

DEFINING MEDICAL CAPABILITIES FOR EXPLORATION MISSIONS

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Exploration-class missions to the moon, Mars and beyond will require a significant change in medical capability from today's low earth orbit centric paradigm. Significant increases in autonomy will be required due to differences in duration, distance and orbital mechanics. Aerospace medicine and systems engineering teams are working together within ExMC to meet these challenges. Identifying exploration medical system needs requires accounting for planned and unplanned medical care as defined in the concept of operations. In 2017, the ExMC Clinicians group identified medical capabilities to feed into the Systems Engineering process, including: determining what and how to address planned and preventive medical care; defining an Accepted Medical Condition List (AMCL) of conditions that may occur and a subset of those that can be treated effectively within the exploration environment; and listing the medical capabilities needed to treat those conditions in the AMCL. This presentation will discuss the team's approach to addressing these issues, as well as how the outputs of the clinical process impact the systems engineering effort.