# Behavioral Med. Risk Approach Plan

## Risk Characterization / Formulation

<table>
<thead>
<tr>
<th>HRR Gap: research logic description</th>
<th>BMed-101: Identify individual vulnerabilities and resiliencies to adverse CNS/neurological, cognitive, and behavioral health &amp; performance changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMed-104: Define spaceflight environment (e.g. radiation, CO2, habitat) impacts to CNS/neurological, cognitive, and behavioral health and performance</td>
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<tr>
<td>BMed-106: Identify the impact of communication delays and/or ICE on personal relationships / families</td>
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<td>BMed-108/RE4: Characterize additive, antagonistic, or synergistic impacts of multiple spaceflight stressors</td>
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<tr>
<td>BMed-107: Characterize post-mission/long-term CNS/neurological, cognitive, and behavioral health and performance changes</td>
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## CM Development / Evaluation

- **BMed-102/RE2/RE4**: Identify operationally relevant biomarkers as indicators of behavioral health and performance
- **BMed-102/RE2/RE4**: Characterize mechanisms and brain pathways driving adverse outcomes
- **BMed-102/RE5**: Develop/refine/validate and integrate methods and measures for detecting meaningful changes in behavioral health and performance

## CM Integration/Validation

- **BMed-102/RE3**: Develop acceptable thresholds (POLs) for behavioral health and performance
- **BMed-101/RE6**: Selection recommendations
- **BMed-103**: Habitat/vehicle recommendations (e.g. habitat layout, exercise, food, lighting, recreation)
- **BMed-104**: Psychosocial support CMs (including under conditions of com delay)
- **BMed-106**: Countermeasures to treat adverse outcomes (e.g. pharmacological)

## Key Indicators and Methods for Monitoring Behavioral Health and Performance

- **BMed thresholds and inputs to establish POLS and standards for behavioral health and performance**
- **Countermeasures to mitigate adverse behavioral health and performance**

## Validated thresholds and countermeasures to mitigate adverse behavioral health and performance

Update to standards and clinical guidelines for promoting behavioral health and performance.

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Note: Decision Points (●) and Gap Closures (◉) are Program reviews with defined entry/exit criteria.

Legend:  
- Analog  
- Flight environment  
- Cross Element Integration  
- Anticipated PRR Color Change

07/26/2023