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SPACE MEDICINE WITHIN MEDICAL EDUCATION: SURVEY FINDINGS FROM RECENT AUSTRALIAN MEDICAL SCHOOL GRADUATES

Abstract

Space medicine is a specialised field of medicine that focuses on human health within the context of the space environment. Since Neil Armstrong first stepped on the Moon in 1969, over 600 individuals have travelled beyond Low Earth Orbit (LEO). Recent developments in commercial space travel imply a strong interest in expanding operations, manufacturing, and tourism into LEO, and correlate with an increased number of civilians experiencing the physiological challenges of spaceflight. Aspiring visitors will require medical clearance, currently under the purview of private companies that provide spaceflight services, similar to the way scuba divers obtain licensing. For current and future doctors to confidently assess and advise patients regarding space travel, adequate medical education in space medicine is essential. In this study, we surveyed recent Australian medical school graduates (Class of 2024) on their awareness of and engagement with space medicine both within and beyond the classroom. Our survey responses (n=26) noted that 96% of graduates believed there was inadequate exposure to the field during medical school, with 4% remaining neutral. There was strong overall interest, with 85% having an interest in learning more and 58% expressing a desire for more exposure and relevant opportunities. However, only 12% knew where to find appropriate resources for self-learning. Still, 50% believed such exposure could benefit their clinical knowledge and practice, suggesting space medicine's relevance to terrestrial medicine as well. Overall, we have identified a gap in medical education in Australia, with a lack of exposure within the curriculum leading to workforce gaps and underdeveloped interests. This study is the first to document medical school graduate attitudes towards space medicine education in Australia and serves as a foundation for future curriculum design and programming. As space exploration develops further, new skills and expertise will be required to address the health of astronauts and civilian travellers. Developing such capabilities amongst recent medical graduates will be crucial to building a robust workforce that can contribute on both a domestic and international front. As the study demonstrates, interest in space medicine exists at the medical school level despite a scarcity of exposure and opportunity. By incorporating space medicine within the medical school curriculum, providing learning opportunities and financial support, and engaging with special interest organisations, future Australian doctors will be in a position to deliver the promise of safe human exploration to new celestial bodies in the upcoming decades.