

SAFE PASSAGE

Addressing Crew Health Operations Missions



2008
2002

WHO WE ARE:

- A private, non-profit organization
- Established in 1970, under 1863 Congressional charter of NAS
- A component of the National Academy of Sciences
- We advise the nation issues of health and medical policy
- Majority of studies are requested and funded by the federal government
- Study committees are composed of experts serving pro-bono

A TYPICAL YEAR

- IOM's research program is about \$25 million per year
- At any given time, IOM has about 70 to 80 activities underway
- IOM publishes about 40 reports annually through the National Academy Press

POLICY

A definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions.

- Webster's Collegiate Dictionary

IOM STUDIES ISSUES SUCH AS:

- Are pesticide residues in food harmful to children?
- What nutrients does the body need to prevent deficiency and protect us from disease? And at what level?
- Are silicone breast implants safe?
- What proportion of disease and deaths are due to lifestyle?
- What's the best system for investing scarce resources in vaccine development?

MORE STUDIES...

- The Future of Public Health
- The Human Genome Project
- Allocation of organs for transplantation
- Medical errors

Background

- Origin: NASA request
- Sponsor: NASA
- Funding: \$1.4 million/ 24 months
- Staff: Charlie Evans, Mel Worth, Judy Rensberger, Tanya Lee

Purpose

To conduct an assessment of the current status of scientific knowledge; evaluate the most promising directions for the future of space medicine scientific progress, recommend a national and international strategy for space medical care during long term space flight, and suggest the most effective ways for NASA to address priority areas in achieving this strategy.

Creating a Vision for Space Medicine During Travel Beyond Earth Orbit

Committee Information

- Chair: John Ball, M.D., J.D.
- 14 member committee
- Academy Membership: 3 IOM Members
- Board Liaison: Gloria Sarto

Status

| Committee Formation | Meetings and Report Writing | Report Review | Book Publication |
|---------------------|-----------------------------|---------------|---------------------------------|
| August 1999 | October 1999 | February 2001 | May 2001 (Release) July 2001 |

Background

Origin: NASA Request

Sponsor: NASA

Funding: \$250 K/year for 5 years

Staff: R. Manning, M. Worth, B. Hamlin,
N. Dickson

Purpose

The IOM, through activities including studies and workshops undertaken at the National Academies under the auspices of its standing Committee on Aerospace Medicine and the Medicine of Extreme Environments (CAMMEE), shall provide to NASA independent technical advice relevant to aerospace medicine. More specifically, the CAMMEE shall coordinate with Office of the Chief Health and Medical Officer, Code AM, three times a year, to become informed of existing conditions and emerging issues related to medical care in space, to define prospective activities (such as studies or analysis of medical needs and/or approaches to addressing those needs) to be conducted at the National Academies and funded by NASA, and, through such activities, to provide advice on current NASA programs in aerospace medicine.

Aerospace Medicine and the Medicine of Extreme Environments

Chair: David Longnecker, M.D.

Membership: 11 Members

Academy Members: 2 (IOM), 1 (NAE)

Board Liaisons: D. Masys (also a member)

Committee Information

Sponsor extended contract for 5 years, has asked for report on Longitudinal Study of Astronaut Health (LSAH).

**Roundtable
Formation**

Committee Meetings

MTG 1
JAN 02

MTG 2
MAY 02

LSAH
Subcommittee
Formed
NOV 02

1st LSAH
MTG JAN 03

2nd LSAH
MTG
AUG 03

LSAH Rpt
DEC 03

Status

RECOMMENDATIONS

- **Recommendation 1. NASA should give increased priority to understanding, mitigating, and communicating to the public the health risks of long-duration missions beyond Earth orbit.**
- **Recommendation 2. NASA should develop a comprehensive health care system for astronauts for the purpose of collecting and analyzing data while providing the full continuum of health care to ensure astronaut health.**

RECOMMENDATIONS (Cont.)

- **Recommendation 3. NASA should develop a strategic health care research plan de-signed to increase the knowledge base about the risks to astronaut health.**
- **Recommendation 4. NASA should give priority to increasing the knowledge base of the effects of living conditions and behavioral interactions on the health and performance of astronauts on long-duration space missions.**
- **Recommendation 5. NASA should develop and use an occupational health model for the collection and analysis of astronaut health data, giving priority to the creation and maintenance of a safe work environment.**

RECOMMENDATIONS (Cont.)

- **Recommendation 6. NASA should accelerate integration of its engineering and health sciences cultures.**
- **Recommendation 7. NASA should establish an organizational component headed by an official who has authority over and accountability for all aspects of astronaut health, including appropriate policy-making, operational, and budgetary authority.**