Subject: NASA Health and Medical Policy for Human Space Exploration (Revalidated 3/28/17)

Responsible Office: Office of the Chief Health & Medical Officer

Change History

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<td>Updated with 1400 compliance, applicable documents and forms, and added paragraph 11. to responsibilities.</td>
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1. POLICY

a. It is NASA's policy to:

   (1) Provide a healthy and safe environment for crewmembers to enable successful human space exploration.

   (2) Provide health and medical care systems for crewmembers for all mission phases—prior, during, and after space flights.

   (3) Update crewmember health and medical services based on best supporting evidence and current standards of medical practice, lessons learned, risk management, and expert recommendations.

   (4) Design initial and recurrent health and medical training for crewmembers, consistent with mission requirements and commensurate with available resources and priorities.

   (5) Establish space flight health and medical standards that address:

           (a) Health and medical screening, evaluation, and certification (including medical selection and retention standards).

           (b) Health and medical diagnosis, intervention, and care (including management and training).

           (c) Health maintenance, preventive programs, and countermeasures (including permissible exposure limits, permissible outcome limits, and fitness for duty standards).

           (d) Habitability, environmental health, planetary protection considerations, and human performance guidelines and standards.

   (6) Sponsor health and medical clinical research to enable human space exploration.

   (7) Evaluate granting an operational exception to existing health/medical standards in the context of long duration space flight.
2. APPLICABILITY

a. This NASA Policy Directive (NPD) is applicable to NASA Headquarters and all NASA Centers, including Component Facilities and Technical and Service Support Centers. This language applies to the Jet Propulsion Laboratory, a Federally Funded Research and Development Center, grant recipients or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants or agreements.

b. In this directive, all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms: "may" or "can" denote discretionary privilege or permission, "should" denotes a good practice and is recommended, but not required, "will" denotes expected outcome, and "are/is" denotes descriptive material.

c. In this directive, all document citations are assumed to be the latest version unless otherwise noted.

3. AUTHORITY


b. NPD 1000.0, NASA Governance and Strategic Management Handbook.

c. NPD 1000.3, The NASA Organization.

4. APPLICABLE DOCUMENTS AND FORMS

NASA Procedural Requirements (NPR) 7120.11, NASA Health and Medical Technical Authority (HMTA) Implementation.

5. RESPONSIBILITY

a. The Chief Health and Medical Officer (CHMO) shall:

(1) Promulgate health and medical policy for Human Space Exploration.

(2) Serve as NASA's independent HMTA.

(3) Ensure Agency-wide implementation of HMTA as described in NPR 7120.11.

(4) Establish and maintain human health and medical standards for space flight.

(5) Define appropriate levels of health and medical care for space flight.

(6) Review and approve all human health-related and medical requirements for space exploration.

(7) Review and approve all human health-related research requirements and deliverables from applicable Mission Directorates and Offices.

(8) Approve operational implementation of human health and performance-related research deliverables that enable human space exploration.

(9) Approve operational use of health and medical systems and technologies prior to their use in space exploration.

(10) Consult and coordinate with the Associate Administrator for the Science Mission Directorate, or the designee for planetary protection, regarding planetary protection issues related to health and medical requirements to ensure coordination with existing NASA planetary protection policy.

(11) Evaluate granting an exception to existing health/medical standards in the context of long duration space flight.

b. The Associate Administrator for the Human Exploration and Operations Mission Directorate shall:

(1) Formulate Directorate-level requirements for Exploration Systems, including health-related and medical requirements, based on Agency-level exploration requirements and NASA standards.

(2) Develop and mature targeted human health and medical research and technologies aimed at enabling sustained and affordable human and robotic exploration to an appropriate stage of readiness level for final review,
approval, and implementation.

(3) Manage flight crew health and safety to include the following:

(a) Implementation of crew health and medical care systems.

(b) Compliance with health and medical requirements.

(c) Management of in-flight research activities.

(d) Crew participation in in-flight research, as appropriate.

(e) Integration of and use of CHMO-approved health and medical technologies for extravehicular and intravehicular activity.

(4) Evaluate granting an exception to existing health/medical standards in the context of long duration space flight.

c. The Deputy Chief Technologist shall be responsible for integrating, coordinating, and tracking the technology investments across the Agency, including the mission-focused investments (e.g., NASA health, medical, and performance technologies) made by the NASA mission directorates.

d. The Associate Administrator for the Science Mission Directorate, or the designee for planetary protection, shall be responsible for coordinating with the CHMO regarding health and medical issues related to planetary protection for human space exploration.

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENT/VERIFICATION

The Office of the Chief Health and Medical Officer will determine adherence to this policy through assessments of related activities and operations.

8. CANCELLATION


/s/

REVALIDATED WITH CHANGE 1, 3/28/17, ORIGINAL SIGNED BY:

Charles F. Bolden, Jr.
Administrator

ATTACHMENT A: DEFINITIONS

Health is defined as encompassing physiological, psychological, and dental well-being. Medical refers to the treatment of illness and injury.

Human health research deliverables are biomedical knowledge, pharmaceuticals, procedures, protocols, hardware, software, health or medical devices, or technology developed to directly affect the health and performance of crewmembers derived from completed research studies that are ready for transfer to the appropriate operational community.

ATTACHMENT B: REFERENCES

A.1 NPD 8020.7, Biological Contamination Control for Outbound and Inbound Planetary Spacecraft.

A.2 NPD 8700.1, NASA Policy for Safety and Mission Success.

A.3 NPD 8900.1, Medical Operations Responsibilities in Support of Human Space Flight Programs.

A.4 NPR 8705.2, Human-Rating Requirements for Space Systems.

A.5 NPR 8900.1, NASA Health and Medical Requirements for Human Space Exploration.