



# **Multilateral Medical Operations Panel (MMOP)**

## **Medical Informatics & Technology (MIT) Working Group**

# **IMMR Phase 1 Prototyping Plan Inputs**

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# Purpose of IMMR Prototype Phase 1 (IPP1)

- **Conduct the first prototyping effort of the MDS using the MITWG strategy for prototyping and development.**
  - Spiral Incremental Approach
  - Plan (replan), Build, Evaluate IMMR in short manageable phases that results in MDS technology and User Content
- **Breathe life into the MITWG efforts and demonstrate MDS capabilities for MMOP User assessment.**
- **Define realistic objectives that can be demonstrated and evaluated in a relatively short time**
  - User Content (Processes and Documentation)
  - Technology (systems)
- **List candidate objectives for future IMMR Prototype Phases: IPP2, IPP3, ... IPPn**
- **Build a foundation that can support future phased prototyping.**

# IPP1 Plan Overview

- **Define a scenario for a limited number of FSs and custodians (BMEs) to store and retrieve a limited number of example data MICs from an IMMR Repository prototype.**
  - Focus on PDDs with common sets of parameters, definitions and format that can readily be promoted into MIC-DD/F, MIC\_DD/N and MIC-DD/Us by using the MITWG Process for Developing MIC-DDs
  - Create example MICs based upon MIC-DD/F, MIC-DD/N and MIC-DD/U for custodians to store and for FSs to access.
  - Leverage already existing SharePoint Portal/EDMS capabilities to create a prototype IMMR repository.
  - Leverage already existing agency capabilities and workstations to provide secure connectivity and user access.
- **Approach is for FS participation to assist in**
  - Promotion of PDDs to MIC-DDs
  - Evaluation of technology for IMMR
  - Evaluation of FS interaction with the IMMR
- **Utilize the IPP1 repository to prototype the documentation technology for the MIC Catalog.**
  - Contain results of the PDDs and MIC-DDs and main document
  - Evaluate using MITWG FS POCs and members

# **IMMR Prototype Phase 1 (IPP1) Plan for PDDs and MIC-DDs**

- **For IPP1 there will be two lists following the MIC Catalog appendix approach:**
  - A list of PDD/Fs and PDD/Ns (titled IPP1 PDD Appendix)
  - A list of MIC-DDs, including (titled IPP1 MIC-DD Appendix)
    - ◆ MIC-DD/U
    - ◆ MIC-DD/F
    - ◆ MIC-DD/N
- **Initially, all documents considered for sharing in the IPP1 will be designated as PDD/Fs and PDD/Ns**
- **During the IPP1 effort, the MITWG Process for developing MIC-DDs will be used to promote (process) the PDDs into MIC-DD/Fs, MIC-DD/Ns, and MIC-DD/Us.**
- **The results of the IPP1 lists (Appendices) will be used to update the respective MIC Catalog Appendices.**

# IMMR Prototype Phase 1 (IPP1) Plan for MICs

- **IPP1 will initiate and refine over time versions of the PDD and MIC-DD lists (Appendices). Versions will be maintained by date.**
- **IPP1 will store sample-data examples of the PMICs and MICs according to PDDs and MIC-DDs defined for lists.**
- **Intent is to promote the PMICs into MICs by**
  - reaching agreement on a common MIC-DD
  - IPP1 demonstrations/evaluations of the storage and retrieval of multiple instances of associated MICs by FSs and custodians.
- **As agreement is reached on each MIC and MIC-DD, then these will be added to the MIC Catalog**

# IPP1 Objectives

- **Build a list of specific PDDs to prototype and promote into MIC-DDs from the following:**
  - GCTC Specified
    - ◆ List (shown on slide 8)
    - ◆ Merging of Exercise Fitness
    - ◆ MSMB Certificate
    - ◆ Mission Debrief
  - MED Vol B used by ESA/GMO/NASA during STS-114
    - ◆ List TBD
- **Evaluation of storage/retrieval of example MICs using above results**
- **Involve Limited set of MITWG FS POCs and custodians**
- **Document PDDs, MIC-DDs, and MIC Catalog on SharePoint – Documented results from above**
- **Refine MCC MIC Data Flow using above results**
  - Control Center or SMOT or MSMB MIC Data Flow (TBD)
- **Evaluation of SharePoint as a potential IMMR option**
- **Evaluation of User Interface and connectivity**
- **Evaluation of security aspects of prototype**

# IPP1 Example Vs Real Data Pros & Cons

- **Pro Example Data**

- Keeps real data safe while we work out the bugs
- Allows for simpler and quicker implementation of IPP1, especially with regards to security controls

- **Con Example Data**

- FSs are too busy, they won't use it, and no useful feedback.

- **Pro Real Data**

- Would be immediately useful to FSs in real-time operations

- **Con Real Data**

- Would require more security levels
- Might take longer to obtain approvals and implementation
- Must agree that this is a prototype and not a primary support implementation.

# Document Classifications & Sharing Implications For IPP1

Proposed GCTC MIC	NASA Equivalent MIC	Current Multilateral State	Comments
All crew members biography	Public Available on Web Site	<a href="http://www.jsc.nasa.gov/Bios/astrobio.html">http://www.jsc.nasa.gov/Bios/astrobio.html</a>	
Biomedical Training Program of ISS crew	Carbon Dioxide Exposure Training	Agency specific format (US/FSA)	May be others
Space Flight Factors training review	N/A	Agency specific format (US/FSA)	FSA only requirement
Current ISS MSMB Medical data and qualifications	MSMB Certificate	Multilateral format (MMOP)	
Physical Training review and fitness assessment	MRID 077/078 – Functional Fitness Assessment & Recommendation	Agency specific formats with preliminary attempt at standard format (US/FSA)	Med Vol B 5.1
The list of ground and flight experiments with informed consent signed each cosmonaut/astronaut	ISSMP List?	Agency specific format (US/FSA)	Still pending final confirmation
The certificate on readiness to a perform a vein puncture and blood draw for medical and biologic experiments on Russian segment ISS.	CMO Training DB (TAMS) Report	Agency specific format (US/FSA)	
The conclusion of ISS Program Biomedical Section (the results of BMT).	N/A	Agency specific format (FSA)	
Russian Chief Medical Board Protocol (ГМК protocol)	N/A	Agency specific format (FSA)	
Pre launch medical examination report	MRID 009 (CS Clinical Assessment)	Agency specific format (US/FSA)	Med Vol. B 1.1
Post-flight rehabilitation program	MRID 026 (Post-flight Rehab)	Agency specific format (US/FSA)	

# Define Future IPP Objectives From List Below

- **Build a complete list of PDDs and MIC-DDs from IPP1 results and the following:**
  - GCTC Recommendations
  - MED Vol A and B
  - All MIC Data Flows
- **Storage/retrieval of example MICs using above results**
- **Storage/retrieval of MICs using real data based upon MIC Data Flows. (Repeat for all MIC Data Flows)**
- **Full set of FS and custodians**
- **Documented PDDs, MIC-DDs, and MIC Catalog on SharePoint – Documented results from above**
- **Refined MCC MIC Data Flows using above results**
- **Evaluation of SharePoint as a potential IMMR option**
- **Evaluation of User Interface and connectivity**
- **Evaluation of security aspects of prototype**

# Decision and Plans

- **Agree with overall IPP1 plan and objectives contained in the slides in this presentation as updated during the FTF Meeting.**
  - Yes ? \_\_\_\_\_
  - No, more time needed to discuss?
  
- **Proceed with incorporating these slides and strategies into the draft of the IPP1 Plan document.**
  - Yes ? \_\_\_\_\_
  - No, more time needed to discuss?
  
- **Other**
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_