Overview

NIH policy requiring independent data and safety monitoring boards (DSMB) for all multicenter Phase III trials has existed since 1979; the most recent restatement was issued in 1998 (NIH Policy for Data and Safety Monitoring, NIH Guide Notice 98-084). Further NIH guidance for Phase I and II trials was provided in 2000 (Further NIH Guidance on Data A Data and Safety Monitoring for Phase I and Phase II Trials, NIH Guide Notice OD-00-038). In light of the related responsibility for monitoring assigned to local Institutional Review Boards (IRB) by federal regulation (45 CFR 46), NIH added a requirement in 1999 that local IRBs be notified of the outcome of all DSMB reviews, even when no major change has been recommended, to document that data and safety monitoring is occurring as expected (Guidance on Reporting Adverse Events to Institutional Review Boards for NIH-Supported Multicenter Clinical Trials, NIH Guide Notice 99-107).

These NIH policies do not address implementation matters, leaving those to individual Institutes and Centers. As a result, the National Institute of Allergy and Infectious Diseases (NIAID) has issued its own policy on basic principles for DSMB operations†. The Division of AIDS (DAIDS) monitors safety and efficacy of multicenter randomized clinical trials primarily through standing DSMBs. DAIDS believes that standing boards are both more effective and easier to manage than boards established separately for each new trial.

This Charter chiefly describes the organization and procedures of standing DSMBs that oversee most of the randomized trials carried out with funding from DAIDS. It is expected that other future DSMBs involved in oversight of DAIDS trials would have very similar characteristics to the current standing DSMBs, or at least conform to the basic principles articulated in the NIAID Policy. For trials involving collaboration between or among multiple research organizations there will usually need to be detailed discussions to arrive at trial-specific arrangements documented in a trial-specific charter.

Scope of Responsibilities

The “convening authority”‡ for DAIDS DSMBs is single entity (typically NIAID leadership) with the authority and responsibility to respond upon the recommendations of the DSMBs regarding a particular trial.

In general, DAIDS DSMBs will review safety, efficacy, and overall study conduct as specified in the protocol and/or protocol monitoring plan for each trial. Trials are assigned by DAIDS to DSMBs according to the type of trial (i.e., therapeutics, prevention, vaccine) and geographic location of clinical research sites. The standing and any newly formed DSMBs are available to monitor Phase II, III and IV trials funded by DAIDS both through its networks or outside (e.g., under investigator-initiated cooperative agreements).

‡ Ibid.
There is no presumption that the DSMB will accept responsibility for monitoring any particular trial “as is” (i.e., as designed by the protocol team). It is necessary, therefore, to present each study to the DSMB at the time of its initiation, preferably before enrollment begins. This initial review does not constitute participation in trial design, which would compromise the independence of the DSMB. Rather, it gives the DSMB an opportunity to communicate to DAIDS that it cannot take responsibility for oversight unless major issues and concerns are addressed. In this case, the DSMB will provide DAIDS a comprehensive list of specific issues that need to be resolved before assuming oversight responsibilities.

The DSMB’s role does not necessarily end when the opportunity for stopping enrollment early passes. The DSMB should continue to review summaries of safety data by treatment group at least annually (local IRBs will be notified of the results of these reviews) until either safety follow-up ends or another entity assumes this responsibility.

The DSMB normally will have no role or responsibility for final analyses and preparation of manuscripts for publication.

**Membership and Appointment Procedures**

Membership of the DSMB should reflect the disciplines and medical specialties necessary to interpret the data from the trial, including medicine, statistics and potentially ethics. Selection of DSMB members should include consideration of clinical trials experience, relevant expertise, prior DSMB service, and absence of significant conflict of interest (COI). Terms of appointment are for two to four years and can be renewed. Ad hoc members may be added for reviews of specific studies to expand expertise or geographic representation as appropriate for the trial. To hold an official DSMB meeting a quorum consisting of at least three voting members must participate, including at least one clinician and one biostatistician.

No member of the DSMB should have any involvement in the conduct of the studies to be reviewed. Furthermore, no member should have certain financial, proprietary, professional, or other interests that may affect impartial, independent decision-making by the DSMB. Members may recuse themselves in the case of such potential conflicts. In general, it is best to avoid appointing individuals who work in the same institution as the investigators. A lead investigator on one trial should not be a member of the DSMB for a different but similar trial. All regular and ad hoc DSMB members will sign a COI certification prior to being asked to participate initially and at least once per year thereafter. Members will be asked to disclose any interests that involve potential conflicts for studies under review prior to each meeting of the DSMB. Consideration of and decisions regarding potential COI will follow the NIAID policy on COI for data and safety monitoring.

Input for the appointment of a new DSMB Chair is solicited from various sources including current Board members and NIAID staff. The Director of the Division of AIDS appoints the Chair.

§ NIAID Policy for Identifying Potential Conflict of Interest for Individuals Serving on Advisory Committees or Independent Safety Monitors Responsible for Data and Safety Monitoring of Clinical Trials, Version 1.0, Effective 11/01/2012
Suggestions for potential Board members are similarly sought from various sources. In consultation with the appropriate Board Chair, network or study investigators, and NIAID staff, the NIAID Biostatistician, who acts as Executive Secretary, makes the final decision to appoint a Board member.

As indicated above, selection of members is more complicated when DAIDS networks collaborate with others. When the collaborator is another established research organization, appropriate representatives of each partner will develop plans jointly. For some studies, one of the existing DSMBs may not have representation from a country or region with a substantial number of participating clinical sites. In such cases, DAIDS policy is to add ad hoc members representing these countries, or regions, as necessary. These ad hoc members are identified in consultation with trial investigators, national ministries of health, and others.

Coordination of DSMB activities is the responsibility of a senior NIAID biostatistician, who acts as Executive Secretary. In this role, the individual is not a member of the DSMB, does not vote nor attempt to influence DSMB deliberations or recommendations, and has no direct or supervisory role in the conduct of the trial being reviewed. This individual oversees meeting planning and development of the meeting agendas, prepares the official meeting summaries and notifications of local IRBs, and serves as primary point of contact for inquiries regarding the DSMB.

DSMB members who choose to obtain liability insurance to cover their participation on an NIAID/DAIDS DSMB may be eligible for reimbursement for their premiums. (See Attachment A in NIAID DSMB Policy.)

Meeting Planning

DSMBs are expected to meet at least once per year and can convene in the U.S. (typically in Bethesda, MD) or outside of the U.S (e.g., Africa). The NIAID in conjunction with the statistical centers and the DSMB Chair will develop the agenda for the meetings. In addition to studies scheduled for a required annual review, protocol initiation reviews and interim data reviews prompted by safety concerns or protocol specifications are added to the schedule. A draft agenda as well as logistical information will be distributed to meeting participants (possibly through the network headquarters) two months in advance of the meeting. Two weeks prior to the meeting, NIAID will distribute the final agenda, copies of the protocols, summaries of previous DSMB reviews, as well as review assignments to the Board.

Meeting Conduct and Data Reports

It is expected that prior to its first data review and preferably prior to protocol enrollment of a trial the DSMB will understand the timing and conditions for data reviews and possible early stopping for safety, futility, efficacy, and/or ethical reasons; and have the opportunity to discuss any significant concerns with NIAID and protocol team leadership. NIAID staff informs the DSMB that they will review unblinded data to render any safety, planned efficacy, and planned futility recommendations. The DSMB may decide to defer unblinding while interim results permit

** Ibid.
that. However, the mechanics for immediate unblinding must be clearly established before the DSMB reviews any grouped data.

Meetings will usually be face-to-face, occasionally by conference call (particularly for time-sensitive reviews). Sessions will be of three types, open session, closed session and closed executive session, not all of which would be needed at every meeting (depending upon the trial under review).

Study data reports will be prepared by the study statistician(s) and distributed at least one and preferably two weeks or two weekends prior to a scheduled meeting to those DSMB members and NIAID staff who will participate in the review. The protocol team will determine contents and format initially; the DSMB may request additions and other modifications for subsequent reports. Reports for the meetings consist of separate open and closed session reports.

All material presented at any session will be considered confidential, and copies of reports for closed sessions, except for archival copies retained by the NIAID, will be collected and destroyed following the meeting. All closed reports will be discarded in a confidential manner seven years after study completion.

I. Open Session: This session is open to observers, including members of the protocol team, coordinating/data center staff, NIAID staff*, representatives of industrial collaborators, or representatives from the Food and Drug Administration. This open session will deal with issues relating to the general conduct and progress of the study, such as accrual, patient demographics and other baseline characteristics, data quality control, adherence to the protocol, retention, and follow-up. Unless Senior DAIDS Program Staff approve an exception, outcome results must not be discussed during the open session nor included in the open data report even if data are pooled. Discussion should be limited to the DSMB members, protocol chair, and statistician, and observers should refrain from participating unless asked a question or to volunteer a clarification.

Open Data Report: This report is reviewed in the open session. It is routinely distributed to the protocol chair, to DSMB members and to appropriate NIAID staff*. Information in the open report includes overall data on study conduct, protocol compliance, site performance, quality control, follow-up, and participant baseline characteristics exclusive of data by treatment group. Note: Pooled safety data may also be reported with limited distribution to the study Chair(s), DAIDS Medical Officer, Branch Chief and Program Director, and may require a session with restricted attendance to discuss this data.

II. Closed Session: At this session, safety and efficacy data by treatment group will be reviewed. Comparative results are presented to the DSMB in closed reports and closed sessions are normally attended only by voting members of the DSMB and one member of the NIAID staff or contractor serving as DSMB Executive Secretary (apart from the statistician who prepared the reports, who may in some instances be a NIAID employee or contractor and serves to clarify data reports and answer questions regarding the analyses, and a staff person

*Some trials overseen by an NIAID DSMB are supported jointly by other NIH components and/or other federal agencies. In such cases, each supporting agency would be entitled to participate in meetings and receive reports under the same conditions as NIAID staff.
to assist with taking notes). The study chair does not attend. Reports showing data by treatment
group should mask the identity of the groups, and the DSMB will determine if and when to
unmask.

**Closed Data Report:** This report is distributed to DSMB members and the Executive Secretary
only and is reviewed in the closed session. In addition to information included in the open report,
the closed report includes safety and efficacy outcome data by treatment group. Ordinarily the
by-treatment reports are coded as a safeguard against disclosure through lost documents, and
code keys are provided separately to DSMB members and the Executive Secretary.

To address an emerging safety issue, the designated DAIDS Medical Officer/Medical Monitor
(MO/MM) for the trial may share supplemental information with the DSMB and gain DSMB
perspective on safety issue relating to his/her safety oversight responsibilities. To do so the
Medical Officer/Medical Monitor provides a written request for access to closed safety analyses
(in a manner that minimizes unblinding) and attendance at the DSMB session dealing with
closed safety analyses to the DAIDS Director for review and approval [See Attachment 1,
Standard Procedures to Determine DAIDS Medical Officer/Monitor Access to DSMB Closed
Safety Analyses (xx/xx/2015).] The Medical Officer/Medical Monitor is not a member of the
DSMB, will not vote nor attempt to influence DSMB deliberations or recommendations. The
DAIDS Director is strongly encouraged to consult with the DSMB Chair [through the NIAID
Executive Secretary] before approving the MO/MM’s request. If approved the DSMB should be
notified of this authorization in advance of the meeting with opportunity for the Director of DAIDS
or designee to address any member’s concerns.

**III. Closed Executive Session:** This session involves only the DSMB members in order to
ensure complete objectivity as they discuss outcome results, make decisions, and formulate
recommendations regarding a study.

The DSMB will have the option to invite other participants to attend any part of the meeting to
assist in fulfilling its responsibilities.

**DSMB Recommendations**

Within two weeks after the meeting, the DSMB Executive Secretary works closely with the
DSMB Chair to prepare and distribute a report summarizing the DSMB’s recommendations, but
none of the confidential information presented at the meeting. After approval of the summary
recommendations by the full DSMB, the DSMB Executive Secretary forwards the final version to
the DAIDS Medical Officer, or other senior DAIDS staff as appropriate, to ensure clarity of the
summary prior to its distribution to: the study chair, study statistician, director of the statistical
center, network chairs, as relevant, and to other key DAIDS staff. It is expected the DAIDS
Medical Officer or other senior DAIDS staff reading of the final version will occur within 24
hours. The study chair is then responsible for disseminating the DSMB summary report to other
team members as necessary. In the case of trials conducted by networks, the network
headquarters may take responsibility for distribution within the network (e.g., posting the
meeting summary to a website and notifying investigators where to find it).

It is encouraged and acceptable for the DSMB to verbally share any recommendations of a
routine nature with the team representatives and program officials at the meeting.
**Major Recommendation.** In circumstances when there is a major recommendation (e.g., to stop a study arm), the Board instead first communicates its formal recommendations only to the DSMB convening authority. After consulting with relevant NIAID staff as deemed necessary by NIAID leadership, the DSMB convening authority’s responsible official makes the final decision to accept the recommendations or not. The convening authority may consult with trial leadership prior to making a final decision to accept recommendations or not. If approved, the Executive Secretary circulates the DSMB recommendations as described above.

**Reporting to IRBs**

In fulfillment of the NIH Guidance on Reporting Adverse Events to Institutional Review Boards for NIH-Supported Multicenter Clinical Trials (release date: June 11, 1999), the NIAID will distribute the final DSMB meeting summaries documenting the occurrence of the meeting and the recommendations to Institutional Review Board (IRB)/Ethics Committee (EC) via the site investigator who forwards to their IRB/EC or directly as appropriate.

**Change History**

The change summary table below will be updated when the document is reviewed or revised.

<table>
<thead>
<tr>
<th>Version #</th>
<th>Date</th>
<th>Replaces</th>
<th>Date of Review/Revision</th>
<th>Rationale for Revision/ Retirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>07/14/09</td>
<td>V1.0</td>
<td>07/14/09</td>
<td>Clarification enhancements, newly formed DSMBs, clarification of procedures for access to closed safety data, new procedures for communicating final DSMB recommendations and definition of quorum established</td>
</tr>
<tr>
<td>4.0</td>
<td>10/18/2012</td>
<td>V3.0</td>
<td>10/18/2012</td>
<td>Deletion of names of specific DSMBs, meeting frequency and specific locations; inclusion of NIAID conflict of interest policy; reorganization and enhancement of meeting and data reports sections; revised meeting summary procedure.</td>
</tr>
<tr>
<td>5.0</td>
<td>04/13/2015</td>
<td>V4.0</td>
<td>05/07/2015</td>
<td>Addition of: NIH policy regarding Phase II trials; clarification of roles/responsibilities of NIAID employees/contractors in closed sessions; additional details on DSMB access to blinded data and unblinding; reimbursement of liability insurance. Clarification of: the timeline to discard closed reports.</td>
</tr>
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Attachment 1

Standard Procedures to Determine DAIDS Medical Officer/Monitor Access to DSMB Closed Safety Analyses†† (xx/xx/2015)

(1) For New Trials Not Yet Undergoing DSMB Review

- For all DAIDS trials to be monitored by a DSMB, the assigned Medical Officer/Medical Monitor (MO/MM) will assess the study for level of risk and safety concerns during protocol development.

- The MO/MM will also discuss whether to request access to closed safety data and analyses and the underlying safety concern with his/her Branch Chief and Program Director.

- All MO/MM requests for access to closed safety data and analyses pertinent to a safety issue and the rationale will be discussed at the DAIDS’s Clinical Science Research Committee (CSRC) or Prevention Science Review Committee (PSRC) review.

- The designated MO/MM should then provide a written request for access to closed safety data/analyses and attendance at the DSMB session dealing with safety analyses to the Director, Division of AIDS [through their Branch Chief and Program Director] for a final decision. The Division Director is strongly encouraged to consult with the DSMB chair [through the NIAID Executive Secretary] before approving a request.

- The DSMB will be informed of the decision and rationale to allow access to the closed session safety analyses at the protocol initiation review. The protocol statistician will be present and will be able to ensure that the study safety monitoring plan includes the proper reports for the MO/MM to review.

(2) For Trials Currently Undergoing DSMB Review

The general process described above will also be applied to trials currently reviewed by DSMBs. The request for access will be discussed at the Branch level and Program level before going forward. Discussion at the CSRC and PSRC is not required. Each DSMB will be informed of these requests for ongoing trials as soon as possible. Program will then provide the Statistical Centers with a list of ongoing studies that will have MO/MM access to closed safety analyses.

(3) For Trials in which MO/MM Does not have Access to Closed Session Safety Data

When the MO/MM does not have access to the closed session safety data/analyses for a DSMB-monitored study, the MO/MM will receive interim reports with aggregated safety data as directed by the study safety monitoring plan. The MO/MM may request access to closed data analyses per the above approval process (#2), if any new information indicates a substantial safety concern. The DSMB and Statistical Center will be informed of approved requests as soon as possible.

†† This procedure should be followed for MO/MM requests of any additional restricted information.