EXMC WORK PRIORITIZATION PROCESS

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Last year, NASA's Human Research Program (HRP) introduced the concept of a "Path to Risk Reduction" (PRR), which will provide a roadmap that shows how the work being done within each HRP element can be mapped to reducing or closing exploration risks. Efforts are currently underway within the Exploration Medical Capability (ExMC) Element to develop a structured, repeatable process for prioritizing work utilizing decision analysis techniques and risk estimation tools. The goal of this effort is to ensure that the work done within the element maximizes risk reduction for future exploration missions in a quantifiable way and better aligns with the intent and content of the Path to Risk Reduction. The Integrated Medical Model (IMM) will be used to identify those conditions that are major contributors of medical risk for a given design reference mission. For each of these conditions, potential prevention, screening, diagnosis, and treatment methods will be identified. ExMC will then aim to prioritize its potential investments in these mitigation methods based upon their potential for risk reduction and other factors such as vehicle performance impacts, near term schedule needs, duplication with external efforts, and cost. This presentation will describe the process developed to perform this prioritization and inform investment discussions in future element planning efforts. It will also provide an overview of the required input information, types of process participants, figures of merit, and the expected outputs of the process.