EXPLORATION MEDICAL SYSTEM TECHNICAL ARCHITECTURE OVERVIEW

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The Exploration Medical Capability (ExMC) Element Systems Engineering (SE) goals include defining the technical system needed to support medical capabilities for a Mars exploration mission. A draft medical system architecture was developed based on stakeholder needs, system goals, and system behaviors, as captured in an ExMC concept of operations document and a system model. This talk will discuss a high-level view of the medical system, as part of a larger crew health and performance system, both of which will support crew during Deep Space Transport missions. Other mission components, such as the flight system, ground system, caregiver, and patient, will be discussed as aspects of the context because the medical system will have important interactions with each. Additionally, important interactions with other aspects of the crew health and performance system are anticipated, such as health & wellness, mission task performance support, and environmental protection. This talk will highlight areas in which we are working with other disciplines to understand these interactions.

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