

MINUTES
NIOSH Board of Scientific Counselors
Washington, DC
October 18, 2006

Introductions, Announcements, and Approval of Minutes

Dr. Henry Anderson, Chairman, called the 48th meeting of the NIOSH Board of Scientific Counselors to order. Other attending Board members were Dr. Blaney, Dr. Brown, Dr. Bunn, Dr. Derebery, Dr. Haight, Dr. Kesler, Mr. Lamar, Dr. Lin, Dr. Renshaw, Dr. Reville, Dr. Perrewe, Mr. Schneider, and Dr. Warheit. The NIOSH Director, Division Directors, NIOSH staff, and members of the public also attended. The minutes from the 47th meeting on March 30, 2006, were reviewed and approved.

Report from the Director

World Trade Center Responders Monitoring and Treatment

John Howard, Director, NIOSH, first thanked eight Board members for completing their terms of service. Dr. Howard then presented an update on health monitoring and treatment activities for responders to the World Trade Center attacks. Based on a 2002 grant for a medical screening program, a journal article was published this year by members of the hospital consortium administering the program. The article documented a high prevalence of symptoms among the responders with, most notably, a high percentage of restrictive lung defects. The consortium continues to document both physical and mental health symptoms and disorders in a database. Additional funds were applied this year to the programs including \$75 million for treatment. Those grants are scheduled to begin at the end of October. The Secretary of the Department of Health and Human Services also has formed task force of Departmental leaders to oversee financing and science activities. Dr. Howard noted that treatment is a new activity and challenge for NIOSH.

Discussion: The Board asked for clarification of Dr. Howard's responsibilities in the program. Dr. Howard stated that he will coordinate but not directly manage several programs including a health registry funded through the Agency for Toxic Substances and Disease Registry. The Board asked for a clear definition of the cohort being studied. Dr. Howard stated that there are no separate funds for a well-defined research protocol but only funds to monitor and follow-up cases so it is difficult to establish a clear cohort. Dr. Howard stated he would welcome more systematic research if funding becomes available.

Mining

Dr. Howard highlighted an active year in mining safety and health, noting changes in the Occupational Safety and Health Act and the new MINER (Mine Improvement and New Emergency Response) Act, which includes funding by the U.S. Congress to enhance mine safety training and improve safety and communications technology for miners.

Budget

Dr. Howard noted a projected \$12 million decrease in base funds that does not include some specified funds for the World Trade Center treatment program or for administration of NIOSH programs under the Energy Employees Occupational Illness Compensation Act. It is expected that CDC would withhold some funds from all Centers for the CDC goals process and also for a reserve against uncertain finalization of the budget in Congress. Funds for emergency preparedness are expected to increase by \$100,000.

Discussion: The Board questioned how NIOSH expected to adjust to the anticipated reductions. Dr. Howard stated that each Laboratory and Division is developing an organizational health plan to adjust resources and personnel to better fit current priorities.

Program Portfolio and Review

Dr. Howard noted that web sites are being developed for all NIOSH programs in the portfolio, each to have distinct priorities. Program evaluation by the National Academies of Science is ongoing. Dr. Howard stated it has been a positive experience overall but requires a significant investment of time and resources. So far, reviews of the Hearing Loss and Mining programs have been completed and a report on the Hearing program has been released. Scores for the hearing program were 3 out of 5 for relevance and 4 out of 5 for impact. Dr. Howard promised a careful examination of the relevance issues. Programs currently scheduled for review are: Respiratory Diseases, Agriculture, Construction, and Personal Protective Technologies.

Discussion: The Board inquired about progress in appointing members of the industry sector councils to guide setting of priorities in the second decade of the National Occupational Research Agenda (NORA). Dr. Howard stated that specific dates are not set but hopes for wide and varied participation using electronic means, when available, to facilitate long-distance involvement. The Board also inquired about how the National Academies of Science (NAS) establishes their review process and committees. Dr. Howard suggested presentations on the NAS reviews by NIOSH staff at future meetings. The Board accepted that suggestion and request that NIOSH present plans on how the Institute will respond to the NAS committee recommendations. The Board also requested additional information on when, or whether, to continue with NAS reviews. Dr. Howard stated that the act of preparing and presenting has its own value in helping organize the programs systematically and committed to making the evidence packages for each of the programs public on the NIOSH website. The Board encouraged NIOSH to reflect carefully on the return of value in performing the program reviews and whether the current pace can be sustained with increasingly limited resources.

Science Initiatives

Dr. Paul Schulte, Director, Education and Information Division, gave a brief update on the Prevention Through Design initiative, stating that the first meeting was held to plan a national effort to integrate occupational safety and health protections into building and tool designs. National strategy planning will be developed further at a workshop in April. Dr. Schulte invited

the Board to participate in the process stating that NIOSH can help coordinate the effort but can not accomplish the initiative on its own.

Dr. Howard noted that the initiative on real-time exposure monitoring continues with developments in personal dust monitoring and a colorimetric method for stachybotrus mold detection. Dr. Howard also noted continuing progress on revising the NIOSH sampling strategies manual and on nanotechnology. NIOSH will chair the International Standards Organization health and safety standards work group for nanotechnology.

Information Products

Examples of new information products include an update of the Federal web site on pandemic flu that recommendations for protection of health care workers, such as N95 respirator protection. Other produces include an alert on asthma prevention from isocyanate exposure and a trench safety awareness CD.

NORA update

Dr. Sid Soderholm provided a brief NORA update stating that three industry sector councils have begun meeting to develop strategic plans for each sector. NIOSH also will release an updated extramural grants program announcement in the next few months that will be aimed at NORA priorities.

General Discussion

The Board suggested a working group to review the communications and document development process to support the Research to Practice initiative. Dr. Howard endorsed the suggestion.

Health Hazard Evaluation Program Review: Response to Board Recommendations

Dr. Allison Tepper, Chief, Hazard Evaluations and Technical Assistance Branch (HETAB), Division of Surveillance, Hazard Evaluations, and Field Studies, presented the NIOSH response to Board recommendations for enhancing the Health Hazard Evaluation (HHE) program. Dr. Tepper noted that an extensive review of the program by the NAS is scheduled for 2007. Selected Board recommendations and the HHE program response are briefly noted as follows:

Recommendation: The mission of HETAB should be the investigation of non-respiratory conditions, underserved populations, and disaster management. The mission of the HHE unit in the Division of Respiratory Disease Studies (DRDS) should be to resolve health issues related to respiratory conditions.

Response: This is often the procedure but sometimes new or cross-cutting issues require more collaboration between the Divisions.

Recommendation: More triage is needed to reduce the number of open projects per project officer.

Response: Balancing resources with triage priorities continues to be a management challenge especially when confronted with new, unrecognized hazards, illnesses with unknown causes, unregulated exposures, or health effects occurring at exposure levels below current standards.

Recommendation: Routine indoor environmental quality (IEQ) requests should no longer be a responsibility or priority of the NIOSH HHE program.

Response: There still is a strong demand for IEQ evaluations and it is valuable to consider a select few if they can inform the damp building/asthma studies in DRDS.

Recommendation: Develop annual goals and measurable objectives regarding the work products, priorities, and work processes.

Response: Strategic planning has commenced. Elements to be included are a mission statement, expected outcomes with a 10-yr timeframe (e.g., reducing illnesses and exposures, identifying emerging issues, enhancing Federal disaster role), and quantifiable measures of outputs.

Recommendation: Utilize evaluation consultants and researchers from nearby universities to assist with development of reports and follow-up analyses.

Response: An interagency agreement has been established with the Federal Office of Personnel Management to obtain their expertise and assistance in analyzing follow-up surveys of HHEs to determine if recommendations were implemented effectively. The OPM also will assist in recommending questionnaire improvements and developing a template for future reports. University relationships have been established for statistical project support and training of occupational health professionals.

Dr. Tepper also stated that HHE program staff, in response to Board recommendations, are committed to publicizing the program more widely, better identifying staff skill needs, promoting DRDS as a center of excellence in respiratory disease evaluation, and studying ways to demonstrate economic gains that might be realized by implementing HHE recommendations.

Discussion: The Board requested additional information about IEQ requests that do not result in field visits compared to those that do. Dr. Tepper stated that standard printed information or telephone follow-up is sufficient for most IEQ requests while, on field visits, it is often not clear what percentage have identifiable health problems. Dr. Kay Kreiss (Chief, Field Studies Branch, DRDS) stated that chest symptoms, to be distinguished from the irritation and dryness symptoms associated with classic sick building syndrome, have increased in the last decade. These increases suggest that asthma is an emerging issue in IEQ. Dr. Tepper also mentioned some neurological and cognitive effects in IEQ reports that also may be indicators of emerging issues. The Board thanked NIOSH for the thoroughness of the response and expressed concern about the limited budget and staffing. The Board requested a more explicit statement on priority populations in the strategic plan and more publications detailing experiences and lessons learned. The Board encouraged more follow-up of recommendations and analysis of economic benefits. Dr. Kreiss noted some NIOSH success at follow-up of HHEs of bronchiolitis obliterans from

exposure to popcorn flavorings. Some Board members suggested charging fees to companies requesting HHEs but other Board members noted that ability to pay might restrict access to the program. Dr. Tepper mentioned that the HHE program has a reputation of independence that could be compromised by charging fees.

Economics of Occupational Safety and Health: Overview and NIOSH Program

Dr. Delon Hull, Director, Office of Research and Technology Transfer, and Dr. Rene Pana-Cryan, Senior Scientist, Office of the Director, gave an overview of occupational safety and health economics at NIOSH. Among the accomplishments noted were a variety of publications, sponsorship of conferences, and establishment of the economics forum to support development and diffusion of economic research in NIOSH. The forum includes economists, others with interest in economics, and Division leaders. Directions for future activity in economics were identified from a variety of sources including the town meetings held to identify priorities for the second decade of NORA. Analysis of NORA comments suggested that economics research needs may include: health and productivity tools for demonstrating to employers that it makes economic sense to invest in employees; cost-effective solutions to prevent repetitive motion injuries; behavior-based safety management in mining; economic forces affecting fishers' dangerous working conditions; cost-effective interventions for fall protection in construction; and objective measures of worker productivity and "presenteeism". It was noted that the economics initiative harmonizes well with the Research to Practice initiative to provide evidence for effective prevention practices that are adopted at the workplace. Draft strategic goals were enumerated including:

- Increase the use of information on the value to the worker and his/her family, to the employer, and to society at large, of preventing occupational illness and injury by occupational safety and health researchers and practitioners. Building the body of economic research in these areas will be critical to improved utilization.
- Increase the use of information on the role of labor force and work organization issues on occupational safety and health outcomes by occupational safety and health researchers and practitioners.
- Facilitate the use of economic research in cross cutting areas of occupational safety and health, including work-life initiatives and global research and prevention efforts.
- Enhance the capacity to make use of available knowledge on the economics of occupational safety and health.
- Develop strategic partnerships among researchers in the fields of economics and occupational safety and health and between researchers and practitioners to improve the relevance, quality, and impact of NIOSH and other research.

Forum efforts include: internal and external capacity building, identifying continuing education opportunities, compiling and synthesizing available research, identifying strategic partnerships, and serving as a research "incubator."

Examples of current projects are: costs of occupational injury and illness (using current data and improved methods), back disorders in union carpenters, intervention effectiveness in Finnish agriculture, cost engineering models for mining health and safety research, and post-accident

earning and benefits adequacy and equity.

Examples of suggested future projects are: economic modeling to evaluate low back pain interventions, economics of farm labor (evaluating a farm planning tool, contingency management in occupational safety and health), projects through sectors that address economic causes and consequences of specific diseases, and injuries and cost-effective interventions.

Discussion: The Board suggested further review of the existing health and productivity literature and suggested the International Health Productivity Management group as a potential partner. The Board endorsed the initiative and cited Paul O'Neale's efforts at Dupont as an example of how safety culture can contribute to economic success.

Flavorings-Related Lung Disease: Update of NIOSH Activities

Dr. David Weissman, Director, DRDS, gave an update on NIOSH investigations of severe obstructive lung disease in food processing and flavoring plants. Dr. Weissman described sentinel outbreak investigations of bronchiolitis obliterans at a microwave manufacturing plant and associations of the disease with exposure to organic vapors, particularly diacetyl, during the mixing of flavorings. Exposure controls and other recommendations by NIOSH included: isolation, local exhaust ventilation of mixing and flavoring tanks; general dilution ventilation of mixing room and packaging areas; reducing tank temperatures; closed transfer of flavorings; respirators for mixing personnel; local exhaust ventilation for microwave ovens in the quality control lab; flavoring substitution; and medical surveillance with spirometry. Follow-up evaluations suggested fewer symptoms and spirometry abnormalities after implementation of recommendations but monitoring continues. Current and planned activities include: information dissemination (web page, e-mail address, Alert reprint); surveillance (case registry); additional health hazard evaluations; technical assistance to the State of California on exposure assessment and control implementation and evaluation; animal toxicology research; and assistance to regulators.

Discussion: The Board commended the efforts and noted that it is difficult to ascertain how many workers are exposed, or at risk, since there is no specific ICD code for bronchiolitis obliterans.

Final Remarks

The Board requested fewer topics at future meetings to allow more time for discussion.

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

Henry A. Anderson, M.D., Chairman

Date