

The articles published in this newsletter are presented for informational purposes and topics of discussion and do not necessarily represent the opinions or recommendations of the Civil Aviation Medical Association.

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# Flight Physician



*A publication of the Civil Aviation Medical Association*

### CAMA News

As of the Omaha Annual Scientific Meeting, there are new CAMA Officers and Trustees for the coming two years See Page 2 for a listing of all Officers and Trustees and the various committees currently active within CAMA.

The CAMA Executive Board met via Zoom on Saturday, February 10, 2024, to plan activities both for this year and for the long range. The May 5, 2024, CAMA Sunday and CAMA Luncheon programs during the AsMA Annual Meeting have been finalized and are pending a Continuing Medical Education (CME) rating.

The program and schedule of events for this year’s CAMA Annual Scientific Meeting is currently under development and promises to be a stellar program filled with interesting and useful medical updates and entertaining presentations. Registration for the Annual Scientific Meeting will open on or about May 1, 2024, so be sure to watch your email and/or the May edition of the CAMA newsletter for a registration notice. CAMA members will be notified first, so if you plan to attend this year’s annual meeting September 19-21, 2024, in Jacksonville, Florida, please join CAMA or renew your membership for 2024 at your earliest convenience. Go to the CAMA website at [www.civilavmed.org](http://www.civilavmed.org), navigate to the Members Lounge page, and click on one of the links on the left side of the page to join or renew your personal membership or your corporate membership quickly and securely.

With this first edition of 2024, we are introducing a new section in the newsletter—the OP-ED section, starting on Page 28. Opinion pieces and editorials are placed into this section for the entertainment of CAMA newsletter readers.

We hope that you enjoy this edition of “The Flight Physician” which contains many articles, educational information, links to important FAA websites, and CAMA’s plans for the year.

The various CAMA logo images scattered throughout the newsletter are the two versions of our new logo, developed in 2023 and voted into use during the CAMA Executive Board meeting in Omaha, Nebraska, in early October of last year. Both versions are beautiful and depict the various missions and ideals of CAMA and its members.



## **2024-2025 CAMA Officers:**

### **President**

Leigh L. Speicher, MD, MPH

### **President-Elect**

Gregory A. Pinnell, MD

### **Immediate Past President**

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Edmond F. Feeks, MD, MPH

### **Vice President for Management**

Kris M. Belland, DO, MPH

### **Parliamentarian**

Kris M. Belland, DO, MPH

## **CAMA Trustees:**

### ***Term Expiring 2024:***

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Alison Leston, MD, PhD

Christopher F. Flynn, MD

Andrew H. Miller, MD

David Rogers, MD, MPH

### ***Term Expiring 2025:***

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Richard S. Roth, MD

Sergio B. Seoane, MD

Basil P. Spyropoulos, MD

Rodney E. L. Williams, MBBS

### ***Term Expiring 2026:***

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Daniel Danczyk, MD, MPH

Fred A. Furgang, MD

Farhad Sahiar, MD, MS

Alex M. Wolbrink, MD, MS

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Alex M. Wolbrink, MD, MS

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Robin Dodge, MD

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Basil Spyropoulos, MD

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Rodney E. L. Williams, MBBS

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### **Webpage Committee:**

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Sherry Sandoval, EVP

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### **Nominations Committee:**

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Co-Chair: Gerald W. Saboe, DO, MPH

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R. Ronan Murphy, MBChB

Gregory A. Pinnell, MD

John S. Raniolo, DO

Sherry Sandoval, EVP

David G. Schall, MD, MPH

Sergio B. Seoane, MD

Warren S. Silberman, DO, MPH

Basil P. Spyropoulos, MD

### **HIMS Committee:**

Chair: To be announced

### **Space Medicine Committee:**

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Kristy Anderson, MD

Kris M. Belland, DO, MPH

Matthew M. Cooper, MD, MBA

Daniel Danczyk, MD, MPH

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Gerald W. Saboe, DO, MPH

Farhad Sahiar, MD, MS

David G. Schall, MD, MPH

Alex Wolbrink, MD, MS

## 2024 CAMA SUNDAY AND CAMA LUNCHEON PROGRAM AGENDAS

**CAMA Sunday Lectures – Four hours comprised of four presentations, rated by the AAFP for four hours of CME credit.**

**Title: “Space Medicine Considerations for AMEs”**

**Program Objective:** The physician will understand and recognize the medical issues associated with commercial space flight that could arise during a medical examination for space flight operators and passenger candidates.

**Date, Time, Location:**

Sunday, May 5, 2024, 8:00 AM to 12:15 PM  
Hyatt Regency Hotel, Chicago IL. Room TBD

**8:00 AM to 9:00 AM**

**A One-Hour Presentation by Aubrey L. Florom-Smith, PhD, RN, AFAsMA**

*Clinical Assistance Professor, Medicine-Primary Care and Population Health, Stanford University School of Medicine*

**Lecture Module Topic - Commercial Spaceflight: Future Steps—Implications for CAMA**

**Objective:** Physicians will better understand the health conditions that would complicate an individual’s participation in spaceflight by using screening criteria that will preserve participant health and safety; and, Physicians will be able to discuss advantages of interprofessional civilian space medicine research teams.

**9:00 AM to 10:00 AM**

**A One-Hour Presentation by Emmanuel Urquieta Ordonez, MD, MS, FAsMA**

*Assistant Professor, Center for Space Medicine, Department of Emergency Medicine, Baylor College of Medicine*

**Lecture Module Topic – Considerations in Commercial Spaceflight Human Research**

**Objective:** The physician will be able to discuss how human research is used to screen, select, and train the best candidates for commercial spaceflight both as flight operators and as other participants in order to assure the best performance and health outcomes during space flight.

**10:00 AM to 10:15 AM Break**

**10:15 AM to 11:15 AM**

**A One-Hour Presentation by Charles H. “Chip” Dukes, MD, US Army Col. (Ret) MC, FS Reserve, FAPA, Aerospace Psychiatrist**

*Behavioral Health and Performance Operations Group, Exploration Medical Capability, Clinical and Science Team, NASA Johnson Space Center, Senior AME, HIMS Psychiatrist, Psychiatry Consultant to the Federal Air Surgeon, Psychiatric Consultant to the Surgeon General*

**Lecture Module Topic - NASA's Behavioral Health and Performance Services for Long-Duration Spaceflight Missions**

**Objective:** The physician will better understand how NASA will support space flight crews and other participants while on long duration space flight to assure continued good health, space safety, and mission success.

**11:15 AM to 12:15 PM**

**A One-Hour Presentation by Michael F. Harrison, MD, PhD, FAsMA**

*Aerospace Medicine Specialist, Critical Care Specialist, Emergency Medicine Physician, Associate Medical Director, Medical Officer for Axiom*

**Lecture Module Topic: Would You Fly With This Commercial Astronaut?**

**Objective:** The physician will be able to discuss how appropriate medical screening, selection, and training of astronauts can affect mission success and safety during commercial spaceflight missions and performance.

**CAMA Luncheon and One-Hour Presentation, rated by the AAFP for one hour of CME credit.**

Monday, May 6, 2024, 12:00 Noon to 02:00 PM  
Hyatt Regency Chicago Hotel, Room TBD

**One Hour Presentation by Kris M. Belland, DO, MPH, FAsMA**

*Past President AsMA, Vice-President Management and Planning CAMA, Retired Captain USN Flight Physician and Pilot*

**Lecture Module Topic – United States Naval Strike and Air Warfare Center, Navy Fighter Tactics Instructor Program (TOPGUN): Carrier Air Wing Mishap Reduction Retrospective**

**Objective:** The physician will learn how to ascertain by utilization of a retrospective non-randomized study: Did Human Factors Analysis Classification System Informed Operational Risk Management Training Reduce Carrier Air Wing Mishaps at Naval Strike and Air Warfare Center and Navy Fighter Tactics Instructor Program (TOPGUN)? The physician will understand James Reason's Swiss Cheese theory of risk mitigation as it applies to aviation mishap reduction and other high reliability fields such as medicine. This theory can be used in the hospital environment to reduce medical errors and mishaps.



## 2024 CAMA Sunday Medical Education Program

May 5, 2024 (Held during AsMA 2024)

**SESSION RECORDINGS**

Includes **FOUR** hours of presentations by four speakers + Luncheon Session (5 Hours Total)  
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|  |                     |   |                                 |



*Leigh L. Speicher, MD MPH  
CAMA President 2023-2025*

*Getting to know the new President...*

*Leigh L. Speicher, MD, MPH is board certified in Internal and Aerospace Medicine. She serves as a Consultant within the Section of the Executive Health Program at Mayo Clinic in Florida. Dr. Speicher is a licensed private pilot and a Senior FAA Aeromedical Examiner. She serves as the Aerospace Medicine Elective. Dr. Speicher is an Assistant Professor of Medicine. She is a Fellow of the American College of Physicians, Aerospace Medical Association, and the Civil Aviation Medicine Association.*

*Dr. Speicher earned her Bachelor of Science at Eckerd College in St. Petersburg, Florida and her medical degree from the University of Miami School of Medicine in Miami, Florida. She completed a general surgery internship at the National Navy Medical Center in Bethesda, Maryland and served as a Flight Surgeon for VP-30 at Naval Air Station Jacksonville while on active duty in the US Navy. She completed combined Internal and Aerospace Medicine Residency at the University of Texas Medical Branch in Galveston, Texas, where she also obtained a Master of Public Health degree. During this time, she continued to serve in the US Navy reserves attaining the rank of Commander before separating. She worked in the medical appeals department for the FAA prior to joining Mayo Clinic in 2012. Dr. Speicher enjoys spending time with family, traveling, and scuba diving.*

### **CAMA President's Message**

We had an informative and productive Winter Board meeting on 2/10/24. We have many passionate voices who are working hard to make CAMA the best resource for our members. In thinking back, I initially joined CAMA to assure that I had the latest information to share with pilots during FAA exams. After attending my first CAMA scientific meeting, I was hooked. I so appreciated hearing not only the latest information straight from FAA representatives but also what was coming in the future. I was so happy to find a group of AME's that all had similar questions and goals in their own practices. I've since been a regular at our annual scientific meetings and always try to make CAMA Sunday and our CAMA Lucheon when I attend AsMA. I joined the CAMA leadership team to contribute and strengthen our association. I wonder if you have a similar story or if you will one day in the future. Those reading this newsletter are either members or potential members that our board hopes to serve. With this as the foundation, a couple of the goals that I hope to keep top of mind during my time as president are to

- 1: Maintain CAMA's relevance and presence as a leading resource for AME's, and
- 2: Increase AME participation at CAMA Sunday, our AsMA Luncheon, and our Annual Scientific Meeting.

My President's report during the recent board meeting included several topics. I shared that several CAMA members are continuing to collaborate with MITRE to help shape the future of FAA exams (See Pages 12-13). I also shared that with the help of AsMA's Jeffery Sventek, CAMA Sunday has been added to the registration page for AsMA. The event is free, but this update allows interested people to sign up ahead of time to

guarantee their ticket. We had 99 people registered as of the day this article was prepared. If you plan to attend the AsMA Annual Meeting this May in Chicago, please register to attend the CAMA Sunday program on May 5, 2024. You will certainly enjoy the program we have prepared for you!

Two other advances during the board meeting included voting to approve that our HIMS committee go from ad hoc to a standing committee and moving the time of our annual business meeting that takes place during each Annual Scientific Meeting. The membership/general meeting will now be held on Fridays during the Annual Scientific Meeting adjacent to lunch rather than during Honors Night. We hope this will strengthen the attendance and communication needed to optimize voting for our association.

Many other committees and members are hard at work for their respective leadership positions. I would certainly like to highlight the work that has gone into our two upcoming events for AsMA this May in Chicago. Dr. Basil Spyropoulos, as chair of the Space Medicine Committee, has organized a wonderful collection of speakers for CAMA Sunday. The title is, "Space Medicine Considerations for AME's." This is exactly the sort of subject that drew me into CAMA in the first place. I found this group to be one of the only sources for what is coming in the future. Our very own Dr. Kris Belland, VP for Management and Planning will be presenting at the AsMA CAMA Luncheon. His lecture title is, "United States Naval Strike and Air Warfare Center, Navy Fighter Tactics Instructor Program (TOPGUN): Carrier Air Wing Mishap Reduction Retrospective."

*(Continued on Page 6)*

Both the CAMA Sunday program and the CAMA Luncheon Keynote presentation have been rated by the AAFP for CME—Four hours of CME for CAMA Sunday and one hour of CME for the CAMA Luncheon presentation. While the CAMA Sunday program is free of charge, you must purchase your CAMA Luncheon tickets directly from AsMA prior to the date of the luncheon.

I remember attending AsMA in Chicago back in 2013 with my soon-to-be husband. Our family returned in 2018 and enjoyed seeing the Chicago skyline from the Navy Pier Centennial Wheel. I hope you will all consider coming to create memories of your own and share some time with colleagues by “Honoring the Past...Preparing for the Future.”



*The Speicher Family enjoying the activities at Navy Pier in 2018*



**94th Annual Scientific Meeting**

**CHICAGO, IL**  
**MAY 5-9, 2024**

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## IN MEMORIAM

### In Remembrance, Charles Chesanow, DO

By Christopher F. Flynn, MD, CAMA Trustee



*Dr. Charles Chesanow  
Photo courtesy of Mrs. Dory  
Chesanow*

Charles Chesanow, DO (Charlie), served as the FAA's Chief Psychiatrist since 2003. There, he shared his expertise in psychiatry, forensic psychiatry and addiction psychiatry to support both aviators and five

Federal Air Surgeons! For two decades, Dr. Chesanow truly was the Nation's Authority in Aviation Psychiatry. What pleased him more was that he could improve the lives of aviators. Due to his belief in them; by 2023, thousands of pilots with successfully treated mental health conditions had returned to flying. In addition, Dr. Chesanow's wise counsel had generated years of steady advances to strengthen FAA policies for pilot mental health.

Dr. Chesanow repeatedly pushed to enhance the first great change in US aviator mental health regulations: the 1970s Human Intervention Motivation Study (HIMS) Special Issuance (SI) program. Over years, he deliberately increased the few initial HIMS trained psychiatrists into a nationwide cadre. Because of Dr. Chesanow, pilots can now access many more experts to help them get back to flying - faster. In 2022, he argued for the current HIMS requirements Step-Down program. Dr. Chesanow recommended the new approach because it reduced SI requirements as pilots showed steady recovery from addiction. Due to his ongoing efforts, the HIMS SI protocol is an internationally admired aviation safety program.

Moreover, Dr. Chesanow advocated for and inaugurated the second great change in US aviator mental health regulations: the 2010 FAA Anti-depressant SI program. This revolutionary step catapulted aviator mental health into the mainstream of Civilian Aviation Medicine. After decades of hiding their mental health treatment (or avoiding it), pilots could now receive treatment and continue to fly. With his recent endorsement, a fifth antidepressant medication was added for pilot treatment. By 2023, well over 1000 pilots with medication treatment had maintained their flying careers because of Dr. Chesanow's visionary ideals.

However, these two Special Issuance programs could not function without highly trained AMEs, psychologists, neuropsychologists and psychiatrists. Dr. Chesanow loved teaching and worked tirelessly to expand mental health training both for AME's and mental health professionals. Up until his illness kept him from traveling, he wanted to provide mental health updates at every CAMA and HIMS meeting. He urged adding HIMS breakout sessions for mental health professionals and more mental health lectures for AMEs. He wanted extra time for them to sharpen their pilot assessments: "to get it right, the first time." It was another way that Dr. Chesanow created a "win-win" for flying safety and for pilots.

Dr. Chesanow's activism also led to the FAA adding three new psychiatrists between 2019 and 2023. This was not a simple transition, since his steady voice had been the only one guiding FAA psychiatry for 16 years. I will never forget our first discussion where we had differing views on an aviator determination. Dr. Chesanow could have "directed" the outcome to his conclusion. Instead, he said, "This is complex work and professionals won't always agree. Do what you think is right." This truly captures Dr. Chesanow's astounding professionalism, insight and leadership. Aviation Psychiatry, the FAA, AMEs, HIMS Mental Health Professionals and aviators - have all lost a tremendous Champion for their safe return to flying. And for me, I have lost a wonderful teacher, mentor and friend.



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# In Memoriam

Reprinted with permission from the FAA Weekly Digest Bulletin dated December 3, 2023

## **Dr. Charles Chesanow, DO**

Dr. Chesanow was the FAA Chief Psychiatrist for 20 years and won the 2023 AAM Mission Support Award. Below is the nomination writeup which does a good job of capturing a distinguished career:

Through Dr. Chesanow's leadership, powerful AAM mental health programs were implemented that have promoted pilot mental health and the safety of the National Airspace. His ability to navigate the complex challenges at the interface between mental health and pilot safety makes him a national authority in Aviation Psychiatry.

For 20 years, Dr. Charles Chesanow has been the Chief Psychiatrist of the FAA, and the one to whom 5 Federal Air Surgeons (FAS) have turned for advice on safeguarding the national airspace. For 17 of those years, he has been the only one. The past three years, he has presided over a 300% increase in psychiatry staffing, despite a critical shortage of mental health professionals nationwide. AAM's ability to successfully recruit is a direct result of the high professional standards and collegial environment he has created. He has selected and assisted in the training of a cadre of HIMS psychiatrists which has now grown to 97 nationwide. These community practitioners are critical to a thorough, aeromedically savvy evaluation of pilots and good certification decisions.

He reviewed and made certification recommendations to the Federal Air Surgeon on up to 550 cases in a year. This while also providing expert witness support for a myriad of complex legal cases. His Board Certifications in both Addiction Psychiatry and Forensic Psychiatry coupled with his ability to distill an argument quickly to its essence render him uniquely qualified and highly sought-after by the FAA's enforcement attorneys.

In 2010, it was to him the FAS turned to push the controversial and stagnated Selective Serotonin Reuptake Inhibitor (SSRI) program into reality. Carefully evaluating candidate antidepressants, developing program rule-outs, and constructing a strong follow-up safety net has resulted in a program that safely returned over 1500 pilots to flying and later expanded to air traffic controllers.

In 2015, he was selected as a member of the Administrator's Aviation Rulemaking Committee (ARC) convened in response to the Germanwings murder suicide. He was a leading voice in proceedings which drafted critical but practical

recommendations to prevent future similar occurrences. Subsequently, he expertly directed AAM's development of an updated mental health training curriculum for all Aviation Medical Examiners in response to the ARC recommendation. Further, in 2020, Dr. Chesanow co-authored a highly respected peer-reviewed publication analyzing one of the most difficult aviator safety issues of our time: pilot suicide by aircraft.

In 2022, the National Transportation Safety Board challenged the FAA to implement career-long follow up of pilots with substance dependence. Dr. Chesanow's extraordinary knowledge and decades of experience guiding the phenomenally successful HIMS program was key to the effort. Working collaboratively with industry, HIMS Chairs, and mental health professionals, critically assessing the value of various elements of the recovery program, and recognizing the lifelong, chronic, relapsing nature of the disease, the innovative "Step-down" program was developed. A program that had already supported over 1700 pilots' safe return to flying just got better.

\*\*\*\*\*

## **Dr. Terry Jakubaitis, MD**

The best physicians are eternal students and educators. Office of Aerospace Medicine Deputy Regional Flight Surgeon Dr. Terry Jakubaitis, MD was always willing to teach others and provide a firm understanding of FAA regulations and processes.

November 17, 2023, Dr. Jakubaitis passed away. He was 67 years old.

Dr. Jakubaitis became Deputy Regional Flight Surgeon for the Great Lakes Region in 2018, after more than a decade as a Senior Aviation Medical Examiner (AME) which was obtained in 2011. He served as an AME assisting Airmen in the Great Lakes Region seeking medical certification. He devoted his life to protecting the NAS by ensuring pilot fitness to fly and evaluating the health of FAA air traffic controllers.

Dr. Jakubaitis also served as a Human Intervention Motivational Study (HIMS) AME. The HIMS program afforded Dr. Jakubaitis a chance to help airmen struggling with substance abuse an opportunity to seek treatment and turn their lives around. This industry-wide effort helped many airmen preserve their careers while enhancing air safety.

*(Continued on Page 9)*



## In Memoriam (Continued)

His medical career highlights include more than two decades of providing care in the Waukesha County Mental Health Center and working seven years for the Intensivist-Critical Care at Aurora St. Luke's Medical Center in Milwaukee, Wisconsin. Dr. Jakubaitis took great pride in his work at St. Luke's, responding to medical, respiratory, neurosurgical, cardiac, cardiovascular and surgical ICU demands.

Prior to St. Luke's, Dr. Jakubaitis helped launch the initial startup of the Aurora eICU, a telemedicine program that monitors the 270 ICU beds in the system. Once it was up and running he became the program's assistant medical director. This role

incorporated Dr. Jakubaitis' passion for medicine and engineering.

Dr. Jakubaitis received his doctorate from Rush Medical College in 1989. He earned a master's degree in civil engineering from Northwestern University in 1980 and a physics bachelor's degree from Florida State University in 1977.

The devoted husband and proud family man leaves behind a wife and several now adult stepchildren.



### In Memoriam

*Obituary reprinted from Curlew Hills Memory Gardens online at [www.curlewhills.com](http://www.curlewhills.com).*

*Photo from Linda Laguna Facebook*

Joseph Anthony Laguna, 80, passed away on February 5th in Palm Harbor Florida, surrounded by his family.

Joseph was born April 29th, 1943, in Arequipa, Peru, to Jose and Georgina Laguna. Joseph received his pilot's license at the age of 16, served in the Navy and earned his M.D. before immigrating to the U.S. to pursue his American dream.

He built a thriving medical practice in Clearwater, where he served his community for nearly 40 years. After retiring from clinical medicine in 2021, Joseph maintained his passion and specialization in aviation medicine and worked for the Federal Aviation Administration until his passing.

Joseph considered his family to be his greatest accomplishment; he was a devoted husband, father, and grandfather.

Joseph is survived by his wife Linda, son Michael (Michelle) Laguna, daughter Lauren (Stuart) Bell,

grandchildren Arrow, Nora, Alex and Maija-Ann, and siblings Amanda, Silvia, Jorge, and Hugo. A funeral service was held on February 20th at 11am at Curlew Hills Memory Gardens. Donations in Joseph's memory may be made to Suncoast Animal League in lieu of flowers.

*Dr. Laguna was a long time member of CAMA and a senior AME. He attended many annual scientific meetings, often accompanied by his wife Linda, and was made a Fellow of CAMA in 2020.*



*Dr Joseph Laguna and his wife Linda at the 2017 CAMA field trip to Richard Childress Racing. (CAMA archive photo)*

## AsMA Resolution for Ultraviolet “C” (UV-C) Light Emitting Diode (LED) Technology as an Additional Component of the Multi-Layered Risk Mitigation Strategy for Aircraft Disinfection



On 21 November 2023, the membership of the Aerospace Medical Association (AsMA) passed a resolution on the use of ultraviolet “C” (UV-C) Light Emitting Diode (LED) technology as an additional component of the multi-layered risk mitigation strategy for aircraft disinfection.

This resolution advocates for the use of continuous inflight Ultraviolet “C” (UV-C) Light Emitting Diode (LED) technology in occupied aircraft cabins as an integral part of the multi-layered risk mitigation strategy for aircraft disinfection, with a special emphasis on the safety and well-being of aircrew members.

The AsMA resolution specifically states: **"The continuous use of UV-C aboard aircraft, below exposure limits, and with appropriate engineering safeguards, can be an additional synergistic, safe, and effective risk-mitigation layer to reduce disease transmission and translocation."**

The impetus for this resolution comes from the global health challenge posed by infectious diseases, as identified by the World Health Organization and Centers for Disease Control. Despite advancements in aircraft cabin engineering and environmental control systems, the risk of transmission and spread of infectious diseases, including COVID-19, Influenza, Respiratory Syncytial Virus (RSV), measles, Tuberculosis, and the common cold, remains a significant concern. These diseases, transmitted through aerosols and surface contamination, necessitate robust air and surface disinfection measures.

UV-C LED technology, recognized for its micro-organism inactivation capabilities since the late 1800s, operates in the 200 nm to 280 nm range and has been adapted to safely apply UV-C irradiation in occupied spaces, well below established exposure limits. This advancement is critical, considering there are no OSHA-mandated employee exposure limits for ultraviolet radiation. The shallow penetration

depth of UV-C radiation and normal cell turnover mitigate potential superficial and transient skin and eye issues from UV-C exposure.

Thank you for your kind consideration of this most important effort to enhance the safety of global Aerospace Medicine operations.

*EDITOR'S NOTE: In upcoming 2024 CAMA Flight Physician newsletters, we will publish additional articles and/or research papers by Dr. Kris Belland, Dr. Charles DeJohn, and Dr. Diego Garcia regarding UV-C LED technology and its potential use as a strategy for aircraft disinfection*

Following is a link to the recently published peer-reviewed AM & HP publication regarding airborne UV-C use—

<https://pubmed.ncbi.nlm.nih.gov/38356125/>

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## Medical Certification Policy Updates

By Judith Frazier, MD, MBA, Manager of the Policy and Standards Branch in the Office of Aerospace Medicine

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The Policy and Standards branch continues to focus on helping Aviation Medical Examiners (AMEs) more easily obtain the information needed to make a medical certification decision. This version highlights policy changes and updates published between June 2023 and October 2023. The full list of changes is hyperlinked in the [Archives and Updates](#) section of the AME Guide.

**ADHD** – A new [FAST TRACK](#) was introduced. If there is no history of a psychiatric diagnosis or treatment (ever) and no use of ADHD meds or symptoms (in the past 4 years), evaluation can be performed by a local provider (psychologist or neuropsychologist) and review of clinical records. If all items on the FAST TRACK – FAA ADHD Summary are “No”, the AME can issue. There is a new disposition table and added guidance for community providers.

The previous certification criteria for ADHD remains as the STANDARD TRACK. Evaluation and testing should be performed by a HIMS Neuropsychologist. If the AME defers; required evaluation data is listed.

**Atrial Fibrillation (AFib)** – There is a revised and shortened [Non-Valvular Atrial Fibrillation \(AFIB\)/A-Flutter Recertification Status Summary](#) to key questions for cardiologist.

**Frequently Used Webpages** – This document was added as quick resource to find the most often requested information.

**HIMS AME Step Down Transition** – Allows HIMS AMEs to make the decision to transition a pilot from on Special Issuance for substance dependence from Phase 2 to Phase 3 and Phase 3 to Phase 4. AAM will then review the HIMS AME decision. For all others, AAM will make the determination.

**Pharmaceuticals** – Expanded the [Do Not Issue \(DNI\) – Do Not Fly \(DNF\)](#) section and expanded the [Over the Counter Medications](#) section, revised the [Acceptable Combination of Diabetes Medications](#).

**Polycystic Ovarian Syndrome (PCOS)** – PCOS has been removed from the Prediabetes CACI. A new disposition table has been added. There is a new CACI with expanded medications.

**Prediabetes** – Updated the disposition table. Updated CACI. AASI updated. New Status

Summary. AASI updated. Removed PCOS (see above).

**Weight Loss Management** – New disposition table. New CACI. AASI updated. This allows AMEs to issue if specific criteria are met. For all others, the AME defers; required evaluation data is listed. A new pharmaceutical page for [Weight Loss Medication](#) was added.

Help us improve the AME Guide! Send your comments or suggestions to: [AMEGuide@FAA.gov](mailto:AMEGuide@FAA.gov). (This mailbox does not answer case questions.)



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CAMA was recently contacted by [The MITRE Corporation](#), a not-for-profit organization that works in the public interest across federal, state and local governments, and industry and academia. MITRE is currently working on an effort in partnership with the FAA's Aerospace Medical Research Division to bring together industry partners to **collaboratively re-envision aeromedical certification**. They felt that CAMA and our members might have key input into exploring what a future state may look like and how best to achieve it.

The MITRE Corporation has done some initial outreach with a number of individuals working in aviation—many of whom are pilots. They are interested in scheduling some time with the appropriate people at CAMA in the next few weeks to provide an overview of the effort and to gather some initial input on key questions related to needs, challenges, and ideas regarding managing medical risk to aviation safety. A one page detailed description of the effort is attached on Addendum Page (see Page 8 of this publication) for your information should you wish to participate in this information gathering effort.

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*Editor's Note: The MITRE group made a lunch presentation during the Omaha Annual Scientific Meeting to collect information and input from practicing AMEs and other medical professionals involved in the aviation industry. Participation is entirely voluntary.*

(Continued on Page 13)

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# A Fresh Look at Aviation Safety and Medical Risk



## The Vision

We have all experienced regulations or standards intended to serve the public that did not clearly align with our perception of the risk. That may have caused puzzlement, frustration, a loss of trust in the rule-making authority, or disregard for the rule.

Now imagine a future where the criteria for medical fitness-to-fly are transparent and more logical. A future where pilot health requirements are clearly aligned to the performance requirements of their assigned aircraft. A future where pilots can seek the medical care they need without fear of loss of livelihood from a potentially overly conservative standard. A future where innovative and enduring risk management methods accommodate differences in pilots, aircraft equipment, and automation to optimally manage systemic risks to aviation safety.

## The Case for Change

Aeromedical risk acceptance may be conservative due to uncertainty about a pilot's health as they ready for a flight and the specific mental and physical demands of them for a given aircraft and operation. These risk management challenges – along with government resourcing and economic constraints, pilot workforce growth, healthcare ecosystem changes, and increasing population morbidity – all indicate that business as usual and minor process adjustments are not sufficient. Now is the time for new thinking – and we sense stakeholders are ready to collaborate in shaping a new approach.

## An Opportunity for Collaboration

The public has high expectations for aviation safety. The FAA has the responsibility to translate public expectations into regulations and standards. Operators control their operations and have data about how aircraft systems perform. Pilots manage their health and fly safely. Together, these perspectives and data can inform risk-based safety criteria for medical certification, reducing conservatism caused by uncertainty, and favoring evidence based decisions and processes.

Since the operational community can establish a richer and more practical control set, we seek input on key questions (see sidebar). You are invited to an exploratory discussion to share your needs, challenges, and ideas regarding managing medical risks to aviation safety. We will not attribute statements from these conversations to you or your organization. Following an initial exploratory discussion, stakeholders may choose to participate in follow-on workshops that are intended to clarify opportunities and collaboratively shape solutions.

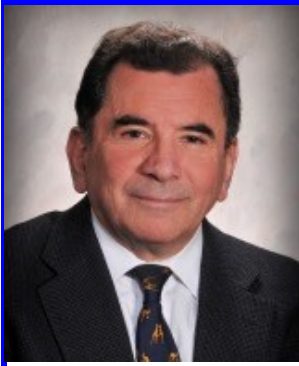
**We seek industry partners to collaboratively re-envision aeromedical certification. Together, we will explore and shape the feasibility of fresh, new future approaches for better managing medical risks to aviation safety.**

**Industry input can help address questions about the future of aviation safety such as *how might we...***

- **better manage pilot health-related safety risks?**
- **verify that risks are consistently managed at an acceptable level of risk?**
- **optimize data use to ensure the public's interest in aviation safety is met?**
- **benefit from integrating physical and mental health into a collaborative safety management approach?**

## MITRE

MITRE's mission-driven teams are dedicated to solving problems for a safer world. Through public-private partnerships, as well as the operation of federally funded R&D centers, we work across government to tackle challenges to the safety, stability, and well-being of our nation.



**Matthew M. Cooper, MD MBA FACS FAsMA FCAMA**

*Dr. Cooper serves as Vice President, Medical Affairs, Corporate Health, & Safety for 3M Health Care. He has previously served as Chief Medical Officer Medical Solutions & Global Director of Safety for 3M Health Care, and Medical Information Director at 3M's Health Information Systems. He is a Diplomat of the American Boards of Thoracic Surgery and Surgery, and a Fellow of the American College of Surgeons (FACS), the Aerospace Medical Association (FAsMA), and the Civil Aviation Medical Association (FCAMA). He is a graduate of Franklin & Marshall College (BA, Mathematics & Biology), New York University School of Medicine (MD), and Watson Graduate School of Management, Spears School of Business, Oklahoma State University (MBA). In addition to Residencies and Chief Residencies in*

*General Surgery (New York University Medical Center, The University of Iowa Hospitals & Clinics) and Thoracic Surgery (Columbia Presbyterian Medical Center), he also completed a Medical Staff Fellowship in the Surgery Branch of the National Heart, Lung & Blood Institute of the National Institutes of Health (NIH) and a Fellowship in Pediatric Cardiothoracic Surgery and Transplantation at The Hospital for Sick Children, Great Ormond Street, UK. He has also studied Health Policy at the John F. Kennedy School of Government, and Comprehensive Medical Simulation, both at Harvard University.*

*Dr. Cooper's research has included pioneering methods of immunosuppression for primate cardiac xenograft transplantation. In addition to his 3M responsibilities, he serves in multiple capacities at the University of Minnesota as a member of the Industrial Advisory Board of the Institute for Engineering in Medicine, various roles with the Design for Medical Device and innovation programs, and also serves on the Board of the Fetal Therapy Foundation & Think Tank.*

*Dr. Cooper is a Senior Aviation Medical Examiner, expert in Aviation Physiology, and a Special Consultant to the Federal Air Surgeon. He is a commercial pilot, flight instructor, and aerobatic and formation air show performer, and has flown a variety of single and multi-engine, general and military aircraft. He has been a leader in the application of aviation-based safety culture to health care.*

**The Future is Here\* (Part 2 of 2)**

*\*This article contains material previously presented during CAMA Sunday at the 2023 AsMA Meeting in New Orleans, May 21, 2023, and CAMI Group Meeting July 18, 2023. See Part 1 in the September 2023 CAMA Newsletter*

When we think about the future, it is usually inclusive of what the digital overlays will be. This now means artificial intelligence and enabled and augmented human capabilities and performance.

For me, this begins with an understanding of our human strengths and weaknesses and how we interact with our environment. In other words, an understanding of situational awareness (SA) as the full and predictive awareness of what is all around (Figure 1). It is both an individual and a shared construct. Cognition is the foundation of optimized decision making – our ability to reliably assess the

present and predict the future state. Effective decision making is then at the heart of effective action and performance. Loss of situational awareness results in ambiguity, confusion, and decreased communication (1). It has been said that “Our systems are too complex to expect merely extraordinary people to perform perfectly 100% of the time (2).”

Let us continue in that frame. We work in increasingly complex environments, particularly in health care and in abnormal regimes. There is a resultant increased cognitive load as a threat to SA. As the load increases, we must sort and process the influx of information. We know that human brains are superior at visual recognition, but inferior at processing. Think of the striking demonstrations of our inattention blindness (*Gorillas in Our Midst*; 3). We are also limited as humans in our ability to incorporate new information and change the direction of our decision vectors. We typically have imperfect or incomplete information and need to perform beyond recognition primed decision making in which we apply what we have seen before that is identical or similar to the challenge at hand. David Spirk, Jr., Chief Data Officer, SOCOM, highlighted the need to predict an adversary's next move. The charge is to get the “...right information to the right person at the right time and in the right format...[to] actually take some kind of action.” Precision and speed are critical as the “...luxury of waiting till perfect doesn't exist (4).” The requirement of speed and accuracy together is not new. John Boyd taught



Figure 1

*(Continued on Page 15)*

that in effective implementation of the OODA Loop (Observe – Orient – Decide – Act) and Wyatt Earp has been quoted as saying that “Fast is fine, but accuracy is final.” Perhaps in our modern world it isn’t so much what we know that gives us an edge, rather how fast we can figure the meaning of what is new and respond.

DARPA’S Augmented Cognition Technical Integration Experiment explored the feasibility of using psychophysiological measures of cognitive activity and load to guide real time human-computer interfaces (5). Measures such as eye blinks, respiratory rate and quality, heart rate and R-R variability, galvanic responses, and electroencephalograms could be used to assess the cognitive state to determine when information or guidance is needed, what is needed, how it is best communicated, and at what rate. The development of such technologic capability has the potential to enable augmented SA to more optimally handle the cognitive load (Figure 2).

Shifting to a familiar and earthly context helps to illustrate the trajectory we are on. The stethoscope was invented in 1816 by French physician René Théophile Hyacinthe Laënnec (1781-1826). He was treating a young female patient and was embarrassed to use the traditional method of “immediate auscultation,” which involved the doctor pressing his ear to the patient’s chest. Laënnec recounted that the method was “rendered inadmissible by the age and sex of the patient.” Instead, he rolled up a sheet of paper into a tube which allowed him to hear his patient’s heartbeat. Subsequent to this, stethoscope development has emphasized acoustic detection and definition, first mechanically and then electronically/digitally with sound amplification and noise cancelling.

Today there is concern that skill in the critical evaluation of various cardiac murmurs, gallops, and other sounds is waning. As such, built-in analytic enhancements and relevant clinical decision support have garnered interest. Some artificial intelligence (AI) enhanced devices can tell you if a cardiac murmur is present and, if so, whether it is systolic or diastolic and whether it is benign or structural in nature. In addition, deep learning algorithms potentially outperform human experts in sensitivity and specificity (6). The binaural may also become vestigial, to be replaced by wireless ear buds or interpretation by the app on a smart phone that potentially obviates human listening. Algorithmic evaluation of a single lead ECG is available that detects low ejection fraction (EF) if it is already present and predicts deteriorating EF. The implications are clear for early intervention and treatment for heart failure with lifesaving potential. This could be added to a stethoscope (Figure 4).



Figure 2

What the operator and camera sees can be enhanced by analytic overlays. The physical may be combined with the digital and has been applied to the battlefield and the Operating Room to enhance SA and optimize decision making (Figure 3).

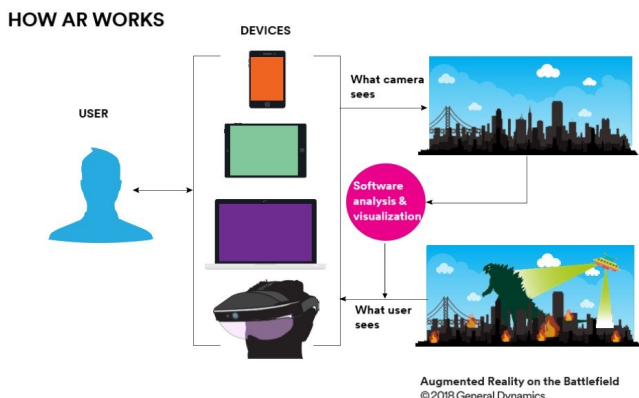


Figure 3



Figure 4

It doesn’t stop there. Point of care hand-held diagnostic tools have been evolving as well. Enhanced point of care capability has the potential to accelerate diagnosis and therapy and favorably disrupt the current workflow of care as we know it. Are there developments in bedside imaging that will obviate acoustic analysis entirely? Hand-held point of care ultrasound is a reality. Artificial intelligence is

(Continued on Page 16)

under development to remove the operator dependence of ultrasound as well as mitigate the learning curve in interpretation. Butterfly IQ+, for example, has been to space where AI delivered measures of left ventricular ejection fraction and urinary volume (7). Perhaps such images with an AI overlay to optimize data capture and interpretation are the modern equivalent of saying that a picture is worth more than one thousand words or one thousand sounds. A review of the progression thus far indicates first a mechanical stethoscope, then a digital scope with AI, from binaural to binaural-free, add ECG with AI with clinical prognostication, and a point of care image with AI ---all co-located - we have a “tricorder” (Figure 5). Not at all a crazy conclusion.



Figure 5

We speak of the Internet of Things – we can now speak and think of the Internet of the Body. We can sense almost anything. The question is what to sense to impact awareness, decision making, and enhance outcomes. A real-life tricorder for ***This Generation*** would be an all-body system non-invasive tool, usable regardless of setting – urban, rural, extreme. Real time diagnostic support (AI) and analytic syntheses (AI) would be integrated. Visualize an augmentation of human senses to interpret the language (function/state) of organ systems, beyond acoustics. Incremental capability could be added, for example sampling of aerosolized organic compounds. Such devices already exist and facilitate examination of the heart, lungs, eyes, ears, throat, abdomen, skin, and body temperature. Screening for occult disease and surveillance and management of chronic disease via telehealth are possible and may be purchased at **BEST BUY**.

A historic patient encounter is shown on the left in Figure 6. We can do better than accept this status quo. On the right is the potential for added analysis, augmented sensing and point of care testing, propensity matching of the facing patient with virtual

cohorts in real time, and, thereby, optimized diagnosis, and guidance for precision therapy and treatment. Let’s expect even more. Wearable devices (= remote monitoring) may be combined with computer modeling and simulation to develop digital twins, equivalent to those created for jet engines and rocket ships. Sensing yields performance measures, surveillance detects wear and tear, trending beyond human ken is offered, proactive and preventive maintenance scheduled, and failure modes and timing of same are predicted.

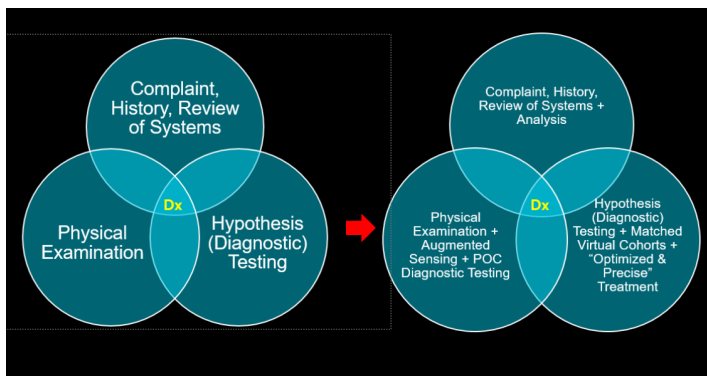


Figure 6

Now we can broaden our perspective beyond the individual to offer what naturalistic and critical decision making pioneer Gary Klein refers to as “expert intuition” to use AI to “...give everyone the best doctor, the best tests, the best analysis, anywhere in the world...to truly democratize health care (8,9).” Expanding scope further moves from individuals to managing populations. But first, is it appropriate to ask, rather than assume, that investment in technologic advancement should be in health care? Don’t we in the United States already spend *too much* on health care? Is there something *better* to spend it on, for example, recreation or professional sports?

Shared, anonymized data collectives allow predictive analyses, preventative interventions, and could be democratized, available and accessible to all. What or whom do we focus on (Figure 7)?



Figure 7

(Continued on Page 17)

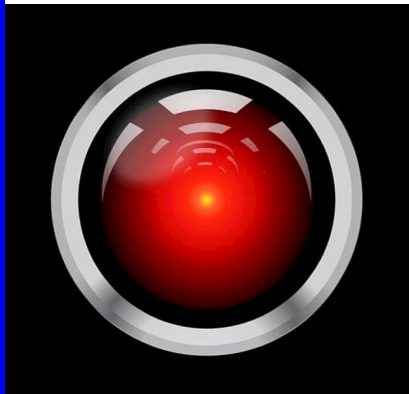


How should we prioritize the following:

- enhance the patient experience;
- virtual care alternatives;
- the most pressing needs of the few or of the many;
- the greatest good for the greatest number;
- preventative care or treatment of chronic conditions (incorporating adjustments for different rates in different populations).

This is a digital ecosystem of patients, providers, payors, and commercial platforms. Who pays? Return on investment to whom? Patients want more direct involvement and decision making in their care. That requires patient education and lay translation. How do you assure their understanding?

Technologic limits and constraints do exist (Figure 8). Who will be included? Who will be left out? How do we mitigate disparities in access? Is that a realistic expectation? The answers are not all technology. They combine policy, priority, procurement, and a sense of shared humanity. Who decides all of this? Contextualize this with lessons from history that include examples in which AI was judged to have overpromised and underdelivered in health care (10).



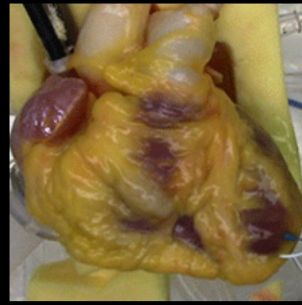
I AM PUTTING MYSELF TO THE FULLEST POSSIBLE USE, WHICH IS ALL I THINK THAT ANY CONSCIOUS ENTITY CAN EVER HOPE TO DO.

-- HAL 9000, 2001: A SPACE ODYSSEY

Figure 8

So, if the solution for the future is AI, or more specifically generative AI, what are the concerns and caveats? Such capability is a powerful tool that could design and build anything. It is a powerful partner that can explore space and doesn't need air and food. It is also potentially a powerful weapon that can attack anything. How do we know if it is trustworthy if we have no way to check the code; the knowledge basis and reward structure are unknown, as is whom/what it is working for. If the human heart is the critical differentiator, please consider this picture of a functioning *ex vivo* heart (Figure 9).

*The critical differentiator...*



The Visible Heart Laboratory - University of Minnesota  
Paul A. Mazzo PhD, FHRD, FRCR, FRCR, Founder & Director

Figure 9

In closing, a young philosopher was introduced to me by my daughter Nila. Bo Burham reminds that "Apathy's a tragedy And boredom is a crime." (11) We cannot afford to be either as we are in a critical stage of this republic and this earth and this humanity. We don't get to the future by being passive. "There is no growth in the comfort zone." (12). And what we are doing today is not necessarily good enough.

As we embark on the future, it helps to remember that the rest of the universe is getting closer. Generational achievement is again required on multiple levels. But does the public sufficiently trust technology and our institutions? Is education the solution? How do we achieve this? We live in a world of politically biased media impacting acceptance and adoption. How do we restore the ethical governance needed to constructively exploit data for good? Do we need another moon shot, realizing that this a more fragmented and distracted world in some ways today than it was for the Apollo program?

Innovation must continue. Will we have as much faith in ourselves and our creations as did the wearer of the bullet proof vest in the 1920s, on the left in Figure 10? Unifying focus is again needed to enable such achievement

*The future is here...are we ready?*

(Continued on Page 18)



Figure 10

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## FIGURES

- 1) Thanks to Michael Jorgensen, renowned fighter pilot and aviation photographer, who shared this photo.
- 2) Stock Image from Web.
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- 5) *Star Trek: The Original Series*. 1966-1969. Paramount Global.
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- 9) Courtesy of Paul A. Iaizzo, PhD FHRSE FIEEE, Founder & Director, The Visible Heart Laboratory, University of Minnesota.
- 10) Testing of bulletproof vest Washington, D.C., September 1923. Wikipedia.



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Follow him on LinkedIn at: <https://www.linkedin.com/in/william-hoffman-md-ame>.

deserve ... to be healthy in mind and in body ... that will strengthen safety.”



FAA Medical Specialties Division Director Dr. Penny Giovanetti spoke on a panel about ‘Our Current Approach to Evaluating Mental Fitness: Views from FAA, Providers, and Researchers’ at the Navigating Mental Health in Aviation safety summit on December 6. NTSB photo

## **A message for your pilot patients! A summary of the National Transportation Safety Board Round Table on Mental Health**

The National Transportation Safety Board (NTSB) continued the discourse regarding mental health in aviation during a round table in December 2023. Called by Chair Jennifer Homendy, the panel asked pointed questions about the barriers pilots and other safety sensitive personnel face in seeking mental healthcare and how we might build mental health into the aviation system of the future. “No one... should have to think twice about their job before seeking help,” NTSB Chair Jennifer Homendy was [quoted saying in The Hill](#) during her opening remarks. “And yet, we’re here today because that’s not currently the case in U.S. aviation.” The full-day panel occurred at NTSB headquarters in Washington, DC, with testimony from a range of voices including pilots navigating the special issuance process, aeromedical professionals, industry leaders and regulators.

A key question recurred throughout – how do we meet the unique mental healthcare needs of our aircrew and other safety sensitive personnel while maintaining aviation’s exceptional safety record? A [recent paper](#) showing 56% of a sample of over 5,000 pilots across the US and Canada reported a history of healthcare avoidance due to fear for loss of their ability to work and fly served as a basis of the discussion. Speakers and NTSB board members covered a range of topics including the barriers personnel face in seeking mental health care, administrative and clinical challenges surrounding certification and open questions that lack research to guide direction ahead. “Let me be clear: the safety risk comes from a culture of silence around mental health,” Homendy was [quoted](#) in *The Hill*. “A culture that empowers people to get the care they

Dr. Penny Giovanetti, FAA Medical Specialties Division Director, was the lead representative from the Federal Aviation Administration and discussed the work being done at the FAA to address the challenges ahead. “We are focused on dispelling the myths and destroying the barriers...” said Dr. Giovanetti during her testimony and was quoted on the [recording of the discussion](#). “...it’s amazing as I travel around and talk to groups, what myths really do exist... we have a huge task in front of us to dispel those myths.” She highlighted efforts by the FAA related to mental health, including hiring additional psychiatrists, providing information in the Guides for Aeromedical Examiners and the addition of Wellbutrin on the approved medication list. “If you have uncomplicated anxiety... and you get into remission,” she said. “You will 100% get back into the cockpit.”

Some expressed a less optimistic view. Dr. Brent Blue, a Senior AME representing AOPA expressed concern about the process pilots face when seeking a special issuance related to mental health. “A pilot could have a letter from a world-renowned psychiatrist and that would still be ignored by the FAA because they have to go through the FAA’s... process,” [said Dr. Blue](#). “If AMEs could issue a medical certificate for certain mental health conditions, it would significantly reduce the workload at the FAA while reducing delays in the system.”

The discussion repeatedly turned to the rising generation of aviation professionals in universities and training programs across the US. “...(student pilots) are part of this generation where society tells them it’s okay to talk about your mental health,” said

(Continued on Page 20)



*NTSB Aviation Safety Summit 12/06/23*

*Article Contributor Dr. William R. Hoffman is the seventh individual from the left.*

Harley Waters, aviation faculty at Middle Tennessee State University and Student Wellness Coordinator. “But then aviation as an industry is saying no it’s not and they want it to be.” Innovative programs aimed at addressing mental wellness in student pilots were discussed. These efforts ranged from student-led peer support programs to mental wellness instruction in freshmen aviation courses. “I spend my days with wonderful young people,” said Dr. Frank Ayers of Emory Riddle Aeronautical University. “I think this next generation is waiting for us to move forward. They’re a pretty neat bunch of folks if you have the chance to get to know them; they’re our future.”

Health. Per the [FAA's website](#), the “ARC will provide a forum for the United States aviation community to discuss and provide recommendations to the FAA that break down the barriers that prevent pilots from reporting and seeking care for mental health issues.” There appeared to be an air of hopefulness at the end of the day, recognizing that all stakeholders are interested in wellness and safety in aviation. “We need to create a great culture, a different culture,” said Chair Homendy during an interview with me on behalf of the Aerospace Medical Association (AsMA) Communication’s Committee. “Where... everyone in the aviation industry can get the same help you and I can... freely without fear of their livelihood or their salary or losing their job... I do feel hopeful.”

The conference concluded with a focus on next steps and the Federal Aviation Administration Aviation Rule Making Committee (ARC) of Mental



*Safety experts, mental health specialists, pilots, government agencies, and aviation industry professionals convened to discuss mental health in the aviation industry at an NTSB safety summit on December 6. NTSB photo.*

## FINDING THE RIGHT AME

By Fred A. Furgang, MD, Senior AME, CAMA Fellow, and CAMA Trustee



*Dr. Fred Furgang graduated from New York University with a B.A. degree in physics, and from Columbia University's College of Physicians and Surgeons with the M.D. degree. He completed his residency in Anesthesiology at the University of Miami, and spent 15 years in private practice in Miami as the head of his anesthesia department before joining the faculty of the University of Miami's School of Medicine, where he retired after 20 years. Dr. Furgang also served with the U. S. Navy as a Diving Medical Officer, and is currently a full-time Senior Aviation Medical Examiner and HIMS AME for the FAA. He is certified by the American Board of Anesthesiology. As a pilot himself (ATP, CFI/II), Dr. Furgang believes pilot physical exams should be conducted in an 'aviator friendly,' non-medically threatening, environment. To make that a reality, he opened an office in Reliance Aviation at Miami Executive Airport (KTMB). All classes of FAA physicals can be accommodated with on-site transmission of ECG's. Dr. Furgang has extensive experience helping pilots obtain medical certification in problem cases, and maintains an active HIMS program for pilots requiring special assistance.*

There is a saying: "You can have it fast, you can have it good, you can have it cheap: pick two out of the three." This applies to AME's as well. I have been an AME for 30 years. The number of AME's when I started was approx. 6000; currently there are about 2300. About 75% of AME's have a primary practice like family medicine or internal medicine. Very few AME's, approx. 4%, devote their entire practice to aviation (aerospace medicine). About half the AME's are pilots themselves.

AME's have an international medical society to stay abreast of the latest developments in this area; the Civil Aviation Medical Association (CAMA). However, less than 300 AME's belong to CAMA. We meet once a year and devote a significant part of our program to FAA updates on the medical certification process. The FAA mandates that AME's undergo on-line training at least once every 3 years, and attend

an in-person seminar every 6 years at a minimum.

The "bible" that governs FAA medical certification is called the AME Guide; it is updated on a monthly basis. These updates contain critical information to guide the AME's decision making process. The FAA has done an outstanding job of making it easier for AME's to make certification decisions. In many cases this avoids a deferral by the AME, or even a potential denial by the FAA. In short, the best AME's use the Guide to stay current and attend professional meetings more often than mandated.

I recommend that the AME you choose, should not also be your personal physician. What your own doctor knows about you is information protected by a Federal law called HIPPA. However, the AME is required to report all aero-medically relevant information to the FAA; this can present a conflict of interest for your own doctor. In addition, your physician may be part of a busy medical practice and may have little time to spend with you on complex certification issues.

Many requests for medicals come in via my cellphone. If the first question asked is "how much?" I know that person is shopping around for the cheapest AME. Let's put this in perspective. The cost of flying a Cessna 172 with an instructor is approx. \$200/ hr. The cost of obtaining a PPL can exceed \$10,000. Many students are launching on an aviation career that may cost in excess of \$100,000. So the cost of the AME exam is only a tiny fraction of the overall cost. If the AME exam is not through, and fails to uncover an aero-medically significant problem, there is a great likelihood that this will come back to "bite" in the future. In case of an accident, the subsequent investigation may uncover this issue and hold both the pilot and the AME responsible. This could result in the insurance coverage for the accident being denied.

I schedule each medical for 1 hour. The first thing I ask for is a government issued picture ID: usually a Driver License or Passport. This confirms that the person I am seeing is actually the one applying for the medical, however it also protects the applicant or pilot. The AME should make certain that the name is correctly displayed on the medical certificate and precisely matches the official ID. When presenting for a 2 check-ride, if the examiner determines that a discrepancy exists between the name on the medical certificate, the pilot certificate, or the official ID, the check-ride will be cancelled. I have frequently assisted students to get a corrected certificate when

*(Continued on Page 22)*

this problem is not detected until they appear for their check-ride.

Many applicants quickly complete the 8500-8 (MedXpress) application without giving it much thought. They check "No" to all the questions in Part 18 regarding their medical history. Some, mistakenly think the questions only refers to the last 3 years, however Part 18 clearly indicates "ever in your life." It is Part 19 that limits your responses to the past 3 years for visits to health professionals. Note the fine print on the bottom of the page stating that the filing of a fraudulent application can result in serious financial penalties and possible jail time. This is to discourage willful falsification that may create a safety hazard in the National Airspace System (NAS). Even the AME may be held liable if they are a party to the falsification. The AME should carefully review all parts of the 8500-8 application and ask appropriate questions to determine if aero-medically significant issues are absent or being withheld. It is NOT appropriate for the applicant or pilot to decide which of their medical issues are aero-medically significant.

Once you complete the MedXpress application and submit it, you receive a confirmation number. When you provide that number to your AME, and he/she opens the application it can result in only one of three options: you are issued the certificate, you are "deferred" to the FAA for a decision, or you are "denied." In practice the AME will never issue a denial. Once the AME opens the application, it must be submitted to the FAA within 14 calendar days. During this time you and the AME have the opportunity to obtain whatever information is required to arrive at a certification decision. If you have any doubt about your ability to qualify for a medical certificate, it is far better to arrange for a consultation with the AME before initiating a formal exam. The AME can then provide you with the guidance to procure the required medical records from your health care providers. Cooperation by your personal physicians is of paramount importance in obtaining a successful certification outcome in complex cases.

Today, many chronic medical conditions may qualify for certification directly by the AME under the FAA's CACI program (Conditions an AME Can Issue). These include hypertension, hypothyroidism, prostate cancer and over 20 other diagnoses. Other conditions may be "disqualifying" but may have a Special Issuance workaround (an Authorization). However, the initial certification under an Authorization MUST come directly from the FAA. This can be a time consuming and expensive process to navigate. An experienced AME can help guide you along the way, usually resulting in a time-

limited medical certificate. Less than 1% of all applications result in a final denial, and that is often due to not providing all the requested information. If you do require an Authorization to fly, usually the AME will be able to issue subsequent medical certificates once you provide the necessary information required by the Authorization.

If your AME is unable to give you the time to guide you through the certification process, you may want to look for another AME. There are also outside consultation services that can help. AOPA can assist pilots who are members. More complex issues can be assisted by consultation services, like Aviation Medical Advisory Service (AMAS) and Pilot Medical Solutions, which can assist your own AME. In addition, working with an AME who is not nearby may be worth the time and effort involved. An unnecessary deferral by the AME may result in months of delay before the FAA gets to review your application and make a decision. They may ask for additional information not originally provided, resulting in additional delays. Obviously, an unnecessary deferral by an AME is to be avoided.

The AME exam is not only to determine if you are medically qualified to hold the class of medical certificate applied for, but also to determine if you will likely remain qualified to do so for the duration of that certificate: anywhere from 6 months to 5 years. It is this later aspect of the medical which, I believe, is often ignored.

For example, a pilot who is found to have increasing blood pressure at each exam should be advised to see their personal physician for further evaluation and treatment before their pressure reaches FAA limits (155/95, which represents moderate hypertension). It is important for pilots to understand that the FAA does not define hypertension; that is done by organizations like the American Heart Association. It is far better to stand down from flying for one week after starting, or a change in medication, than not receiving a medical certificate at all. A good AME will keep the long-term health of his/her pilots in mind in order that they may fly as long as possible. However, this is no substitute for having one's own personal doctor. The AME exam should NOT be considered a replacement for an annual check-up by a competent physician.

I caution my pilots that the medical certificate is the most valuable document in their flight bag. To lose your pilot certificates takes some egregious act: for example, willfully producing a fraudulent application, or having a positive DOT test. But you can lose your medical certificate in a heart-beat. This is the reason that your AME plays such a pivotal role in your aviation future.



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## **Bariatric Surgery in Aeromedical Certification**

**By Daniel Alejandro Mendoza Mantilla, MD; Adriana Zuluaga Serna, MD; and Charles Mathers, MD**

Reprinted with permission from the U.S. Federal Aviation Administration Weekly Digest Bulletin, dated November 20, 2023

Obesity is a growing global issue and is similarly on the rise within the aviation industry. For pilots and cabin crew, obesity heightens the risk of various health conditions, including diabetes mellitus, hypertension, sleep apnea, and dyslipidemia, all of which increase cardiovascular risk and could lead to disqualification in both civil and military aviation sectors. Ricaurte et al. analyzed autopsy reports from civil aviation accidents recorded by the Civil Aerospace Medical Institute from 1990 to 2005. Out of the 6,241 fatalities, 442 cases were examined where the pilot had a body mass index (BMI) of 30 or higher, with an average BMI of 33 (ranging from 30 to 69). They found cardiovascular comorbidity in 33% of these individuals, with hypertension and arrhythmias being the most common, followed by abdominal pathologies at 30%, ophthalmologic at 15%, and neuropsychiatric conditions at 13%.

Bariatric surgery serves as a method to manage obesity and its related conditions. Bariatric surgery includes procedures such as Roux-en-Y gastric bypass (RYGB), biliopancreatic diversion with or without duodenal switch (BPD/DS), and laparoscopic adjustable gastric banding (LAGB). These procedures lead to significant, sustained weight loss over at least 10 years, with outcomes three to four times greater than those of non-surgical treatments. Bariatric surgery has been identified as a protective factor against certain cancers, reducing the incidence of esophageal and gastric malignancies and associated mortality. Cognitive improvements have been observed in 43.8% of patients who are post-bariatric surgery, along with reduced inflammation, leptin levels, blood pressure, medication use for comorbid conditions, and increased physical activity. However, clear guidelines from civil aviation authorities worldwide regarding the post-operative management of aeronautical personnel who have undergone such surgery are lacking. It is vital to review potential complications following these procedures to implement interventions that can mitigate associated risks.

### **Bariatric surgery long-term risks**

Alongside the benefits of bariatric surgery, it is crucial to consider health implications and nutritional changes that may arise because of the procedure, which varies according to the type of surgery performed. As a result of bypassing or modifying

parts of the digestive tract, individuals who undergo bariatric surgery are at risk for micronutrient deficiencies. Without adequate nutrition and micronutrient supplementation, these deficiencies can show up years after the surgery was performed. The American Society for Metabolic and Bariatric Surgery (ASMBS) recommends nutrient assessments every three to six months in the first year after bariatric surgery and then on an annual basis thereafter. While many individuals remain attentive to this recommendation, some are not as diligent, thus putting themselves at risk for micronutrient deficiencies.

Anemia is a notable complication following bariatric surgery, particularly after sleeve gastrectomy (SG). Studies indicate that while the prevalence of anemia ranges from 0 to 30% prior to surgery, it escalates to between 3.6 to 51% within the first 12 months post-operatively. This increase is primarily due to iron, vitamin B12, or folate deficiencies, with a significant proportion of patients—33 to 49%—developing anemia within two years after the procedure. The incidence is higher in women, with 32% experiencing anemia compared to nearly 10% of men after the first-year post-surgery. Postoperative monitoring shows that ferritin levels decrease over time, suggesting that iron storage depletion is a progressive concern. Since unrecognized anemia can predispose pilots to subtle incapacitation, diligent postoperative nutritional monitoring and supplementation are crucial to mitigate this risk. More serious neurological complications such as peripheral neuropathy, vitamin B12 deficiency, Guillain-Barré syndrome, Wernicke's encephalopathy, and copper deficiency occur in 4.6% to 16% of cases postoperatively. Bariatric surgery is also linked to a rise in gastroesophageal reflux disease (GERD), with 25% to 40% of patients developing de novo GERD post-sleeve gastrectomy (SG), and approximately 10% developing Barrett's esophagus after SG. These complications also highlight the need for thorough post-surgery follow-up.

Bariatric surgery is linked to an increased risk of alcohol abuse, particularly among patients who underwent a gastric bypass procedure. While we don't know for sure, this may be due to increased potency of alcohol due to increased transit and absorption into the bloodstream. Co-morbid psychiatric disease may also contribute. It is also

*(Continued on Page 25)*



important to note that mortality from suicide is increased in bariatric surgery patients. Given the growing prevalence of mental health disorders in the United States, attention to these issues from the standpoint of aeromedical safety is paramount.

Bariatric surgery is a key strategy for managing morbid obesity; however, the lack of adequate long-term follow-up means few studies provide insight into the long-term outcomes or potential secondary complications such as nutritional issues, weight control maintenance, and mental health. Aviation authorities must consider the long-term consequences of bariatric surgery and its complications when medically certifying pilots.

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*Dr. Charles Mathers is a Medical Officer in the Policy and Standards Branch in the FAA's Office of Aerospace Medicine.*

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## Home Office Activities and Information



*Sherry Sandoval*  
*CAMA Executive Vice President*

### Dues and Membership 2024

The CAMA Board voted during the Fall Executive Board Meeting October 4, 2023, in Omaha, Nebraska, to increase CAMA Membership Dues for 2024. Regular membership dues for a calendar year is now \$250.00; Sustaining Membership is \$500.00; a fully retired AME may retain CAMA membership for \$85.00; Life Membership is currently \$2500.00; and Corporate Membership is \$550.00. Medical Students, Interns, Residents, and some Fellows may become CAMA members at no cost. The various dues forms are available at the end of this newsletter and can also be accessed on the Members Lounge page of the CAMA website at [www.civilavmed.org](http://www.civilavmed.org). If you have not done so already, please take a few moments to pay your 2024 CAMA dues so that you do not miss out on any news or activities.

Most individuals and corporations joining CAMA or renewing membership for 2024 are using the links on the CAMA website to complete the necessary forms and to make their payments. The CAMA website has advanced security, easy access to news and information, and links to important FAA information and websites, such as the AME Guide, the AME Minute, FAA AME training seminar schedule, the Federal Air Surgeon Bulletin and the Pilot Minute files. These important links are on the landing page of the CAMA website.

Call the CAMA Home Office at 770-487-0100 or email [civilavmed@aol.com](mailto:civilavmed@aol.com) if you have questions or experience problems.

### CAMA Administrative Activities

On Saturday, February 10, 2024, the CAMA Executive Board held its Winter Board Meeting via Zoom to plan this year's activities and to take care of any necessary administrative issues. We welcomed two new CAMA Trustees to the Board—Dr. Alison Leston, an Aviation Neurologist from the UT Southwestern Medical Center in Dallas, Texas, and Dr. David Rogers, Senior AME and HIMS AME from Colorado Springs, Colorado. To see the full slate of officers and trustees, as well as CAMA committees, please refer to page 2 of this publication. This information is also found on the

CAMA website on the "About CAMA/Officers" tab.

CAMA members are encouraged to participate in the planning and administration of CAMA activities by serving on one of our amazing committees! Please peruse the various committees available and let us know which one you wish to join to further our management and planning capabilities. Articles for the CAMA newsletter are always welcome as well. Please contact the EVP for instructions regarding appropriate content and how to submit your article, photographs and graphics, case study, abstract, etc., to appear in the CAMA newsletter.

### 2024 CAMA Sunday and CAMA Luncheon

Each year during the Aerospace Medical Association (AsMA) annual meeting, CAMA hosts a four hour CME educational event called CAMA Sunday. This year's program takes place on Sunday, May 5, 2024, at the Hyatt Regency Hotel in Chicago, IL. The scheduled presentations address how an AME or other physician may become involved with Space Medicine and/or other issues that address or deal with commercial space travel for both airmen and passengers. Please see Page 3 for the full program and objectives for this event. Our own Kris M. Belland, DO, MPH, CAMA VP of Management and Planning, will give the keynote presentation during the CAMA Luncheon on Monday, May 6, 2024.

### 2024 Annual Scientific Meeting in Jacksonville, Florida

The Sheraton Hotel Jacksonville will host our 2024 Annual Scientific Meeting in Jacksonville, Florida, September 19-21, 2024. The hotel is located near a large shopping mall and a number of restaurants and has free parking for meeting participants.

Plans currently in progress include having a meet-and-greet cocktail party on Thursday evening at a new Flight Base of Operations (FBO) facility at the Jacksonville Executive Airport. The FBO hangar has been undergoing renovations and improvements that will be completed by the time of the 2024 Annual Scientific Meeting.

Ryan Smith, Chief Growth Officer of JAX Executive at the KCRG Airport, promises a number of beautiful aircraft will be staged in the upgraded hangar around which we will spend an hour or so with light appetizers and a couple of cash bars to relax and network with the attendees and those corporate members who elect to participate in the conference activities. Ryan has also indicated that

(Continued on Page 27)

in honor of the annual meeting, he will offer tiedown and aviation fuel incentives for any CAMA attendees who fly into JAX Executive Airport and use his FBO for services. Additional information will be provided in upcoming newsletters when registration for the 2024 Annual Scientific Meeting opens in early May.

We have contracted with the newly established Deerwood Castle and Jacksonville Sports Car Museum to host the second leg of our field trip and catered dinner among an amazing collection of exotic cars, some of which belonged to celebrities and several from some well-known movies (all of which are for sale, so bring your wallets)! Deerwood Castle is designing a terrific dinner menu for us over coming months.

Both the new FBO (it is currently in operation, even during the renovations) and Deerwood Castle/Jacksonville Sports Car Museum are new businesses in the Jacksonville area, and CAMA is proud to work with and support these local establishments to host various aspects of our 2024 annual meeting field trip.

Leigh Speicher, MD, MPH, the new CAMA President for the 2024 and 2025 Annual Meetings lives in Jacksonville and practices Internal Medicine and Aerospace Medicine at Mayo Clinic, Jacksonville. Holding her first Annual Scientific Meeting as CAMA President in her home town will be a special occasion. With her guidance, we are able to invite a number of specialists from Mayo Clinic to speak at the 2024 meeting.

The Annual Scientific Meeting program is in the final stages of planning and promises to be a very exciting educational event!

### **2025 Annual Scientific Meeting in Spokane, Washington**

We are very pleased to announce that our 2025 Annual Scientific Meeting will take place September 18-20, 2025, at the Mirabeau Park Hotel in Spokane, Washington. The hotel includes a fabulous destination restaurant called Max, and Chef Andrew has promised us an amazing dining experience during our conference!

The Forrest Bird Aviation Museum and Inventor Center, located at Pappy Boyington Field just north of Coeur d'Alene, Idaho, is a short bus ride from the Mirabeau Park Hotel and will host our 2025 field trip and catered dinner. Forrest M. Bird, MD, PhD, was President of CAMA 1993-1995, and was a tremendous supporter of the organization until his death in 2015. His wife, Pamela Riddle Bird, carried

on his support of CAMA until her passing later in 2015. Her daughter, Rachel Riddle Schwam, is the Executive Director of the museum and looks forward to hosting CAMA at Dr. Bird's museum among some of his favorite airplanes, cars, and amazing inventions, including the first mechanical respirator and the "Babybird" respirator that reduced the rate of breathing-related infant mortality from 70% to 10%. To read more about this fascinating individual who was such a huge part of CAMA history, check out his Wikipedia page at [Forrest Bird - Wikipedia](#).

### **Future CAMA Annual Meetings**

During the first full week of March, 2024, the CAMA EVP will be in Dayton, Ohio, to review and select a host hotel for our 2026 Annual Scientific Meeting taking place October 22-24, 2026. We have been in touch also with the National Museum of the US Air Force to make arrangements for that facility to host our 2026 field trip and catered dinner. Check out this museum on their website at:

[National Museum of the USAF](#)

Dayton, Ohio, has a number of other very interesting museums and attractions which CAMA attendees will want to see: The Wright Brothers National Museum, The National Aviation Hall of Fame, The Wright Brothers Memorial, Carillion Historical Park, and many other sites. Once the hotel and field trip venue have been selected, we will have additional information about Dayton to share with newsletter readers. Wright State University is the repository for the CAMA Archives. On the CAMA website ([www.civilavmed.org](http://www.civilavmed.org)), click on the "About CAMA" tab and scroll to "CAMA History" - the direct link to view the CAMA Archives is:

[Civil Aviation Medical Association Records \(MS-526\) | Wright State University Research | CORE Scholar](#)

This website is fully searchable and contains documents, newsletters, and photographs documenting the amazing history of the Civil Aviation Medical Association.

Once we have completed all necessary actions for our 2027 annual meeting in Dayton, Ohio, our attention will move to Oklahoma City, Oklahoma, as the potential site for our 2027 Annual Scientific Meeting. Oklahoma City is not only the home of the FAA Civil Aerospace Medical Institute (CAMI) but also a myriad of interesting and historical museums and other attractions, such as the [National Cowboy & Western Heritage Museum](#). As the arrangements are made for 2026 and 2027 meeting sites, CAMA members and other interested parties will be kept informed via the CAMA newsletters and on the CAMA website.

## OP-ED PAGE

This section is a new feature for the CAMA Flight Physician newsletter. Often we receive interesting items that do not quite fit into other sections or which are clearly opinions of readers or other interested parties. Items included in this section are provided strictly for entertainment purposes and to allow CAMA readers to express their opinions or ideas. They do not represent a CAMA position or support in any way, and are included as items of interest only or to initiate conversation among our readers. Letters to the Editor will also be included in this section.



### **Results from A Survey of Western Michigan University College of Aviation Students** *By Laila Stein, recent graduate from WMU, a current CFI, and Adjunct Professor*

The stressors that college students face have been well documented, and include tuition bills, low-paying jobs while in school, personal issues, and time management. However, there may be increased challenges for college aviation students related to increased tuition due to flying, weather, check-ride stress, industry pressures, and displacement from family or a support system because specialty aviation schools are limited. But time again aviation students have had the unmeasured perception that they cannot ask for help. This article aims to summarize current research on the perceptions that collegiate aviators hold regarding the regulations governing mental health care.

In October 2021, John Hauser, a University of North Dakota aviation student, took his own life in a single-pilot plane crash. Hauser's family confirmed his mental health struggles after the National Transportation Safety Board (NTSB) determined that there was no mechanical failure associated with the crash. Although John Hauser's death has been one of the most public and recent deaths, a history of collegiate aviation deaths is documented back to a 1998 suicide by an Embry Riddle Aeronautical University graduate and flight instructor. Although we cannot draw direct conclusions from these deaths, we can guess that a 2022 study by Lipson Et. al. (<https://www.sciencedirect.com/science/article/abs/pii/S0165032722002774?via%3Dihub>) that found that just under 60% of college students met the criteria for one or more mental health problems, does apply to aviation students.

Per the Federal Aviation Regulations, each pilot who acts as a pilot in command must hold an appropriate class medical certificate. It is through the process of medical certification that each applicant is judged for their mental fitness to fly. To best measure the perceptions held by college students about these

mental fitness-to-fly requirements, a series of questions were presented through a survey to Western Michigan University College of Aviation students, faculty, staff, and flight instructors. The survey ran for four months from October 2022 through February 2023. A total of 291 students, faculty, staff, and flight instructors responded to the survey, and 226 of those respondents completed the survey in its entirety. Of the complete responses, 201 identified as students and 25 respondents identified as faculty, staff, or flight instructors. These respondents met the demographic percentages of the College of Aviation [Western Michigan University] within 10%, based on major, employment status, grade level, and gender.

The survey yielded interesting results: 53.23% of students and 64% of faculty, staff, and flight instructors believe that the FAA's rules on getting mental health help while obtaining and/or keeping a FAA medical are restrictive. When asked "If someone you trust said to you 'you can see a mental health professional and keep your FAA medical', to what extent would you believe them?," 52.74% of students and 36% of faculty, staff, and flight instructors said that they would not believe that person. Similarly, 73.13% of students and 52% of faculty, staff, and flight instructors said that it is definitely false or probably false that one can fly while having diagnosed anxiety or depression. Optimistically, 58.21% of students and 72% of faculty, staff, and flight instructors reported that it is probably true or definitely true that one can talk to a therapist or counselor while keeping an FAA medical.

This data provides a limited scope of the perceptions held by college students [of the university surveyed] of the FAA's policies regarding mental health. However, it does indicate that there is false information circulating among student pilots about what the FAA's policies are regarding mental health issues. The absence of air traffic control students excludes any perceptions they may hold. The inclusion of [Western Michigan University] College of Aviation faculty, staff, and flight instructors in the survey provides a view of potential perceptions held by professionals in the aviation field, but it is limited. Future focus on expanding the

(Continued on Page 29)

results to understand the perception of a greater audience could be directed at air traffic control students, and professionals in the flight, management, and technical operations areas. The implications of this data are limited by the scope of the survey but could imply broader perceptions held by other populations of people in the aviation industry. Further research on this topic will need to be done to apply these perceptions to other populations.

As college programs attempt to dispel the myths held by young aviators, they only represent a fraction of new pilots every year. AMEs also have the key ability to interact with all medical applicants during their first and hopefully subsequent visits. Taking time to share successful stories of aviators who have gained their medical while having a depression or anxiety diagnosis can provide a roadmap to those currently or hoping to apply. As more and more flight schools require students to have first-class medicals before meeting with their flight instructors, AMEs are now acting as navigators for students, having the opportunity to provide guidance and support throughout the entire process. Further research is needed to guide as to how best to dispel these myths in the broader aviation population.

*Ms. Stein stated, "The survey was developed for my undergraduate thesis project, and published through Western Michigan University's Lee Honors College. I developed the survey and wrote the paper with the guidance of my thesis chair and committee. Although I had been involved with this topic prior, it was the death of UND student John Hauser that inspired me to use my thesis to bring this issue to light. John believed that he was unable to seek treatment for his mental health issues and continue flying, a concept he shared with his parents in his suicide note to them.*

Editor's Note: *In the past year, CAMA has received a number of inquiries regarding the commercial pilot mandatory retirement age and whether or not raising that age would be appropriate. The CAMA Executive Board/ Trustees has discussed the issue, and it was determined that in light of recent FAA and Congressional actions on this subject, CAMA does not at this time have an official position on the issue. The following paper from Dr. Raymond Basri, AME and CAMA Life Member includes some thoughts and his opinion about how AMEs could potentially address some of the issues associated with aging aviators, an important and timely subject. CAMA provides Dr. Basri's letter for informational and entertainment purposes for those who may be interested.*

### **Raymond Basri, MD, FACP**

AME since 1987

Letter dated November 29, 2023



### **AGE 67 RULE**

The current medical certification misses crucial facts and tests needed to make an age-appropriate evaluation for extending privileges for airline transport pilots after age 65. We should adapt our exams to mitigate any additional risk for inflight incapacitation in an environment that is both physically and mentally challenging.

The First-Class medical exam for airline transport pilots should be age-appropriate. The current exam does not include all the relevant information that would be essential for 65-year-old aviator to complete a routine yearly exam for any patient being seen in primary care or an internal medicine practice.

### **CARDIOVASCULAR**

Sudden incapacitation during flight, while rare, are frequently cardiovascular events. The current examination uses the history and symptoms provided in the Medxpress along with a physical examination and electrocardiogram. Medxpress should include specific questions related to cardiovascular symptoms. We should recognize that many aviators look at their medical exam as an employment exam. They could lose their income or career. The aviator may be reluctant to reveal anything that would jeopardize their certificate.

Cardiovascular examinations for individuals that are 65 years old must include a history that includes cigarette smoking, cholesterol levels, and family history of premature cardiovascular events. These should be added to the age-appropriate exam.

*(Continued on Page 30)*

### **ADVERTISEMENT**



**Kris Belland**

President / CEO

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We should objectively measure cardiac risk using a methodology, such as the Framingham or SCORE models, that uses cardiac risk factors, such as hypertension, hyperlipidemia, cigarette, smoking, diabetes, family, history, obesity, gender, and age to quantify risk for a cardiac event. Various risk stratification models should be considered as most applicable to the age 50+ aviators. This should be a topic of debate as the revised guidelines are formulated.

Where appropriate, some form of functional assessment of cardiovascular health should be mandated. While a limited walking challenge could be used to verify functional capacity, it would lack active monitoring and likely miss ischemia, arrhythmia, and altered blood pressure.

I believe that an exercise tolerance stress test would offer the best assessment of functional capacity as part of the risk stratification process. In the past, we used a Master's Double Two Step which was used an EKG. Perhaps adopting a new procedure would allow office testing without a treadmill.

Firefighting has consistently had the most frequent cause of line-of-duty death being cardiac events. I created a Firefighters Stress Test that we use as a functional assessment in the firehouse for fitness for duty. We use a 40 lb. weight vest and a simple treadmill. We take an EKG and blood pressure before and after performing a 4 MPH 10-degree inclined slope for 6 minutes.

This level of activity is equivalent to approximately a 10 METS exercise tolerance test workload. Successful performance on a yearly basis has mitigated the risk for these firefighters suffering cardiac events. Firefighters are thankful that for once a functional evaluation is part of their yearly exam.

While cardiovascular testing may represent a significant disadvantage for doctors that practice in fields removed from Internal Medicine, the age-appropriate medical exam should be done by those Senior examiners that want to provide this service.

## **COGNITIVE FUNCTION**

Cognitive impairment is almost always beyond the scope of the age-appropriate AME exam. We converse with the aviator, question them about recent travel, their sleep schedules, and family but we don't systematically investigate mental health beyond the superficial. We also must make allowances for those aviators that are being examined immediately after returning from a trip. I believe that if there was cognitive impairment, the

coworkers would be more likely to recognize it. Whether this is adequate is beyond my expertise, but the anonymous reporting process is available.

Evaluation of cognitive impairment may be done through an online app that would be performed under supervision. This could be done remotely using a combination of CogSceen- AE and video monitoring before the aviator comes in for their exam.

## **FURTHER CONSIDERATIONS**

As Senior AMEs, we should develop a comprehensive risk assessment before certifying fitness extending beyond age 65. Perhaps some of these screening tools may be applicable in younger aviators as well. AMEs have a duty to remind all aviators of essential screening services that may save their lives. We should be cognizant of the additional responsibility placed upon us as we provide an age-appropriate exam.

The increasing incidence of special issuance for cardiovascular disease in airline transport pilots should suggest that assessment of cardiac risk factors become part of the age 50 exam. Perhaps this incidence of disease, rather than the number of events in the cockpit, should be used to adapt our certification process.

EASA guidelines generally include more cardiovascular screening examinations such as exercise stress tests at age 40. Symmetry with the European guidelines would include cardiovascular testing based upon risk stratification at an earlier age. Furthermore, aligning FAA and EASA guidelines would enhance data collection, perhaps allowing meaningful comparisons by including a larger number of participants.

Perhaps this would be a good time to consider going beyond age limits. Most of the pilots approaching retirement wish that they had another couple of years to work. Some need work to stay fulfilled and fear retirement for being on the downslope. Most pilots have taken much better care of themselves than their non-aviator neighbors. This generation didn't smoke or drink too much, went to the gym, ate healthily, visited the doctor, took their statins, and had their routine screening exams.

If an airline transport pilot got to retirement without a special issuance, passed a comprehensive age-appropriate medical exam, and wanted to continue working, shouldn't we be their advocate? Don't most women age better than men and have a longer life expectancy?

*(Continued on Page 31)*

Would passengers choose experience over youth if the health requirements were based on current science and specific to each airman? Would the shortage of pilots allow the industry to reconsider the age of mandatory retirement?

I believe that dynamic testing may alter the paradigm of mandatory age retirement. Perhaps the use of risk stratification beginning at age 50 would enable functional testing, such as a treadmill, for airman with high predictive risk scores. Although the

frequency of testing may vary by risk score, now is the time to consider going beyond age 70. Perhaps first-class airman wishing to work beyond age 70 in corporate aviation would be examined yearly and allow them to work an additional five years and fly with the other pilot age 67 or less.

Furthermore, these considerations will encourage aviators to take better care of themselves throughout their lives. This would mean less cardiac special issuances over time.



## Aerospace Medicine Strategic Consultation



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*James Butler, Senior AME, Board Certified Aerospace Medicine*



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## EDUCATIONAL OPPORTUNITIES

### Online Training, Refresher, and Resources for Continuing Medical Education (CME) Credit

Ronan Murphy, MBChB, the CAMA Vice President of Education, has indicated that there are still resources online for those AMEs who need training and/or CME credits. Please see the information and links listed below.

If you are interested in becoming an AME, please contact the [FAA Regional Office](#) responsible for your locality. AME seminar attendance requires advance approval of the [AAM-400 Education Division](#).

Available resources from FAA 400 Education Division:

1. FAA AME refresher courses may be moved to a Zoom format if necessitated by COVID-20 restrictions. Click the link below to access the course schedules 2022:

[https://www.faa.gov/other\\_visit/aviation\\_industry/designees\\_delegations/designee\\_types/ame/seminar\\_schedule/](https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/seminar_schedule/)

- Attendance requires approval in advance. Contact your Regional Flight Surgeon for approval, and the RFS staff will check availability for the course of your choice.
- Registration opens three months prior to the start date of the seminar.
- Participants must have an FAA Designee Registration System account (DRS) to sign up for the AME Refresher course
- If you do not have an account on DRS and wish to have one, click the following link for instructions:

[https://www.faa.gov/other\\_visit/aviation\\_industry/designees\\_delegations/designee\\_types/ame/media/drs.pdf](https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/media/drs.pdf)

2. To locate other online courses that offer CME, click the following link:

[https://www.faa.gov/other\\_visit/aviation\\_industry/designees\\_delegations/designee\\_types/ame/ametraining/](https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/ametraining/)

- Clinical Aerospace Physiology Review for Aviation Medical Examiners (CAPAME) – 6 hours American Association of Family Practitioners (AAFP) CME credit available
- Multimedia Aviation Medical Examiner Refresher Course (MAMERC) 3.0 - 6 hours AAFP CME credit available

### FEDERAL AIR SURGEON'S PILOT MINUTE VIDEO FILES (To activate each link, use "control" and "mouse click" at the same time)

[Pilot Minute: If I'm on BasicMed, would I ever have to come back through the FAA again?](#)

[Pilot Minute: What happens when I get diagnosed with prostate cancer?](#)

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[Pilot Minute: Why is it important to report disability benefits in MedXPress?](#)

[Pilot Minute: What is jet lag and how can I prevent it?](#)

[Pilot Minute: How is the FAA approaching new treatments for cancer?](#)

[Pilot Minute: How do we encourage the brightest minds into aviation?](#)

[Pilot Minute: How do I check my application status in MedXPress?](#)

[Pilot Minute: Is it okay to fly if I'm just a little tired?](#)

[Pilot Minute: What should I do if I have depression or anxiety?](#)

[Pilot Minute: Why is it important to assess my health before piloting an aircraft?](#)

[Pilot Minute: Why is it important to do a PRICE check before and during a flight?](#)



## AVIATION MEDICAL EXAMINER (AME) SEMINAR SCHEDULE

For full information, visit the FAA web site at: [https://www.faa.gov/other\\_visit/aviation\\_industry/designees\\_delegations/designee\\_types/ame/seminar\\_schedule/](https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/seminar_schedule/)

| DATE OF SEMINAR       | SEMINAR LOCATION  | SEMINAR TYPE |
|-----------------------|-------------------|--------------|
| March 4-8, 2024       | Oklahoma City, OK | Basic        |
| April 12-14, 2024     | VIRTUAL           | Refresher    |
| May 6-9, 2024         | Chicago, IL       | AsMA         |
| June 10-14, 2024      | Oklahoma City, OK | Basic        |
| August 9-11, 2024     | TBD               | Refresher    |
| September 19-21, 2024 | Jacksonville, FL  | CAMA         |
| October 21-15, 2024   | Oklahoma City, OK | Basic        |
| November 22-24, 2024  | TBD               | Refresher    |

The FAA recommends that you make sure all travel and lodging reservations are refundable. While scheduled to proceed as in-person seminars, one or more of these sessions may be rescheduled as a virtual seminar with little notice. These seminars will open for registration when the contract is approved and hotel room block information is received. The CAMA seminar registration will open in May 2024.

### Register for a Refresher Seminar

Registration opens **three months** prior to the start date of the seminar. To register for a refresher seminar, you will need an account to access the Designee Registration System (DRS). Please review the instructions (PDF) on the FAA web site for creating a DRS account. Registration is open to the FAA Aviation Medical Examiner (AME)

If you are interested in becoming an AME, please contact the FAA Regional Office responsible for your locality. AME seminar attendance requires advance approval of the AAM-400 Education Division.

### Accreditation Statement

The Civil Aerospace Medical Institute is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

### Seminar Types

#### Basic

A 4 1/2 day AME seminar focused on preparing physicians to be designated as Aviation Medical Examiners. Contact your Regional Flight Physician

#### Refresher

A 2 1/2 day AME refresher seminar consisting of 12 hours of AME specific subjects. You must use the Designee Registration System (DRS) to register for a seminar.

#### Aerospace Medical Association (AsMA)

A 3 1/2 day AME seminar held in conjunction with the Aerospace Medical Association (AsMA). Registration must be made through AsMA. Call 703-739-2240, extension 106/107. A registration fee is charged by AsMA to cover their overhead costs. Registrants have full access to the AsMA meeting.

#### Civil Aviation Medical Association (CAMA)

Sanctioned by the FAA, this seminar is sponsored by the Civil Aviation Medical Association (CAMA) and does fulfill the FAA recertification training requirements. Registration may be completed through the CAMA website Annual Meeting page ([www.civilavmed.org](http://www.civilavmed.org)) or by calling CAMA at 770-487-0100.

## AME MINUTE ISSUE GUIDE

The FAA issues monthly reminders/updates for Aviation Medical Examiners in the form of a brief audio file with information on an important subject. Following is a summary of the most recent AME Minute issuances, in case you might have missed one. AME Minute items may be accessed from the FAA archive at: [https://www.faa.gov/other\\_visit/aviation\\_industry/designees\\_delegations/designee\\_types/ame/videos/](https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/videos/)

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[AME Minute: Why did FAA establish rules for some diabetic medications for weight loss?](#)  
[AME Minute: Why is a pilot's age relevant to a CACI issuance for glaucoma?](#)  
[AME Minute: Why does the FAA have two tracks for ADHD?](#)  
[AME Minute: Why should I warn my pilots about kava and kratom?](#)  
[AME Minute: Why is it important to provide details in Item 60?](#)  
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[AME Minute: Why do CACIs require specific verbiage?](#)  
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[AME Minute: Why did the FAA revise the GO AME website?](#)  
[AME Minute: Medical Certification Updates for the AME – September 2017](#)  
[AME Minute: 10 Color Vision Testing](#)  
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The financial resources of individual member dues alone cannot sustain the Association's pursuit of its broad goals and objectives. Its fifty-plus-year history is documented by innumerable contributions toward aviation health and safety that have become a daily expectation by airline passengers worldwide. Support from private and commercial sources is essential for CAMA to provide one of its most important functions: that of education. The following support CAMA through corporate and sustaining memberships, and we recognize the support of our lifetime members:

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Senior AME, Pilot, HIMS, EAA, AAFP, AsMA  
Specialty: Aerospace/Occupational Medicine

Message from the Executive Vice President of CAMA—Please remember that CAMA members receive early access to registration for CAMA activities and meetings, as well as reduced pricing for the Annual Scientific Meeting. An individual membership is only \$250 per calendar year. Please go to the “Members Lounge” page of the CAMA website ([www.civilavmed.org](http://www.civilavmed.org)) and join CAMA or renew your CAMA membership today, so that you do not miss out on any CAMA activities, news, or educational opportunities! You may also use any of the membership forms contained in the final pages of this edition of our newsletter to accomplish membership. Call the CAMA Home Office at 770-487-0100 if you have any questions.



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(\*Required Information)



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| *MEMBER CITY/STATE/ZIP/COUNTRY:  |  |             |     |     |    |
| AME NUMBER:  |  | SENIOR AME? | YES | NO  |    |
| Permission to add name and address to the CAMA Web Site in the Members Only Section? |  |             |     | YES | NO |

Please complete and return with your payment.

NOTE: Membership is from January 1<sup>st</sup> through December 31<sup>st</sup> of each year

Membership dues..... \$ 250.00 U.S. Dollars  
 Sustaining Membership dues (optional)..... \$ 500.00 U.S. Dollars  
 Membership dues for Retired Members..... \$ 85.00 U.S. Dollars (Retired from medical practice AND no longer performing AME examinations for the FAA)  
 Membership dues for Students..... \$ FREE  
 Life Membership..... \$2500.00 U.S. Dollars

Payment Options: CAMA Accepts checks, MasterCard, VISA, Discover, or American Express.

|                                   |   |            |      |                  |   |
|-----------------------------------|---|------------|------|------------------|---|
| CHECK ENCLOSED                    | # | MASTERCARD | VISA | American Express | x |
| CREDIT CARD NUMBER:               |   |            |      |                  |   |
| EXPIRATION DATE:                  |   |            |      |                  |   |
| CVV/CVC SECURITY CODE:            |   |            |      |                  |   |
| BILLING ADDRESS ZIP CODE:         |   |            |      |                  |   |
| TOTAL AMOUNT/AUTHORIZED CHARGE \$ |   |            |      |                  |   |
| PRINT NAME:                       |   |            |      |                  |   |

Signature or authorization statement for charge: \_\_\_\_\_

|                                |  |
|--------------------------------|--|
| SPOUSE/SIGNIFICANT OTHER NAME: |  |
|--------------------------------|--|

Check if you are a member of:

|       |     |    |
|-------|-----|----|
| PILOT | YES | NO |
| AME   | YES | NO |
| AMA   | YES | NO |
| HIMS  | YES | NO |
| AOA   | YES | NO |

|      |     |    |
|------|-----|----|
| EAA  | YES | NO |
| AOPA | YES | NO |
| FPA  | YES | NO |
| AAFP | YES | NO |
| AsMA | YES | NO |

|                     |  |
|---------------------|--|
| *MEDICAL SPECIALTY: |  |
| *CELL PHONE NUMBER: |  |
| OTHER PHONE NUMBER: |  |
| FAX NUMBER:         |  |
| *EMAIL ADDRESS:     |  |

Return form to: CAMA  
 P. O. Box 823177  
 Dallas, TX 75382  
 FAX: 770-487-0080  
 Telephone: 770-487-0100  
 email: [civilavmed@aol.com](mailto:civilavmed@aol.com)

NOTE: YOU MAY ALSO INITIATE OR RENEW YOUR CAMA MEMBERSHIP ON OUR WEBSITE AT [WWW.CIVILAVMED.ORG](http://WWW.CIVILAVMED.ORG) ON THE "MEMBERS" LOUNGE" PAGE USING OUR SECURE PAY APPLICATION.



## CAMA STUDENT MEMBERSHIP FORM AND ANNUAL SCIENTIFIC MEETING AUDIT REQUEST



**CAMA**

**CAMA**

|   |  |
|---|--|
| <b>*MEMBER NAME &amp; TITLE(S):</b>   |  |
| <b>*MEMBER STREET ADDRESS:</b>  |  |
| <b>*MEMBER STREET ADDRESS:</b>  |  |
| <b>*MEMBER CITY/STATE/ZIP/COUNTRY:</b>  |  |
| <b>WHAT IS YOUR FIELD OF STUDY?</b>   |  |
| <b>WHAT IS YOUR SPECIALTY OR ANTICIPATED SPECIALTY?</b>                           |  |
| <b>WHERE ARE YOU CURRENTLY A STUDENT, INTERN, OR RESIDENT? ON FELLOWSHIP?</b>     |  |
| <b>WHEN DO YOU EXPECT TO GRADUATE?</b>  |  |
| <b>WHAT DEGREE(S) DO YOU CURRENTLY HOLD?</b>                                      |  |
| <b>WHAT DEGREE(S) DO YOU ANTICIPATE UPON GRADUATION OR COMPLETION OF STUDIES?</b> |  |

|   |            |  |           |  |
|---|------------|--|-----------|--|
| <b>Permission to add name and address to the CAMA Web Site in the Members Only Section?</b> | <b>YES</b> |  | <b>NO</b> |  |
|---|------------|--|-----------|--|

|  |  |
|--|--|
| <b>IF YOU PLAN TO AUDIT PRESENTATIONS DURING THE CAMA ANNUAL SCIENTIFIC MEETING, PLEASE ANNOTATE WHICH DAYS OR EVENTS YOU PLAN TO ATTEND SO THAT ID CREDENTIALS CAN BE PREPARED FOR YOU:</b> |  |
|--|--|

Check if you are/are a member of:

|               |     |  |    |  |
|---------------|-----|--|----|--|
| <b>*PILOT</b> | YES |  | NO |  |
| <b>*AsMA</b>  | YES |  | NO |  |
| <b>*AMSRO</b> | YES |  | NO |  |

|              |     |  |    |  |
|--------------|-----|--|----|--|
| <b>*EAA</b>  | YES |  | NO |  |
| <b>*AOPA</b> | YES |  | NO |  |
| <b>*AMA</b>  | YES |  | NO |  |

|              |     |  |    |  |
|--------------|-----|--|----|--|
| <b>*AOA</b>  | YES |  | NO |  |
| <b>*AAFP</b> | YES |  | NO |  |
| <b>*FPA</b>  | YES |  | NO |  |

|                |     |  |    |  |
|----------------|-----|--|----|--|
| <b>*AME</b>    | YES |  | NO |  |
| <b>*HIMS</b>   | YES |  | NO |  |
| <b>**OTHER</b> | YES |  | NO |  |

|                                     |  |
|-------------------------------------|--|
| <b>**OTHER ORGANIZATIONS/GROUPS</b> |  |
| <b>CELL PHONE NUMBER:</b>           |  |
| <b>OTHER PHONE NUMBER:</b>          |  |
| <b>FAX NUMBER:</b>                  |  |
| <b>*EMAIL ADDRESS:</b>              |  |

*\*E-mail address is REQUIRED, please – all CAMA correspondence, registrations, notifications, and publications are sent via email. Please notify CAMA of any email address changes. CAMA does not share your information with any other entity or with any changes, so that you do not miss any important communication with our organization.*

**NOTE:** CAMA does offer discounted student registrations for our Annual Scientific Meetings, and Students may audit the educational sessions at no charge (no meals or CME included without prior payment). We do request advance notice for planning and space arrangement purposes.

**PLEASE RETURN FORM TO: CIVIL AVIATION MEDICAL ASSOCIATION (CAMA)  
P. O. BOX 823177  
DALLAS, TX 75382  
TELEPHONE/TEXT: 770-487-0100  
EMAIL: [civilaymed@aol.com](mailto:civilaymed@aol.com)**



CAMA

# CAMA CORPORATE MEMBERSHIP FOR 2024



CAMA

Corporation/Business Name and Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Please complete and return with your payment.**

**NOTE: Membership is from January 1st through December 31st.**

**Corporate Membership dues..... \$ 550.00 U.S. Dollars.**

**CAMA accepts MasterCard, VISA, Discover, American Express, and checks only.**

**NOTE: You may pay corporate dues online on the "Members Lounge" page of the CAMA web site at [www.civilavmed.org](http://www.civilavmed.org) using our secure payment application.**

**Payment Options:**

Check Enclosed # \_\_\_\_\_ MasterCard \_\_\_\_\_ VISA \_\_\_\_\_ AMEX \_\_\_\_\_

Credit Card Number: \_\_\_\_\_

CVV/CVC Security Code: \_\_\_\_\_

Zip Code of Billing Address: \_\_\_\_\_

Expiration Date: \_\_\_\_\_ Authorized Amount \$ \_\_\_\_\_

Print Name on Card: \_\_\_\_\_

Signature: \_\_\_\_\_

Return form to: CAMA  
P. O. Box 823177  
Dallas, TX 75382  
FAX: 770-487-0080  
Telephone: 770-487-0100  
email: [civilavmed@aol.com](mailto:civilavmed@aol.com)

**PLEASE PRINT (\* required information)**

\*Contact Person(s) Name: \_\_\_\_\_

\*Specialty/Type of Business: \_\_\_\_\_

\*Phone: # ( ) \_\_\_\_\_

Cell # of Contact Person(s): ( ) \_\_\_\_\_

Fax: # ( ) \_\_\_\_\_

\*E-Mail Address of Contact Person(s):  
\_\_\_\_\_