

**MINUTES**  
**NIOSH Board of Scientific Counselors**  
**Washington, DC**  
**December 13, 2007**

**Introductions, Announcements, and Approval of Minutes**

Dr. Sarah Felknor, Chair, called the 51st meeting of the NIOSH Board of Scientific Counselors to order. Other Board members attending in person were: Mr. Scott Schneider and Mr. Eric Lamar, and Drs. Benjamin Amick, Mei-Li Lin, and Hester Lipscomb. Attending by teleconference were: Drs. William Bunn, Catherine Heaney, Pamela Hymel, Joel Haight, David Warheit.

The NIOSH Director, Division Directors, NIOSH staff, and members of the public also attended. The minutes from the 50th meeting on October 11, 2007, were reviewed and approved.

**NIOSH Implementation of the National Academies of Science Program Review Recommendations**

***Board Process For Providing Input to the National Academies of Science Program Reviews***

Dr. Benjamin Amick presented an overview of a process for Board of Scientific Counselors review of NIOSH implementation of National Academies of Science (NAS) program review recommendations. This process was proposed by a work group of Board members composed of Drs. Felknor, Amick, McCauley, and Heaney. Dr. Amick stated that the group goal was to prepare a brief response on each National Academy of Science Program Evaluation through a transparent and structured process. These responses would then be presented to the full Board for review and endorsement. The work group would coordinate activities with NIOSH staff but would not be responsible for all reviews. All Board members would be responsible for endorsing the brief response. The process would be modeled on the extramural grant review process. The review would generate briefing notes and provide a forum for discussion. The timeline from receipt of NAS report to formal briefing note to NIOSH Director from the BSC Chair would depend on the time required by NIOSH staff to prepare an implementation plan in response to NAS evaluations.

Key Issues to consider in developing briefing materials are:

- Is the NAS report fair and appropriate in assessing relevance and impact?
- Is the NIOSH program response to the NAS report complete?
- Does it adequately address recommendations?
- If a NIOSH program disagrees with NAS report, is sufficient justification provided?
- Are there additional recommendations that the BSC endorses as important for NIOSH program management of NIOSH senior management?
- Will the program's response lead to more relevant research?

- Will the program’s response lead to research that is more effective at reducing illness, injuries and hazardous exposures?

### ***Discussion***

Dr. Howard endorsed the use of the term “implementation plan” to emphasize action, and the forward-thinking nature of the NIOSH report in response to NAS recommendation. Dr. Howard suggested that the Board advisory document be appended to NIOSH report after it is completed. Dr. Howard also requested that the Board not concentrate on insufficient funds in response to implementation plans, but evaluate whether the recommendations are mission-oriented and fit with program goals. Dr. Howard suggested that the implementation plan be posted for public comment so that those comments can inform the Board. The Board suggested also emphasizing the strategic plan since it gives an overall guide to the process.

The Board asked how the various programs were chosen for NAS review. Dr. Howard stated the more mature programs were selected first for review because the reviews are outcome-oriented. The Board noted the large size of the evidence packages provided by NIOSH to the NAS and requested that brief summaries be prepared for public consumption. The Board requested costs figures for NAS reviews which were estimated by NIOSH staff to total \$3.1 million for all program reviews. The Board also asked how NAS reviews were related to Office of Management and Budget (OMB) program reviews. Dr. Howard stated that the association is indirect but many benefits accrue from the NAS reviews when OMB examines NIOSH activities. The Board requested that indirect costs be considered in future estimates.

The Board asked how the NAS framework committee receives information on the implementation plans and the Board reviews. Dr. Howard stated that the NAS panel will receive a report showing the implementation plan and comments from the Board. A small amount of NIOSH resources will maintain the status of framework committee for long-term monitoring of the process. Dr. Howard also noted that NIOSH will prepare a formal report for the peer-reviewed literature on this evaluation process.

### ***Board Review of the NIOSH Hearing Loss Program Plan for Implementation of NAS Recommendations***

Dr. Amick presented an overview of the NAS recommendations and the NIOSH implementation plan followed by work group recommendations to the Board. The work group proposed that the Board find the NAS report a fair and appropriate assessment of the NIOSH Hearing Loss Program (HLRP) given the metrics used to evaluate relevance and impact. The work group had three general observations to offer the full Board:

Observation 1: Concur with the impact score of 4, but note that the role of the HLRP in the development of standards, measures, and tools was undervalued using the adopted impact metric. The Board should highlight the significance of this work as a public good.

Observation 2: Concur with the assessment of the NAS that there is a need for the talented

scientific staff of the HLRP to publish more in peer-reviewed journals. However, given the scope and magnitude of the recommendations made by the NAS, be concerned that this important metric of scientific output will be subverted by other organizational priorities. Encourage NIOSH leadership to support the efforts of a talented and creative research group to publish in peer-reviewed journals

Observation 3: Concur with the NAS about the importance of surveillance data, but be concerned that the NAS undervalued the partnership between NIOSH and NCHS for collection of audiometric data on the NHANES survey. While there are limitations, this is a national survey which offers tremendous opportunity to describe the epidemiology of hearing loss. Furthermore, the NAS call for a major new surveillance system in the current funding environment is of concern to the Board.

Overall, it was proposed that the Board find the NIOSH HLRP program plan complete and responsive to each of the 15 recommendations of NIOSH, and compliment the NIOSH HLRP for the development of a detailed Strategic Plan with a mission to provide national and world leadership to reduce the prevalence of occupational hearing loss. Specific note was directed to Recommendations 6 and 8 in the NAS report. Recommendation 6 encouraged use information from evaluation of hearing loss prevention measures to guide program planning. Recommendation 8 encouraged greater emphasis on evaluation of the effectiveness of hearing loss prevention measures on the basis of outcomes that are as closely related as possible to reducing noise exposure and the incidence of occupational hearing loss.

It was proposed that the Board consider the development of the evidence base on the efficacy and effectiveness of hearing loss prevention measures and, in particular, the limited discussion of worksite and other evaluations a missed opportunity to establish world leadership in HLR. The Board should consider this work critical for the HLRP to achieve an NAS score of 5 on impact since it will focus on outcomes closely linked to reducing noise exposure (intermediate outcomes) and the incidence of occupational hearing loss (end outcomes).

Additional issues for Program management and NIOSH senior management:

Consider the role of systematic reviews of the effectiveness of hearing loss prevention programs and the epidemiology of occupationally-induced hearing loss as useful platforms for benchmarking research.

Revisit the recommendation made at the CDC Futures Workshop to describe the human, economic and social burden as a methodology for valuing the more basic science and the relevance of the work.

Consider the role of occupational noise exposure in other work-related diseases and injuries to further value the relevance of the work.

Consider how to better measure the collaborative activities of the HLRP as well as other NIOSH programs so this critical aspect of translating knowledge to practice is more appropriately captured.

Overall, it was proposed that the Board consider the HLRP well-positioned to conduct more relevant research. The challenges faced appear to be resources. Will the HLRP be able to recruit and retain the researchers required to achieve the ambitious goals set forth in the strategic plan? Will resources be available for national surveillance activities? In addition, there is a need for employers, labor and workers to support evaluation research. Without this support the HLRP will be challenged to demonstrate prevention effectiveness.

### *Discussion*

The Board suggested that systematic review not be restricted to randomized trials because much good information could be lost. The Board also noted that hearing loss is often overlooked because changes in hearing are slow and insidious. They stated that surveillance recommendations are very important to justify all other activities. Surveillance could start small, maybe in one sector or region. More engineering controls also need to be explored, especially inexpensive controls. Barriers to adoption of controls need to be examined. The absence of OSHA in hearing loss prevention efforts was noted.

The work group also noted that the surveillance goal in the HL strategic plan includes intervention effectiveness recommendations and was concerned that one activity may lose emphasis in favor of the other. The work group also suggested that the epidemiology goal be broadened to include vulnerable populations. It was proposed that the Board formally endorse the goals or add a goal as needed. Dr. Howard stated that such an endorsement is valuable to the hearing program staff. Efforts by NIOSH staff to share the strategic and implementation plans with the NORA sector councils was encouraged.

Dr. Howard requested assistance on how the NAS impact scores should be interpreted given that a score of 5 may often be unachievable. The Board suggested that the learning process is more important than the scores and hoped that self-evaluation would become more systematic so that the burden of program review every 4-5 years is not so great. In addition, the Board recommended keeping policy and regulatory bodies engaged even though regulatory actions take a very long time, stating that this an important part of the research-to-practice process.

In closing, the work group stated they will prepare a summary of the recommendations in a draft document to be reviewed by the entire Board then finalized and submitted to the agency. The Board voted unanimously to endorse the five hearing loss program strategic goals while noting that limited resources will impact achievement of the goals. Dr. Howard requested a written outline of the Board's process for reviewing all of the implementation plans to be prepared in response to the array of NAS program reviews.

I certify that, to the best of my knowledge, the foregoing summary of minutes is accurate and complete.

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Sarah A. Felknor, Dr.P.H., M.S., Chair

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Date