

Day 2: Second Morning Session

Review of Federal Research and Development and Outreach Activities: Questions for the Federal Agency Panel

In the second session, each panel member was asked in turn to respond to and discuss some specific questions:

Question 1: Is federal indoor environment research and outreach commensurate with need?

Most panel members indicated additional areas where more studies should be conducted. Ms. Cotsworth noted the resource limitations for her agency and suggested that it is important to encourage non-federal entities to contribute and leverage available resources. Dr. Falk noted that concerns evolve, and that it is important to coordinate and prioritize efforts to obtain the best results given these changing interests. Dr. Wilson noted substantial information gaps in understanding disease-exposure relationships and the magnitude and prevalence of exposures. More coordinated research is needed in these areas. Mr. Dion indicated that DOE is mostly on the receiving end of indoor environment health effects research and needs help in making the best use of it to design and implement technical changes in building practices (they need it “translated from the health domain into the engineering domain”). Mr. Kampschroer noted that the building industry is very fragmented, with many small companies involved in architecture and construction, and it is difficult to move big research forward. He estimated that the industry spends less than 0.5% of gross receipts on research. He suggested that the Surgeon General could take the lead in motivating and coordinating more high-quality industry-funded research. Dr. Jacobs suggested that we have not fully articulated the needs. We do not know what fraction of disease is caused by indoor environment factors or the costs of addressing these issues. He pointed to lead, and the efforts made to address it as a health issue, as a model of what needs to be done with indoor environment issues in order to define environmental hazards and the cost-benefit of cleanup. Dr. Hill and Mr. Fisk indicated that there is not enough funding to address the real-world problems that have already been identified.

Question 2: What can we do to improve responses to indoor environment problems?

Ms. Cotsworth emphasized coordination and communication, suggesting that educational activities and science must be shared across agencies. She advocated leverage and partnerships between agencies while still fulfilling individual agency missions, and stressed the role of the CIAQ in facilitating this kind of collaboration. Dr. Falk stressed two main points: (1) much more collaboration is needed, including working with agencies at the state and local level, and (2) public health agencies should be more visible in this coordinated action. Using lead abatement as an example, he noted that regulation

can eliminate major sources (e.g., in gasoline and paint), but remediation still has to be addressed on a house-by-house basis. Dr. Wilson suggested that visibility of health aspects of the built environment is too low. He suggested establishing some way of indicating health status, such as a “scorecard” for homes and communities that would be analogous to rating homes for energy efficiency and could be a driver to achieving more visibility. Mr. Dion pointed out the need for a single federal entity to take the lead in a collaborative effort, and that this function could be filled by the Surgeon General. It is hard to address these issues one pollutant at a time, and an integrated approach is more likely to be successful.

Mr. Kampschroer thought that combining health research with engineering research is the key to more effective responses. Dr. Jacobs noted the central role of housing in dealing with any public health issues, and suggested revitalizing the President’s Task Force on Environmental Health Risks and Safety Risks to Children (1997), building on asthma and lead safety reports already produced. He felt that a Cabinet-level initiative is needed to drive an effective program. Dr. Hill again stressed a need for collaboration to make the best use of scarce resources. Mr. Fisk, noting how often collaboration has come up in the discussion, asked for specifics. Dr. Hill stressed the role of interagency committees to plan budget initiatives and research. Mr. Dion stressed the need for more communication at lower levels, with technical people from the agencies working with each other and with state and local experts. Dr. Falk also supported including more local-level collaborations. Ms. Cotsworth thought a President’s commission focused on asthma might be a good model. It is more defined in scope and objectives, she said, and therefore more likely to result in a productive collaboration than other indoor environment areas where hazards and consequences are not as well understood or objectives are too far-reaching.

Question 3: What is the role for regulations, standards, and guidelines?

Dr. Hill suggested that there are pros and cons for efforts such as these. Industry standards are generally developed by a consensus process that may not satisfy those at either end of the spectrum. However, the consensus process produces a set of standards that everyone has “bought into” and is able to meet (the ASHRAE standards, for example). Federal regulations may not have to deal with a consensus process, but are often difficult to implement (EPA’s attempts to tighten air standards, for example). Dr. Jacobs pointed out that there must be authority to enforce standards for them to be effective. Mr. Kampschroer considered the long time needed to establish industry standards by consensus to be a significant problem because building materials and practices change too quickly for consensus to catch up with current practices. Market forces provide an alternative to regulatory action that can often move faster to establish best practices. Mr. Dion suggested that standards are called for when the market fails to respond, which is not all that uncommon. He indicated that it may be necessary to do research first to establish best practices, and then get them out into the marketplace. Dr. Falk indicated that regulations can be helpful for certain issues, but indoor environment problems such as dust mites and cockroach allergens are not easily regulated. In these cases, education and guidelines to produce behavioral changes may be more productive. Ms. Cotsworth indicated the need for a wide ranging “toolbox” of approaches to cover

various health issues, suggesting that more can be achieved by education and marketing than through regulation alone.

Questions and Comments

Mr. Fisk then asked for audience comments on the issue of coordination among federal agencies. One consultant responded that when the objective is change, information alone may not be enough. Since the federal government is the single biggest building owner in the United States, actions taken by the government regarding its own built space could have a strong market impact. Collaboration with agencies that manage and use property (but have no direct mission that includes indoor environment health effects) could be useful in this regard. An audience member with connections to GSA pointed to senior-level collaborative efforts for energy accounting, and suggested that a similar approach could be applied to health or green building issues by developing a green building measurement tool. Responding to this point, Mr. Kampschroer indicated that there is a structural impediment to life-cycle costing (favoring green building) in that the costs and benefits go to different parties. It can be difficult to move from theory to practice, but energy-efficiency labels that may produce marketing pressure are one idea of how to accomplish this. The financial community must be brought into the process, for example by providing lower mortgage rates for healthy homes. Dr Jacobs underscored this accounting problem, using window replacement as an illustration of the disconnect that can occur between who pays and who benefits. On the other hand, market forces can work. The lead paint disclosure rule helped to solve the lead problem in many homes without mandating any specific corrective measures: there was improvement to over 150,000 housing units just from disclosure. An audience member who had real estate experience in California agreed that the disclosure rule has been very helpful in that state, but in order to act on the disclosed information, people still need to know why it is a health problem and what they can do to correct it. Tenants should also be required to disclose water infiltration problems to their landlord so they can be corrected promptly. This audience member stressed two needs: to raise public awareness of hazards and the need for disclosure.

An audience member with a background in community health and nursing indicated that she is now in the private sector, evaluating homes for potential health problems. She observed that as lead paint abatement programs were more successful, problems with mold increased because lead is toxic to mold. She described home building as “manufacturing in the field,” suggesting it is inherently more complex and difficult to regulate than other manufacturing activities. In her work, she looks to government to set some standards and criteria for what constitutes an acceptable healthy home, focusing on the total environment rather than on individual agents and issues.

Several participants commented on the government’s role in leading corrective efforts. One participant suggested that information on good practices should be distributed through as many different routes as possible to reach the audience of all those who can effect change. Builders will look to the government to provide credible guidelines and practices that they can use to produce healthy homes. Acceptable standards will cut

across the differing concerns of individual agencies. A Congressional legislative aide in the audience suggested a joint multi-agency (NIH, CDC, EPA, and HUD) study on the health and economic impact of mold, funded under a Congressional mandate, to result in a set of model standards or regulations. Citizens affected by mold problems find it difficult to get help from the government because of gaps between agencies. However, he indicated that no matter how collaborative the process, there should ultimately be a single government resource to answer questions from the public in order to avoid confusion. Dr. Falk responded that the need for more study and agency collaboration is clear, but there may be too many objectives to address in a single study. He suggested that a task group from this workshop could explore the specifics of what to address first and make recommendations. Dr. Wilson commented that this was an excellent suggestion, and that he would be interested in following up to see if it could be implemented.

In a similar context, a representative of the building technology industry spoke as a consultant to the National Institute of Building Sciences (NIBS) to represent their interests at this workshop. He indicated that the financial and insurance industries are very interested in having a mold standard, which they could use to address risk and protect their commercial interests. A group of key stakeholders in the home ownership industry (including mortgage companies like Fannie Mae and Freddy Mac) met at a 2002 NIBS workshop on mold and are vitally interested in addressing health and liability issues associated with mold. They have started to form a building-and-mold alliance with the objective of developing guidelines for new and old construction based on the existing knowledge base. Some federal agencies, such as GSA, DOE, the U.S. Army Corps of Engineers, and the Veterans Administration, are starting to work with them. This group has had two meetings as a council of NIBS, and would be happy to serve as a vehicle for establishing this kind of program.

Highlights from Federal Panel Discussion Session

The Surgeon General could take the lead in motivating and coordinating healthy indoor environment initiatives.

More effective collaboration between federal, state, and local government and non-government agencies can help to improve the indoor environment, and public health agencies should take a more visible role in this coordinated effort.

Collaboration of all stakeholders will likely result in sound guidelines and be more effective than regulations.

There are many unmet research and program needs; specifically in understanding disease-exposure relationships, determining the magnitude and prevalence of exposures, documenting cost-benefits of intervention strategies, and developing cost-effective technologies for improving indoor environmental quality in new and existing buildings.

Best practices to improve the indoor environment should be specifically developed and distributed to many different audiences so that change can be effected.

A definition of a "healthy home" is needed.

A task force should be formed to identify and prioritize indoor environment issues.

A mixed approach combining public information, applied market forces, and standards setting and regulatory actions is likely to be more effective than any single approach (e.g., public-private partnership in Hong Kong).