

IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)  
Medical Care for Humans in Space (3)

Author: Ms. Kathleen Samoil  
University of Calgary, Canada

Dr. Adam Sirek  
Western University, Canada

## DEFINING THE CREW MEDICAL OFFICER: STAGE ONE

**Abstract**

**INTRODUCTION:** Aerospace medicine is an internationally recognized sub-specialty encompassing diverse practitioners with operational experience and specific knowledge of extreme physiology. Recognizing the progressive demands of exploration it is necessary to create a comprehensive definition for the Crew Medical Officer (CMO). This definition will be specific to aerospace medicine with universal application across both public and commercial sectors.

**METHODS:** This manuscript presents a review of publicly available literature and technical documents for currently utilized definitions of the Crew Medical Officer. Medical literature was used as the primary source for available definitions of CMO. Literature focused on the post space shuttle era (1981) to present day. This time period was chosen as space missions have progressively increased in duration throughout that period. A hand search of additional sources was conducted to compensate for the challenges posed by information held outside of research databases and to ensure a comprehensive review.

**RESULTS:** Following a search of available databases, manuscripts were reviewed for inclusion. Many articles comment on the CMO and highlight the various roles of the position, but no single unifying definition was found. Utilizing the commentary and data collected, a preliminary CMO definition was proposed.

**CONCLUSION:** This manuscript represents the first step in a multistage approach to comprehensively defining the CMO. In order to meet the challenges of exploration a CMO will be required to be agile, autonomous and adept. In conducting a complex enquiry, we will ensure a robust and accurate definition which contributes to the foundational development of a health care professional. Our early definition will next proceed to stage two which includes scrutiny by subject matter experts. A clear and comprehensive CMO definition will enable future curriculum development and collaboration.