# Principles for Termination of Medical Care in Austere Analog Environments for Development of Spaceflight Protocols

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**INTRODUCTION:** When compared to operations in low earth orbit, exploration class missions will have substantially limited resources and ground medical support while the risk of a significant medical event is projected to be higher. Termination of care (TOC) may need to be considered in certain instances. We aim to utilize data from earth-based analogs to identify common principles that can help develop future guidelines to this complex medical and ethical challenge. **METHODS:** A comprehensive literature review was conducted in medline, nasa.gov, Defense Technical Information Center(DTIC) and google scholar. Key search terms including "withdrawal of care, termination of care, termination of CPR, military medicine, wilderness medicine, futility, potentially inappropriate" and others were used to identify analog studies of relevance. These were qualitatively evaluated for recurring principles or themes that were reviewed and structured. **RESULTS:** Mission planning termination of care principles: definitions of clear medical goals, separate protocols for each relevant condition, protocols developed using best available evidence, crew involvement in development, protocols rehearsal pre-launch, and inclusion of palliative capabilities. In-mission termination of care principles: 1. Crew Medical Officer directed stabilization of the patient; 2. Consultation with mission control with standardized information exchange; 3. Multidisciplinary medical and ethical conference among the mission directors, flight surgeons and relevant specialist experts; 4. Multidisciplinary risk review examining both medical and mission risks for relevant options; 5. Provision of a transparent explanation of the process and decision to crew; 6. Allowing crew feedback and inquiry to review board; 7. Support of the crew in the enacted decision. **DISCUSSION:** By utilizing the best available evidence in conjunction with expert opinion we have identified common principles from earth-based analogs that could be used to help design future TOC protocols.