AEROSPACE MEDICINE BOARD

1. PURPOSE

This charter establishes the Aerospace Medicine Board (AMB) and defines the Board’s functions and membership. The AMB is an instrument of the Office of the Chief Health and Medical Officer (OCHMO) at the Johnson Space Center (JSC).

2. APPLICABILITY/SCOPE

This charter is applicable to NASA Headquarters, NASA Centers, including Component Facilities, all crewmembers operating spacecraft under NASA control or cognizance, aircraft operations, and training in support of space flight activities.

This charter supersedes the AMB portion of NC 1000.12. The Chief Health and Medical Officer (CHMO) is responsible for the maintenance of this charter.

3. AUTHORITY

National Aeronautics and Space Act, as amended, 51 U.S.C. § 20113 (a)

4. GOVERNING COUNCIL AFFILIATION

Executive Council.

5. FUNCTIONS

The Chief Health and Medical Officer (CHMO) has responsibility and authority for oversight of the development, review, waiver, and maintenance of medical policies and standards. The AMB is established as part of this authority and is primarily a clinical and implementation body for addressing crew medical certification. The AMB also addresses establishment of, or modification of, health and medical policies and standards, and oversees surveillance of crew health including evaluating and recommending approval or disapproval of waivers related to medical standards for atmospheric and space flight.

The functions of the AMB are

a. Medical certification of NASA’s active astronauts, JSC aircrew, and commercial astronauts who are piloting a vehicle for NASA, utilizing NASA medical standards as applicable.

b. Case presentations given to multilateral boards for certification of astronauts, including NASA, international partner, and commercial astronauts, performing crew duties on NASA space vehicles.
c. Review of case presentations of aircrew at other NASA centers, at the request of the CHMO.
d. Delegation of medical certification of flight controllers, divers, and other specific occupations to appropriately trained physicians, services, or chartered boards wherein the applicable NASA medical standards are followed. Delegation of such authority will occur during regularly scheduled AMB meetings and recorded in the meeting minutes. When a question arises as to the appropriateness of a disqualification or a waiver, a physician knowledgeable with the case will present to the AMB at the discretion of the AMB Chair.
e. Development and refinement of medical policies and standards for selection and periodic evaluation of crew. In the event of a new category of space flyer within NASA’s oversight, appropriate standards will be developed. Changes to the established health and medical policies or standards will be approved by the CHMO.
f. Annual review of clinical practice related to atmospheric and space flight care and development of recommendations for appropriate countermeasures, clinical practice guidelines, or treatment processes used to standardize, stratify, and decrease risk to the individual and NASA mission.
g. Periodic review of the following data to assess the impact on health and medical policies and standards.
   (1) Epidemiological findings and statistical data regarding morbidity and mortality from the Lifetime Surveillance of Astronaut Health (LSAH).
   (2) Data regarding astronaut surveillance and treatment regarding causality, contribution, and association of health risks potentially as a consequence to human space flight.
   (3) Quality metrics data related to the quality and standard of care in the flight medicine clinic.
h. Review of medical data of
   (1) NASA astronauts assigned for space flight.
   (2) International partner and commercial astronauts, when those participants will fly with NASA crews or their health and medical condition may impart or contribute to the risk of a NASA mission. Review of international partner or commercial astronaut data may be deferred to the NASA representative of the Multilateral Space Medicine Board (MSMB) or similar board at the discretion of the CHMO.
i. Review of medical data and recommendations regarding the medical qualification status of astronaut selection candidates during astronaut-selection cycles. Referral of medical data and cases of selection candidates in the event of an appeal to the CHMO.
j. Review of cumulative medical events before, during, and after space missions on a regular basis.
k. Assessment of the efficacy of health maintenance and preventive medical measures used in human space flight for health-risk reduction and conveying
recommendations for improvement of those measures to the Human System Risk Board (HSRB) and Medical Policy Board (MPB) as appropriate.

l. Periodic review of waivers in excess of six months and permanent medical disqualifications to assure no changes in status.
m. Exchange knowledge and information for education purposes

The Responsibilities of the AMB Chair are to

a. Provide recommendations to the CHMO on the certification of astronauts pre- and post-space flight and before return to regular training and flight duties following space flights. The authority of decision for return to duty following spaceflight may be delegated to the crew surgeon when appropriate.
b. Issue annual medical certification of astronauts and JSC aircrew with flying duties for NASA aircraft, as appropriate.
c. Report to the CHMO medical findings that could impact medical policies, standards and procedures.
d. Provide written recommendations, including recommendations for waivers, as advised by the board, to the CHMO within 15 days of the AMB meeting.
e. Maintain all records associated with the AMB.

Recommendations for waivers

a. Waiver Categories
   (1) Unconditional waivers shall be granted when the board determines the medical condition for which a waiver is granted is stable and requires no additional medical evaluation, operational testing, monitoring, or treatment. Because there is no need for the board to reconsider the waiver on a regular basis, an unconditional waiver is granted without restriction. During annual physical examinations, the examining physician will specifically document the current status of the condition.
   (2) Conditional waivers may be granted if the board determines the medical condition for which a waiver is granted requires regular follow-up, including treatment, medical surveillance, or duty restrictions. The physician will communicate, in writing, the board’s recommendations, including the specified treatment, surveillance regimen, or restrictions to the individual. For the conditional waiver to be valid, the individual must consent to the required medical treatment or diagnostic procedures.

b. Granting Authority
   (1) The recommendation for a waiver or to deny a request for a waiver is made by the AMB Chair to the CHMO. If no waiver of the medical standard is recommended by the AMB Chair, the astronaut or aviator is then considered medically disqualified for space flight or aviation activities.
   (2) In recommending a waiver the AMB Chair shall consider the:
      (a) Possibility of sudden incapacitation.
(b) Potential for loss of a spacecraft and/or a mission.
(c) Ability to complete duty assignments in the operational environment.
(d) Risk to other crewmembers.
(e) Risk to the individual by continued exposure to, or work in, the operational environment.

(3) After appropriate review of the waiver recommendation, the CHMO will inform the AMB Chair of his/her decision.

c. Development of a Waiver Recommendation

(1) When the examining physician finds a disqualifying condition, the crewmember is denied medical certification until the AMB reviews the findings.

(2) A waiver may be considered once the condition to be waived is stable and a complete evaluation has been conducted.

(3) The AMB case presentation with waiver request is prepared by the examining physician.

(4) Considerations for waiver include the risk of the medical condition to the individual and to the mission.

(5) There are no pre-approvals on waivers.

(6) No waivers are granted for astronaut selection candidates who fail to meet the current astronaut medical selection standards.

(7) A waiver request, once denied, may be again presented to the board if there has been a change in the individual’s medical condition, a change in the medical standard or requirement, or if significant new information relevant to the issue has become available. This new information may include the results of additional clinical evaluation or diagnostic testing, changes in the operational requirements, or modification of the relevant standard during periodic expert panel review.

6. MEMBERSHIP

a. Chair: The CHMO has designated the JSC CMO as the Chair of the AMB. The JSC CMO may delegate this function to his or her physician designee. The Chair will not be an astronaut, and must have sufficient experience in aerospace medicine.

b. Core Members: The Chair will appoint four civil servant physicians to serve as core members of the AMB, a physician who is not an astronaut as Alternate Chair who will assume the duties of the Chair during his or her absence, and a physician who is not an astronaut to serve as executive secretary.

c. Other Members: A civil servant physician from a NASA Center other than JSC will be appointed to the membership of the AMB when aviation medical evaluations from that NASA Center are under consideration.

d. Recusal: The Chair shall replace those physicians serving as core members on the AMB during review of the astronaut selection candidates if any core member has
submitted an application to be an astronaut. The Alternate Chair will replace the Chair, if the Chair has submitted an application to be an astronaut or if the Chair’s own flight status or case is reviewed. In addition, members of the AMB who have a current application on file for astronaut selection shall recuse themselves from all AMB activities that are associated with review of astronaut applicant records and AMB deliberations. These members shall have regular privileges regarding other matters of the AMB. This substitution shall be made in order to avoid a conflict of interest or the appearance of a conflict of interest.

e. Qualifications: Members must have a doctor of medicine or doctor of osteopathic medicine degree, have a current license to practice medicine in a state or territory of the United States, have a current board certification as recognized by the American Board of Medical Specialties or American Osteopathic Association, be credentialed by the Space Medicine Operations Division and be full-time NASA employees (civil service or Department of Defense). All members have the right to deliberate or voice a dissenting opinion.

f. Other Non-Member Attendees: All Space Medicine Operations Division physicians, physicians employed as contractors providing services to the Space Medicine Operations Division, international partner flight surgeons, and aerospace medicine residents assigned to JSC are invited to attend the regularly scheduled AMB meetings and to provide presentations and individual advice to the AMB Chair when requested.

7. MEETINGS

a. A quorum of the AMB must include at least four members in addition to the Chair and Executive Secretary.

b. The Executive Secretary, or authorized designee, shall provide notice of meetings of the AMB, including the time, place, and agenda, to all members of the Board. For urgent matters, the chair may convene a meeting as required.

c. Preparation and presentation of materials for AMB review

(1) Items for consideration by the board may be submitted by any board member, in writing, to the executive secretary or authorized designee.

(2) Requests for medical certification, disqualification, and issuance of waivers will be submitted in writing by the examining physician in a timely fashion for the chair to review prior to a scheduled AMB meeting.

(3) For routine re-certifications for flight status, the MSMB template is the standard template to be followed. For waiver requests, the NASA template will be used to supplement the MSMB template for presentations.

d. Meeting Format

(1) The Chair will call the meeting to order and review the agenda for the meeting.

(2) The Chair will moderate discussion of issues before the AMB.
The Chair shall have the right to call a closed session of the board. Attendance will be limited to members, or core members, at the discretion of the Chair.

e. Decision Processes

(1) All attendees may participate in the discussion.

(2) The board is advisory to the Chair, and as such, it is the Chair who makes the recommendations to the CHMO.

(3) The Chair will formulate his or her recommendations and decisions based upon the discussion and will include the minority or alternative view of any member, if any.

(4) The Chair has final authority over and responsibility for the findings and recommendations rendered by the board.

(5) A case may be reconsidered at a subsequent meeting of the board if there has been a change in the individual’s medical condition, a change in medical standard or requirement, or if significant new information relevant to the issue has become available. This new information may include the results of additional clinical evaluation or diagnostic testing, changes in the operational requirements, or modification of the relevant standard.

8. DURATION

This charter will remain in existence at the discretion of the Administrator.

9. ASSESSMENT

The CHMO may ask the Chair of the AMB to provide an annual report of accomplishments, reviews, and quality metrics in order to assess performance and quality of the processes.

10. RECORDS, REPORTS, and ACTIONS

a. The AMB Executive Secretary is responsible for the official written reports of the AMB meetings. These reports will summarize pertinent findings, waivers, present the case in sufficient detail to permit review, and identify specific actions for implementation. These records, as well as other information considered in their preparation, are protected by the Privacy Act of 1974, as amended, 5 U.S.C. § 552a, and NASA’s Privacy Policy and Requirements.

b. An executive assistant will provide administrative support for the Board. The assistant prepares the official written reports of the AMB meetings. This assistant will adhere to the same standards of confidentiality and patient privacy as the physicians on the AMB. This function is generally provided by a NASA contractor, who is bound by the Privacy Act.

c. Records will be maintained documenting all Board actions on a secure computer system. This searchable database must allow Board officers and regular members to access information about waivers, document changes, and other Board actions.

d. A template format will be used for waivers.
e. AMB decisions become part of the individual’s permanent medical record and may include recommendations for additional evaluation, treatment, counseling, or other actions.

f. The CHMO will maintain all records associated with approval of waivers requested by the AMB Chair. The waiver will be signed electronically or by hand, and transmitted to the AMB Chair after due consideration.

g. An individual’s medical information is subject to the Privacy Act of 1974, as amended, 5 U.S.C. § 552a, and is part of the system of medical records.

h. The JSC CMO shall be the designated the system of records official for all records under 10HIMMS and 10HERD. All regulations, laws, and controls applicable to this system of medical records extend to the Chair’s recommendation letter and all materials pertaining to the case brought before the board.