my family relocated to Pennsylvania where they continued to farm.

In 1960, I graduated from high school and I enlisted in the U.S. Army. In 1961 I completed the Infantry Officer Candidate School at Fort Benning, Georgia and I was commissioned a Second Lieutenant just one month past my twentieth birthday.

At that time the Army was about to begin a build up of their Aviation component and I was offered the chance to attend fixed wing flight school at Ft. Rucker, Alabama. I had at one time entertained ideas of becoming a pilot, but college had been beyond my reach, so I thought my dream would be unrealized.

I fairly leaped at the opportunity to become a pilot and in the fall of 1962, my Dad pinned the silver wings of an Army Aviator on my proud chest. I was selected to transition to the DeHavilland Caribou (CV-2B) following flight training and I completed this course later that year.

I was assigned to Fort Benning, Georgia and in the autumn of 1963, our Caribou unit was assigned to participate actively in the testing of the Army's Airmobile Division, which was to become the First Air Cavalry Division.

For the next year I was intensely involved as a Caribou Aircraft Commander in the testing which involved operating transport aircraft in short dirt strips, low level formation flying night and day in bad weather and resupply through parachute drops and low level extraction.

In August of 1964, I was selected as an aircraft commander on the first trans-Pacific ferry mission which the Army had attempted since the Air Force separated in 1947. We ferried three Caribous to South Viet Nam and set a minor record for our class of aircraft.

By now the build up for the Viet Nam War was in full swing and later in 1964 I was selected to be an aircraft commander to deploy an entire aviation company to Viet Nam via the Atlantic route.

Page 2 JU/AUTOBIO

I served the next year in Viet Nam as a Caribou aircraft commander in the 61st Aviation Company at Vung Tau. We provided combat transport support for RVN forces, MACV, Special Forces and later in 1965 as the war escalated, regular American Forces.

When I returned to the States after that first tour, I was assigned as a classroom instructor with the Department of Tactics of the Aviation School at Ft. Rucker. In 1967, I was again assigned to Viet Nam. This time I was to transition to the OV-1 Grumman Mohawk and I completed the Combat Surveillance Course in preparation for my assignment with the Aerial Surveillance Unit of the First Cavalry Division.

From July 1967 to May 1968, I flew day and night photo, side looking radar and infra red missions in combat support of the First Cav. I flew with the Cav during the intense fighting in I Corps, Hue Citadel and Khe Sanh during the Tet I offensive. For my combat service, I was awarded the Bronze Star, a pair of Army Commendation Medals and a sack full of Air Medals.

Upon my return from my second combat tour I had the opportunity to be hired by Continental Airlines and I left the Army after eight years of service. I was trained as a second officer on the Boeing 727 and for the next fifteen years I served Continental as a crewman on that airplane. I upgraded to First Officer in 1972 and Captain in 1979. I completed a Learjet ATP in 1978 in preparation for my 727 Captain upgrade.

In all, I flew approximately 10,500 hours in the 727 for Continental which was fairly evenly divided between all three crew positions.

The early 1980's saw the advent of airline deregulation which made for some very unsettling times for us at Continental. It all culminated with the first bankruptcy of Continental in 1983 and two bitter years of labor strife which ended in the decertification of the Airline Pilots Association and the abrogation of our contract.

I chose to leave Continental rather than return to work for Frank Lorenzo. Another major factor was that I had just voluntarily gone through an alcohol rehabilitation program in 1982 and I felt my chances of maintaining sobriety would be much better if I did not subject myself to the intensely stressful environment at Continental.

I am happy to report that to this date, I successfully completed the FAA Aeromedical monitoring program and have maintained complete sobriety for the past seventeen years.

From 1984 through the the summer of 1989, I worked as a Registered Securities Representative and Certified Financial Planner. I also completed a bachelors degree in Aerospace Science at Metropolitan State College in Denver.

· Page 3 JU/AUTOBIO

I thoroughly enjoyed my career in the financial services industry, but it became apparent that in order to meet my financial goals, I should return to commercial flying.

In early 1989 I was offered a job with Transocean Airways (Gulf Air). The company unfortunately went bankrupt by the end of that year but it had allowed me to regain FAR 121 qualification.

My next job was with Key Airlines which was also doomed for bankruptcy, but once again I was able to complete an excellent 727 requal program.

In April 1990, I was hired as a DC-8 First Officer by Airborne Express and I have been employed there ever since. I served as a DC-8 F/O until 1992, when I upgraded to Captain on the YS-11. I continued as a YS Captain until those aircraft were sold in 1997 and I retrained as a DC-9 F/O and Captain in quick succession. I have now served as a DC-9 Captain for the past two years.

In all, my flying career has spanned the past thirty-seven years with a few years taken out for an alternate career in finance. I have acquired over fifteen thousand hours of flying time, of which about ten thousand hours are as pilot in command of jet and turbine powered aircraft.

During this time I have never had an aircraft accident nor incident or violation or even put a scratch on an airplane, military or civil. Other than a few routine engine failures there has never been anything resembling a life threatening situation.

In 1991 as I was jumpseating on United, I was privileged to fill in as First Officer when the United F/O became sick and incapacitated in flight.

There was another short interruption of my career in 1993, when I was diagnosed with prostate cancer. I underwent radical surgery and over six years of treatment and monitoring by my doctors and the FAA indicate that I am totally cured.

I very much appreciate the enlightened aeromedical policies of the FAA which have allowed me to continue my career as a professional pilot through alcohol recovery and recovery from deadly prostate cancer. I find it ironic that at this point, when I am in the best health of my entire life and at the peak of my professional skills, that I must face mandatory retirement.

It is a fact that most of my life at this point, other than that which is dedicated to my wife of thirty-five years and my family, is dedicated to maintaining my health and my flying proficiency

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JU/AUTOBIO

I have not smoked nor used any form of tobacco in over twenty years. I diet and exercise regularly to maintain my weight and fitness. My regimen includes golf, skiing, weightlifting, ice hockey and longboard surfing whenever I can get near an ocean.

To maintain my instrument flying skills I purchased an Elite MD-81 Flight Simulator Program for my personal computer complete with professional quality flight controls. I use it to prepare for checkrides and to sharpen my instrument skills, particularly when returning to fly line trips after a vacation.

I will be in great physical condition and mental health for whatever career I choose after my sixtieth birthday. I hope and pray that I have the opportunity to continue as an airline pilot.

Doyle Ray Vaughan
Date of Birth: August 21, 1933

Place: Farwell, Texas

Graduated High School, Farwell, Texas 1952 Attended West Texas State University at Canyon, Texas

Served in the US Army

Learned to fly at Muleshoe, Texas
Obtained Commercial, instructors, multiengine, and Instrument rating at Plainview, Texas

Was employed as an agricultural pilot for three years.

Purchased my helicopter rating at Mineral Well, Texas. Then became an Instructor pilot for the US Army Primary Helicopter School at Mineral Wells, Texas.

I then left to fly for Hughes Tool Company at Culver City, California as a company instructor and check pilot.

Was hired as a first officer for Southwest Airlines, promoted to Captain in one year and four months and was employed by Southwest until mandatory retirement at age sixty in 1993.

While at Southwest Airlines I had to shut down an engine in flight because of loss of oil pressure.

I now fly for a local 135 charter company and also do 737 test and ferry flights for Bold Horizon of Auburn, Alabama.

My total flight time exceeds 28,000 hours of accident and incident free experience.

Married to Diana. Have 3 sons—all pilots for Southwest Airlines. 2 daughters—1 is a flight attendant, the other is a school teacher and ski instructor at Deer Valley, Utah.

My Mother is 86 years old and is in good health. My father passed away last January at the age of 90.

Doyle Vaughan

P.O. Box 9405

Jackson, WY 83002

307-733-6480

Dagle Vauglia

Michael Lewis Waldron

Born in San Antonio, Texas on February 9, 1945. Raised there in a family of six with three sisters. Graduated from Central Catholic High School in 1962. Attended the University of Texas on an NROTC scholarship. Graduated in 1967 with a BA degree in International Relations and was immediately commissioned into the Navy. Ordered to Pensacola, Florida to begin flight training. Designated a Naval Aviator in August 1968.

Tours of duty:

- Sep 68-Oct 69; Flight Instructor, Navy Basic Training Command
- Nov 69-Nov 70; Fleet Replacement Pilot, training in the F8 Crusader for combat operations
- Dec 70-Jul 73; Fleet fighter pilot, three deployments to SE Asia, one hundred fifty plus combat missions, over two hundred fifty carrier landings
- Aug 73-Sep 75; Fleet Replacement Pilot Instructor in the F8, teaching advanced fighter tactics, flying the F8 and the A4 Skyhawk
- Oct 75-Dec 77; Senior Operations Test Pilot on a joint service test program flying the F5E Tiger II in simulated air combat missions

Resigned from active duty in January 1978 at the rank of Lieutenant Commander.

Jul 79-Feb 97; Navy Reserve, multiple assignments within the Navy Reserve Intelligence Command including four tours of Command

Retired with thirty years of commissioned service at the rank of Captain.

Commercial aviation career:

- Jan 78-Aug 86; Frontier Airlines, First Officer on the CV580, B737-200, and the MD80
- Dec 86-Feb 98; Continental Airlines, First Officer on the MD80
- Mar 98-Jan 99; Captain on the MD80
- Feb 99-pres.; Captain on the B737-300/500/700/800

Additionally, in 1987, attended the University of Colorado Graduate School of Business focusing on operations management and human resources. Held the position of Manager of Employee Relations, Pilots in Continental Airlines management from June 1994 to April 1996. Was Chairman of the Professional Standards Committee for the Independent Association of Continental Pilots from March 1997 to December 1999.

Married twenty five years, with two children. Class I medical certificate, no waivers

Arthur B. Ward

The following biographical information is to be used in a petition for exemption from the Age 60 Retirement Rule.

I was born, into an aviation family, on April 27, 1937. My grandfather started the family tradition in the early 1920's, when, at the age of forty-six, he became a private pilot. He continued to fly until his seventy-eighth birthday, at which time he voluntarily gave up flying. His first child, my aunt Elinor, achieved some small degree of fame in the late 1920's and 30's as the "Flying Flapper" of Roosevelt Field. Her first license, granted by the Federation Aeronautique Internationale, was signed by Wilbur Wright; it is proudly displayed in her home to this day.

My father, my grandfather's younger child, did not begin his flying career until 1943, when he became a flying mechanic and observer on PBY Catalinas on anti-submarine patrol for the U.S. Navy. After the end of World War II, my father transferred to the U.S. Army Aviation Corps, which was shortly to become the U.S. Air Force, and continued to fly as a flight engineer until his retirement in 1968.

My own aviation career began when I enlisted in the USAF as an Aviation Cadet in February of 1959. I completed flight training in June of 1960 and was named a Distinguished Military Graduate. I was awarded a commission as a second lieutenant and assigned as an Instructor Pilot. At the end of my Air Force stint, on September 1, 1965, I had accumulated 2,700 hours of flight time in T-33, T-37 and T-38 aircraft.

I began the airline portion of my career when I reported to American Airlines on September 8, 1965 where I remained until my sixtieth birthday. During that thirty-one years and eight months I flew as co-pilot for twelve and a half years and the remaining nineteen years as captain, accumulating an additional 17,000 hours in the DC-6, BAC 1-11, Boeing 707, 727, 757/767, 747 and the DC-10. I was a Check Airman in the B-727 and 757/767 for six and a half years and Assistant Fleet Manager in the 757/767 for a year and a half.

Upon my retirement from airline flying, I began searching for a way to continue my professional aviation career and was able to secure employment with Business Jet Solutions as a pilot in the Learjet model 60. To this date, October 18, 1999, I have flown 1,095 hours in that aircraft, giving me a grand total of 20,800 hours of flight time.

I am particularly proud of this last portion of my aviation career for several reasons. First because it illustrates my love of flying. After my time at American, I could have retired to the golf course, and yet I just couldn't give up flying. The thought of looking at contrails in the sky, and knowing that I would never make them again, was too painful to accept. The second reason for pride is that the Lear 60 is a very hot little machine! At a time in life when most of my friends feel that they're too old to fly the big lumbering airliners, I was able to check out in an airplane that accelerates and climbs faster than anything I've flown since the supersonic T-38 back in 1965.

Another reason to be proud is that corporate flying is more demanding than airline flying. We cater and clean the airplanes, plan our own flights and do our own weight-and-balance computations. There are no "milk runs' in corporate aviation; every day is a new schedule and we are rarely given more than twelve hours notice of what the next day's schedule will look like. The airports that we operate into, such as Aspen and Telluride, CO and Sedona, AZ are far more demanding of our aviation skills than the relatively benign major airports.

In the Air Force, I was an Instructor Pilot; at American I was a Check Airman and Assistant Fleet Manager; in my present job, I am once again serving as a Check Airman, helping to qualify new co-pilots and captains in the Lear 60. I have always set the highest personal and professional standards for myself and always tried to encourage others to do so. Aviation has been, is now and will continue to be the abiding passion of my life.

I Jay Welch

I was born in Price, Utah February 17, 1941. My first airplane ride was with my father in a J-3 Cub at the age of five. After many flights over the years with him and his friends I took my first formal lesson on September 29th, 1953. It was for thirty five minutes in an Aeronca Champion with instructor George Palmer at Torrance, California. Even before that day, which I remember almost as well as the day I soloed, I knew that I would earn my living by flying. I had a deep interest in all aspects of aviation then and I still do today.

Perhaps because of the countless hours I spent building model airplanes in my youth I compromised my distant vision and had to settle for a career in aeronautical engineering. In 1965 I graduated from Columbia University School of Engineering and Applied Science with a masters degree in engineering mechanics. I went to work for Hughes Aircraft as a Member of their Technical Staff, I helped develop the Surveyor Spacecraft, the first Lunar soft landing vehicle. At about that time the airlines reduced their distance vision requirements and I was suddenly medically qualified to pursue a career as an airline pilot.

In January 1966 I began my pursuit of an airline career in earnest. By devoting my resources and time to flying a variety of civilian light planes I was able to obtain an Airplane Transport Rating in August 1968. This gave me the flight experience required of pilot applicants by the major airlines at that time. In September and October 1968 I was offered flight positions with Continental, Piedmont (now part of US Air) and Trans World Airlines. I started my flying career with Continental in October 1968 and have flown the following positions and equipment for the Proud Bird.

Second Officer: Boeing 707, Boeing 727, and Douglas DC-10

First Officer: Boeing 727 and Douglas DC-10

Captain: Boeing 727, Boeing 757 and Boeing 747

For two years I held a position as Director of Flight Operations for a company based in the Western Pacific. I flew a North American Sabre Liner and an IA Westwind. In addition to being the pilot in command I had the responsibility of obtaining the diplomatic clearances and all the other support required for flying into and out of many of the countries in the Western and Southern Pacific.

In more than three decades of professional flying I have accumulated almost thirty thousand hours, most of that time as captain of a Boeing Airliner. I have had no emergencies, accidents or incidents. In my career I have filed two irregularly reports. The first was due to a mechanical problem that prevented normal pressurization of a B-727 on departure requiring a fuel dump and return. The second was a result of a dragging brake that caused a B-727 wheel fuse plug to melt during a turn around at a through stop.

Through-out my career I have enjoyed my training events. In particular the study of aircraft systems has been a pleasure to me. Building a model from "scratch" in my youth and adult-hood, studying the design and development of light planes and studying the systems of a "new generation" airliner have been my focus. I maintain a power and sailplane instructors certificate.

I can say with no hesitation and with complete conviction that because of my background I am more valuable as an airline captain now that I have ever been. I have significant experience to contribute. I look forward to many more years of productivity.

DONALD W. WETMORE 2301 S.W. 2nd Street Bentonville AR 71712 501-273-2606

DOB: February 5, 1942, Palo Alto CA.

SSN: 563-50-8147

Certificate (Pilot License) Number: 1693526

Air Transport Pilot, Airplane Multiengine Land B727, A310, B757, B767

Commercial Privileges Airplane Single Engine Land

9/62-9/67: US Navy #675772 Discharged Lieutenant (O-3)

Squadron: VS-38, NAS North Island, San Diegeo CA.

Ship: USS Bennington, CVS-20.

Combat Service: Vietnam 3/65-10/65 and 11/66-7/67.

Medals Awarded: Air Medal (with Gold Star in lieu of second award)

National Defense Service Medal Vietnam Campaign Medal

Vietnam Service Medal (2 Bronze Stars)

Aircraft Flown: T-34, T-28, S-2.

9/67-11/91 Pan American World Airways #95250 Aircraft Flown: B727, B707, B737, B747, A310

Based: Miami, Berlin, New York.

Routes Flown: North/Central/South America, Europe, Eastern Europe, Middle East, and

Africa.

11/91-Current: Delta Air Lines #682774

Aircraft Flown: A310, B727, B737, B757, B767. Based: New York, Atlanta, Dallas/Ft. Worth.

Routes Flown: Europe, Eastern Europe, Middle East, and North America.

Total Hours Flown: Unknown (total hours records not maintained).

NEVER any Violations, Incidents or Accidents...

Nov. 16 1999 12:53PM P2

FAX NO. : 8174815318

FROM : YETMAN'S

Biography

NAME:

Bert M. Yetman

ADDRESS:

P.O. Box 1116

Grapevine, TX 76099

TELEPHONE:

(817) 481-5318 tel/fax

PERSONAL:

Non-smoker, Height - 5' 11", Weight - 165 pounds,

Health - First Class Physical, Citizenship - American, Married

MILITARY:

United States Air Force - twenty years, Primary duty - Jet Fighter Pilot

EXPERIENCE:

Presently---President of the Professional Pilots Federation, an international organization of pilots from 35 airlines dedicated to changing FAR 121.383(c), which forces retirement on Part 121 pilots at age 60 Also flying B-737 test, ferry, acceptance and delivery flights under FAR Part 91

1979 to 1992---Captain for Southwest Airlines; Flew scheduled FAR 121 operations. Responsible for the safety and comfort of passengers.

1975 to 1979---Pilot for TWA/Saudia; Flew scheduled FAR 121 and ICAO operations throughout the Mid-East, Europe and North Africa.

1972 to 1975---Factory Demonstration Pilot for Cessna Citation. As a member of a successful sales team, responsible for safety, achievement of sales goal and maximum performance demonstrations of the aircraft. I've flown this aircraft worldwide and from every conceivable surface.

1951 to 1972---United States Air Force; Joined during Korean conflict, started flight training August, 1952; later flew 248 combat missions in Vietnam. During the early 1960's I established and implemented a program to bring seven NATO countries, flying F-104 "Starfighter" aircraft, to a combat readiness state utilizing nuclear weapons. I instructed academics, as well as flight, in Germany, Italy, Belgium, Holland, Turkey and Greece. Also Canadian and French forces in Germany. Later I spent four years as the Officer in charge of German F-104 Flight Test activities in the USA.

FAX NO. : 8174815318

LICENSES:

Airline Transport Pilot, Multi-engine land, Commercial, Single

engine land, Instruments, Type rated in Boeing 737 200/300/500, and

Cessna Citation, C-500.

FLIGHT

EXPERIENCE:

Total time: 20,000 hrs. plus, Multi-jet: 16,000 hrs., Single

engine jet: 3500 hrs., various others: 500 hrs.

No accidents, no incidents.

MISCELLANEOUS:

Top Secret clearance during military service as F-104 nuclear weapons instructor to seven NATO countries. I retain Part 91 currency in Boeing 737s'

Flight Time by Aircraft:

Boeing 737-200/300/500	12272	
Boeing 707/720	1600	
Cessna Citation	2100	
F-104C/D/G	1225	*
F-100C/D/F	1156	
F-86F/E	444	
F-84G	37	
A-37B	348	
T-33	495	
C-47 (DC-3)	18	
C-54 (DC-6)	13	
C-119	12	
U-6	20	
T-28	56	
T-6	130	
Aeronca 7AC (PA-18)	25	
Misc	500	
(Mooney, Luscombe, Stearman,		

Four years of F-104 time not recorded due to nature of flight.

B-25, L-5, Helio, Swift)

Bert M. Yetman

PO Box 1116, Grapevine, Texas 76099

Patricia P. Barry, M.D., M.P.H.

Curriculum Vitae

PERSONAL

Name: Patricia Pound Barry

Home Phone: (617) 262-1135, FAX: (617) 262-2875

Office Phone: (617) 638-8383, FAX: (617) 638-8387, e-mail: ppbarry@bu.edu

Home Address: 107 Warren Avenue, Boston, MA 02116

Office Address: 88 East Newton Street, F4, Boston, MA 02118-2393

Current Academic Rank: Professor of Medicine, Boston University School of Medicine Associate Professor of Public Health, Boston University School of Public Health

Citizenship: U.S.

HIGHER EDUCATION

Institutional:

College of William and Mary in Virginia, Chemistry, B.S., 1963 University of South Florida College of Medicine, M.D., 1975 Boston University School of Public Health, Epidemiology/Biostatistics, M.P.H., 1987

Professional Training:

Internship: University of South Florida Affiliated Hospitals, 1975-1976, Internal Medicine Residency: University of South Florida Affiliated Hospitals, 1976-1978, Internal Medicine Chief Resident, Internal Medicine: University of South Florida Affiliated Hospitals, 1978-1979

Certification and Licensure:

American Board of Internal Medicine, September 1978
Added Qualifications in Geriatric Medicine, 1988
Federated Licensure Examination, June 1976
State Board of Medical Examiners, State of Florida, 1977-1994
Board of Registration in Medicine, Commonwealth of Massachusetts, 1984-present

EXPERIENCE

University of South Florida College of Medicine: 1979-84

Assistant Professor of Medicine, 1979-84

Director, Division of Geriatric Medicine, 1980-84

Consultant in Geriatrics, James A. Haley VA Hospital, 1980-84

Clinical Services Coordinator, Suncoast Gerontology Center, 1980-83

Boston University School of Medicine: 1984-87

Assistant Professor of Medicine, Geriatrics Section, 1984-87

Staff Physician, Home Medical Service, University Hospital, 1984-87

Consultant in Geriatrics, Edith N. Rogers VA Hospital, 1984-87

Consultant, Boston University-Brandeis University Health Policy Research Consortium, 1984-87



University of Miami School of Medicine: 1987-92

Associate Professor of Clinical Medicine, Department of Medicine, 1987-1992

Senior Fellow, Center on Adult Development and Aging, 1987-1992

Adjunct Associate Professor, Department of Psychiatry, 1988-1992

Chief, Section of Geriatrics, Division of General Medicine, 1988-1991

Director, Geriatric Medicine Fellowship Program, 1988-1992

Chief, Division of Geriatric Medicine, 1991-1992

Clinical Director, Miami VA Medical Center GRECC, 1991-1992

Associate Chief of Staff, Geriatrics and Extended Care, Miami VA Medical Center, 1991-1992

Boston University School of Medicine: 1992-present

Chief, Geriatrics Section, Department of Medicine, 1992-

Director, Boston University Gerontology Center, 1992-

Program Director, Geriatric Medicine Fellowship, 1992-97

Associate Professor of Medicine, 1992-97

Chief, Home Medical Service, Boston University Medical Center Hospital, 1992-96

Chief, Boston City Hospital Geriatrics and Home Care, 1994-96

Chief, Geriatrics Section, Boston Medical Center, 1996-

Interim Chief Medical Officer/Senior Vice President, Boston Medical Center, 1997-98

PUBLICATIONS (since 1990)

Chapters:

- Barry PP. Chemical Dependency in the Elderly. In Hazzard WR, Andres R, Bierman EL, Blass JP, eds. Principles of Geriatrics and Gerontology, 3rd ed. McGraw-Hill, 1993.
- Barry PP. Assessment of Geriatric Patients. In Homburger F, ed. <u>The Rational Use of Advanced Medical Technology with the Elderly</u>. Springer, 1994.
- Barry PP. Health Care of the Elderly Woman. In Carr P, Freund K, Somani S, eds. <u>The Medical Care of Women</u>. W.P. Saunders, 1995.
- Rabin DL, Barry PP. Community Options for Elderly Persons. In Reichel W, ed. Clinical Aspects of Aging, 4th ed. Williams & Wilkins, 1995.
- Barry PP. Iatrogenic Disease in the Elderly. In Reichel W, ed. <u>Clinical Aspects of Aging</u>, 4th ed. Williams & Wi Levine S, Barry P, Eskew A. The Geriatric Patient. In Noble J, ed. <u>Primary Care and General Medicine</u>.

 Mosby, 1995.

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- Barry PP. Perioperative Care. In Ham RJ, Slone P, eds. Primary Care Geriatrics, 3rd ed. Mosby, 1996.
- Barry PP, Levine S. Home Care and Medical Education: The Boston University Experience. In Michel J-P,
- Barry PP, Ackerman K. Chemical Dependency in the Elderly. In Hazzard WR, Blass JP, Ettinger WH, Halter JB,
 - Ouslander JG, eds. Principles of Geriatric Medicine and Gerontology, 4th ed. McGraw-Hill, 1998.
- Barry PP, Robinson BE. Community-Based Long Term Care. In Gallo J, ed. <u>Reichel's Care of the Elderly:</u> <u>Clinical Aspects of Aging</u>, 5th ed. Williams & Wilkins, 1999.

Monographs:

- Barry PP (ed) Cardiovascular Disease. In <u>Forging a Women's Health Research Agenda</u>. Washington: National Women's Health Resource Center, 1991.
- Barry PP, Markson EW. <u>Clinical and Community Issues in Primary Care: Aging Module</u>. Washington: National Health Service Corps, 1994.
- Reuben DB, Barry PP, Besdine R, Jahnigen D, Knebl J, Reed R. Medicine. In <u>A National Agenda for Geriatric Education: White Papers</u>. Bureau of Health Professions, Health Resources & Services Administration, Public Health Service. Rockville: DHHS, 1995.

Articles:

- Barry PP, Ibarra M. Multidimensional Assessment of the Elderly. Hospital Practice 1990; 25(4):117-128.
- Cattan RA, Barry PP, Meade G, et al: Use of ECT in Octogenarians. J Am Geriatr Soc 1990; 38:753-758.
- McGovern CM, Barry PP. Day Care Programs for Clients with Dementia. Am J Alz Care & Rel Disorders & Res 1991; 6(6):37-42.
- Barry PP. The Demented Elderly Patient: Evaluation and Management. J Fla Med Assoc 1991; 78:767-769.
- Barry PP. Age-based Rationing of Medical Care. Geriatrics 1992; 47(8):64-67.
- Barry PP. Confusion in the Elderly: Delirium or Dementia? Emergency Medicine 1993; 25(6):96-103.
- Barry PP. Coronary Artery Disease in Older Women. In PP Barry ed. Health Care of the Older Woman: Symposium Supplement. Geriatrics 1993; 48(suppl 1):4-8.
- Task Force on Older Women's Health (P Barry, Chair). Older women's health. J Am Geriatr Soc 1993; 41:680-683.
- Eisdorfer C, Sevush S, Barry PP, Kumar V, Lowenstein DA. Evaluation of the Demented Patient. Med Clin NA 1994; 78(4):779-784.
- Barry PP. Geriatric Clinical Training in Medical Schools. Geriatrics Curriculum Development Conference and Initiative, Association of Professors of Medicine. Am J Med 1994;97 (suppl 4A):8-9S.
- Barry PP. Address to the American Geriatrics Society. J Am Geriatr Soc 1995; 43:1165-1166.
- Noe CA, Barry PP. Healthy aging: guidelines for cancer screening and immunizations. Geriatrics 1996; 51(1):75-83.
- Marwill SL, Freund KM, Barry PP. Patient Factors Associated with Breast Cancer Screening Among Older Women. J Am Geriatr Soc 1996; 44:1210-1212.
- Small GW, Rabins PV, Barry PP, et al. Diagnosis and treatment of Alzheimer disease and related disorders.

Other Publications:

- Barry PP. Is the Special Competency Exam Fair to Primary Care? (Invited Commentary). Geriatrics 1990; 45(10):79.
- Barry PP. Geriatrics in Internal Medicine: the Time Has Come. (Editorial) Am J Med 1991;91:447-448.
- Barry PP. Geriatric Home Assessment After Hospital Discharge. (Editorial) J Am Geriatr Soc 1994; 42:1303.
- Silliman RA, Barry PP. Outpatient Comprehensive Geriatric Assessment: An Intervention Whose Time Has Come, or Has It? J Am Geriatr Soc 1999; 47:371-372.

Abstracts:

McGovern CM, Barry PP. Day Care Programs for Clients with Dementia. Gerontologist 1990;30:129A.

Barry P, Markson L, Atkinson L. Physician Home Care: Patient Characteristics and Outcomes. J Am Geriatr Soc 1995; 43:SA40.

PROFESSIONAL

Funded Activities Performed:

National Institute on Aging Geriatric Medicine Academic Award, 1981-1984 (PP Barry, PI)

Co

The Medical Foundation, "A Study of Elderly Patients Who Refuse Hospitalization" 1984-1985 (PP Barry, PI)

American Geriatrics Society/Office of Technology Assessment (US Congress) "Life-Sustaining Technology and the Elderly" 1985 (PP Barry, PI)

National Institute on Aging, AGS/NIA Summer Institute in Geriatrics, Boston University, 1986 (PP Barry, PI)
National Institute on Aging, Summer Institute in Geriatrics, Boston University, 1988 (Original PI and Director, changed to Assistant Director after leaving Boston University)

Miami Area Geriatric Education Center (Associate Director, co-author), 1988-1991 (E Olsen, PI)

Miami VA Medical Center Geriatric Research, Education and Clinical Center (GRECC) (Clinical Director and co-author), 1991- (B Roos, PI)

Faculty Training Projects in Geriatric Medicine and Dentistry, Public Health Service, 1991-94 (K Steel, then P Barry, PI); competitive continuation 1994-99 (P Barry, PI)

Evans Medical Foundation, Health Services Research Feasibility Grant, 1994-95 (P Barry, PI)

American Geriatrics Society, "Enhancing Geriatric Knowledge of Practicing Physicians," funded by the John A. Hartford Foundation, (P Barry, PI), 1997-2002.

Center of Excellence in Geriatrics at Boston University, funded by the John A. Hartford Foundation, 1998-2001

Editorial Responsibilities:

Geriatrics, 1984 - present Journal of the American Geriatrics Society, 1985-1988 Age and Ageing, 1998-

Reviewer Responsibilities:

Journal of the American Geriatrics Society Archives of Internal Medicine New England Journal of Medicine Journal of General Internal Medicine

Professional and Honorary Organizations:

Alpha Omega Alpha, 1976-

American Board of Internal Medicine, Geriatric Test Committee, 1992-98

American Board of Psychiatry and Neurology, Geriatric Test Committee, 1998-

American College of Physicians, Fellow

Subcommittee on Aging, 1988-92

Human Rights and Medical Practice Subcommittee, 1993-94

Nominations Committee, 1996-97

American Geriatrics Society, Fellow

Representative to Association of Subspecialty Professors, 1998-

Chair, Board of Directors, 1996-97

President, 1995-96

President-Elect, 1994-95, Secretary, 1993-94

Board of Directors, 1988-97

Membership Committee, Chair, 1989-94

Delegate to International Association of Gerontology World Congress, Budapest, 1993

Previous Committee Memberships: Clinical Practice Committee, Education Committee, Program

Committee, Research Committee, Ad Hoc Committee on Requirements for Fellowship Training in

Geriatrics, Ad Hoc Committee for Guidelines for Internal Medicine Residency Training in Geriatrics

American Public Health Association, Gerontology Section

Gerontological Society of America, Clinical Medicine Section

American Federation for Aging Research

Research Committee, 1985-92

Chair, John A. Hartford/AFAR Medical Student Geriatric Scholars Program Committee, 1997-

Massachusetts Peer Review Organization, Inc. (MassPRO)

Executive Committee, 1986-87; Board of Directors, 1995-97

Association of Subspecialty Professors, Council Member, 1999-

Doctoral Committees

"Risk Factors for Change in the Ability to Perform Basic Activities of Daily Living Among the Elderly" Terry S. Field, DSc (Epidemiology), Boston University School of Public Health, 1993

Honors and Awards:

University of South Florida College of Medicine:

Dean's Award, Outstanding Graduate, 1975

Alpha Omega Alpha, Charter Member, 1976

Nathan Marcus Award, Internal Medicine, 1978

Distinguished Alumnus Award, 1994

The Best Doctors in America, 1st, 2nd and 4th listings

Who's Who in America, 1995, 1996, 1997, 1998

Visiting Nurses Association of Boston, 1998 Community Partnership Award

Boston Magazine: Best Doctors in Boston, 1999

Presentations at national and international meetings and conferences: (since 1990)

"Health, Life and Death Decisions: Mediating Bioethical Disputes," American Bar Assn 3rd National Family Dispute Resolution Conference, Miami Beach, FL, March 22, 1990.

"Drug Therapy in the Elderly," Meet the Professor Sessions: 71st Annual Session of the American College of Physicians, Chicago, IL, April 27, 1990.

"Medical Evaluation of the Demented Elderly Patient," Precourse in Geriatrics: 13th Annual Meeting of the Society of General Internal Medicine, Arlington, VA, May 2, 1990.

"Perioperative Considerations in the Elderly," Symposium: 47th Annual Meeting of the American Geriatrics Society, Atlanta, GA, May 20, 1990.

"Medical Illness in Psychiatric Patients," 4th Annual Meeting of the American Association of Geriatric Psychiatry, Ft. Lauderdale, FL, Feb. 17, 1991.

"Surgical Risk in the Elderly," Meet the Professor: 48th Annual Scientific Meeting of the American Geriatrics Society, Chicago, IL, May 10, 1991.

"Ethical Issues in Home Care," Annual Meeting of the National Council on Aging, Miami Beach, FL, May, 1991.

"The Older Woman: Cardiovascular Disease and Research Issues" Symposium on Health Care of the Older Woman, 49th Annual Scientific Meeting of the American Geriatrics Society, Washington, DC, November 14, 1992.

"Geriatric Clinical Training in Medical Schools," Geriatrics Curriculum Development Conference and Initiative.

Association of Professors of Medicine, Leesburg, VA, September 17, 1993.

"Home Care: Symposium on Creative Teaching Sites for Geriatric Medicine," 50th Annual Scientific Meeting of

the American Geriatrics Society, New Orleans, LA, November 18, 1993.

"The Future of Geriatric Education for Residents: Symposium on Developing Geriatric Medicine Curriculum for

Residents," 50th Annual Scientific Meeting of the American Geriatrics Society, New Orleans, LA, November 19, 1993.

Discussant, Symposium on Geriatric Medical Fellowship Training, 46th Annual Scientific Meeting of the

- Gerontological Society of America, New Orleans, LA, November 21, 1993.
- Precourse Workshop in Geriatric Curriculum Development, Spring Meeting of the Association of Program Directors in Internal Medicine, Miami, FL, April 18, 1994.
- Panel on "Approaches to Meeting the New Special Requirements for Internal Medicine Training," Spring Meeting of the Association of Program Directors in Internal Medicine, Miami, FL, April 18, 1994.
- Workshop on "Evaluating and Managing the Geriatric Patient," 77th Annual Session of the American College of
 - Physicians, San Francisco, CA, April 26, 1996.
- "Demography of Aging," Core Curriculum, 53rd Annual Meeting of the American Geriatrics Society, Chicago, IL, May 2, 1996.
- Panel, Consensus Conference on Alzheimer's Disease and Related Dementias, Geriatric Psychiatry Alliance, Washington, DC, January 4-5, 1997.
- Beverly Lecture: "Geriatric Education: A Team Approach," 23rd Annual Meeting of the Association for Gerontology in Higher Education, Boston, MA, February 21, 1997.
- Workshop on "Evaluating and Managing the Geriatric Patient," 78th Annual Session of the American College of
 - Physicians, Philadelphia, PA, March 22, 1997.
- "Geriatric Education and Training Issues," First French-American Geriatric Meeting, Paris, France, September 10-12, 1997.
- Panel: "Gastrointestinal Problems in the Geriatric Patient," American College of Gastroenterology, 63rd Annual Scientific Meeting, Boston, MA, October 13, 1998.

<u>Invited outside lectureships (selected, since 1990):</u>

- "Evaluation of the Confused Elderly Patient," Medical Grand Rounds, University of South Florida, Tampa, FL, January 11, 1990.
- "Improving Patient and Family in Dementia" and "Nutrition in Aging," Florida Medical Association Annual Meeting, Miami Beach, FL, September 14-15, 1990.
- "Depression," Practical Geriatrics Program, University of North Carolina, Chapel Hill, NC, October 3, 1991.
- "Non-Institutional Long Term Care," Intensive Course in Geriatric Medicine, UCLA, Los Angeles, CA, January 22, 1992.
- "Cardiovascular Disease in Older Women," Geriatrics Seminar, Harvard Division on Aging, Boston MA, March 3, 1993.
- "Coronary Heart Disease in Older Women," Medical Grand Rounds, University of South Florida, Tampa, FL, March 18, 1993.
- "Identification of Elderly People at Risk for Decline," Advances in Internal Medicine, University of Michigan, Ann Arbor, MI, April 27, 1994.
- "The Utility of Physician Home Care," Geriatrics Seminar, Harvard Division on Aging, Boston MA, February 7, 1995.
- "Physician Home Care," Medical Grand Rounds, Dartmouth-Hitchcock Medical Center, Hanover, NH, December 8, 1995.
- "Evaluation of the Confused Elderly Patient," Medical Grand Rounds, Broward General Medical Center, Ft. Lauderdale, FL, December 5, 1996.
- Keynote Address: "Evaluation and Treatment of Dementia," Challenges in Geriatric Practice, University of North
 - Carolina, Chapel Hill, NC, January 9, 1997.
- Keynote Address: "Geriatrics as a Discipline," 1998 Geriatric Update, University of Oklahoma, Oklahoma City, OK, May 15, 1998.
- Panel: "Impact of Cardiovascular Disease on Women's Health," New England Regional Conference on Women's Cardiovascular Health, Worcester, MA, June 16, 1998.

Visiting Professorships:

Division of Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine, Baltimore MD, March 14-15, 1994

Division of Geriatrics and The Geriatrics Center, University of Michigan, Ann Arbor MI, April 26-27, 1994 Division of Geriatric Medicine, Saint Louis University Health Sciences Center, St. Louis, MO, January 17-18, 1995

Geriatrics Division, Medical Center of Central Massachusetts, Worcester, MA, Sept 1, 1995 Geriatrics Program, Dartmouth-Hitchcock Medical Center, Hanover, NH, December 8, 1995

Geriatrics Department, University of Oklahoma, Oklahoma City, OK, May 14, 1998

Consultation:

Consultant Panel for Physician Education for Home Care, American Medical Association, 1987-91

Consultant in Geriatrics, National Library of Medicine, 1988

Specialist Site Visitor, Geriatric Medicine Programs, Residency Review Committee for Internal Medicine, 1988 Geriatric Consultant, Parke-Davis, 1990

Co-Facilitator, Cardiovascular Panel, "Forging a Women's Health Research Agenda," National Women's Health Resource Center, 1990-92

Scientific Advisory Panel, Society for the Advancement of Women's Health Research, 1991-92

Advisory Board, Center for Research in Applied Gerontology (Roybal Center), New England Research Institute,

Inc., 1993-96, Sargent College of Boston University, 1996-

Member, Medicine Study Group for the National Forum on Geriatric Education and Training, Bureau of Health Professions, PHS, 1994-95

Consultant Site Visitor, John A. Hartford Foundation, 1994-

External Advisory Panel, Competency-Based Curriculum in Geriatrics for Residency Training in Internal Medicine and Family Medicine. Huffington Center on Aging, Baylor College of Medicine, Houston, TX, 1995-

External Scientific Advisory Committee, Institute on Aging, University of South Florida, Tampa, FL, 1996-National Advisory Board on IRBs and Health Services Research, A Study Performed for the John A. Hartford Foundation by Public Responsibility in Medicine and Research, Boston, MA, 1996

Steering Committee, Expansion of Home Care into Academic Medicine, The Homecare Institute, Hackensack University Medical Center, Hackensack, NJ, 1997-

Alzheimer's Disease Primary Care Education Council, 1997.

Review Committees:

National Institute on Aging Geriatric Medicine Academic Award, Ad Hoc Review Committees 1981-83 Health Resources and Services Administration, Review Committee for Geriatric Education Center Grants, 1985.

SERVICE

University of Miami:

Director, Geriatric Medicine Board Review Course, 1990

Curriculum Committee, University of Miami School of Medicine, 1990-92, Vice-Chair, 1991-92

Boston University and Boston Medical Center:

Board of Directors, Evans Medical Foundation, 1992-96, Clerk/Secretary, 1996

Steering Committee, Health Services Research and Development Field Program, EN Rogers Memorial Veterans Hospital, Bedford, MA, 1992-95

Geriatric Research, Education, Clinical Center Advisory Committee, EN Rogers Memorial Veterans Hospital, Bedford, MA, 1993-

Graduate Medical Education Committee, 1993-98, Chair 1997-98

Third and Fourth Year Student Promotions Committee, School of Medicine, 1994-95

Curriculum Committee, School of Medicine, 1994-98

Chair, Medicine Clerkship Curriculum Task Force, Dept. of Medicine, 1995

Cancer Prevention and Control Center Curriculum Committee, 1995-97

Advisory Group on Boston Medical Center Physician Leadership, 1997

Interim Chief Medical Officer/Senior Vice President, Boston Medical Center, 1997-98

Boston Medical Center Medical Management Council, 1997-, Chair 1997-98

Boston Medical Center Operations Management Council, 1997-98

Boston Medical Center Strategic Planning Group, 1997-98

Boston Medical Center Medical Staff By-Laws Committee, 1996-, Chair 1996-98

President-elect, Medical-Dental Staff, Boston Medical Center, 1996-98

President, Medical-Dental Staff, Boston Medical Center, 1998-

Boston Medical Center Medical Executive Committee, 1996-, Chair, 1998-

Boston Medical Center Strategic Planning Committee, 1998-

Community

Visiting Nurses Association of Boston, Inc., Board of Directors, 1995-

CEO Search Committee, 1997-98

Executive Committee, 1998-

Strategic Planning Committee, 1999

CURRICULUM VITAE

Name

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Address

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New York, New York 10024

Office:

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60 East 86th Street New York, NY 10028 Tel: (212) 517-1315

Fax: (212) 288-5450

Birth Date & Place

January 21, 1927 - New York, New York

Citizenship

United States of America

Social Security #

142-12-9094

1945-49

Education & Training

1747-47	Columbia College, Columbia University, B.A.
1949-53	Columbia University College of Physicians and Surgeons, M.D.
1953-54	St. Luke's Hospital, New York, Internship
1954-55	University of California Langley Porter Clinic, Residency
1956-57	National Institute of Mental Health, Residency
1957-58	Chesmut Lodge, Residency

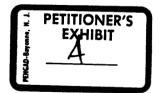
Columbia College Columbia University R A

Board Status

1961 Diplomate, American Board of Psychiatry and Neurology

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Military Service

1982-	Inactive Reserve, U.S. Public Health Service
1978-82	Assistant Surgeon General, U.S. Public Health Service
1976-78	Medical Director, U.S. Public Health Service
1962-76	Inactive Reserve, U.S. Public Health Service
1961-62	Senior Surgeon, U.S. Public Health Service
1955-61	Surgeon, U.S. Public Health Service
1944-47	U.S. Maritime Service Warrant Officer-Ensign

Type of Practice

Gerontology, Psychiatry

Licensure Status

1982-	New York State, #0149988-1
1958-	District of Columbia, #2222
1956-	State of Maryland, #D-4219
1955-95	State of California, #C-3152

Academic Appointments

1997-	President and CEO, International Longevity Center
1995 -	Professor of Geriatrics and Adult Development, Mount Sinai Medical Center

-		Invited Visiting Professor, Medical School Faculty, Service of Psychogeriatrics, University of Lausanne, Government of the Canton of Vaud. (Host Professor and Vice Dean, Jean Wertheimer, Service De Psychogeriatric, Hospital De Cery, Prilly),
	1982-95	Brookdale Professor of Geriatrics and Adult Development, Mount Sinai School of Medicine, City University of New York
	1982-	Meritorious Professor of Gerontology and Geriatrics, Hunter College, City University of New York
	1976-	Honorary Member, The Washington Psychoanalytic Institute
	1962-82	Clinical Professor of Psychiatry and Behavioral Sciences, George Washington University School of Medicine
	1962-76	Associate Clinical Professor of Psychiatry, Howard University School of Medicine
	1962-76	Research Psychiatrist and Gerontologist, The Washington School of Psychiatry
	1962-76	Teaching, University of Chicago, Catholic University, Georgetown University, University of Maryland
Professional Appointments		
	1997-	President and CEO, International Longevity Center - U.S.
	1995-	Professor Geriatrics, Henry L. Schwartz Department of Geriatrics and Adult Development
	1990 -	Director, International Longevity Center - U.S.
	1982-95	Brookdale Professor and Chairman, Henry L. Schwartz Department of Geriatrics and Adult Development, The Mount Sinai Medical Center

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Research Activities

1984-95

1984-90

1983-95

1976-82

1976-82	Director, National Institute on Aging, National Institutes of Health
1975-76	Director Designate, National Institute on Aging, National Institutes of Health
1962-76	Research Psychiatrist and Gerontologist, The Washington School of Psychiatry
1955-62	Research Psychiatrist, National Institute of Mental Health, Laboratory of Clinical Science (Dr. Seymour Kety)
1955	Physician, Kaiser-Permanente Hospital, San Francisco, California
1997	President and CEO, International Longevity Center (US)
1990-97	Director, International Longevity Center (USA)
1985-96	Co-Director, Hunter-Mount Sinai Geriatric Education Center (HHS-HRSA)
1984-87	Director, Training Center for John Hartford Foundation,

Hartford Geriatric Faculty Development Award

Co-Director, National Institute on Aging, Alzheimer's

Principal Investigator, Atlantic Richfield Foundation

Alzheimer's Disease and Related Disorders

Disease Research Center, The Mount Sinai Medical Center

Center of Productive Aging, Department of Geriatrics and Adult Development, The Mount Sinai Medical Center

Director, Robert Wood Johnson, Jr. Laboratory-Studies in

Director of Aging Research, National Institute on Aging

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1962-76	Principal Investigator: Psychotherapy and Psychology of Middle and Later Life, Community Studies, Memoir Study
	of Persons of Achievement after Middle Life, Washington
	School of Psychiatry, Washington, D.C.

1955-66 Principal Investigator, Human Aging Study of National Institute of Mental Health, Bethesda, Maryland

Consultant/Advisory Activities

1997-	Charter Member, Leadership Council, Alzheimer's Association, New York Chapter.
1996-	Chair, European-wide Advisory Committee on Aging Well.
1995-	Member Jury, Heinz Awards, Human Condition
1995-	Member, Honorary Advisory Board of the UCLA Center on Aging.
1995-	Member, Advisory Council, National Silver Haired Congress.
1995-	Co-Chair (with Dr. Irwin Redlener, The Children's Health Fund). The Intergenerational Committee for the Health of America's Children (Chairs: Betty Ford, Rosalyn Carter and Hugh Downs).
1995-	Chair, Advisory Committee 1995 White House Conference on Aging (Presidential Appointment)
1994-	Member, Advisory Committee Project on Death in America (Open Society Institute, Soros Foundation)
1994-	Scientific Advisor, Human Nutrition Institute of the International Life Sciences Institute
1994	Member, Commission on Older Students, New School for Social Research, New York (Review of Institute for Retired Professionals)

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1993-	U.SJapan Joint Commission on Aging
1993-94	Board of Advisors, National Academy on Aging
1993-94	New York State Task Force on Alzheimer's Disease Care Coordination
1993-	National Advisory Council on Aging (National Institute on Aging, NIH) (Delegate of NACA to Advisory Committee of the Director (ACD), NIH).
1991-	National Advisory Committee, Physicians for Human Rights
1990-	Advisory Board, National Women's Health Resource Center
1990-91	Advisory Board, Coming of Age in America
1990-91	Commission on Aging Services for the Year 2001 (Mayor David Dinkins)
1990-	Advisory Board, National Retiree Volunteer Center
1990-	Advisor, Study Geriatric Education Health Resources and Services Administration
1988-90	Senior Advisor, Institute of Medicine/National Academy of Sciences National Agenda for Research on Aging
1987-90	Member, National Visiting Council for the Health Sciences Faculties, Columbia University (College of Physicians and Surgeons)
1987-88	Member, Health Advisory Committee, Public Affairs Committee
1987-	Member, Edith K. Ehrman East Harlem Health Education Advisory Committee, The Mount Sinai Medical Center
1987-89	Advisory Committee, Long Term Care Social Insurance Program Villers Foundation, American Association of Retired Persons, and Older Woman's League

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1987-	Member, Advisory Board, National Media Owl Awards, Retirement Research Foundation
1986-89	Member, National Leadership Commission on Health Care
1986-87	Member, Institute of Medicine Committee on Leadership for Academic Geriatric Medicine
1986-87	Co-Chairman, Committee on Chemical Toxicity and Aging, National Research Council, National Academy of Sciences (Report: Aging in Today's Environment, 1987.)
1986-	Member, Advisory Council, New York-New Jersey Center on Environmental and Occupational Health
1986-	Member, External Advisory Board, Alzheimer Neuroscience Center and Division of Behavioral Neurology, Case-Western, Cleveland, Ohio
1986-89	Member, U.S. Congress Office of Technology Assessment Physician Payment Review Commission
1986-	Member, Advisory Council, Sarah's Circle, Washington, D.C.
1986-	Member, Delegation for Basic Biomedical Research
1985-88	Member, The Older Women Film Project, San Francisco. (Film: Acting Our Age, Michal Avian, 1987.)
1985-	Member, Clinical Research Center on Psychopathology of the Elderly (CRC/PE) External Scientific Advisory Committee, U.C.L.A.
1985-96	Member, National Advisory Council, The San Francisco Institute on Aging, Mount Zion Hospital & Medical Center
1985-91	Chairman, The Commonwealth Fund Commission on Elderly People Living Alone

1985-89	Chairman, Advisory Committee, Living-at-Home Program, The Commonwealth Fund, The Pew Trust, Arthur Vinning Davis, New York Community Trust and 29 other foundations
1985-87	Member, New York State Governor's Task Force on Aging (Governor Mario Cuomo)
1985-89	Member, Advisory Board, New York City Alzheimer's Resource Center (Mayor Edward Koch)
1985-	Member, Board of Advisors, New York Center for Policy on Aging (New York Community Trust)
1985-90	Member, Alzheimer's Disease and Related Disorders Association Medical and Scientific Advisory Board
1985-87	Member, The Brookings Institution National Advisory Panel on Long Term Care for the Elderly
1985-	Chairman, Advisory Committee, National Fellowship Program in Geriatrics, Humanities and Social Sciences, Brookdale Foundation
1985	Chairman, Advisory Committee, Interagency Memory Aid Project, Research Triangle Institute (NASA)
1985-87	Chairman, Workshop on Environmental Toxicity and the Aging Process (EPA/NIA)
1984-86	Member, Advisory Board, Encyclopedia of Aging (Springer)
1984	Member, The National Citizen's Board of Inquiry in Health in America
1983-92	Member, Ethel Percy Andrus Gerontology Center Board of Counselors
1983-	Member, Citizen's Council on Earnings Sharing
1983-	Member, Prospective Reimbursement Committee, SOS (Save Our Security)

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1980-83	Member, Hogg Foundation, National Advisory Council
1979-85	Commissioner, American Bar Association, Commission on the Legal Problems of the Elderly
1977-89	Jury Member, Albert and Mary Lasker Foundation
1976-82	Advisor, World Health Organization (including United Nations World Assembly on Aging, Vienna 1982) - meetings in Geneva, Copenhagen, Weimar, Tokyo, Washington to help establish global program for research on aging.
1976-81	Member, Advisory Council, Over Easy television program
1971	Member, Technical Advisory Committee, White House Conference on Aging
1970-71	Member, Mental Health Technical Advisory Committee to the Health Planning Advisory Committee, District of Columbia, Department of Public Health
1969-72	Member, Committee, Gerontological Curricula in Medical Schools and Continuing Medical Education, Gerontological Society
1969	Member, Public Welfare Committee (later called Community Health), District of Columbia Medical Society
1969-72	Chairman, District of Columbia Advisory Committee on Aging (analogous to a State Commission on Aging)
1969-72	Member, Committee on History, American Psychiatric Association; Chairman, Commission on History. Developed program of memoirs of contributors and leaders is psychiatry.
1969-76	Member, National Advisory Board for Legal Research and Services for the Elderly, National Council of Senior Citizens.
1968-76	Consultant, U.S. Senate Special Committee on Aging

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1968-74	St. Elizabeth's Hospital and D.C. Government Right to Treatment Case)
1968-70	Member, Committee on Research and Development in Social Gerontology, Gerontological Society (Funded by the Administration on Aging, Department of Health, Education & and Welfare)
1968-70	Member, Committee on Public Policy, Gerontological Society
1966-67	Member, Subcommittee on Employment of the District of Columbia Interdepartmental Committee on Aging
1965-70	Member, Committee on Archives and History, Gerontological Society
1965-86	Founding Member, The Forum for Professionals and Executives in the District of Columbia
1963-76	Consultant to various homes of the aging such as DC Baptist Home, Hebrew Home for the Aged (Rockville, Maryland), etc.
1962-76	Consultant, Department of Public Welfare: Protective Services for Older Adults (HEW funded project)
1962-76	Senior Consultant, in the District of Columbia St. Elizabeth's Hospital, Washington, D.C.
1962-76	Consultant, National Institute of Mental Health, Bethesda, Maryland
1962-76	Consultant, Geriatric Research Program, Langley Porter Neuropsychiatric Institute, University of California at San Francisco, California (Monograph: Aging and Mental Disorders in San Francisco). (Professors Alexander Simon and Marjorie Fiske Lowenthal).

-	1962-67	Chairman, Committee on Geriatrics, Washington Psychiatric Society
	1961-72	Member, Executive Committee, Washington School of Psychiatry
Public Activities		
	1984-94	Editor, Long Life Series, Ballantine Books, Random House.
	1975	Co-Creator, Lifetime Magazine, Public Television.
	1969-72	Special Task Force Unit, on "Newtown" Development Episcopal Diocese of Washington
	1968-72	Ralph Nader Study Projects and Books on Problems of Nursing Homes and Community Mental Health Centers
	1968	Elected Member, D.C. Delegation, Democratic National Convention
	1962-72	Board of Directors (and First Secretary), National Ballet Society and School-the Nation's Capital's First Professional Ballet Company.
Board Memberships		
	1998 -	Member, the Institute for the Study of Aging (Lauder Foundation).
	1995-	Member, Board, Americans for Healthy Aging
	1995-	Member, Board, Friends of the National Institute on Aging
	1992-	Honorary member of the Board of Directors of the John Heinz Congressional Fellowship in Aging and Health.
	1992-	Member, Board, International Council of Global Health Progress, Paris.

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Member, Asociacion Nacional Pro Personas Mayores

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1976-88

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1988-	Member, National Advisory Committee, Asociacion Nacional Pro Personas Mayores.
1976-	Faculty for Continuing Medical Education Advisory Council (Senior Medical Consultants)
1974-76	Trustee, Group for the Advancement of Psychiatry
1972-87	Member, The National Caucus and Center on Black Aged, Inc.
1972-76	Trustee, Washington School of Psychiatry
1971-74	Trustee, Wesley Homes, Atlanta, Georgia
1968-84	Member, National Council on the Aging

Scientific & Professional Editorial Boards

1997	Nutrition, Health and Aging
1997	Journal of Gerontology: Psychological Sciences
1995-	Current Issues in Public Health, Current Science
1993-	Hong Kong Journal of Gerontology
1992-	American Journal of Geriatric Psychiatry
1988-96	International Psychogeriatrics
1986-95	Journal of Geriatric Psychiatry and Neurology
1986-	Geriatrics, Editor-in-Chief
1986-89	Comprehensive Gerontology (Ceased publication 1989)
1986-	Merck Manual of Geriatrics, First and Second editions
1985-91	Alzheimer's Disease and Associated Disorders - An International Journal

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-	1980-90	Neurobiology of Aging: Experimental and Clinical Research
	1982-92	Medical Aspects of Human Sexuality (ceased publication, 1992)
•	1982-84	Journal of the American Geriatrics Society
	1979-95	Age and Aging Journal (British Geriatrics Society)
	1975-	Geriatrics
	1970-	International Journal of Aging and Human Development
	1970-	Journal of Geriatric Psychiatry
	1995-	Editorial Review Panel, Alzheimer's Disease, Time Life Medical (C. Everett Koop)
Other Editorial Boards		
	1996-	Aging Today, American Society on Aging
	1990-	Health and Medical Advisory Board, Family Circle
	1990-	Sex Over Forty Newsletter
	1989-95	Longevity
Special Programs		.
	1994	Symposium on Strategies to Delay Late Life Dysfunction Mount Sinai Medical Center
	1991	Issues in Older Men's Health, American Medical Association
	1986-	Advisory Committee, Metropolitan Life Foundation Medical Research Awards, Chair, 1994-

-	1985	Symposium on Modern Biological Theories of Aging (cosponsored with the National Institute on Aging and American Museum of Natural History), Mount Sinai Medical Center
	1985	Advisor and Participant, Growing Old in America, ABC News: Closeup
	1984-86	Jury, Wood Kalb Award for Alzheimer's Disease Research
International Activities - Selected -		
	1998	Chair, Salzburg Seminar
	1995	Keynote, International Federations on Aging, Jerusalem, Israel.
	1994	Keynote Lecture, 120th Anniversary Yomiuri Shimbun, Tokyo, Japan.
	1992	Presentation, Cancer, AIDS and Society. International Society for Global Health Policy, UNESCO Building, Paris, France.
	1992	Presentation, Foundation of Gerontology, Paris, France.
	1991	Sasakawa Foundation
	1991	Keynote Lecture, International Conference on Health Economics and Medical Systems: A Japan-United States Comparison, New York University, Harvard University and the University of Tokyo
	1991	Keynote Lecture, Productive Aging, Businessmen and Women, Tokyo, International Leadership Center on Longevity and Society, Tokyo, Japan

1991	Lectures, University of Lausanne, Basel and Geneva:
	Round Table, Pharmacological Treatment in Psychogeriatrics: What are the Relevant Targets from a Clinician's Viewpoint? Today and in the Year 2005? Sandoz Pharmaceutical, Basel, Switzerland
	Assisted Suicide, University of Basel, Switzerland
	New Trends of Geriatrics Research in the United States, The Hopital de Geriatrie de Geneve
1991	Visiting Professor, University of Lausanne, Switzerland. Also lectures University of Basel and Geneva
1989	Participant, Conference on Feasibility of Establishing an Institute for Senior Scholars, France
1989	Keynote, for International Conference, Alzheimer's Disease International, Dublin, Ireland
1989	Keynote, The Fourth Congress of the International Psychogeriatric Association, Tokyo, Japan
1989	International Congress of Gerontology, Acapulco, Mexico
1989	Keynote, Program on Research on Aging, World Health Organization
1988	Symposium Director, "Who is Responsible for My Old Age?," sponsored by The Japan Shipbuilding Industry Foundation, New York, New York
1988	Member Special Advisory Committee, Special Program for Research on Aging, World Health Organization
1988	Keynote, Aging Research, International Forum on Health and Aging, Sponsored by The Department of Shizuoka Prefecture and The World Health Organization, Pacific Manila Office, Japan

1988	Lectures, Australia, Alzheimer's Disease and Related Disorders Society of Australia (ADARDS), Melbourne, Adelaide, Sidney (six week work-study trip)
1988	Seminar, Department of Community Services and Health, The Federal Government of Australia, Camberra
1988	Keynote, Alzheimer's Disease International, Brisbane
1988	Formal Inauguration of the United Nations International Institute on Aging, Valletta, Malta. American Member of the Board
1987	Guest Consultant, Citibank International Conference, Kuala Lumpur, Malaysia
1987	Keynote, Symposium, An Aging Society, <u>Asahi Shimbun</u> , Tokyo, Japan
1987	Guest Consultant, School of Medicine, University of Buenos Aires, Argentine-North American Association for the Advance of Science, Technology and Culture in Buenos Aires, Argentina; also special guest, U.S. Embassy, August, 1987
1987-	Medical Advisory Board, Medical Development for Israel, Inc.
1987	Consultant, Kupat Holim (Health Services) Histadrut (General Federation of Labor), Israel, June 13-27, 1987
1987	Co-Chairman (with Hans Popper) and Presenter, Aging in Liver and Gastrointestinal Tract, Falk Symposium, No. 47, Titisee, West Germany, June 10-12, 1987
1987	Keynote Address, 40th Anniversary Jubilee, Netherlands Society of Gerontology, May, 1987
1987	Symposium Director, "The Promise of Productive Aging," sponsored by The Japan Shipbuilding Industry Foundation, Dirksen Senate Office Building, Washington, D.C.

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1987	Guest Presentation, Japan External Trade Organization (JETRO), American Health Products and Services Fair, Osaka, Japan
1986	Official Trip, People's Republic of China, Ministry of Health, People's Republic of China
1984	United States Information Agency/State Department Lecture Tour in Japan
1983	Faculty Chairman, The Salzburg Seminar, Salzburg, Austria, Seminar on Aging, Productivity and Health
1983	Guest of Government of France for the National Conference on Aging ("French White House Conference on Aging"), Paris (and other sites).
	The French National Conference of Retired and Elderly Persons, (Assises Nationales Des Retraites et Personas Agees, Paris, France).
1982	Advisor to the World Health Organization for the United Nations World Assembly on Aging, Vienna, July - August, 1982
1981	Participant, International Congress of Gerontology, Hamburg, Germany
1979	Guest, Romanian Institute of Gerontology, (Dr. Ana Aslan). Bucharest and other sites, Romania, August 1979
1978	International Congress of Gerontology, Tokyo, Japan, Post- Congress Symposium, Kyoto, Japan
1978	Official visit, U.S.S.R., Host: Institute of Gerontology, Kiev
1969	International Congress of Gerontology, Washington, D.C.
1966	International Congress of Gerontology, Vienna, Austria. Special: Semmering, Austria

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Honorary Degrees

	1997	Doctor of Science, Philadelphia College of Pharmacy and Science
·	1987	Doctor of Medicine, Hahneman University
	1981	Doctor of Science, University of Southern California
	1981	Doctor of Medicine, University of Goteborg, Sweden
Honors/Awards		
	1998	Andrus Foundation Lifetime Achievement, September.
	1998	NIHAA Public Service Award (National Institutes of Health Alumni Association)
	1988	Lifetime Achievement Award, American Association of Retired Persons, Andrus Foundation
	1997	Anniversary Medal for Service to Aging Research and Geriatric Medicine, British Geriatrics Society
	1997	Leader Health Care Achievement Award
	1997	Dr. Charles D. Schottland Memorial Lecture Series Award, Distinguished Lecturer
	1997	John P. McGovern Award in the Behavioral Sciences, The Smithsonian Institution
	1997	ABP, Jesse H. Neal Editorial Achievement Award
	1996	The Gustav O. Lienhard Medal for Advancement of Health Care, Institute of Medicine, National Academy of Sciences
	1996	Jacobi Medallion Award, The Mount Sinai Alumni
	1995	ESTA

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1995	Raymond Pearl Memorial Lecture, Human Biology Council (now Human Biology Association).
1994	Lifetime Achievement Award, New Choices Magazine.
1994	ABP, Jesse H. Neal Editorial Achievement Award
1993	The Sandoz Prize for Gerontological Research, Awarded by the International Association of Gerontology
1992	First Hy Hirsch Award, Institute of Retired Professionals, New School for Social Research, New York
1992	The Association of Business Publishers 1992 Neal Awards - Certificate of Merit
1990	Distinguished Service Award, Alzheimer's Association
1990	Gray Panthers Honor
1990	The Association of Business Publishers 1990 Neal Awards-Certificate of Merit
1989	Robert Ray Parks Award of St. Margaret's House, Trinity Church, New York
1989	Jack Weinberg Memorial Award in Geriatric Psychiatry
1988	Allied-Signal Achievement Award in Aging
1988	Honoree, Alzheimer's Disease and Related Disorders Association
1987	Ollie Randall Award, National Council on the Aging
1987	Resolution of Recognition, House of Representatives, Puerto Rico
1987	Claude Pepper Award, New York Foundation for Senior Citizens
1986	Claude Pepper Humanitarian Award, International Platform Association

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1986	Friends and Relatives of Institutionalized Aged (FRIA)
1985	Alice Brophy Award, Burden Center for the Aging
1984	Brookdale Award for Distinguished Contribution to the Field of Gerontology
1984	The Geriatric Community Project Committee of Long Island, Man of the Year Award
1984	American Federation for Aging Research, Award of Distinction
1983	John Jay Award, Columbia University
1982	Dodd-Ross Lecture on Geriatrics, American Medical Directors Association
1981	Kesten Lecture, University of Southern California
1980	United States Public Health Service Distinguished Service Medal
1980	American Association of Homes for the Aging, Distinguished Service Award
1980	Freeman Award, Gerontological Society
1980	Salmon Lectures, N.Y. Academy of Medicine
1979	Elected to Institute of Medicine, National Academy of Sciences
1978	American Psychiatric Association Founders Award
1978	Donald P. Kent Award, Gerontological Society
1977	A. Ross McIntyre Award
1977	Arthur S. Flemming Award, National Association of State Units of Aging
1976	Pulitzer Prize for General Nonfiction. Why Survive?

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Being Old in America

	1976	Washingtonian of the Year
	1976	Leo Laks Award
	1976	Certificate of Appreciation, Mid-Atlantic Chapter of The American Medical Writers' Association
	1976	Community Service Award, D.C. Medical Society
Organization Memberships		
	1990-	Founding Member in Health, National Academy of Social Insurance
	1988-	Member, The New York Academy of Sciences
	1985-	Member, New York Science Policy Association
	1983-	Member, New York Academy of Medicine
	1979-	Member, Institute of Medicine, National Academy of Sciences
	1978-	Member, American Association of Geriatric Psychiatry
	1965-	Member, The Medical Society of the District of Columbia
	1965-	Member, Group for the Advancement of Psychiatry
	1965-86	Member, Forum for Professionals and Executives (Founding Members)
	1965-76	Member, Washington Psychoanalytic Society, District of Columbia; Honorary Member, 1976-
	1962-	Member, Gerontological Society of America
	1962-	Member, American Geriatrics Society (Founding Fellow)

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1962-65	Member, Southern Medical Association
1959-76	Member, Washington Psychiatric Society
1959-76	Member, Washington School of Psychiatry
1955-62	Member, American Medical Association (via USPHS)
1959-	Member, American Psychiatric Association (Fellow, 1963) (Life Fellow, 1990).

Media

Public Broadcasting Systems:

Co-Creator Life Time Magazine

Participant and Advisor, Over Easy

Frequent consultation and participation in Television, Radio and Print Media.

Public Policy Activities

1990-	Founding Member in Health, National Academy of Social Insurance
1987-88	Member, Health Advisory Committee, Public Affairs Committee
1987-	Member, Edith K. Ehrman East Harlem Health Education Advisory Committee, The Mount Sinai Medical Center
1986-89	Member, National Leadership Commission on Health Care
1986-87	Co-Chairman, Committee on Chemical Toxicity and Aging, National Research Council, National Academy of Sciences Report: Aging in Today's Environment

1986-	Member, Advisory Council, New York-New Jersey Center on Environmental and Occupational Health
1986-89	Member, U.S. Congress Office of Technology Assessment Physician Payment Review Commission
1986-	Member, Delegation for Basic Biomedical Research
1985-90	Chairman, The Commonwealth Fund Commission on Elderly People Living Alone
1985-89	Chairman, Advisory Committee, Living-at-Home Program The Commonwealth Fund, The Pew Trust, Arthur Vinning Davis, New York Community Trust and 29 other foundations
1985-87	Member, New York State Governor's Task Force on Aging (Governor Mario Cuomo)
1985-	Member, Board of Advisors, New York Center for Policy on Aging (New York Community Trust)
1985-87 1983-	Member, The Brookings Institution National Advisory Panel on Long Term Care for the Elderly Member, Citizen's Council on Earnings Sharing
1983-85	Member, The Council of the Institute of Medicine of the National Academy of Sciences
1979-85	Commissioner, American Bar Association, Commission on the Legal Problems of the Elderly
1971	Member, Technical Advisory Committee, White House Conference on Aging
1970-71	Member, Mental Health Technical Advisory Committee to the Health Planning Advisory Committee, District of Columbia, Department of Public Health
1969-72	Chairman, District of Columbia Advisory Committee on Aging (analogous to a State Commission on Aging)
1968-76	Consultant, U.S. Senate Special Committee on Aging
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-	1968-74	Consultant, Center for Law and Social Policy (Regarding St. Elizabeth's Hospital and D.C. Government Right to Treatment Case)	
	1968-70	Member, Committee on Public Policy, Gerontological Society	
	1966-67	Member, Subcommittee on Employment of the District of Columbia Interdepartmental Committee on Aging	
	1968-72	Ralph Nader Study Projects and Books on Problems of Nursing Homes and Community Mental Health Centers	
Memberships			
	1971-	Cosmos Club (Washington, D.C.)	
	1984-	Century Association (New York City)	
Community Activities			
	1996	Conceptualization Project Linkage - East Harlem Shared 202 housing complex with after school enrichment program for latchkey children.	
Board of Directors			
	1990-	Neurogen Corporation, Branford, Connecticut. A development-stage biotechnology company working on anxiolytics	
	1996-	Alteon, Leader in the discovery and development of pharmaceutical products for the treatment of the complications of diabetes and age-related diseases	

Special Boards

1988- Disinterested Trustee Scudder Funds: American
Association for Retired Persons-Investment Funds -

Income Trust and Growth Trust

Advisory Committees

1993- Geron Corporation, Menlo Park, California. A development-stage biotechnology company working on

aging (Telomeres)

1996- Genesis Health Ventures, Kennett Square, Pennsylvania.

1996- Greenbriar Corporation - "The Assisted Living Company,"

Advisory Committees.

Presentations and Consultant Activities

Businesses:

Baxter-Travenol; Merck, Sharpe and Dohme; Sandoz; Miles Pharmaceutical (the Miles Council for Physician-Patient Communication); Hilhaven; GeriMed of America Corporation; Burson-Marsteller; Hospital Satellite Network; Age Wave; Searle

Foundations:

Brookdale Foundation Commonwealth Fund Donald W. Reynolds Foundation Tsao Foundation

References:

Who's Who American Men of Science Dictionary of International Biography Who's Who in the South and Southwest Personalities of the South Community Leaders in America Who's Who Among Authors and Journalists Who's Who in American Politics National Register of Scientific and Technical Personnel Library of Human Resources Contemporary Authors Who's Who in American Education The Health Care 500 (Health Policy Makers) The Best Doctors in America The Best Doctors - New York Metro Area (Castle, Connolly Guide) - 1996 The Best Doctors - New York Magazine, 1996 Current Biography - January 1997

Audie W. Davis, M.D.

Audie Davis M.D. 1704 Dartmouth Ct. Norman, OK 73071 USA

PERSONAL

Birth: January 28, 1931, Camden, Alabama

Married to Bernice Bryson Davis November 23, 1963. Three children.

EDUCATION

B.S., University of Alabama M.D., Medical College of Alabama MPH, Harvard School of Public Health

Diplomate, [Board Certification] Aerospace and Preventive Medicine

EMPLOYMENT

1996-Present

Medical Director, Harvey Watt and Co.

Aviation Insurance Compay

1997-Present

Project Director, Air Line Pilots Association's Human Intervention and Motivation Study Concerned with discerning the most appropriate methods for the prevention, education, treatment and rehabilitation of substance abuse among pilots.

1966-1996

Manager, Aeromedical Certification Division

Civil Aeromedical Institute

Mike Monroney Aeronautical Center Federal Aviation Administration Department of Trannsportation

Focal point for all medical certification of pilots for the F.A.A.

1964-1966

Chief, Medical Qualifications Branch Federal Aviation Administration

1962-1964

Research Physiologist
Biodynamics Branch
Civil Aeromedical Research Institute
Research primarily in the field of cardiology

Honors

- 1951 Alpha Epsilon Delta Honorary Pre-Med Society
- 1952 Phi Beta Kappa
- 1957 McBurney, given by Phi Beta Pi Medical Fraternity to "Outstanding Graduate"
- 1973 Fellow, Aerospace Medical Association
- 1974 C.D. Henry Award given by Civil Avation Medical Association in Recognition of Contributions to Civil Aviation
- 1979 John A. Tamisea Award, given by the Aerospace Medical Association for contributions to the art and science of Aviation Medicine in its application to General Aviation.
- 1987 Boothby- Edwards Award, for outstanding research and/or clinical practice directed at the promotion of health and prevention of disease among airline pilots."
- 1993 Airline Medical Directors Award, for outstanding contributions to the safety and promotion of National and International Aviation through the proficient and and innovative practice of Aerospace Medicine.
- 1993 Election to the International Academy of Aviation and Space Medicine
- 1993 General Chang Award, Granted by Aerospace Medical Association of Korea for



Outstanding Professional and Academic Achievements in the Field of Aerospace Medicine.

Publications:

Mitigation of Fatigue with Spartase; Davis, Nagle, et al Office of Aviation Medicine Report 63-12

Physiological Responses of Men During Sleep Deprivation; Fiorica, Davis, et al. Journal of Applied Physiology, vol. 24, no. 2 February 1968

Effect of Antihistamine Compounds on Performance at Altitude; Higgins, Davis, et al Journal of Aviation Medicine, Vol.39 No. 11 November 1968

Effects of Alcohol at Three Simulated Aircraft Cabin Conditions; Daavis, Higgins, et al. Office of Aviation Medicine Report AM 68-18

Medical Factors in Unlimited Class Air Racing Accidents; Snyder and Davis, Journal of Aerospace Medicine, Vol. 43, NO. 3 March, 1972

Paroxysmal and Chronic Atrial Fibrillation in Airman Certification; Busby and Davis Aviation Space and Environmental Medicine, Vol. 47, No. 2, February, 1976

Effects of Lithium Carbonate on Performance and Biomedical Functions; Davis, Higgins, et al. Office of Aviation Medicine Report AM 77-17

Cardiorespiratory Assessment of Decongestant-Antihistamine Effects on Altitude, +Gz, and Fatigue tolerances; Lategola, Davis. Office of Aviation Medicine Report 78-20

Characteristics of Medically Disgualified Airman applicants in Calender Years 1975 and 1976; Dark, Davis. Office of Aviation Medicine Report AM 78-25

Aviation Related Cardiorespiraatory Effects of Blood Donation in Female Private Pilots; Lategola, Davis. Office of Aviation Medicine Report AM 85-12

Alcohol Rehabilitation of Airline Pilots; Russell, Davis. Office of Aviation Medicine Report AM 85-12

Right Bundle Branch Block as a Risk for Subsequent Cardiac Events; Hudson, Booze,

Davis. Office of Aviation Medicine Report AM 90-7

Military Service

1956-1957 1st Lt. USAF Senior Medical Student Program 1958-1961 Captain, Medical Officer, USAF 1964-1966 Major, USAF Reserve

VITA

NAME:

Robert William Elliott

OFFICE ADDRESSES:

Aviation Psychology Center

9100 South Sepulveda Avenue, Suite 123

Los Angeles, CA 90045

(310) 641-6902

Department of Special Education

Redondo Beach Unified School District

1107 Vincent Street

Redondo Beach, CA 90277

(310) 798-8683

HOME ADDRESS:

629 27th Street

Manhattan Beach, CA 90266

(310) 545-6400

PERSONAL:

Birthdate:

March 19, 1942

Birthplace:

Port Gamble, Washington

Marital Status:

Married - Twila

(Transition Program Specialist)

Children:

Four

EDUCATION:

Ph.D. Counseling Psychology - 1975 University of Southern California

M.A. Psychology - 1972 Pepperdine University

B.A. Psychology - 1964

California State University at Long Beach

DISSERTATION:

Differential Effect of Audiotape Feedback on

Client Self-Perception

Major Professors:

Paul Bloland, Ph.D. Steven Frankel, Ph.D.

LICENSURE AND CERTIFICATION

Licensed Psychologist (Clinical), California Board of Psychology (1977). License Number PSY 5107

Educational Psychologist, California Board of

Behavioral Science Examiners (1975).

License Number 451



Credentialed School Psychologist, California State Department of Education (1972). Life

Administrative and Supervisory Credential, California State Department of Education(1976). Kgn - 12th grades

National Register of Health Services Providers In Psychology (1985). Listed as Psychologist

EXPERIENCE

1976 - Present	Consulting Psychologist; Los Angeles. Serve as mental health/psychology/neuropsychology consultant for Federal Aviation Administration, nursing homes, residential psychiatric facilities, major airlines, drug programs, and programs for the developmentally disabled.
1993 - Present	School Psychologist; Redondo Beach Unified School District, Redondo Beach. Chair of high school testing program. Chair special education meetings. Perform assessments and conduct counseling sessions with students and parents. Present training seminars to staff. Supervise school psychology interns.
1997 - 1998	<pre>Instructor; Loyola-Marymount University, Los Angeles. Advanced individual psychology classes in School Psychology graduate program.</pre>
1972 - 1993	School Psychologist; South Bay Union High School District, Manhattan Beach. Performed same job functions as 1993-Present. South Bay Union High School District merged with Redondo Beach USD as a result of voter unification.
1969 - 1971	Industrial Relations Generalist; TRW Corporation Redondo Beach. Recruitment and interview of aerospace firm job applicants. Chair of EEOC committee. Conducted sensitivity training.
1967 - 1969	<u>Personnel Representative</u> ; Continental Airlines, Los Angeles. Recruitment of flight crew and maintenance personnel. Interview of job applicants. Chair of EEOC and employment testing committee.
1965 - 1967	<u>Field Secretary</u> ; Delta Chi International Fraternity, Iowa City, Iowa. Responsible for development of fraternity chapters. Supervised

existing chapters and alumni support groups.

INTERNSHIP

From July 1975 to August 1976 provided psychological services for a large psychiatric hospital. Rotated through child, adult, adolescent and geriatric services. Services provided included psychotherapy, neuropsychological evaluations, staff in-service training and general assessment services.

PRIMARY CONSULTANTSHIPS

1989 - Present	Equal Opportunity Employment Commission, Washington, D.C. Expert Consultant on Aging Issues and Aviation
1989 - Present	Maryvale Orphanage, Rosemead, CA Consultant in Child Psychology
1975 - Present	Consultant in addictions and medical psychology for America West Airlines, United Airlines, Trans World Airlines, Continental Airlines, Federal Express, American Airlines, Delta Airlines, US Air, Canadian Airlines, Hawaiian Airlines, other airlines, the FAA and other various federal and state agencies, public school districts and private organizations.
1988 - 1997	Federal Aviation Administration, Oklahoma City Computerized Cognitive Screening Battery Project Evaluator and Consultant
1985 - Present	Bell, Boyd & Lloyd Law Firm, Chicago, IL Aviation/Neuropsychology Consultant
1977 - 1987	CareUnit Hospital, Orange, CA Neuropsychology Consultant
1981 - 1987	Exceptional Children's School, Los Angeles, CA Psychology/Education Consultant
1981 - 1983	Tuum Est Drug Rehabilitation Center, Venice, CA Psychology/Drug Abuse Consultant

Current Special Interests

Aviation /Flight Competencies Continuing Education Issues Public/Professional Advocacy Policy Aging Issues Neuropsychology Special Education Childhood Emotional Disturbance Chemical Dependency Chronic Medical Conditions

PROFESSIONAL ORGANIZATIONS, DISTINCTIONS AND HONORS

Professional Organizations

Society of Indian Psychologists American Psychological Association (Divisions: 6, 12, 15, 16, 20, 40, 41, 42, 47, 50, 52, Vice-Chair (former) Committee for the Approval of Continuing Education Sponsors (CACES), Chair, Continuing Education Division 50 (Addictions) American Psychological Society National Academy of Neuropsychology (Secretary; Fellow) (Former: Professional Advocacy Chair, Treasurer, Member-At-Large) National Association of School Psychologists California Psychological Association (Continuing Education Committee member) California Association of School Psychologists (Former Region V Representative, Task Force Chair) Aerospace Medical Association Association of Aviation Psychologists International Neuropsychology Society (Former CE Committee) American Association of Applied and Preventive Psychology Philadelphia Neuropsychology Society American Board of Professional Neuropsychology (Former President, Member-At-Large) Reitan Society South Bay Association of School Psychologists (Past President) Redondo Beach Teachers Association (Board of Directors) American Association of Retired Persons

Honorary Listings

Marquis' Who's Who In America (44th Edition)
Marquis' Who's Who In The West (20th, 21st Editions)
Who's Who In California (16th Edition)
Marquis' Who's Who Of Emerging Leaders In America (1st Edition)
Who's Who In Health Sciences

Honors, Awards and Distinctions

- 1997 <u>Distinguished Contributions to Neuropsychology Award</u>, American Board of Professional Neuropsychology
- 1993 <u>Recognition Award</u> for influencing the course of neuropsychology, American Board of Professional Neuropsychology
- 1994 <u>Recognition Award</u> for contributions to clinical 1993 neuropsychology, National Academy of Neuropsychology 1992

1990 1989

1988

1987

- 1986 Recognition Award by the National Academy
 Neuropsychologists for serving as annual convention
 chairperson for 1985 and 1986
- 1986 Awarded <u>Fellow</u> status by the National Academy of Neuropsychologists (first year of eligibility)
- 1985 Earned <u>Diplomate</u> status in clinical neuropsychology, American Board of Professional Neuropsychology/ American Board of Clinical Neuropsychology (first year of eligibility)
- 1985 Robert W. Elliott Award, established by Delta Chi Fraternity (California State University of Long Beach Chapter) for outstanding service by an active fraternity member
- 1984 <u>Outstanding School Psychologist Award</u>, California Association of School Psychologists

1983 Earned <u>Diplomate</u> status in clinical neuropsychology, American Board of Professional Neuropsychology

Offices and Committees

- 2000 Present Secretary, National Academy of Neuropsychology
- 1998 Present Member of APA Division 40 (Clinical Neuropsychology) Convention Committee.
- 1998 Present Chair, Continuing Education Committee, American Psychological Association Division 50 (Addictions)
- 1997 Present Chair, Continuing Education Committee,
 American Board of Professional Neuropsychology
- 1995 Present Member of ABPP Subcommittee of American
 Psychological Association Division 50 (Division of Addictions) Education and Training Committee
- 1995 Present Congressional District Key Person for National Association of School Psychologists
- 1994 Present Division 50 (Division of Addictions) of American Psychological Association Area Code Representative
- 1993 Present Member of Redondo Beach Teachers Association Board of Directors
- 1992 Present Work Sample reviewer for the American Board of Clinical Neuropsychology
- 1989 Present Examiner and Work Sample Reviewer for the American Board of Professional Neuropsychology
- 1989 Present Consultant and Expert Witness in neuropsychology for the Equal Opportunity Employment Commission
- 1980 Present Ad Hoc member of Aviation Medical Examiners

 Committee for the Federal Aviation Administration
- 1995 1997 Chair of Professional Advocacy Committee for National Academy of Neuropsychology
- 1994 1995 Chair of National Academy of Neuropsychology Political Advocacy Task Force

1993 - 1995	Chair of Redondo Beach Unified School District High School Testing Committee
1993 - 1996	Vice-Chair American Psychological Association Committee for the Approval of Continuing Education Sponsors (CACES)
1993 - 1996 1993 - 1995	Member of International Neuropsychology Society Continuing Education Committee Chair of Certification Committee to define competencies for certification in traumatic brain injury, behavior intervention specialist and early childhood specialist for the California Association of School Psychologists
1991 - 1994	Treasurer for the National Academy of Neuropsychology
1991 - 1992	Chair of the Blue Ribbon Committee to define traumatic brain injury for the California State Department of Education
1988 - 1993	Executive Board Member (Regional Representative) of the California Association of School Psychology (elected position)
1989 - 1992	Member of advisory panel to define neuropsychologist and standard of practice for the California State Psychological Association
1987 - 1993	Chair of Testing Committee for the South Bay Union High School District
1986 - 1993	Chair of computer utilization committee for the Special Education Division of the South Bay Union High School District
1985 - 1992	Member of the Drug Free Education Committee for the South Bay Union High School District
1987 - 1991	Chair of Education Committee for National Academy of Neuropsychology
1985 - 1990	Expert Consultant in Neuropsychology and Aviation and Member of the Age 60 Exemption Panel for the law firm of Bell, Boyd & Lloyd, Chicago
1985 - 1987	Member-At-Large for the National Academy of Neuropsychologists (Executive Board Member)
1985 - 1986	Chair of National Academy of Neuropsychologist national convention held in Las Vegas

1984 - 1985	Chair of National Academy of Neuropsychologist national convention held in Philadelphia
1984 - 1986	Member of the committee to define Serious Emotional Disturbance for the California Association of School Psychologists
1984	Consultant to the Los Angeles Municipal Court Judges Drinking Driver Committee
1983 - 1985	Member of the committee to define Serious Emotional Disturbance (Federal and State education designation) for the Southwest Special Planning Organization
1983 - 1984	President of the South Bay Association of School Psychologists
1977 - 1984	Consultant and advisor to Pan American World Airways Fearful Flyers program
1976 - 1979	Examiner for the California Board of Behavioral Science Examiners
1975 - 1976	Chair of Classification Committee for the Los Angeles County Schools proposal to the California State Department of Education Master Plan for Education
1962 - 1964	Founder of Delta Chi International Fraternity California State University at Long Beach Chapter

Reviewing and Editing Positions

1985 - Present	Editorial Board, <u>Archives of Clinical</u> <u>Neuropsychology</u>
1993 - 1997	Editorial Board, Applied Neuropsychology
1983 - 1984	Editor, <u>South Bay Association of School</u> <u>Psychologists Newsletter</u>
1970 - 1971	Editor, TRW Semiconductor Newsletter

GENERAL REFERENCES

Dr. Antonio E. Puente Professor of Psychology University of North Carolina Wilmington, NC 28403

Dr. Cecil Reynolds
Professor of Educational
Psychology
Texas A & M University
704 Harrington Educational Ctr
College Station, TX 77843

Dr. Charles Long
Professor of Psychology
Psychology Department
The University of Memphis
Memphis, TN 38152

Dr. Lawrence Marinelli Director of Aviation Medicine Centinela Airport Med Center 9601 South Sepulveda Blvd. Los Angeles, CA 90045

Dr. Arthur MacNeill Horton National Institute of Drug Abuse 5903 Lone Oak Drive Bethesda, MD 20814

Dr. Garrett O'Connor
Director of Addiction Medicine
9100 South Sepulveda Blvd
Suite 123
Los Angeles, CA 90045

Additional References Provided On Request

PUBLICATIONS

Elliott, R.W. (1997). Acute and long term neuropsychological sequelae of childhood and adolescent substance abuse. <u>In Handbook of Child Clinical Neuropsychology</u>, Cecil Reynolds & Elaine Fletcher-Jansen (Eds.), Plenum Publishing, New York.

Elliott, R.W. (1994). History and Requirements for Certification by the American Board of Professional Neuropsychology. <u>Bulletin of the National Academy of Neuropsychology</u>, 11 (2).

Elliott, R.W. (1994). The Examiner's Manual for the American

Gaines, R.N. <u>Board of Professional Neuropsychology</u>.

Moses, J.A. Unpublished manuscript, American Board of
Prutsman, T.D. Professional Neuropsychology, Manhattan Beach, CA.

Williams, M.J. (1990). The Conference Manual of the National Puente, A.E. Academy of Neuropsychology. Unpublished manuscript, National Academy of Neuropsychology, MacInnes, W.D. Midland, Michigan.

- Elliott, R.W. (1989). Neuropsychological sequelae of adolescent substance abuse. In <u>Handbook of Child Clinical Neuropsychology</u>, Cecil Reynolds & Elaine Fletcher-Jansen (Eds.), Plenum Publishing, New York.
- Elliott, R.W. (1986). Aging Effects and the Professional Pilot. Hearings on Age Discrimination and the FAA Age 60 Rule. Select Committee on Aging, House of Representatives, 97th Congress, First Session, October 17, 1985, Comm. Pub. No. 99-533, Washington, D.C., pp. 375-387.
- Elliott, R.W. (1986). Response to Billings and Flinn regarding the FAA mandatory age 60 retirement rule for commercial pilots. Hearings of Age Discrimination and the FAA Age 60 Rule. Select Committee on Aging, House of Representatives, 97th Congress, First Session, October 17, 1985, Comm. Pub. No. 99-533, Washington, D.C., pp. 66-68.
- Elliott, R.W. (1985). <u>Position Statement: Neuropsychological</u>
 Harrington, D. <u>Issues Special Interest Group, Division 16 (School Psychology), American Psychological Association</u>.
 Available from author.
- Elliott, R.W. (1985). (Book Review of <u>The CIBA Collection of Medical Illustrations</u>, Volume 1, The Nervous System, Part I, Anatomy and Physiology). Book Reviews in the Neurosciences, No. 14, The Blors Corporation.
- Elliott, R.W. (1985). Behavior Disorder or Serious Emotional Disorder? <u>California Association of School</u>
 <u>Psychologists Today</u>, <u>34</u>, 10-11.
- Elliott, R.W. (1984). Behavior Disorder of Serious Emotional Disorder? In M. DeYoung (Ed.), Educational Diagnostic Manual for the Seriously Emotionally

<u>Disturbed Student</u>. (pp. 24-25), California Association of School Psychologists, Millbrae, CA.

WORKSHOPS, PRESENTATIONS AND COLLOQUIA

Elliott, R.W. Neuropsychology for the school psychologist.

Gaines, R.N. Workshop presented at the <u>California Association</u>
of <u>School Psychologists</u>, Pasadena, March, 1999.

Elliott, R.W. Neuropsychology in the TBI patient. Invited presentation at <u>University of Florida/Intelicus</u>
Life Care Planning Training Seminars, Manhattan
Beach, CA: March, 1999.

Elliott, R.W. American Board of Professional Neuropsychology:
Long, C.J. Preparation for application, work sample
Submission, and examination for board (diplomate)
Certification. Invited workshop at the National
Reynolds, C. Academy of Neuropsychology 17th annual convention,
Las Vegas, NV: November, 1997.

Elliott, R.W. Neurobiological consequences of drug abuse.

Renshaw, P. Symposium presented at the <u>American Psychological</u>

Bigler, E. <u>Association Annual Convention</u>, Chicago, 1997.

Abraham, H. Strickland, T.

Elliott, R.W. American Board of Professional Neuropsychology:
Long, C.J. Preparation for application, work sample
Crown, B.M. submission, and examination for board (diplomate)
certification. Invited workshop at the National
Reynolds, C. Academy of Neuropsychology 16th annual convention,
New Orleans, LA: November, 1996.

Elliott, R.W. Neurobehavioral and neuropsychological assessment Renshaw, P. of drug abuse. Symposium presented at the Strickland, T. American Psychological Association Annual Convention, Toronto, Canada, August, 1996.

Bigler, E.

Elliott, R.W. Conversation Hour: New Roles for
Horton, A.M. Neuropsychologists In Private Practice. <u>American Psychological Association 104th Annual Convention</u>,
Toronto, Canada, August, 1996.

Elliott, R.W. American Board of Professional Neuropsychology:
Berg, R. Requirements of application, work sample,
Submission, and examination for board (diplomate)
Crown, B.M. Submission, and examination for board (diplomate)
Certification. Invited workshop at the National
Academy of Neuropsychology 15th annual convention,
San Francisco, CA: November, 1995.

Elliott, R.W. Psychological and chemical dependency evaluations of commercial and general aviation pilots.

Invited workshop for <u>Federal Aviation</u>

<u>Administration</u> consulting psychologists,

Oklahoma City, OK: September, 1995.

Elliott, R.W. Education miniconvention open meeting:
Blankmeyer, B. Sponsor approval system. Panel presentation
Ginsberg, M.R. at <u>American Psychological Association 103rd</u>
Fong, M.L. <u>Annual Convention</u>, New York, August, 1995.
Johnson, M.E.
LeSure-Lester, G.

Elliott, R.W. Conversation Hour: American Board of Professional Horton, A.M. Neuropsychology. American Psychological Crown, B.M. Association 103rd Annual Convention, New York, Long, C.J. August, 1995.

Berg, R.

Elliott, R.W. Psychological evaluation of pilots. Invited workshop for <u>Federal Aviation Administration</u> consulting psychologists, Oklahoma City, OK: June, 1995.

Elliott, R.W. American Board of Professional Neuropsychology:
Crown, B.M. Requirements for application, work sample,
submission, and examination for board (diplomate)
certification. Invited workshop at the National
Academy of Neuropsychology 14th annual convention,
Orlando, FL: November, 1994.

- Elliott, R.W. Neuropsychological testing in aviation. Invited presentation at <u>Civil Aviation Medical Association</u> 29th annual scientific meeting, Phoenix, AZ: September, 1994.
- Elliott, R.W. Independent practice of neuropsychology with children and adolescents. Symposium presented at the <u>American Psychological Association</u>
 <u>Annual Convention</u>, Los Angeles, August, 1994.
- Elliott, R.W. Chemical dependency issues in aviation. Invited presentation at <u>America West Airlines</u> management meeting, Phoenix, AZ: July, 1994.
- Elliott, R.W. Understanding students with traumatic brain damage. Invited workshop at the <u>California Association of School Psychologists</u> annual convention, Long Beach, CA: March, 1994.

- Elliott, R.W. Preparation for board certification. Invited Long, C.J. workshop at the <u>National Academy of</u>
 Horton, A.M. <u>Neuropsychology</u> thirteenth annual convention, Phoenix, AZ: November, 1993.
- Elliott, R.W. Educational implications of traumatic brain injury. Special topic presentation at the National Academy of Neuropsychology thirteenth annual convention, Phoenix, AZ: October, 1993.
- Elliott, R.W. School psychology, special education, and independent neuropsychology practice. Symposium presented at the <u>American Psychological Association Annual Convention</u>, Toronto, Canada, August, 1993.
- Elliott, R.W. Board certification in neuropsychology. Invited presentation to the <u>Northern California</u>
 <u>Neuropsychology Forum</u>, Berkeley, CA: July, 1993.
- Elliott, R.W. Chemical dependency evaluations in aviation.

 Invited presentation to <u>Birds Of A Feather</u>

 <u>International Convention</u>, Palm Springs, CA:

 June, 1993.
- Elliott, R.W. Psychological assessment of airline personnel.

 Invited workshop presented to <u>America West</u>

 <u>Airlines</u> employee assistance staff, Phoenix:
 February, 1992.
- Elliott, R.W. Working with the brain-injured child. Invited presentation to <u>Southwest Special Education</u>

 <u>Planning Area</u> special education personnel,

 Torrance, CA: January, 1992.
- Elliott, R.W. Specializing in neuropsychology as an independent Horton, A.M. practitioner. Presentation at the <u>American Psychological Association Annual Convention</u>, San Francisco, August, 1991.
- Elliott, R.W. Differentiating the educational needs of the brain Grandinetti,S. injured, learning disabled, and emotionally disturbed child. Invited presentation at Seminar on Neurologic Interventions for Children,

 Adolescents, and Young Adults. Sponsored by New Medico Head Injury System, Apple Valley, CA: September, 1991.
- Elliott, R.W. Neuropsychological sequela of substance abuse children and adolescents. Symposium:

 Neuropsychology in Independent Practice: Dealing with Drugs. Presentation at the American

- <u>Psychological Association Annual Convention</u>, San Francisco, August, 1991.
- Elliott, R.W. Traumatic brain injury as a new federal handicapping condition. Invited presentation to the <u>South Bay Association of School Psychologists</u>, Torrance, CA: December, 1990.
- Fishburne, F. Preparation for board certification in Elliott, R.W. professional neuropsychology. Invited workshop at the <u>National Academy of Neuropsychology</u> tenth annual convention, Reno, NV: November, 1990.
- Elliott, R.W. Case study development for FAA medical recertification. Invited workshop to <u>Seminar on Substance Abuse In Airline Pilots</u>, Federal Aviation Administration Civil Aeromedical Institute, Oklahoma City, OK: June 15-16, 1990.
- Elliott, R.W. Intervention and the chemically dependent pilot.
 Invited workshop to <u>America West Airlines</u> pilot
 management and AIM team, Phoenix: March, 1990.
- Elliott, R.W. Flight crew alcoholism and other chemical dependencies Invited address to <u>America West Airlines</u> flight management, Phoenix: February, 1990.
- Elliott, R.W. Substance abuse: Myths and facts. Invited presentation to <u>America West Airlines</u> maintenance supervisors inservice program, Phoenix: January, 1989.
- Elliott, R.W. Can educators meet the awesome emotional needs of todays students? Invited address to the South Bay Union High School District annual inservice program, Redondo Beach, CA: March, 1988.
- Elliott, R.W. Neuropsychological and psychological assessment process used in the FAA special issuance application. Invited presentation to <u>United Airlines</u> annual administrators meeting, Chicago: February, 1984.
- Elliott, R.W. Neuropsychological consultation in the schools.

 Invited presentation at the <u>National Academy of Neuropsychologists</u> seventh annual convention,
 Chicago: October, 1987.
- Elliott, R.W. Adolescent drug use in the school system. Invited

- address to the <u>Manhattan Beach Coordinating</u> <u>Council</u>, Manhattan Beach, CA: October, 1987.
- Elliott, R.W. Assessment with an elderly substance abuser.
 Invited demonstration and presentation to medical staff, <u>Veterans Administration Medical Center</u>,
 Baltimore, MD: May, 1987.
- Elliott, R.W. Neuropsychology of aging and substance abuse.
 Invited presentation and demonstration (Grand Rounds) to medical staff at <u>Veterans</u>
 Administration Medical Center, Baltimore, MD:
 May, 1987.
- Elliott, R.W. Career strategies in psychology. Invited address to Department of Psychology, <u>University of North Carolina</u>, Wilmington, NC: August, 1986.
- Elliott, R.W. Psychological assessment for development of a behavior modification program. Invited presentation to <u>TRI Center, Inc.</u>, Culver City, CA: November, 1985.
- Elliott, R.W. Psychoeducational assessment implications for classroom use. Invited workshop presented to South Bay Union High School District annual inservice program, Redondo Beach, CA: April, 1985.
- Elliott, R.W. American Board of Professional Psychology examination preparation. Invited presentation to the <u>California Neuropsychology Special Interest Group</u>, College Hospital, Cerritos, CA: April, 1984.
- Elliott, R.W. Identification of the alcoholic airline pilot.
 Invited presentation to <u>United Airlines Annual</u>
 <u>Medical Conference</u>, Chicago: April, 1984.
- Elliott, R.W. Serious emotional disturbance. Invited workshop to public and private school educators, Torrance, CA: June, 1984.
- Elliott, R.W. Serious emotional disturbance in the school-aged child. Presentation to the <u>Southwest Special Education local Planning Area Psychologists</u>, Torrance, CA: May, 1983.
- Elliott, R.W. Child neuropsychology. Invited address to the South Bay Association of School Psychologists, Redondo Beach, CA: January, 1983.

- Elliott, R.W. Neuropsychological aspects of alcoholism. Invited workshop to alcoholism counseling certification program, <u>University of California at Irvine</u>, Irvine, CA: February, 1982.
- Elliott, R.W. Psychological and neuropsychological testing of the alcoholic patient. Invited workshop for Eisenhower Medical Center Second Annual Conference on Alcoholism, Rancho Mirage, CA: October, 1982.
- Elliott, R.W. Development of the normal adolescent. Invited address to the <u>Church of Latter Day Saints</u> parent association, Redondo Beach, CA: May, 1981.
- Elliott, R.W. Psychological and neuropsychological elements of he assessment process. Presentation at the nference on the Aviation Medical Exemption cess, Sponsored by the Federal Aviation Administration Newport Beach, CA: 1980.
- Elliott, R.W. Team approach to pupil personnel services.

 Gelon, D. Invited colloquium, Los Angeles Pupil Personnel

 Marshall, F. Association, Pasadena, CA: February, 1980.

 Wickwire, P.
- Elliott, R.W. Psychological aspects of Fear of Flying. Invited colloquium for <u>Pan American World Airways Fearful Flyers</u> training seminar, Los Angeles: June, 1977.

W98:Resume.Ava

CURRICULUM VITAE

1999

STEVEN ROSS GAMBERT, M.D., F.A.C.P.

CURRENT APPOINTMENTS:

Chairman, Department of Medicine and Physician-in-Chief Sinai Hospital of Baltimore Baltimore, Maryland

Professor of Medicine Department of Medicine Johns Hopkins University School of Medicine Baltimore, Maryland

Program Director
Johns Hopkins University/Sinai Hospital Program
in Internal Medicine

Coordinator, Johns Hopkins Clinical Clerkship in Internal Medicine at Sinai Hospital

Adjunct Professor of Medicine and Gerontology New York Medical College Valhalla, New York

PERSONAL DATA:

SOCIAL SECURITY NUMBER:

104-38-9705

HOME ADDRESS:

220 Wendover Road Baltimore, Maryland 21218

WORK TELEPHONE:

(410) 601-6340

HOME TELEPHONE:

(410) 243-6743

DATE OF BIRTH AND LOCATION:

August 22, 1949 - New York, NY

FAMILY:

Wife - Gry Biong Gambert Children - Christopher and Iselin



EDUCATION AND TRAINING:

EDUCATION:

University College, New York University Bronx, New York - AB with Honors in Biology	1971
Columbia University College of Physicians and Surgeons, New York, New York - MD	1975
Physician-Executive Management Program Wharton School, University of Pennsylvania Managed Care: Negotiation, Finance, and Development	7/97
POST-DOCTORAL TRAINING:	
Medical Resident, Dartmouth Affiliated Hospitals Hanover, New Hampshire	1975-77
Fellow in Medicine (Endocrinology, Metabolism, Geriatric Medicine and Gerontology Research), Harvard Medical School, Beth Israel Hospital, Boston, Massachusetts	1997-79
PROFESSIONAL LICENSURE:	
Maryland (#DO054005)	
BOARD CERTIFICATION:	
Diplomate, National Board of Medical Examiners	1976
Diplomate, American Board of Internal Medicine	1978
Board Eligible in Endocrinology and Metabolism	1979
Added Qualifications in Geriatric Medicine American Board of Internal Medicine	1988

PROFESSIONAL EXPERIENCE:

Academic Appointments:

The Medical College of Wisconsin, Milwaukee, Wisconsin	
Acting Director of Gerontology and Geriatrics, Department of Medicine	7/79-12/79
Assistant Professor of Medicine, Department of Medicine	1979-7/81
Director of Gerontology and Geriatrics Service Department of Medicine	1/80-5/81
Associate Chief of General Internal Medicine Section, Department of Medicine	1/81-5/81
Chief, Section of Geriatrics and Gerontology, Department of Medicine	5/81-8/83
Associate Professor of Medicine	7/81-8/83
Associate Professor of Physiology	7/81-8/83
Marquette University School of Dentistry, Milwaukee, Wisconsin	
Marquette University School of Dentistry, Milwaukee, Wisconsin Associate Adjunct Professor of Preventive Dentistry and Community Health	1983
Associate Adjunct Professor of Preventive	1983
Associate Adjunct Professor of Preventive Dentistry and Community Health	1983 1983-1997
Associate Adjunct Professor of Preventive Dentistry and Community Health New York Medical College, Valhalla, New York Professor of Medicine	
Associate Adjunct Professor of Preventive Dentistry and Community Health New York Medical College, Valhalla, New York Professor of Medicine (Granted Tenure, 1987) Director, Division of Gerontology and Geriatric	1983-1997
Associate Adjunct Professor of Preventive Dentistry and Community Health New York Medical College, Valhalla, New York Professor of Medicine (Granted Tenure, 1987) Director, Division of Gerontology and Geriatric Medicine, Department of Medicine Director, Center for the Study of Aging and	1983-1997 1983-1994

Professor and Executive Vice-Chairman Department of Medicine	1993-1994
Professor and Chairman (Acting) Department of Medicine	1/94-7/96
Director, Division of Medical Education Department of Medicine	1994-1996
Adjunct Professor of Medicine and Gerontology	1997-present
University of Medicine and Dentistry of New Jersey- New Jersey Medical School:	
Professor of Medicine (Granted Tenure 1997)	1997-8/98
Vice Chairman for Academic Affairs, Department of Medicine	1997-8/98
Johns Hopkins University School of Medicine	
Professor of Medicine (Part-Time)	9/98-present
Program Director Johns Hopkins University/Sinai Hospital Program in Internal Medicine	9/98-present
Coordinator, Johns Hopkins Clinical Clerkship in Internal Medicine at Sinai Hospital	9/98-present
Miscellaneous:	
Faculty of the Brookdale Center, Brookdale Center on Aging of Hunter College New York, New York	3/87-3/97
Honorary Professor, Clinical Associate Faculty, School of Health Sciences, Ithaca College, Ithaca, New York	6/88-3/97
Hospital Appointments:	
Staff Physician, Beth Israel Hostel Evening Ambulatory Care Clinic, Boston, Massachusetts	1977-1979

Emergency Room Staff, Glover Memorial Hospital, Needham, Massachusetts	1977-1979
Emergency Room Staff, Winchester Hospital, Winchester, Massachusetts	1977-1979
Emergency Room Staff, Framingham Union Hospital Framingham, Massachusetts	1978-1979
Chief, Geriatrics Section Medical Service, Wood VA Medical Center, Milwaukee, Wisconsin	1979-1983
Director, Geriatrics Service, Department of Medicine Milwaukee County Medical Complex, Milwaukee, Wisconsin	1979-1983
Staff Physician, Endocrine-Metabolic Section, Department of Medicine, Wood VA Medical Center and Milwaukee County Medical Complex, Milwaukee, Wisconsin	1979-1983
Senior Attending Physician, Department of Medicine, Froedtert Hospital and Milwaukee County Medical Complex, Milwaukee, Wisconsin	1980-1983
Co-Director, Gerodentistry Fellowship Program Veterans Administration Central Office (VACO), Wood VA Medical Center, Milwaukee, Wisconsin	1982-1983
Chief of Medical Services, Ruth Taylor Geriatric and Rehabilitation Institute, Valhalla, New York	1983-1993
Attending, Westchester County Medical Center, Valhalla, New York	1983-1997
Director, Geriatric Medicine Westchester County Medical Center	1983-1994
Consultant, Coler Memorial Hospital, New York City	1984-1989
Health and Hospitals Corporation, Roosevelt Island, New York	1984-1989

Consultant, Franklin Delano Roosevelt VA Medical Center, Montrose, New York	1988-1997
Director of Medicine (Acting), Department of Medicine Westchester County Medical Center	1994-1996
Attending Physician, University Hospital, Newark, New Jersey	1997-8/98
Chairman, Department of Medicine and Physician-in-Chief Sinai Hospital of Baltimore	9/98-present
Other Professional Positions and Major Visiting Appointments:	
Co-Director, The Hudson Valley Alzheimer's Disease Assistance Center	1989-1998
Physician Advisor, John Hancock Mutual Life Insurance Company	1989-1996
President, Medical Research Associates, PC	1/94-7/96
President, Medical Business Associates (A Physician Management and Billing Company)	1/94-7/96

PROFESSIONAL EXPERIENCES:

Memberships and Participation in Professional Societies:

Fellow, American College of Physicians 1981-prese	
	ent
Member, New York Academy of Sciences 1979-prese	
Member, American Geriatrics Society 1979-1983	}
Member, American Aging Association 1983-1990)
Fellow (Charter), American Aging Association 1990-preso	ent
President-Elect, American Aging Association 1984-1985	
President, American Aging Association 1985-1986	,)
Member, Gerontological Society of America 1980-1983	-
Secretary and Treasurer, Gerontological Society 1981	
of America, Clinical Medicine Section	
Secretary, Gerontological Society of America, 1984-1985	;
Clinical Medicine Section	
Chair-Elect, Clinical Medicine Section, 1987-1988	}
Gerontological Society of America	

Chairman, Clinical Medicine Section,	1988-1989
Gerontological Society of America	
Member, American Federation for Clinical Research	1980-1997
Councilor, American Federation for Clinical Research	1981-1984
Member, American Association for the Advancement	1980-1997
of Science	
Member, The Endocrine Society	1981-present
Member, American Medical Association	1981-1983
Member, The Medical Society of Milwaukee County	1981-1983
Member, State Medical Society of Wisconsin	1981-1983
Member, Milwaukee Academy of Medicine	1981-1984
Member, American Federation for Aging Research	1981-1991
(Scientific Council)	
Member, Society for Experimental Biology and Medicine	1981-1997
Fellow, American Geriatrics Society	1983-present
Fellow, Gerontological Society of America	1983-present
Member, Central Society for Clinical Research	1983-1997
Fellow, Westchester Academy of Medicine	1984-1997
Member, Westchester County Medical Society	1984-1992
Fellow, New York Academy of Medicine	1984-present
Chairman, Geriatrics Section	1986-1987
The New York Academy of Medicine	
Chairman, Admissions Committee, New York	1990-1991
Academy of Medicine	
Member, American Public Health Association	1987-1997
Member, American Diabetes Association	1989-1997
(Education and Health Care Council)	
Member, State Society on Aging of New York	1994-1997
Chair, Geriatrics Committee, New York State	1990-1996
Councilor, New York State Chapter	1993-1996
American College of Physicians	1993-1996
Governor-Elect, New York Downstate Region I	1997-1998
American College of Physicians	
Governor, New York Downstate Region I	1998-2002
American College of Physicians/American Society of Internal Medicine	
(resigned due to relocation 9/98)	
BOARD OF DIRECTORS/TRUSTEES:	
Member, Board of Directors, American	1983-1991
Aging Association	1,00 1,71
Advisory Board Member, Northern Westchester	1985-1995
Geriatrics Committee	1703-1773

Member, Board of Trustees St. Cabrini Nursing Home, Dobbs Ferry, New York	1985-1996
Board of Governors American College of Clinical Gerontology	1985-1992
Board of Governors International Congress of Biomedical Gerontology	1985-1992
Member, Research Board of Advisors, American Biographical Institute	1987-1997
Member, Medical Advisory Board, The Amyotrophic Lateral Sclerosis Association, Hudson Valley Chapter	1987-1997
Member, Caregivers Exchange Advisory Board, St. Margaret's House	1989-1991
Member, Long-Term Care Advisory Board, Hudson Valley Health Systems Agency	1989-1995
Elected Member, Byram Hills District School Board North Castle, New York	1990-1996
President, Byram Hills District School Board	1994-1995
Member, New York Sate Public Service Training Program Advisory Board	1990-1992
Director, Mid-Hudson Regional Geriatric Education Center	1986-1997
Member, Advisory Board, International Conference on Aging, Depression, and Dementia, Graz, Austria	1992-1994
Member, Advisory Board, Foundation for Long Term Care	1991-1996
Member, Advisory Board for Geriatric Programs New York Academy of Medicine	1992
Member, Advisory Committee, Elder Abuse Physician Guidelines, American Medical Association	1992

Member, Medical Board, This Close - for Cancer Research	1994-1996
Member, Advisory Board, National Nurses Network	1994-1997
Member, Board of Governors, American College of Physicians (resigned due to relocation 9/98)	1997-2002
MAJOR COMMITTEE ASSIGNMENTS:	
NATIONAL AND REGIONAL:	
American Aging Association	
Executive Committee/Board of Directors Chairman, Awards Committee Publications Committee Co-Chairman, Clinical Program Committee International Liaison Committee Chairman, Affiliations Committee Membership Committee Chairman, Organizational Interaction Committee Chairman, Board of Directors Chairman, Publication Committee Member, Fellowship Committee Member, Clinical Gerontology Committee	1984-1991 1984-1991 1984-present 1984-1987 1984-1987 1984-1987 1984-1987 1984-1987 1989-1990 1993-1995 1993-1995
Member, Research Committee, Clinical Medicine Section Vice-Chairman, Services Committee, Clinical Medicine Section Executive Committee, Clinical Medicine Section Finance Committee Member, Publications Committee Representative to Program Committee Chair-Elect, Clinical Medicine Section Chairman, Clinical Medicine Section Member, Executive Committee, Gerontological Society of America Co-Chairman, Research Task Force, Clinical	1982-1986 1984-1986 1984-1991 1984-1985 1986-1987 1986-1987 1987-1988 1988-1991
Medicine Section	

Milwaukee AOA Long-Term Care Gerontology Center, Milwaukee, Wisconsin:

Co-Director, Research Peer Review and Development Committee	1981-1983
Director, Medical Student Education	1981-1983
Operating Committee Member	1981-1983
Center Senior Investigator	1981-1983
Geriatrician-in-Chief	1981-1983
American College of Physicians	
Member, Health and Public Policy Committee	1989-9/98
New York State Chapter	1990-1997
Chairman, Geriatrics Committee	
New York State Chapter	
1992,1996,1997	
Chairman, Nominating Committee for Council	
New York Chapter	1992
Chairman, Search Committee for Governor,	
New York State Chapter	
Program Chairman, Downstate Scientific Meeting	1992
Co-Director, MKSAP IX Review, New York	1992
Member of Council, New York State Chapter Program Chairman, Downstate Scientific Meeting	1993-1996
Program Chairman, Downstate Scientific Meeting	1994
Member, Board of Governors	1996
Governor-Elect, NYS Dowstate I Region	1997-2002
Governor, NYS Dowstate I Region	1997-1998
(resigned as Governor due to relocation, 9/98)	1998-2001
Co-Program Chairman, Downstate Scientific Meeting	1000
Co Frogram Chamman, Downstate Scientific Meeting	1998
Other Committees:	
Vice-Chairman, The State Medical Society	1981-1982
of Wisconsin Committee on Aging and Extended Care	
Chairman, State Medical Society of Wisconsin	1981-1982
Sub-Committee on Geriatrics and Gerontology	1981-1983
Long-Range Planning for CME in Geriatrics	
University of Wisconsin School of Medicine	1981-1986 ~
Membership Committee, American Federation for Aging	
Research	
State of Wisconsin Task Force on Implemenation on	1981-1983
Swing Bed Programs	
Milwaukee County Medical Society - Committee on the	1982-1984
Needs of the Elderly	

Planning Process (MEDIPP), Veterans Administration Central Office (VACO) Chairman, The State Medical Society of Wisconsin Committee on Aging and Long-Term Care Member, Affiliations Committee, American Federation for Aging Research Member, Statewide Advisory Committee, New York State Long-Term Care Case Mix Reimbursement Project Committee on Medical Colleges Westchester County Medical Society Public Policy Committee American Geriatrics Society Member, Geriatrics Committee New York Academy of Medicine New York Academy of Medicine Committee on Public Health New York Academy of Medicine Tork Academy of Medicine New York A
Chairman, The State Medical Society of Wisconsin Committee on Aging and Long-Term Care Member, Affiliations Committee, American Federation for Aging Research Member, Statewide Advisory Committee, New York State Long-Term Care Case Mix Reimbursement Project Long-Term Care Case Mix Reimbursement Project Committee on Medical Colleges Westchester County Medical Society Public Policy Committee American Geriatrics Society Member, Geriatrics Committee New York Academy of Medicine New York Academy of Medicine Committee on Public Health New York Academy of Medicine Committee on Public Health New York Academy of Medicine Wew York Academy of Medicine New York Academy of Medicine New York Academy of Medicine New York Academy of Medicine Member, AID's Curriculum Committee Byram Hills School District Chairman, Admissions Committee New York Academy of Medicine
Committee on Aging and Long-Term Care Member, Affiliations Committee, American Federation for Aging Research Member, Statewide Advisory Committee, New York State Long-Term Care Case Mix Reimbursement Project Committee on Medical Colleges Westchester County Medical Society Public Policy Committee American Geriatrics Society Member, Geriatrics Committee New York Academy of Medicine Chairman, Geriatrics Committee New York Academy of Medicine Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine New York
Member, Affiliations Committee, American Federation for Aging Research Member, Statewide Advisory Committee, New York State Long-Term Care Case Mix Reimbursement Project Committee on Medical Colleges Westchester County Medical Society Public Policy Committee American Geriatrics Society Member, Geriatrics Committee New York Academy of Medicine Chairman, Geriatrics Committee New York Academy of Medicine Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Committee on Public Health New York Academy of Medicine New York Academy of Medicine Syram Hills School District Member, AID's Curriculum Committee Byram Hills School District Chairman, Admissions Committee New York Academy of Medicine Member, Program Committee New York Academy of Medicine New York Academy of Medicine Syram Hills School District
for Aging Research Member, Statewide Advisory Committee, New York State Long-Term Care Case Mix Reimbursement Project Committee on Medical Colleges Westchester County Medical Society Public Policy Committee American Geriatrics Society I985-1991 Member, Geriatrics Committee New York Academy of Medicine New York Academy of Medicine Regriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Syram Hills School District I989-1991 Chairman, Admissions Committee Byram Hills School District I990-1991 Chairman, Admissions Committee New York Academy of Medicine
Member, Statewide Advisory Committee, New York State Long-Term Care Case Mix Reimbursement Project Committee on Medical Colleges Westchester County Medical Society Public Policy Committee American Geriatrics Society Member, Geriatrics Committee New York Academy of Medicine Chairman, Geriatrics Committee New York Academy of Medicine Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Swy York Academy of Medicine Committee on Public Health New York Academy of Medicine Member, Admissions Committee New York Academy of Medicine Member, AID's Curriculum Committee Byram Hills School District Member, Curriculum Committee Byram Hills School District Syram Hills School District New York Academy of Medicine New York Academy of Medicine New York Academy of Medicine Byram Hills School District Syram Hills School District
Long-Term Care Case Mix Reimbursement Project Committee on Medical Colleges Westchester County Medical Society Public Policy Committee American Geriatrics Society Member, Geriatrics Committee New York Academy of Medicine New York Academy of Medicine Officiatric Health Subcommittee Committee on Public Health New York Academy of Medicine New York Academy of Medicine Geriatric Health Subcommittee Vormittee on Public Health New York Academy of Medicine New York Academy of Medicine Member, Admissions Committee New York Academy of Medicine Nember, Alli's School District 1989-1991 Member, Curriculum Committee Byram Hills School District 1990-1991 Chairman, Admissions Committee New York Academy of Medicine Member, Program Committee New York Academy of Medicine Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1991-1993 Chairman, Curriculum Committee Byram Hills School District
Committee on Medical Colleges Westchester County Medical Society Public Policy Committee American Geriatrics Society Member, Geriatrics Committee New York Academy of Medicine New York Academy of Medicine New York Academy of Medicine Seriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Member, Admissions Committee New York Academy of Medicine Nember, AID's Curriculum Committee Byram Hills School District 1989-1991 Member, Curriculum Committee Byram Hills School District 1990-1991 Chairman, Admissions Committee New York Academy of Medicine New York Academy of Medicine New York Academy of Medicine Member, Program Committee New York Academy of Medicine Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1991-1993 Chairman, Curriculum Committee Byram Hills School District
Westchester County Medical Society Public Policy Committee American Geriatrics Society Member, Geriatrics Committee New York Academy of Medicine Chairman, Geriatrics Committee New York Academy of Medicine New York Academy of Medicine Seriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Nember, Admissions Committee New York Academy of Medicine Member, AID's Curriculum Committee Byram Hills School District Member, Curriculum Committee Byram Hills School District 1990-1991 Chairman, Admissions Committee New York Academy of Medicine New York Academy of Medicine Nember, Program Committee New York Academy of Medicine Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1991-1993 Chairman, Curriculum Committee Byram Hills School District 1992-1993
Public Policy Committee American Geriatrics Society Member, Geriatrics Committee New York Academy of Medicine Chairman, Geriatrics Committee New York Academy of Medicine New York Academy of Medicine Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Nember, AID's Curriculum Committee Byram Hills School District Member, Curriculum Committee Byram Hills School District Chairman, Admissions Committee New York Academy of Medicine Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1992-1993 Chairman, Curriculum Committee
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New York Academy of Medicine Chairman, Geriatrics Committee New York Academy of Medicine 1986-1992 Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine New York Academy of Medicine Member, Admissions Committee New York Academy of Medicine New York Academy of Medicine Nember, AID's Curriculum Committee Byram Hills School District Byram Hills School District Syram Hills School District Chairman, Admissions Committee New York Academy of Medicine Nember, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1992-1993
Chairman, Geriatrics Committee New York Academy of Medicine Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Nember, AID's Curriculum Committee Byram Hills School District Byram Hills School District Syram Hills School District Chairman, Admissions Committee New York Academy of Medicine Nember, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1992-1993
New York Academy of Medicine Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Nember, AID's Curriculum Committee Byram Hills School District Byram Hills School District Syram Hills School District Chairman, Admissions Committee New York Academy of Medicine Nember, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1992-1993
Geriatric Health Subcommittee Committee on Public Health New York Academy of Medicine Nember, AID's Curriculum Committee Byram Hills School District Byram Hills School District Syram Hills School District Chairman, Admissions Committee New York Academy of Medicine New York Aca
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Byram Hills School District Member, Curriculum Committee Byram Hills School District Chairman, Admissions Committee New York Academy of Medicine Nember, Program Committee New York Academy of Medicine New York Academy of Medicine New York Academy of Medicine 1990-1991 Member, Program Committee New York Academy of Medicine 1991-1996 Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program 1991-1993 Chairman, Curriculum Committee Byram Hills School District 1992-1993
Member, Curriculum Committee Byram Hills School District 1990-1991 Chairman, Admissions Committee New York Academy of Medicine 1990-1991 Member, Program Committee New York Academy of Medicine 1991-1996 Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program 1991-1993 Chairman, Curriculum Committee Byram Hills School District 1992-1993
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Chairman, Admissions Committee New York Academy of Medicine Member, Program Committee New York Academy of Medicine New York Academy of Medicine Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1990-1991 1991-1993
New York Academy of Medicine Member, Program Committee New York Academy of Medicine Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1990-1991 1991-1993
Member, Program Committee New York Academy of Medicine Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1991-1993
New York Academy of Medicine Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program Chairman, Curriculum Committee Byram Hills School District 1991-1993 1992-1993
Member, Advisory Board, Hudson Valley Long-Term Care Ombudsman Program 1991-1993 Chairman, Curriculum Committee Byram Hills School District 1992-1993
Ombudsman Program 1991-1993 Chairman, Curriculum Committee Byram Hills School District 1992-1993
Ombudsman Program 1991-1993 Chairman, Curriculum Committee Byram Hills School District 1992-1993
Chairman, Curriculum Committee Byram Hills School District 1992-1993
Byram Hills School District 1992-1993
AIDS Curriculum, Byram Hills School District 1993-1994
Member, Committee on Medical Colleges
Westchester County Medical Society 1993
Member, Advisory Board, Golden Age Care Program
Rye, New York
Member, Search Committee for Chairman of Medicine 1994-1995
Cabrini Medical Center, New York, New York 1997-present
Member, ACGME Internal Medicine Residency Review
Committee's Pre-Review Committee

International Committees:

Member, Program Committee	1985-1989
International Congress of Biomedical Gerontology	
Member, Steering Committee	1985-1989
International Congress of Biomedical Gerontology	
Vice-President, International Association of	1987-1989
Biomedical Gerontology	1000 1002
Secretary, North American Program Committee for	1990-1993
the International Congress of Gerontology	1002 1004
Member, Advisory Board, International Congress of	1993-1994
Aging, Depression, and Dementia, Graz, Austria	
Medical School Committees:	
The Medical College of Wisconsin, Milwaukee, Wisconsin	
Intended and the control of Committee	1979-1980
Interdepartmental Geriatrics Committee Chairman, Education Committee on Geriatrics and	1979-1960
Gerontology	1979-1980
Interdepartmental Nutrition Committee	1979-1983
Director of Geriatric Education and Research,	1980-1983
Gerontology Office	1700 1705
Chairman, Interdepartmental Geriatric and	1980-1983
Gerontology Group	1,00 1,00
N	
New York Medical College, Valhalla, New York:	
Chairman, Internal Advisory Body, Center for the	1983-1997
Study of Aging and Health Promotion	
Graduate Medical Advisory Committee	1984-1996
Curriculum and Education Committee	1984-1997
Committee for Innovative Program Development	1984-1990
Veterans Administration Hospital Liaison Committee	1985-1990
Chairman, Committee for 3rd & 4th Year Curriculum	1985-1987
Member, Committee for Primary Care Studies	1985-1997
Member, Faculty Senate	1985-1990
Member, Executive Committee, Faculty Senate	1985-1989
Chairman, Curriculum and Education Committee	1986-1997
Member, Alternate Pathway Promotions Committee	1987-1991
Member, Committee on Ethics and Human Values	1987-1996
Member, Search Committee for Chairman,	1988-1989
Department of Psychiatry, New York Medical College	1991-1997
Member, Medical Education Committee,	

New York Medical College Medical Education Consortium	1991-1997
Chairman, Special Needs Committee NYMC Medical Education Consortium	1991-1993
	1991-1993
Chairman, Education, Committee, LCME Self-Study	1992-1997
Member, Continuing Medical Education Committee	1992-1997
Member, LCME Review Task Force and Steering Committee	1992-1993
Chairman, LCME Review Committee for Educational	1992-1993
Program for MD Degree	1992-1994
Member, Operational Task Force, Robert Wood Johnson	1992-1994
Generalist Physician Initiative Grant	1002 1004
Member, Education Committee for Primary Care/	1993-1994
Generalist Initiative	1002 1004
Member, School Development Committee	1993-1994
for Managed Care Programs	1002 1004
Chairman, Faculty Education Subcommittee,	1993-1994
School Development Committee for Managed Care	1002 1004
Member, Contract Guidelines and Principles	1993-1994
Subcommittee, School Development Committee	
for Managed Care Programs	1004 1006
Member, Governing Council, Medical Faculty Health	1994-1996
Alliance (MFHA)	1004 1006
Member, Contract Review Committee, MFHA	1994-1996
Member, Finance Committee, MFHA	1994-1996
Member, Primary Care Curriculum Subcommittee	1994-1997
Member, Admissions Committee	1995-1997
UMDNJ-New Jersey Medical School	
Director, Intro. to Clinical Sciences Course (ICS)	1997-8/98
Member, Graduate Medical Education Committee	1997-8/98
Chairman, ICS Faculty Committee	1997-8/98
Member, Academic Policies and Procedures	1997-8/98
Committee, Pre-Clinical and Clinical Subcommittees	2227 0.20
Other Committees:	
Long-Range Planning for CME in Geriatrics	1981-1983
University of Wisconsin School of Medicine	1701-1703
Madison, Wisconsin	
Appointments & Promotions Committee	1999-present
Johns Hopkins University School of Medicine	1777-present

Hospital/Clinical Committees:

Wood VA Medical Center, Milwaukee Wisconsin:

Interdepartmental Gerontology Committee	1979-1980
Animal Studies Sub-Committee	1980-1983
Nutrition Committee	1980-1983
Domiciliary Council	1980-1983
Chairman, Interdepartmental Gerontology Committee	1980-1983
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Ruth Taylor Geriatric and Rehabilitation Institute:	
Executive Committee	1983-1993
Research Committee (Chairman)	1983-1993
Infection Control Committee	1983-1987
Safety Assurance Committee	1983-1987
Medical Nursing Committee	1983-1993
Patient-Care Policy Committee	1983-1993
Admissions Committee	1983-1992
Pharmacy Committee (Chairman)	1983-1987
Nutrition Committee (Co-Chairman)	1983-1987
Policy Review Committee	1983-1993
Multidisciplinary Care Committee	1985-1993
Quality Assurance Committee	1989-1993
Westchester County Medical Center:	
Research Protocol Review Committee	1984-1989
Infection Control and Safety Committee	1984-1990
Ambulatory Care Committee	1984-1991
Chairman, Geriatrics Committee	1984-1997
Committee on Governance of WCMC	1984-1985
Ball Committee	1984-1989
Chairman, Research Protocol Review Committee	1985-1989
Bioethics Committee	1985-1997
Chairman, Ad Hoc Autopsy Committee	1989-1990
Sinai Hospital of Baltimore:	•
Medical Executive Committee	1998-present
Board of Trustees Advisory Committee	1998-present
Community Physician Advisory Board	1998-present
LifeBridge Institutes for Successful Aging Steering Committee	1998-present

Lifebridge Institute for Complementary Medicine Steering Committee	1998-present
Chairman, Resource Utilization Review and Length of Stay Review Committee	1998-present
Continuing Medical Education Committee	1998-present
Graduate Medical Education Committee	1998-present
Member Search Committeee for Chair of Pathology	1999
Member Search Committee for Chair of Surgery	1999
Clinical Competency Committee, Internal Medicine Residency	
Program, Johns Hopkins/Sinai Hospital	1998-present
Advisory Board Member, Center for Bone Health	1999-present
Advisory Board Member, Diabetes Care Center	1999-present
Advisory Board Member, Congestive Disorders Program	1999-present
Chairman, Department of Medicine Executive Committee	1998-present
Chairman, Clinical Practice Guideline Development Committee	1998-present
Chairman, Finance Committee	1998-present
	
Other Committees:	
Member, Quality Assurance Committee	1985-1987
St. Cabrini Nursing Home, Dobbs Ferry, New York	1700 1707
Member, Long Range Planning Committee	1985-1996
St. Cabrini Nursing Home, Dobbs Ferry, New York	1500 1550
Chairman, Quality Assurance Committee	1986-1996
St. Cabrini Nursing Home, Dobbs Ferry, New York	2,00 2,70
Chairman, Medical Director Search Committee	1987-1989
St. Cabrini Nursing Home, Dobbs Ferry, New York	
Member, Advisory Committee, Bethel Methodist Home	1988-1993
Ossining, New York	
Chairman, Medic al Advisory Board, Diabetes	1994-1996
Treatment Center at St Agnes Hospital, White Plains	
New York	
Member, Clinical Practice Guideline Development	
Committee, UMDNJ-New Jersey Medical School	1997-1998
Department Committees:	
The Medical College of Wisconsin, Milwaukee, Wisconsin	•.
Executive Committee, Department of Medicine	1980-1983
Resident Recruitment and Curriculum Committee,	1700 1705
Department of Medicine	1980-1983
•	1700 1703
New York Medical College, Valhalla, New York	

Department of Medicine:	
Committee on Evaluation of Clinical Competence	1983-1996
Member, Search Committee for Chairman	1987-1988
Department of Medicine, Metropolitan Hospital	
Chairman, Search Committee for Chief of Medicine	1990-1991
Franklin Delano Roosevelt VA Medical Center	
Member, Search Committee for Chairman	1990-1991
Department of Medicine, New Rochelle Hospital	
Chairman, Wage and Benefits Committee	1992-1993
Chairman, Finance and Billing Committee	1993-1996
Chairman, Research Committee	1993-1995
Chairman, Academic Program Committee	1993-1996
Chairman, Clinical Services Committee	1993-1996
Member, Search Committee for Chairman of Medicine	1994-1995
Cabrini Medical Center, New York, New York	
UMDNJ-New Jersey Medical School, Neward, N.J.:	
Department of Medicine:	
Member, Executive Committee	1997-8/98
Chairman, Residency Curriculum Committee	1997-8/98
Member, Clinical Practice Guideline Development	
Committee	1997-8/98
Chairman, Computer Assisted Education Committee	1997-8/98
EDITORIAL ACTIVITIES:	
Editorial Positions:	
Mombon Editorial Doord January of Consensation	1001 1005
Member, Editorial Board, Journal of Gerontology	1981-1986
Consulting Editor, Practical Geriatrics	1981-1982
Advisory Editor, Psychiatric Medicine	1981-1995
Editor-in-Chief, Contemporary Geriatric Medicine, Plenum Press	1001 1000
	1981-1988
Health Editor, Senior News	1983
Editor-in-Chief, The Geriatric Medicine Letter	1983-1988
Member, Editorial Board, Westchester County Medical	w.
Society Bulletin	1984-1988
Editor for Clinical Research AGE	1984-present
Member, Publication Committee, Journal of Gerontology	1987-1988
Member, Editorial Board, Geriatrics	1987-present
DUMITIONE MULTOPIOL D'AUTOONI MAANA NAMAAN DAAAANA	
Member, Editorial Advisory Board, Senior Patient Member, Editorial Board, Journal of Geriatric	1988-1992

Nephrology and Urology	1989-present
Section Editor, "Literature Review and Opinion",	
Journal of Geriatric Nephrology and Urology	1990-present
Advisory Editor, Gerontology and Geriatric Medicine	
Marcel Dekker Publishers	1990-present
Editor-in-Chief, Long-Term Care Forum	1990-present
Member, Editorial Advisory Board, Primary Caregiver	1991-1992
Alzheimer's Disease	•
Member, Editorial Board, Journal of Applied	1991-present
Nutrition	
Member, Editorial Board, Journal of Optimal	1991-present
Nutrition	
Editor, 50th Anniversary Issue, Geriatrics	1996

Manuscript Reviewer:

Science

Age

Journal of Gerontology

Psychiatric Medicine

Journal of the American Geriatrics Society

Postgraduate Medicine

Archives of Internal Medicine

Journal of Clinical Endocrinology and Metabolism

The Journal of the Association for Persons with Severe Handicaps

Geriatrics

American Journal of Mental Deficiency

American Journal on Mental Retardation

Senior Patient

Metabolism

Biological Psychiatry

Patient Care

Journal of the American Family Physician

Journal of Geriatric Urology and Nephrology

Journal of Optimal Nutrition

Journal of Applied Nutrition

Journal of Primary Care

Endocrine Reviews

American Family Physician

Preventive Medicine

AWARDS AND HONORS:

Member of Bristol Pre-Medical Honor Society

1969-1971

Elected President, Bristol Pre-Medical Honor Society Rockefeller University Honors Program (Lipid Metabolism)	1970-1971 1971
George Wiley Prize in Biology, New York University	1971
Joseph Goldberger Research Fellowship, American Medical Association, Metabolic Unit of the University of Vermont, Burlington, Vermont	1974
American Medical Association Physicians Recognition Award	1979-1999
Consultant, National Aging Research Planning Panel Five Year Plan for Aging Research	1981
Secretary and Treasurer, Gerontological Society of America, Clinical Medicine Section	1981
Consultant, Medical Advisory Committee, Visiting Nurse Association of Milwaukee, Milwaukee, Wisconsin	1981-1983
Medical Consultant, State of Wisconsin, Department of Health and Social Services	1981-1983
Elected Councilor, American Federation of Clinical Research, Midwest Section	1981-1984
Fellow, American College of Physicians	1981-present
Awardee, Geriatric Medicine Academic Award National Institute on Aging	1982-1989
Listed in "American Men and Women of Science"	1982
Moderator, "To Better Health - Monthly Public Television Series for the Elderly"	1982-1983
Chairman, Selection Committee for Walter Nicolai Prize: Biomedical Gerontology, American Aging Assoc.	1982-1993
Fellow, Gerontological Society of America	1983-present
Fellow, American Geriatrics Society	1983-present

Fellow, New York Academy of Medicine Secretary, Gerontological Society of America, Clinical Medicine Section	1984-present 1984-1987
President-Elect, American Aging Assocation	1984-1985
Secretary, Geriatrics Section, The New York Academy of Medicine	1985-1986
President, American Aging Association	1985-1986
Chair, Section of Physical and Mental Health Northeastern Gerontological Society	1986
Chairman, Geriatrics Section The New York Academy of Medicine	1986-1987
Board of Directors, Medical Faculty Associates, PC Department of Medicine, New York Medical College	1986-1996
Chairman, Geriatrics Committee, New York Academy of Medicine	1986-1987
Elected Member, Iota Chapter Alpha Omega Alpha Medical Honor Society	1987-present
Marshall, New York Medical College Graduation 1987,1988,1992	
Vice-President, International Association of Biomedical Gerontology	1987-1989
Chair-Elect, Clinical Medicine Section, Gerontological Society of America	1987-1988
Chairman, Clinical Medicine Section, Gerontological Society of America	1988-1989
Member, National Faculty of the Core Content Review of Family Medicine	1987-1996
Listed in "Men of Achievement"	1988
Member, Prostate Cancer Education Council	1989-present

Secretary, North American Program Committee for the International Congress of Gerontology	1990-1993
Fellow (charter), American Aging Association	1990-present
Chairman, Admissions Committee, New York Academy of Medicine	1990-1991
Listed in Who's Who in Medicine and Health	1990
Chair, Geriatrics Committee, New York State Chapter, American College of Physicians	1990-1997
Co-Course Director, 1992 MKSAP IX American College of Physicians Review Program New York City	1991-1992
Elected Chairman, Curriculum Committee Byram Hills School District	1991-1993
Program Chairman/Co-Chairman, Scientific Session American College of Physicians New York Chapter, New York, New York	1992,94,96,98
Elected Councilor, American College of Physicans New York State Chapter	1993-1996
Re-elected Member, Byram Hills District School Board North Castle, New York	1993-1996
Elected President, Byram Hills District School Board, North Castle, New York	1993-1994
Member, Selection Committee for Geriatric Gynecology Fellowship Program, American Federation for Aging Research	1993
Listed in American Men and Women of Science	1994
Recipient of the Joseph T. Freeman Award, The Gerontological Society of America	1994
Member, Development Committee for Computer Based Examinations, National Board of Medical Examiners	1994-1997

"Expert Consultant", Office of Professional Medical Conduct, State of New York, Department of Health	1994-1997
Recipient of Laureate Award, American College of Physicians, New York State Chapter	1996
Listed in "The Best Doctors in America", National Physician Survey, American Health Journal	1996
Member, ACGME Geriatric Fellowship Pre-Review Committee	1996-present
Member, USMLE Step 3 Committee, National Board of Medical Examiners	1996-present
Elected Governor-Elect, New York Downstate Region 1 American College of Physicians	1997-1998
Elected Governor, New York Downstate Region 1 American College of Physicians (resigned due to relocation, 9/98)	1998-2002
Listed in Who's Who in America	1997,1998
Member, National Palliative Care Faculty for Diseases of Different Etiologies	1997-present

MAJOR TEACHING EXPERIENCE

Medical Attending on General Medical Service at all institutions I have been affiliated with (1983-present)

Faculty in physiology course at Medical College of Wisconsin (1979-1983) and New York Medical College (1985-1990)

Faculty member in Introduction to Clinical Medicine Course, Medical College of Wisconsin and New York Medical College (1983-present)

Faculty member in Nutrition Course, New York Medical College (1983-1996)

Faculty member (1983-1996) and Organizer (1993-1996) of Introduction to Medicine Course at New York Medical College

In charge of and Organizer of Geriatric Medicine Course for fourth year medical students at New York Medical College (1984-1996)

In charge of medical resident and Fellow eduational experience in geriatric medicine at Meidcal College of Wisconsin (1979-1983) and New York Medical College (1983-1996)

In charge of re-organizing Clinical Skills Course (Physical Diagnosis) at New York Medical College 1992-1993) and oversite of Course (1993-1996)

Chairman, Third and Fourth Year Sub-Committee of Curriculum and Education Committee, New York Medical College (1984-1986)

Chairman, Curriculum and Education Committee, New York Medical College (1986-1997)

Director and faculty member of Gerontology Tract, MPH Program, Graduate School of Health Sciences, New York Medical College (1990-1996)

Faculty member and Steering Committee member of Primary Care Course (Generalist Initiative), New York Medical College (1992-1997)

Conducted Morning Report with medical residents at Westchester County Medical Center, (1993-1996) in both in-patient and out-patient settings

Provided oversite for Third Year Medical Clerkship and Fourth Year Subinternship in Medicine at New York Medical College (1993-1996)

Experienced in Problem-based Learning, Computer Assisted Education, Faculty Development Programs, OSCE, Clinical Competency Examinations, and Standardized patient education

Extensive experience in CME and Lay education involving TV, radio, media, and audience directed programs

Medical Attending, University Hospital, Newark, N.J. (1997-1998)

Lecturer, Introduction to Clinical Sciences Course, UMDNJ-NJMS, (1997-1998)

Conducted Morning Report with medical residents and medical students at University Hospital, Newark, N.J. (1997-1998)

Conducted Chief Rounds, Medical Student training program at University Hospital, Newark, N.J. (1997-1998)

Medical Student Preceptor, Medicine Clerkship and Clinical Skills Course, UMDNJ-NJMS (1997-1998)

Director, Introduction to Clinical Sciences Course and Clinical Skills/Physical Diagnosis Course, UMDNJ-NJMS (1997-1998)

Coordinator, Johns Hopkins Clinical Clerkship in Internal Medicine at Sinai Hospital (9/98-present)

Program Director, Johns Hopkins University/Sinai Hospital Program in Internal Medicine Residency Program (9/98-present)

Conduct Morning Report and Chief Rounds for medical residents and medical students at Sinai Hospital, Baltimore, Maryland (9/98-present)

PRINCIPAL CLINICAL AND HOSPITAL SERVICE RESPONSIBILITIES:

Medical Attending, General medical Service, Milwaukee County Medical Center and Wood VA Medical Center (1979-1983)

Associate Chief, Division of General Internal Medicine, Medical College of Wisconsin (1983-1984) Affiliated Hospitals

Medical Director, VA Nursing Home Care Unit, Wood VA Medical Center (1979-1983)

Director of Geriatric Services, Milwaukee County Medical Center and VA Medical Center, Milwaukee (1979-1983)

Director of Geriatrics, Westchester County Medical Center (1983-1994)

Chief of Medical Services, Ruth Taylor Geriatric and Rehabilitation Institute (1983-1993)

Director, Geriatric Outpatient Services and Consultation Team, New York Medical College and Westchester County Medical Center (1983-1996)

Director of Medical Services (acting), Westchester County Medical Center (1994-1996)

Medical Attending, General Medical Service, Westchester County Medical Center (1983-1996)

Medical Attending, General Medical Service, University Hospital, Newark, N.J. (1997-8/98)

Physician-in-Chief, Sinai Hospital of Baltimore (9/98-present)

MAJOR RESEARCH INTERESTS:

Health Promotion and Successful Aging
Innovations in Medical Education
Endocrine Aspects of Aging
Geriatric Disorders/Atypical Presentation of Disease in the Elderly
Developmentally Disabled Elderly
Health Service/Outcomes Research
Menopausal Health
Effect of Age on Cardiovascular Morphology and Function

RESEARCH GRANT PARTICIPATION:

- 1. Principal Investigator "Effects of Increasing Age on Thyroid Hormone Metabolism and Regulation." VA Research Advisory Group Support (RAGS), \$21,550, 1979-80.
- 2. Principal Investigator Animal Research Award, National Institute on Aging, \$15,000, 1979-80.
- 3. Principal Invesigator "Effect of Increasing Age on Sensitivity to Thyroid Hormone", MCW Institutional Research. Support, \$5,000, 1979-80.
- 4. Co-Investigator ACTH and Thyroid Hormone Abnormalities in Ob/Ob Mice, Wisconsin Diabetes Association, \$8,000, 1980-81.
- 5. Principal Investigator "Aging and Its Effect on Thyroid Hormone Metabolism and Sensitivity", VA Merit Review Program, \$86,480, 1980-83.
- 6. Principal Investigator "Thyroid Metabolism During Aging", MCW Department of Medicine Research Grant, \$3,000, 1979-80.
- 7. Co-Investigator "The Effect of Age on Hormonal Response to Exercise", MCW Institutional Research Support, \$5,000, 1981-82.
- 8. Co-Investigator "Effects of Increasing Age on the Thyroid Hormone Dependent Enzymes", VA Research Advisory Group Support (RAGS), \$20,000, 1981-82.
- 9. Principal Investigator "Geriatric Medicine Academic Award", National Institute on Aging, \$307,107, 1982-87 (Terminated due to relocation, 1983).
- 10. Co-Director, Gerodentistry Fellowship Program Grant, Veterans Administration Central Office (VACO), \$409,448, 1982-87 (Terminated due to relocation, 1983).
- 11. Principal Investigator "Clinical Implication of an Incontinence Clinic", AOA, Milwaukee Long-Term Care Gerontology Center, \$13,000, 1982-83.

- 12. Principal Investigator "Aging and Thyroid Hormone Economy", Department of Medicine Research Award, New York Medical College, \$30,000, 1983-86.
- 13. Principal Investigator Geriatric Medicine Academic Award, National Institute on Aging, \$450,000, 1984-89.
- 14. Principal Investigator "Age, Thyroid Hormone and Thermogenic Response", National Institute on Aging, \$24,250, 1984-85.
- 15. Principal Investigator "The Role of Supplemental Pancreas in the Malnourished Elderly", McNeil Pharmaceuticals, \$13,000, 1985-86.
- 16. Co-Investigator "Cutaneous Dilantin Use in the Treatment of the Decubitus Ulcer", Zenith Labs, \$6,000, 1984-85.
- 17. Co-Investigator "Age, Exercise, and Neuroendocrine Response", Institutional Research Grant, New York Medical College, \$5,000, 1985-86.
- 18. Principal Investigator Mid-Hudson Regional Geriatric Education Center, U.S. Health and Human Services, \$113,400, 1985-88.
- 19. Principal Investigator Mid-Hudson Regional Geriatric Education Center, Hunter Brookdale Research Foundation, \$76,000, 1988-90.
- 20. Co-Investigator Hudson Valley Alzheimer's Disease Assistance Center, New York State Bureau of Health, \$35,000, 1988-89.
- 21. Co-Investigator Hudson Valley Alzheimer's Disease Assistance Center, New York State Bureau of Health, \$74,000, 1989-90.
- 22. Principal Investigator Mid-Hudson Regional Geriatric Education Center, Hunter Brookdale Research Foundation, \$94,500, 1990-93.
- 23. Co-Investigator Hudson Valley Alzheimer's Disease Assistance Center, New York State Bureau of Health, \$100,000, 1990-91.
- 24. Co-Investigator Hudson Valley Alzheimer's Disease Assistance Center, New York State Bureau of Health, \$100,000, 1991-92.
- 25. Principal Investigator Stay Healthy Senior Citizen Program United Way, \$12,500, 1991-92.
- 26. Principal Investigator Stay Healthy Senior Citizen Program United Way, \$12, 500, 1992-93.

- 27. Principal Investigator Alzheimer's Disease Education Program, Burke Research Foundation, \$7,088, 1992-93.
- 28. Principal Investigator Mid-Hudson Regional Geriatric Education Center, Hunter Brookdale Research Foundation, \$54,000, 1993-96.
- 29. Principal Investigator Alzheimer's Disease Education Program, Burke Research Foundation, \$3,544, 1993-94.
- 30. Principal Investigator Alzheimer's Disease Education Program, Burke Research Foundation, \$5,000, 1994-95.
- 31. Co-Principal Investigator, Starting Hormone Replacement Therapy in an Inner-City Hospital, The Retirement Research Foundation, \$169,400, 1994-96.
- 32. Co-Investigator, Aging of the Heart, P. Anversa, Principal Investigator, NIH 2 R01HL39902-07, \$1,769,222, 1995-2000.
- 33. Principal Investigator Aging Research Symposium Grant, John A. Hartford Foundation/AFAR, \$1,940, 1995.
- 34. Co-Investigator Hudson Valley Alzheimer's Disease Assistance Center, New York State Bureau of Health, \$154,000, 1995-98.
- 35. Principal Investigator Alzheimer's Disease Education Program, Burke Research Foundation, \$4,150, 1995-96.
- 36. Project Director Development and Testing of Treatments for Battlefield Phosgene Poisoning, U.S. Department of Defense Research Contract, #DAMD-17-94-C-4043, \$112,321, 1995-96.
- 37. Principal Investigator Alzheimer's Disease Education Program, Burke Research Foundation, \$4,150, 1996-97.
- 38. Principal Investigator Alzheimer's Disease Education Program, Burke Research Foundation, \$4,150, 1997-98.

MAJOR ADMINISTRATIVE RESPONSIBILITIES:

Associate Chief, Division of General Internal Medicine, Medical College of Wisconsin (1979-80)

Director of Geriatrics, Medical College of Wisconsin and Affiliated Hospitals (1979-1983)

Geriatrician-in-Chief, AOA Gerontology Center, Wisconsin (1980-1983)

Medical Director, VA Nursing Home Care Unit, Wood VA Medical Center (1979-1983)

Director, Fellowship Program in Geriatric Medicine, Medical College of Wisconsin (1980-1983)

Director, Division of Gerontology and Geriatric Medicine, Department of Medicine, New York Medical College (1983-1994).

Director, Center for the Study of Aging and Health Promotion, New York Medical College (1983-1997)

Director, Fellowship Program in Geriatric Medicine, New York Medical College (1984-1995)

Associate Dean for Academic Programs, New York Medical College (1991-1997)

Executive Vice-Chairman, Department of Medicine, New York Medical College (1993-1994)

Professor and Chairman (acting), Department of Medicine, New York Medical College (1/94-7/96)

President, Medical Research Associates, PC (1993-1996)

President, Medical Business Associates (1993-1996)

Chairman, Oversite Committee, Diabetes Management and Treatment Center, St. Agnes Hospital (1994-1996)

Co-Director, Menopausal Health Program and Osteoporosis Center at New York Medical College (1993-1996)

Director, Gerontology Tract, MPH Program, Graduate School of Health Sciences, New York Medical College (1989-1997)

Chairman, Curriculum and Education Committee, New York Medical College (1986-1997)

Vice-Chairman for Academic Affairs, Department of Medicine, UMDNJ-New Jersey Medical School (1997-8/98)

Director, Introduction to Clinical Science and Clinical Skills Courses, UMDNJ-New Jersey Medical School (1997-8/98)

Chairman, Department of Medicine and Physician-in-Chief, Sinai Hospital of Baltimore (9/98-present)

Program Director, Johns Hopkins University/Sinai Hospital Program in Internal Medicine Residency Training Program (9/98-present)

Coordinator, Johns Hopkins Clinical Clerkship in Internal Medicine at Sinai Hospital (9/98-present)

PUBLICATIONS

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- 1. Tulp, O., S.R. Gambert, and E.S. Horton: Adipose Tissue Development, Growth, and Food Consumption in Protein-Malnourished Rats. J Lipid Res 20:47-54, 1979.
- 2. Gambert, S.R. and A.R. Guansing: Protein-Calorie Malnutrition in the Elderly. J Amer Geriat Soc 26:272-275, 1980.
- 3. Gambert, S.R., T.L. Garthwaite, C.H. Pontzer, and T.C. Hagen: Thyroid Hormone Regulation of Central Nervous System Beta-Endorphin and ACTH. Horm Metab Res 12:345-346,1980.
- 4. Gambert, S.R., T.L. Garthwaite, C.H. Pontzer, and T.C. Hagen: Age-Related Changes in Central Nervous System Beta-Endorphin and ACTH. Neuroendocrinology 31:252-255, 1980.
- 5. Gambert, S.R., C.H. Pontzer, and E.M. Dagon: Thyroid and the Depressed Elderly. J Amer Geriat Soc 28:433-438, 1980.
- 6. Gambert, S.R. and T.L. Garthwaite: The Effect of Diphenylhydantoin on Basal and Stimulated Thyroid Stimulated Hormone (TSH) and Prolactin Secretion in Euthyroid and Hypothyroid Rats. Horm Metab Res 12:643-644, 1980.
- 7. Gambert, S.R., T.L. Garthwaite, C.H. Pontzer, and T.C. Hagen: Fasting Associated Decrease in Hypothalamic Beta-Endorphin. Science 210:1271-1272, 1980.
- 8. Gambert, S.R., S.H. Ingbar, and T.C. Hagen: Interaction of Age and Thyroid Hormone Status on Na+-K+ATPase in Rat Renal Cortex and Liver. Endocrinology 108:27-30, 1981.
- 9. Gambert, S.R.: Interaction of Age and Thyroid Hormone Status on BetA-Endorphin Content in Rat Corpus Striatum and Hypothalamus. Neuroendocrinology 32:114-117, 1981.

- 10. Gambert, S.R., C.H. Pontzer, and J.J. Barboriak: Effect of Ethanol Consumption on Central Nervous System (CNS) Beta-Endorphin and ACTH. Horm Metab Res 13:242-243, 1981.
- 11. Gambert, S.R.: Effect of Increasing Age on the Degradation of Thyroxine by Rat Liver Homogenate. AGE 4:48-50, 1981.
- 12. Gambert, S.R. and J.J. Barboriak: Interaction of Age and Alcohol on Plasma Lipids in the Rat. AGE 4:85-87. 1981.
- 13. Gambert, S.R. and E.H. Duthie: Sleep Disorders: Coping with a Waking Nightmare. Geriatr 36:61, 1981.
- 14. Gambert, S.R. and E.H. Duthie: TRH Testing and Depression. Wisc Med J 80:25, 1981.
- 15. Wiltzius, Sr., F., S.R. Gambert, and E.H. Duthie: Importance of Resident Placement Within a Skilled Nursing Facility. J Amer Geriatr Soc 29:418-421, 1981.
- 16. Gambert, S.R., E.H. Duthie, and Sr. F. Wiltzius: The Value of Yearly Medical Evaluation in a Nursing Home. J Chronic Diseases 35:65-68, 1982.
- 17. Gambert, S.R., T.L. Garthwaite, C.H. Pontzer, E.E. Cook, D.R. Martinson, E.H. Duthie, F.E. Tristani, D.J. McCarty, and T.C. Hagen: Running Elevates Plasma Beta-Endorphin/Beta-Lipotropin and ACTH in Untrained Human Subjects. Proc Soc Exp Biol & Med 168:1-4, 1981.
- 18. Duthie, E.H., S.R. Gambert, and D.D. Tresch: Evaluation of the Systolic Murmur in the Elderly. J Amer Geriatr Soc 29:498-502, 1981.
- 19. Gambert, S.R., E.H. Duthie, and B. Priefer: Bacterial Infections within a Skilled Nursing Facility. Wisc Med J 80:25, 1981.
- 20. Gambert, S.R. and T.L. Garthwaite: Serum Thyroid Hormone Levels and Thyroid Hormone Metabolism by 10% Liver Homogenate from Adult Lean and Obese Ob/Ob Mice. Horm Metab Res 13:588-589, 1981.
- 21. Priefer, B., E.H. Duthie, and S.R. Gambert: Frequency of Urinary Catheter Change and Clinical Urinary Tract Infection. Urology 20 (2):141-2, 1982.
- 22. Schiedermayer, D.L., E.H. Duthie, M.V. Shelley, P.D. Tsitouras, M. Lund, and S.R. Gambert: Emergency Detention of the Elderly: Demographics, Diagnosis, and Outcome. J Amer Geriatr Soc 30:383-386, 1982.
- 23. Gambert, S.R: Effect of Age on the Conversion of Thyroxine (T4) to 3,5,3' Triiodothyronine (T3) by Liver Homogenate from Fed and Fasted Rats. AGE 5:88-91, 1982.

- 24. Gambert, S.R.: Diagnosis and Management of Thyroid Disease in the Elderly. Wisc Med J 81:43-45, 1982.
- 25. Gambert, S.R.: Nutritional Assessment of the Elderly. Wisc Med J 81:18-21, 1982.
- 26. Gray, R. and S.R. Gambert: Effect of Age on Plasma 1,25(OH) Vitamin D in the Rat. AGE 5:54-56, 1982.
- 27. Gambert, S.R. and J.J. Barboriak: Effect of Cold Exposure on Thyroid Hormone in Fischer 344 Rats of Increasing Age. J of Gerontol 37(6):684-687, 1982.
- 28. Duthie, E.H., B. Priefer, and S.R. Gambert: The Teaching Nursing Home-One Approach. JAMA 247:2787-2788, 1982.
- 29. Sohnle, P.G. and S.R. Gambert: Thermoneutrality-An Evolutionary Advantage Against Aging? Lancet, I: 1099-1101, 1982.
- 30. Lloyd, P. and S.R.Gambert: Periodic Oral Examinations and Panoramic Radiographs in Edentulous Elderly Men. J of Oral Surg, Oral Med & Oral Path 57:678-680, 1984.
- 31. Gambert, S.R. and E.H. Duthie: Effect of Age on Red Cell Membrane Sodium-Potassium Dependent Adenosine Triphosphatase (Na+-K+ATPase) Activity in Healthy Men. J of Gerontol 38:23-25, 1983.
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- 34. Paegle, R.D., T. Anderson, H.L. Brooks, S.R. Gambert, P. Sigmann: Subscriber Survey and Health Education as a Public Service Via Cable-TV. Wisc Med J 81:11-14, 1982.
- 35. Duthie, E.H., S.R. Gambert: Geriatric Consultation: Implications for Teaching and Clinical Care. Gerontol and Geriatr Educ 4:59-66, 1983.
- 36. Gambert, S.R. and P.D. Tsitouras: Effect of Age on Nuclear Triiodothyronine Receptors in Circulating Human Lymphocytes. AGE 6:76-77, 1983.
- 37. Duthie, E.H., R. Rabinovitch, P.D. Tsitouras, and H. Rose, S.R. Gambert: Effectiveness of Influenza Vaccination in the Long-Term Care Setting. Wisc Med J 83:11-12, 1984.
- 38. Gambert, S.R.: Atypical Presentation of Thyroid Disease in the Elderly. Geriatr 40:63-69, 1985.

- 39. Murray, M.D., E.H. Duthie, S.R. Gambert, S.B. Sepic, L.A. Mallinger: Age-Related Decline in Knee Muscle Strength in Normal Women. J of Gerontol 40:275-280, 1985.
- 40. Gambert, S.R. and P.D. Tsitouras: Effect of Age on Thyroid Physiology and Function. J Amer Geriatr Soc 33:360-365, 1985.
- 41. Escher, J, E.H. Duthie, and S.R. Gambert: Anticoagulation Usage in the Elderly: Research Imperative. AGE 9:85-90, 1986.
- 42. Donnelly, M.B., E.H. Duthie, R. Kirsling and S.R. Gambert: The Use of the Combined Palmore and Dye and Sassenrath Aging Quizzes for Measuring Knowledge Gain in Medical Education, Gerontol and Geriatr Educ 6:11-25, 1986.
- 43. Gambert, S.R.: Effect of Age on Basal and 3,5,3' Triiodothyronine (T3) Stimulated Human Mononuclear Cell Sodium-Potassium Adenosine-Triphosphatase (Na+-K+ ATP'ase) Activity. Horm Met Res 18:649-50, 1986.
- 44. Benson, D.M., E. Humbach, and S.R. Gambert: Establishment and Impact of a Dementia Unit Within the Nursing Home. J Amer Geriatr Soc 35:319-323, 1987.
- 45. Ng, R. and S.R. Gambert: Missing Medications within a Long-Term Care Facility. J Geriatr Drug Therapy 1:65-70, 1987.
- 46. Cameron, D., E. Humbach, J. Davis, S.R. Gambert: A Specialized Dementia Unit: A Cost, Benefit and Reimbursement Analysis. NY Med Quarterly 7:103-107, 1987.
- 47. Gambert, S.R., S. Liebeskind, D. Cameron: Preventive Health Care for the Developmentally Disabled Elderly. J Assoc for Persons with Severe Handicaps 12:292-296, 1988.
- 48. Gupta, K., S.R. Gambert, and F. Powell: Importance of a Specialized Assessment Unit within the Nursing Home. NY Med Quarterly 7:32-36, 1987.
- 49. Gambert, S.R. and J. Escher: Atypical Presentations of Endocrine Disorders in the Elderly. Geriatr 43:69-78, 1988.
- 50. Gambert, S.R., D. Crimmins, D. Cameron, et al: A Geriatric Assessment Program for the Mentally Retarded Elderly. NY Med Quarterly 8:144-147, 1988.
- 51. Escher, J., B. Burstiner, S.R. Gambert, et al: Interactive Computer Teaching with the Elderly. NY Med Quarterly 8:4-7, 1988.
- 52. Gupta, K.L., B. Dworkin, and S.R. Gambert: Common Nutritional Disorders in the Elderly: Atypical Manifestations. Geriatr 43:87-97, 1988.

- 53. Escher, J., S.R. Gambert, and B. Rothschild: Metabolic Bone Disease. AGE 10:62-69, 1987.
- 54. Gambert, S.R., A. Fader, and S. Dubowsky: Influence of Age and Illness on Color Preference. AGE 11:110-111, 1988.
- 55. Gambert, S.R., K.L. Gupta: Preventive Care: What It's Worth. Geriatr 44:61-71, 1989.
- 56. Escher, J.E., C. O'Dell, and S.R. Gambert: Typical Geriatric Accidents and How to Prevent Them. Geriatr 44:54-69, 1989.
- 57. Gambert, S.R., J. Jacobs, and N. Fox: Rates of Health Care Utilization of NIDDM Patients New to Oral Hypoglycemic Therapy. Facts and Research in Gerontology, 147-156,1992.
- 58. Fader, A., M. Nash, K.L. Gupta, J.E. Escher and S.R. Gambert: Implementing a "Do-Not-Resuscitate" (DNR) Policy in a Nursing Home. J Amer Geriatr Soc 37:544-548, 1989.
- 59. Fader, A.M., H.B. Kleinbaum, S.R. Gambert: When "Something is Wrong": A case for Investigating Vague Health Complaints. Geriatr 45:76-80, 1990.
- 60. Martins, C., S.R. Gambert, K.L. Gupta, and B.M. Schultz: Effect of Age and Dementia on the Prevalence of Cardiovascular Disease. AGE 13:9-11, 1990.
- 61. Fader, A.M., J.E. Escher, S.R. Gambert: Geriatrics Consultation in the Acute Care Institution: A Combined Experience in Both the Medical and Psychiatric Hospital. AGE 13:39-41, 1990.
- 62. Fader, A., N. Koge, K. Gupta, and S.R. Gambert: Perceptions of Elder Abuse by Health Care Workers in a Long-Term Care Setting. Clin Gerontol 10:87-89,1990.
- 63. Escher, J.E. and S.R. Gambert: Geriatric Assessment and Cognitive Dysfunction Among the Elderly. Clin Gerontol 10:79-81, 1991.
- 64. Schultz, B.M., K.L. Gupta, E. Humbach, P. Baker, J.E. Escher, and S.R. Gambert. Urinary Tract Infections in Non-Catheterized Nursing Home Residents. J of Geriatr Nephrol and Urol 1:29-34, 1991.
- 65. Maucher, J. and S.R. Gambert: Cost Effectiveness of Influenza Vaccination in the Elderly. AGE 13:81-85, 1990.
- 66. Schultz, B.M. and S.R. Gambert: Minimizing the Use of Psychoactive Medications in the Institutionalized Elderly. Clin Gerontol 80-83, 1991.

- 67. Schultz B.M. and S.R. Gambert: Influence of Chronic Disease on the Presentation of Urinary Tract Infections in Non-Catheterized Nursing Home Residents. AGE 14:79-81, 1991.
- 68. DeAntoni, E., E.D. Crawford, N.N. Stone, S.R. Gambert: Prostate Cancer Awareness Week: 1992. A summary of Key Findings. Clin and Invest Med 16:448-457, 1993.
- 69. Gambert, S.R.: Future of Nutrition. J of Opt Nutr 1:28-30, 1992.
- 70. Tan, J.Z., K.L. Gupta, and S.R. Gambert: Metabolic Profile of the Elderly upon Entry to the Nursing Home. AGE 15:15-17, 1992.
- 71. Tjan, M.F., S.R. Gambert, and K.L. Gupta: Rehabilitation and the Nursing Home Patient. AGE 15:108-112, 1992.
- 72. Plichta, A.M., R.L. Bayer, and S.R. Gambert: The Challenge of Diagnosing Temporal Arteritis. AGE 15:118-120, 1992.
- 73. Gupta, K.L., S.R. Gambert, M.S. Grayson, et al: Comparing the Teaching of Physical Diagnosis in a Primary Care Setting and a Hospital Setting. Acad Med 68:311, 1993.
- 74. Gambert, S.R.: The Role of Diet in the Prevention and Treatment of Osteoporosis. J Opt Nutr 3:32-38, 1994.
- 75. Gambert, S.R.: Who are the Elderly? J of Geriatr Nephrol and Urol 4:3-4, 1994.
- 76. Olivetti, G., G. Giordano, D. Corradi, M. Melissari, C. Lagrosta, S.R. Gambert, P. Anversa: Gender Differences and Aging: Effects on the Human Heart. J Am Coll Cardiol 26:1068-1079, 1995.
- 77. Ammon, R., R. Sharma, S.R. Gambert, K.L. Gupta: Hydergine Revisited: A Statistical Analysis of Studies Showing Efficacy in the Treatment of Dementia. AGE 18:5-9, 1995.
- 78. Gambert, S.R.: Geriatric Medicine Maturation or Senescence? J of Long Term Home Health Care 14:17-22, 1995.
- 79. Olivetti, G., E. Cigola, R. Maestri, D. Corradi, C. Lagrasta, S.R. Gambert, and P. Anversa: Aging, Cardiac Hypertrophy and Ischemic Cardiomyopathy Do Not Affect the Proportion of Mononucleated and Multinucleated Myocytes in the Human Heart. J Mol Cell Cardiol 28:1463-1477, 1996.
- 80. Olivetti, G., F. Quaini, R. Sala, C. Lagrasta, D. Corradi, E. Bonacina, S.R. Gambert, E. Cigola, and P. Anversa: Acute Myocardial Infarction in Humans is Associated with Activation of Programmed Myocyte Cell Death in the Surviving Portion of the Heart. J Mol Cell Cardiol 28:2005-2016, 1996.

- 81. Crawford, E.D., E.P. DeAntoni, R. Etzioni, S.R. Gambert, et al: Serum Prostrate-Specific Antigen and Digital Rectal Examination for the Early Detection of Prosate Cancer in a National Community-Based Program. Urology 47:863-869, 1996.
- 82. Sharma, R., Gupta, K.L., Ammon, R.H., Gambert, S.R.: Atypical Presentation of Colon Perforation Related to Corticosteroid Use. Geriatr 52:88-90, 1997.
- 83. Gambert, S.R.: Alcohol Abuse: Medical Effects of Heavy Drinking in Late Life. Geriatr 52:30-37, 1997.
- 84. Mogul, H.R., Marshall, M., Frey, M., Burke, H.B., Wynn, P.S., Wilder, S., Southren, A.L., and Gambert, S.R.: Insulin Like Growth Factor-Binding Protein-1 As a Marker for Hyperinsulinemia in Obese Menopausal Women. J Clin Endocrinol Metab 81,4492-4495, 1996.
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- 88. Carney, P.A., Baron, M.E., Grayson, M.S., Klein, M., Cochran, N., Eliassen, S., Gambert, S.R., Gupta, K.L., Labrecque, M.C., Munson, P.J., Nirerenberg, D.W., O'Donnell, J.F., Whitehurst-Cook, M., Willett, R.M.: The Impact of Early Clinical Training in Medical Education: A Multi-Institutional Assessment. Academic Medicine 74: 59-66, 1999.

NON PEER-REVIEWED ARTICLES

REPORTS, LETTERS, REVIEWS, COMMENTARIES

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- 2. Gambert, S.R.: The Mechanism of Lipolysis in Epididymal Fat Pads. Honors thesis on file at New York University Library, University College, Bronx, New York, 1971.

- 3. Duthie, E.H. and S.R. Gambert: (Letter to Editor) Anemia and Cardiac Disease in the Elderly. Amer Heart J 101:240-241, 1981.
- 4. Duthie, E.H., S.R. Gambert, and M. Lund: Planning a Geriatric Curriculum within a Medical School. Proceedings of the National Association for Gerontology in Higher Education, 59-60, 1981.
- 5. Gambert, S.R., T.L. Garthwaite, C.H. Pontzer and T.C. Hagen: Opioids and Eating Behavior (Technical Comment) Science 213:1282, 1981.
- 6. Gambert, S.R., T.C. Hagen, T.L. Garthwaite, and E.H. Duthie: (Letter to the Editor) Exercise and the Endogenous Opioids. N Engl J Med 305:1590-1591, 1981.
- 7. Gambert, S.R.: Nutritional Assessment of the Institutionalized Elderly. Practical Geriatr 1:1-2, 1981.
- 8. Drucker, W.D., S. Duck, S.R. Gambert, and P.D. Tsitouras: Sexual Aspects of Endocrinopathies. Human Sexuality 16: 60L-FF, 1982.
- 9. Gambert, S.R. and E.H. Duthie: (Letter to the Editor) RBC Na+-K+ATPase as a Metabolic Marker. N Engl J Med 306:808, 1982.
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- 11. Gambert, S.R.: Nutrition and the Elderly: Consultation. Physician and Patient 1:56. 1982.
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- 14. Gambert, S.R. and E.H. Duthie: Current Theories on the Aging Process. J Milw County Med Soc 9:9, 1982.
- 15. Duthie, E.H. and S.R. Gambert: Hypertension in the Elderly, J. Milw County Med Soc 9:4, 1982.
- 16. Hooyman, N.W., E.H. Duthie, D.L. Schiedermayer and S.R. Gambert: (Letter to the Editor) Emergency Detention of the Elderly. J Am Geriatr Soc 30:788, 1982.

- 17. Gambert, S.R, P.D. Tsitouras and E.H. Duthie: Interpretation of Laboratory Results in the Elderly: A Clinician's Guide to Endocrine Tests. Postgrad Med 72(4):251-256, 1982.
- 18. Gambert, S.R., D. Benson, D. Grosenick, E.H. Duthie: Psychiatric Manifestations of Common Endocrine Problems of the Elderly. Psych Med I: 407-428, 1983.
- 19. Hooyman, N.W. and S.R. Gambert: Pharmacology in the Elderly: Psychological and Physiological Interrelationships. Psych Med 1:445-458, 1983.
- 20. Gambert, S.R.: A Clinician's Guide to the Physiology of Aging, Geriatric Medicine II, Wisc Med J 82:13-15, 1983.
- 21. Gambert, S.R.: Osteoporosis, Geriatric Medicine II, Wisc Med J 82:26-28, 1983.
- 22. Lloyd, P. and S.R. Gambert: Guidelines for Oral Health Care of the Institutionalized Elderly. Wisc Med J 82:28-29, 1983
- 23. Schiedermayer, D.C., E.H. Duthie, S.R. Gambert: Medical Management of Hip Fractures in the Elderly. Wisc Med J 82:28-30, 1983.
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ABSTRACTS

- *Presented at Meeting
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- 2. Gambert, S.R. and S.H. Ingbar: Prompt Potentiation of the Calorigenic Effect of Epinephrine by Triiodothyronine (T3). Proceedings of the 60th Annual Meeting of the Endocrine Society, June, 1978.
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- 13. Gambert, S.R.: Increasing Age Alters Peripheral Thyroid Hormone Response to Fasting. Proceedings of the 63rd Annual Meeting of the Endocrine Society, June, 1981.* Abstract #311.
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- 19. Gambert, S.R.: Aging and the Thyroid-Endogenous Opioid Relationship. Proceedings of the Annual Meeting of the American Aging Association, New York, N.Y., 1981.
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- 72. Gambert, Ss.R. and R. Pace: Effect of Age on Oxygen Free Radical (O-) Degradative Enzymes in Human Fibroblasts. Clinical Research, September 1989.*
- 73. Gambert, S.R.: Rates of Health Care Utilization in Elderly Persons with Diabetes Mellitus. Proceedings of the Annual Meeting of the American Geriatires Society, Atlanta, Georgia, May 1990.*
- 74. Gupta, K.L. and S.R. Gambert: Implementing a Curriculum in Gerontology and Geriatric Medicine in All Years of Medical School. Proceedings of the Annual Meeting of American Geriatrics Society, Atlanta, Georgia, May 1990.*
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- 77. Schultz, B.M, K.L Gupta, and S.R. Gambert: Characteristics of Urinary Tract Infection (UTI) Non-Catheterized Nursing Home (NH) Residents. The Gerontologist 119A, October 1990.*
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- 80. Kassur, D. and Gambert, S.R.: Implementing a Supportive Care Only Policy in the Nursing Home. Proceedings of the Annual Meeting of the Gerontological Society of America, November 1991.*
- 81. Gupta, K.L, S.R. Gambert, M.S. Grayson, et al: Teaching Clinical Skills in the Primary Care Seting A Comparative Study. Annual Meeting, Association of American Medical Colleges, New Orleans, Louisiana 1992.*
- 82. Swartz, M.H., S.R. Gambert, S.A. Kline, et al: Assessment of Clinical Competence Utilizing Standardized Patients: What are we Really Measuring. Fifth Ottawa International Conference on Assessment of Clinical Competence, Dunde, Scotland 1993.*
- 83. Gupta, K.L., S.R. Gambert, and A. Sozza: Subjective vs. Objective Assessment of Clinical Skills Teaching. Annual Meeting, Association of American Medical Colleges, Washington, D.C. 1993.*
- 84. Stone, N.N., D.S. Blum, E.D. Crawford, S.R. Gambert, etc. Prostate Cancer Risk Factor Analysis Among > 50,000 Men in a National Study of Prostate-Specific Antigen (PSA). Annual Meeting, American Urological Association, San Francisco, California 1994.*
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- 86. Pastore, F.R., S.R. Gambert, and A. Plutchik: A Curriculum for Empathy Training in Medical School A New Approach. Annual Meeting, Association of American Medical Colleges, Boston, Massachusetts 1994.*
- 87. Gambert, S.R., K. Berg, J. Michaels, and C. Heimann: A Unique Opportunity for Faculty Development Partnerships Between Medical Schools and Professional Communication

- Specialists. Annual Meeting, Association of American Medical Colleges, Boston, Massachusetts 1994.*
- 88. Sperber, R., K.K. Katsoyannis, and S.R. Gambert: An Analysis of Aggressive Behavior in Contained Dementia Units. Annual Meeting, American Geriatrics Society 1994.*
- 89. Sharma, R., K.L. Gupta, R. Ammon, and S.R. Gambert: Improving the Rate of Influenza Vaccination in a Nursing Home. Annual Meeting, American Geriatrics Society, Washington, D.C. 1995.*
- 90. Sharma, R., V. Dasari, K.L. Gupta, and S.R. Gambert: Influence of a Geriatirc Rotation on Medical Student Attitude and Knowledge. Annual Meeting, Amerian Geriatrics society, Washington, D.C. 1995.*
- 91. Gadioma, R., K.L. Gupta, A. Fader, and S.R. Gambert: Functional Capacity and Nursing Home Placement of the Developmentally Disabled. Annual Meeting, American Geriatrics Society, Washington, D.C. 1995.*
- 92. Sharma, R., K.L. Gupta, and S.R. Gambert: Increased Risk of Instestinal Perforation Secondary to Steroid Use: A Case in Point. Annual Meeting, American Geriatrics Society, Washington, D.C. 1995.*
- 93. Anversa, P. and S.R. Gambert, G. Olivetti: Aging of the Heart: Myocyte Size and Number. Annual Meeting, Gerontological Society of America, Los Angeles, California 1995.*
- 94. Gross, M., D. Zheng, S.R. Gambert and D.G. McLeod: Robust Estimates of the Predictive Value of Prostate-Specific Antigen (PSA) in a National Community-Based Program for the Detecton of Prostate Cancer Using PSA and Digital Rectal Examination DRE. Annual Meeting, American Urological Association, Inc., Orlando, Florida 1995.*
- 95. E.P. DeAntoni, C.A. Ross, S.R. Gambert, Dd.G. McLeod and F. Staggers: Time Since Vasectomy Cannot Be Separated from Age as Risk for Prosate Cancer. Annual Meeting, American Urological Association, Inc., Orlando, Florida 1995.*
- 96. E.P. Antoni, E.D. Crawford, S.R. Gambert, D.G. McLeod, and F. Staggers: Age and Race-Specific Reference Ranges for Prostate-Specific Antigen from a Large Community-Based Study. Annual Meeting, American Urological Association, Inc., Orlando, Florida 1995.*
- 97. Sharma, R., K.L. Gupta, S.R. Gambert: Correlation Between Total Protein, Albumin, and HbA1C in the Elderly. Annual Meeting, The Gerontological Society of America, Los Angeles, California 1995.*
- 98. Escher, J.E., R. Sharma, A. Diaz, K. Turo, J.W. Chiao, and S.R. Gambert: Distribution of Lymphocytes in Persons with Alzheimer's Disease (AD) and Age Matched Non-Demented

- (ND). Annual Meeting, The Gerontological Society of America, Los Angeles, California 1995.*
- 99. R. Gadioma, R. Ammon, R. Shara, K.L. Gupta, and S.R. Gambert: "DNR" in a Nursing Home Revisited. Annual Meeting, The Gerontological Society of America, Los Angeles, California 1995.*
- 100. R. Ammon, R. Gadioma, K.L. Gupta, S.R. Gambert: Total Cholesterol and Cardiovascular Disease in an Institutionalized Geriatric Population Annual Meeting, The Gerontological Society of America, Los Angeles, California 1995.*
- 101. E. Forman, K.L. Gupta, and S.R. Gambert: Nursing Home Resident's Perception of Quality of Life. Annual Meeting, The Gerotological Society of America, Los Angeles, California 1995.*
- 102. Mogul, H.R., S.R. Gambert, M. Frey, M. Marshall: IGFBP 1 in Obese Menopausal Women. Annual Meeting, The 10th International Congress of Endocrinology, San Francisco, California 1996.*
- 103. Sharma, R., R. Ammon, N. Caruuli, K.L. Gupta, S.R. Gambert: Dysphagia in Patients with Stroke in the Nursing Home. Annual Meeting, Gerontological Society of America, Washington, D.C. 1996.*
- 104. Sharma, R., S. Gazis, R. Ammon, K.L. Gupta, S.R. Gambert: HIV Patients in the Nursing Home. Annual Meeting, Gerontological Society of America, Washington, D.C. 1996.*
- 105. DeAntoni, P., K. Holthaus, E.D. Crawford, N.N. Stone, D. Blum, E.T. Berger, S.R. Gambert, M. Eisenberger, F.S. Staggers, D.G. McCloud: Prostate-Specific Antigen (PSA) Velocity in a National Cohort Tested Serially with Three Annual Tests. American Urological Association Annual Meeting, New Orleans, Louisianna 1997.*

CURRICULUM VITAE

NAME: Edward G. Lakatta

CURRENT APPOINTMENTS:

1986-Present Director, Laboratory of Cardiovascular Science, Gerontology

Research Center, National Institute on Aging, National

Institutes of Health, Baltimore, Maryland

1982-Present Adjunct Professor of Physiology, University of Maryland

School of Medicine, Baltimore, Maryland

1980-Present Professor of Medicine, Johns Hopkins School of Medicine,

Baltimore, Maryland (Part-time)

1976-Present Visiting Physician, Johns Hopkins Bayview Medical Center,

Baltimore, Maryland

OFFICE ADDRESS: Laboratory of Cardiovascular Science, Gerontology Research

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HOME ADDRESS: 126 Briarcliff Lane, Bel Air, Maryland 21014

DATE OF BIRTH: May 10, 1944

PLACE OF BIRTH: Scranton, Pennsylvania

MARITAL STATUS: Married, Loretta Cantwell - 3 children

EDUCATION:

1962-1966 B.S. (Biology), University of Scranton, Scranton,

Pennsylvania

1966-1970 M.D., Georgetown University School of Medicine,

Washington, DC

PRIOR PROFESSIONAL EXPERIENCE:

1970-1971 Internship, Department of Medicine, Strong Memorial

Hospital, Rochester, New York

PETITIONER'S
EXHIBIT

1971-1972	Residency in Internal Medicine, Department of Medicine, Strong Memorial Hospital, Rochester, New York
1972-1974	Clinical Associate, National Institutes of Health, NICHD, Gerontology Research Center, Cardiovascular Section, Baltimore, Maryland
1973-1974	Fellow in Cardiology, Assistant in Medicine, Johns Hopkins School of Medicine, Baltimore, Maryland
1974-1975	Fellow in Cardiology, Georgetown University Hospital, Washington, D.C.
1975-1976	Fellow in Medical Science of the American College of Physicians for 1975, Department of Physiology, University College, London, and Department of Cardiac Medicine, Cardiothoracic Institute, London, England
1976-1985	Chief, Cardiovascular Section, Clinical Physiology Branch, Gerontology Research Center, National Institute on Aging, National Institutes of Health, Baltimore, Maryland
1994-1995	Acting Scientific Director, National Institute on Aging,

MEDICAL LICENSE:

State of Maryland

BOARD CERTIFICATIONS:

1973

Internal Medicine

1977

Cardiovascular Disease

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

American Society for Clinical Investigation

Association of American Physicians

American Physiological Society, Fellow Cardiovascular

Section

Biophysical Society

American Heart Association, Council on Basic Science

Heart Failure Society of America

International Society for Heart Research

Physiological Society of Great Britain

OTHER PROFESSIONAL ACTIVITIES:

Associate Editor, <u>Journal of Molecular and Cellular</u> <u>Cardiology</u>, 1987-present

Consulting Editor, Cardiovascular Research, 1983-1999

Council Member International Society for Heart Research 1995 to 2002.

Editor for Clinical Sciences, <u>Experimental Aging Research</u>, 1982-1989

Editorial Boards - Journal of Gerontology, Journal of Molecular and Cellular Cardiology, Cardioscience, Current Problems in Geriatrics, Journal of Cardiovascular Electrophysiology, Circulation, Cell Calcium

American Heart Association, Cardiovascular B - Research

Member NIH Ad Hoc Study Section on Animal Model for the Study of Pathogenesis of Specific Heart Muscle Disease, 1981

Ad Hoc Grant Proposal Reviews and Site Visit Committees - Veterans Administration and National Science Foundation

American Heart Association - Task Force for the Application of the AHA Mission to the Elderly, 1989-1990; 1990-1991

Honorary Professor, Department of Biology, Beijing University, 1995-present

INTERNAL COMMITTEES:

Chairman, Search Committee for Director, Laboratory of Biological Chemistry, GRC

Chariman, Search Committee for NIA Clinical Director

Chairman, NIA Technology Transfer Committee

Chairman, NIA Committee for Recruitment of Women and Minorities; 1993 to present.

Chairman, NIA Intramural Promotions and Tenure Review Committee, 1989-1991

Search Committee for Director of NIA Intramural Program, 1988

Search Committee for Director of the National Heart, Lung, and Blood Institute, 1981

HONORS AND AWARDS:

B.S. Cum Laude, University of Scranton

M.D. Magna Cum Laude, Georgetown University

Alpha Omega Alpha, National Medical Honor Society

Georgetown Hospital Special Award in Medicine

Mosby Scholarship Book Award

Appointment as Eli Lilly Fellow in Medical Science of the American College of Physicians for 1975

Public Health Service Commendation Medal for 1982;1990 Elected Fellow, Cardiovascular Section, American Physiological Society

Elected Fellow, American Society for Clinical Investigation

National Institutes of Health, NIH Director's Award, June

1992 Paul Dudley White Award in Cardiology

Allied Signal 1993 Achievement Award in Aging

Honorary Professor, Department of Biology, Beijing University, Beijing, People Republic of China 1994

Elected Member, Association of American Physicians

Chairman, Gordon Conference on Mechanisms of Cardiac Regulation, 1994

National Institutes of Health, NIH Director's Award, June

Chairman, Scientific Program Committee International Society for Heart Research World Congress, 1998

Novartis Prize for Gerontological Research, International Association of Gerontology, 1999

Docteur Honoris Causa, Universite D'Auvergne, Clermont, France, 1999

INVITED LECTURES

Symposium, "Explorations in Aging", 1st Philadelphia Symposium on Aging, Philadelphia, Pennsylvania, September 30-October 2, 1974.

Symposium, "Pharmacological Interventions of the Aging Process", 2nd Philadelphia Symposium on Aging, Philadelphia, Pennsylvania, May 26-28, 1977.

Symposium, "Systems Physiology and Aging", 62nd Annual Meeting of the Federation of American Societies for Experimental Biology, Atlantic City, New Jersey, April 9-14, 1978.

Symposium, "Cerebral Manifestations of Episodic Cardiac Dysrhythmias", Miami, Florida, June 19-30, 1978.

Symposium,"Muscle Function and Aging", 31st Annual Meeting of the Gerontological Society, Dallas Texas, November 16-20, 1978.

"Meet-the Experts" Session on Geriatric Cardiology, 28th Annual Scientific Session of the American College of Cardiology, Miami Beach, Florida, March 11-15, 1979.

Symposium, "Maturation and Aging of the Heart", 2nd Meeting of the American Section of the International Society for Heart Research, Ottawa, Canada, May 11-19, 1979.

Departmental Seminar, Department of Physiology, Medical College of Wisconsin, Milwaukee, Wisconsin, October 5, 1979.

Symposium, "Biology of Aging", 30th Fall Meeting of the American Physiology Society, New Orleans, Louisiana, October 15-19, 1979.

Course, "Aging in Man, Understanding the Interplay of Physiology and Disease", Winter Scientific Meeting of the American Medical Association, San Antonio, Texas, January 12-15, 1980.

Symposium, "Research in Geriatrics", 3rd Inter-University Conference on Geriatric Education of the American Geriatric Society, Chicago, Illinois, April 18, 1980.

Department Seminar, Department of Pharmacology and Cell Biophysics, University of Cincinnati Medical Center, Cincinnati, Ohio, May 5, 1980.

Seminar, "Aging of the Cardiovascular System", Eisenhower Medical Research and Education Center, Rancho Mirage, California, October 31, 1980.

Inter-departmental Seminar, "Modification of the Cardiovascular Response to Stress in Advance Age", Research Seminar Series in Geriatric Medicine, Co-sponsored by the Institute on Aging and the Medical School Department of Medicine, Metabolism Section, Temple University, Philadelphia, Pennsylvania, March 24, 1981.

Symposium, "Drugs and the Elderly", Pharmaceutical Manufacturers Association of Canada, Medical R and D Section, Spring '81 International Symposium, Montreal, Quebec, Canada, May 4-5, 1981.

Symposium, "Biology of Myocardial Hypertrophy and Failure - Mechanics I", Annual Meeting of the International Society for Heart Research - American Section, University of Vermont, Burlington, Vermont, June 18, 1981.

Symposium, "Biology of Myocardial Hypertrophy and Failure - Aging and the Heart", Annual Meeting of the International Society for Heart Research - American Section, University of Vermont, Burlington, Vermont, June 18, 1981.

Conference, "Non-Lethal Biological Markers of Aging", National Institute on Aging, National Institutes of Health, Bethesda, Maryland, June 20, 1981.

Departmental Seminar, Department of Pharmacology, University of Kiel, Kiel, West Germany, June 9, 1981.

Chairman, Symposium, "Cardiovascular System", XII International Congress of Gerontology, Homburg, West Germany, July 12-17, 1981.

Lecture, "Laser Spectroscopic Studies of Diastolic Cardiac Muscle: Implications Regarding Diastolic Tone and Systolic Function", University of Texas Health Science Center at Dallas, Dallas, Texas, January 12, 1982.

Lecture, "Biochemical and Physiological Aging of the Adult Myocardium", North Texas State University, Fort Worth, Texas, January 13, 1982.

Lecture, "Age-Related Modifications of the Cardiovascular Response to Adrenergic Stimulation", Texas College of Osteopathic Medicine, Camp Bowie at Montgomery, Fort Worth, Texas, January 13, 1982.

Inter-departmental Seminar, "Laser Spectroscopic Studies of Diastolic Cardiac Muscle: Implications Regarding Diastolic Tone and Systolic Function", Physiology-Pharmacology and Bioengineering Departments, University of California, San Diego, California, February 12, 1982.

Gordon Conference (Invited Speaker), "Biology of Aging", Ventura, California, February 15-19, 1982.

Lecture, "The Physiology of Normal Aging", The Thirtieth Annual Scientific Assembly and Annual Meeting of the Delaware Academy of Family Physicians, Wilmington, Delaware, March 26, 1982.

1981-1982 CME Lecture Series, "Clinical Update on Aging and Disease", the Fifth Annual Continuing Medical Education Lecture Series of the Montgomery County Medical Society, Gaithersburg, Maryland, April 20, 1982.

Symposium, "The Exercise Response of the Aged Cardiovascular System", Annual Meeting of the American College of Sports and Medicine, Minneapolis, Minnesota, May 27, 1982.

Lecture, "Aging of the Cardiovascular System", Washington University Medical Center, St. Louis, Missouri, June 17, 1982.

III International Erwin Riesch Symposium, "Cardiac Adaptation to Hemodynamic Overload, Training and Stress", Tubingen University, Tubingen, West Germany, September 19-22, 1982.

Lecture, "Laser Spectroscopy Detects Spontaneous Ca²⁺ Oscillations in Mammalian Cardiac Muscle", Laboratoire De Physiologie Cellulaire Cardiaque, Universite de Paris, INSERM, Orsay, France, October 8, 1982.

"Workshop on Calcium Antagonists", Cannes, France, October 11, 1982.

Lecture, "The Contractile State of 'Relaxed' Myocardium", Cardiothoracic Institute, London, England, October 14, 1982.

Lecture, "Cardiology and Aging", Fifth International Workshop on Experimental Gerontology, University Erlanger-Nurnberg, Nurnberg, West Germany, October 20-22, 1982.

Seminar, "Spontaneous Ca²⁺ Oscillations in Intact Cardiac Muscle", Department of Physiology, Temple University, Philadelphia, Pennsylvania, November 10, 1982.

Symposium, "Age and the Heart", 35th Annual Scientific Meeting of the Gerontological Society, Boston, Massachusetts, November 21, 1982.

"Intensive Course in Geriatric Medicine", American College of Physicians, Santa Monica, California, January 15-23, 1983.

International Titisee Conference, "Myocardial Ischemia: Pathogenesis Mechanism and Clinical Implications", Titisee, West Germany, March 17-19, 1983.

Lecture, "Starling's Law of the Heart: Reactivated", Department of Physiology, Texas College of Osteopathic Medicine, Camp Bowie at Montgomery, Fort Worth, Texas, April 22, 1983.

Discussion, "Health, Disease and the Cardiovascular System", National Academy of Sciences Committee on an Aging Society, Washington, DC, July 18-20, 1983.

Symposium, "Drugs and Aging", Medical Chemical Section of the American Chemical Society National Meeting, Washington, DC, August 31, 1983.

Symposium, "Heart Failure", Scientific Meeting of the American Section of the International Society for Heart Research, Hilton Head Island, South Carolina, September 21-24, 1983.

Annual Clinical Gerontology Lectures, "Senescent Heart in Health and Disease", 13th Annual Meeting of the American Aging Association, Washington, DC, October 8, 1983.

Lecture, "How the Heart Ages", Workshop on Geriatric Care, John L. Deaton Medical Center, Baltimore, Maryland, October 29, 1983.

Seminar, "Age Related Alterations in Myocardial Excitation-Contraction Coupling", Department of Physiology, The University of Texas Health Science Center, San Antonio, Texas, November 1, 1983.

3rd Annual Texas Tech Symposium, "Interfaces in Physiology", Texas Tech University, Lubbock, Texas, November 3-4, 1983.

Ochsner Medical Foundation Symposium, "The Heart and Antihypertensive Therapy", Anaheim, California, November 13, 1983.

Symposium, "Aging and Altered Cardiovascular Function", 56th Scientific Sessions of the American Heart Association, Anaheim, California, November 13-17, 1983.

Annual Cardiac Symposium, "Geriatric Cardiology", British Columbia Heart Foundation, Vancouver, British Columbia, February 10, 1984.

Seminar,"Myths and Realities of Cardiovascular Aging", Cardiovascular Meeting of the Cleveland Clinic Foundation, Tucson, Arizona, February 16-17, 1984.

Seminar, "Myths and Realities of the Aging Heart", University of Michigan Biomedical Research Council Research Forum, Ann Arbor, Michigan, March 10, 1984.

CME Program, Grand Rounds, "Myths and Realities of Cardiovascular Aging", Holy Cross Hospital, Silver Spring, Maryland, March 20, 1984.

Visiting Lecture, "Starling's Law of the Heart", Reactivated, Cardiovascular Research Conference, Boston University Medical Center, Boston, Massachusetts, April 2, 1984.

American Medical Colleges Visiting Lectureship: Lecture, "The Physiology of the Aging of the Cardiovascular System", Roger Williams General Hospital; Cardiology Conference, Miriam Hospital; Grand Rounds, Rhode Island Hospital, Providence, Rhode Island, April 10-11, 1984.

Seminar, "The Contractile State of Relaxed Myocardium", Department of Physiology, Yale University, New Haven, Connecticut, April 12, 1984.

Panel Discussion, "Age Associated Changes in Cardiac Function in Response to Disease", 65th Annual Session of the American College of Physicians, Atlanta Georgia, April 29, 1984.

Lecture, "Health, Disease and the Aging Cardiovascular System", American College of Physician's Course on Common Clinical Challenges in the Elderly, Philadelphia Geriatric Center, Philadelphia, Pennsylvania, May 4, 1984.

"Basic Science" Lecture, "Aging and the Cardiovascular System", Annual Meeting of the Society of Cardiovascular Anesthesiologist, Boston, Massachusetts, May 7, 1984.

Association of American Medical Colleges Visiting Lectureship in Geriatrics and Gerontology, Medical College of Georgia, Augusta, Georgia, May 16-17, 1984.

Seminar, "Evidence for Altered Beta-adrenergic Modulation of the Cardiovascular System with Adult Aging", Division of Cardiology, University of Connecticut Health Center, Farmington, Connecticut, May 22, 1984.

Association of American Medical Colleges Visiting Lectureship in Geriatrics and Gerontology, "Research Involving Aging and Disease of the Cardiovascular System", Veterans Administration Medical Center, North Chicago, Illinois, June 6, 1984.

Symposium, "Fundamental Defects in Energy Metabolism", Cardiology, Department of Medicine, The Johns Hopkins Medical Institutions, Tidewater Inn, Easton, Maryland, June 20-23, 1984.

NATO Workshop on the Biology of Aging, Aquafredda di Maratea, Italy, July 8-14, 1984.

Lecture, "Ion Regulation in the Heart", Meeting of the American Association of Colleges of Pharmacy, Baltimore, Maryland, July 29, 1984.

Symposium, "Ryanodine: A Probe of Sarcoplasmic Reticular Function in Striated Muscle", American Society for Pharmacology and Experimental Therapeutics (ASPET) First Fall Meetings, Indianapolis, Indiana, August 21, 1984.

Workshop, "Physiologists' Approach to Age-Dependent Changes in Function", 35th Annual Fall Meeting of the American Physiology Society, University of Kentucky, August 29-31, 1984.

Symposium, Scientific Meeting of the American Session of the International Society for Heart Research, Oklahoma City, Oklahoma, September 13-15, 1984.

Workshop, "Research Needs in Blood Pressure Regulation and Aging", National Heart, Lung, and Blood Institute and National Institute on Aging co-sponsors, Bethesda, Maryland, September 19-20, 1984.

Post Graduate Seminar, "Aging and Heart Disease", American Heart Association, Council on Clinical Cardiology, Miami Beach, Florida, November 11, 1984.

Lecture, "The Aging Heart", American Heart Association's Twelfth Science Writers Forum, Monterey, California, January 13-16, 1985.

Lecture," Prevalence of Coronary Artery Disease in Autopsy Studies and Living Populations", Workshop, Biobehavioral Determinants of Coronary Artery Disease, Duke University, February 21-23, 1985.

Lecture, "Cardiovascular Function in the Aging Patient", Mini-Course, Geriatric Cardiology - Use of Cardiovascular Drugs in the Elderly, 34th Annual Scientific Session of the American College of Cardiology, Anaheim, California, March 10-14, 1985.

Lecture, "Aging of the Cardiovascular System", 26th Annual New Jersey Postgraduate Anesthesia Seminar, Cherry Hill, New Jersey, March 24, 1985.

Lecture, "What Effect Does Aging Have on the Cardiovascular System?", Postgraduate Workshop Minicourse, Geriatric Medicine: From Bench to Bed, American College of Physicians, Washington, DC, March 28, 1985.

Seminar, "Spontaneous Ca²⁺ Release in Myocardial Cells and Muscle", Roche Institute of Molecular Biology, Nutley, New Jersey, April 16, 1985.

Science Advisor, Boston University School of Medicine, Hypertension Faculty Meeting, Puerto Vallarta, Mexico, May 2-5, 1985.

Lecture, "The Aging Heart", Second Annual Symposium on Aging and Health, Atlanta, Georgia, May 9-10, 1985.

Lecture,"The Aging Cardiovascular System", Symposium, Aging and the Lung, American Thoracic Society, Clinical Problems Assembly, Anaheim, California, May 15, 1985.

Symposium, "Heart and Coronary Vessels in Hypertension", Cleveland Clinic Foundation, Cleveland, Ohio, May 17-19, 1985.

Lecture, "Spontaneous Ca²⁺ Release in Mammalian Hearts", Department of Clinical Pharmacology, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania, June 6, 1985.

Lecture, "New Perspectives of Adaptations to Exercise in Healthy Elderly Subjects", Second Acta Medica Scandinavica Symposium on Physical Activity in Health and Disease, Gothenburg, Sweden, June 10-12, 1985.

Richard S. Ross 25th Anniversary Symposium, June 13, 1985.

Co-Chair Symposium, "Aging and the Heart", XIIIth International Congress of Gerontology, New York City, New York, July 12-17, 1985.

Working Conference on the "Recognition and Management of Coronary Heart Disease in the Elderly", Bethesda, Maryland, September 4-6, 1985.

Seminar, "Spontaneous Ca Release in Cardiac Preparations", Merck Institute for Therapeutic Research, Rahway, New Jersey, October 30, 1985.

Lecture, "Cardiology of the Elderly", Symposium on Geriatric Medicine, Dewitt Army Community Hospital, Fort Belvoir, Virginia, November 1, 1985.

The Noble Wiley Jones Lecture,"Myths and Realities of Cardiovascular Aging", The Oregon Health Sciences University, Portland, Oregon, December 2, 1985.

Lecture, "Cardiac Drugs in Heart Failure", Interdisciplinary Team Conference, The Oregon Health Sciences University, Portland, Oregon, December 3, 1985.

Visiting Lecture, "The Functional Significance of Spontaneous Diastolic Calcium Release in the Myocardium", Alberta Heritage Foundation for Medical Research, The University of Calgary, Calgary, Alberta, Canada, December 4, 1985.

Seminar, "The Function of the Left Ventricle and Aging", Journal Club, Department of Medicine and Medical Physiology, The University of Calgary, Calgary, Alberta, Canada, December 5, 1985.

Grand Rounds, "The Aging Cardiovascular System--Myths and Realities", Francis Scott Key Medical Center, Baltimore, Maryland, December 18, 1985.

Seminar, "Evidence for Altered Adrenergic Modulation of Cardiovascular Function with Advancing Age", Department of Biomedical Engineering, Biomedical Engineering Cardiovascular Group, Johns Hopkins University School of Medicine, January 10, 1986.

Symposium, The Developing Adult and Aging Heart, International Society for Heart Research, XII Congress, Melbourne, Australia, February 9-13, 1986.

Lecture, "An Integrated Approach Toward the Understanding of Myocardial Aging", 1986 Sandoz Lectures in Gerontology, Basel, Switzerland, February 26-28, 1986.

Lecture, "Cardiovascular Physiology of the Aging", Joint Grand Rounds of the Department of Geriatrics and the Division of Cardiology, Mount Sinai Hospital, New York, New York, March 18, 1986.

Seminar, "Cardiovascular Physiology in Elderly Subjects", Annual Meeting of the Association of University Anesthetists, Gainesville, Florida, April 5, 1986.

Lecture, "Effects of Exercise-Training on the Aged Cardiovascular System - Studies on Rats", The American Physiological Society Symposium, Aging and Exercise: Physiological Interactions, The 70th Annual Meeting of the Federation of American Societies for Experimental Biology, April 13-18, 1986.

Seminar, "Realities and Myths of Cardiovascular Aging", Cardiology Conference, Sinai Hospital of Detroit, Detroit, Michigan, April 23, 1986.

Lecture, "Cardiovascular Aging", Fitness and Aging Seminar, Wayne State University, Detroit, Michigan, May 7, 1986.

Bethesda Conference No. 18 on Cardiovascular Disease in the Elderly, Bethesda, Maryland, May 8-10, 1986

Lecture, "Myths and Realities of Cardiovascular Aging", Symposium on Aging, Pennsylvania State Gerontology Center and College of Medicine, Hershey Pennsylvania, May 15, 1986.

Lecture, "How Hypertension Mimics the Effect of Age on the Myocardium", Symposium on Management of Hypertension and Heart Disease in Older Patients, Johns Hopkins University School of Medicine, Baltimore, Maryland, June 4, 1986.

Lecture, "Cardiovascular Considerations in Exercise Programs for the Elderly", Conference on Nutrition and Aging II: Health Promotion and Disease Prevention in the Elderly, Little, Rock, Arkansas, September 11, 1986.

Lecture, "Functional Implications of Spontaneous Ca²⁺ Release in Diastole", International Symposium, "The Physiology of Diastole in Health and Disease", Sponsored by Harvard Medical

School, Department of Medicine, Beth Israel Hospital, Cambridge, Massachusetts, September 12-14, 1986.

Lecture, "Aging of the Cardiovascular System", Department of Medicine, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, North Carolina, September 25, 1986.

Lecture, "Vascular Etiology of Disturbed Behavior in the Elderly", Continuing Medical Course at the 38th Annual American Academy of Family Physicians Convention, Washington, D.C., September 29, 1986.

Lecture, "Age-Related Physiologic Changes in the Cardiovascular System", Symposium on Managing Cardiovascular Disease in the Elderly, Post-Convention Program of the American Academy of Family Physicians, New York, New York, October 3, 1986.

Seminar, "Realities and Myths of Cardiovascular Aging", Geriatric Medicine CME Course, Hennepin County Medical Center, Minneapolis, Minnesota, October 17, 1986.

Lecture, "Myths and Realities of Cardiovascular Aging", in a series on "The Elderly - A Generation at Risk," Timken Mercy Medical Center, Canton, Ohio, October 22, 1986.

Symposium, "Inotropism", Institut Scientifique Roussel, Paris, France, December 4-5, 1986.

Lecture, International Conference on "Hypertension in the Elderly", Orlando, Florida, December 10-12, 1986.

Lecture, "Why Be Concerned About Spontaneous Sarcoplasmic Reticulum Calcium Release?", Cardioprotection Workshop, San Ysidro Ranch, Montecito, California, January 16, 1987.

Seminar, "Calcium and Cardiovascular Function", Scientific Session: Age Related Changes in Calcium Function, First Joint Symposium of the Tokyo Metropolitan Institute of Gerontology and the National Institute on Aging, Tokyo, Japan, February 18-20, 1987.

Lecture, "Altered Cardiovascular Physiology", American College of Cardiology's Core Curriculum Session, "Cardiovascular Disease in the Elderly," New Orleans, Louisiana, March 9, 1987.

Lecture, "Myths and Realities of Cardiovascular Aging", American Heart Association Council on Epidemiology Session, "Cardiovascular Disease in the Elderly," jointly sponsored by AHA, NHLBI and NIA, Charleston, South Carolina, March 21, 1987.

Invited Lecture, "Cardiovascular Function in Human Aging", International Symposium, The Cardiovascular System in the Elderly: Normal and Clinical Problems," Montreux, Switzerland, March 30, 1987.

Lecture, "Cardiovascular Aging in Health and Disease and Autonomic Modulation of Cardiovascular Function with Aging", Second Annual Geriatric Medicine Seminar, Louisville, Kentucky, April 2, 1987.

Lecture, "The Heart in the Aging Process", National AAPHERD Meeting Seminar "Cardiac and Skeletal Muscle Changes in Older Adult, Las Vegas, Nevada, April 15, 1987.

Lecture, "Functional Sequelae of Spontaneous Diastolic Sarcoplasmic Reticulum Calcium Release", VIIth International Washington Spring Symposium "Cell Calcium Metabolism '87," Washington, DC, May 21, 1987.

Lecture, Lilly Research Laboratories Cardiovascular Task Force, Indianapolis, Indiana, June 11-12, 1987.

Lecture, "Changes in Cardiac Muscle with Senescence", 2nd International Congress of Biomedical Gerontology, Hamburg, West Germany, July 15-17, 1987.

Lecture, "Functional Implications of Ca²⁺ Release in the Heart", Department of Biology, University of Turku, Turku, Finland, July 20, 1987.

Lecture, "Mechanisms of Excitation-Contraction Coupling in the Heart", Department of Physiology, University of Cologne, Koln, West Germany, July 27, 1987.

Lecture, "An Overview of Coronary Artery Disease", Symposium, Atherosclerosis/ Hyperlipidemia, Houston, Texas, September 9, 1987.

Lecture, "Similar Effects of Aging Hypertension on Cardiac Muscle Function", XI National Cardiological Congress, Ancona, Italy, October 12-14, 1987.

Lecture," A Rebellion of Myocytes Leads to Myocardial Dysfunction", Colloguium in Physiology, University of Pittsburgh, Pittsburgh, Pennsylvania, October 28, 1987.

Seminar, "Changes in Excitation-Contraction Coupling Mechanisms in Cardiac Muscle with Senescence", Harvard Medical School, Division of Aging Physician Scientist Program Seminar Series, Boston, Massachusetts, November 4, 1987.

Lecture, "Aging of the Cardiovascular System - Physiologic Considerations", Symposium, "Cardiovascular Disease in the Elderly," Plenary Session VI of the American Heart Association's 60th Annual Scientific Session, Anaheim, California, November 16, 1987.

Lectures, "Myths and Realities of Cardiovascular Aging and Excitation -Contraction Coupling Alterations in Cardiac Muscle with Aging", Department of Physiology, Louisiana State University Medical Center Lecture Series "The Role of Exercise in Health Maintenance," New Orleans, Louisiana, November 19-20, 1987.

Seminar, "Spontaneous Calcium Release: A Rebellion of Cardiac Myocytes", Molecular Cardiology Seminar Series, Division of Cardiovascular Disease, University of Alabama, Birmingham, Alabama, December 1, 1987.

Lecture, "Alterations of the Cardiovascular Response to Exercise in Advancing Age, Annual Scientific Meeting of the American Heart Association, Connecticut Affiliate, University of Connecticut School of Medicine, Farmington, Connecticut, December 2, 1987.

Lecture, "Myocardial Function", The 15th Annual Mason F. Lord Symposium and Geriatric Medicine and Board Review Course, Annapolis, Maryland, December 12, 1987.

Seminar, "Aging Effects on the Heart and the Effect of Exercise", Center of Aging, The University of Kansas Medical Center, Kansas City, Kansas, December 16, 1987.

Lecture, "Health, Disease and Cardiovascular Aging", Guest Faculty Member, University of California 1988 Intensive Course in Geriatric Medicine and Board Review, Los Angeles, California, January 22, 1988.

Seminar, "Ageless Limits in Cardiovascular Systems", Annual Meeting of the American Physical Therapy Association Session on Geriatrics, Washington, DC, February 11, 1988.

Lecture, "Disease, Lifestyle, and Cardiovascular Aging", West Penn and Wintage Geriatric Care Program, Third Annual Forum in Geriatric Care, Pittsburgh, Pennsylvania, March 4, 1988.

Seminar, "Health, Disease and Cardiovascular Aging", The Lankenau Medical Research Center and The Center for the Study of Aging of the University of Pennsylvania, Symposium on Aging, Philadelphia, Pennsylvania, March 19, 1988.

Seminar, "Heart Failure Can Result From a Rebellion of Cardiac Myocytes", Department of Physiology, The Ohio State University, Columbus, Ohio, April 27, 1988.

Lecture, "Cardiovascular Aging - Myths and Realities", Continuing Medical Education Symposium on Management of the Institutionalized Elderly, Medical Society of the County of Kings and The Academy of Medicine of Brooklyn, Inc., Brooklyn, New York, May 15, 1988.

Lecture, The Regulation of Blood Pressure in Older People, 45th Annual Meeting of the American Geriatrics Society, Anaheim, California, May 22, 1988.

Lecture, "Age Associated Changes in the Efficacy of 8-Adrenergic Modulation of Cardiovascular Function", 1st International Congress, Aging and Pathology of the Autonomic Nervous System, Room, Italy, June 16-18, 1988.

Lecture, "Cardiovascular Aging", Dean's Interdepartment Conference, The Aging Process, University of California, Davis, Martinez, California, June 29, 1988.

Lecture, "Health, Disease and Cardiovascular Aging", Summer Institute in Research on Aging, Warrenton, Virginia, July 18-19, 1988.

Lecture, "The Effects of Exercise on the Aging Heart", Third Annual Gerontology Seminar, Geriatrics Comes of Age, Branson, Missouri, August 21, 1988.

European Society for Cardiac Electrophysiology, XIIth Workshop on Cardiac Cellular Electrophysiology, Leuven, Belgium, September 9-10, 1988.

Senior Discussant, IX Meeting of the European Section of the International Society for Heart Research, Oxford, United Kingdom, September 15-18, 1988.

Seminar, "Functional Implications of Spontaneous Diastolic Sarcoplasmic Reticulum Calcium Release in Heart", Merck Sharp and Dohme Research Laboratories, West Point, Pennsylvania, October 6, 1988.

Lecture, "Age Associated Adaptations in Cardiovascular Structure and Function", Symposium, Changes in Organ System with Aging, Montreal, Canada, October 11, 1988.

Chairman, Symposium, Age-related Changes in Adrenergic Control of the Cardiovascular System, presentation, "Excitation-Contraction Alterations in Cardiac Muscle that Occur in Senescence", Canadian Physiology Society, Montreal, Canada, October 11, 1988.

Seminar, "Are Cardiovascular Structure and Function Decremental or Adaptive?", Biology Department, Syracuse University, Syracuse, New York, October 13, 1988.

Lecture, "Myths and Realities of Cardiovascular Aging", Clinical Center Grand Rounds, Bethesda, Maryland, October 26, 1988.

Lecture, "Health, Disease and Cardiovascular Aging", Medical Grand Rounds, Minneapolis VA Medical Center, Minneapolis, Minnesota, October 28, 1988.

Lecture, "Na⁺-Ca²⁺ Exchange, Sarcolemmal Ca²⁺ Fluxes, Excitation-Contraction Coupling", Departmental Seminars on Cell Physiology, Jefferson Medical College of Thomas Jefferson University, Philadelphia, Pennsylvania, November 1, 1988.

Lecture, "Age-Associated Changes in Cardiovascular Function", The Breeders' Cup Symposium, Louisville, Kentucky, November 4, 1988.

Lecture, "Hypertension and Congestive Heart Failure in the Elderly", Loyola University of Chicago, Stritch School of Medicine Division of Continuing Medical Education and Section of Geriatric Services, and Resurrection Medical Center Symposium: Current Topics in Geriatric Medicine, Chicago, Illinois, November 9, 1988.

Seminar, "Advances in Understanding Cardiovascular Disease in the Elderly", Annual Scientific Meeting of the Gerontological Society of America, San Francisco, California, November 20, 1988.

Lecture, "Aging Heart: Clinical Aspects", Office of Continuing Medical Education of Howard University College of Medicine Seminar: Management of the Geriatric Patient, Washington, DC, December 1, 1988.

Lecture, Clinical Liaison Team of the National Academy of Sciences for the Establishment of a National Research Agenda on Aging, Wake Forest University, Winston-Salem, North Carolina, January 6-7, 1989.

Seminar, Stetten Research Seminar, Stone House, National Institutes of Health, Bethesda, Maryland, January 27, 1989.

Grand Rounds, Mechanisms of Normal and Abnormal Heartbeats: Perspectives from Single Cardiac Cells to the Intact Heart, Visiting Professor, Cardiovascular Division, Harvard Medical School, Boston, Massachusetts, February 2, 1989.

Lecture, "Aging Myocardium", Annual Johns Hopkins/Mason F. Lord Continuing Medical Education in Geriatrics for 1989, Baltimore, Maryland, February 3, 1989.

Lecture, "Basic Mechanisms of Normal and Abnormal Heart Beats", Cardiology Division, Department of Medicine, Strong Memorial Hospital, University of Rochester, Rochester, New York, March 1, 1989.

Lecture, "Excitation-Contraction Coupling Properties of Heart Cells", Department of Pharmacology, Strong Memorial Hospital, University of Rochester, Rochester, New York, March 2, 1989.

Lecture, "Heart Failure", Cardiovascular Physiology, Spring 1989 Course, Department of Physiology, University of Maryland School of Medicine, Baltimore, Maryland, March 30, 1989.

Lecture, "Effects of Aging on the Cardiovascular System", Cardiovascular Physiology, Spring 1989 Course, Department of Physiology, University of Maryland School of Medicine, Baltimore, Maryland, March 31, 1989.

Lecture, "Aging and Cardiovascular Disease", Plenary Session, The Challenge of Health Care in the Aged, Pharmaceutical Manufacturers Association Joint Program: Research and Development and Medical Section, Laguna Beach, California, April 10, 1989.

Lecture, "Health, Disease in Cardiovascular Aging", Symposium Special Considerations in the Treatment of Cardiovascular Disease in the Elderly, American Geriatric Society, Boston, Massachusetts, May 11, 1989.

Co-Chairman, Energetics and Myocardial Ionic Homeostasis, Satellite Meeting of the American Physiological Society, Baltimore, Maryland, May 11-13, 1989.

Grand Rounds, "Cardiovascular Disease in the Elderly", Monmouth Medical Center, Hahnemann University School of Medicine, Long Branch, New Jersey, May 25, 1989.

Lecture, "Effects of Exercise on the Aging Cardiovascular System", Symposium, Exercise and Aging, American College of Sports and Medicine, Baltimore, Maryland, May 31, 1989.

Colloquium. "Function of Single Myocytes", American College of Sports and Medicine, Baltimore, Maryland, June 1, 1989.

Lecture, "Altered Contractile and Biochemical Responses to Beta-adrenergic Stimulation in Cardiac Muscles and Myocytes from Aged Rats", Symposium on Basic Researches on Hypertensive Hearts, European Section of the Society for Cardiac Research and INSERM, Jouy-en-Josas, France, July 17, 1989.

Lecture, "Cardiac Dysfunction in the Aged Heart", Symposium, Heart Failure and Diastolic Dysfunction: New Insights, XI Congress of the European Society for Cardiology, Nice, France, September 13, 1989.

Invited Discussant, Symposium, Cardiac Excitation and Contraction: From Molecular Biology to Clinical Application, Homburg, Germany, September 18-21, 1989.

Lecture, "Arterial Hypertension and Aging Effects on the Heart", Colloquium, Basic and Clinical Interactions in Hypertensive Heart. Villeneuve-lez Avigonon, October 5, 1989.

Lecture, "Regulation of Cardiac Muscle Function in the Hypertensive Heart", Symposium Cellular and Molecular Mechanisms of Hypertension, Bockus Research Institute, The Graduate Hospital, Philadelphia, Pennsylvania, November 1-2, 1989.

"Workshop on Left Ventricular Dysfunction", Merck & Co. Inc., Rahway, New Jersey, March 23, 1990.

Litchfield Lecture, "Age-Associated Changes in Cardiac Function", The Clinical Medicine of Later Life: The Scientific Basis of Practice, An International Symposium, The British Council, Oxford University, Oxford, UK, April 3-6, 1990.

Lecture, "Myocardial Aging: Perspectives from Man to Cells to Molecules", Sendai Forum on Cardiology, Tohoku University School of Medicine, Sendai, Japan, April 14, 1990.

Lecture, "Determinants of Relaxation (Calcium, Myofilament Ca²⁺ Sensitivity and External Mechanical Load) in Cardiac Cells", Yamagata University School of Medicine, Yamagata, Japan, April 16, 1990.

Lecture, "CaOS in the Ventricular Myocyte", Toyama Medical & Pharmaceutical University, Toyama, Japan, April 17, 1990.

Grand Rounds, "Cardiovascular Disease in the Elderly", Monmouth Medical Center, Hahnemann University School of Medicine, Long Branch, New Jersey, May 25, 1989.

Lecture, "Effects of Exercise on the Aging Cardiovascular System", Symposium, Exercise and Aging, American College of Sports and Medicine, Baltimore, Maryland, May 31, 1989.

Colloquium. "Function of Single Myocytes", American College of Sports and Medicine, Baltimore, Maryland, June 1, 1989.

Lecture, "Altered Contractile and Biochemical Responses to Beta-adrenergic Stimulation in Cardiac Muscles and Myocytes from Aged Rats", Symposium on Basic Researches on Hypertensive Hearts, European Section of the Society for Cardiac Research and INSERM, Jouy-en-Josas, France, July 17, 1989.

Lecture, "Cardiac Dysfunction in the Aged Heart", Symposium, Heart Failure and Diastolic Dysfunction: New Insights, XI Congress of the European Society for Cardiology, Nice, France, September 13, 1989.

Invited Discussant, Symposium, Cardiac Excitation and Contraction: From Molecular Biology to Clinical Application, Homburg, Germany, September 18-21, 1989.

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Lecture, "Regulation of Cardiac Muscle Function in the Hypertensive Heart", Symposium Cellular and Molecular Mechanisms of Hypertension, Bockus Research Institute, The Graduate Hospital, Philadelphia, Pennsylvania, November 1-2, 1989.

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Lecture, "CaOS in the Ventricular Myocyte", Toyama Medical & Pharmaceutical University, Toyama, Japan, April 17, 1990.

Lecture, "Mechanisms of Physiologic and Pathophysiologic Excitation-Calcium-Contraction Coupling in Cardiac Cells", Fujisawa Pharmaceutical Co., Ltd., Osaka, Japan, April 18, 1990.

Lecture, "Determinants of Relaxation (Calcium, Myofilament Ca²⁺ Sensivitity and External Mechanical Load) in Cardiac Cells", Osaka University Hospital, Osaka, Japan, April 19, 1990.

Lecture, "Calcium Regulation in Cardiac Cells", Eisai Co., Ltd., Tokyo, Japan, April 20, 1990. Lecture, "Health, Disease and Cardiovascular Aging", The Institute of Gerontology, The University of Michigan, Ann Arbor, Michigan, May 29, 1990.

Lecture, "Similarities between Myocardial Alterations in Aging and Hypertension", The Institute of Gerontology, The University of Michigan, Ann Arbor, Michigan, May 30, 1990.

Seminar, "Physiologic and Pathophysiologic Ca²⁺ Release in the Heart", Glaxo Research Labs, Research Triangle Park, North Carolina, July 23, 1990.

Lecture, "The Effect of Ace-Inhibitors on Diastolic Function", Merck Sharpe & Dohme, Free-Standing Symposium on Renitec for Latin America, Mexico City, Mexico, July 28, 1990.

Lecture, Symposium, "Myocardial Optimization and Efficiency" - International Institute for Theoretical Cardiology, Graz, Austria, September 14, 1990.

Lecture, "Cytosolic Calcium, Contraction and Membrane Current Measured Simultaneously in Single Cardiac Myocytes", Polish Physiological Society, XVIII Congress, Krakow, Poland, September 20-22, 1990.

Seminar, New Seminar Series on Aging, The Medical College of Pennsylvania, Philadelphia, Pennsylvania, October 17, 1990.

Colloquium, "Aging of the Heart", Symposium on "Ageing and the Cardiovascular System," Instituto Scientifico Roussel, Italy; Rome, Italy, October 25-26, 1990.

Co-Chair the Abstract Session, "Mechanisms of Cardiac Contractility," 63rd Scientific Sessions of the American Heart Association, Dallas, Texas, November 13-14, 1990.

Lecture, "E-C Coupling in Ischemia, Hypoxia and Reoxygenation", Annual Meeting of The British Society for Cardiovascular Research, "Physiology and Pathophysiology of Excitation-Contraction Coupling," London, United Kingdom, December 6-7, 1990.

Lectures, "Myocardial Adaptations with Aging," and "Functional Sequelae of Spontaneous Ca²⁺ Release in the Heart", Northwestern University Medical School, Chicago, Illinois, December 18, 1990.

Lecture, "Cardiovascular Aging in Health and Disease", Desert Hospital, Palm Springs, California, January 11, 1991.

Lecture, "The Aging Patient: Special Considerations in Their Evaluation: Medical Examination and Exercise Testing", University of Florida, Gainesville, Florida, January 28, 1991.

Lecture, "Ca²⁺-Myofilament Interaction During Relaxation and at Rest in Single Cardiac Myocytes", University of California, Los Angeles, Center for Health Sciences, Los Angeles, California, January 31, 1991.

Chairman of the Faculty Panel Satellite Symposium, Treatment of Hypertension in the Elderly, presentation "Physiological Characteristics of Aging - Defining the Term" Elderly, Merck Sharp & Dohme, Atlanta, Georgia, March 2, 1991.

Symposium, "Cardiovascular Function in the Elderly: An Overview, of Cardiovascular Disease in the Elderly": Current Concepts in Pathophysiology, Evaluation and Management, 1991 AGS/AFAR Annual Scientific Meeting in Chicago, Illinois, May 9, 1991.

Symposium, "Modifications in Post-Synaptic Beta Adrenergic Response in the Myocardium with Aging", Mid-Atlantic Pharmacology Society, Philadelphia, Pennsylvania, May 14, 1991.

Lecture, "Excitation-Contraction Coupling Mechanisms in Cardiac Cells", IXth Meeting of the Japanese Section for the International Society for Heart Research, Hamamatsu, Japan, June 7-8, 1991.

Lecture, "Myocardial Calcium-Myofilament Interaction During Relaxation and Diastole: Perspectives From Single Cardiac Cells", Osaka University Medical School, Osaka, Japan, June 6 or 10, 1991.

Lecture, "Cardiovascular Changes in Advancing Age in Healthy Humans", Chair a Workshop on Cardiovascular Function, 4th International Association of Biomedical Gerontology, Ancona, Italy, June 26-29, 1991.

Lecture, "Biophysical, Biochemical and Molecular Changes in the Senescent Rat Heart", First International Congress on Biomarkers of Aging: Expression and Regulation, University of Bologna, Bologna, Italy, June 30 - July 1, 1991.

Lecture, "Health, Disease, and Cardiovascular Aging", Summer Institute in Research on Aging, National Institute on Aging, Warrenton, Virginia, July 6-13, 1991.

Symposium, "Cardiovascular Changes in Advancing Age in Healthy Humans", Thirteeneth Annual Conference on Geriatrics and Gerontology in Primary Care, The Milton S. Hershey Medical Center, Hershey, Pennsylvania, August 16-17, 1991.

Lecture, "Changes in Excitation-Contraction Mechanism With Development and Aging",

Satellite Meeting of the XII Meeting of the European Section of the International Society for Heart Research "The Calcium Paradox: The First Quarter Century," Utrecht, The Netherlands, September 9-10, 1991.

Lecture, "Regulation of the Heart Beat in Health and Science," Bayview Campus-Wide Series, The Johns Hopkins General Clinical Research Center, Baltimore, Maryland, October 4, 1991.

Chairman, Symposium on "Mechanisms of Cardiovascular Aging," and presentation, "Biophysical, Biochemical and Molecular Changes in the Senescent Rat Heart", 21st Annual Meeting of the American Aging Association, Denver, Colorado, October 9-12, 1991.

Lecture, "Physiology of the Aging Heart", Canadian Cardiovascular Society Symposium: Heart Disease in the Elderly, Calgary, Alberta, Canada, October 19, 1991.

Lecture, "Interaction Between Nutrition and Aging: Cardiovascular System Effects", Tokyo, Japan, October 26, 1991.

Lecture, University of California, San Diego, Asilomar Conference on The Molecular and Cellular Biology of the Cardiac Myocyte, Asilomar, California, November 17-20, 1991.

Chairman, Abstract Session on The Effect of Aging on the Heart; and presentation, "Cardiac Hypertrophy in the Elderly", at the American Heart Association Scientific Sessions, Anaheim, California, November 11-14, 1991.

Lecture, "Cardiovascular Aging: From a Social and Economic Reality to Recent Physiopathological Notes," Institut DeProduits DeSynthese Et D'Extraction Naturelle (IPSEN), Paris, France, January 18, 1992.

Lecture, "Ventricular Function in Aging", program on Left Ventricular Hypertrophy: Epidemiology Mechanisms and Clinical Picture; Focus on the Effects of Aging, Monte Carlo, January 24, 1992.

Lecture, "Exercise and Cardiovascular Functioning", House Select Committee on Aging Briefing, Biology Aging Program, National Institute on Aging, Bethesda, Maryland, March 1, 1992.

Lecture, "The Assessment of Diastolic Function", Fireside Panel, American College of Cardiology 41st Annual Scientific Session, Dallas, TX, April 12-16, 1992.

Lecture, "Regulation of Relaxation in Myocardial Cells", Satellite Symposium, Osaka, Japan, May 8-9, 1992.

Lecture, "Novel Perspectives of Cardiac Excitation-Contraction Coupling in Single Cardiac Cells", XIV World Congress of the International Society for Heart Research, Kobe, Japan, May 10-14, 1992.

Lecture, "Biophysical, Biochemical, and Moelcular Changes in the Heart with Aging", Annual ICSABER Society Graduate Student Forum, Ohio State University, Columbus, Ohio, May 19, 1992.

Vice-Chair, Gordon Conference on Cardiac Regulatory Mechanisms, Plymouth State College, Plymouth, New Hampshire, June 8-12, 1992.

Discussion Leader, Excitation/Contraction Coupling II, presentation, "Mechanisms of Contraction and Relaxation in Single Heart Cells", Gordon Conference on Cardiac Regulatory Mechanisms, Plymouth State College, Plymouth, New Hampshire, June 9, 1992.

Organizer, Symposium, Excitation Contraction Coupling and Energetics in Experimental Myocardial Failure, International Society for Heart Research, Burlington, Vermont, June 17-20, 1992.

Lecture, "Pathophysiology of Heart Failure", Free-standing Symposium, Recent Advances in the Prevention and Treatment of Left Ventricular Dysfunction and Heart Failure, Sao Paulo, Brazil, July 18, 1992.

Lecture, "Negative Feedback of Opioid Peptide Receptor Regulation on Beta-Adrenergic Effects in Heart Cells", 2nd International Symposium on the Mamalian Myocardium, Biochemical and Physiological Mechanisms Underlying the Heart Beat, University of Leeds, England July 26-29, 1992.

Lecture, "Cardiovascular Aging in Health and Disease", 2nd Annual Dialogue Program of the American Academy of Family Physicians, San Diego, California, October 18, 1992.

Lecture, "Cardiovascular Changes in Advancing Age in Healthy Humans", New Perspectives in Hypertension in the Elderly during the American Geriatrics Society/American Federation for Aging Research Annual Scientific Meeting, Washington, DC, November 14, 1992

Lecture, "Systolic/Diastolic Dysfunction in Hypertension: Implications for Therapy", Symposium, The Heart in Hyperstension (ASN/NKF), Twenty-fifth Annual Meeting of the American Society of Nephrology, Baltimore, Maryland, November 15, 1992.

Lecture, "Novel Aspects of Neuropeptides Modulate Cardiac Function", Cardiovascular Division, Beth Israel Hospital, Boston, Massachusetts, December 17, 1992.

Lecture, "Mechanisms of Cardiac Relaxation: Perspectives From Studies in Single Cardiac Cells", International Symposium, Physiology of Diastole in Health and Disease, Palm Beach, Florida, January 29-31, 1993.

Lecture, Milestones and Medicine: The Elderly Hypertensive, Houston, Texas, February 15-16, 1993.

Lecture, "A Communication Gap Between the Brain and Heart with Aging", NIA Seminar, National Youth Leadership Forum on Medicine, National Institute on Aging, Bethesda, Maryland, March 10, 1993.

Lecture, "Cardiovascular Function and Healthy Aging", The 1993 VALIC Symposium on Research on Aging: Functional Capacity and Exercise Intervention, National Convention of the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD), Washington, DC, March 24, 1993.

Lecture, "Treatment of Hypertension in the Older Individual", Program, Hypertension: Treating the High Risk Patient, American Medical Communications, Dallas, Texas, March 25, 1993.

Lecture, "Modulation of the Myofilament Ca²⁺ Response in Heart Cells", Symposium Drug Action on Intracellular Calcium and Cardiovascular Function, part of the 2nd Symposium, Calcium and Drug Action, Osaka, Japan, June 12, 1993

Seminar, "Differing Effects of Stimulation of \$-Adrenergic Regulation Subtypes in Heart Cells", Department of Medicine and Pathophysiology, Osaka University, Osaka, Japan, June 14, 1993.

Seminar, "Health Disease and Cardiovascular Aging", Department of Pharmacology, Yamagata University School of Medicine, Yamagata, Japan, June 16, 1993.

Visiting Professor, Beijing University, Department of Biology, presented two lectures, "Differing Effects of Stimulation of \$-Adrenergic Regulation Subtypes in Heart Cells and Modulation of the Myofilament Ca²⁺ Response in Heart Cells", Beijing, China, June 17-23, 1993.

Lecture, "Health Disease and Cardiovascular Aging", Natural Hospital of China, Beijing, China, June 22, 1993.

Lecture, "Diminished Norepinephrine Augmentation of Calcium Current Cystolic [Ca²⁺] and Contraction with Aging in Single Rat Ventricular Cells", Symposium, Pharmacology of Aging Process: Methods of Assessment and Potential Interventions, 5th Congress of International Association of Biomedical Gerontology (IABC), Budapest, Hungary, July 1-3, 1993.

Co-Chair, APRIL Study Session - XVth World Congress of Gerontology, Budapest, Hungary, July 4-9, 1993.

Chairperson, Round Table, Blood Lipids and Cardiovascular Aging, presentation, "Aging of Cardiovascular System", XVth World Congress of Gerontology, sponsored by the International Association of Gerontology, Budapest, Hungary, July 4-9, 1993.

Lecture, "Impact on lifestyle, Disease and Aging on the Geriatric Cardiovascular System", Symposium Cardio Forum: Trends in Cardiovascular Healthcare, Baltimore, Maryland, July 17, 1993.

Lecture, "Impact on lifestyle, Disease and Aging on the Geriatric Cardiovascular System", Symposium Cardio Forum: Trends in Cardiovascular Healthcare, Baltimore, Maryland, July 24, 1993.

External Examiner for the Ph.D. Thesis & Lecture, "Age Associated Changes in Heart Muscle", Faculty of Graduate Studies, University of Alberta Edmonton, Canada, July 26 - 28, 1993.

Co-Chair, Session VII Excitation-Contraction Coupling in Normal and Failing Cardiac Muscle, presentation, "Calcium and Myofilament Regulation of Relaxation in Ventricular Myocytes", Scientific Conference on the Molecular Biology of the Normal, Hypertrophied, and Failing Heart, Asilomar Conference Center, Pacific Grove, California, August 4-8, 1993.

Lecture, "Impact on Lifestyle Disease and Aging on the Geriatric Cardiovascular System", Cardio Forum: Trends in Cardiovascular Healthcare, Minneapolis, Minnesota, September 9, 1993.

Lecture, "Impact on Lifestyle Disease and Aging on the Geriatric Cardiovascular System", Cardio Forum: Trends in Cardiovascular Healthcare, Minneapolis, Minnesota, September 22, 1993.

Lecture, "Overview of Congestive Heart Failure In the Elderly - Is the difference in kind or complexity", Mercy Heart Institute, Geriatric Cardiology Seminar III - Congestive Heart Failure In the Elderly, Pittsburgh, Pennsylvania, October 8, 1993.

Lecture, "Different Effects of B₁ and B₂ Adrenergic Receptor Stimulation on E-C Coupling", University of Cincinnati, Cincinnati, Ohio, October 17-18, 1993.

Lectures, (1) "Cardiovascular Aging In Health and Disease", (2) "Free Radical Effects on Myocardial Cells", VI International Symposium, Heart Institute, University of San Paulo, Brazil, October 21-23, 1993.

Lecture, "Interactions of Cardiac and Vascular Cells", University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania, December 7, 1993.

Speaker, "The Circulatory Response to Exercise", Symposium - The Physiological Consequences of Aging", Kings College, London, England, December 15-17, 1993.

Lecture, "Differing Effects of Beta-Adrenergic Subtype Receptor Stimulation on the Heart," Physiology Department, Case Western Reserve University, Cleveland, Ohio, January 6, 1994.

Lecture, "Cardiovascular Disease Risk Factors," Akron City Hospital, Akron, Ohio, January 7, 1994.

Lecture, "The Aging Heart," 21st Annual Geriatrics Symposium: A Board Review, Cosponsored by The American Geriatrics Society and Gerontology Research Center at Stouffer Harbor Place Hotel, Baltimore, Maryland, January 24, 1994.

Speaker, 1994 Gordon Research Conference on the Biology of Aging, "Neuroendocrine Cardiac Communication Deteriorates During Aging," Casa Sirena, California, February 28, 1994.

Speaker, "Subtypes of Beta-Adrenergic Receptors Differ in their Modulation of Excitation-Contraction Coupling in Cardiac Cells," Second International Conference on Myocardial Function, Padova, Italy, February 3, 1994.

Lecture, "Cardiovascular Changes with Advancing Age," 11th Marquette Life Sciences Symposium, Biology of Aging, Milwaukee, Wisconsin, March 11, 1994.

Lecture, "Effect of Aging on the Vasculature," American College of Cardiology Session, Disorders of Cardiovascular Aging, Atlanta, Georgia, March 17, 1994.

Lecture, "Effects of Oxidative Stress (Free Radicals) on Excitable (Cardiac) Cells," First International Conference on Oxidative Stress and Aging, Kailua-Kona, Hawaii, March 23, 1994.

Lecture, "Cardiac Muscle Change in Hypertrophy and Aging," Fujian Provincial Research Institute for Cardiovascular Disease, Zuzhou, China, April 11, 1994.

Lecture, "Cardiovascular Aging in Health and Disease," Fujian Provincial Hospital, Zuzhou, China, April 12, 1994.

Lecture, "Receptor-Mediated Modulation of the Heart Beat," Fujian Medical University, Zuzhou, China, April 13, 1994.

Lecture, "Receptor-Medicated Modulation of the Heart Beat," Hauqiao University of China, Quanzhou, China, April 15, 1994.

Lecture, "Cardiovascular Aging in Health and Disease," Xiamen University, Xiamen, China, April 16, 1994.

Lecture, "Cardiac Muscle Change in Hypertrophy and Aging," Xian Medical University, Xian, China, April 17, 1994.

Lecture, "Receptor-Medicated Modulation of the Heart Beat," Xian Medical University, Xian, China, April 18, 1994.

Lecture, "Cardiovascular Aging and Health and Disease," Chunqin Medical University, Chunqin, China, April 21, 1994.

Lecture, "Cardiovascular Aging in Health and Disease," Tongji Medical University, Wuhan, China, April 22, 1994.

Lecture, "Regulation-Mediated Modulation of the Heart Beat," Beijing University, Beijing, China, April 28, 1994.

Seminar, "Relaxation Mechanisms in Cardiac Cells," Department of Physiology, University of North Texas Health Science Center, Ft. Worth, Texas, May 13, 1994.

Speaker, "\$-Adrenoceptor Subtype Stimulation Effects in Cardiac Cells," International Conference on Heart Failure; Frontiers of Molecular, Cellular and Clinical Cardiology, Winnipeg, Canada, May 23, 1994.

Lecture, "Cardiovascular Disease in the Elderly," Workshop, Current Geriatric Cardiology Challenges, Ribeirao Preto, Sao Paulo, Brizil, June 1, 1994.

Lecture, "Role of Free Radicals in the Cardiovascular With Ageing and Atherosclerosis - Clinical Aspects," 15th Congress of the Society of Cardiology of the State of San Paulo, Ribeirao Preto, Sao Paulo, Brazil, June 2, 1994.

Chair, Gordon Research Conference on Cardiac Regulatory Mechanisms, Salve Regina University, Newport, Rhode Island, July 11-15, 1994.

Lecture, "Cardiovascular Reserve During Aging in Healthy Humans," and Chair, Main Session "Large Artery Function in Health and Disease" at the Joint 12th World Congress of Cardiology and 16th Congress of the European Society of Cardiology, Berlin, Germany, September 12, 1994.

Speaker, "Cardiovascular Aging: Perspectives From Man to Molecules," Pharmacologic Intervention in the Ageing Process, London, England, September 26, 1994.

Lecture, "The Aging Heart: Discriminating Disease from Aging" Fifteenth Annual Meeting of the Southeastern Pharmacology Society (SEPS), Clearwater, Florida, October 1, 1994.

Lecture, "The Aging Heart," Matthew E. Fairbank Alumni Symposium in Geriatric Medicine, Center on Aging, University of Rochester, Rochester, New York, October 8, 1994.

Speaker, "\$ Adrenergic deficits with Aging," The Signal Transduction Workshop, Montecito, California, December 7-9, 1994.

Lectures, "cAMP-Independent Effects of \$-Adrenergic Receptor Simulation on Cardiac Excitation-Contractions" and "Cardiovascular Aging in Health: A Time Bomb for Disease Risk," Cardiovascular Grand Rounds, University of Texas Medical School at Houston, Houston, Texas, January 5, 1995.

Lecture, "Aging and Autonomic Nervous System," 3rd International Congress on Hypertension in the Elderly, Rome, Italy, February 4, 1995.

Speaker, "Collagen Expression Duirng the Transition from LV Dysfunction to Heart Failure," Session on Transition from Asymptomatic LV Dysfunction to Heart Failure at Heart Failure '95:

First International Meeting of the Task Force on Heart Failure, Amsterdam, The Netherland, April 1-4, 1995.

Lecture, "Why Is Advancing Age in Health Care a Major Risk Factor for Cardiovascular Disease, "Grand Rounds, Sinai Hospital of Baltimore, Baltimore, Maryland, April 6, 1995.

Co-Chair, Aging Symposium Session on "Mechanisms Responsible for Cardiovascular-Renal Adaptations to Aging: From Cells to Whole Animals," at the Experimental Biology '95 meetings in Atlanta, Georgia, April 9-13, 1995.

Lecture, "\$-Adrenoceptor Subtypes in Cardiac Ventricular Cells Couple to Different Signal Pathways," Sendai International Symposium on Molecular and Cellular Mechanism of Cardiovascular Regulation, Sendai, Japan, May 10-12, 1995.

Visiting Professor, 1995 British Heart Foundation, London, England, June 1-15, 1995.

Lecture, "\$-Adrenoceptor Subtypes Couple to Different Signal Pathways in Cardiac Cells," Cardiology Ground Rounds, Columbia Univ. Medical Center New York, New York, June 27, 1995.

Chair, Young Investigators' Award Review Committee, XV World Congress of the International Society for Heart Research, Prague, Czech Republic, July 2-7, 1995.

Lecture, "Cardiovascular Aging", Emerk Darmstadt, Germany, August 10-11, 1995.

Lecture, "Cardiac Biophysical, Biochemical and Molecular Changes with Aging," Symposium #6, Biochemistry and Molecular Biology of Aging, 23rd Meeting of the Federation of European Biochemical Societies, Basel, Switzerland, August 14, 1995.

Lecture, "Cardiovascular Aging in Health," 14th Annual Symposium of Geriatrics and Gerontology, "Cardiovascular Disease in Older Persons", St. Louis, Missouri, September 11, 1995.

Lecture, Washington University School of Medicine, St. Louis, Missouri, September 4, 1995.

Lecture, "Cardiovascular Reserve during Aging in Healthy Humans", 8th Mhnster International Arteriosclerosis Symposium, Aging and Cardiovascular Diseases, Mhnster, Germany, October 2-3, 1995.

Keynote Address, The American Osteopathic Association Annual Research Conference, Orlando, Florida, October 16, 1995.

Medical Grand Rounds, Dartmouth University/Hitchcock Hospital, October 27, 1995.

Chair, Session on Cardiac Apoptosis, American Heart Association, National Scientific Meeting, Anaheim, CA., November 13-16, 1995.

Chair, Symposium "Cardiovascular Aging from Molecules to Humans" Gerontological Society of America Meeting, Los Angeles, California, November 16, 1995.

Medical Grand Rounds, New York Medical College, Valhalla, Nov 1995.

Seminar, Dept. of Physiology Yale University, November 24, 1995.

Cardiology Grand Rounds, Yale University Hospital, November 25, 1995.

Speaker, International Symposium on Care for the Elderly, Teipie Taiwan, December 11-14, 1995.

Chair, Session on Cardiac Excitation Contraction Coupling Biophysical Society Annual Scientific Sessions, Baltimore, Feb 1996.

Co-Chair, International Symposium on Cardiovascular in the Elderly on "Arrhythmia in the Elderly", in Osaka, Japan, March 20-22, 1996.

Lectures, "8-adrenergic sub-type signalling on the heart" at Cardiology Ground Rounds and "Cardiovascular Aging in Health as a risk factor for disease", at Medical Ground Rounds in San Diego, CA, May 1-2, 1996.

Co-Chair at the "Endothelial Signalling", Symposium, XVIII Meeting of the International Society for Heart Research-American Section, in Chicago on June 9-13,1996.

Lecture at Unesco Sponsored International Conference on Human Aging, "Adding Life to Years", on Biological perspectives on loss and gain in ageing in Paris, France June 17-20, 1996.

Chair, Session on Cardiac Regulatory Mechanisms, Gordon Research Conference, Colby-Sawyer College, July 7-12, 1996.

Lectures, "Cellular mechanisms of cardiovascular aging", and "Effects of aging on the cellular electrophysiology of cardiac tissue", Integrating Geriatrics into the Subspecialties of Internal Medicine, Banff, Canada, August 12-14, 1996.

Lectures, "Is there a normal cardiac ageing", and "Adaptability of the cardiovascular system to exercise", European Academy for Medicine of Ageing, 4th EAMA Training Session, Sion, Switzerland, August 20-23, 1996.

Seminar, IX International Vascular Biology Meeting, Seattle, WA., September 4-9, 1996.

Lecture, "The Transition to Failure in Hearts of Aged Rats with Chronic Pressure Overload and the Impact of Captopril"; III International Conference on Myocardial Function, Padova, Italy, October 23-25, 1996.

Lectures, "Cardiovascular Changes During Aging in Health: Preventable Risk Factors for Disease?" and "Cardiac Changes During Aging Mimic Adaptations to Hypertension"; Nagoya Symposium, Nagoya, Japan, October 30-31, 1996.

Chair, Session on Cardiac Excitability and Contractility, American Heart Association, New Orleans, LA., November 10-14, 1996.

Lecture, ADiversity of \$-subtype Receptor Signaling in Heart", Wayne State University, December 19, 1996.

Lecture, AMyocardial Gene Expression Changes and Resulting Phenotypic Changes with Aging"; Gordon Conference, Ventura, CA, January 5-10, 1997.

Lecture, "Overview of Cardiovascular Aging"; Molecular Aspects of Age-related Cardiovascular Decline, NIA & Glenn Foundation for Medical Research, Montectito, CA, January 21-24, 1997.

Lecture, "Health Disease and Cardiovascular Aging"; Instituto Dermapatico Dell'Immacolata, Rome, Italy, February 13-14, 1997.

Lecture, "Cardiovascular Aging, Humans to Molecules"; University of Texas Medical Branch at Galveston, Texas, February 28, 1997.

Medical Grand Rounds, Saint Francis Medical Center, Hartford, CT, March 20, 1997.

Lecture, "\$-Adrenergic Subtype Signalling in Heart"; Merck and Company, Inc., West Point, PA, April 8, 1997.

Lecture, "Cardiovascular Effects of Aging"; Henry Ford Heart and Vascular Institute, Detroit, MI, April 16, 1997.

Lecture, "The Effects of Aging on the Human Cardiovascular System"; Society of Cardiovascular Anesthesiologists, 1997 Annual Meeting and Workshops, Baltimore Convention Center, Baltimore, MD, May 12, 1997.

Lecture," Is the Aged Heart a Diseased Heart?"; Heart Failure '97, Cologne, Germany, May 24-27, 1997.

Lecture, "Different Signalling Pathways for Cardiac \$-adrenergic Receptor Subtypes"; XXXIII International Congress of Physiological Sciences, St. Petersburg, Russia, June 26-July 2, 1997.

Lecture, "Cardiovascular Disease on Aging" Merck & Company, Mystic, Connecticut, July 18, 1997.

Lecture, "Cardiovascular Aging in Health", The Brookdale Foundation, Airlie Conference Center, Airlie, Virginia, July 22, 1997.

Chair, Sandoz Lectures, Sandoz Foundation for Gerontology Research, Singapore, August 15-18, 1997; Adelaide, August 19-23, 1997.

Lecture, "Cardiovascular Aging"; Panel Discussion, "Aging and the Cardiovascular System", Duke University, Durham, NC, September 17, 1997.

Lecture, "Multiple Mechanisms Underlie the Transition to Heart Failure in a Chronic Hypertensive Model." First Annual Scientific Meeting of Heart Failure Society of America, Baltimore, MD, Sept. 21-24, 1997.

Lecture, "Cardiovascular Reserve during Aging"; Medical Grand Rounds, "Health, Disease and Cardiovascular Aging." Geisinger Medical Center, Danville, PA, October 24, 1997.

Lecture, "Health Disease and Cardiovascular Aging", Merck, San Antonio, TX, March 6, 1998.

Lecture, "Is the Heart a Failing Heart?", council on Geriatric Cardiology Annual Meeting, Atlatnta, GA, March 28, 1998.

Lecture, "Heart Disease and Cardiovascular Aging", 1998 Bennet Day at the College of Medicine at Ohio State, April 6, 1998.

Lecture, "Alterations in the Aging Heart.", Swiss Society of Cardiology Annual Meeting, Basel, Switzerland, May 14-16, 1998.

Lecture, "Apoptosis in Cardiac Disease.", International Conference on Apoptosis in Cardiac Biology, Regensburg, Germany, October 8-10, 1998.

Lecture, "New Perspectives on Cardiac Adrenergic Signalling.", Department of Physiology, University of Berne, Switzerland, October 11, 1998.

Lecture, "β-adrenergic Signalling in Heart.", Department of Physiology, New York Medical Center, New York, October 30, 1998.

Lecture, "Cellular Mechanisms of Cardiovascular Aging.", Brazilian Cardiology Annual Meeting, Dallas, TX, November 7, 1998.

Lecture, "Withering of Cardiovascular β-adrenergic Receptors Response with Aging.", Directors of Research Laboratories in Pharmaceutical and Cosmetical Industries Meeting, Paris, France, March 29, 1999.

Lecture, "Apoptosis in Cardiac Disease-What Is It-How Does It Occur?" 8th International Congress on Cardiovascular Pharmacotherapy, Amsterdam, The Netherlands, March 30, 1999.

Lecture, "Is the Senescent Heart an Overloaded Heart?", 8th International Congress on Cardiovascular Pharmacotherapy, Amsterdam, The Netherlands, April 1, 1999.

Lecture, "Broadcast of Cardiac β₂-adrenergic Receptor Signalling is Modulated by Gi Coupling." University of Connecticut Health Center, Farmington, CT, May 4, 1999.

President 's Lecture, "Age Associated Changes in Cardiovascular Structure and Function During Aging in Health and Their Modulation by Physical Conditioning." 1999 American College of Sports Medicine Meeting, Seattle, Washington, June 5, 1999.

Lecture, "Cardiovascular Aging." 6th Asia/Oceania Regional Congress of Gerontology Meeting, Seoul, Korea, June 8-11, 1999.

Plenary Lecture, "Adaptive Mechanisms of Cardiac Aging." Xxth European Section Meeting of the International Society for Heart Research, Maastricht, The Netherlands, June 26, 1999.

Lecture, "Adrenergic control of the normal, hypertrophied and failing heart. XXI Congress of the Polish Physiology Society, Poznan, Poland, September 7-10, 1999.

Lecture, "Cardiovascular Aging in Health." Brazilian Society of Cardiology, Recife, Brazil, September 19-22, 1999.

Abstract Session Moderator, 72nd Annual Scientific Sessions of the American Heart Association, Atlanta, GA, November 10, 1999.

Invited Speaker, "Cardiovascular Seminar", 72nd Annual Scientific Sessions of the American Heart Association, Atlanta, GA, November 10, 1999.

ORIGINAL PUBLICATIONS IN SCIENTIFIC JOURNALS

- 1. Weisfeldt, M.L., Wright, J.R., Shreiner, D.P., Lakatta, E.G., and Shock, N.W.: Coronary flow and oxygen extraction in the perfused heart of senescent male rats. *J. Appl. Physiol.* 30: 44-49, 1971.
- 2. Lakatta, E.G., Gerstenblith, G., Angell, C.S., Shock, N., and Weisfeldt, M.L.,: Prolonged contraction duration in aged myocardium. *J. Clin. Invest.* 55: 61-68, 1975.
- 3. Angell, C.S., Lakatta, E.G., Weisfeldt, M.L., and Shock, N.W.: Relationship of intramyocardial oxygen tension and epicardial ST segment changes following acute coronary artery ligation: Effects of coronary perfusion pressure. *Cardiovas. Res.* 9: 12-18, 1975.

- 4. Lakatta, E.G., Gerstenblith, G., Angell, C.S., Shock, N.W., and Weisfeldt, M.L.: Diminished inotropic response of aged myocardium to catecholamines. *Circulation Res.* 36: 262-269, 1975.
- 5. Horton, J.D., Sherber, H.S., and Lakatta, E.G.: Distance correction for precordial electrocardiographic voltage in estimating left ventricular mass: an echocardiographic study. *Circulation* 55: 509-512, 1977.
- 6. Lakatta, E.G., and Jewell, B.R.: Length-dependent activation its effect on the length-tension relation in cat ventricular muscle. *Circulation Res.* 40: 251-257, 1977.
- 7. Gerstenblith, G., Frederiksen, J., Yin, F.C.P., Fortuin, N.J., Lakatta, E.G. and Weisfeldt, M.L.: Echocardiographic assessment of a normal adult aging population. *Circulation* 56: 273-278, 1977.
- 8. Froehlich, J.P., Lakatta, E.G., Beard, E., Spurgeon, H.A., Weisfeldt, M.L. and Gerstenblith, G.: Studies of sarcoplasmic reticulum function and contraction duration in young and aged rat myocardium. *J. Mol. Cell. Cardiol.* 10; 427-438, 1978.
- 9. Yin, F.C.P., Raizes, G.S., Guarnieri, T., Spurgeon, H.A., Lakatta, E.G., Fortuin, N.J., and Weisfeldt, M.L.: Age-associated decrease in ventricular response to haemodynamic stress during beta-adrenergic blockade. *Brit. Heart J.* 40: 1349-1355, 1978.
- 10. Gerstenblith, G., Spurgeon, H.A., Froehlich, J.P., Weisfeldt, M.L., and Lakatta, E.G.: Diminished inotropic responsiveness to ouabain in aged rat myocardium. *Circulation Res.* 44: 517-523, 1979.
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ABSTRACTS

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- 396. Sham, J.S.K., Song, L.-S., Deng, L.-H., Chen-Izu, Y., Stern, M.D., Lakatta, E.G., Cheng, H.: Local Ca2+ release is determined by the first openings of ryanodine receptors (RyR). Biophysical J 74: A247, 1998.
- 397. Cheng, H., Song, L.-S., Lakatta, E.G., Stern, M.D.: How and how many ryanodine receptors are activated during a calcium spark? Biophysical J 74: A118, 1998.
- 398. Kuschel, M., Lakatta, E.G., Xiao, R.-P.: Pertussis Toxin Restores the Ability of β2-Adrenoceptor Stimulation to Induce Phospholamban Phosphorylation. Circulation 98(17): I-234, 1998.
- 399. Zhou, Y.Y., Cheng, H., Song, L.S., Wang, D.-J., Lakatta, E.G., Xiao, R.P.: Spontaneously-Activated β₂-adrenoceptors Bypass L-type Ca²⁺ Channel to Modulate Cardiac Excitation-contraction Coupling. Circulation 98(17): I-234, 1998.

- 400. Xiao, R.-P., Zhang, S.-J., Zhou, Y.-Y., Cheng, H., Lakatta, E.G.: Ligand-Directed Differential Coupling of β2-Adrenergic Receptor to G Proteins in Intact Cardiomyocytes. Circulation 98(17): I-234, 1998.
- 401. Fedorova, O.V., Lakatta, E.G., Bagrov, A.Y.: Endogenous Ligands of the NA, K Pump in NaCl Induced Hypertension. Circulation 98(17): I-377, 1998.
- 402. Song, L.S., Sham, J.S.K., Stern, M.D., Lakatta, E.G., Cheng, H.: Temporal Synchrony of SR Ca²⁺ Release: Novel Determinant of Cardiac Contractility. Circulation 98(17): I-763, 1998.
- 403. Janczewski, A.M., Spurgeon, H.A., Lakatta, E.G.: β₁-adrenergic Inotropic Effects in Cardiac Myocytes Are Mediated Both by Sarcoplasmic Reticulum Ca²⁺ Loading and Augmented Gain of Sr Ca²⁺ Release. Circulation 98(17): I-763, 1998.
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- 406. Dipla, K., Xiao, R.-P., Margulies, K.B., Lakatta, E.G., Houser, S.R.: Reduced Response to β-Adrenergic Stimulation in Hypertrophied/Failing Feline and Failing Human Ventricular Myocytes. Circulation 98(17): I-554, 1998.
- 407. Wang, S, Song, L-S, Boheler, KR, Wang, S-Q, Xiao, R-P, Lakatta, EG, Shou, W, Cheng, H.: Alteration of Ca2+ Signaling in FKBP12-deficient Mouse Cardiomyocytes. *Circ. Suppl.*, 1999, in press.
- 408. Chesley, A, Ohtani, S, Asai, T, Lundberg, M, Xiao, R-P, Lakatta, E, Crow, M.: A Pertussis Toxin-Sensitive Signaling Pathway Linked to β2-Adrenergic Receptor Stimulation Blocks Apoptosis in Hypoxic Neonatal Cardiomyocytes. *Circ. Suppl.*, 1999, in press.
- 409. Correia, LCL, Lakatta, EG, O'Connor, FC, Clulow, J, Townsend, S, Schulman, SP, Gerstenblith, G, Fleg, JL.: Attenuated Cardiovascular Response to Prolonged Submaximal Cycle Exercise in Healthy Older Men. Circ. Suppl., 1999, in press.
- 410. Scuteri, A, Chen, C-H, Yin, FCP, Spurgeon, HA, Lakatta, EG.: Conduit Arterial Structural and Functional Correlates in Untreated Persons with Elevated Blood Pressure. *Circ. Suppl.*, 1999, in press.

- 411. Zhou, Y-Y, Zhu, W-Z, Zhang, S-J, Wang, D, Chruscinski, A, Kolbilka, BK, Lakatta, EG, Xiao, R-P.: Ligand-independent constitutive activation of β₂- but not β₁-adrenoceptors overexpressed in β₁β₂-adenoceptor double knockout mouse myocyte. Circ. Suppl., 1999, in press.
- 412. Xiao, R-P, Cheng, H, Zhou, Y-Y, Wang, D, Lefkowitz, RJ, Zhang, S-J, Koch, WJ, Lakatta, EG.: Muscarinic stimulation rescues β1-adrenoceptors from desensitization induced by constitutively active β2-adrenoceptors in cardiac myocytes. *Circ. Suppl.*, 1999, in press.
- 413. Kuschel, M, Zhou, Y-Y, Kuramochi, T, Lakatta, EG, Xiao, R-P.: Frequency-dependent THr¹⁷PLB phosphorylation is independent of Ser¹⁶PLB phosphorlyation in rat ventricular myocytes. *Circ. Suppl.*, 1999, in press.
- 414. Fedorova, OV, Lakatta, EG, Bagrov, AY.: Endogenous sodium pump ligands, myocardial Na/K ATPase and left ventricular remodeling in hypertensive Dahl rats. *Circ. Suppl.*, 1999, in press.
- 415. Wang, S, Kuschel, M, Sollott, S, Xiao, R-P, Crow, M, Lakatta, EG.: Constitutively Active Calmodulin Kinase II in Rat Ventricular Myocytes Reduces the Myofilament Ca2+ Response and Accelerates Relaxation. *Circ. Suppl.*, 1999, in press.
- 416. Fleg, JL, Gerstenblith, G, O'Connor, FC, Becker, LC, Clulow, J, Schulman, SP, Lakatta, EG: Longitudinal Changes in Cardiovascular Performance During Maximal Upright Cycle Exercise in Healthy Men. Circ. Suppl., 1999, in press.

STANLEY ROSS MOHLER, M.D., M.A.

September 1999

POSITION:

Professor and Vice Chair (July 1, 1978)

Department of Community Health Director, Aerospace Medicine

Wright State University School of Medicine

P.O. Box 927

Dayton, OH 45401-0927 Telephone: (937) 276-8338

Department Location: Good Samaritan Hospital Rosary Hall/5th Floor 2222 Philadelphia Drive Dayton, OH 45406

HOME:

6539 Reigate Road Centerville, OH 45459

Telephone: (937) 435-8771

SPECIALTY: Diplomate of the American Board of Preventive Medicine (with certification in Aerospace Medicine), 1968

Fellow, American College of Preventive Medicine

First-Class Aviation Medical Examiner, Federal Aviation Administration

Airline Transport and Instructor Pilot

President, Aerospace Medical Association, 1983 - 1984

DEGREES:

Ball High School, Galveston, TX, 1945

B.A. University of Texas, 1953

M.A. University of Texas Medical Branch,

Galveston, TX, 1953

M.D. University of Texas Medical Branch,

Galveston, TX, 1956



PROFESSIONAL POSITIONS

Chief, Aeromedical Applications Division, Office of Aviation Medicine, Federal Aviation Administration, Department of Transportation, Washington, DC, November 21, 1965 - 1978. (Supervised Accident Investigation Branch, Research Planning Branch, and Biomedical Engineering Branch).

Director, Civil Aeromedical Research Institute, Office of Aviation Medicine, Aeronautical Center, Federal Aviation Agency, P.O. Box 25082, Oklahoma City, OK, August 8, 1961 - November 21, 1965.

Associate Professor of Research Preventive Medicine and Public Health, University of Oklahoma School of Medicine, 1961 - 1968.

Medical Officer, Center for Aging Research, National Institutes of Health, U.S. Public Health Service, Bethesda, MD, July 1957 - August 1961.

Internship, U.S. Public Health Service Hospital, San Francisco, CA, (with Obstetrics at St. Joseph's Hospital and Pediatrics at Children's Hospital), July 1956 - June 1957.

Teaching and Research Fellow, Physiology, University of Texas Medical Branch, Galveston, TX, 1952 - 1953.

COLLATERAL PROFESSIONAL EXPERIENCE

Graduate Faculty: Wright State University

Adjunct Faculty, Institute of Aerospace Safety and Management, University of Southern California, Taught Graduate Course, "Physiology of Aerospace Operations", Pentagon, May 11 - July 5, 1970, Washington, DC. Continued lectures for Safety Center, "Human Factors in Accident Causation", Course SSM-532, Forrestal Building, November 16, 1976 - January 10, 1977. Same course taught again, 1978.

Coordinator and lecturer, Human Factors, National Aircrast Accident Investigators School, Civil Aeronautics Board - FAA Joint Activity, Aeronautical Center, Oklahoma City, OK, 1964 - 1965.

Lecturer, National Aviation System Course, FAA, Aeronautical Center, Oklahoma City, OK, 1963 - 1965.

Acting Chief, Research Requirements Division, Aviation Medicine Service, FAA, December 8, 1961 - July 8, 1962, and Chief, Aeromedical Research Division, Aviation Medical Service, FAA, July 8, 1961 - January 2, 1964 (in addition to duties as Director, CARI).

Technical Director, Research in Gerontology: Biological and Medical, White House Conference on Aging, January 1961.

Research Assistant, Blood Coagulation and High Altitude Physiology, Department of Physiology, University of Texas Medical Branch, 1952-1954.

Member, Air Force Studies Board, Assembly of Engineering, National Research Council, National Academy of Sciences, 1982 - 1987. Consultant, 1988 - 1992.

Chairman, Aerospace Medicine Committee and Advisory Group, National Aeronautics and Space Administration, 1982 - 1983.

Section Chairman, Crew Selection and Enhancement, Biotechnology Needs for the Year 2000, U.S. Air Force and Southwest Research Institute, San Antonio, TX, 1981 - 1982.

Consultant, Systems Research Laboratories, Dayton, OH

Member, Summer Study, Human Factors of computer Software, Air Force Studies Board, Woods Hole, MA, July 1983. Report titled: "Methods for Improving Software Quality and Life Cycle Cost".

Member, Medical Advisory Panel, Aircraft Owners and Pilots Association, Frederick, MD, 1983 -.

Member, Risk Factor Panel for Review of Civil Aviation Medical Standards, American Medical Association - Federal Aviation Administration, 1983 - 1986.

Member, Aerospace Medicine Advisory Committee, National Aeronautics and Space Administration, 1988-1994.

Member, Operational Medicine Discipline Working Group, National Aeronautics and Space Administration, 1988-1994.

PROFESSIONAL ORGANIZATIONS

The Aerospace Medical Association (Fellow)

President 1983 - 1984

First Vice President, 1981, President Elect, 1982

Fellow 1968

Vice President 1962 - 1963

Member, Executive Council, 1975 - 1978, 1981 - 1989

Member, Aerospace Medical Heritage Committee, 1962

Chairman, Scientific Program Committee, 1973

Member, Scientific Program Committee, 1964 - 1970, 1972 - 1977

Member, Technical Exhibits Committee, 1963 - 1968

Member, Long Range Planning committee, 1965 - 1966, 1972 - 1977, 1981-1986

Member, Safety and Health Committee, 1965 - 1968, 1984 - 1986

Member, Space Medicine Branch, 1968 -

Chairman, Technical Exhibits Committee, 1966-1968

Chairman, International Quarantine, Airport Medical Service and Flight

Sanitation Committee, 1968 - 1973

Member, International Activities Committee, 1970 - 1971

Member, Advisory Editorial Board, <u>Aviation. Space and Environmental Medicine</u>, 1970 - 1990

Member, Site Selection Committee, 1975 - 1978

Member, Editorial Board, 50th Anniversary Commemorative Volume, 1976-1979

Chair, History and Archives Committee, 1979-82, Member, 1984-98, Chair, 1999-2000

Member, Awards Committee, 1979 - 1980, 1984 - 1985

Member, Education Committee, 1978 - 1984

Member, Membership Committee, 1986-1996

Chairman, Nominations Committee, 1989

Chairman, Resolutions Committee, 1992 - 1994, Member-

The American Board of Preventive Medicine

Member, Subcommittee for Examination in Aerospace Medicine,

1975 - 1977

Member, American Board of Preventive Medicine, 1976 - 1992

Vice Chair, Aerospace Medicine, 1978 - 1980

Secretary/Treasurer, 1980 - 1992

Residency Review Committee, Preventive Medicine, ACGME, 1978 - 1980: Ex Officio, 1980 - 1992

The Society of Air Safety Investigators (Director, 1969 - 1978, 1966 - 1992): Chairman, Nominations Committee, 1974

Civil Aviation Medical Association, 1992 - 1993, 1998-

The Flying Physicians Association, 1963 - 1971

Director, 1964 - 1967 Member, Science and Education Committee, 1964 - 1966 Chairman, Aerospace Specialty Section, 1964 - 1965 Chairman, Program Committee, 1967 - 1968 Vice President, 1968 - 1969

Gerontological Society (Fellow), 1958 - 1973

Member, Fellowship Status Committee, 1961
Member, Membership Committee, 1962
Member, Research Committee, 1962 - 1967
Chairman Elect, Clinical Section, 1963
Chairman, Clinical Section, 1964
Chairman, Research Committee, Clinical Section, 1965 - 1966
Clinical Section Delegate to the Research and Training Committee of the Society, 1969 - 1971
Finance Committee, 1972 - 1973

The American Medical Association, 1956 - Present

The Oklahoma State Medical Society, 1964 - 1965

The American College of Preventive Medicine, 1968 - Present: Fellow

Aerospace Human Factors Association, 1997 - Present.

The Oklahoma County Medical Society, 1963 - 1965
Member, Speaker Bureau Committee, 1963 - 1965
Member, Recruitment Committee, 1963 - 1965
The Oklahoma City Clinical Society, 1964 - 1965
The Ohio State Medical Society, 1978 The Montgomery County Medical Society, 1978 -

The Flight Safety Foundation, 1970 - 1973

Barbour Award Committee, 1977 - 1980

Editor, Human Factors and Aviation Medicine, 1978 -1986

The Commissioned Officers Association of the U.S. Public Health Service

Phi Rho Sigma Medical Fraternity

The Aircraft Owners and Pilots Association, 1958 - (Periodic column, Pilot Rx, AOPA Pilot)

Member, Committee on Hearing, Bioacoustics, and Biomechanics, National Academy of Sciences/National Research Council, 1966 - 1976

Sigma Xi, Scientific Research Society of North America, 1957 - 1968

Experimental Aircraft Association

Monthly Medical Column, Sport Pilot Medicine, Sport Aviation (EAA Publication, 1984 - 1988, occasional 1988 -

Courtesy Staff Privileges, Department of Family Medicine, Good Samaritan Hospital, Dayton, OH, 1979 -

Member, Life Sciences, International Astronautical Federation, 1984

Advisor, International Women's Air and Space Museum, Inc., Centerville, OH 1988 -

Member, Board of Visitors, AOPA Air Safety Foundation, Aircraft Owners and Pilots Association, Frederick, MD, 1989 - 1992

Consulting Editor, The International Journal of Aviation Psychology

HONORS

Cecil A. Brownlow Publication Award, Flight Safety Foundation, officially presented at the joint meeting of Flight Safety Foundation, the International Federation of Airworthiness and the International Air Transport Association, Nov. 18, 1998, Cape Town, Republic of South Africa.

Bauer Founders Award, Awarded May 21, 1998, (\$500), "For the most Significant Contribution in Aerospace Medicine". Aerospace Medical Association and the Jefferson C. Davis Wound Care and Hyperbaric Medicine Center.

President's Special Award, The Society of NASA Flight Surgeons, Annual Meeting, Chicago, IL, May 14, 1997.

Co-winner, Life Sciences Book Award, Space Biology and Medicine, with Drs. A. Nicogossian, O. Gazenko, and A. Grigoriev, International Academy of Astronautics, October 3, 1995

Honorary Foreign Member, Argentine Society of Aerospace Medicine, November 18, 1993

Presidential Award for Faculty Excellence in Professional Service, Wright State University, September 13, 1991 (\$500)

Hubertus Strughold Award, Space Medicine Branch, Aerospace Medical Association, May 9, 1991

"Outstanding Researcher in the State of Ohio Award", Ohio Research Council on Aging, Ohio Network of Educational Consultants in the Field of Aging, April 6, 1990

Recipient, Paul H. Poberezny President's Award, Annual Convention, Experimental Aircraft Association, Oshkosh, WI, July 19, 1989

Elected Honorary Member, Korean Medical Association, Seoul, Korea, November 1987

Honorary Member Society of NASA Flight Surgeons, 1986

Lawrence P. Sharples Award, Awarded October 17, 1984 (\$1000), Aircraft Owners and Pilots Association

Theodore C. Lyster Award, Awarded May 10, 1984, (\$500) for "outstanding achievement in the general field of aerospace medicine", Aerospace Medical Association and the Purdue Frederick Co., Keith Loring Gentilcore Memorial Fund

Outstanding Achievement Award in Medical Education and Research, Academy of Medicine, Wright State University School of Medicine, May 23, 1984

Meritorious Service Award, Flight Safety Foundation, 1982

Special Recognition Award, Flight Safety Foundation, 1980

Harry G. Moseley Award, Awarded May 9, 1974, "for the most outstanding contribution to flight safety", Aerospace Medical Association and the Lockheed Aircraft Corporation

Meritorious Service Award (Silver Medal), the Federal Aviation Administration, 1971

Elected to Academie Internationale de Medicine Aeronautique et Spatiale, 1969

Elected Fellow, Aerospace Medical Association, 1968

Walter M. Boothby Award, 1966 (\$1000), "for studies on airline pilot health and safety", Aerospace Medical Association, Aviation Insurance Agency

Gail Borden Research Award, 1956 (\$500), "For Studies on Blood Fibrinolytic Systems and Urokinases"

Alpha Omega Alpha Honor Medical Society, 1955

Alpha Epsilon Delta Honor Premedical Society, 1950

Mu Delta Honorary Medical Service Society, University of Texas Medical Branch, 1954

Third Annual Honors Day, University of Texas, 1951 (upper 3 percent of class)

Sir William Osler Society, University of Texas Medical Branch (President, 1954)

OTHER PERTINENT INFORMATION

Medical License: State of Texas (1956), State of Oklahoma (1965), District of Columbia (1973) and Ohio (1978)

Member, Research Advisory Groups, Civil Air Surgeon, FAA, 1960 - 1961

Member, Advisory Board for Research in Aging, FAA, 1960 - 1961

Advisory Editor, International Survey of Gerontology, 1963 - 1964

U. S. Patent, 2529347, "Exercising Devices", 1950 (See Official Gazette, U.S. Patent Office, November 7, 1950)

Airline Transport Pilot Certificate, Multiengine Land, with Single Engine Land Commercial Privileges, Flight Instructor - Airplane, Ground Instructor - Instrument

U.S. Army Quartermaster Corps., 1946 - 1948, Noncommissioned Officer

Commission, Senior Assistant Surgeon, Inactive Reserve, U.S. Public Health Service

Advanced Administration and Supply School, U.S. Army Quartermaster Corps., Camp Lee, VA, 1946

Chemical Analyst, Longhorn Tin Smelter, Texas City, TX, 1949 - 1950

Member, Board of Directors, The Foundation for Senior Citizens, Inc., a non-profit foundation, Oklahoma City, OK, 1963 - 1967

Served as U.S. Delegate to the "International Conference on the Reduction of Noise and Disturbance Caused by Civil Aircraft", London, England, November 21-27, 1966

Member, Visiting Comm., College of Engineering, Univ. of Oklahoma, Norman, OK, 1969 - 1970

Served as U.S. medical participant to the Seventh French-Anglo Saxon, U.S. meeting on the Supersonic Transport (FAUSST VII), Paris, France, March 3-7, 1969

Executive School, Federal Aviation Administration, Charlottesville, VA, September 12-25, 1971

Department of Transportation representative to the Ad Hoc Committee on Environmental Health Research, Council on Environmental Quality, Federal Council on Science and Technology, 1972

Served as FAA participant in the 29th AGARD (NATO) meeting on "The Use of Medication and

Drugs in Flying Personnel", Glasgow, Scotland, September 4-8, 1972, and to the 20th International Congress of Aviation and Space Medicine, Nice, France, September 18-21, 1972

Department of Transportation Executive Effectiveness Seminar for Supergrades, Williamsburg, VA, July 17-20, 1973

Invited speaker, Symposium Aviation Medicine, Aviation Medical Society of Australia and New Zealand, Rotorua, New Zealand, September 20-21, 1973

DOT Seminar for Executive Action for Mission Accomplishment, Williamsburg, VA, January 16-18, 1974

Served as representative of the Federal Air Surgeon, 21st International Congress of Aviation and Space Medicine, Munich, Germany, September 16-24, 1974

Served as FAA participant in the 23rd International Congress of Aviation and Space Medicine, Acapulco, Mexico, September 29 - October 2, 1975

Flew with Pan American Airways crew members to Australia, Japan, Hong Kong, Guam, Thailand, India, Lebanon, Great Britain, Guatemala, Panama, Venezuela, Argentina, Liberia, Ghana, Nigeria, Kenya, Zaire, South Africa, and other locations in a prolonged study of aircrew fatigue, 1974 - 1975

Physician's Recognition Award, American Medical Association, 1976 - 1979, 1979 - 1983, 1983 - 1985, 1985 - 1988, October 1, 1988 - November 1, 1991, November 1, 1992 - November 1, 1994

Invited Speaker, 28th International Air Safety Seminar, Flight Safety Foundation, Amsterdam, Netherlands, November 1-6, 1975

Delegation Head, Subgroup 8, "Aeromedical and Human Factors in Flight", Soviet/American Agreement, Moscow, Puschina on Oka, Kiev, and Leningrad, August 21 - September 9, 1976

Delegation Head, Subgroup 8, "Aeromedical and Human Factors in Flight", Soviet/American Agreement, Moscow, Riga, Leningrad, Alma Ata, October 10-25, 1977

National Aeronautics and Space Administration Ad Hoc Panel on Medical Selection Criteria and Maintenance of Crew Health, 1978

Member, NASA Panel to review Physiological Design Requirements for the Space Shuttle, November 9, 1979

Invited participant, Government of Canada, Canadian Aviation Medical Examiners Conference, Jasper State Park, Alberta, October 4-6, 1979

Speaker, 27th International Congress of Aviation and Space Medicine, Manila, Philippines, October 8-12, 1979

Co-chairman, Human Factors Research in Air Traffic Control (with Dr. Richard L. Sulzer), 13th Annual Workshop on Human Factors in Transportation, Transportation Research Board, National Research Council, January 20, 1980, Washington, DC

Speaker, 28th International Congress of Aviation and Space Medicine, Montreal, Canada, September 8-11, 1980

Panel Chairman: The Modern View of Airport Disaster Medical Management, Aerospace Medical Association Meeting, Anaheim, CA, May 12-15, 1980 (published in <u>Aviation</u>. Space, and <u>Environmental Medicine</u>, November 1980, 1256-1269

Chairman, Human Factors Research in Air Traffic Control, 14th Annual Workshop on Human Factors in Transportation, Transportation Research Board, National Research Council, January 11, 1981, Washington, DC

Speaker, 29th International Congress of Aviation and Space Medicine, Nancy, France, September 7-11, 1981

Conducted two-day Workshop on Aerospace Medicine, 7th Medical Command, U.S. Army, Berchtesgaden, West Germany, November 17-18, 1981

Invited speaker, Flight Attendant Health and Fatigue Symposium, Auckland, New Zealand, February 23-25, 1982

Invited speaker, Australia-New Zealand Aerospace Medicine Association, Mackay, Australia, September 16-17, 1982

Conducted a 3-day Accident Investigation Workshop for Latin American Flight Surgeons, 30th International Congress of Aviation and Space Medicine, Santiago, Chile, October 4-7, 1982

Invited speaker, Japanese Space Medicine Society, Tokyo, Japan, October 29-November 1, 1982

Speaker, 31st International Congress of Aviation and Space Medicine, Amsterdam, Netherlands, September 5-8, 1983

Speaker, 32nd International Congress of Aviation and Space Medicine, Madeira, Portugal, October 1-5, 1984

Invited speaker, 4th International Symposium, Occupational Health in Aviation and Space Work, University of Occupational and Environmental Health, Kitakyushu-Shi, Japan, October 21-23, 1984

Invited speaker, China Airlines Operational Safety Workshop, Flight Safety Foundation, Taipei, Taiwan, January 29-30, 1985

Invited speaker, Olympic Airways, Flight Safety Foundation Workshop, Athens, Greece, February 26-28, 1985

Participated, 36th International Astronautical Federation Congress, Stockholm, Sweden, October 6-11, 1985

Participated, 33rd International Congress of Aviation and Space Medicine, Guadelajara, Mexico, October 20-25, 1985

Coordinator and speaker, 7th Medical Command, U.S. Army, Seminar, Aerospace Medicine, Berchtesgaden, West Germany, November 20-21, 1985

Speaker, Fourth Seminar on Aviation and Space Medicine, Hospital Rangueil, Toulouse, France, April 3-5, 1986

Expert Testimony, April 16, 1986, Ottawa, Canada, Canadian Air Safety Board, Formal Inquiry, Arrow Air Accident, (DC-8 248 passengers and 8 crew, all fatal, take-off, Gander, Newfoundland, December 12, 1985)

Participant, 37th International Astronautical Federation Congress, Innsbruck, Austria, October 5-10, 1986

Speaker, 34th International Congress of Aviation and Space Medicine, Belgrade, Yugoslavia, October 13-17, 1986

Consultant, AGARD, to German Aviation and Space Institute, Cologne, West Germany, December 13-17, 1986

Speaker, 38th International Astronautical Federation Congress, Brighton, England, October 11-17, 1987

Consultant, Korean Air Lines, Seoul, Korea, and speaker, Inha University, Seoul, and Korean Preventive Medicine Association, Cheju Island, November 2-9, 1987

Speaker, Nihon University Aerospace Symposium, Tokyo, Japan, December 4-9, 1987

Participant (co-editor), planning session for new treatise on Space Biology and Medicine, representing NASA, Moscow and Kiev, USSR, August 29 - September 7, 1988

Delivered Andre Allard Opening Lecture, 36th International Congress of Aviation and Space Medicine, Brisbane, Australia, October 17-21, 1988

Member, Review Committee, DLR Institute for Aerospace Medicine, Cologne-Porz, West Germany, April 5-6, 1989

Speaker, 8th Man in Space Symposium, International Academy of Astronautics, Tashkent, Uzbeckistan, USSR, September 29 - October 5, 1989

Invited Speaker, Aeromedical Association of Korea, "Aspects of Aerospace Medicine in the 2000's", Second Annual Scientific Meeting of the Association, April 20, 1991

Invited opening speaker on Civil Aeromedical Standards for the Twenty-first Century, 40th International Academy of Aviation and Space Medicine, Tokyo, Japan, October 5-8, 1992

Invited speaker on Evolution of the Aeromedical Standards, 41st International Academy of Aviation and Space Medicine, Hamburg, Germany, September 12-16, 1993

FAA Medical Review Officer, Aviation Sales, Inc. Dayton, OH, and Sunbird Aviation, Springfield, OH

Manuscript reviewer and Foreword preparer for Occupational Health in Aviation Maintenance and Support Personnel, J. Ribak, R. Rayman, and P. Froom, Academic Press, New York, 1995, pp 1-238

Invited Speaker, Government of Colombia, 2nd International Seminar on Human Factors on Human Factors in the Investigation of Aviation Accidents, Santa Fe de Bogota, September 20-22, 1995

Invited Speaker, The Third Session of Flight Safety and Technology of CAAC (Civil Aviation Authority of China), Peoples Republic of China in cooperation with the Boeing Co., October 7-10, 1996, Guangzhou, PRC.

PUBLICATIONS

- Sobel, G.W., Mohler, S.R., Jones, N.W., Dowdy, A.B.C. and Guest, M.M. "Urokinase An Activator of Plasma Profibrinolysin Extracted from Urine". <u>The American Journal of Physi-ology</u>. Vol. 171, No. 3, December 1952, pp 768-769.
- Guest, M.M., Mohler, S.R. and Celander, D.R. "Studies on Urokinase: An Activator of Plasma Profibrinolysin, Extracted from Urine", abstracts of communications, <u>Nineteenth</u> <u>International Physiological Congress</u>. Montreal, September 1953, p 422.
- 3. Mohler, S.R. Species Specificity Studies on Urinary Fibrinoproteases and the Activation of Plasma Profibrinolysin by Urinary Kineses. Master of Arts Thesis. University of Texas, Austin, TX, August 1953, pp 1-40.
- Mohler, S.R., Celander, D.R. and Guest, M.M. "Distribution of Urokinase Among the Common Mammals". <u>The American Journal of Physiology</u>. Vol. 192, No. 1, January 1958, pp 186-190.
- 5. Hunt, G.H. and Mohler, S.R. Aging. A Review of Research and Training Grants Supported by The National Institutes of Health. Public Health Service Publication No. 652. U.S. Government Printing Office, Washington, DC, December 1958, pp 1-50.
- 6. Hunt, G.H. and Mohler, S.R. "Research Grant Programs of The National Institutes of Health". Geriatrics. Vol. 14, June 1959, pp 396-403.
- 7. Mohler, S.R., Frame, E. and Hunt, G.H. "Annual Administrative Reviews: Chronic Illness". Hospitals, Journal of the American Hospital Association. Vol. 34, April 16, 1960, pp 54-59.
- 8. Mohler, S.R. "Problems of Gerontology in the United States". Section on Geriatrics and Gerontology. <u>Proceedings of the Pan American Medical Association</u>. Mexico City, May 3, 1960, pp 1-5. Available through the Center for Aging Research, NIH.
- 9. Mohler, S.R. "Aging and Pilot Performance: Current Related Research and Research Needs". Seventh Annual Postgraduate Course in Aviation Medicine. Ohio State University, Columbus, OH, September 15, 1960, pp 1-17. Available from Center for Aging Research, National Institutes of Health, Bethesda, MD.
- Mohler, S.R. "Some Aspects of Gerontology in the United States" <u>Public Health Reports</u>.
 Vol. 75, No. 12, December 1960, pp 1107-1109.
- 11. Mohler, S.R. (with G. Bourne, A. Behnke, N. Shock, J. Gerber, and J. Freeman). "The Aging Patient". Vol. 1, No. 5. Voice of Medicine. LP Record. New York. 1960. Available as booklet from Center for Aging Research, NIH, Bethesda, MD.

PUBLICATIONS (Continued)

- 12. Mohler, S.R. "Aging and Pilot Performance". Geriatrics. Vol. 16, No. 2, February 1961, pp 82-88.
- 13. Mohler, S.R. "Research Priorities in Aging". Postgraduate Course No. 11. The American College of Physicians. The Lankenau Hospital, Philadelphia, PA, April 11, 1961, pp 1-48.
- 14. Mohler, S.R. "Some Current Views of Aging". Proceedings of Conference on Education for Aging. Region VII. Department of Health, Education and Welfare, Washington, DC, November 20-21, 1961, pp 1-6. Available through the Office of Education, D.H.E.W.
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Date of Birth: May 14, 1960

Place of Birth: Palo Alto, California

Education:

1982 B.A, Pitzer College of the Claremont Colleges, Claremont, CA

1986 M.D., The University of Rochester School of Medicine, Rochester, NY

1993 M.P.H., Harvard School of Public Health, Boston, MA (Quantitative Methods)

Postdoctoral Training:

Internships and Residencies:

1986-1987 Intern, Internal Medicine, Harbor-UCLA Medical Center, Torrance, CA 1987-1989 Resident, Internal Medicine, Harbor-UCLA Medical Center, Torrance, CA

Fellowships:

1990 Fellow, Geriatric Medicine, National Research Institute of Gerontology and

Geriatric Medicine, Parkville, Victoria, Australia

1991 Fellow, Clinical Effectiveness Program, Harvard University School of

Public Health, Boston, MA

1990-1992 Fellow, Geriatric Medicine, Harvard University Medical School, Division on

Aging, Boston, MA

1992-1993 Postdoctoral Fellow, Agency for Health Care Policy and Research, Center for

Gerontology and Health Care Research, Brown University, Providence, RI

ETITIONER'S

Licensure and Certification:

1989 Diplomate, American Board of Internal Medicine

1994 Added Qualifications in Geriatric Medicine, American Board of Internal

Medicine.

1989-present Drug Enforcement Agency Registration

1989 California License Registration

1989 Advanced Cardiac Life Support Certificate
1990-present Massachusetts License Registration; State DEA Registration

Professional Positions:

1989	Physician, University of California Student Health Service, Los Angeles, CA	
1991-1995	Instructor, Clinical Medicine, Lasell College, Newton, MA	
1991-1994	Physician Peer Reviewer, Massachusetts Medical Society (Mass Pro)	
1992-	Staff Physician, Hebrew Rehabilitation Center for Aged, Boston, MA	
1993	Locum Tenens (Weekends), Urgent Care, Harvard Community Health Plan, Wellsely, MA	
1992-1993	Contributing Editor, The Brown University Geriatric Research Application	Digest
1994-1995	Staff Physician, Section of Geriatric Medicine, Deaconess Hospital, Boston, MA	_
1993-1995	Staff Physician, Sherrill House Nursing Home	
1994-1995	Associate Attending Physician, Gerontology Division, Beth Israel Hospital,	Bo
1995-	Staff Physician, Geriatrician, Gerontology Division, Beth Israel Deaconess	Me
Academic Ar	opointments and Medical School Committees/Activities:	
1992-1995	Co-Director, Introduction to Clinical Medicine for Second Year Harvard	Me
1993-	Faculty, Harvard Medical School Division on Aging	
1993-1998	Instructor in Medicne, Harvard Medical School	
1999-	Assistant Professor of Medicine, Harvard Medical School	
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1995-	Faculty tutor, Human Systems, Harvard Medical School	
1995-	Faculty tutor, Human Systems, Harvard Medical School	
1995-	Faculty tutor, Human Systems, Harvard Medical School Head Tutor, Cardiovascular/Pulmonary/Hematology Pathophysiology, William	

Awards, Honors and Grants:

1982	Sigma Xi
1982	The National Council on Aging Geriatrics Fellowship
1988	"Employee of the Month", Harbor-UCLA Medical Center, CA
1989	Solomon Award for Clinical Research, University of California,
	Los Angeles, California
1989	Participant, Summer Institute, sponsored by the National Institute on Aging,
	Airlie House, Virginia
1992, 1994	Research Award, Third and Fourth International Conferences on Alzheimer's
	Disease and Related Disorders
1992	Trainee Award, American Federation Clinical Research
1994-1996	Alzheimer's Association Faculty Scholar Award: The New England Centenarian
	Study.
1994	Geriatric Research Training Center Pilot Project Grant, Harvard Division on
Aging	
1994	Investigator Award, Deaconess Hospital Department of Medicine
1995	Issue Expert, White House Conference on Aging, Washington, DC
1995-1997	Grant Award, AARP-Andrus Foundation.

1995-1998	Physician's Scientist Award (K12), National Institute on Aging, AG-00294
1997	Geriatric Research Training Center Pilot Project Grant, Harvard Division on
Aging	
1997	Neuroscience and Education Foundation Grant
1997-2000	Alzheimer's Association grant: The New England Centenarian Study
1998	R0-3 Pilot Study Grant plus supplement award, National Institute on Aging:
	Centenarian Sibling Pair Study
1998-2001	Paul Beeson Faculty Scholar in Aging Research Award, American Federation
	Aging Research and The Alliance for Aging Research.
1998-1999	Nathan Shock Excellence in Biology of Aging Center Fellow
1999-2000	R-21, Centenarian Studies Network, National Institute on Aging (technically, this
	has been changed to a 1 year R0-1 because of increased funding)

Memberships, Offices & Committee Assignments in Professional Societies:

1986-	Associate Member, Sigma Xi Research Society
1989-	Member, American Federation of Clinical Research
1990-1997	Member, American College of Physicians
1997-	Fellow, American College of Physicians
1991-	Member, Gerontological Society of America
1991-	Member, Massachusetts Medical Society
1991-	Member, American Geriatrics Society
1992-	Member, American Public Health Association
	Chair (1993-1995), Membership Committee, Gerontology Section
1992-	Member, Society of General Internal Medicine
1993-	Member, American Society on Aging
1994-1995	Quality Assurance Committee, Sherrill House Nursing Home
1994-1995	Medical Oversight Committee, Sherrill House Nursing Home
1994-	Physician Education Committee, Alzheimer's Association, Eastern MA Section
1996	Advisory Board Member ("Costs in the Last Year of Life"), The Alliance for
	Aging Research, Washington, DC
1996-	Panel Member, International Age-Validation Commission. Chair: James Vaupel.
1996-	Committee Member, National Institute on Aging Centenarian Cell and DNA Bank
	Advisory Board

Peer Review:

 1993- Gerontological Society of America Meeting Abstract 1993- American Public Health Association Meeting Abstracts 1997- Psychology and Aging 1997- American Geriatrics Society Abstracts 	
1997- Psychology and Aging	Abstracts
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1997- American Geriatrics Society Abstracts	•
1998 Grants reviewer, Sigma Kappa Foundation	

Invited Lectures:

- 1994 Selective Survival in the Oldest Old. Jewish Community Housing for the Elderly. Workshop on Dementia. Primary Care and Internal Medicine. Principles and Practice, 1994. Harvard Medical School Continuing Education Program.
- 1995 Workshop on Dementia. Primary Care and Internal Medicine. Principles and Practice, 1995. Harvard Medical School Continuing Education Program.

 Nutrition in the Ninth Decade and Beyond. Malnutrition in the Hospitalized Patient Deaconess Hospital and Harvard Medical School.
- 1996 Apolipoprotein E and longevity. Genetic Issues Seminar, Update '96. American Council of Life Insurance.

Nutrition in the Ninth Decade and Beyond. Malnutrition in the Hospitalized Patient-Nutrition Support in the Year of Managed Care. Deaconess Hospital and Harvard Medical School.

Meeting the Health care Needs of Our Aging Population. Beth Israel President's Circle Symposium. May 13, 1996

Workshop on Dementia. Primary Care and Internal Medicine. Principles and Practice, 1996. Harvard Medical School Continuing Education Program.

Our Aging Society: A forum on the Social and Legal Issues. Massachusetts Commission Against Discrimination, December 9, 1996

1997 Dementias of the Oldest Old. Nurse Practitioner Association Continuing Education Conference. Marlborough, MA, March, 1997.

Successful Aging and Centenarians. Visiting Nurse Association of Boston, April, 1997. A Brave New World, Alumni Scientific Conference, Harvard Medical School, June, 1997. Middle Age Mothers Live Longer. Geriatrics Grand Rounds. Harvard Medical School. August, 1997.

Middle Age Mothers Live Longer and They Also Determine The Human Life Span. Geriatrics Grand Rounds, Mount Sinai, NY. September 26, 1997.

Living Longer, Better. The Forty Niners. Beth Israel Deaconess Medical Center. October 21, 1997.

Workshop on Dementia. Primary Care and Internal Medicine. Principles and Practice, Harvard Medical School Continuing Education Program. November 11, 1997

1998 Centenarian Workshop. Geriatrics CME course, Harvard Division on Aging, February, 1998.

The New England Centenarian Study. The AARP-Andrus Foundation Board of Directors Meeting. January 30, 1998.

The Role of Genes In Achieving Extreme Longevity. General Medicine Research Rounds. Columbia University, December 21, 1998.

1999 All in the Family: The Genetics of Extreme Longevity. Unversity of Pennsylvania, Institute on Aging. January 21, 1999.

Bridge to Tommorow, Aetna Retirement Sefvices, Honors Club, San Francsco, May, 1999

Living Longer, Better, Brookline Seniors Lecture, Brookline Department of Health, May, 1999

The New Science of Aging, American Federation of Aging, Board of Directors Annual Meeting, May, 1999

Publications:

- 1. Perls TT: Inpatient Geriatric Consultation. Medical Rounds 1989; 2:183-186.
- 2. Castle SC, Norman DC, Perls TT, et al: Analysis of cutaneous delayed-type hypersensitivity reaction and T cell proliferative response in elderly nursing home patients: An approach to identifying immunodeficient patients. Gerontology 1990; 36:217-229.
- 3. Perls TT, Morris JN, Ooi WL, and Lipsitz LA. The relationship between age, gender and cognitive performance in the very old: The effect of selective survival. J Am Geriatr Soc 1993;41:1193-1201.
- 4. Perls TT, Fogel BS. Environmental design: a therapeutic tool for patients with dementia. Nursing Home Medicine, 1994;2:27-33.
- 5. Rebeck GW Perls TT West HL Sodhi P Lipsitz LA Hyman BT. Reduced apolipoprotein epsilon 4 allele frequency in the oldest old. Alzheimer's patients and cognitively normal individuals. Neurology (1994 Aug) 44(8):1513-6
- 6. Perls TT. Demographic selection's influence upon the oldest old. J Gerontologic Psychiatry 1995;28:33-56.
- 7. Perls TT. The Oldest Old. The Scientific American, 1995;272:70-75.
- 8. Perls TT. The approach to the patient with cognitive impairment. Part 1: Differential diagnosis. Clinical Geriatrics. April, 1995.
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Give the following information for the key personnel and consultants and collaborators. Begin with the principal investigator/program director. Photocopy this page for each person.

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Claude D. Pepper Award of Mount Sinai Medical Center, 1989
Barber B. Conable, Jr., Award for Leadership in Long Term Care, 1990
Distinguished Service Medal, U.S. Public Health Service, 1990
Honorary D.Sc. Degrees, Medical College of Ohio, 1987; University of North Carolina, 1992
Gustav Lienhard Award, Institute of Medicine, National Academy of Sciences, 1996
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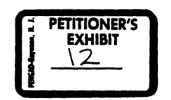
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A Review of the Medical Standards for Civilian Airmen

Synopsis of a Two-Year Study

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 This article summarizes the report of a comprehensive review by the American Medical Association (AMA) of the medical standards for civilian airmen. The present standards were promulgated by the Federal Aviation Administration in 1959; the alcoholism and cardiovascular standards were revised in 1982. The AMA report recommends new or revised standards for cardiovascular, mental and behavioral, visual, endocrine, respiratory, hematological, hearing and equilibrium, musculoskeletal, and nervous system disorders. It also provides guidance for the medical certification of airmen with conditions not covered specifically by the standards and recommends a new medical history and examination form for use by aviation medical examiners. Risk factors for the development of sudden incapacitating disease, such as coronary heart disease and stroke, receive special attention. Final standards will be developed by the Federal Aviation Administration.

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THIS ARTICLE is a synopsis of a report of a comprehensive review by the American Medical Association (AMA) of the medical standards for civilian airmen, known as Part 67 of the Federal Air Regulations.1 In its statement of work, the Federal Aviation Administration (FAA) requested that the final report detail:

the results of a total and comprehensive review of the medical standards for airman medical certification and their application to enable the FAA to determine the medical fitness of applicants for exercise of airman privileges. . . . The report must consider pertinent advances in the field of medicine since 1959, and determine what changes in FAA medical standards, if any, are warranted, and the rationale for such changes.

This review presents recommendations made by the AMA to the FAA; the acceptance or modification of the recommendations is a matter that will be determined solely by the FAA.

HISTORY AND BACKGROUND

The first medical standards for civilian airmen were issued in 1926 by the Civil Aviation Administration. Specific standards were written only for hearing and vision. All other conditions were handled under the general rubric that if a medical condition interfered with the safe handling of an aircraft, a person with such a condition was denied certification. In 1959, the FAA came into existence. succeeding the Civil Aviation Administration.

The FAA was given greater authority to regulate aviation safety and soon developed medical standards that included the history or clinical diagnosis of specific medical conditions whose presence in an individual disqualified that individual from obtaining a medical certificate. These conditions were (1) a personality disorder severe enough to have repeatedly manifested itself by overt acts: (2) a psychosis: (3) alcoholism; (4) drug dependence; (5) epilepsy; (6) a disturbance of consciousness without satisfactory explanation of the cause; (7) myocardial infarction; (8) angina pectoris or other evidence of coronary heart disease that the Federal Air Surgeon finds may reasonably be expected to lead to myocardial infarction; and (9) diabetes mellitus that requires insulin or other hypoglycemic drugs for control. Specific hearing and vision standards were expanded, as was the general statement concerning all medical conditions that the Federal Air Surgeon finds "makes the applicant for a [medical certificate] unable to safely perform the cuties or exercise the privileges of the airman certificate that he holds or for which he is applying."

In 1982, the FAA adopted three significant changes in the regulations. First, the FAA defined alcoholism as "a condition in which a person's intake of alcohol is great enough to damage physical health or personal or social functioning, or when alcohol has become a prerequisite to normal functioning," and it gave the Federal Air Surgeon discretionary authority to issue a medical certificate to an applicant who has shown evidence of recovery from alcoholism, including abstinence from alcohol for not less than the two years preceding the date of application. Second, it separated the conditions of angina pectoris from other evidence of significant coronary heart disease, to clarify that angina pectoris itself is a disqualifying condition, and defined significant coronary heart disease as a condition that "has required treatment, or, if untreated, that has been symptomatic or clinically significant." Third, the

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FAA adopted a new procedural mechanism, called "special issuance," by which the Federal Air Surgeon (or member of his staff acting with his authority) could issue a medical certificate to an applicant with a disqualifying condition and set specific criteria for type and frequency of medical monitoring that the person must follow to continue to hold the certificate.

The changes in the cardiovascular standard and the adoption of the special issuance procedure resulted in part from several decisions handed down by the National Transportation Safety Board (NTSB) that severely limited the FAA's ability to regulate aviation safety through medical monitoring. An applicant who is denied a medical certificate may appeal to the NTSB, which has the authority to determine whether the applicant meets the rules, regulations, and standards that the FAA has established. Prior to 1982, the NTSB ruled in favor of some applicants with coronary artery disease who had been treated by bypass surgery and who had been denied medical certificates. By ordering the FAA to issue medical certificates, the NTSB effectively ruled that the FAA could not require any limitations or specific medical reevaluation.

When it adopted the changes in the Part 67 standards in 1982, the FAA announced that it would seek a thorough review of its medical standards, which had not been reviewed in toto since 1959. The review, conducted by the AMA and summarized here, is a result of that announcement.

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CLASSES OF AIRMAN CERTIFICATES

One of three classes of airman medical certificates described in the Table must be held by an individual who wishes to operate a US-registered civilian aircraft.

The basis for the gradations of both the strictness of the medical standards and timing for routine reapplication and examination is the potential risk to public safety if a holder of an airman medical certificate should develop a sudden incapacitating illness or fail to see, hear, communicate, or make prudent decisions while operating an aircraft. Captains of passenger aircraft have hundreds of lives

Classes of Civilian Airman Certificates			
Class*	Frequency of Recertification, mo	Required to Be Held by	Comments
First	6	Pilots in command (cap- tains) of most passenger carrying aircraft	Strictest medical standards, especially for hearing and vision
Second	12	All other airmen who derive income from operating aircraft; also civilian air traffic controllers not em- ployed directly by FAA†	Group includes first officer (copilot) and second offi- cer (engineer) of passen- ger aircraft, air freight pi- lots, corporate pilots, crop dusters, skywriters, and flight instructors
Third	24	Persons who operate US- registered aircraft for nonremunerative person- al use	Least strict medical stan- dards

*The standards for first-, second-, and third-class certificates are found in the Code of Federal Regulations, 14 CFR §67.13, §67.15, and §67.17, respectively. †FAA indicates Federal Aviation Administration.

under their control, whereas pilots of private planes have but a few. The risk to the public is not based only on the number of passengers. Private pilots may still crash into a crowded shopping mall, and captains have one or two other crew members to help guide the aircraft down safely. And the responsibilities and job requirements of some holders of second-class certificates are demanding enough to place their risks to the public's safety as equal to those of airline captains. Such considerations were taken into account in the review process and in the standards and guidelines that are proposed.

THE MEDICAL CERTIFICATION PROCESS

There are different levels of decision making in the airman medical certification process. At the first level are the aviation medical examiners (AMEs), who are the physicians to whom airmen first apply for certification. Aviation medical examiners are licensed practicing physicians who have a special interest in aviation and who are certified but not employed by the FAA to perform medical examinations. (A subset of AMEs are certified to perform examinations for first-class certificate applicants.) Aviation medical examiners may deny certification to an individual who fails one or more of the FAA's medical standards; AMEs may also defer the ruling of a denial to the FAA.

Since only a few medical conditions are mentioned in the standards, the AMEs are asked to use their best

clinical judgment and knowledge of the requirements of piloting aircraft safely in their determination of whether to issue or deny a certificate, or to defer to the FAA. To assist AMEs, the FAA publishes an Aviation Medical Examiners Guide (AME Guide), in which the FAA provides the standards; procedural guidelines; guidelines on following up answers to medical history questions and on conducting an appropriate physical examination; guidelines on disposition of applicants with certain medical conditions; and guidelines for obtaining pertinent medical information from the applicant's personal physician(s) to help the FAA evaluate more thoroughly a particular medical condition.

When an AME defers judgment, or when an AME denies certification and the applicant appeals to the FAA, the matter is taken up either by a Regional Flight Surgeon or by staff physicians in the FAA's Aeromedical Certification Branch. These FAA physicians may grant a certificate without limitations or special follow-up, request more detailed medical records before making a determination, provide a "special issuance" certificate to the applicant with certain limitations or special medical follow-up, or deny certification entirely.

When the applicant is denied a certificate by either the Regional Flight Surgeon or the Aeromedical Certification Branch, he or she may appeal to the Federal Air Surgeon, who makes the final determination of issuance, special issuance, or denial, usually with the advice of a panel of

special consultants.

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Finally, an applicant who is denied a medical certificate by the Federal Air Surgeon may appeal to the NTSB, using his or her own resources to present a case. Few cases reach this level, but, as noted before, the decisions of the NTSB may have farreaching consequences.

THE REVIEW OF THE MEDICAL STANDARDS

The final report of the AMA's review consists of five sections: (1) recommended medical standards for all three classes of airman certificates: (2) recommended changes to the medical history and examination form that is used routinely by the AME: (3) recommended changes in format and specific instructions in the AME Guide; (4) rationale for recommended standards and guidelines for the AME and further clinical recommendations to the FAA, especially regarding special issuances and medical follow-up of persons certified by special issuance, and (5) recommendations for future research.

In reviewing the current standards, AMA staff and consultants did not assume that all present standards needed to be changed. Realizing that not all medical conditions could be covered by specific standards, the AMA produced comprehensive guidelines to direct the medical evaluation and handling of persons who are thought to be at increased risk of suddenly or gradually occurring incapacitation or sudden death.

Important recommended changes in the medical history and examination form are questions about medical conditions in family members that may point to increased risk of the development of significant disease (diabetes mellitus, epilepsy, and glaucoma and heart disease in family members younger than 50 years); and the use of a number of new special tests reflecting the availability of tests that can more accurately quantitate the functioning of organs and organ systems. These include sitting and standing blood pressure determinations, speech discrimination or audiometry, hematocrit, and "minimental status," and for certain persons, instrument tonometry, fasting plasma glucose, simple spirometry, and electrocardiography. The rationale for recommending these tests is presented below.

The AME Guide, an important document in the medical certification process, serves to guide the AME through the administrative process and also serves as a mini-textbook of clinical medicine. The recommended AME Guide is arranged in sections by organ system, and for each section there is a review of the pertinent standards, a guide to handling positive answers on the medical history form, a guide to the conduct of the physical examination and pertinent laboratory tests, and a guide to the handling of the applicant based on all relevant medical findings.

The section on the rationale for the recommended standards and further clinical recommendations explains the reasoning behind those standards and proposed guidelines and provides guidance to the FAA on any other medical conditions that the consultants deemed important or controversial, or about which the FAA requested assistance.

The participants in the review project realize that there are few hard data on the efficacy of either the present or recommended standards and guidelines of enhancing flight safety. Thus, many of the recommendations are based on their best clinical judgments. With the hope of strengthening the information base upon which future guidance to the FAA may be given, suggestions for future research are made, ranging from surveillance of pilots who are issued certificates under special issuance for certain medical conditions to the development of new screening tests that are more appropriate to the aviation environment. An example of the former is close surveillance of pilots with diabetes mellitus or histories of myocardial infarction, coronary angioplasty, bypass surgery, or arrhythmia. Examples of the latter are the development of a test of a pilot's ability to discriminate speech in the cockpit environment, and a visual test for third-class certificate applicants to discriminate aviation signal red, green, and white in the physician's office.

Seventy-one consultants assisted the AMA's staff in reviewing the medical standards. These consultants were clinical specialists and/or specialists in aviation medicine or had a special interest in aviation; some were themselves pilots. The intent in selecting these consultants was to get a mix of physicians with knowledge and interest in aviation and with strong credentials in a specialty of clinical medicine.

The consultants were grouped into 13 working committees, 12 of which reviewed testing, diagnosis, treatment, and follow-up of medical conditions affecting specific organ systems and one of which reviewed the importance of risk factors for sudden, incapacitating events in the medical certification process. The chairmen of the working committees, the AMA staff (A.L.E. and T.C.D.), and a special consultant (H.L.G.) constituted a steering committee, which reviewed the draft reports of the working committees. The working committees met from two to four times over the course of two years. At the completion of the project, the Risk Factor Working Committee, all of whose members are past presidents of the Aerospace Medical Association, acted as a final committee that reviewed the report before its submission to the FAA.

The purpose of this extensive internal review was to attempt to foster agreements among working committees. However, when agreements were not possible, all recommendations of the committees that disagreed were submitted to the FAA.

In its statement of work to the AMA the FAA requested that:

Current concepts in the determination of risk for adverse medical events, such as stroke or myocardial infarction or other incapacitating conditions, and the usefulness of diagnostic and prognostic techniques in the determination of body system functioning and of qualification for airman medical certification, must be addressed. Suggestions should be developed for the inclusion of such techniques in the standards if deemed appropriate and feasible.

This raised the question about the purpose of the AME examination: Should the examination remain a "safety" examination or should it become a "preventive medicine" examination as well? At present, the examination is designed to detect overt illness that may diminish flight safety. To that end the FAA may deny

a medical certificate to an applicant whose illness may significantly affect ability to perform an airman's duties safely over a 24-month period. Risk factors do not necessarily have so quick and severe an effect. Yet it is also the concern of the FAA and the AME that pilots remain healthy for as long as possible. Examinations for safety and for disease prevention, therefore, are not mutually exclusive, but they are different.

After much discussion the project participants concluded that the examinations should remain safety examinations, with the incorporation of some risk factor identification items, especially for cardiovascular, pulmonary, and visual disorders. This promotes safety and increases the likelihood that pilots who pay attention to the risk factors will have opportunities for recertification in the future. Examples of such risk factors include family history of diabetes mellitus, early morbidity from heart disease, and glaucoma; tobacco smoking, which may lead to using spirometry for the detection of early pulmonary impairment; and levels of blood lipids and plasma glucose, which would be determined at specified ages. Some clinical techniques that are wise to include in a routine medical examination, such as breast examinations and testicular examinations, are not mandated, but rather are encouraged.

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RECOMMENDED STANDARDS Cardiovascular System

For first-, second-, and third-class certificates:

- A. An applicant shall have no established medical history or clinical diagnosis of:
 - Myocardial infarction.
 - Angina pectoris.
- Coronary heart disease that has required treatment or, if untreated, is or has been symptomatic or clinically significant.
- Any form of heart or arterial surgery, including coronary angioplasty or permanent pacemaker insertion.
- Any form of congenital heart disease.
- Any significant heart murmur or valvular heart disease.
- Any evidence of pericarditis or cardiomyopathy.
- Any significant disturbance of heart rhythm or conduction.
- A sitting blood pressure equal to or greater than 150/95 mm Hg or a systolic

blood pressure greater than 160 mm Hg, or a history of any antihypertensive medication within the last year, or any history of surgery or angioplasty for the treatment of hypertension.

- Any evidence of significant peripheral arterial-vascular obstructive disease or aneurysm, or a history of surgery for these conditions.
- B. The applicant's sitting blood pressure must not exceed 150/95 mm Hg.

For first- and second-class certificates only:

C. For airmen who fly in single-crew cockpit operations, at age 50 years, the applicant must have a total serum cholesterol level of less than 300 mg/dL.

For first-class certificates only:

D. On initial certification, and at age 35 years, at age 40 years, and annually after age 40 years, the applicant must demonstrate an absence of any significant electrocardiographic abnormality, including myocardial infarction. An electrocardiogram, made according to acceptable standards and techniques 30 days or less before an examination for a first-class certificate, is accepted at the time of the physicial examination.

For second-class certificates only:

D. On initial certification, and at age 35 years, at age 40 years, and every two years thereafter, the applicant must demonstrate an absence of any significant electrocardiographic abnormality, including myocardial infarction. An electrocardiogram made according to acceptable standards and techniques within 30 days before an examination for a second-class certificate is accepted at the time of the physical examination.

For third-class certificates only:

D. On initial certification, and at age 40 years, and at a minimum every six years thereafter, the applicant must demonstrate an absence of any significant electrocardiographic abnormality, including myocardial infarction. An electrocardiogram made according to acceptable standards and techniques within 30 days before an examination for a third-class certificate is accepted at the time of the physical examination.

Cardiovascular disease poses the greatest medical threat to flight safety' and has been the subject of thorough review during the past decade in the United States' and in Europe.' By amending its cardiovascular standards in 1982 and by the selected use of the special-issuance procedure, the FAA has demonstrated an understanding of the advances in cardiovascular diagnosis, treatment, and rehabilitation.

The recommended standards are

more detailed than the present ones, which mention only coronary heart disease and its signs and symptoms. The recommended standards point out that other forms of heart disease, such as congenital, valvular, pericardial and myocardial diseases, and arrhythmias, may cause sudden incapacitation or death and that pilots with a history or presence of these forms of heart disease must be evaluated thoroughly before being certified medically.

At present first-class certificate holders are required by standards to pass blood pressure measurements, which range from 140/88 mm Hg in pilots aged 20 to 29 years to 170/100 mm Hg in pilots aged 50 years or older.8 This is inconsistent with the present knowledge about hypertension. First, in the absence of other clinical or laboratory evidence of cardiovascular disease, blood pressure may be the best predictor of cardiovascular events that might cause unexpected disability or death in a pilot or other flight crew members.*. Thus, it is unwise to restrict blood pressure standards to only one class of certificate holder. Second, the diagnosis of hypertension in adults is confirmed when the average of two or more measurements of diastolic blood pressures obtained in the sitting position on at least two separate visits or on separate measurements is 95 mm Hg or greater and when the average of measurements of multiple systolic blood pressures obtained on two or more separate visits is consistently greater than 150 mm Hg." A sustained systolic blood pressure over 160 mm Hg itself is associated with increased risk of sudden death.12 Third, the prognostic significance of high blood pressure is greater in the older age groups."

Similarly, the present limitation of routine electrocardiograms to first-class certificate holders belies the importance of the electrocardiogram as a screening tool. Up to 20% of heart attacks fail to produce symptoms that bring a person to a physician, and the resting electrocardiogram may show a prior myocardial infarction or patterns of left ventricular hypertrophy and nonspecific ST-segment and T-wave abnormalities that are associated with an increased risk of coronary artery disease.

Furthermore, other common abnormalities of intracardiac conduction, such as right and left bundle-branch blocks and the Wolff-Parkinson-White syndrome, which are not associated with symptoms or easily detected physical findings, may trigger concern regarding certification, assessment, and follow-up.

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The recommendation for cholesterol determinations for airmen at age 50 years with first-class and secondclass certificates in single-crew cockpit operations raises a number of issues. First, the presence of high levels of serum cholesterol is a known risk factor for atherosclerotic heart disease, even for young adults.18.19 For the sake of disease prevention, a young pilot should be aware of his or her serum cholesterol level and maintain it at a safe level that is well below 300 mg/dL. However, the cardiology consultants could not agree that a reading of 300 mg/dL in a pilot younger than 50 years constitutes a risk to aviation safety.20 Therefore, they selected for lipid study a pilot population at highest risk to the public's safety. Second, the concept of "single-crew cockpit operations," that is, a work situation in which one other person is not present who is capable of performing all the duties of the airmen in the cockpit (or tower, for air traffic controllers), relates to an operational milieu that would increase the risk to the public's safety due to the presence of a pilot with a known risk of sudden cardiac disease. Conversely, "multicrew operations" would decrease the safety risk. We realize that combining an operations concept with medical recommendations may present the FAA with some legal and administrative difficulties. especially for holders of first-class certificates," yet we believe that this concept is a valid one.

The Risk Factor Working Committee recommended a more preventive approach to lipid determinations. They suggested that serum cholesterol and triglyceride levels be determined for all applicants when they apply for initial aeromedical certification. If the values are 300 mg/dL and 200 mg/dL or greater, respectively, then the FAA should require lipid determinations every six months and an annual complete physical examination until the serum lipid levels

drop below these levels." The Risk Factor Committee and the Cardiovascular Committee concurred that pilots at age 50 years who have serum cholesterol levels of 300 mg/dL or greater should demonstrate a negative response to a treadmill exercise test before a certificate may be issued.

With the US civilian pilot population being predominantly male and middle-aged, coronary artery disease is by far the most important medical issue for aviation. *** The propensity for sudden onset and sudden death adds to the concern.23,24 Yet the occurrence of air transport incidents resulting from sudden incapacitation of air crew members because of cardiovascular events is very low'; for this reason, and because of its low predictive value,15,25-27 routine stress electrocardiography is not recommended. The AMA report recommends instead that the FAA establish a surveillance program to test the reliability of risk factor monitoring to predict sudden, incapacitating cardiovascular events.

Mental and Behavioral Disorders

For first-, second- and third-class certificates:

- A. An applicant shall have no established medical history or clinical diagnosis of any of the following:
- Substance abuse, substance dependence, and related substance use disorders, including but not limited to those associated with alcohol, barbiturates, other sedative-hypnotics, muscle relaxants, anxiolytics, opioids, central nervous system stimulants such as cocaine and amphetamines, and hallucinogens such as phencyclidine, cannabis, and volatile solvents and gases.
- Schizophrenic disorders, including disorganized, catatonic, paranoid, undifferentiated, and residual subtypes.
- Paranoid disorders, including paranoia, shared paranoid disorder, acute paranoid disorder, and atypical paranoid disorder.
- Psychotic disorders not elsewhere classified, including schizophreniform disorder, brief reactive psychosis, schizoaffective disorder and atypical psychosis, infantile autism, childhood-onset pervasive developmental disorder, and atypical pervasive developmental disorder.
- Major affective disorders, including bipolar disorder and major depression.
- Anxiety disorders, including panic disorders.
 - · Dissociative disorders, including psy-

- chogenic amnesia and fugue, multiple personality, depersonalization disorder, and atypical dissociative disorder.
- Disorders of impulse control, including intermittent and isolated explosive disorder.
- Personality disorders, including paranoid, schizoid, schizotypal, histrionic, narcissistic, antisocial, and borderline.
- Disorders that are usually first evident in infancy, childhood, and adolescence.
 - Organic brain syndrome.
- B. An applicant shall have no other organic, psychotic, substance use, affective, anxiety, dissociative, psychosexual, impulse control, adjustment, pervasive developmental, or personality disorder, or other mental disorder that the Federal Air Surgeon finds:
- Makes the applicant unable to perform safely the duties or exercise the privileges of the airman certificate that he or she holds or for which he or she is applying; or
- May reasonably be expected, within two years after the findings, to make the applicant unable to perform those duties or exercise those privileges; and the findings are based on the case history and appropriate qualified medical judgment relating to the condition involved.
- C. At the discretion of the Federal Air Surgeon, a certificate may be issued to an applicant who does not meet the provisions above if there is established clinical evidence of recovery satisfactory to the Federal Air Surgeon in accordance with the following criteria:
- Substance abuse, substance dependence, and related substance use disorders: Sustained total abstinence from alcohol for not less than the preceding two years, and other substances of abuse for not less than the preceding five years, associated with stable social and occupational functioning; and absence of mental disorder or psychopathology as demonstrated by psychiatric evaluation and psychological testing. For alcohol abuse and dependence, the required two-year period of abstinence may be reduced by the Federal Air Surgeon for cases in which an appropriate level of medical and operational monitoring has been established.
- Psychotic disorders not elsewhere classified: After a single episode, sustained freedom from all signs and symptoms of the disorder for the preceding year for brief reactive psychosis, and for the preceding two years for schizophreniform disorder, while taking no medication, and associated with stable social and occupational functioning; and absence of other mental disorder or psychopathology as demonstrated by psychiatric evaluation and psychological testing.
 - Major depression: After a single epi-

sode, sustained freedom from all symptoms and signs of the illness for not less than the preceding one year, associated with stable social and occupational functioning; and absence of other mental disorder or psychopathology as demonstrated by psychiatric evaluation and psychological testing.

- Panic disorders: Sustained freedom from any symptoms that would represent a hazard to flying safety, with no use of antianxiety or other psychotropic medication, for not less than two years, associated with stable social and occupational functioning; and absence of other mental disorder or psychopathology as demonstrated by psychiatric evaluation and psychological testing.
- Personality disorders other than paranoid, schizoid, schizotypal, histrionic, narcissistic, antisocial, and borderline: Sustained freedom from any behavior that reflects impaired judgment or creates legal or disciplinary problems for not less than the preceding five years, associated with stable social and occupational functioning; and absence of other mental disorder or psychopathology as demonstrated by psychiatric evaluation and psychological testings.

D. Individuals with any of the disqualifying conditions listed in paragraphs A and B, except as provided for in paragraph C above, are not usually eligible for certification. However, an applicant may still seek reconsideration by the Federal Air Surgeon who, acting on behalf of the administrator, will continue to issue medical certificates to applicants who are able to perform airman duties without endangering safety. In making this decision, the Federal Air Surgeon considers the natural history and severity of the problem, the period of satisfactory recovery since manifestation of the problem, and treatment and continuing requirements for treatment. Other factors the Federal Air Surgeon considers include (1) any current or recent psychiatric symptoms, aberrant behavior, or psychiatric or other medical findings; (2) the need for, or use or abuse of, any clinical agents, for either therapeutic or recreational purposes; (3) any personality traits or other recognized factors involving the risk of future recurrence of the problem or the risk of adverse effects; and (4) the current psychiatric functional status and stability of the applicant, as determined by appropriate evaluative techniques.

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The recommended standards differ considerably from the present ones,²⁸ not only in their length, but also in their organization. The recommended standards are designed to incorporate the terminology of the Diagnostic and Statistical Manual of Mental Disor-

ders, edition 3 (DSM-III)." A major feature of DSM-III is the elimination of major categories, such as psychoses and neuroses, in favor of many syndromes, each with its own set of explicit diagnostic criteria. Thus, disorders that have the symptoms of psychosis, such as organic disorders, schizophrenia, paranoid disorders, affective disorders, and schizotypal and borderline personality disorders, are listed separately in the recommended standards, and "psychosis" as a disqualifying condition is not mentioned. The Mental and Behavioral Disorders Committee recognizes that such explicit criteria may pose some difficulty in a regulatory process. For example, a diagnosis of schizophrenic disorder requires that the illness be present continuously for at least six months29(p189); a diagnosis of antisocial personality disorder requires that a pattern of antisocial behavior occur before age 15 years. Evidence for both of these stipulations may be difficult to obtain in a regulatory setting.

The recommended standards also reflect the DSM-III definitions of substance abuse and substance dependence, the former being distinguished by a pattern of pathological use and impairment in social or occupational functioning as a result of that use, and the latter by the addition of tolerance and withdrawal. The term "alcoholism," which is used in the present standards, is avoided, since there is no explicit definition of this term in DSM-III. The provision in the recommended standards that allows the Federal Air Surgeon to waive the required two-year period of abstinence for alcohol abuse and dependence when there is evidence of medical and operational monitoring is designed to entice alcohol-abusive or alcohol-dependent pilots into treatment programs, who might otherwise remain "closet" drinkers for fear of losing their incomes for no less than two years. For the past eight years the FAA and the Air Line Pilots Association have cooperated in an alcohol abuse and dependence treatment program, through which 850 airline pilots have come forth for assistance (Richard L. Masters, MD, oral communication, 1985). The recommended standards would continue to foster and possibly enhance the value of such programs.

Alcohol abuse and dependence are but two syndromes that may affect cognitive function, as may dementia or affective disorders. The routine AME examination has never included tests that would detect a diminution of cognitive function, which if left unnoticed may result in poor pilot judgment or slow reaction time in critical operational situations. The committee devised a five-question mental status examination that is based on the "mini-mental state" of Folstein et al. which can be administered at every examination by the AME or an assistant. The applicant would be expected to answer each question correctly, and any deviation from a perfect score would require that the complete mini-mental state examination of Folstein et al be given. Since the five-question examination is new and untested, the AMA report recommends that the FAA monitor the use and acceptance of the examination by pilots and AMEs and assess its validity and reliability as a screening tool in detecting diminished cognitive functions in the pilot population.

Vision Standards

For first- and second-class certificates:

- A. An applicant must meet the following standards:
- Distant visual acuity of 20/20 or better in each eye separately, without correction; or of at least 20/200 in each eye separately, corrected to 20/20 or better with conventional corrective lenses (glasses or contact lenses), in which case the applicant shall be qualified only on the condition that he or she wear those corrective lenses while exercising the privileges of the airman certificate.
- Near vision of 20/40 Snellen equivalent or better at 16 inches in each eye separately, with or without corrective lenses. After age 50 years, near vision of 20/40 Snellen equivalent or better at both 16 inches and 32 inches in each eye separately, with or without corrective lenses. If corrective lenses are required to meet this standard, the applicant may be qualified only on the condition that he or she wear those corrective lenses while exercising the privileges of the airman certificate.
 - Normal color vision.
 - Normal fields of vision.
- No acute or chronic pathological condition of either eye or adnexa that might interfere with its proper function, might progress to that degree, or might be aggravated by flying.
- Bifoveal fixation and vergence-phoria

relationships sufficient to prevent a break in fusion under conditions that may reasonably occur in performing airman duties. Tests for these factors are not required except for applicants found to have more than 1 PD of hyperphoria, 6 PD of esophoria, or 6 PD of exophoria. If these values are exceeded, the Federal Air Surgeon may require the applicant to be examined by a qualified eve specialist to determine if there is bifoveal fixation and adequate vergence-phoria relationship. However, if the applicant is otherwise qualified, he or she is entitled to a medical certificate pending the results of the examination.

 Intraocular pressure of no more than 25 mm Hg as measured by tonometry in either eye in every applicant over age 40 years, or in any applicant with a family history of glaucoma in a first-degree relative. The difference between the intraocular pressure in the two eyes must not be greater than 5 mm Hg. If intraocular pressure measures greater than 25 mm Hg in either eye, or if the intraocular pressure difference between the two eyes is greater than 5 mm Hg, ophthalmologic evaluation is necessary to rule out glaucoma. If the applicant is otherwise qualified, he or she is entitled to a medical certificate pending the results of the ophthalmologic evalua-

For third-class certificates:

- B. An applicant must meet the following standards:
- Distant visual acuity of 20/40 or better in each eye separately, without correction; or if the vision in either or both eyes is poorer than 20/40, and is corrected to 20/30 or better in each eye with conventional corrective lenses (glasses or contact lenses), the applicant may be qualified on the condition that he or she wear those corrective lenses while exercising the privileges of the airman certificate.
- Near vision of at least 20/40 Snellen equivalent or better, with or without correction at 16 in; after age 50 years, near vision of 20/40 or better at both 16 in and 32 in, with or without correction. If corrective lenses are required to meet this standard, the applicant may be qualified only on the condition that he or she wear those corrective lenses while exercising the privileges of the air certificate.
- Ability to distinguish aviation signal red, aviation signal green, and aviation signal white.
- No acute or chronic pathological condition of either eye or adnexa that might interfere with its proper function, might progress to that degree, or might be aggravated by flying.
- Intraocular pressure of no more than 25 mm Hg as measured by tonometry in either eye in every applicant over the age of 40 years, or in any applicant with a

family history of glaucoma in a first-degree relative. The difference between intraocular pressure in the two eyes must not be greater than 5 mm Hg. If the intraocular pressure measures greater than 25 mm Hg in either eye, or if the intraocular pressure difference between the two eyes is greater than 5 mm Hg, ophthalmologic evaluation is necessary to rule out glaucoma. If the applicant is otherwise qualified, he or she is entitled to a medical certificate pending the results of the ophthalmologic examination.

The recommended standards for first-class and second-class certificates are identical, since some secondclass certificate holders may operate aircraft that transport passengers or operate aircraft in and around major airports where passenger-carrying airplanes are present. The requirement that all certificate holders meet near vision standards of 20/40 Snellen equivalent or better is based on the use of characters of 20/40 Snellen-scale size or larger or aeronautical maps. Intermediate vision at 32 inches should be tested in first- and second-class certificate holders aged 50 years and older, since instrument flight is common, and presbyopia with diminished intermediate vision becomes more prevalent at that age.

Increased intraocular pressure of greater than 24 mg Hg, which is objective evidence for the possible development of glaucoma, occurs in less than 0.15% of the US population.31(p59) Because of the insidious course of chronic, open-angle glaucoma, which may remain asymptomatic until large changes to visual fields, night vision, and contrast sensitivity have taken place, and because with easy, objective testing, glaucoma can be approached in a preventive manner, the AMA report recommends that intraocular pressure be tested in all pilots aged 40 years and older and in pilots who have a strong family history of glaucoma. Instrument testing for intraocular pressure is already required for FAA-employed air traffic controllers.

The significance of color vision in aviation was identified in 1920 by Wilmer and Berens," who stated: "The proper recognition of color plays an important part of the success of all types of flyers." Today color discrimination is useful in the identification of signals and navigation lights, airport beacons, approach lights, and

runway and taxiway lights; in viewing instrument panel warning lights, cathode-ray tube displays, and radar; in detecting color differences in terrain; and in map and chart reading. Yet investigators have not clearly established that color vision standards and screening techniques for them have enhanced flight safety.^{33,34}

Both the present and recommended standards require that first-class and second-class certificate holders have "normal color vision," but what constitutes "normal" depends on the uses of color vision in aviation and the methods by which color vision is tested. Ideally, testing for normal color vision should discriminate between those who are "color safe," that is, those who can identify aviation signals correctly, from those who cannot. The US Air Force School of Aviation Medicine Color Threshold Tester was designed to test the ability to discriminate aviation signal colors at differing intensities. Persons with normal color vision could discriminate colors even at the lowest intensities; persons with color deficiencies would make more errors as the intensities are reduced. This color threshold tester was field-tested, and a cutoff score was described as the level at which pilots did not report difficulty in identifying aviation signals while operating aircraft. 35.34 However, with few such color threshold testers in existence, this test obviously cannot be used as a screening device in civilian aviation.

What is available to the AMEs are devices that can be used in the office. including the Titmus vision tester, Keystone Orthoscope/Telebinocular, and the pseudoisochromatic plates of Isihara, Hardy-Rand-Ritter, Dvorine, and the American Optical Company. Each tests for different qualities of color blindness, and some are also quantitative. Each has its own cutoff point for pass or fail. The pseudoisochromatic plates in particular are effective screening tools, because they are inexpensive, are easily used by experts and relatively untrained examiners, and take little time."

The AMA report offers no new insight into the problems of color vision testing and how to handle persons with less than normal color vision. At present, applicants for first- and second-class certificates

with abnormal screening tests results may be limited to flying in the daytime or may request a medical flight test to prove that their deficiencies do not interfere with the performance of their duties. Applicants for thirdclass certificates, who are required only to distinguish aviation signal green, red, and white, may be tested by a signal light gun test at a local air traffic control tower; the AMA report suggests no reason to change these procedures at present. It does suggest that the FAA develop and field test a signal light gun instrument that could be used in AMEs' offices.

Endocrine System

For first-, second-, and third-class certificates:

A. The applicant shall have no established medical history or clinical diagnosis of diabetes mellitus that requires insulin for control.

The present standard for diabetes mellitus denies certification to any person with a medical history or clinical diagnosis of diabetes mellitus that requires insulin or an oral hypoglycemic drug for control. Until only very recently, the FAA provided no special-issuance certificates to persons who failed to meet this standard. Both the hard line of the past and the loosening up of the present created whirlwinds of controversy. Possibly no other issue took as much painstaking review as this one.

The AMA report continues to recommend that persons taking insulin be denied certification. This recommendation is based on three factors: (1) that symptoms of neuroglycopenia may develop without warning in individuals taking insulin"; (2) that there is an inherent unpredictability of hypoglycemic episodes that cannot be monitored readily and (3) that the combined effects of hypoglycemia and hypoxia on cognitive functioning are not known.

The recommendation to remove the absolute prohibition against certifying persons taking oral hypoglycemic agents is based on the evidence that (1) acute or chronic malnutrition almost always accompanies the hypoglycemia caused by sulfonylureas, (2) that other factors predispose to hypoglycemia, including advanced age, renal or hepatic disease, adrenocortical insufficiency, and the use of alco-

hol, salicylates, and other drugs, 41.42 and (3) that in automobile drivers who have non-insulin-dependent diabetes, there is an apparent absence of hypoglycemic symptoms. 43 Non-insulin-dependent diabetic pilots, who are usually well educated, well nourished, and highly motivated, would not be expected to suffer from hypoglycemic episodes.

The AMA report recommends very strict guidelines concerning the appropriate administrative management of pilots with non-insulindependent diabetes. These guidelines include trials of diet therapy only or diet therapy with oral hypoglycemic agents for at least three months, during which time the airman must be educated about his or her diabetes in a program consistent with the guidelines of the National Diabetes Advisory Board."

Respiratory System

For first-, second-, and third-class certificates:

A. At the first examination after the 40th birthday, the applicant must demonstrate the absence of severe lung disease by performance of spirometry. Severe lung disease is defined as a forced vital capacity equal to or less than 50% predicted, or a forced expiratory volume in 1 s equal to or less than 50% predicted, or a forced expiratory volume in 1 s/forced vital capacity percent equal to or less than 50%. Spirometry shall be repeated every six years in order to demonstrate the continued absence of severe lung disease.

B. An applicant shall have no established medical history or clinical diagnosis of:

- Lung disease that is severe enough to produce, or likely to produce, chronic hypoxia to a level of Pao, less than or equal to 65 mm Hg while breathing room air at sea level.
- Poorly controlled asthma. As used in this section, poorly controlled asthma is defined as chronic wheezing or recurrent acute episodes of wheezing occurring at least once weekly despite administration of bronchodilator medications.
- Hypersomnolence sleep apnea syndrome or hypoventilation syndrome.
- Chronic pulmonary hypertension as defined by a mean pulmonary artery pressure greater than or equal to 35 mm Hg.
- Recurrent unilateral pneumothorax or bilateral pneumothoraxes occurring separately or simultaneously, unless surgical or chemical pleurodesis has been performed.
 - Recurrent pulmonary emboli.

• Metastatic carcinoma of the lung, and surgically unresectable carcinoma of lung not yet proved to be metastatic.

The evaluation of the respiratory system is based on two general principles: (1) there should be maintenance of adequate oxygenation throughout flight and (2) retention of carbon dioxide should be avoided. Since direct measurement of arterial oxygen and carbon dioxide levels is impractical in an AME's office, the medical history and clinical assessment is directed toward detecting those applicants who may need special assessment to rule out chronic hypoxemia or hypercapnia. To this end, the AMA report recommends the inclusion of spirometry in the routine assessment of applicants at certain ages, for all applicants who have a history of smoking at least 20 packyears of cigarettes, and for those with histories of chronic obstructive pulmonary disease, asthma, and dyspnea. The physiological measurements for spirometry and arterial oxygen tension that are noted in the recommended standards are levels that are considered inadequate for oxygen maintenance or avoidance of carbon dioxide retention. These levels do not imply that all persons whose measurements exceed these numbers are presumed to be free of the central nervous system effects of hypoxemia or hypercapnia. The setting of the Pao, at 65 mm Hg at sea level while breathing room air was of particular concern to the nonpulmonary consultants in our review project, who thought that Pao, levels just above 65 mm Hg are still very low and unsafe. However, the lower limit of normal for 80-year-old persons is 67 mm Hg," and the pulmonary consultants concluded that a margin of error of 2 mm Hg in some instances may be accepta-

Hematologic System

For first-, second-, and third-class certificates:

A. At the first examination after the 40th birthday, the applicant must demonstrate the absence of severe disorders of red blood cells by a hematocrit determination. Hematocrits must fall between 32% and 55% for issuance of a certificate.

For first- and second-class certificates

B. Hematocrit determinations must be repeated annually.

For third-class certificates only:

C. Hematocrit determinations must be repeated at the time of the routine examination.

As with the physiological standards for pulmonary function, the recommended standards for maximum and minimum hematocrits do not imply that all values between these numbers are safe. The etiologies of anemic or polycythemic states should be determined, and the ability of individuals to compensate through pulmonary and cardiac mechanisms should be assessed. An underlying cause of an abnormal hematologic value that is still within the standards or guidelines itself may be disqualifying.

There is little debate about the adverse effects of low hemoglobin concentrations. The effects of high hemoglobin concentrations may be just as critical. Regardless of the cause of polycythemia, there is good evidence that cerebral blood flow and some mental functions decrease continuously in a linear fashion as hematocrit increases; conversely, reducing the hematocrit is associated with a linear increase in cerebral blood flow and an improvement in intellectual function.

Hematocrit has a tendency to increase in normal individuals who reside in altitudes above sea level. However, adequate data are not available to establish normal values for persons living at high altitudes. According to the National Center for Health Statistics, the 95th percentile of hematocrit for nonsmoking men of all ages over 20 years and living at sea level never exceeds 50%; for women the comparable value is 47%.50 Thus, the AMA report concludes that few if any normal individuals living at high altitudes should be adversely affected by the standard.

Ear, Nose, Throat and Equilibrium

For first-, second-, and third-class certificates:

A. An applicant shall:

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- Demonstrate an acceptable understanding of speech as determined by audiometric speech discrimination testing to a score of at least 70% obtained in one ear or in a sound field environment, or
- Provide acceptable results of audiometric testing of unaided acuity according to the following table, using the standards of the American National Standards Institute, 1969:

Frequency, Hz

			_	
Acuity, dB	500	1,000	2,000	3,000
Better ear	35	30	30	40
Poorer ear	35	50	50	60

- B. An applicant shall have:
- No disease of the middle or internal ear that will cause acute paroxysms or unpredictable attacks of vertigo.
- No disease or malformation of the nose, oral cavity, pharynx, or larynx that might interfere with, or be aggravated by, flying.
- No disease or malformation of the oral cavity, pharynx, or larynx that would interfere with clear and effective speech communication.

The "whispered voice" test for hearing, which is all that is required presently for holders of second- and third-class certificates, is antiquated, nonobjective, and not at all related to the requirements of hearing in the cockpit environment. Ideally one would want to test an airman's ability to understand speech as it would be heard in radio communications in a cockpit. The pilot's ability to understand speech is a function of hearing level, ability to discriminate speech from background noise, and knowledge of aviation jargon in order to piece together a command or information from a control tower. The AMA report recommends that the FAA develop and field test a cassette tape recording of radio communications that could be used by AMEs for this purpose. Because no such tape is presently available, and there is a need to rate hearing objectively, hearing standards for all certificate holders should be based on audiometric testing of unaided acuity or on testing of speech discrimination with valid and reliable instruments, such as the phonetically balanced, monosyllabic word list of the Northwestern University Auditory Test No. 6. In this test, pilots would be allowed to set the speakers to which they were listening at the most favorable intensity to maximize their chances of discriminating at least 70% of the words in the list, much as they would adjust the radio in the cockpit to the most favorable level.

Musculoskeletal System

For first-, second-, and third-class certificates:

A. An applicant must have no medical history or clinical diagnosis of the following:

- Quadriplegia.
- Hemiplegia or hemiparesis secondary to brain disease, regardless of cause.
- Collagen vascular disease with central nervous system involvement.
 - Progressive neurological disorders.

These standards pertain only to severe disorders that clearly limit a pilot's ability to fly an aircraft or that may lead to sudden disturbances of central or peripheral nervous system functioning. For other musculoskeletal disorders in which residual function may be measured accurately, the FAA administers a medical flight test to assess the effects of limited function on the ability to handle an aircraft. The AMA report recommends that the medical flight testing continue. Those pilots whose musculoskeletal impairment is static or well stabilized may be issued a Statement of Demonstrated Ability under the provisions of 14 CFR §67.19(e), which allows for recertification without repeating the medical flight test, unless the pilot's condition improves or deteriorates.

Nervous System

For first-, second-, and third-class certificates:

- A. An applicant shall have no established medical history or clinical diagnosis of the following:
 - Epilepsy.
 - A single seizure.
- An impairment of consciousness and/ or transient loss of control of nervous system function(s) without satisfactory medical explanation of the cause.
- B. An applicant shall have no other convulsive disorder, disturbance of consciousness or neurological condition that the Federal Air Surgeon finds:
- Makes the applicant unable to perform safely the duties or exercise the privileges of the airman certificate that he or she holds or for which he or she is applying, or
- May reasonably be expected, within two years after its diagnosis, to make him or her unable to perform those duties or exercise those privileges; and the findings are based on case history and appropriate, qualified medical judgment relating to the condition involved.

The recommended standards point out the distinction between the epilepsies, which by definition consist of multiple seizures," and single seizures. The major concern with either epilepsy or a single seizure is the risk it poses for the occurrence of an unexpected seizure sometime in the

future. Until recently there were few studies of long-term follow-up of persons who had epilepsy as children or adolescents. Recent studies indicate that seizures recur in 24% to 36% to of these individuals and that recurrences may be 16, 18, and 20 years later.4.5 The risk of a second convulsion after a single, unprovoked seizure in childhood is also high." Thus, for most seizures of childhood (the exceptions being febrile seizures and benign rolandic epilepsy of childhood), and for other conditions that cause seizure activity, such as adultonset epilepsy, provoked and unprovoked seizures in adulthood, and seizure activity resulting from trauma, the AMA report recommends that 20 years elapse before certification, during which time the airman must be off all anticonvulsant medications and be free of seizure activity. In addition, the neurological examination, electroencephalogram, and computed tomographic scan or magnetic resonance imaging must be normal at the time of the certification examina-

In 1979 the AMA reviewed neurological and neurosurgical conditions that affect flight safety for the FAA." The 1985 AMA report updates the 1979 report, providing guidance on the increased diagnostic and prognostic capabilities afforded by the new technologies of computed tomographic scanning and magnetic resonance imaging.

Other Organ Systems

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At present, disorders of the gastrointestinal system, genitourinary system, and skin are covered under the general standard that the pilot should have "no other organic functional or structural disease, defect or limitation that the Federal Air Surgeon finds . . . makes the applicant unable to safely perform the duties or exercise the privileges of the airman certificate that he holds or for which he is applying." The AMA report gives guidance to the AMEs and FAA on many specific conditions and evaluation techniques. For example, it concludes that the stool guaiac would not be a worthwhile screening examination in the AME setting, in which obtaining six samples to confirm the presence or absence of occult blood would be difficult, and in which a

hematocrit determination, which is proposed, would be of greater clinical value. Similarly, the report also recommends that breast examinations in women and testicular examinations in men be optional, and that pelvic ultrasound or a report of a recent pelvic examination by a female pilot's attending physician suffice to rule out conditions such as an ovarian mass that may undergo sudden torsion and cause incapacitating pain.

Risk Factors

In addition to those risk factors that are discussed above, the AMA report considers other fixed and controllable risk factors that affect aviation safety. For example, a pilot's anthropomorphic measurements are generally fixed. The report recommends that the FAA review its aircraft airworthiness standards (14 CFR Parts 23, 25, and 26), which deal with aircraft design and include standards for cockpit seat dimensions, movement, and arrangement, and strength requirements for manual control, and which are presently formulated largely for a male pilot popu-

Obesity is a controllable risk factor, which may have an effect on the cardiovascular system, see especially if other risk factors are present, and on a pilot's ability to enter and leave the cockpit quickly and to operate controls. The AMA report recommends that males with a body mass index of 50 or greater and females with a body mass index of 49 or greater be disqualified until that index is reduced. o

CONCLUSION

Freedom from impairing disease is a major determinant of safe pilot performance." The FAA's medical standards and certification procedures are established to detect civilian airmen who may have such disease. The AMA believes that its report provides the FAA with a well-reasoned review of current knowledge about medical conditions that affect flight safety and charts a prudent course for potential future FAA regulatory action and changes in its medical certification process.

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PREVALENCE OF SELECTED PATHOLOGY AMONG CURRENTLY CERTIFIED ACTIVE AIRMEN Charles F. Booze, Jr.

INTRODUCTION

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The Federal Aviation Administration (FAA) and its predecessors have been charged with the responsibility for medical certification of all United States and some international civil airmen since 1927. Each airman must hold a current medical certificate of the appropriate class to validate any pilot certificates he or she may possess. As of January 1, 1984, 715,858 active airmen were medically certified. Federal Aviation Regulations require that physical examinations must be performed at 6-month intervals for air transport pilots, annually for other commercial pilots, and at 2-year intervals for private pilots.

The Aeromedical Certification Branch of the Civil Aeromedical Institute (CAMI), located in Oklahoma City, Oklahoma, is the central screening facility and repository within the FAA for collection, processing, adjudication, investigation, and analyses of medical data generated by the aeromedical certification and related regulatory programs.

Medical certification criteria have changed dramatically in favor of the airman during recent years as a result of the evolution of aviation medicine and increased efforts in the area of aeromedical research. A primary function of CAMI is to identify and provide substantive data in support of current medical criteria in the furtherance of aviation safety as well as provide a better service to the airman. It has been the policy of the FAA to medically certify individuals, for a variety of flying privileges, who also have medical deficiency or disease, provided it can be determined that such action does not compromise air safety. During recent years, for example, standards have been relaxed with respect to contact lens use and medication allowed for control of hypertension.

This descriptive epidemiologic study presents the point prevalence of pathology among active airmen as of January 1, 1984, by age, class of medical certificate, major body system, and other selected pathologies of interest within the major body systems. The study updates previous studies of a similar nature with respect to current prevalence of disease among airmen.

METHODS

Physical examinations to detect medical conditions which could incapacitate or otherwise adversely affect pilot performance are given by some 7,696 designated aviation medical examiners (AMEs), most of whom are physicians in private practice. Military applicants receive their examinations at 536 designated military facilities. Reports of these examinations from throughout the world are forwarded to the Aeromedical Certification Branch in Oklahoma City.



Federal Aviation Regulations, Part 67, specify that a medical certificate will be denied if an applicant has an established medical history or clinical diagnosis of any of the following conditions:

- 1. A personality disorder that is severe enough to have repeatedly manifested itself by overt acts.
- 2. A psychosis.
- 3. Alcoholism.
- 4. Drug dependence.
- 5. Epilepsy.

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- Disturbance of consciousness without satisfactory medical explanation of the cause.
- 7. Myocardial infarction.
- 8. Angina pectoris or other evidence of coronary disease.
- 9. Diabetes mellitus, requiring insulin or other hypoglycemic drug for control.

However, certification is possible despite the existence of one of the above disqualifying medical conditions if exemption from the regulations is granted after extensive medical review by FAA and consultant specialists. The primary considerations in such exemption cases are history, prognosis, and potential risk of sudden incapacitation. It is appropriate to note, however, that airmen with disqualifying conditions are issued medical certificates with special medical and operational restrictions that allow for control of risk.

Automated medical record files maintained by the Aeromedical Certification Branch provided the source data for the study. The files utilized contain only the most recent application for medical certification from an airman within the past 3 years. Pathology detected by previous medical examinations is brought forward to the current automated medical file in order to maintain as complete a history as possible. While this file contains records for a total of 3 years, a medically certified airman is considered "active" for a maximum of 24 calendar months following his or her most recent FAA medical examination; i.e., regardless of the class of medical certificate originally issued, it is valid for third class airman purposes for a period of time up to 24 calendar months unless otherwise limited or recalled by the FAA.

Prevalence data were automatically produced from the automated files described above. Prevalence data in this population are expected to be somewhat conservative since problems have been experienced in the acquisition of complete and accurate histories from pilots with a job, hobby, or aircraft investment to protect.

Prevalence data are obviously a function of incidence and duration of diseases; therefore, one would not expect the more immediately lethal diseases to be represented to the same extent as less serious diseases of longer duration. Additionally, airmen with more serious health problems are likely to be denied medical certification and would not become eligible for study. These data do, however, indicate the relative importance of various diseases among airmen, even though conservative in some instances, and provide insight concerning potential health problem interaction with the aviation environment. Since general population literature prevalence data are limited with respect to some of the diseases reported on in this study, some further benefit is expected in that regard.

RESULTS AND DISCUSSION

Diseases of the cardiovascular system are the most frequently observed diseases among active airmen. As expected, hypertension is the greatest contributor to the total prevalence rate. However, as may be seen in Table II, the prevalence of hypertension is only a fraction of that which would be expected in an unscreened population. The low prevalence of hypertension in this population is due to higher than usual upper limit cutoffs for assignment of a hypertensive diagnosis among airmen (170/100 for applicants for second and third-class certification, and only slightly more stringent for class one applicants). More severe hypertensive airman applicants are also excluded from this population due to the type or dosage of medication required for control. Mild diuretics without other derivatives and some beta-blockers in low dosage are currently allowed for hypertension control. Clearly, this excludes many hypertensive applicants requiring larger doses or combination of drugs for effective control.

Heart murmurs, including functional or physiologic murmurs, account for over 16 percent of all heart diseases observed to exist among active airmen.

Reference to Tables I and II indicates that eye diseases are the next most prevalent medical problems among active airmen. While representing a serious threat to air safety if not recognized and treated by adequate correction, most eye pathology is relatively innocuous. Of the 715,858 active airmen as of January 1, 1984, some 45 percent (324,986) required lens correction for some visual deficiency. Of this total, 20,355 are contact lens wearers. Additionally, 4,437 airmen are certified to fly with blindness or absence of an eye (which includes visual acuity worse than 20/200 uncorrected in either eye). Serious incapacitation during flight is possible should corrective lenses become dislocated and temporarily unavailable during a critical phase of flight. Considerable research effort has been and will continue to be devoted to this important area of potentially health-related pilot dysfunction.

Prevalence of abdominal diseases is third in total body system importance. Specific diseases making major contributions include current hernias, history of kidney stones, and uncomplicated ulcers.

Major body system prevalence rates for neuropsychiatric and bone and joint diseases are approximately equal at 14.1 and 12.1 per 1,000 airmen respectively. Within these systems no single disease entity makes a contribution significant enough to deserve separate mention. Both major body systems contain 30 to 40 distinct disease categories, with each making minor contributions totaling the approximate 12-14 per 1,000 rate for the major body system.

The "miscellaneous" category of disease includes endocrinopathies, skin diseases, drug usage by type, allergies, tropical diseases, and general systemic conditions. Nearly one-third of all disease observed in this category was "hay fever". Other major contributors to this category included antihistamine drug usage, asthma, diabetes controlled by diet, and hypothyroidism.

The ten most prevalent diseases observed among active airmen are presented in Table II. Diseases found to increase with age include hypertension, kidney stones, hernia, blindness or absence of an eye, history of neoplasm, and uncomplicated ulcer. Diseases demonstrating a trend of decrease with age included contact lens use, hay fever, and asthma. Heart murmurs were most common among young and older ages with lower prevalence among the middle ages.

These age/disease findings are consistent with expectation except for the decreasing prevalence of hay fever with age, which may be due to underreporting.

Disease is most prevalent among third class (general aviation) airmen and least prevalent among class one and two airmen (professional pilots). Since the professional pilot undergoes a more thorough and rigid examination and is subjected to stricter standards by the FAA as well as employers, one must assume that these results reflect the effects of more thorough early screening out of problem medical cases which results in less subsequent disease among the remaining group. Possibly medical history (which would lead to disease detection) is being masked to a greater extent among the professional category pilots. Certainly the incentive is great, both monetary and otherwise, for the latter hypothesis.

The prevalence findings of this study and previous research efforts involving the airman population or segments thereof are generally similar with respect to major body systems presenting the highest prevalence rates; i.e., cardiovascular, eye, and abdominal (1,2). However, as seen in Figure 2, prevalence rates are higher than those in previous studies for most major body systems partially due to the fact that prevalence, by definition, is an accumulation of disease at a point in time and would be greater in a given population at successive measurements for nonlethal diseases. The second consideration with regard to increased prevalence rates surely has to do with the fact that medical requirements have been relaxed over recent years to allow airmen to continue flying with various medical problems not previously acceptable. A possible additional factor having to do with the increase in prevalence seen in this study has to do with a rather dramatic decrease in population since the previous study. It seems likely that the residual population are more "hard core" aviators, many of whom may have accumulated pathology over the years. Large and statistically significant increases in age specific cardiovascular pathology were observed in comparing this study with the 1980 study. This difference is largely attributable to an increased number of hypertensives in the population resulting from a relaxation of allowable medications and combinations.

Sizeable increases in age specific rates for abdominal pathologies were also observed in this study over the previous study. No single explanation, however, accounts for this latter observation other than that speculated earlier.

SUMMARY

Health findings in the active airman population are generally consistent with those that might be expected in the general U. S. population, except scaled to reflect lower prevalence due to prescreening and problems associated with accurate reporting of symptoms and history by pilots.

Cardiovascular diseases are highest in frequency of occurence among active airmen. As expected, hypertension is the greatest contributor to cardiovascular disease prevalence.

Eye disease is the next most common problem among pilots with some 45 percent of all airmen requiring lens correction for some visual deficiency.

Abdominal disease prevalence is third in total body system importance. Major contributors to the category include current hernia conditions, history of kidney stones, and uncomplicated ulcers.

Overall, disease prevalence is greater among currently certified airmen than among previous groups studied. This increase in prevalence is probably a reflection of more liberal standards more than any other single factor. Through the years the trend has been toward relaxation of medical standards where possible when not resulting in a compromise of air safety.

The greater prevalence of disease observed among general aviation pilots compared to professional pilots likely reflects the impact of stricter standards and examination for professional pilots with some greater masking of disease and history among the professional pilots suspected. With the trend away from airline medical departments, possibly some increased vigilance in examination of professional pilots will be necessary.

TABLE I. PATHOLOGY PREVALENCE AMONG ACTIVE AIRMEN
BY AGE AND MAJOR BODY SYSTEMS
(Rate per 1,000)

			Age (Years)	(B		
Body System	< 30	30–39	67-07	50–59	> 59	Total
Eye	42.9	61.4	56.9	6.49	110.9	44.4
ENT	2.2	5.2	10.0	19.6	40.3	0.6
Respiratory	1.1	2.2	3.2	5.7	8.3	2.9
Cardiovascular	25.9	41.0	72.7	115.6	169.9	59.4
Abdominal (GI, GU, etc.)	13.7	32.0	53,3	73.3	109.0	40.2
Neuropsychiatric	8.5	13.8	18.6	19.0	18.5	14.1
Bones and Joints	3.9	8.6	14.6	24.8	38.6	12.1
Muscles	0.5	1.4	2.2	3.6	5.5	1.8
Miscellaneous	30.6	41.2	48.7	59.1	9.49	43.1

TABLE II. TEN MOST PREVALENT CONDITIONS AMONG ACTIVE AIRMEN

BY AGE

(Rate per 1,000).

:

			Age (Years)			
Disease	< 30	30–39	67-07	50-59	> 59	Total
Hypertension	7.0	17.9	40.2	68.2	87.0	29.4
Wears Contact Lenses	28.6	37.9	23.7	15.3	14.4	27.7
Hay Fever	12.7	16.5	16.2	14.1	10.6	14.6
Kidney Stones	3.4	11.0	18.6	20.2	21.9	12.0
Heart Murmur	11.4	9.3	7.6	8.8	16.8	6.6
Hernia	1.2	4.1	0.6	16.0	27.2	7.0
Blindness or Absence of Eye	2.4	4.9	8.2	10.4	15.5	0.9
History of Neoplasm	1.1	3.3	6.2	14.0	31.4	6.0
Asthma	5.6	6.2	5.1	4.8	4.6	5.5
Uncomplicated Ulcer	2.6	5.1	7.3	8.4	0.6	5.4

CERTIFICATE OF TRUE COPY

I HEREBY CERTIFY that the attached

st of airline pilots granted an exemption or special issuance medical rtificate between the dates of July 1, 1985, and March 31, 1986,

le in the Aeromedical Certification Branch; that I am the legal custodian thereof.

> Signed and dated at Oklahoma City, Oklahoma this _15__day of _April NOVA L. GREEN Comments 1. Bruen Medical Record Technician MACKAGE KERKER SERVICE Aeromedical Certification Branch (Title)

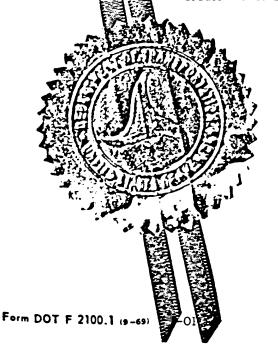
Civil Aeromedical Institute

I HEREBY CERTIFY that NOVA L. GREEN

who signature is now, and the legal todian of the aforesaid records, A foregoing certificate is now, and was, at the time of signing

and that

and credit should be given his certificate as such.



IN WITNESS WHEREOF, I have hereunto subscribed
my name and caused the seal of the Department of
Transportation to be affixed this15
day of, 19_86_
Oklahoma City, Oklahoma Jetitioner's EXHIBIT AUDIE W. DAVIS, M.D.
(Signature) Manager. Aeromedical Certification Branch (Title) Civil Aeromedical Institute
Department of Transportation

FAA AC 73-5735

FEDERAL AVIATION ADMINISTRATION SPECIAL ISSUANCE REPORT

UNITED AIRLINES

PSY. COND. & DRINKING REHOSP. FOR DRINKING Reason Terminated 00/00/00 04/00/85 01/28/86 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 00/00/00 Dt Term NOT VALID FOR PILOT-IN-COMMAND VALID FOR PLT ENG DUTIES ONLY CI Operator Limitations ALCOHOLISM/GLUCOSE INTOLERANCE CAD REY. ANGIOPLASTY & CABG ALCOHULISM; BIPOLAR DISEASE ALCOHULISM 04/09/80 AUKTIC VALVE REPLACEMENT MI & HYPERTENSION ALCOHOLISM ALCOHOLISM ALCOHOLISM **ALCOHOLISM** ALCOHOLISM ALCOHOLISM ALCOHOLISM ALCUHULLSM ALCOHOLISM ALCOHOLISM ALCOHOLISM ALCOHOLISM ALCOHOLISH ALCOHOLISM ALCOHOLISM ALCOHOLISM ALCOHOLISH ALCOHOLISH MI & CABG HI & CABG HI & CAD Defects CABG Issue Dt 01/14/86 00/57/00 08/22/85 02/10/86 01/54/60 07/11/85 03/11/80 08/12/85 **U9/17/85** 10/18/05 09/00/85 08/14/85 03/01/06 98/97/10 11/01/85 08/115/85 09/23/85 11/22/85 98/80/TO 01/13/86 03/01/80 02/10/86 08/01/85 59/52/60 07/24/85 08/22/85 09/06/85 09/20/85 09/00/85 10/04/33 87/90/01 03/21/40 67/57/71 04/03/33 03/24/35 06/11/00 06/21/20 02/11/34 12/18/43 DI/14/34 16/91/01 12/02/39 96/91/90 95/6T/LO 08/00/00 08/60/60 10/10/38 11/22/37 10/01/40 **T 7 / T O / 7 O** 07/90/50 62/50/00 06/28/35 03/23/36 85/ET/50 01/23/37 67/17//0 11/14/39 DOB PAGE



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FEDERAL AVIATION ADMINISTRATION SPECIAL ISSUANCE REPORT 04/09/86

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Reason Terminated		RESUMED DRINKING PREV. HELD 3RD CLASS		PREV. HELD 3RD CLASS PREV. HELD 3RD CLASS	RESUMED DRINKING
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FEDERAL AVIATION ADMINISTRATION SPECIAL ISSUANCE REPORT 04/09/86

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FEDERAL AVIATION ADMINISTRATION SPECIAL ISSUANCE REPORT 04/09/86

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PAGE	# On	16/00/00	12/09/40	08/04/31	02/11/35	07/119/34	67/57/71	17/10/70	08/00/90	07/27/48	09/03/30	01/11/38	14/20/00	11/00/11	02/25/33	66/17/70	10/10/38	10/15/39	06/01/00	06/77/60	14//1/70	11/00/38

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U8/U5/85 U1/17/86 11/18/85	01/00/80	09/27/05 03/18/80	01/21/80	02/10/86	U2/14/80 U3/11/40	09/20/65	11/04/85	50/12/60	11/27/85	09/20/85	09/77/80	08/77/80
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REMARKS

AERU AERUHECH AIRLINES

AHEX AERUHEXICO

ACA AIR CALLFURNIA

AIR CANADA

A C A

AIR CULUKADO

AFL AIR FLOKIDA

MIAF AIR FURCE, AIR RESERVE, AND AIR NATIONAL GUARD

AFK AIN FRANCE

AIK HAWALL

AHA ANB ANB

AIR ILLINOIS

AIR NEBKASKA

AIK NEVADA

AIK NEW ENGLAND

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AIRL AIRCRAFF INDUSTRY

INDUSTRY ENGAGED IN AIRCRAFT PRODUCTION; AIRCRAFT

CORPORATION, AIRPLANE COMPANY OR CORPORATION, ETC.

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AIKLIFT ASSOCIATES 1,117

ALASKA AIRLINES ASA

ALLEGHENY COMMUTER AIRLINES VVV

ALOHA AIKLINES TPA

AMERICAN AIRLINES VVF

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EMPLOYER CODE LISTING

PAGE

REMARKS

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REPORT DATE U4/U9/86

APOLLO AIRWAYS A PO

AKIIY, KESEKVE, AND NATIONAL GUARD HIAH

ASPEN ALKWAYS SPEN ATLANTIC AIRLINES ATL

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BIG SKY AIRLINES BSKA

BRANIFF INT'L AIKLINES

BKA BKITISH AIKWAYS

BKIT BKITT AIKWAYS

CAPA CAPITOL AIR SERVICE

PITA CAPITOL INTERNATIONAL AIRWAYS

CBIA CAKIBBEAN INTERNATIONAL AIRLINES

CASC CASCADE AIRLINES

CATA CATALINA AIKWAYS

CATS CATSAILL AIKWAYS

CEME CENTURY AIRLINES

CHIN CHINA AIRLINES

HICC COAST GUARD

CUMA CUMAIR, INC.

CAL CONTINENTAL AIRLINES

COPP COPPER STATE AIRLINES

DAL DELTA AIRLINES (NORTHEAST)

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Jut

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EKIE AIKWAYS

FAA FEDERAL AVLATION ADHINISTRATION

BASE FIXED BASE OPERATION

FLA FLUKIUA AIKLINES

FILA FLYING TIGER LINES (SEABOARD WORLD)

FAL FROMTLER AIRLINES

COLD COLDEN STATE AIKLINES

COMM COLDEN WEST AIRLINES

GOVE GOVERHIEMS, UTHER THAN FAM OR MILITARY

GLKA GREAT LAKES AIKLINES

HAL HAWALLAN ALKLINES

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INDU INDUSTRY

ALII ALH - ROYAL DUTCH AIRLINES

JAPAN AIKLINES

JAL

NUAN KUDIAK WESTERM ALASKA AIRLINES

NUKA KUREAM AIKLINES

LAN LAKER AIRWAYS

BASED IN NEW YORK STATE

AIRPORT OPERATORS, MANAGERS, AND AIRPORT FLYING SCHOOLS

INCLUDES STATE AND LOCAL GOVERNMENT (EXCEPT FIXED BASE OPERATORS) ANY INDUSTRY OTHER THAN AIRCRAFT INDUSTRY

PAGE

EHPLOYER CODE LISTING EPUKT DATE U4/U9/80

LUFINANSA - GERMAN AIKLINES HAKINES AND NAVY, RESERVE

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LOT - POLISH AIRLINES

LAS VEGAS AIRLINES

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HEIRUFLICHT AIRLINES

HLIKUPLEX AIRLINES HYA

HEALCANA DE AVIACION HIDSTATE AIRLINES HEAL 401

HIDWAY AIKLINES IN

HISSISSIPPI VALLEY AIRLINES 11155

HUHE NUKTHERN ALKLINES 117u

HATTUNAL AEKUHAUTICS AND SPACE ADHINISTRATION HADA

REMARKS

PRIMAIR-PUERTO RICO INTERNATIONAL AIRLINES

WIN.

UNNINS AIRWAYS

PAH AHEKICAN WOKLD AIKWAYS (NATIONAL)

PLEDHONY AVIATION

PIUNEER AIKWAYS

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PACIFIC NATIONAL AIRWAYS
PACIFIC SOUTHWEST AIRLINES

UZAKK AIKLINES PALIFIC CAL AIK PACIFIC WESTERN AIRLINES

(NON-SCHEDULED AIRLINES, CHARTER SERVICE, FOREIGN MILITARY, Cargo/Freight Operations

MUNTHWEST UNIENT AIRLINES (NWA & OKIA)

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REMAKKS

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USA U.S. AIK

UAL UNITED AIKLINES

WAL WESTERN AIRLINES

WLM WILM AIR ALASKA (WLA & AIRA)

WUKLU AIRWAYS MKLD

CANTUP ALKWAYS N W 7

CERTIFICATE OF TRUE COPY

I HEREBY CERTIFY that the attached of the original

list airline pilots granted an exemption or special issuance medical cert te between the dates of January 1, 1982, and July 31, 1985.

on file de Aeromedical Certification Branch; am the legal custodian thereof.

Signed and dated at Oklahoma City, Oklahoma

this 16th day of

NOVA L. GREEN by Medical Record Technician

Sometry interest x Reconsider x Secretarionx Aeromedical Certification Branch (Title)

Civil Aeromedical Institute

I HEREBY CERTIFY that NOVA L. GREEN

going certificate is now, and was, at the time of signing who signed the legal

and that full credit should be given his certificate as such.

IN WITNESS WHEREOF, I have hereunto subscribed my name and caused the seal of the Department of Transportation to be affixed this ____16th August ____,_19__85 Oklahoma City, Oklahoma PETITIONER'S **EXHIBIT**

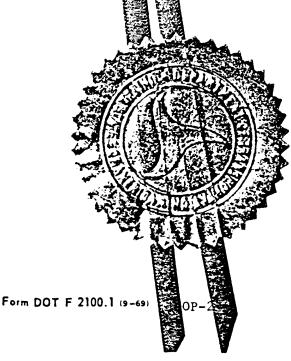
(Signature)

Manager, Aeromedical Certification Branch (Title)

Civil Aeromedical Institute

Department of Transportation

FAA AC 73-5735



AMETARY 1, 1982, through JULY 31, 1985

FOLLOWUP REPORTS REQUIRED: at 6-month or 12-month intervals

MI(myocardial infarction); CAD(coronary artery disease); CABG(coronary artery bypass graft surgery; PTCA(percutaneous transluminal coronary angioplasty)

Reports of cardiovascular examinations by a specialist in cardiology or internal medicine including medical history as to symptoms or treatment referable to the cardiovascular system; general physical examination to include blood pressure, weight, funduscopic, and cardiac examination; report of blood cholesterol and triglycerides; electrocardiograms taken at rest and with a maximal (treadmill or bicycle ergometer) stress test with appropriate blood pressure responses noted. All resting and exercise electrocardiographic tracings must be furnished.

Other tests that may be required: Nuclear cardiology studies including an exercise/rest thallium 201 myocardial perfusion scan and data on left ventricle function (wall motion and ejection fraction by either gated blood pool scanning (stress MUGA) or by first pass technetium); echocardiogram; 24-hour Holter monitor test.

Alcoholism: monitoring reports at monthly, quarterly, 6-month or 12-month intervals

- (1) Monthly reports from airman's flight operations supervisor and union representative (ALPA or APA or F.E.I.A.).
- (2) Quarterly reports from the aftercare counselor.
- (3) 6-month or annual psychiatric reports from a designated psychiatrist.
- (4) Blood alcohol and liver function tests as deemed necessary by the monitor.
- (5) Annual electrocardiogram tracings required of airmen at age 40.

These reports are collected by a designated physician monitor and presented to the FAA at 6-month intervals. The requirement for followup reports remains in effect for a minimum of 24 months.

<u>Neurological conditions</u>: Neurological evaluation, by a neurologist. Depending upon the airman's history, we may require an electroencephalogram, CAT scan, or Doppler spectral analysis.

<u>Psychiatric conditions</u>: Report of psychiatric interview at 6-month or 12-month intervals. Repeat psychological testing may be required in some circumstances.

Followup reports are determined on an individual basis and depend upon the airman's medical hisotry and present condition.

NEUROLOGICAL CONDITIONS

DATE	OF BIRTH	DATE OF ISSUANCE	!	MEDICAL CLASSCONDITION	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE
1. 10	10-9-28	6-10-85	1		None			American Airlines
2. 9-	-8-33	9-12-84	7	Seizure & su due to Ralionire	R Sulf. Malf. None			American Airlines
3. 10	0-28-24	2-28-85	2	Carotid art. disease req.	*(1)			American Airlines
4. 10	10-20-34	1-12-83		R. carotid pccf: cere- braf bypass	None			Braniff Airlines
5. 7-	7-13-24	6-23-83	2	Brain stem transient ischemic att.	. *(1)			Braniff Airlines
6. 5-	-25-42	12-27-83	-	Cerebral infarction with hemorrhage	None			Continental Airlines
7. 8-	-1-32	11-2-82	1	Cerebral dysfunction	None			Eastern Airlines
8. 6-	6-19-26	2-13-85	н	Transjent globaj amnesia	None			Eastern Airlines
9. 2-	2-2-44	12-13-84		Recurrent Syncopal att req. med.	att. None			Frontier Airlines
10. 1		4÷8-85	F-1 .	L. carotid endarterect.	None			N. W. Airlines
11. 1	12-25-28	10-14-82		Selzure of unknown etiology	None			Pan Am
12. 9	1-12-38	8-28-84	н	Head injury regulfing craniotomy	None			Republic Airlines
13. 1	2-4-42	7-8-83	2	Hydrocephalus requiring a	s *(2)	7-16-84	Upgraded to Class I No opr. limits.	Southwest Airlines
14. 2	2-13-44	4-4-84	2	Head injury requiring craniotomy	*(2)			Transamerica Airlines
15. 4	12-28-28	3-7-85	1	Cerebral inf arction and hypertension	None			T.W.A,
16. 4	-16-29	4-29-85	1	Vascular mal Formation re Surgery	ar mal- ion req. V		·	T. W. A.
17. 5	5-22-34	6-14-85	1	Transient ischemic attack	None			United Airlines
18. 4	4-16-43	2-19-85	1	Cerebrovas. accident	None			United Airlines
•								
Operational	fonal limitions:	(1) Valid	d for	Flight Engine	Engineer Duties Only.	Only.		

(1) Valid for Flight Engineer Duties Only.(2) Not Valid For Pilot-In-Command.

PSYCHIATRIC CONDITIONS

	es									les				S.		
AIRLINE	Americal Airlines	Britt Airways	Delta Airlines	Delta Airlines	Metro Airlines	Metro Airlines	N. W. Airlines	N. W. Airlines	Pan Am	Republic Airlines	Saudi Airlines	T.W.A.	United Airlines	Western Airlines		
REASON	4-19-85 Upgraded to Class I	-					Rehospitalization for adverse change in cond.									
DATE TERM.	4-19-85						12-7-82									
OPR. LIMITS.	None	None	None	e None	None	None	None	None	None	None	None	None	None	None		
MEDICAL CLASSCONDITION	Drug abuse & trafficing	Chronic Depression	Phobic Condition	Alcohol abuse and situat ional react.		Psychosis & major dep.	Emotional problems	Criminal sexual conduct	Acute sit- uational reaction	Personality disorder	Nervous disorder	Depressive episode	Alcohol abuse Situation al depress.	Depression		
ŀ	2	1	н	1	1	2	1	1	1	1	1	2	1	1		
DATE OF ISSUANCE	9-13-82	9-6-82	8-10-82	1-9-85	5-9-84	4-16-85	8-16-82	10-28-82	10-19-83	6-6-83	1-25-85	4-12-84	1-6-84	12-9-83		
DATE OF BIRTH	1. 4-9-48	2. 1-31-30	3. 10-30-31	4. 1-23-40	5. 12-31-47	6. 1-30-49	7. 6-11-53	8. 9-19-35	9. 9-30-31	10. 2-9-41	11. 6-18-43	12. 7-20-39	13. 10-23-40	14. 10-2-43		

Republic Airlines AIRLINE T.W.A. 7-16-83 Adverse change in cond. REASON DATE TERM. Pancreatic carcinoma Sylfingalin None OPR. LIMITS. Carcinoma of prostate red None Surgery DATE OF MEDICAL ISSUANCE CLASSCONDITION 7 7 6-29-83 3-8-85 MISCELLANEOUS CONDITIONS DATE OF BIRTH 2. 2-27-28 8-2-49

	ines	ines	S	səu	nes				တ	S	Airlines	S		es	es	89	es		
AIRLINE	American Airlines	American Airlines	Delta Airlines	Eastern Airlines	Eastern Airlines	Pan Am	Pan Am	Pan Am	N. W. Airlines	N. W. Airlines	Republic Airl	Saudi Airlines	T.W.A.	United Airlines	United Airlines	United Airlines	United Airlines	U.S. Air	
REASON														•		Upgraded to Class I; No opr. limitations			
DATE TERM.																4-2-85			
OPR. LIMITS.	None	*(1)	None	None	None	*(1)	None	*(1)	None	*(2)	None	None	*(1)	None	None	*(1)	*(1)	None	
MEDICAL	MI & CAD	M.I.	M.I.	M.I.	M.I.	M.I.	M.I.	M.I.& apical aheurysm	M.I. and hypertension	M.I.	M.I. & CAD	M.I.	M.I.	M.I.	M.I.	M.I.	M.I.	M.I.	
11 1	1	2	1	1	1	2	2	2	1	2	1	2	2	2	н	2	2	2	
DATE OF ISSUANCE	3-14-85	5-3-85	11–16–84	5-21-85	5-18-84	12-23-82	3-7-85	3-19-84	12-22-82	6-3-83	4-7-83	3-29-82	9-30-82	6-25-85	7-17-85	1-10-83	6-25-82	2-27-85	
DATE OF BIRTH	1-8-34	2. 6-9-24	3. 11-10-34	4. 7-19-33	5. 7-19-34	6. 9-19-33	7. 11-9-37	8. 9-29-14	9. 6-6-36	10. 2-12-38	11. 2-4-34	12. 11-24-40	13. 11-29-38	14. 9-16-37	15. 6-21-26	16. 2-19-32	17. 9-4-25	18. 3-10-25	

 Valid For Flight Engineer Duties Only.
 Not Valid For Pilot-In-Command. Operational limitations:

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DATE OF BIRTH	DATE OF ISSUANCE	CLASS	MEDICAL CLASSCONDITION	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE	
20. 10-12-28	8-2-82	2		*(1)			Pan Am	
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CORONARY ARTERY BYPASS GRAFT SURGERY AND ANGIOPLASTY

DATE OF BIRTH	DATE OF ISSUANCE	CL.	MEDICAL CLASSCONDITION	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE
1. 5-30-34	12-28-84	1	CAD & PTCA	None			Alaskan Airlines
2. 10-2-38	11-9-82	2	CAD & CABG	None			Alaskan Airlines
3. 7-24-40	7-10-85	н	CAD & CABG	None			American Airlines
4. 7-30-35	6-21-85	H	CAD & PTCA	None			American Airlines
5. 1-27-33	3-8-85		CAD & PTCA	Nơne			American Airlines
6. 6-7-29	3-15-85	1	M.I. & CABG	None			American Airlines
7. 5-15-23	6-22-82	2	CAD & CABG	None			American Airlines
8. 6-1-30	12-22-82	1	CAD & CABG	None			Delta Airlines
9. 10-31-37	1-9-85	1	CAD & CABG	None			Delta Airlines
10. 10-15-40	. 2-27-85	1	M.I. & CABG	None			Delta Airlines
11. 2-12-30	11-1-82	1	CAD & CABG	None			Delta Airlines
12. 5-7-34	9-28-82	1	CAD & CABG	None			Delta Airlines
13. 4-11-35	8-20-82	2	CAD & CABG	None			Delta Airlines
14. 11-27-31	7-25-84	2	CAD & CABG	*(1)			Evergreen Int'1. Airline
15. 5-23-41	8-30-82	1	CAD & CABG	None			Flying Tiger Airlines
16. 12-7-28	11-23-82	1	CAD & CABG	None			Frontier Airlines
17. 8-16-26	2-16-84	2	CAD & CABG	*(3)			Great Northern Airline
18. 11-3-42	12-13-83	П	M.I. & PTCA	None			N.W. Airlines
19. 12-1-28	6-26-84	н	CAD & CABG	None			Pan Am
-							

100	CORONARY ARTERY BYPASS GRAFT SURGERY AND ANGIOPLASTY	GRAFT SUR	GERY A	AND ANGIOPLAS	TY			
l d	DATE OF BIRTH	DATE OF ISSUANCE	1	MEDICAL	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE
20.	6-7-31	4-25-83	11	CAD & CABG	*(1)	1-4-85	Upgraded to Class I; No opr. limitations	Pan Am
21.	, 9-1-39	12-27-82	2	CAD & CABG	*(2)	5-6-85	Upgraded to Class I; No opr. limitations	Pan Am
22.	9-18-39	8-20-82	-1	CAD & CABG	None			Pan Am
23.	. 3-6-33	1-3-85	2	CAD & CABG	*(1)			Pan Am
24.	, 11-6-25	2-10-82	2	CAD & CABG	*(1)			Pan Am
25.	, 8-19-31	2-4-85	2	CAD & CABG	*(1)	3-15-85	Angina symptoms	Pan Am
26.	5-9-41	7-26-85	1	M.I. & CABG	None			Piedmont Airlines
27.	, 4-26-28	3-22-85	1	M.I. & CABG	None			Piedmont Airlines
28.	, 2-25-33	5-29-85	1	M.I. & CABG	None			Republic Airlines
29.	. 10–19–29	3-19-82	1	CAD & CABG	None			Republic Airlines
30.	, 2-20-28	11-15-83	2	M.I. & CABG	*(2)			Republic Airlines
31.	6-10-46	1-15-85	1	CAD & CABG	None		•	Southwest Airlines
32.	1-4-26	6-11-85	1	CAD & PTCA	None			T.W.A.
33.	. 2-12-21	6-11-85	2	CAD & PTCA	*(1)			T.W.A.
34.	2-20-42	6-4-85	1	CAD & PTCA	None			T.W.A.
35.	1-10-24	6-4-85	1	CAD & CABG	None		. •	T.W.A.
36.	. 12-3-34	2-22-82	1	CAD & CABG	None			T.W.A.
37.	3-24-39	12-23-83	2	CAD & CABG	*(2)			T.W.A.
38.	8-26-37	6-28-84	2	CAD & PTCA	None	7-11-85	7-11-85 Gooung O. I	T.W.A.
r								

CORONARY ARTERY BYPASS GRAF SURGERY AND ANGIOPLASTY	GRAF SURG	ERY AI	ND ANGIOPLAST	X.			•
DATE OF BIRTH	DATE OF ISSUANCE	[1	MEDICAL CLASSCONDITION	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE
39. 2-1-34	5-19-83	2	M.I. & PTCA	*(2)	12-28-84	Upgraded to Class 1; No opr. limitations	United Airlines
40. 6-21-32	7-24-78	2	CAD & CABG	*(2)	4-29-85	Upgraded to Class 1; No opr. limitations	United Airlines
41, 6-19-36	2-7-85	1	CAD & PTCA	None			United Airlines
42. 10-5-38	2-5-85	1	CAD & CABG	None			United Airlines
43. 4-15-29	12-27-83	2	CAB(*(1)	6-24-85	Issued unlimited second-class	United Airlines
44. 4-20-36	8-19-83	2	CAD, CABG & Hypertension	*(2)			United Airlines
45. 3-21-32	7-21-83	2	CAD & CABG	*(1)			United Airlines
46. 4-16-32	2-12-85	1	CAD & CABG	None			U.S. Air
47. 2-6-41	6-4-85	1	CAD & CABG	None			U.S. Air
48. 9-17-31	5-7-85	5	M.I. & PTCA	*(1)			World Airways
49. 5-19-22	6-21-83	2	CAD & CABG	*(1)	4-8-85	Upgraded to Class 1; No opr. limitations	World Airways
50. 9-4-25	5-15-85	2	CAD & CABG	None		·	World Airways
							,
Operational limitations	(1)	Valid For Not Valid	r Flight Eng d For Pilot-	Engineer Duties Only. ot-In-Command.	es Only.	·	
	(3) Mu	Must Be pilot pr	Accompanied ivileges.	by a Quali	fied Pilc	by a Qualified Pilot when Carrying Passengers, except for private	rs, except for private
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CARDIOVASCULAR CONDITIONS
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OTHER CARDIOVASCULAR CONDITIONS	NDITIONS							
DATE OF BIRTH	DATE OF ISSUANCE	1 11	MEDICAL CLASSCONDITION	OPR. LINITS.	DATE TERM.	REASON	AIRLINE	
1. 9-18-21	1-12-83	2	CAD and angina	None			American Airlines	j
2. 6-20-22	1-24-85	2	Arrhythmia 8 abn. EKGs	None			American Airlines	
3. 3-1-34	6-19-84	2	Ψ,	*(2)			Air B.V.I. Islands)	
4. 11-14-39	7-20-83	1	Abnormal EKG and CAD	None '		~	Britt Airlines	
5. 6-21-26	3-22-85	1	י בי	None			Delta Airlines	
6. 12-30-31	6-25-85	1	Angina & CAD	None			Delta Airlines	
7. 7-5-35	1-6-84	н		None			Eastern Airlines	
8. 4-17-43	1-14-85	1	Aortic valve replacement	None			Horizon Airlines	
9. 9-2-33	3-30-84	П		None			N.W. Airlines	
10. 10-21-29	12-26-84	5	Coronary art ery disease	*(2)			Scenic Airlines	
11. 3-28-32	1-24-85	2	CAD and hypertension	*(1)	7-17-85	Issued unlimited second-class	T.W.A.	
12. 8-22-22	5-9-5	2	ry art angim	a None			United Airlines	
13. 3-12-24	10-27-83	П		None			United Airlines	
14. 11-20-29	10-24-84	1	Mitral valve pro., LBBB	None			United Airlines	
15. 3-14-28	1-22-82	1	Aortic valve replacement	None			United Airlines	
16. 7-12-30	5-29-85	-1	Angina and CAD	None			U.S. Air	
17. 3-16-36	6-29-83	2	CAD & LBBB	None	8-16-84	Angina symptoms	Western Airlines	
Operational limitations	(1)	Valid for Not Valid	Valid for Flight Engineer Duties Only Not Valid for Pilot-In-Command.	ineer Duti In-Command	es Only.			
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AIRLINE	Air Florida	Air Georgia	Air Wisconsin	Air Wisconsin	American Airlines	11	Ξ	и	п	п	u	=	=	п	Ε	=	=	11	=
REASON		,								M.I.		•				·	,		
DATE TERM.										10-7-83									
OPR. LIMITS.	None	=	=	11	=	E	=	=	11	=	=	=	=	=	11	11			=
MEDICAL	Alcoholism	ı	=	=	ı	ı	Ξ	E	11	ı	Ξ	=	=	и	H	11	11	=	:
CLASS	1	1	1	П	1	1		1	1	2	1	н	1	1	1	1	1	1	1
DATE OF ISSUANCE	10-15-82	2-11-85	12-22-82	8-9-8	11-4-82	5-28-85	7-2-85	3-16-84	5-25-84	7-19-82	5-29-85	2-2-83	2-27-84	11-28-84	3-5-82	2-20-85	7-27-82	3-22-85	7-27-82
DATE OF BIRTH	5-20-51	2. 10-29-39	3. 1-21-47	10-12-42	5. 9-9-44	6. 11-29-34	7. 12-8-38	8. 3-8-30	9. 1-5-26	10. 8-18-30	11. 9-10-35	12. 4-14-33	13. 11-1-28	14. 9-25-28	15. 5-7-36	16. 2-18-32	17. 12-19-37	18. 4-14-30	19, 11-29-36

	lirlines	•													Astro-Wing Airlines	S.E. Airlines	Airlines		
AIRLINE	American Airlines	1	11	ı	Ξ	=	=	1	н	11	=		=	11	Astro-Wing	Atlantic 8	Braniff A	П	
REASON		•					Resumed drinking					٠							
DATE TERM.							4-16-84												
OPR. LIMITS.	None	=	11	=	Ξ	=	=	=	11	11	11			н	11	11	11		
MEDICAL CLASSCONDITION	Alcoholism		Alcoholism & coxic psych.	Alcoholism	ε	=	=		11		ı.	=	=	11	11	1	=	.	
CLASS	1	1	1	1	1	П	П	1	1	rH .	1	1	1	1	1	1	П	1	
DATE OF ISSUANCE	2-27-85	7-28-82	12-1-83	11-15-83	9-18-84	6-20-84	9-8-83	10-26-83	9-18-84	10-15-82	1-31-85	5-17-84	4-5-82	2-17-84	10-15-82	2-8-85	2-26-82	5-28-85	
OF BIRTH	7-23-27	3-17-33	2-16-34	11-11-26	5-20-40	4-4-37	6-8-41	9-11-24	11-30-36	2-21-33	4-12-39	4-22-32	6-9-29	7-8-24	9-6-45	6-16-53	12-9-23	10-2-36	
DATE	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.	33.	34.	35.	36.	37.	

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AIRLINE	Cascade Airways	=	Continental Airlines	=		=	=	11	11	11	11	11	11	11	Delta Airlines	П	11	1	=
REASON		,							-										
DATE TERM.																			
OPR. LIMITS.	None	=	=	=	=	11	=	=	2	=	=	:	-	=	=	=	=	=	=
MEDICAL	Alcoholism	ε	Ε	=	=	=		п	=		=		Ξ	Ε	=	=	=	=	=
CLASS	н	н	П	1	1	FI	н		П	н.	н	-	г	1	1	П	1	1	
DATE OF ISSUANCE	7-25-83	9-23-83	3-23-83	7-6-83	6-30-83	7-1-83	7-14-82	3-2-83	3-29-82	3-25-83	8-13-82	10-22-84	5-18-83	8-24-83	7-2-85	3-21-85	4-23-85	4-11-85	1-24-85
ОҒ ВІЕТН	9-1-43	6-27-48	1-31-37	2-22-40	6-4-43	4-14-39	5-12-39	10-19-39	9-11-41	9-3-42	5-28-40	5-18-40	11-18-41	12-23-26	7-26-36	5-31-32	6-19-34	3-10-36	8-29-38
DATE	39.	40.	41.	42.	43.	44.	45.	46.	47.	48.	49.	50.	51.	52.	53.	54.	55.	56.	57.

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DATE OF BIRTH	DATE OF ISSUANCE		MEDICAL	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE
58. 12-21-37	4-26-85	1	Alcoholism	None			Delta Airlines
59. 11-12-38	4-11-85	1	Ξ	11			
60. 3-13-39	5-25-84	1	=	=			=
61. 3-3-41	5-11-84	1	=	:			1
62. 4-27-39	12-21-83	1	п	u			
63. 12-12-37	7-25-83	1	11				11
64. 4-13-39	2-9-84	1	Ξ	Ξ			11
65. 10-2-36	7-20-84	1	=				=
66. 5-22-39	6-26-81	1	1	11	8-4-83	Denied due to CAD & FICA Issued Cl. 1, 4-8-85	=
67. 1-22-36	6-21-83	1	=	:			=
68. 3-14-26	3-4-83	1	Alcoholism Cancer of Iarynx.	=			=
69. 9-21-24	9-1-83	1	Alcoholism	=		•	11
70. 10-20-39	9-2-83	1	=	=			=
71. 8-1-41	3-9-84	1	=	=			1
72. 5-25-39	11-3-83	1	=	=			Ξ
73. 3-30-37	3-2-84	н	=	11			Ξ
74. 7-14-40	4-15-84	1	=	11			=
75. 3-23-38	3-9-84	1	ı	11			=
76. 12-21-31	3-25-83	п	=	:			=
			Assessment				

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77. 1-78. 4-79. 6-		ISSUANCE	CLASS	CLASSCONDITION	LIMITS.	TERM.	REASON	AIRLINE
I	1-9-35	7-25-84	н	Alcoholism	None			Delta Airlines
	4-6-43	4-15-84	1	=				=
	6-18-40	10-28-83	1	=	=			=
80.	2-27-38	3-1-83	1	Alcoholism & seizures	:			=
81. 3-	3-2-37	8-18-83	П	Alcoholism	Ξ			=
82. 3-	3-23-36	8-24-83	7		=			12
83. 3-	3-21-36	11-4-82	٦	E	=			11
84. 6-	6-5-26	2-16-84	1	=	u			14
85. 2-	2-15-36	2-16-84	-	:				=
86. 8-2	8-20-42	8-29-84	H.		11		·	=
87. 11-	11-10-42	5-13-83	7	=	=			Ξ
88. 10-	10-27-47	2-24-84	1	=	=			=
89. 11-	11-26-44	9-18-84	1	=	=			
90. 11-	11-15-32	9-16-83	н	11	=			=
91. 5-6	2-6-40	3-15-85	П	=	11			Eastern Airlines
92. 1-3	1-3-31	4-26-85	-1	=	=		·	=
93. 12-	12-29-33	4-29-85		=	Ξ			1
94. 8-1	8-10-37	4-26-85	П	=	=			1
95. 6-2	6-23-35	7-1-85	1 d	Alcoholism depression	=			=

													,						
AIRLINE	Eastern Airlines	=	11	11	=	=	=	-	=	=	=		=	85	=	#	=	=	=
REASON		,			Resumed drinking					Resumed drinking			Deceased, air crash	Redwmed dfinking: 15894ed non-comply. Issued 2221,485		·			
DATE TERM.					12-7-84					5-31-85			1-1-85	4-15-82					
OFR. LIMITS.	None	=	=	=	11	:	11	ı	=		=	=	=	=	11	11	11		=
		=	11	Alcoholism depression	Alcoholism	=	=		Alcoholism & drug abuse	Alcoholism_	=	Ξ	=	=	u	11	=	п	=
CLASS	1	1	1	1	1	1	П	1	1	1	Н	1	1	1	1	1	1	1	-
DATE OF ISSUANCE	4-8-85	4-11-85	4-12-84	12-21-83	3-23-83	8-23-84	8-54-84	10-21-84	1-9-85	1-23-85	4-11-85	4-1-85	9-19-84	3-5-82	78-6-7	2-16-84	7-17-84	2-28-85	5-19-83
DATE OF BIRTH	96. 4-9-44	97. 8-1-37	98. 4-2-39		100. 1-8-30	101. 6-6-33	102. 6-25-37	103. 9-12-35	104. 5-23-44	105. 12-14-49	106. 4-2-43	107. 10-25-44	108. 8-17-32	109. 7-24-32	110. 6-10-42	111. 6-27-35	112. 8-28-46	113. 9-28-43	114 10-20-34

DATE OF BIRTH	DATE OF ISSUANCE	- 11	MEDICAL CLASSCONDITION	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE
115. 10-23-43	3-20-84	н	Alcoholism	None			Eastern Airlines
116. 4-17-42	2-8-84	1				,	
117. 4-29-34	2-16-83	1	Alcoholism & cocaine	11			ı
118. 7-1-38	5-17-83	н	Alcoholism				-
119. 5-31-32	4-23-84	1	ŧ	:			п
120. 3-28-30	7-27-82	П	=	=			1
121. 7-10-45	7-2-85	П	=	=			Flying Tiger Airlines
122. 4-3-37	6-29-84	1	u .				
123. 5-8-35	7-8-83	1	=				11
124. 9-7-41	9-26-83	1	=	=			=
125. 5-23-36	3-10-83	1	=				c c
126. 10-1-41	10-19-83	Н					н
127. 11-5-44	1-22-82	1			12-28-82	Emotional problems	, n
128. 6-9-36	2-5-85	7	11		3-28-85	Resumed drinking	п
129. 5-4-36	1-8-85	н	=				11
130. 7-19-30	4-5-83	H	=	E		·	=
131. 9-15-27	4-19-83	1	=	=	11-14-83	Cardiac condition	Hawaijan Airlines
132. 2-5-46	5-5-83	1	=	=			Metro Airlines
133. 10-13-47	1-2-85	н	=	:			Midway Airlines

DATE	E OF BIRTH	DATE OF ISSUANCE	1 19	MEDICAL CLASSCONDITION	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE
134.	11-20-43	8-17-83	1	Alcoholism	None			N.W. Airlines
135.	8-1-42	1-10-84	1	=	=		·	
136.	4-7-37	1-28-83	П	=	Ξ			Ξ
137.	2-20-24	3-25-83	1	=	11			Ozark Airlines
138.	8-31-40	1-19-84	1	11	11			=
139.	9-17-22	3-29-82	1	=				Ozark Airlines
140.	11-4-38	8-1-83	П		11			Pacific S.W. Airlines
141.	9-12-44	7-26-84	П	u				=
142.	9-4-37	12-19-83	1	Alcoholism. intercrania hemorrhage	=			
143.	6-19-40	4-11-85	п	Alcoholism	=			Pan American
144.	4-8-32	6-28-85	2	=				-
145.	6-9-35	4-29-85	1	=	:			Ε
146.	9-9-29	6-17-82	2	:				Ξ
147.	10-22-25	7-11-84	2	п	=			=
148.	3-21-38	7-6-83	н	=	11			Ξ
149.	8-8-41	7-14-82	1	11	11		•	Ξ
150.	3-16-36	1-25-84	1	н				12
151.	10-11-36	1-12-83	1	t.	11			П
152.	9-4-27	10-15-82	П	=	=			1

DATE OF BIRTH	DATE OF ISSUANCE	CLASS	MEDICAL	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE
153. 10-12-32	1-16-84	1	Alcoholism	None			Pan American
154. 1-22-44	7-2-84	1	Ξ	:			п
155. 12-11-37	7-19-84	1	=	H			П
156. 10-27-43	3-11-83	1	11	11			-
157. 10-9-36	7-20-84	Н	11	11			Ξ
158. 12-23-35	6-30-83	1	=	=			=
159. 12-18-37	3-5-82	1	=	=			-
160, 10-30-38	7-27-82	1	=	=			п
161. 11-23-37	8-6-82	П	=	:			11
162, 4-29-35	11-7-84	П.	=	=			н
163. 3-10-38	11-15-8		=	=			н
164. 2-28-39	1-24-83	П	=	=		Suicide 11-83	=
165. 10-30-38	8-16-82	FT	=	11			Ξ
166. 1-12-32	3-9-83	1	=	=		-	П
167. 8-8-37	3-25-83	н	=	=			11
168. 9-27-31	1-12-83	П	=	=			П
169. 10-3-41	12-12-84	1	=	=			Piedmont Airlines
170. 2-4-39	9-6-83	-	=	=			Ξ.
171. 8-10-42	8-1-84	-	=	=			Н .

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CLASSCONDITION LINITS. CLASSCONDITION LINITS.		חאדנת		MEDICAL.	OPR.	DATE		
Decensionality Personality Personality Decensionality Decensiona	ISSUANCE	5 8	CLASS	CONDITION		'	REASON	AIRLINE
1 Alcoholism "	2-7-85			Personality disorder &	None			Piedmont Airlines
1 Alcoholism " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 2 " " 1 " " 2 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 "	1-31-85	2		Nypertension diabetes alcoholism				-
1 " " "	4-12-84	71	1	Alcoholism	:			Republic Airlines
1 " " "	5-2-83		1	=	=			11
1	3-17-82	22	П	=	=			11
2 1 " " "	4-6-83		1	=	=			1
82 1 " " " "	3-29-82	22	1	и	:			=
3 1 " " 4 1 " " 4 1 " " 5 1 " " 4 1 " " 4 1 " " 4 1 " " 5 1 " " 4 1 " " 2 1 " " 1 " " " 1 " " " 1 " " " 1 " " " 1 " " " 1 " " " 1 " " " 1 " " " 1 " " " 1 " " " 1 " " " 1 " " " 1 " " " 1 <	12-29-82	-82	1		=			=
4 1 " " 4 1 " " 5 1 " " 3 2 " " 4 1 " " 2 1 " " 1 " " 3-29-85 1 " " 1 " " 1 " "	3-17-83	33	1	=	Ξ			=
1 " " 1 " " 1 " " 2 " " 1 " " 1 " 3-29-85 Resumed drinking 1 " " 1 " " 1 " " 1 " " 1 " " 1 " " 1 " "	8-1-84	.+	1	:	1			Ξ
1 " " "	7-16-84	84	1	=	=			11
1 " " " — 2 " " " — 1 " " 3-29-85 Resumed drinking 1 " " " 3-19-85 Resumed drinking	5-10-84	34	1	E	=		·	11
1 " " " 3-29-85 Resumed drinking 1 " " " 1 1 1 1 1 1 1 1	7-12-85	85	1	E.	=			Southwest Airlines
2 " "	7-2-85	5	1	=	=			Transamerica Airlines
1 " 3-29-85 Resumed drinking T.W.A. 1 " 1 " 1 " 1 " 1 " 1 " 1 " 1 " 1 " 1	5-12-83	83	2	=	=			=
2 1 " " 3-29-85 Resumed drinking T.W.A. 1 " 1 " T.W.A.	8-16-84	34	Н	=	=			=
1 " T.W.A.	3-12-82	32	1	Ξ	=	3-29-85	Resumed drinking	11
1 " "	7-2-85	2	7	Ξ	ε			T.W.A.
	4-2-85	-5		=	=			П

DATE OF BIRTH	DATE OF ISSUANCE	CLASS	DATE OF MEDICAL SSUANCE CLASSCONDITION	OPR. LINITS.	DATE TERM.	REASON	AIRLINE
191. 3-29-41	7-5-85	1	Alcoholism	None			T.W.A.
192. 5-26-39	3-25-85	1	=	=			
193. 7-17-39	4-4-85	1	11	=			1
194. 9-20-38	3-15-85	1	11	=			
195. 2-12-25	6-13-84	2	Psychiatric problems & alcoholism	*(2)			
196. 11-30-43	6-20-84	1	Alcoholism	None			=
197. 11-1-23	8-18-81	2	=	11			=
198. 7-7-34	7-30-82	П	=	11			=
199. 8-4-39	5-25-83	н	=	=			=
200. 9-23-27	7-19-84	н.	=				11
201. 5-9-40	8-8-83	H	=	=			=
202. 9-24-35	1-8-85	н	=	=			=
203. 9-22-39	4-7-82	1	Ξ	=			11
204. 12-25-35	11-2-82	1	=	=			
205. 3-23-37	5-7-85	П	н	=			1
206. 8-21-33	7-7-83	1	=	=		·	=
207. 4-12-29	5-13-83	1	=	=			=
208. 2-11-35	5-4-84	1	Ξ	=			=
209. 4-21-28	8-17-83	н	=	=			=

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AIRLINE	T.W.A.	Ξ	=	United Airlines	Е	=	ı	=	=	=	=		11	11	н	11	Ξ	E.	
REASON		·										٠				•			
DATE TERM.																			
OPR. LIMITS.	None	Ξ	1	11				11		и	=	11	••	11	11	11	-	11	=
MEDICAL	Alcoholism	=	-	=			11	11	н	11	ı	u	•	11	11	11	=	=	=
CLASS		1	1	1	1	1	1	1	2	į	1	1	1	1	1	1	П	1	н
DATE OF ISSUANCE	2-17-83	4-19-85	7-1-83	3-26-85	4-1-85	4-1-85	5-29-85	6-4-85	10-24-8	3-15-83	9-14-83	7-5-84	3-3-83	4-7-83	1-23-84	8-29-84	10-15-82	8-17-83	7-13-83
DATE OF BIRTH	210. 11-21-41	211. 5-11-39	212. 12-12-41	213. 7-31-33	214. 1-28-33	215. 1-6-39	216. 4-12-40	217. 11-16-30	218. 12-25-22	219. 5-2-32	220. 10-6-47	221. 6-29-34	222. 8-6-35	223. 8-31-41	224. 3-14-35	225. 8-16-26	226. 2-6-41	227. 6-25-23	228. 8-22-27

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DATE OF BIRTH	DATE OF ISSUANCE	,	MEDICAL	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE
229. 11-1-38	6-20-84	1	Alcoholism	None			United Airlines
230. 3-31-42	3-1-83	Н	11	11		-	
231. 11-22-37	3-25-83	1	11	11			п
232. 5-8-24	1-25-83	1	=	11			Ξ.
233. 4-11-28	2-17-83	1		11			Ξ
234. 9-27-30	1-27-83	1	Depression & alcoholism	11			11
235. 4-29-36	3-29-83	1	Alcoholism				П
236. 12-3-29	5-24-83	П	11	11			Ξ.
237. 8-9-29	3-2-84	Н	11	11			н
238. 9-19-40	3-1-83	Ч.	=	11			п
239. 12-16-29	6-20-84	П	Ξ	=			11
240. 2-20-34	12-13-84	1	=	=		·	н
241. 12-26-38	12-17-84	1	=				Н
242. 10-27-41	10-22-84	1	=				ш
243. 12-27-31	4-12-84	1	••	••			н
244. 7-11-29	5-25-84	1	=	=	5-14-85	Cervical degenerative arthritis	1
245. 3-18-37	7-14-82	1		=		Deceased 12-21-84	11
246. 3-17-40	1-29-85	H	=	=			Ξ.
247. 9-19-38	2-12-85	1	=	=			=
							

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TE	ОҒ ВІКТН	DATE OF ISSUANCE	11	MEDICAL	OPR. LIMITS.	DATE TERM.	REASON	AIRLINE	4.5
248.	6-30-44	2-7-85	1	Alcoholism	None			United Airlines	31 1
249.	7-12-42	8-16-82	1	=	=		·	=	1
250.	7-16-32	3-1-83	1	=	:			11	1
251.	9-22-25	4-12-82	1	Alcoholismtla recutrent carotid	Α	1-13-83	Medical condition; Adverse change		i
252.	3-25-43	1-6-84	1	Alcoholism	=			11	i
253.	11-27-42	7-15-82	1	-	11			=	1
254.	6-9-33	5-24-82	-1	=	:			Ε.	ì
255.	2-2-32	3-29-82	н	=	. =			12	ì
256.	4-15-39	3-10-82	1	=	:			11	1
257.	10-27-24	8-16-82	г - 1	=	=			=	ı
258.	5-12-35	4-20-83	1	11	11			11	1
259.	11-18-33	6-22-82	1	=	=			=	İ
260.	11-4-28	5-15-84	1	п				=	ı
261.	4-21-26	6-15-84	1	11			-		1
262.	3-24-37	10-26-83	1	п				ı	1
263.	1-21-24	2-23-83	1	II.				1	i
264.	11-18-28	2-22-83	П	=	11			ı.	
265.	11-27-27	10-26-83	н	=	=	5-30-84	Resumed drinking	П	İ
266.	4-22-37	9-18-84	1	11	=			Ξ	1

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	DATE	DATE OF BIRTH	DATE OF ISSUANCE		AL ION	OPR. LIMITS.	DATE TERM.	REASON	ATELLA	-
•	267.	6-25-38	10-11-8		Alcoholism	None	78-96-7	Posimod detalities	AIRLINE	
	268.	2-24-30	2-12-82	1	=	=			United Airlines	
1970	269.	4-19-41	5-20-83	1	=	=			= :	
	270.	3-8-40	5-23-85	1	=	=				
• .	271.	3-19-32	1-22-82	1	=	=			U.S. Air	
	272.	2-13-30	3-9-83	1	=	=			: =	
	273.	3-9-45	4-1-82	1	=	=			=	
	274.	1-17-38	6-20-84	1	=	=	1-		=	
	275.	2-9-44	4-9-4	1	=	=			=	
	276.	7-11-40	10-15-82	1	=	=				
	277.	7-31-43	9-2-83	-	=	=			=	
:	278.	12-10-43	5 11 00	· -	:				=	
			3-11-83	-	=	=		٠	=	
	279.	6-8-36	4-25-83	1	Ξ	:			=	
•	280.	11-25-50	5-4-84	1	=	=		-	=	
	281.	12-17-44	5-11-83	1	=	=			: =	
	282.	8-29-25	8-26-83	1	Ξ	=			=	
	283.	12-14-29	11-22-83	1	=	=			: :	
	284.	8-5-42	10-15-82	1	=	=				1
	285.	7-24-42	7-28-83	1	=	=			western Airlines	
• ~										

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AIRLINE	Western Airlines	Ξ	Ξ		11	11	ш							
REASON		•		·	Resumed drinking Deceased 12–84							•		
DATE TERM.					9-30-83									
OPR. LIMITS.	None	=	=	=	=	=	=							
MEDICAL CLASSCONDITION	Alcoholism	=	=	=	=	=						-		
CLASS	1	1	1	1	7	1	7							
DATE OF ISSUANCE	4-6-84	3-5-84	3-13-85	7-26-82	2-8-83	9-14-83	3-20-84							
DATE OF BIRTH	. 5-21-40	287. 7-29-36	288. 8-12-39	289. 9-23-39	290. 9-10-35	291, 8-4-36		l						

"Statement of Frank Austin, M.D. 56th Scientific Meeting of the Aerospace Medical Association May 1985"

Welcome to the 56th scientific meeting of the Aerospace Medical Association, San Antonio, Texas. Code 6, 1/84-85 FAA Aviation Medical Examiner's Seminar, Session one. Thank you.

As Chief of Medical Education, I would like to welcome you to our Aviation Medical Seminar being conducted in conjunction with the Aerospace Medical Association Scientific Meeting. It is always a pleasure to have you here with us, and I would like to run through a couple of announcements. Number one, to introduce our Federal Air Surgeon. He will be talking with you this morning.

We find a drastic change, and I don't mean that in a derogatory manner by any means, but a very dynamic change in our leadership in FAA, both in the Administrator as well as Dr. Austin. It is a great pleasure to have him on board with us holding the helm and steering us, I hope, in the right direction. Frank, it's all yours.

FRANK AUSTIN:

The Helm. I think somebody thinks we are on emergency steerage in a main drag road.

I had a couple of comments there. First, welcome. I see that there is a number of people in the audience that normally don't attend any of these seminars, and I am very pleased that they are anxious to hear what I am going to say, and you are all welcome as well as those who are attending the seminar in a normal sense. It is a pleasure to have you here and to be here myself.

The comment about----the first thing I must say is, it has been pointed out to me that the ICAO medical representative in the front row expresses sympathy for me, but does not imply an international endorsement for my policy or practice. Thank you, Silvio, for that vote of confidence.

If those from the Air Force, Army and Navy, Civil, or anyone else would like to make that caveat, I would be glad to present it.

The other thing that Jim mentioned was the military. I think it's our intention, and the way I understand it is, Bob Dille has been working this program from CAMA. We are put upon for errors in AME things. You will hear that during this conference. And the military seem to be hit, at least the errors that are identified statistically, were there. We have shot ourselve in the foot with Air Rate and the reason is that computers can count errors a hell of a lot easier than humans and the computer counts a blank as a 100% error on that particular form. We are working on that, you know. It is sometimes a question of whether...if you leave out the specific gravity...well we don't have that on every...if you leave out something insignificant, whether it's really all that big a deal; but auditors are auditors, and their green shade falls over when they see something you have written down that's an instruction that you don't follow. And those of us who have gone through the IRS audit in the last decade know that's true.



The plan is that, since the military work under a facility license...and I did that for twenty-five or so years myself...the plan is to have at least one of the senior persons, or at least one of the AME's in the military there who's going to sign under that license, be an attendee to the seminar. I think this makes a lot of sense. It was implied in our first...the first time they got it and did it, and we certainly have that. And I endorse that, because being a Flight Surgeon in the Navy for all those years, I had dropped in to some of these seminars at Aerospace Medical Meetings, but I had never gone officially to an AME seminar. I was signing-off on licenses, and then I went to NASA. I was signing-off first-classes like I knew what I was doing. Soon after, I got to Ames at Moffett Field, the head one at Oakland. I was absolutely fascinated with the quality of the scientific preservations and certainly the merit of the VME that they gave, plus an opportunity to get a look at what the problems are on running these forms through which amounts to ... think Audie Davis sometimes must dream of them in his sleep.... 500,000 a year, pieces of paper that come into that place. So I think that is the intention; if I am wrong it will be corrected during the seminar here, but that is what we are trying to do.

One of the things, too....on the military....is that we have been working ... Jon Jordan, my Deputy, has been working very hard with all the militaries to get the certification of air traffic controllers who are as second-class airmen. Most of military off of being certified you may not know.... I didn't know really, until I got into FAA, and hadn't seen it....the air traffic controllers in the civilair traffic controllers are not being certified against physical standards for airmen. They are not being certified against civil for airmen. They can take an airman physical and pass it if they will, but the standards are for airmen. The standards for an air traffic controller are Office of Personnel Management standards which we apply to them -- initial hire and There is a lot of confusion like that and, of course, we continuation. always get into that bit when a guy says, "I can fly my Cessna 172 and you won't let me be an air traffic controller or a tower operator or an approach controller", or "I can be an approach controller and you won't let me fly my 172." Whatever. The dilemma is there.

So, that is just a quick editorial -- since he brought that up -- I thought I'd throw it in.

Well, I suppose most people in this audience know who I am. I usually try to . . . in AME seminars I go to . . . try to tell people a little bit about that, but I guess that most of you know that I had a military background ...thirty years or so. Went to NASA. Had a lot of NASA experience as a medical monitor.

Page Three Austin Tape

The shots this morning in the lecture of Project Mercury reminded me of some fine days. Interestingly enough, I had never seen a launch until last week, and it was Thornton ...actually I was talking to him for some other reason, and he said, "Would you like to go down to a launch?" And I did arrange to run by and see the launch down there of the last shot. It was quite thrilling.... Certainly not like it was in the early days. I landed and stayed all the night at Orlando. In the morning, drove over there. All the cars were going over there that way, and we all went in and I got a chance to go up to an office where I could see a TV that made it a lot better than the stands....the VIP stands. And then the launch occurred and within three minutes the cars were going out, and it was quite amusing to see that. I think... and, of course, all the social activities which attended the launches in the early days, before, during and after, I didn!t get involved in, but I think they have kinda cooled down, too. They are down to business, and they are really running a tight schedule. Looks like a good operation.

I would like to ask the AME's, "Who you are?" And first, I'd like to ask, "How many of the AME's are certified in some board?" "AME's certified in some board?" OK. "How many are certified in family practice?" My experience, that's fewer than here. It's to be understood, in the seminar I just went to, it was almost 100% general practioners, and one opthamologist, and one psychiatrist, and one internist.

How many of the AME's are active aviators? Have a license, etc.? That shows again. Like in all our business, the interest that keeps you alive, is the flying business.

OK, the next caveat I want you to remember is that what I am saying, in general, is policy, and a little bit of brain storming and philosophy on where I want to go. Particularly, I want to tell you where I think we have been -- that is, my perception. As you may or may not know, I became the Federal Air Surgeon on October 1, 1984....last year. I demanded they not call me the new Federal Air Surgeon after January 1st. I thought that was fine, so I noticed they haven't done that. One of the first things I did after I became the Federal Air Surgeon....and I had already scheduled it before I was even being considered or thought I was going to move....was to go to Monterrey CAMA meeting. Civil Aviation Medical Association, Global Symposium. I got a chance to speak there and talk to a lot of folks, and got a lot of ideas, and also had a little time to see what was going on back home. So I gave them a snapshot of what I saw at that moment. Today at the CAMA luncheon, I am going give them an eight-month...I think it has been about eight months... snapshot of where we are today. I can give you some of that preview. If you happen to be coming to both luncheons, I apologize for the fact that we will cover some of the same ground.

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As far as the AME's are concerned....that are attending this seminar....I want to stress....and it seems that at every seminar I have gone to....I have been trying to get around to all of them....to visit these AME seminars as well as to visit the regions....our people are in the regions. Anything you hear from me is very often what I am maybe thinking about doing...striving to do. We're staffing-out. We're studying and so forth....standards, and rules, and how to do things, and what you do. The word you get from your people here is the way you have to function when you leave here as an AME. Now, the reason I say that is, people seem to forget sometime. They hear, "Well, we are thinking about doing so and so, but it hasn't been staffed out; hasn't been finished."

I hoped to have ready to deliver to you new guidelines we are going to send out to the regional flight surgeons and is going to be administered by us. Unfortunately, the wheels of progress go very slowly in this situation. Those are still in staffing with the regional flight surgeons. Most of this stuff we are dealing with there doesn't normally influence the daily activity of an AME. What?....90% of the cases you see are clean. You recertify. They come in, do their physical, and you look at them. You recertify them and off they go. The big problems....and the issues that we are getting into, they're all classes of airmen....is in the waiver process.

Now, it used to be exemptions....no longer exemptions. Now called 'special issuance." Those are the places where it gets tough and difficult. The regulations which are out in the publications and the changes I think it was in 1982 when the last one occurred ... established that the Federal Air Surgeon should give special issuances under 67-19. since '82. There was....just been going on historical perspective....they were giving exemptions. Those were real tough to do. The same thing if you get an exemption for your airplane. If you want to fly with a square wing instead of a round one, or whatever you decide, you go in to get an exemption. Or you want to fly into an airport that has a noise restriction and your bird makes too much noise, you go in for an exemption. But, for what it is worth, the exemption people in the hardwareside of the house are completely inundated and unable, with their budgeting problems and their lack of personnel, to handle the exemptions. They are just snowed. So medical, who always feels they are at the bottom of the barrel -- sometimes being a small group and put upon -- is not the only people in the agency that are having trouble.

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Exemptions were very difficult and long and time consuming and very formalistic legal proceedures. There were not too many of them given. The process just took forever. We had a suit by an airline that will go unnamed, which took exception to our certifying a first-class pilot with a ... giving a restricted first-class pilot certificate, with what they called a functional limitation. We were constrained by the courts thereafter, back in those days, to not give a first-class certificate with a restriction on it. We couldn't say, "You're cleared for a first-class to fly as co-pilot or as flight engineer," or "not into Chicago," or whatever we might want to do.

This put the wheels at a zero rate of progress for a long time. We had to go out on rulemaking. Rule making is a long and tedious process. Any of you who think that you can help us by writing in and getting your congressman or somebody else to push us to get the rulemaking done, are well intended. We certainly want that opinion, but I can assure you that the rulemaking process progresses at a very slow rate. It goes through lots of hoops, and they are making it even worse because now instead of it just being reviewed by everybody and being published in the Federal Register and so forth, going to the Department of Transportation (under which my Administrator works), and reports to Elizabeth Dole (Department of Transportation), like other transportation modes, it's got to go to OMB now. And that puts some other things in it. The governmental process is slow and getting slower; probably in an effort to control the budget and things like that, or whatever. It seems like, from our perspective sometimes, you can never get anything done. But we keep working on it and it does get through eventually.

But we were faced with a long period of time until we get the rules out. There was a huge backlog developed in CAMI, Oklahoma City, and in the headquarters. So I would present it when I got there with a number of problems. The worst was the backlog and the hue and cry from all those people who were not getting an answer. Now those who work in the field up there know, they say, "All I want is an answer, whether it's yes or no." What they really want is a "yes" answer, and they want it now. We couldn't do that. Our process wouldn't work. We are just completely... at the same time we are losing people, we are losing money. I am not giving you a diatribe on the problems of governmental regulatory medicine, but I'm going to put it into context.

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So when I got there, I said, "Well, lets look at the thing and let's see what we can do about it." We needed to work on the back log. It was pretty obvious that, if we had the same input with the backlog included, we would not be able to improve our output without more people to work on it. There is no opportunity -- absolutely none -- Zero -- there's two opportunities (more than none) to get Civil Service positions at this time. Nobody else is going to give us any. I think maybe Charlie has used that before. Is that right, Charlie? So, we decided we would try to contract. Contracting has become practically impossible because of the desire of the government to compete and so forth. If you put up a competitive contract up, you might get it in eight months...out on the street...and ten months later. Well, we decided to try to contract and get some support. We have done that, and that is to attack the certification problem.

The other way to do it was to decentralize some. We are doing that a little bit by going down. I held off from that for six months. I've gotten lots of suggestions. Those of you who have been watching any of the writings and so forth about how to solve the problem (but this is kinda the way I was looking at it from there), we pushed it back, reluctantly and slowly. As we saw we couldn't do much up in Washington—could get no help and could really not move things, get these decisions out—we moved it back to CAMA. They had a little more flexibility with more people, and Audie Davis' shop has done an outstanding job of helping us move and get this backlog out. Then the next job would be to decentralize it into the regions and out to the AME's.

One of the things that you may not be aware of as a AME, which comes -- hits you right in the forehead when you come in my position in the federal business--is that, by law, an AME cannot grant a waiver. By law an AME...not a federal position. You're CAVED by us. You're given a mantle and given a job to do, but you cannot waive any defect. The way this is done is, you examine the people. You try to get as much data as you can. You advise them on what to do, and that is why you have had access to the rules in the past, which I hope you will all read very carefully, and advise the airman what to do. Then the process has to come up at the moment. The way we're thinking...the way it is now, the thing has to be, either deny -- if it's a blatant situation, you can deny.

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Very few of us ever did that before. I am sure very few of you do write the letter; play the black hat. Most people do not give the certificate and put down, "deferred for future action." That has to go into Oklahoma City. Once you start the process, they finish the form and that goes to Oklahoma City. Now the sign it. By law, it is mandated reason it has to is because that airman may be shopping around. His high blood pressure, history of fainting, or whatever, he has told to a couple of other AME's; but he comes in to you and doesn't tell you, or he makes a small case of it. You might even say, "Fainted once when he saw his mother-in-law go over the hill -- over the cliff -- in his new Cadillac, he was so ambivalent." But then you will write little things on there and when it gets to Oklahoma City it gets matched up with a previous record, and that does it. The only way they will discuss this probably -- that you can do that (fix that situation) -- is to counsel the airman and tell him what additional information needs to be done. So, it is difficult for us to decentralize and take care of this massive backlog, the obvious workload that we are having, which is going to increase against a fixed force of people to handle it. It is difficult for us to find ways to decentralize out to the to the AME's. We have thought of lots of ideas and there seems to be three opinions on each. One for, one against and mine; and I sometimes haven't made up my mind yet. We will discuss that a little bit, and let you just kinda think about it.

Again I warn you. Please remember, many of the things that I am talking about that might happen, until you see them written and you get the document, or you talk to somebody like Audie Davis or Bill Hark (who is in my headquarters; Audie Davis in Oklahoma), or one of the regional flight surgeons, (all three of those are the federal positions who have the same authority designated by the instructions and by me to make these sort of judgments and decisions)—until you get that, you will have to follow the guidelines very carefully. Right now you have the old guidelines. O.K.

That gives you an idea of what we were working against. At the same time, I entered into a system in which I was not aware existed and which, apparently, a lot of folks here don't know had existed. We are beginning to certify, and we (FAA) have begun to certify over a year or two ago or more — I don't know when the first one was done— people who had had conditions which were previously totally uncertifiable, forever. I am talking about particularly in the cardiovascular area; that is, the massive number of cases we had. We had a few in the neurological; but, in the hierarchy of things we deal with that are problematical and ask for waivers, are cardiovascular — a few eyes, some unknown episode of passing out, hemorrhages, and so forth— cardiovascular is the main one.

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FAA had begun certifying coronary artery by-pass disease many years—a year or so before I came up here. It had been done, and this was based on the fact that more and more people were having the process done. It was proven that they had absolutely good function. We had exotic tests of non invasive and invasive tests to show that they were able to function well. The judgment was that the risk—the myocardium was not at risk to a sufficient degree to keep them from flying. It started, of course, with a third-class where we had accepted. It is in our regulations that the individual pilot can accept more risk. There is an occasional person who raises the question of the 172 falling on my house, or in the middle of whatever, or flying into a busy airport and running into a biggie.

Aviation is not a safe activity. Driving cars is not a safe activity. Living is not safe. So these judgments were made and they were made by the specialists — ostly the cardiovascular specialists in that area and the aeromedical community in my place, that made the decisions.

I want to stress that because there seems to be a hue and cry about that, Frank Austin came in and suddenly started doing something different. Well, I did, with flair, I suppose. I did accelerate the process, and part of it was to work on the backlog. But I also saw that there was some rigidity in the system which I perceived was uncalled for. So I began to develop several camps of concern.

The first area of great concern had come about, long before I got to the FAA, from the private aviation community. Those of you who are AOPA... how many AOPA members here? AOPA? Is Basil Fermao (?) here from AOPA I saw him in the .. he should be here to find out what is going on. Where are you, Basil? OK. He is a contact that many people have contacted over the years from AOPA. There were articles in the AOPA journal and the Experimental Aircraft Association at Oshkosh. Paul Pover ny and those folks were really out in force talking about the unfairness of the regulations.

There was a very strong group of airline pilots who had been grounded for a number of years who formed an association called -- it sounded like some Russian Association -- CCPR or something like that. But the main thing was to appeal to the Administrator. They had some audiences with and Administrator Engen was in there a number of months before I him, to change the regulation. And the FAA had gone out in response to was, Dr. Reighard and the whole team had responded in a positive way to this. this. Went out on a contract to the AMA. They went out on a...it wasn't I think it was a sole-source bid. AMA got a contract an open contract. to look at the medical standards. The problem with that is that they are looking at the medical standards in a very comprehensive way with committees of experts. There's no problem with that except that it is long and tedious.

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Their draft report was presented in February of this year [1985] — it started in 1984 and their final report is due in August of 1985. Knowing the regulatory process, there's other sources of getting information into the regulatory system. We have NPRM's, grulemaking proposals, out, which any of you can comment to, incidentally. A lot of people — I know that you are commonly reading the Commerce Daily every day or the Federal Register, one of your main magazines. But it is published in the Federal Register — you can find out and you can write comments in to be entered into the docket in relation to what you think individually or your organization thinks. These are welcome and wanted. We have those outstanding against the medical standards, and they will be looked at. If we get to doing that in August of 1985, and we start our rulemaking process, and we have some sort of consensus on which way we are going, we might have the new rule out in 1987....6. The final rule.

When I saw that with the hue and cry that was coming - really-- I saw that we had to do something in the interim. I took some action under the authority which I have without new rules, and some things which I did in which I didn't have the authority; Jon Jordan and some of my wiser heads said, "Hold it!" when we tried a few things. One of those things was a...I saw very quickly something that was very interesting on the third-class pilots. I will talk about that and then I will talk about the airline pilots.

My experience in the military — and I think more in the Navy than perhaps the Air Force and Army — we were able to put pilots in the cockpit and keep them flying when they had some pretty exotic diseases and were incapable in a lot of ways. It kept them in their career patterns while they were getting well. We called that service group three, or whatever we called it at various times, so you could put somebody in a dual cockpit and they could keep on flying. If they got well and could shift back into service group one, you're OK.

If you can't do that. If you got to make a decision __can fly and is not going to crash, and die or not die in the airplane, and crash versus don't fly and wait, it gets ... it gets difficult. How long do you wait? So, I wanted to do limited third-class certificates. I'm told by the legals that I can not give that. The kind of third-class certificate I wanted to give is to a person who would fly with a safety pilot, or some other sort of restriction.

Dr. Dille and the folks at CAMI did a study a number of years ago — and I am sure that the same thing would pertain today —, they looked at all the people that had asked for exemptions. I believe it was, and had gotten waivers to fly. One third of those never...in those days even...that was 19....several....five years ago, '81 I guess. Those folks....one third of them never flew again with their ticket that they got and fought for and paid lots of money to get tests on and so forth. Ego. And some of these people are 70s, 60s. They're old if they are 70 but if they're 60 they're not old — that's my age — until ten years from now. But they write letters saying, "I've been —I've been flying since I was 14....I've got 99,000 hours and this and that....I want my ticket to fly." He wants to fly around the barn.

The problem from our standpoint is, we give him a third class ticket with no limitations on it and he can — the gloom and doom approach is — he can buy him a Baron, pressurize, fly into Chicago on a dark and stormy night, run into a 747. You know, it just overwhelms you.

So, we need some sort of restrictions on third-class, if we could accommodate these folks. The one third — the other third of those people flew one or two times and quit — they proved they could beat the government. They got up into the air. They found it cost \$77 an hour to fly the damn airplane. To rent it and stay current, it took two or three hundred dollars. Hey, they don't need that. A lot of them went over and found out they could fly in ultralights — the younger folks — the older folks haven't done that very much. Or you could do lots of other things.

One third of them did continue to fly, apparently, in the study; but my feeling is -- being in the Navy in particularly __ we know. We tell these folks you can go fly with a pilot, -- safety pilot. You can instruct with a third class certificate. A student is not a primary. These old guys who want a second-class to instruct students __ if a guy has a ticket himself -- they can instruct with a third-class certificate, even a restricted one which requires dual pilotage.

We could do lots of things with that. We are still working that issue, but I'm stymied on that one. You can see the kind of flexibility we would get from being able to do that. We would get a lot of people off our back who just want that ticket to get in the air. It means a lot to them. A lot more to them when they go to rent an airplane or do whatever with their — to have a ticket even if it says you are not supposed to fly anything except noon and you got to have three pilots and a CPR specialist in the back seat. You know. Its r diculous. But if you had that ticket, it's a lot different than if they're going to have to snivel up to their buddy and say, "Would you rent this airplane and let me fly the left seat?" But that was a dream which got punctured. We are right on — right now we have to make a hard core decision, we either give them a third-class or don't.

I, ah, as you might expect, those of you who know me, and those of you who don't may find out, when the decision was that I thought maybe they could fly safely with a pilot versus not certifying them, I very carefully looked at it, and most of the time I certified them. I, uh, with tongue in cheek, and not, I hoped-well, I don't know-but I've told many of them-I have counseled many of them-we have concern in our business about sudden incapacitation and have told many of them to please preflight themselves; and, with tongue in cheek, I have said it is absolutely against regulations and my personal dictum to you to die in that airplane. If you are going to die, die someplace else. Like the nurse that won't let you die in the emergency room, I've said it. But I have tried to give them a lot of counsel in those cases that look a little bit marginal. So far we are doing O.K.

The problem is, that we-the more we certify, the more are going to have two things happen. One, we are going to be having to take tickets away from people because the diseases they have are progressive. So they will have a ticket for four or five years. Then they will lose it when they are 65 or 68, and then they will be after us real hard to replace it. We'll have to do that. We'll have to monitor it more closely, and we are. We monitor them as often as six months. We try not to do that. We monitor almost everyone in the cardiovascular cases, third-class, with a stress test, or other test; if we need to, the MUGA or the thalium scan. Every year, get a SMAC 24. We are not able to get these tests on a regular patient--regular airman--but we can get them on a special issuance.

So, we are doing our very best to be flight surgeons for these people. The word flight surgeon, to me is—it's an anacronism, but to me it means that you serve as that person's personal advisor and physician to have them modify their health so that they can keep flying. As an AME, our obligation really goes to the point of seeing that they meet the criteria—that they can be certified for the length of the certificate which they are applying for (first-class, six months).

We really have written into the regulations that we don't think they have any disease which will make them disqualified in two years. But it is not a lifelong thing, and I think this is one of the special things that we have to kinda separate out. I know there is a lot of folks that want us to practice more occupational preventative medicine--lifestyle modification and so forth--and that is important for us. I want us to practice that, but I believe we have to separate off in the certification process that we are certifying to somebody that they are safe to fly medically and emotionally. I guess there is some psychological thing in it, but we don't pay much--we don't have much ability to do much about that right now, and for the period of certification, which is basically two years.

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Now the reasson for that, of course is, as you will recognize, is that if a man or woman gets a first-class certificate, and they don't get another physical in six months, it becomes a second-class which is good for a year. If they don't get one (a physical) at the end, it automatically becomes a third-class, which is good for two years. That certificate we give is a one-, two-, three-. Or, if we give a two, it's a three. So that's why, basically, we have gone that route.

So, that's what we are trying to do. Our judgment can be faulted. There was -- the one thing I think we have tried to introduce into our consideration and working with our specialists and consultants and so forth, is a concept that we want to avoid--not certifying somebody because of the risk of the disease, itself -- the natural history of the disease -- only. We have got to consider that as a factor, obviously. But so often it is not realized by those who may question some of the certifications we give. We are looking at the individual case. Although we may know, say, that one per cent of the angioplasty cases, after six months, when most of the recurrences occur -- or after a year, depending on what data you look at, have a chance of the angioplasty closing down again on a single artery disease.

Statistics and studies and great work is done. This doesn't mean that this individual necessarily will have that. So, we look at all the factors. We look at it in a relation to not the progress of the disease and what's going to happen to that person in twelve years. We advise them on what to do to keep it from happening -- cholesterol, smoking, and the whole stuff. But we are looking at also their flying. Now, if their flying is in a....you think about the risk....and I've got a special-risk analysis team working now on risk analysis. It's been done a lot, but I'm looking at it not just from the medical disease standpoint, but from the risk analysis of events happening in flight.

We find that ah...it seems rather ridiculous sometime when you have a very low risk of an event occurring, and then...during the next two years. And then you say, "This person is flying four hours a month, if that." And then you think of all the redundancy that's built into it. And particularly why I'm talking to a lot of the folks, and any group I talk to, I do not believe, if they are perceptive, and most of the people who have had a cardiovascular event, are perceptive can miss the fact that they are going to have something happen if they will pay attention to the symptoms. Almost every one of them, when looking back at when they had their heart attack, can recall a precurser.

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Now, there is sudden death. It happens. POW. Just like that. But that's the situation. We are hoping that uh...we are not doing it in a haphazard. lack-a-daisical way. I am getting opinions from specialists in the field. Not only the airman's doctor who lays hands on him. Not only the specialist that he goes to and lays hands on him; but I am getting our aeromedical specialists to look at the situation. And I think the ultimate will be that we will have to, probably on the tough cases that keep badgering us, go to a system where we have something like our Board of Flight Surgeons that's handled at Brooks, or at CAMI, Pensacola and I guess the Army may do it too. I know that our specialists can look at the thallium scans, and look at the tapes and look at the records and make decisions. But it just doesn't add up to me to think that they can make the same decisions for that individual that you can make when you lay eyes on him and lay on hands. Interview him. Talk to him and maybe see him for a period of two, or three days, and have more than one specialist see him. And that's what we have done.

pr. Dille and the group down in CAMI have wanted to do that for years. It's been impossible. I don't see us being able to do it now; but for a small number of cases that just can't be resolved any other way, that may be our out. Designating special examiners out in the field that the AME can go — that the airman can go to when our consultants and us have said, "They are not qualified." They keep insisting they are, and that's the story I get. "My doctors say I can do anything. I can climb mountains, ski, and do all that good stuff we like to do, and you are telling me I can't fly my 152 around the block."

OK. What about the airline pilots? The biggest fear of folks, in general and specifically, is an airline pilot will have an event occur in flight and cause a crash of an airliner with many many deaths involved.

The occurance of this in our flying environment, military and civilian, is practically nil -- suspected from time to time, but it's practically nil. Now, of course, if we start certifying more folks that have diseases, we are going to have...eventually, we will have one. So far, we have had heart attacks in airplanes, a small number. We have had transient global ischemias. We have had transient global amnesias. We have had convulsions. We have had alcohol and various other things.

We've got a redundant system in the airliners which is built in. There's two pilots -- minimum -- and at least three on most of the airplanes. The pilots, nationally and internationally, have some sort of disability training. In other words, if the captain becomes disabled, and can have it...

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OK, you can build a story. Its a dark, stormy night. You are down to two hundred feet. You are just about to make the landing, and the captain dies of a heart attack and slumps over the thing. Could happen! But it hasn't. I think there is a lot of uh...a lot of uh...doom and gloom built into projecting that. You can also say that if you certify fifty a year, eventually you are going to have two captains flying in the cockpit who have had multiple artery by-pass surgery or two captains that have some sort of defect. Statistics go way out of sight on that, but it can happen. Statistics for them both having it at the same time can go way out of sight. It can happen, I guess, but I just can't operate on that.

There also is the other side of the story. If the plane crashes and the person has been disqualified and you give him a waiver, we are going to be sued. Ladies and gentlemen, I can tell you that when the plane crashes, we are going to be sued ANYWAY -- no matter what happens. The guy could be...he could walk on water; change his uniform in a phone booth. He and his co-pilot and all the others are just absolutely clean--pristine; and we are going to be sued. They are going to try find something. So, I can't operate on that basis either.

I guess my message is that someplace the buck has to stop and it is stopping with me right now in this regard, except for one thing which I will discuss a little bit—the appeals process.

We have got to make the decision, and I'm not making it in an arbitrary way, although I have been accused of it. We are looking at these people individually. We see they are functionally good. We see the risk is low, at least acceptable in the aviation context. Not saying that they won't have progressive disease. Not saying they won't die of a heart attack in their sleep or with their lover or whatever. The high-risk business — aviation is a low risk compared with some of the other stuff these cardiovascular guys have to go through.

So, we are making those decisions, and we are all crossing our fingers. If we only did five, and waited five years to see how it worked, and one or two of them had trouble, statistics would be terrible, wouldn't they? If we do a hundred -- we are not experimenting, we are not just putting out people that we think are unsafe; we will not put out anybody that we think is unsafe by any means -- if we do a hundred, two hundred, and nothing happens, then our statistics are better if one of them dies at home, where I hope he will if he has to.

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OR. Another thing I saw and I didn't....I kinda alluded to this in relation to the airline pilots....this group of pilots who had....were badgering Congress...uh....the Administrator, everybody, about changing the regulations uh....all had a vested interest. They had been captains who had been grounded after myocardial infarction or by-pass surgery something like seven years ago. They were all having their annual physicals -- running, active. Some of them were actively flying -- had thousands of hours in the air with other people.

What's with this? They ran the data for us at least on those three cases. They didn't die. They didn't have complications. Their arteries didn't plug up. They reversed their disease. So, they were walking examples of people that could do it.

One very classic case was a transient global amnesia who had a confusing episode taxiing in. He was grounded forever, but kept appealing. Finally he badgered them to the point that...his sideline was being an aerobatic pilot. One of those guys who goes out to airshows and tears it up, you know. Negative G's and so forth. My God what a thing. They finally gave him permission to do that over desolate terrain and never to cross an airway or whatever. He did that for seven years. Never able to get back in the cockpit. The wisdom of the community was, it could recur. Well, sure it could. But it didn't. So we certified him after a careful review. It hasn't recurred yet.

Uh. Age 60 Rule. The Age 60 Rule is an operations rule. The Administrator has said to Congress and everybody else, HE IS NOT GOING TO CHANGE IT.

Now. People can come to me and ask for waivers and exemptions and so forth. I have absolutely nothing to do with it. It has medical overtones. It was established with the medical concept. Whatever we think as physicians or pilots or whatever that you can....and then of course, the Age 60 Rule only applies to 121 operations — airline pilot in the front seat of a commercial carrier. A guy can get a first-class ticket, be 65 years old and go fly you in — in other types of operations — what they call 135 and some of the others. They can fly you all over. You got lots of them out there, folks.

But they are safe. They don't get their first-class or their second-class without some careful monitoring. If they have had some disease, we have them on a monitoring program.

But it is not a medical rule. We are being put upon by forces to have us change the Age 60 Rule again. (Fill in the blanks so the damn computer won't say that you made an error. Fill it in. Fill it in right.)

OK. Anybody....why don't we all stand up. Two minutes in place.

I'm going to open up for questions. Anybody that wants to throw some, and I will be available afterwards. It looks like....if we take ten minutes, it will be OK. Jim said I had till noon, but I think what we will do is break at about fifty. Its thirty-eight right now. So, I would like to have people ask some personal questions and get a chance to talk to individuals Later.

Yes, please?

My name is Mary Hubbard and I represent the Association of Professional Flight Attendants. I did want to ask, in view of all of what has been in the news for the past six months to three years, is there anything in the circles that you are traveling in, in the discussions that you have heard, that is going to require the medical examiner to do urinalysis or drug testing as part of the physical?

The answer is, "No" for airmen physicals as far as I can conceive. Uh...the news that we are talking about, it probably relates to two things. And I only know this second hand, and you will have to talk to airline medical directors or folks. They are not, to my knowledge, doing any examinations, in fact I don't think you even have continuing examinations on airline attendants.

From the floor: We have pre-employment testing.

Pre-employment only. I understand that the pre-employment exam, in...in...some airlines, at least, have indicated to me that they are screening for drugs. The distressing thing is, — although some people claim it is a violation of human rights, — its not. The distressing thing is that, in some communities, they are finding that twenty-five per cent of the people coming in have drugs. This is not for attendants or pilots, it's usually for the other type of folks. The pilots and the others...it's very low. Now, one of the reasons I mention that is because if...you know...and then those people get evaluated and they even get hired if things get explained and things are cured.

We have nothing in our regulations that say that we would require drug testing on employees and we would have....I don't think we would ever make a regulation like that.

From the floor: I want to clarify, we have had about ten or fifteen flight attendants who have been tested for drugs and that's where I am a little bit concerned, because there is no official policy at this point.

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There is an official or unofficial policy in all companies, and we have it in the FAA, and I will discuss our FAA drug thing. For cause, you can test. So, the reason that those people....unless there is something I don't know....I am sure that those people, for one reason or another, either by performance, known association, seen smoking or whatever, those people can be tested as a condition of their continued employment. We have the same thing in the FAA and throughout industry and throughout the military and every place else. So, I'm sure they were not screened on routine....in other words, we do not ever....and I am sure no place in the United States will you find that if your urine is taken for a urinalysis for some sort of physical that you will be screened for drugs without your agreement to it and knowledge. Either your agreement or a flat policy that someplace it will say, "We want a drug-free society, and therefore, it'll be screened."

So, that is generally the way it is attacked and it is a very fair and equitable thing. Thank you for the question. Did that satisfy that?

From the floor: Yes.

Now, let me say one thing about the FAA we have had working for us. The Administrator says, "I want a drug free society." "I want to assure everybody that the controllers are not on any drugs." Of course, the ones that were found in various places gave us a lot of heartburn. The requirement for that is to put out a policy statement first. It's been it's been generated. It's been going through staffing but it hasn't been completed yet. There is a lot of concern.

The second issue that has to be attacked when you do that, is to put out an EAP program so when you find somebody....and our purpose is not to find and fire....our purpose has to be....by federal law and our own desires -- humanitarian -- to find and offer the opportunity to rehabilitate. When the rehabilitation is done, and they can return to work and we monitor them to be sure they are still free, we will return them to work. If they don't make it. OUT!

So, the third thing is, a screening program. We decided against a random screening program for urine. We recommended then...and contrary...instead of that, a screening at the annual physical for all air traffic controllers or all safety people in the FAA. This is all in the package being studied, but we don't expect to see it out for nine months. We will probably put out some new rulemaking and some other announcements.

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Austin Tape

So, that's where the FAA is on this. Those controllers who you see out there, that are controlling you...you don't see them; or if you are flying, you hear them...are monitored very closely. Our main thing to do is, and we have learned this in alcoholism and everything else, is to provide an out for the people. Bring it out of the closet. Give them a chance to rehab. Get rid of those who can't...that ten per cent or whatever in most programs...monitor those carefully that are in there. Educate our supervisors to not tolerate performance which could be alcoholor drug-related. That's going to make the program work. But you gotta have a cushion to fall back on to make it work. This is the same program that has been in the militaries for years now. It is just slow coming into the government.

Any other quick questions? Yes, sir?

From the floor: Doc Austin, since most of the problems are in the cardiovascular area, would you anticipate that the new guidelines or the rules that the AMA is working on, would provide for a more in-depth assesment of coronary risk factors, than the present standards require?

We are definitely going to go for the risk factor analysis, and its a tough one. The physical which we give now is practically. uh...in some respects, it doesn't do any thing for us. About the only thing we can catch anybody on, and suspect that they need special studies and stick, is high blood pressure and the history they give us.

We are writing some things right now in which we are going to ask some risk analysis. All the risk factors we know in cardiovascular —blood pressure, smoking etcetera, etcetera — and we hope we can get those through. They are going to be opposed by the adversy groups, et al. We are trying to do first the ones that don't cost anything, and then if we can make a deal with them, we will get things like SMAC 24 and maybe some other studies.

Any additional test is going to be opposed by the airmen, of course, you can know. In fact, there is a strong group of people out there... I'm amused sometimes about people worrying about what I certify in third-class. There is a strong group of people,...and it is not very far from being a possibility if they really got going... that want to eliminate the requirement for a third-class certificate, and let anybody fly. So, you know. In some respects we are pretty smart to keep going.

Page Nineteen Austin Tape

I did want to mention one other thing. An airman who is turned down for a special issuance, can go to the National Transportation Safety Board. The lawyers can look at it. If we made some administrative errors and denied him, he can be given...we can be ordered to give him a certificate. We can appeal that to the full Board...if you lose it to a law judge. It can order us, if they win the case. When that happens, we cannot monitor that individual. So we really have a vested interest from a standpoint of safety in trying to keep people from going to the NTSB. We will make them do it, if we have to, and bite the bullet.

I didn't have time to go over the guidelines. I might mention that at the CAMA luncheon for those of you who are going to be there.

Yes? Question? It has been a pleasure seeing you folks. Have a good meeting.

AIRLINES MEDICAL DIRECTORS ASSOCIATION C. John Hodgson, M.D., Secretary Mayo Clinic Rochester, Minnesota 55905, U.S.A.

April 11, 1985

Gentlemen:

Spring has sprung, and the darned grass is growing again! Every life has its problems I suppose, but it is nice to see fresh green leaves and feel a warm sun after a somewhat dreary winter. I hope your weather is turning pleasant too. Along with spring comes the annual AMDA meeting. By now you should all have your plans laid for San Antonio, but more of that anon....

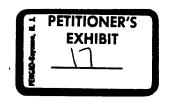
In the February issue, I asked for your opinion about the current categories of membership. About half a dozen of you wrote. While this is not a statistically valid sample, it is probable that the sentiments are representative.

Two-thirds of you felt that we should leave things as they are. One member who is in the associate category felt that he should be a regular member. One of the most interesting suggestions however came from one of our patriarchs, George Kidera. He is very much in favor of having just one category, i.e. "a member is a member is a member." He is our corporate memory, and provides both wisdom and historical perspective to our organization. If our Executive Council wishes to discuss this further at our 10 May meeting, it should be a lively topic.

As I mentioned in the last letter, the new U.S. Federal Air Surgeon, Frank H. Austin, M.D., is really creating a revolution in aeromedical certification. As he points out, he's disagreeing with about 50% of his consultants' decisions, and issuing certificates to pilots with conditions never before certified. It is no longer clear what, if any, limits he intends to set.

We now have significant numbers of airline pilots flying as captains following multiple bypass surgery, heart attacks, and strokes with considerable residual damage. There are also pilots with metastatic neoplasms actively flying. One of the more interesting recent certificates was issued to an airline captain with a homonymous hemianopsia and some evidence of a cognitive defecit following surgery for a bleeding intracranial arteriovenous malformation.

Because all Class I certificates by law must be unrestricted, we could be faced with an international 747 with as many as 16 bypasses in the same cockpit! Or we could have an intercontinental 1011 or DC 10 with four post-stroke cockpit crewmembers. The possibilities are fascinating. Imagine the captain just mentioned flying with a first officer



who has either a cataract or has lost his right eye. The flight engineer panel normally blocks the third seat view on the right. Thus we can have a 747 with no one in the cockpit able to see out the right side of the airplane!

Several airlines still operate with older professional flight engineers (now permitted to fly to age 70 by Federal law) and it becomes clear that these problems are no longer just theoretical possibilities. It also appears that the age 60 controversy will rise once more. Who knows what sort of pathology the FAA intends to return to flying?

In addition, to the concern in the U.S., there is now some speculation that other countries will refuse to permit some of these airline pilots to fly in and out of their airspace. Many other nations are quite rigorous about applying ICAO standards to all aircraft and crews operating within their borders. Imagine the scheduling problems with Capt. X who can fly domestically and to country Y, but not to country Z.

If you wish your organization to address these problems, do let members of the executive council hear of your views.

The other major item for the newsletter is of course the upcoming annual meeting in San Antonio. The Executive Council will meet in the Hilton Palacio del Rio downtown at 1900 on Friday, the 10th of May. Interested members are cordially invited to attend. Check the hotel activity schedule for the room location.

The annual Scientific Meeting will begin on Saturday morning the 11th in the Salon de Rey (South) in the same hotel. Registration will begin at 0800, and the program will get under way at 0845. Dr. John Skelly, our program chairman, tells me that the theme for this year will be "NON-INVASIVE TESTING: WHAT NEXT?" He's arranged papers on cardiology, magnetic resonance, and ultrasound.

The afternoon session will be a change of pace with Major General Paul D. Straw talking about the air war of 40 years ago from first hand experience. He'll also have current films of the aircraft he's still flying as part of the world-famous Confederate Air Force. The CAF owns and operates the ninth largest Air Force in the World. . .more than 125 piston engined aircraft of 1939-1945 vintage. We'll see and hear of the famous Bf 109's Spitfires, Mustangs, He 111's, Superfortresses, and Liberators still flying the skies over south Texas. It should be a treat.

San Antonio, one of the finest convention cities in the U.S., is also a treat. For those of you who've not seen it, the river walk is a must; so is the Alamo, just a couple of blocks from the hotel. We've arranged a catered dinner at the San Antonio Museum of Art which should

also be enjoyable for all who can attend. There will be nothing like it the following week at the main Aerospace Medical Association meeting. We'll also have replica trolley buses to take us to and from dinner. We'll also have dinner music to compliment our surroundings.

Speaking of San Antonio, van service is available from the airport to the downtwon hotels for US \$5.00 per person. Vans may be booked upon arrival at the airport. A taxi will cost about US \$11.00 or 12.00 but the cost can be shared by three or four persons in the same cab.

Room reservations should be made as quickly as possible through the convention bureau. The Texas Medical Association will be just winding up a full week in the city the evening we arrive, and most hotels will still be reasonably full at least on Friday night. Unfortuantely, there are no really inexpensive hotels downtown, although the La Quinta is lower than most. The rest are typical of luxury hotels. The two closest are the Marriott and the Hilton Palacio de Rio where we shall meet.

San Antonio has fine restuarants and many of these are located near our hotels. The Tower of the Americas is a 750 foot revolving restuarant with a marvelous view, and prices to match! Reservations are wise here as well as at most better eating places in the city. There are too many excellent Mexican restuarants even to mention. For fun, try the Red Barn. . .good steaks, efficiently served and with moderate prices. Among the best steak places in town in the Barn Door, but it is some distance from downtown and will require a car or a cab.

We should once again have a fine meeting, good fellowship, and a memorable time. This should be my swan song, and in honor of the event, I've promised our officers not to tell any more aviation jokes. Do attend though, and help launch the term of office of our incoming leader, the urbane Peter Chapman of British Caldedonian, on its way.

Hope to see you all in SAT.

Cordially,

Robert L. Wick, Jr., M.D. President

RLW:jm

CAMA

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CIVIL AVIATION MEDICAL ASSOCIATION

APRIL, 1985

President's Message

Robert E. Field, M.D.



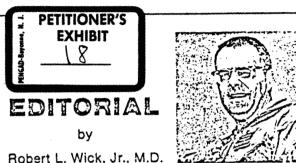
There are many platitudes concerning the human condition: "Nothing is accomplished without stress," and "The road to happiness is always under repair"—these come to mind as I reflect on the recent past months in CAMA's history.

Although we have previously stated that our annual meeting isn't our whole objective in being, we cannot ignore its importance, especially since our meetings have usually been excellent. Because of circumstances beyond our control, it was not feasible to hold this year's meeting in Guadalajara, Mexico, at the time selected. So the decision was made to hold the meeting in San Antonio, Texas, October 24-28, headquartered at the Marriott North Hotel. I hasten to add that San Antonio is in no way a second choice, in that is was officially chosen for a future meeting years ago. We are happy for the opportunity to meet there, and I can tell you that the program is presently well under way under the capable direction of Dr. John Boyd, President-elect. As an added benefit, there is a strong possibility that we will be able to obtain Category I Continuing Education Credit for the meeting.

We are pleased to have Dr. Frank H. Austin as the CAMA luncheon speaker at the Aerospace Medical Association meeting. The Federal Air Surgeon has

Continued on page 4.

STAFF Editor Assistant Editor Photography Editor	Robert L. Wick, Jr., M.D. Albert Carriere Dale J. Ducommun, M.D.
DFFICERS resident resident-elect ist-president cretary-Treasurer	Robert E. Field, M.D. John H. Boyd, D.O. Criss Kidder, M.D. Patrick J. Coyle, M.D.



A Safety Crossroads

Aviation in the U.S.A. is the envy of much of the world. Not only do we have the most airplanes, most airmen, most airports, and the most activity, we also have the world's best safety record. This record has been built with care by many people . . . engineers, pilots, airport operators, and by dedicated civil servants. Scheduled airlines in the western world generally represent one of the most safe and reliable means of mass transportation known.

One integral part of that safety record belongs to medicine. A careful and conservative approach to the medical problems of flight has marked the 70 or more years that physicians have made their contributions. Physical failures on the part of pilots are at least as rare as unforseen structural failures in the airframes. Flight surgeons and aviation medical examiners have thus kept pace with our engineering colleagues.

In medicine however, there are some experiments which one should not ethically conduct. A drug, surgical procedure, or technique which is clearly of benefit to a patient must not be withheld just for the sake of establishing an experimental control. One must remember the basic dictum, "First do no harm..."

The current revolution in certification may well be a case of "doing harm." Many years of concern for both the public safety and the airman's rights were represented in the half century of certification decisions resident in the FAA. Within months, the current Federal Air Surgeon has issued certificates to previously denied infarct cases, stroke victims, hypertensives, and a host of other patient-pilots with a wide variety of pathology. At least one personally issued by the Federal Air Surgeon almost resulted in a catastrophy within weeks of his action. The pilot in

Continued on page 4.

Another in Flight Medical Bill

Rep. Mario Biaggi (D-N.Y.) introduced H.R. 1647 into the house to encourage in flight medical care on board passenger-carrying aircraft. He's introduced related bills in past sessions, but none have been passed. As noted elsewhere in this bulletin, Good Samaritan legislation will be essential if the proposed medical kits are to be effective.

MEA CULPA

Our last issue presented with pride a guest article written by our new Federal Air Surgeon, Frank H. Austan, MD. Dr. Austen, is a very fine and tolerant gentleman. He took our misspelling of Auston in stride, and in a very refined matter for anyone named Austun, politely pointed out that his last name is spelled AUSTIN. Dr. Austyn, please accept our most profound apologies!

- The Editor -

President's Message

Continued from page 1.

been most gracious in giving his time to CAMA. We are also happy to welcome several new members, and ask them to feel free to contact Headquarters or me by letter or phone with suggestions and/or requests. We are especially anxious to have them participate in the day-to-day operation of this association.

Our objective is to promote the role of the Aviation Medical Examiner as a "personal physician advisor" to the examinee. We feel that such a role is helpful to the airmen since it helps fulfill our common objective of aviation safety. I feel that ATC personnel are also members of the team, and that it is CAMA's job to expand its relationship to this group.

Please come to San Antonio, October 24-28, 1985. We need you — and you need the benefit of our meeting, which will be a fine one. You'll renew old acquaintances, make new friends, share problems and hear new ideas. (You might even have some fun!)

I particularly wish to thank Dr. Bob Wick for his outstanding work on The Bulletin. Dr. John Boyd deserves a vote of thanks, too, for his diligent and tireless activity in preparing a program for the October meeting.

WELCOME ABOARD!

We welcome the following new members into the fellowship of CAMA.

A. Stephen Casimir, M.D. 2624 Purdue Dr. Vestal, NY 13850

Joseph Denman, M.D. 18345 SW Alexander #A Aloha. OR 97006

Mark C. Eidson, M.D. 808 Santa Fe Dr. Weatherford, TX 76086

George F. Garnett, M.D. 245 N. Binkley St., Ste. 101 Soldotna. AK 99669

(LAI Kam-chuen) for Commissioner of Labour Labour Dept. Lee Gardens Hysan Ave. Causeway Bay, Hong Kong

Peter J. Leahy, M.D. 2110 Dorchester Ave. Boston, MA 02124

Greg A. Marks, M.D. 3700 Dean Dr. #2602 Ventura, CA 93003

Mark T. McDermott, Esq. 1300 19th St. NW #400 Washington, DC 20036

Henry J. Petrillo, D.O. 408 W. Renfro St. Plant City, FL 33566

Lewis C. Richmond, Jr., M.D. 1181 Main St., P.O. Box 97 Milton, WV 25541

Alan L. Sisson, M.D. 11032 NW 5th Ct. . Coral Springs, FL 33065

William H. Whaley, M.D. 3250 Howell Mill Rd. NW #305 Atlanta, GA 30327

Editorial Continued from page 1.

question, previously denied by the consultant experts, was incapacitated in flight. But for another pilot in the aircraft who was able to land safely, who knows where the airplane might have hit? It appears that the Congress may be interested in this incident.

Pendulums do swing, but this one may have swung too far! We are clearly at an aviation safety crossroads. Let's hope that we can stay on the correct branch...

Remarks of: Frank Austin, M.D.,

on "MEDICAL CERTIFICATION FACTORS" at the Annual Meeting of the Experimental Aircraft Association in Oshkosh. Wisconsin on July 30, 1985

PETITIONER'S EXHIBIT

Dr. Mohler, as you know, is a well-recognized expert in aerospace medicine and we've been friends and compatriots for a long time. In some regards we've ended up on the opposite side of the table on some issues, but not really personal. So we'll always work together.

How many people here have a pilot's license? How many do not have a pilot's license? Here that's easier. That's good. Those who raised their hands that don't have a pilot's license, is it a medical reason that you don't have a pilots license? A pilot's license, not a medical. It's a medical reason you don't have a pilots license? Yeah. You might as well not go. OK. How many are first class air carrier pilot's. Any of the airlines types? Great. Wonderful. And the rest are probably third and so forth.

It's really a great pleasure to be here. I became the Federal Air Surgeon in October of 1984. That's not very long ago and as you know, if you heard the administrator last night, you read some of the literature, he was quite concerned. A number of people have been concerned, not to say the least Paul Poborezny, and John Baker, the two organizations that are very dear to our heart here. About the certification problem, it's almost like there was a revolt in the certification issue throughout the nation, so he selected me to be the Federal Air Surgeon, and I have been looking at the problem.

The first issue, the biggest one, was backlog. Unresponsiveness. And that's something we cannot tolerate and certainly the administrator won't allow us to tolerate. Unresponsiveness. And because of the massive backlog of problems, of loss of personnel, we had a tough, we have a tough problem. I attacked that, at the same time I complicated my resolution of the backlog issue of getting answers out, because people just didn't want to hear again that you are again for the third time certified? They wanted an answer that you are now certified. So it wasn't---you say in your letters... or the people out there just want to get an answer, whatever it is. And then when they'd get the answer and it was wrong, they'd send us another request. So, I complicated....I realized that I was just going to continue in a big circle, that 25 or 30% or maybe 50% of the people were denied and it did not seem justified in their minds and perhaps their physicians' and other people's and a few attorney's they saw. We were just getting in a big circle.

So I knew I had to attack the problem of constrictive requirements and being too stingent and so forth. That's the tough one. Getting rid of the backlog is tough. We've had to go to contract. We've had to do a_lot of things, the least of which is not my own spending about six hours a day, 5 or 6 days a week, 6 hours of my time, which is-I have lots of other things to do too-on just certification. But we had to change the criteria.

The thing I'm dealing with mostly at this time is, as Stan referred to, the people that are asking for waivers. Almost everybody I deal with in my cases everyday, today, at this level, have disqualified under basic regulations. There is a provision which allows them to request a special

issuance, we call it now. It used to be called an exemption or it could be called a waiver. So under that if you can show that you are no hazard to safety because you have various things, epilepsy, heart attacks, psychiatrics, all sorts of things, alcoholism. If you can show that you don't have anything that is dangerous to safety, and I can agree with that, then we can give a special issuance.

One of the things that does give a little flexibility with that, and then we can ask for additional tests to monitor the people. What I noticed was we were giving about 45% of the people who came in for special issuance their ticket. We were requiring sometimes a check every 6 months. Heart case. After a very tough heart case. A check every 6 months. Sometimes a very expensive test. Every year being frequently. Very seldom did we lower to where it was every 2 years for third class certificates. So all of those issues were difficult to handle. I've started attacking them all.

In 6 months I've lowered the backlog in my office about 35%. There were about 2000 cases stacked up in my office in Washington and I don't know how many poor Davis had down in Oklahoma City. They're coming in at 2000 pieces of mail down there. But I did take a statistic the other day in my office and we lowered the rate, the number, just the number of cases that were there by 32%. I shot for 50%, so I didn't get an outstanding for my reading for that one. But it was better than what my boss wanted, 25%, which he thought was way out of sight. We did 32%. My goal was to reduce that another 50% and get it down. This represents a reduction in time delay from about 18 months average, or frequently 18 months from the time a case comes in, to about 6 months. I want to get that delay down to two months.

I want to be able to answer in two months. I think all of us as pilots, and I'm a pilot too, and I've been with experimental and so forth, don't want people in the air who could be an hazard. (Thank you. It keeps echoing, can you hear me in the back? If you don't, well, raise your hand). None of us want pilots in the air that will be a hazard, certainly to themselves. You can liken it to people being denied their driver's license if you want to. There's a lot of ego in that, but there are some people who shouldn't be in the air. We all agree with that, but basically there are very few conditions that can keep a person out of the air if they want to fly and if we could monitor them and watch them very closely.

So this is a general philosophy and mindset I have and we're going to try to do what we can to work toward that goal. There may be some limitations on what you can do with a third class. One of the problems I was discussing over here earlier about a third class certificate, a fellow said I'll accept that third class certificate because I'm only going to fly my 152 around the barn and maybe go over to pick up some milk once a month. The problem is, with that third class certificate, you can buy a 747, get all the tickets you need and fly it in to Chicago, O'Hare at 5:00 in the afternoon, by and far with all the other guys. Now the airline pilots and the public that's flying out there doesn't want you out there particularly if they could learn that you maybe had a heart attack and a four artery bypass and were 76 years old. You could just think of that. So there is a problem with the third class. It's too broad in its concept. Now we all know the guy who gets the ticket, and he just has a 152, a 172 or something, is not going to do that practically. From a legalistic standpoint that's what we're constrained to.

So we're trying to look at how we can change that. First to get rid of all the backlog and change the things I'm trying to do within the constraints that I have, within my authority to make professional judgments and then, secondly, we can work on the regulatory things later.

OK, I have some statistics. Why don't you flash on the first sitde. We'll go through these pretty quickly. Give me about a 10 minutes or 15 minutes cut here. OK, alright, slide one....one of the things I wanted to point out in this, accident causes. You've seen this in many, many areas. When I get around the medical specialists groups and around some groups of aviators and around people in communities, where people are flying over their houses, they worry about being crashed upon. And I'm warned that people with certain conditions taking certain medications will crash and die. I don't see it in here, and it's not identified, but very very rarely is there a medical cause of an aircraft accident. People talk about pilot disability. Well the causes of ultralight accidents for instance, well you look at ultralights, the causes, pilot incapacitation. But what is it? Boozing? Maybe vertigo, maybe some other thing, probably incapacitation. Almost never a medical thing. It probably, down here in the statistics some place, is a cause.

Now let's take the airline pilots for instance, we have about 8 or 9 cases a year of pilot incapacitation in the airlines. We have a great redundency in the air, in the cockpit, three pilots up in there in some of them, now it's getting to be two because John Lauber and those guys finally convinced somebody you can fly with two. Thanks John, now you make my problem harder. They'll say what if you certify a pilot that has a cardiac bypass and two of them get in the same airplane. You fly to London, and one of them has a heart attack and the other one gets so excited and worried he has a heart attack and the stewardess comes in and lands the plane or she gets Kirk Douglas to come in his helicopter or something. That's the kind of scenarios I've got to deal with.

Well, anyways the airline pilots, I'm having a tough time with them because they're the ones that are looked at closer, there is a lot of airline medical directors and a lot of people that are looking at that issue. But even so, statistically speaking, I don't think we have any causes. The third class pilot we have running regulations----philosophy and the mindset that a pilot, the person, has the right to take a little more risk for themselves. Then the only trouble we have is people being concerned about them dying and crashing into the school full of hemophiliacs or whatever. I warn all my pilots, that I recertify, particularly if they visit me up there and their wives are there, and the wives want to get them the hell out of the house and get them back to flying, the biggest motivator in the world is I'll say, that one final thing is that you guarantee that you will not die in the airplane. I don't care where you die, in the sack, anyplace, but don't die in that airplane. Most of them have agreed.

OK, next slide.....this is....the airman application for medical certification is way up----500,000 a year, I don't know if you can see that. This just gives you a look at what's happened in aviation with the wartime and with the big build up. (Can you all see that in the back? Is it too light? Probably a little difficult seeing it. Way in the back can you see the slide? OK, we'll just whip on through these. I wanted to show you sort of what we are faced with.) Now here's a slide with total special issuances granted. And the interesting thing is that we have had an increase trend.

Before I came here, you think that I was the one that was doing it all, people taking shots at me, but they started certifying people with coronary artery by-pass, which is the biggest class of cases--heart disease. We'll talk about why that's occurring right _ now. Some time age, all I did was jump from one artery by-pass to whatever the doctor wants to by-pass, and I'll accept them if the function is good. So we're -getting a lot more. You'll see that we're doing 499 in six months compared to 479 in a year, last year. And this is all types. This is all types of special issuances for Unconsciousness is a very common cause. Alcoholism is not too infrequent, in return to the cockpit. Cardiovascular disease and other kinds of trauma. Go ahead to the next slide. Let's go through these pretty quickly. I have a feeling that you have trouble---this just shows a first class 82 compared to 107, and not all of those are air line pilots, incidentally, of course, you know. Next. go through them real quickly. The last bottom number down here, 53-61, next one, and down in the third class, 319 and 356. So we're really going off and recertifying a lot of folks.

This shows a little breakdown on active airmen by type of flying and there's seven hundred and some thousand, total. It's really kine of a difficult slide. Let's go to the next one. There's seven hundred and some thousand. Now we have our physicals done by physicians out in the field who are designated aviation medical examiners. All of you know that because you go to them for any doc. There are 7,539 of those folks out there and we shoot for a goal of about 1 per 100 airmen. So that gives you a feel and the ratio that we no is there. These folks, a lot of them are pilots themselves. That's a good issue. We trying to strengthen our core out there of pilots CFI pilot AME's and one of the things I'm trying to do is decentralize and deregulate (that's a nice word) as much as I can, all the positive control we have and decentralize it out into the field. First down to Oklahoma City, where is our center, as you all know, I hope, and then to the AME's out in the field and the regional flight surgeons. We have some federal flight surgeons out there in each of the regions. So this gives you a feel for our AME population.

Active airmen by region. Take a quick look at your area there and you'll see how many of your buddies are out there boring around in the skies. There's a lot of aluminum in the skies. You got the dilution factors reducing, so keep the eyeballs out and maybe get one of those magic things that tells you where the enemy is. Go ahead to the next one.

An in-star ratios of airmen. How many of you, while I'm thinking about it, how many of you have a feeling that it's difficult for you to get to an AME? How many of you have a feeling that it's difficult for you to get to an AME? Too far to go? Difficult to get an appointment? Appointment's the problem. OK, just a couple. We get letters from time to time from folks that say they need one and - they're way out in county, or where ever, you know, there's a distribution of them. They're mostly just like other physicians. They're all concentrated around the big metropolitan areas. But I'm surprised it's not a number of you and I'm glad it's not because we feel like the ratio is pretty good and GAO, our green shade watch dog, tells us that we should keep it low because when we have an AME that doesn't do very many, he makes a lot of errors and that causes you delay. So I'm glad to see there's not a perceived problem in this group. Go ahead. This shows that the AME's are generally family practitioners now and a few specialists, and the family practitioner is the one that we deal with. We have a training session for them in each region about once a month, and I go ut to the regions and we have a refresher session. They've got to go to one every five years. OK. Cases for review. Drop that. Keep going.

We have a computer system that scans your record when it comes in and we're trying to clean it up and get some automation in the system so it'll go through faster. With 200,000 pieces of mail coming in every day, you can imagine all the paper mail that's done there. We're gonna go down and try to automate that shop and get's some help to move that stuff. A lot of people have glasses and corrective lenses. This slide shows the restrictions on airmen, and that's handled pretty, pretty easily. All you got to do is convince people that you can see with your glasses and you can get, you can get the flying certificate with the restrictions on it. Yes sir? Would you stand up please? I'm sorry, I really don't know but it's mostly third class, about 65, 70% third class and then the others come in afterwards. About the same percentages you have for the people out there. The first class gets his physical every six months, but those usually slice through pretty fast. We've even gone to the point of telemetering the EKG, which is required in the first class pilot. Brought in from the cavity from the doctor. So, those are some of the things_we're doing. Restrictions, not much of a slide. Go ahead. And these are eye problems, as you know, if you take a quiz in your friendly Sunday newspaper, and they say, what's your most common cause for disqualification for astronauts? And you think, crazy, or whatever, that the most common cause for aviation in general, for years has been

eyes. I think we've got the eyes pretty well solved. The only problem I have now is that airman who comes in that's blind in one eye and can't see out of the other one, and has to fly. This really is difficult. Put glasses on, and you've got 20/400 vision in the one eye, has had a little disease in it, put glasses on him and he can see with one eye with glasses 20/20. Would you fly with that airmen? Who would fly with him? Great. So would I. But, he's outside the regulation and I'm really working on that one. That's about the only one. Yes sir. Say again. Yes, yes Howard Hughes flew with one eye. Wally Post did. Unfortunately the, yeah, Howard Hughes flew with one eye? Wally Post, there you go. See how easy I am. Didn't you tell me Howard Hughes flew with one eye, yeah Howard, you flew with one eye. You think I have an opinion on my own any place? That was great. I think you're a plant. What? Say again? Wally Post got killed in the airplane? Well, that's 'cuz he had Wallace Berry, not Wallace Berry, Stan Mohler tells a story about the ages of man. The first thing you do is quit, forget the names, and I'm at that stage. Next thing you do is is you forget the faces. The next thing that happens to a man is he comes out of the head, john, latrine or whatever, I was in the Navy, and he forgots to zip up his fly. Boy, that's a bad one. The next stage is that he goes into the john and he forgets to zip down his fly. I told that recently and Stan got me aside later and he said there's a fifth stage. I said what is it. He said you go into the john and you forget why you went in. Now if anybody can come up with the sixth stage of man, I'm working on it. OK. If the president comes to me and wants to be certified for a patient after cancer, I'll certify him. I will certify other people with cancer, too. Anyway, I think the question there is very important. Wally Post crashed and died in an airplane and he had one eye. Is that related, is that relevant, is it significant? I have seen, as a physician I have seen I guess about sixty cases of carcinoma of the colon, the disease that, every one of those people have used toilet paper. I want you to think about that. Not a one of them used corn cobs. Now I'm not, [laughter] OK.

Age Distribution Medically Certified Airmen. Go onto the next slide, and the next one. And it shows their age. Next one, and the next one. This is our 38. OK next one, next one. This is what's happened to the age and I look out there at the craggy faces and the bright smiles and I know that this is happening, and I'm right with you. Look at that, third class, thirty-five foot. Now the air line pilots, I thought that the first class represented them, they're up at forty-two, so we've got a population up here. Now what's that mean. When you get above the certain ages with some, a few restrictions, you get more diseases, and more things happen. So

that's why we're having such a crisis with this business. Medical science is advancing our regulation tablet so we had to change our mind set and we're doing that. Next slide.

Applications, hold back. That's some of that business you're talking about awhile ago, the percentage of each. The applications coming into a, you asked me a question about the applications coming into accounting, and here they are now. In 1984, the latest figure we have is 500,000 is kind of a base line figure. We're down to just 463. Recognizing that there's not as many airmen as there were. Go ahead. OK, here on the bottom figure 720,534 airmen with medical certificates, FAA gets a lot of their statistics from the medical certificate. We don't really know, and the FAA doesn't really have any way to say how much flight time there is. They get it off the medical certificate. All of us would like to have better statistics than that on how much flying you're doing. It'd be good if when you go in there and they say how much did you fly last year, you really took it out of your log book or took it out of your head plus you log book, but that's where our statistics come from. It's pretty valid. We've done some checks on it and there are some ways, maybe when we change the regulation we might have people who actually document a little better. I wish we could do a little better than that. OK.

Active Airmen with Waivers. Look at the percent we had with waivers of some sort. 8 or 10%. So the big fuss we had, that causes most of the crises, a very small percent. So just like that, when it happens to you it's a 100%, kid. Go ahead. Defective color vision, and so forth, and we've got some things about color vision coming up, but I don't know what we're gonna, how we're gonna to resolve it. Now, alcoholism. I want to go through this with you. How many of you know that there are 600 air line pilots, recovering alcoholics, flying today in the airlines? How many of you knew that? That's interesting. 600 airmen were identified with alcoholism over the last 10 or so years and these statistics will show it in a little bit. And now they're flying. They are recovering alcoholics. They're recovered, cured in the parlance, in the trade we call it recovering, because you never fully recovered from alcoholism. A thimble full is too much, and a million is not enough for an alcoholic. And those are the people that we put back in the cockpit with a good solid program. So, it's a very good demonstration of what, I'm sure 10 years ago the FAA had a lot of wailing and moaning and ringing of hands about what would happen if you put air line pilots back in the cockpit. We would have crashes all over the place. We

haven't. As far as we know, not one of those air line pilots that was returned to the cockpit, who was dry and who remains dry, except as we'll see in some of the relapses, which we catch and put them out until they're dry again, or put them out entirely, have been involved in any sort of instance that we can identify. No crashes and no instances. I feel real confident. Yes sir. [Question - How can you tell if an - air line pilot is an alcoholic?] Well that's a long story, if you've got about two hours. I tell you, P. Borrington is over with his book. Borrington says in the back of his book he was an alcoholic. He can tell you. You can go to an AA meeting. I'd advise any one who hasn't been to an AA meeting, to go to one. It is diagnosis that can be made very easily. It's not alcoholic abuse. You know, abusing alcohol getting drunk some weekend or whatever, but it's a disease that is very specific and you have to understand it that it takes a little more--you know, you don't just check the blood level once and say you're an alcoholic. Very complicated. We identify somebody that's an alcoholic and needs to be helped because they've had problems with their job, being off work, money problems, wife problems, and so forth. Put them in an alcoholic rehab place, give a good follow up program and the main thing is they have to abstain from alcohol totally. We monitor that to be sure they do. So once we get that going, we got it made. Yes, you had a question sir? You might be able to tell him what an alcoholic is. It's a tough thing. Yes. Drugs is a very similar thing and I will talk about it. Let's go through these real quickly. Let's go back to that other one. Back to that back slide. No, one back. Can you go back one? It's going forward, huh? No, it's going forward. OK, push down the thing and rotate it around, push down your front, no go back. OK. Now here it is from '72 to '75. Does anybody think that there was an alcoholism problem in the air line pilot community? It was roaring. And why didn't we have them of course, turn in your buddy, his career is gone. So they put in an established program. We suddenly had an epidemic of alcoholism. Dr. Reighard and those guys were out of their minds. They caused alcoholism in the air line pilot population. Look at it. Now what happened here was that a couple of air lines that had been smart enough through AA programs and so forth, and they, Dr. Reighard went to them and they said, all our alcoholics are doing good, they're great. He said, make them join a program. We want to be sure for FAA. So we had another epidemic right here. But this is just a bunch of people that had been identified that were really already in the program but weren't identified with us. And then we've gone through. Now relapses are tremendously low for this population. They've got one motivator. It's they lose their ticket to go and get a \$100,000 ride and have fun while they're doing it. So, that's the best motivator to

keep somebody dry. Relapses were pretty high in the first part of the business. We got it down to a very low percent. We find that about 15% will relapse. We identify it immediately. We give a few a chance if they show a good program and good motivation to come back. The relapse rate in the second time is about, oh something like 30, 25%, it varies. The third time, it's almost a loser. So, if a person can't hang it together the first or second time, usually they don't get back in the cockpit. OK. Let's go through 'em real quickly. I've gone over fifteen minutes, I'm sure.

Relapse status is of a different crisis and it is a disease of older people. As you know it takes a long time to become a lush. Although some of us can do pretty well by the age of fifteen. Next.

Issuance. OK. Months from treatment. Well we're shortening down the period. We find that once somebody goes through the rehab and looks pretty good physically, we can go ahead and have them recertified quickly. But they are on a tight program. Now the reason I'm showing this to you people, particularly, and there is only a few air line types here, is that we are going, we are moving toward certifying the third class also. And one of the reasons we haven't is because we haven't had an in place monitoring system which would assure it. I'm trying to get that for the third class also. OK. There still flying. That's pretty good. Pretty good for a disease of that magnitude. Next. Go ahead. OK. Special issuance pathology closed.

Cardiovascular Disease. You'll notice myocardial infarction, coronary angioplasty, coronary by-pass surgery and artery disease. We're recertifying those people real well. There's a lot of advanced technology out there and the people are getting back to work, and we're finding out in some cases, if I can get statistics I think it'll be pretty valid, that people actually have less chance of dying of a sudden incapacitation or dying of a heart attack when they've had the treatment. And that's a great relief for me, because I worry every day about people that are up there flying, that aren't certified. Mainly I'm concerned about them, but mainly also I'm concerned about the program. Yes ma'am. Stand up please. We can recertify somebody with a myocardial infarction if they have the work-up, their function is good, and they're not a great risk of having sudden incapacitation. Yeah, people not a candidate for this is fine. Now the ones that I have trouble with are the people that their doctor's say they really ought to have it, and they say I don't want to have

it. But they've got a lot of functional deficiency. Some of them don't even want to have the test. Now what she's saying, if you didn't hear the question, is if you haven't had one of these special treatments, can you still get certified after a myocardial infarction. The answer is yes if the function is good. OK? Go ahead. Next. I think there is a hole there. Was that the last one? OK. Yeah. I ended up, - that was out of order. OK, there it is kids. I'll open questions. How much longer have we got? Another fifteen minutes. Alright, number one, in the blue shirt. Stand up please and I'll try to repeat the question. The test for people who had bypass or the test that your doctor has given you mostly, we usually ask for a little bit more, particularly in the category of pilot. If you are a first class pilot, you most likely would have to have the functional tests, which are stress tests with thallium scan, that's a nuclear type of scan and a muga performance test, to show how the wall is working and things like that. A first class pilot usually has to have a post-surgery angiogram. They have to wait, until now, they're waiting one year. If their doctor says they're good and they're functioning well, we let them wait six months and we get those tests at that time. And with our bureaucratic messing with it, by the time we get it in eight months, then it'll be about eight months from surgery. Those are the tests and the ones we've been requiring have been those. The philosophy in the cardiovascular specialist field varies and I'm a pseudo-cardiologist just as much as I am a pseudo-psychiatrist, and everything else, being a specialist in aerospace We learn more and more about less and less until we finally know everything about nothing. But, sort of like pilots sometimes. Are there cancer tests for post coronaries. It depends upon the amount of disease it has. Sometimes we, but what I was going to get to, there is the anatomy school of thought versus the functional school of thought. The FAA has functioned in the past with a particular consultants we've had on the anatomy. In other words, you look at how much the arteries are restricted and you try to presume how much of the myocardium or the heart is risk. I'm working more on function. If I can get good functional tests I'll overlook some of the anatomical things. That makes it a lot easier. There are cheaper tests. They are, I think very reliable. There are some hazards there. When you're crashing your airplane, the pathologist, we got a new pathologist here, goes out and slices your heart, he can't see that it could be because of a function or arrythmia, or standstill, you look at the anatomy. And all of us, you included, have blockages in the heart, cardiovascular disease. So, that makes it difficult when we have a crash and we try to decide did they die of a heart attack. But we're still pushing at it. It's a new area. Go ahead. Diabetic not on insulin, well controlled in

diet, can get certified. Diabetic on insulin with drugs to control hypoglycemia, some selected ones are being certified at this time, very cautiously. Diabetic on insulin, not being certified at this time. The insulin issue, I've got to because of the way the regulation was written, I've got to put out some notices and do some other things, plus get some scientific support. We're working on that, I hope to have that done in - six months and I expect that some diabetics that are well controlled on insulin, we might be able to certify early next year. OK. Quickly. Yes sir. It depends upon your function. A third class physical, we don't require normally, unless the function is really, really bad. We don't require the angiography. We'll ask for a stress test and a thallium usually or muga. You take all your papers and a good clinical evaluation from your doctor, and take them to the AME, you have them do your physical, you send it in to Oklahoma City and say I want a special issuance under 67.19 of the regulation. Alright, the follow up has been very onerous and I recognize that. That was my third or fourth priority in the business to placate the time I've been here. To placate the cardiologist who wanted some more tests, even before they gave the certificate, I'd say OK, we'll do a thallium in six months. Right now I'm trying to, if it looks good, require no more than a stress test every year. OK? A stress test every year. That's what your doctor probably does. In fact he may even do it more. I heard a fantastic story from a gentlemen over here, whose insurance company has a, would you believe it, a muga test, stress muga, every year. Well, the way prices are going up on air gas, that's probably a couple of flights around the barn, you know. Yeah, you complain about that, but I'm with you. It's too much. But, of course, again, I have this dilemna. The guy says please give me a ticket. I'll do anything. I'll go to the doctor every week. I'll do all the tests you want. Then in six months he's coming back and says that just cost me fifteen hundred bucks. What the hell am I gonna do. Next one here. Yes. Anybody can get a class one physical at any age. That was the question. Can you get a class one to anybody if he passes the medical? Now that just doesn't mean to go to some friendly AME that looks at you and says you're warm and gives you one. It means, you know, there's some like that. I think I was like that when I was out there. OK. Go ahead. Pacemakers I'm recertifying. I had a tough one there. A guy came in and said this guy is pacemaker dependent. I said, "What does that mean." A sudden incapacitation, because of what ever you've got, we can certify you. I hope not. Next, right here. We'll go about real quickly. There's several others. You're a lucky one. OK. Yes. Yes. His chances are pretty good. If his doctor sends in a physical that shows that he is in, functioning well, doesn't have a high risk of something, pretty complicated

evaluation, have him go for it. I don't know. I really don't. There's a batch. We got 'em. I don't have it right on the top of my head. How many? 30,000 over 70. Yeah. There's probably 30,000, it's a bunch. Out of that 700,000, the population is going to be there. Yes. Next. Go ahead. Well, you can fly at night all you want too. Just have a--yeah you can. You just have to have somebody else that's there - that can see. The color vision issue is very tough. I'm attacking that one and Stan's working on it. We're gonna do some studies. I can give you my personal opinion, but I can't give you, you've got to recognize that the federal air surgeon is the top of a pyramid of regulations. Now as a federal air surgeon, I'd have to say I've got to restrict you because that's the way the regulation is and that's the way we're doing it now. For some reason it seems to have been working and I hate to screw around with something that's working. But I believe that finally a number of people who are color deficient, now the difference between color blind is total, and color deficient, 10% of the male population and only about 1 or 2% of the female population have color vision deficiency. That was a chauvinist back lash. The women pass it on to the next generation of boys. The thing is, I believe that probably in modern aviation, you could probably fly at night safely. But we've got to convince the great public out there that that's true. And one of the problems is, that night flying is more hazardous by a large batch. If we took the statistics on accidents at night, that's pretty tough. So before we can just come in and say he can fly. It looks good to me, we've got to do something and I'm working on that. I hope to have a change in that within a year. Yeah. That's good training because I knew you were going to cheat and go fly anyway. I know you guys. Don't tell me you haven't flown at night. How many people here think he hasn't flown at night? You're naive. Yeah. Go ahead. Yeah. OK. Hang in. We're gonna get that fixed. Next. What determines air traffic controller population, too? They say in an air traffic controller can't work. Even if we got 2,000 of them out there that have been functioning for twenty years. OK. The fellow in the straw hat. Valve replacements are being certified? Again I have the problem with the cardiology community, particularly those who don't get the \$5,000 fee for putting them in. They might stay in, and so forth. And the other issue there is very difficult for me and that's because to be safe with a valve you have to take an anti-coagulant. That means your blood's thin. That means you've got to bleed and you might have sudden impurifications from bleeding. I've bit the bullet on that and I've certified some people under careful control and watched their valve cases and also their pulmonary and so forth. I haven't got any firsts, I'd give a third and a second right now and I would give a first if he looked good. The one way in the

back. Controlled arrythmia we'll certify. The problem with controlled arrythmia is underlying heart disease, or the drug that it takes to control it. Almost anything. If you don't pass out walking off the airplane--now this is going to really screw up Stan Mohler because he wrote a book based on the FAA and his knowledge and use of drugs, and I'm telling you right now, it's of course it's not, again, I'm talking as Frank - Austin the EAA pilot, almost any drug that the physician would give you to live with and control your disease, I think it valid if it doesn't have side affects and cause you possible trouble in flight. And I really believe that. But we're having a heck of a time of course, documenting that's true and we can't always believe the person when they say it doesn't affect me doc. What the hell. But we are working on the drugs. Yes sir in the blue, right in the front. Angina is a tough one. If it's spastic angina and there's no, you know we work up the thing, it's tough. Again, on the medication, I think we will solve that is to probably go to the idea that if your control with medication and will buy the medication and you're not at the risk of a sudden heart attack and we can really convince ourselves that that's true, we'll certify those folks. Well you should be probably. We'll hold a little clinic up here and his fee is very inexpensive. No, I know what you mean. You only get it under certain conditions, like when your wife says, "You're going flying again, you son of a bitch, I hope you die." Go ahead, in the beard. Epilepsy. OK. Good one. Yeah it's a long time. Epilepsy is a tough one and I think the breakthrough there may be similar to angina and some of the other things. You have to come with an anti-convulsant drug. The big bug-a-boo is that they're afraid that they'll break up and have an attack. We're working on that one, too, but basically right now, if a person has a normal EEG, off medication for about a year or two, we'll certify a person who had a single episode and particularly at a young age. So a number of those are getting their thing back. You have really classic epilepsy, unlike these are, you know at any moment the guy says turn left and come down to 1500 feet and load your gear and you flip out, that's not very good, that's not very smart. There's people we probably won't. I think we're looking at ten years or something like that. Probably the answer here is going to be medication and probably the best answer is medication in which we monitor the label of the drug to be sure it's the proper therapeutic label. Not toxic and not too low. This may be our big answer in the future. To get away from this empirical thing, where you're on medication, you're out. So that's all I can say right now on epilepsy. Yes sir. Can come back, if they're well controlled diabetic, on diet only, can come back and be certified. Twenty minutes. No, I mean if the tests are all good. Yes sir, one in the back and that I'll get---Still clausic speech, not

allowed to fly by radio control. You got to have one of those things where you pop it out, you know. No that's a tough one. If there's no risk, if we look at the vessels and there's no risk of another stroke and incapacitation and the person is gonna fly with no radio, I guess he could. But the trouble is I couldn't give you a third class, because you're required with a third class you buy your 747 and go. So, total loss of speech would be difficult and you may not even be able to get your certification—not your medical, but your license. That's obviously not you, because you speak very well sir. You lost speech? When did you get it back? Well if you, your neurologist gives us a report that says it looks good enough by me, we might want you. But it's got to be a good work up and one that we could be really confident that it's good. If you have any problems, give me a call in Washington and we'll work it out. Yes sir. Yeah, bad case. Yeah, that one I know. You have an unconscious episode and it's unconscious due to unknown causes. You look at everything, your heart and everything. I will generally, if they can't find anything and a person cures all the problems and it causes them to pass out. Like, you know, overweight and smoking.

How many people here smoke? Get their names, Stan, would you? I want you license number. Reduce the risk factors in the things that cause these things and we'll recertify people who have those episodes. Can't find anything. Yeah, they pass out a lot. [laughter] We'd worry about drugs, alcohol, other things that trigger off these things, but if the work-up is good, we'll certify them. Yes sir. 24 years old with a myocardial infarction? Wow. You've got a personal problem we'll have to deal with. It's a tough case, so I'll be glad to talk to you about it. Do you have a license? Oh, you have a license but you want a medical. OK. [laughter] Stand up. How many people would fly with this man? Send in your chip. Sit down. Next. We'll have to work on yours. That's a pretty tough situation. Some, maybe congenital or some other cause, OK. Am I gonna change the Age 60 Rule? I do not talk about the Age 60 Rule in public. It's not a medical rule. It's based on medical causes, medical issues, but the Age 60 Rule is an operational rule. I just talked to, as I was walking out of the Pioneer this morning, I met the captain of the Concord. He's 55 and he's got to retire. People that are flying for the VOC and the French that are going to transition in the Concord, have to have 7 1/2 years before they'll train them. They're not allowing them to transition. There was some reason, not just economic in that case, they did find that people that were over 40 whatever it was, 7 1/2 years from 55, had trouble making the transition. So there's some psycho-physiological functioning things, when you transition to a new area, new learning is difficult as you

get older. I noticed that a hell of a lot. I can hardly remember Tony LeBeard's name, for Christ's sake, and he knew me right away. So it shows who's older. But anyway, the Age 60 Rule has medical overtones, but it is an economic, administrative rule and it's also not in the medical thing. I can't give a waiver for that. I can't give a special issuance for that. It's a part 121 issue. So, no matter what I would feel personally, and I don't know how I feel, I haven't checked myself lately about that, you're stuck with it right now. You're not an air line pilot, though. You're an air line pilot? Well, you've got a long way to go, fellow. He's not over 26. He's over 26.

Arrythmia. Can we, well that sounds like a special case. We will certify for arrythmia if it's well controlled and the medication does not give you any side effects. Let's talk about it. Yeah, let's talk about it. And any special things, that is, some other questions about different diseases. Let's give him over here, the one in the back. Get a good work-up from your doc and shows that you have no more sitting in there and you have very low risk. Get a good letter and go to the AME, send it all in to Oklahoma City. Right now it'll probably take you about six months. But we hope that'll decrease. Yes sir, in the middle. Congratulations. Would anybody fly with this gentleman? Oh, Mr. Hairslyn, do I remember you. Wow. You almost caused a divorce in my family. I had to work many many hours on you. Congratulations. Now you remember your promise? You're not going to die in the airplane. Yes sir. If anybody doesn't know, the controller's used to be certified on a class two physical. We no longer certify on a class two for an air traffic controller. It's an office of personnel management. I'm dealing with the people over there, and my people, we're tyring to get the ability to waive almost any color deficiency. One of the big bug-a-boo's is the color with the radar and the colored things, and that's also in the airlines. You know, they call it glass cockpit with all the colored things. It's all of the color issue. Personally I think if you look at the colors of the radar, you don't like the colors, my wife says, like all wives, "Men are all colored blind anyway. Who knows what magenta is and all that stuff." You could probably go up to that radar, punch in the right codes, and you could get all the intelligence and information right off the black and white or shades of gray in it, and so forth. I've got to prove that to the community and there's a big fight going on about it. So we do have some tests that are more discriminatory and are related more to the jobrelated things and I thing that color vision, air controllers are going to be able to be working and personally I don't think that they use color in tower controls anymore.

One of the guys told me that if you get down to that, where you've got to control the red or the blue whatever, you're in deep trouble and you say the high wing, the low wing, and number so and so. So that's the same issue and we're going to attack it at - the same time. OK. I think we had too much over here. Is there any of you, OK, way back. When you're twenty-one and your girl said I will. [laughter] Certify that - man. You're probably OK. If you have no underlying cardiovascular disease, the real bug-a-boo is if, you see, arrythmia is in the heart, and usually or very often caused by something wrong with the heart, as well as the pacing and so forth. Usually can control it OK and you're doctor gives you a good check-up, we'll probably certify you. Take the letter to the AME and he'll have to send it in. It'll probably go through. It might ask you for additional tests. How old are you? If you're over 45, 50 or something. He doesn't look over 32 to me. Standard work-up, kidney stones, whatever your neurologist recommends. Nothing really special, that I know of. No keylating, or fancy stuff, you know. Yes sir. How progressive is the deal there and what--looks good to you. You pilots are all alike. Chauvinists. She can probably get a ticket. Yeah, she can probably get a ticket. It depends on how she's going. We've certified a number of MS'. The medication she's taking which is very difficult, gives her a lot of problems, then of course, that's -- if she can identify when she may be having a lapse. All those factors have to be considered. Probably we can get her her ticket. Take her flying and get her up to speed. Yes sir. Functioning real well? Well, according to the FAA rules, you were supposed to die sometime. Jesus. We'll certify you if you're functioning well. Get you tests from you doc and at least, we need all the hospital records in that period. The doctors who did it are probably dead. OK. Get a fresh bunch of tests, probably at least a thallium scan on stress, and we'll take care of you. Yes sir, in the red.

Fifteen hundred dollars. OK. That's a couple of flight out of your area. We're trying to reduce that. We're trying to reduce that. If your risk factors are down, you don't smoke, your cholesterol is down, you exercise regularly, you don't beat your wife, we'll certify you. You're certified now. What we'll probably want is a stress test, under our new rules. so get your doctor to write us a letter telling us what he recommends, we'll probably accept it. Put that in a letter. We'd be glad to have you do it. We may not, I don't know. It depends on what your history shows and everything. So, work with us and we're trying to reduce those things, too. That was down on my priority list. Next. Yes sir.

In two weeks. Thank you, thank you. What did it say? "We do not certify you?" Yeah, that's right, OK. Well, we're trying to answer those things the best that we can. Thank you very much for that. I'll tell him when I'm down there next week, that we're trying to relieve the workload part. the man in the white, with the cap.

Hypertension must be well controlled. No underlying heart disease, heart murmur. Should be functional. No hemodiamic, meaning the blood's not giving you trouble, you'll probably be certified without a sweat. Yes.

Type one diabetic, OK. About early next year, we probably will have a protocol out. We'll probably demand three months of close monitoring. You'll be sticking your finger, like you probably do now, and give us a record of that, would do you good. A glyco hemoglobin once a month. Your doctor checks you over once a month. You have no eye, heart or kidney trouble. Diabetes, as I mentioned earlier, you might not have been here, is a case where we really put ourselves in a box and we've got to do some administrative and certification rulemaking to make it go. Yes.

Well, that's the trouble, yeah. One of the problems is that with such a huge back log, with all of the problems we've had, we've just really been reluctant to have a population of 200,000 or 300,000 diabetics suddenly descending on us. You can understand our problem. We'll just take a break, but we'll continue on in a moment. As you can see, Red Ron, president Paul is here, and he wants to say a word or two. Frank, if you'll stay here, no, you have to stay here. Come forward Frank, and I'll turn the mike over to Paul.

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

DATE: May 30, 1980

MIKE MONRONEY AERONAUTICAL CENTER P. O. BOX 25082 OKLAHOMA CITY, OKLAHOMA 78125

IN REPLY AAC-130

SUBJECT: Report of current status of grants of exemption from the FAA Regulations.

FROM: Chief, Aeromedical Certification Branch, AAC-130

To Chief, Aeromedical Standards Division, AAM-200

Attached are the statistics requested on the grants of exemption.

This report is based on the number of airmen granted exemptions,

rather than the number of exemptions granted to airmen. Since some

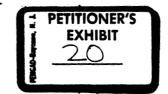
airmen have held more than one exemption, this report will not

reflect the same figures given in the annual report of January 31, 1980.

ADDIE W. DAVIS, M. D.

Chief, Aeromedical Certification Branch, AAC-130

Civil Aeromedical Institute



GRANTS OF EXEMPTION: OPERATIONAL LIMITATIONS

Without inspecting each file, we cannot determine the exact number of exemptions that include an operational limitation, however, we believe that all of the Class I and Class II exemptions granted for a history of myocardial infarction, coronary artery bypass graft surgery, other cardiac conditions, and neurological conditions contain some type of operational limitation. We have listed these exemptions that are currently active.

MYOCARDIAL INFARCTION AND OTHER CARDIAC CONDITIONS:

Class I: 31

Class II: 95

CORONARY ARTERY BYPASS GRAFT SURGERY:

Class I: 8

Class II: 20

NEUROLOGICAL CONDITIONS:

Class I: 21

Class II: 26

CLASS I:

402

CLASS II:

401

CLASS III:

2,064

CLASS I:

Exemptions in effect:	331
Certified under Part 67:	12
Terminated:	54
Deceased:	5
	402

CLASS II:

Exemptions in effect:	311
Certified under Part 67:	22
Terminated:	60
Deceased:	8
	401

CLASS III:

Exemptions in effect:	1,722
Certified under Part 67:	25
Terminated:	261
Deceased:	56
	2,064

TOTALS:

Exemptions in effect:	2,364
Certified under Part 67:	59
Terminated:	375
Deceased:	69
	2,867

GRANTS OF EXEMPTION: DISEASE CATEGORIES

1,106

MYOCARDIAL INFARCTION:

Exemptions in effect: Certified under Part 67: Terminated: Deceased:	823 7 224 52 1,106	
CORONARY ARTERY BYPASS GR	AFT SURGERY:	244
Exemptions in effect: Certified under Part 67: Terminated: Deceased:	208 2 34 0 244	
OTHER CARDIAC CONDITIONS:		191
Exemptions in effect: Certified under Part 67: Terminated: Deceased:	151 8 29 3 191	
ALCOHOLISM:		617
Exemptions in effect: Certified under Part 67: Terminated: Deceased:	564 2 49 2 617	
PSYCHIATRIC CONDITIONS:		312
Exemptions in effect: Certified under Part 67: Terminated: Deceased:	295 2 10 5 312	

NEUROLOGICAL CONDITIONS:		192
Exemptions in effect: Certified under Part 67: Terminated: Deceased:	174 4 12 2 192	
MISCELLANEOUS CONDITIONS:		205
Exemptions in effect: Certified under Part 67: Terminated: Deceased:	152 34 15 4 205	

TOTAL: 2,867

GRANTS OF EXEMPTION: CERTIFICATION

NUMBER OF AIRMEN CURRENTLY CERTIFIED:

1,223

NUMBER OF AIRMEN WHO HAVE BEEN CERTIFIED DURING THE LAST 25 MONTHS:

1,714

MONTHLY CERTIFICATION OF AIRMEN:

Since most airmen are certified twice a year, the 1,223 currently certified represents approximately 2,446 applications for certification. This would average out to about 204 applications monthly. Some airmen are certified annually and others biennially, so the average would be slightly less.

Information taken from our monthly reports listing the number of airmen certified and number of letters requesting additional information:

Average No. of airmen certified: 154 Average No. of incomplete reports:

29

183 Average number applying for certification monthly. GRANTS OF EXEMPTION: COMMERCIAL PILOTS

(This information based only on airmen who have been certified during, the last 25 months.)

EMPLOYED BY THE AIRLINES:	350
AIRCRAFT INDUSTRY:	65
CORPORATE PILOTS:	26
AIRPORT MGRS. AND FIXED BASE OPRS.:	9
FLIGHT INSTRUCTORS AND CROP DUSTERS:	11
FAA EMPLOYEES:	<u>17</u> 478

GRANTS OF EXEMPTION: AIRLINE PILOTS

CURRENTLY CERTIFIED:	350
INACTIVE:	32
TERMINATED:	56
DECEASED:	5
CERTIFIED UNDER PART 67:	$\frac{8}{451}$

GRANTS OF EXEMPTION: OPERATIONAL LIMITATIONS

Without inspecting each file, we cannot determine the exact number of exemptions that include an operational limitation, however, we believe that all of the Class I and Class II exemptions granted for a history of myocardial infarction, coronary artery bypass graft surgery, other cardiac conditions, and neurological conditions contain some type of operational limitation. We have listed these exemptions that are currently active.

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Class I: 8

Class II: 20

NEUROLOGICAL CONDITIONS:

Class I: 21

Class II: 26

MAR 1 9 1979

Mr. Martin Floor 7338 Yerry Hill Road Woodstock, Maw York 12498

Dear Mr. Fleers

Your letter to the Federal Aviation Administration (FAA) dated January 11, requesting information regarding physical examination requirements to determine reaction times of commercial airline pilots, has been referred to this office for reply.

The FAA Office of Aviation Medicine does not consider the scientific measuring of reaction times during routine medical examinations to be useful or feasible for determining eligibility for medical cortification. The frequent evaluations which an airline pilot is subjected to during flight training periods and flight checks are the most practical means for assessing his or her physical reaction times. These evaluations, in conjunction with the requirement that a person may not serve as an airline pilot after his or her 60th birthday, are considered adequate precautionary measures for assuring an acceptable level of performance.

Mincerely.

Original Signed by: MARVIN E. RUSSELL

MARTIN E. MUSSELL, Acting Chief Air Carrier Operations Branch Flight Standards Service

AFS-223:dj:Fell:63460:3/15/79
mc: AFS-200 2/835u5: None
cc: AFS-203/2200/AAM-200
File: 1210





DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

NATIONAL INSTITUTES OF HEALTH
BETHESDA, MARYLAND 20014

August 15, 1977

Stanley R. Mohler, M.D.
Chief, Aeromedical Applications Division
Office of Aviation Medicine
Department of Transportation
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington, D.C. 20591

Dear Dr. Mohler:

This letter is to follow up on the letters between yourself and Dr. Butler, the Director of the National Institute on Aging of July 18th and 25th. Dr. Butler has asked me to thoroughly review the issues with the appropriate people on our staff and reply to you. I have also talked with you by phone and can now respond.

The simplest part is to respond to your request for information about a summary of research on functional indices of aging, since the Handbook of Aging has just been published and does just this. The publisher is Van Nostrand Reinhold, the Chief Editor is James E. Birren, the date of publication is 1977, and the volume of most interest is Handbook of the Psychology of Aging. This work does as well as one could hope to summarize research over the entire field and is well organized and indexed.

In order to respond to the broader issue of how NIA might help in developing criteria for pilot retirement I will try to review the components as they appear, analyze them further and indicate some possible directions for study and improvement of standards.

First, it would seem there are important <u>political</u> issues at stake since the interest of several groups must be reconciled. These include, though not necessarily in order of influence, the safety of the public at large, the livelihood of airline pilots, the profits and efficiency of the airline, and the power and scope of regulating agencies. Practical standards must be political in so far as they reconcile the differences among these groups.

Second, a practical compromise has been to set an arbitrary retirement at age 60. This was arbitrary and hoped to do the least harm to all parties concerned. However, due to a variety of forces—including litigation by pilots, talk of abolishing mandatory retirement ages in general, and continued upgrading of regulatory criteria—there is



pressure to review and revise the mandatory retirement at 60.

Broadly, it would seem there are three general methods of ensuring the capability of older pilots for the safety of the public. Each of these is <u>already</u> in use in some form, so that the issue is not one of inventing new standards but rather of improving old standards. The three general methods are: 1) having an arbitrary age ceiling (currently chronological age, potentially functional age); 2) having physical examinations; and 3) having proficiency checks, both simulated and in-flight.

Concerning these three methods, it appears that dissatisfaction with the first leads to consideration of improving the other two. Review of the current status of each is therefore needed.

Physical exams currently required by FAA regulations are done every six months and include vision and hearing tests and resting EKG. These exams, however, are neither exhaustive, nor highly specialized to reveal deterioration of functions essential to safe flying. Some airlines apply their own additional criteria and have their exams done by a centralized facility such as the Mayo Clinic.

Proficiency checks are mainly made by the individual airlines. They either use simulated performance or actual flight of an airplane. They are standardized within a subcategory, but are done differently according to the airline, the type of aircraft and the type of flying encountered. "Scores" on the test are not highly differentiated, but are likely to be rated on a four-point scale. Concerning the question of pilot age, it is remarkable that examiners cannot tell a difference in performance because of age. Instead, the two most frequent and easily detected causes of deteriorated performance are early alcoholism and fatigue due to preoccupation with second jobs. Thus, the decrement of performance due to aging is far overshadowed by the decrement due to these factors.

Changes in pilot performance with age, because of the very young age of mandatory retirement, are clearly more a result of diseases that accompany aging than they are of the aging process itself.

In other words, 60 years is "young" for a person who has moderate smoking and drinking habits, has kept his weight down and has exercised. Aging has not yet progressed, while the diseases of aging depend on these and other factors.

Of particular public concern is the situation where the pilot dies at the controls. This occurs about three times/year, but because of there being a copilot has rarely resulted in a serious accident. Further, this is usually due to cardiovascular disease which could be detected by improving the standards of physical examination. Also, there is public concern about the mental changes of aging, which appears unlikely in this segment of the population at this age.

In summary, it appears retirement at age 60 is arbitrary and wasteful of human resources. On the other hand, a clear alternative criterion of age, either chronological or functional, is not readily apparent except on an individual basis.

Conferring with colleagues at the NIA has revealed a consensus that there is no current generally applicable method of establishing a precise "physiological" or functional age for a pilot as an alternative to the use of a criterion of chronological age. This is partly because the process of aging is a composite of many factors and one system of the body may age at a different rate than another. Therefore, no single factor can measure a "physiological age." Further, hypothetical composite measures are not necessarily related to the ability to fly without mishap. The staff agreed that a functional index of aging for pilots should be closely related to their performance in their major function of flying. Therefore, it would be close to, or identical to, a proficiency check.

If one views aging as a normal process which is often or always accompanied to some degree by disease, there are two factors that may influence ability to fly--deterioration due to normal aging and deterioration due to the diseases of aging. Because of the young retirement age (60), it is only the diseases of aging that currently affect performance. The method of detecting these diseases are well known. The other factor, the result of aging in a pilot is best revealed by proficiency testing.

Therefore, it appears possible at this time to make two major recommendations about upgrading the ability to safely and equitably deal with pilot retirement because of age. First, the medical examinations should be improved by standardization, centralization and addition of crucial tests such as exercise EKG with treadmill. Second, the proficiency test needs to be improved, especially by changes of the scoring method to give a much broader range of scores and by centralizing testing.

Both of these changes provide a natural foundation for research on aging of pilots. Currently, there isn't a reasonable data base upon which to study aging—medical exams without stress EKG aren't likely to reveal cardiovascular change, for example; and proficiency tests are not well enough differentiated to reveal small changes. By upgrading these two, the stage is set for both doing research and improving safety.

The National Institute on Aging is interested in exploring further how we can be a resource to the FAA in its responsibility of upgrading and revising standards for assessing the effect of aging and aging diseases on pilots. We are open to considering a preferred vehicle you might suggest for accomplishing your aims. Most readily envisioned at the moment are possibilities of participating in conferences you might set up, possibly with follow-up, or in a continuing study group to report and recommend. In either instance it would appear useful to have participants from both the airline pilots organizations and the airline proficiency checking group as well as from military aviation and from medicine, especially the Mayo Clinic. Also possible are more extensive projects which can be explored if they appear feasible.

An example of a project might be the selection of pilots of a limited random sample or sample with comparable control group for study by upgraded medical and proficiency checks. This would be a practical use of your funds, since the upgraded test results could be used for decision-making regarding the study group. Mayo Clinic might be a useful resource here. Another possibility is to ascertain that full use is made of the best available data. For instance, a longitudinal study of the decisions made on 100 pilots evaluated by a top medical facility, such as Mayo's, might be compared with the decisions made on 100 pilots receiving only Class 1 exams.

Another possible way we might be of help is to be sure the FAA is invited to participate in a contemplated study conference Dr. Butler hopes to sponsor on the topic of functional indices of aging to replace mandatory retirement ages (as it impinges more broadly across many occupations).

As a new institute, not heavily funded, we are ready and eager to utilize opportunities to further research and the public interest by studying natural groupings with special health issues such as pilots. We are best able to do this by making use of our consulting expertise, however, because our financial resources are limited.

I hope this reply is of help to you. Please be back in touch when the dialogue should be pursued further.

With best wishes.

Sincerely yours.

Kenneth Gaarder, M.D.

Special Consultant on Longitudinal Studies and Behavioral Medicine

National Institute on Aging

800 Independence Ave., S.W. Washington, D.C. 20591



U.S. Department of Transportation

Federal Aviation Administration

HH 24 1991

Mr. Samuel D. Woolsey 1000 N. Lake Shore Drive Apt. 2101 Chicago, Illinois 60611

Dear Mr. Woolsey:

I am enclosing a copy of our study entitled "The Influence of Total Flight Time, Recent Flight Time and Age on Pilot Accident Rates" for your use. It should be noted that our study is unofficial because it was never formally published by the Federal Aviation Administration, (FAA) or the Office of the Assistant Administrator for Aviation Safety.

Under my management and technical direction, the analysts with Aviation Safety and contractor employees of Acumenics Research and Technology, Inc., supported Operations Research Branch in the development of the concepts and information relating accident rates and pilot experience. We have not formally accepted this study as a final product because there are major data deficiencies. Other problems with the study have been discussed by experts in the aviation field as well as within my office. In 1983, we terminated further research on this topic.

Your use of this study to support any position may be questionable at best. If I could be of further assistance, I can be reached at 202 267-7227.

Sincerely,

Kenneth M. Chin

Executive Officer,

Office of the Assistant Administrator

for Aviation Safety

Enclosures

PETITIONER'S EXHIBIT