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MEDICAL PRACTITIONERS IN EXTREME ENVIRONMENTS: A REVIEW OF SELECTION CRITERIA AND DESIRED SKILLS FOR ISOLATED DOCTORS

Abstract

A long duration space mission could potentially present unique and emergent medical scenarios requiring prompt intervention by a crew member. It is important for mission planners to consider the possibility of medical emergencies occurring, and the subsequent selection of crew to include a pre-determined set of skills. METHODS: A review was made of current selection criteria and agency-identified pre-requisites for medical practitioners deploying to remote and extreme environments, predominantly as solo practitioners. Both military and civilian roles were included. RESULTS: Differences were noted in skills requirements for deploying medical personnel amongst the multiple organisations included in the review. Differing levels of preparatory training were also noted, with a correlation with the type of environment in which the practitioner was to operate. The most commonly identified desired skill set included the ability to competently manage an acutely unwell patient with minimal support. Primary care and basic surgical skills were also frequently identified, however the degree to which a practitioner was expected to perform surgical procedures was usually quite minimal. Reliability of telemedicine and the availability of timely aeromedical evacuation were both significant contributors to the selection criteria. CONCLUSION: There is no current medical or specialty training profile that has been identified to be suitable for all extreme environment medicine scenarios. The concept of the ideal medical background and training for a doctor working in extreme environments will be discussed, as will the need for crew inclusion of a medical professional versus a trained non-medical professional. Ideas for preparatory training to fulfil roles in military deployments, Antarctic expeditions and space missions (including earth-based analogues) will be presented.