Medical Policy Formulation in NASA

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Stakeholders

NASA work force,
Industry, Private Sector,
International Partners, Government,
Public, Global Community
Flow of Authority for Medical Policy at NASA

NASA Authority
42 U.S.C. 2473(c) (1) of the National Aeronautics and Space Act

Administration

Presidential Budget

Congress

Annual Authorization Bill

Annual Appropriation Bill

SRQA

NASA ADMINISTRATOR
Chief Health and Medical Officer

Occupational Health

Code U

Code R

Code M

Code Y

Code S

Biomedical Research

Space Medicine
• Medical Policy Board (HQ)
  – Medical policy for space medicine, atmospheric flight, and occupational health
  – Permanent medical waiver authority
  – Reviews/approves selection and retention medical standards
  – Review of salient space medicine issues with recommendations to the Office of Space Flight as appropriate
  – Reviews health related research requirements and deliverables

• Aerospace Medicine Board (JSC)
  – Clinical board
  – Temporary medical waiver authority, recommends permanent waivers
  – Develops medical standards

• Health Board (HQ)
  – CHMO chairs
  – Occupational Health forum
Policy Makers

- **Medical Policy Board Membership**
  - *NASA physicians*
  - *National Institutes of Health*
  - *DoD*
  - *Agency for Health Care Research and Quality*

- **Aerospace Safety Advisory Panel**

- **Aerospace Medicine and Occupational Health Advisory Committee**
  - *NASA Advisory Council*

- **Institute of Medicine**
Evidence Acquisition for Space Medicine

Is There A Problem?

Defining the Problem

Countermeasures Found Not Effective

1960

Bone Loss

Hypercalciuria

1970

Malabsorption

Changes in Intervertebral Discs

1980

Slow Recovery

Cellular & Molecular Effects

1990

1990

2000

New Drug & Exercise Testing

Artificial G Illness and Injury
Evidence Base for Space Medicine

Longitudinal Study of Astronaut Health

- Types of examinations
  - Selection
  - Retention
  - Pre-flight
  - Post-flight
  - Post-retirement

- Components of examinations
  - Physical exam
  - Laboratory analysis
  - Imaging
  - Special studies
Evidence Base from ground analogs
Evidence Base for Occupational Health

18,500 Civil Service Employees Agency-Wide

Longitudinal Study of Employee Health

Worker’s Comp cases

Illness/Injury database

EAP usage

Leave stats (sick leave, unscheduled leave)
Facilitators and/or Obstacles

• Facilitators
  – *Partners*
    • International
    • Academia
    • Other Federal Agencies
  – *Strategy, clear goals*
  – *Training*

• Detractors
  – *Resource acquisition and allocation*
  – *Access to space*
  – *“Traditional” science approach*
Ensure the health and safety of NASA employees in all environments

- Develop sensible health and medical policies
- Establish guidelines for NASA health and medical practice
- Provide oversight of health care delivery and assurance of professional competency
- Target health related research
- Ensure protection of research subjects and patients
- Review/approve medical selection/retention standards
- Ensure responsible implementation of standards