

## What a Way to Start the Year

Charles DeJohn, D.O., M.P.H.

I would like to start my first President's Page by expressing how grateful I am to have been selected to be your AsMA President. It is an honor to represent such an extraordinary, diverse, and international professional organization. I look forward to the opportunity of sharing the news of our organization and of aerospace medicine with you each month.

A little about my background. After graduation as an aerospace engineer from the University of Oklahoma, I realized a life-long ambition by becoming a Navy pilot. After leaving active duty I worked as an aerospace engineer for the USAF at Tinker AFB, OK, for a time before attending medical school at Oklahoma State University. After medical school I spent a short time working in a hospital ER before taking a position as a research medical officer at the Naval Aerospace Medical Research Laboratory in Pensacola, FL, where I earned a Masters of Public Health degree while attending classes at the University of Alabama part time. From Pensacola it was on to the FAA Civil Aerospace Medical Research Institute in Oklahoma City, where I work today as a research physician. I met my wife Billie, a former flight attendant, while working on an aircraft accident investigation and today we have two grown children and four granddaughters.

Since I've spent most of my professional life as an aerospace medical researcher, I selected "*Advancing Aerospace Medicine Through Research*" as the theme for our 2021 meeting in Reno. My goals for the President's Page were to focus each month on researchers who have made significant advances in aeromedical research. However, as I write this page in early April, we are in the midst of a terrible pandemic. Much of the world is practicing social distancing and elevated hygiene in the hopes of "flattening the curve." Many are unemployed and there are over a million cases of coronavirus and 60,000 people have lost their lives worldwide. There are over 350 clinical trials underway worldwide in various phases related to COVID-19, and the U.S. Senate has passed a \$2 trillion stimulus bill intended to keep businesses and individuals afloat during this unprecedented time. In addition, legislation is being introduced to give hazard pay during the pandemic to essential frontline employees, such as grocery store workers, truck drivers, and transit operators.

The impact on the aviation industry has been staggering. Airline companies are flying with only 15% of their seats occupied on a good day and some companies are losing as much as \$1 million dollars a day in revenue. Hundreds of airline employees have tested positive for coronavirus and some have died. Flight attendants are in a particularly high-risk position due to their close contact with passengers. The aviation industry has been forced to deal with many difficult problems such as aircraft and airport sanitation procedures, managing passenger boarding while

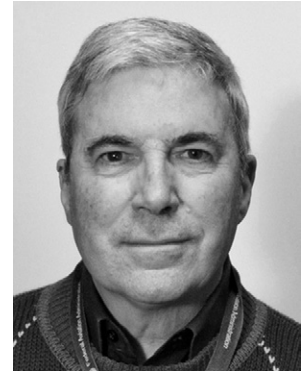
maintaining social distancing, handling cases of COVID-19 among flight crew, and keeping aircrew flying, just to name a few.

But aviation safety professionals are coming together to address these problems. The Flight Safety Foundation is holding a series of teleconferences to bring experts together from government and industry to help airlines, airports, and aviation regulators deal with the crisis. Ground-based medical companies that normally provide medical support to aircraft in flight are now responding to problems on the ground. These companies are now involved with getting symptomatic crewmembers home from a trip and the logistics of completing Public Health follow-ups.

Airline pilots require frequent training to remain current and maintain their flight status. However, with the impact of the coronavirus and reduction in flights, the airline community has also been faced with the need to practice social distancing and are experiencing the isolation that comes with it. In response, AsMA Aerospace Mental Health Working Group Members have explored peer-support, psychological debriefing, and the creation of apps that measure stress levels as interventions to support the aviation community.

The FAA has extended the expiration date for all classes of medical certificates, special issuances, and requests for information until June 30, 2020. The FAA's Civil Aerospace Medical Institute's Functional Genomics Research Laboratory loaned a Biomark machine to the University of Oklahoma Pathology Department to allow for the development of a test to evaluate the RNA sequences of coronavirus antigens. The Biomark will add speed and capacity to the COVID-19 testing process, allowing thousands of samples to be analyzed daily.

Other areas of the aerospace industry are also responding. One aircraft manufacturing company has begun using its 3D printing capabilities to produce face shields to help protect those who are fighting the virus on the front lines, in addition to offering the use of one of their aircraft to help transport critical and urgently needed supplies to healthcare professionals, and donating tens of thousands of masks, gloves, and other equipment to hospitals in need. An aerospace company that, before the pandemic, was building rockets to support satellite launch services, started working with a consortium of physicians and medical-device



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DOI: <https://doi.org/10.3357/AMHP.9106PP.2020>

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**PRESIDENT'S PAGE**, *continued*

experts to develop a simple “bridge” ventilator that could be used on less severe patients to free up intensive care ventilators for use on patients in more severe condition. Researchers at the University of Pittsburgh School of Medicine began working on a potential vaccine against SARS-CoV-2, the coronavirus causing COVID-19, using a microneedle array delivery system of 400 tiny needles made from sugar and protein pieces which eventually dissolve into the skin. Although testing in patients would normally take at least a year, recently announced government policy revisions could shorten the process and provide a vaccine much sooner under these critical circumstances.

At this time no one knows for sure when the virus will peak, how many people will eventually become infected, and how many lives will be lost. Annual meetings that we normally took for granted in the past, like ICAM, ICASM, and our own AsMA

meeting, will have to be postponed due to the unpredictability caused by the virus. As coronavirus rapidly spreads across the globe, phrases such as “social distancing,” “self-quarantine,” “shelter-in-place,” and “flattening the curve” have become part of everyone’s vocabulary. Nations are struggling to get medicinal supplies and respirators to medical professionals who desperately need them. As I write this page, some of our AsMA family are undoubtedly risking their lives on the front lines to save others. But in these dark circumstances, medical professionals in all walks of life are literally being applauded as heroes by the communities they serve.

I sincerely hope that by the time you read this, the pandemic has passed, our world will have returned to some sense of normalcy, and we can all look forward to seeing each other again in Atlanta this October. Until then stay safe.