From Whence We Came and Where We Are Going

David P. Gradwell, BSc, PhD, MB ChB, DAvMed, FRCP, FRCP Edin, FRAeS, FAsMA

Last month Kris Belland asked me to join him in his final President's page. I wish to reiterate my thanks for his service to our Association. I know Kris will continue to support AsMA and its meetings and I will always be grateful for his generous help throughout my term as President-elect and our hand-over period.

When you read this our meeting in Atlantic City will have drawn to a close. For those who attended their "first AsMA" in 2016, I hope you will have discovered how wide the scope of aerospace medicine and human performance is; I encourage you to join the Association and take an active part in its growth and further development.

I am sure all new AsMA Presidents look at the list of those individuals who have preceded them and reflect on the huge privilege it is to have been elected to this post. On the list are the names of some of the giants of aerospace medicine. It starts with Louis Bauer, commemorated by the eponymous lecture that opens each Annual Scientific Meeting and the prestigious Bauer prize awarded at Honors Night. During his term of office the world of aviation was very different from today. In 1929 a Graf Zeppelin airship took 21 days to circumnavigate the globe and a passenger-carrying flying boat achieved airspeeds of 150 miles per hour! In the same year Pan American Airways commenced operations in four-engined "Clipper" flying boats. The need for aeromedical input was well recognised, Flight Surgeons were being trained and the School of Aviation Medicine already established at Brooks Field, TX. Supersonic flight and space travel existed in the realms of science fiction, but the potential role of air power had been acknowledged. Military air forces were nascent and some civilian air operations were operating with scheduled flights, but this was most definitely not mass transportation; few people undertook flight in any form.

In less than 90 years aviation and aerospace medicine have evolved beyond all recognition and so, too, has our understanding of human performance. Space travel is a well-established reality and commercial human spaceflight on the very near horizon. The complexity and demands of air systems are substantial, requiring a clear understanding of the means by which crews can interact with their machines, with each other, and with their ground-based colleagues.

These physical and psychological requirements make demands on crews and bring to the fore the need for a thorough understanding of the scientific and medical factors associated with flight. The most extreme environmental challenges in aviation are commonly associated with military flying, while sports flying has its own particular demands. In commercial aviation, flight-deck crews work to fly passengers and cargo around the world 24 hours a day, every day, with flight attendants providing a vital role in flight safety. In this second decade of the 21st Century, a truly staggering 3 billion, or more, people are flown each year, by aviation industries that are essential to the economic well-being and trading capacity of nations.

Flight has become a routine component of modern life and within the next few decades space travel will probably move from an activity that fascinates millions but is undertaken by very few, into one in which many will participate for the sheer thrill of the experience, as was once the case in aviation.

As flying has become ubiquitous, the need for aeromedical expertise has grown. This includes the requirement for medical support and health surveillance of aircrew, both military and civilian; the safe evacuation by air of the sick and wounded; the development and testing of life support systems to operate in extreme environments; addressing factors in human performance to understand how and why we behave as we do; how we can minimise the adverse consequences of our inherent flaws and investigate air accidents and incidents. With an aging, but more affluent, travelling population, the pressure to safely transport passengers with suboptimal fitness will grow. In all these areas, the expertise within our Association should make important contributions to the health, safety, efficiency and comfort of all who take to the skies.

I would like every member of AsMA to consider how, individually and collectively, we can contribute further. We must reflect on how best we can impart our knowledge and experience to the next generation of scientists and health care professionals working in the fields of space and aviation, supporting all who fly. By doing this, we can exhibit the true value of our professions and show what it is to deliver aerospace medicine for everyone.

DOI: 10.3357/AMHP.06PP.2016

CONTACT DETAILS:
Email: President@asma.org • **Web site:** www.asma.org • **Facebook:** Aerospace Medical Association • **Twitter:** @Aero_Med