

Risk Policy Report

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Strong Benefit-Cost Push Seen For Next Congress

Various signs point to a strong momentum for benefit-cost reforms continuing next Congress, no matter who's in power

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Appropriations Bill Mandates Endocrine Disruptors Study

Congress has tasked the National Research Council with reporting on effects from natural and synthetic hormones

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EPA Peer Review Practices 'Uneven,' GAO Finds

EPA is unevenly implementing its June 1994 peer review policy, a new GAO report finds, citing nine examples

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is very strict and "companies are afraid of getting sued."

Lack of stakeholder involvement has been another impediment. With the exception of 3M's proposal, said van Loben Sels, most projects have not incorporated the significant stakeholder participation called for by XL. Environmental attorney Carol Wiessner, with the Minnesota Center for Environmental Advocacy and a 3M project participant, explained that for a stakeholder group to be successful, project leaders must get the right mix of community representatives. Because stakeholders usually lack technical expertise, they also must be provided with technical assistance.

John Kessler, EPA director of emerging strategies, said EPA is learning through Project XL and is drafting principles for superior environmental performance. EPA planned to hold an internal meeting to reevaluate Project XL. EPA has also drafted a guidance spelling out new ground rules for developing XL projects, which pledges faster response to proposals.

However, Andy Ronschak, Minnesota Project XL coordinator, and others believe national legislation is necessary to make the program effective. Wiessner agreed, saying legislation that authorizes EPA to waive federal environmental statutes for experimental programs would help overcome barriers.

Others question whether Project XL is the right framework for experimenting with regulatory innovation. Alfred Marcus, a University of Minnesota professor and 3M project facilitator, said, "I think we can do better in terms of the environment. The 3M Company's XL project could have achieved better environmental performance at lower cost to both the company and the regulatory agencies than will now happen." In large part, he blames the existing regulatory and legal structure, which is technology based and uses source-by-source controls. "EPA didn't see a way of getting around that limitation."

Marcus added, "On both sides, there is an issue of trust that has to be overcome." —JANET PELLEY

NEWS/SCIENCE

Birth defects, other disorders linked to Superfund site exposure, ATSDR says

The debate over whether hazardous waste sites endanger public health has raged since Superfund legislation was passed in 1980 and the Agency for Toxic Substances and Disease Registry (ATSDR) was created to investigate the issue. Now, based on a comprehensive review of health studies it has conducted or sponsored since 1983, ATSDR has determined that birth defects and other disorders are associated with living near Superfund sites.

The agency presented the first public glimpse of its review in August at the International Society for Environmental Epidemiology conference in Alberta, Canada. The findings support previous ATSDR statements about the health risks associated with hazardous waste sites, but they provide a firmer foundation for the conclusion by combining health data from many Superfund sites.

"When evaluated in aggregate, [the data indicate that] proximity to hazardous waste sites seems to be associated with a small to moderate increased risk of a variety of adverse health outcomes," said Jeffrey Lybarger, director of the agency's Division of Health Studies. Birth defects appear to be one of the health effects linked with many sites. Communities also report increased incidences of neurotoxic disorders, dermatitis, leukemia, cardiovascular abnormalities, respiratory problems, and immune disorders near some Superfund sites. The review concluded, however, that there was no clear association between sites and cancer or kidney disease.

During the past year, Lybarger and Robert Spengler, associate director of science for the division, have reviewed 134 health studies. These include several epidemiological investigations and dozens of situational studies, which typically cite a few cases. Spengler and Lybarger also reviewed the extent and types of health problems reported by the nearly 8000 people listed on four

Health risks

A comprehensive review of health studies by the Agency for Toxic Substances and Disease Registry has identified several health effects associated with living near Superfund sites:

- Birth defects, including cleft lips and palates, cardiac disorders, and upper and lower limb reductions were associated with exposure to water containing volatile organic compounds and chlorinated hydrocarbons.
- Excess speech and hearing impairments were reported among children who were exposed to TCE in utero or in early childhood.
- Decreased pulmonary function was observed in persons exposed to emissions from smelters and phosphate ore processing facilities.
- Modest changes in the immunoglobulin levels in lead-exposed children were found, but the significance of this finding is unknown.
- Blood samples from approximately 6000 people living near 10 hazardous waste sites showed an increased production rate of abnormal blood cells associated with chronic lymphocytic leukemia.

ATSDR exposure registries. The agency maintains registries on people who live near Superfund sites and are likely to have been exposed to trichloroethylene, benzene, trichloroethane, and dioxins.

The review began as an agency effort to pull together its own findings to report to its oversight board and Congress, said Lybarger. The findings have been presented to the House and Senate committees responsible for Superfund reauthorization and to EPA's Office of Solid Waste, which operates the cleanup program. Spengler and Lybarger plan to submit their review for journal publication next year.

"ATSDR's findings provide further evidence that there are

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health effects associated with hazardous waste sites," said a spokesperson for EPA's Office of Solid Waste. "They also underscore the need for ongoing funding of Superfund." ATSDR estimated that 11 million people living within a mile of these sites could be affected by exposure.

Environmental justice advocates say ATSDR's findings substantiate their claims that disadvantaged communities, often located near sites, face disproportionate risks. Poor, minority communities will welcome the findings, said Rabbi Daniel Swartz, associate director of the National Religious Partnership for the Environment, which works on environmental justice issues. "It's good to have concrete evidence to back up people's anecdotal tales."

ATSDR's work will help state health officials answer the public's concerns and determine if states need to take additional actions, said Alice Stark, who directs the New York State Department of Health's Bureau of Environmental and Occupational Epidemiology. The agency's findings, however, do not permit a general statement about the risks a Superfund site may pose. "It's not a question anyone can say yes or no to," Stark said. "Each site is different."

ATSDR does not have enough information to prove Superfund sites caused the health effects researchers observed, stressed Lybarger. Nor can it tease out the chemicals that pose the greatest risk, because people are normally exposed to mixtures. However, the study shows associations that merit future research.

The findings warrant attention, but the health community needs to know the basis of comparison for its risk evaluation, said Jerry Poje, director of international programs and public health at the National Institute of Environmental Health Sciences (NIEHS). Hazardous waste sites may present a small-to-moderate risk to the vast majority of people, he said, but some vulnerable subpopulations may be particularly affected by these sites because they already face other health problems.

William Suk, who directs the NIEHS Superfund Basic Research Program funded by EPA, had not

HUMAN EXPOSURE

Personal exposure project completes monitoring

The monitoring phase of one project in EPA's National Human Exposure Assessment Survey (NHEXAS) concludes this month. For six 1-week periods over the past 12 months, 63 participants living in or near Baltimore donned personal emission monitors (see photo). With the help of a battery-powered pump stored in a 2.5-lb pack, air was drawn through 0.8- μ m-wide pores into the monitor located near each participant's collar bone. Air pollutants were caught by a Teflon filter inside the monitor.

Researchers also monitored subjects' food as well as the soil and ambient air in and around their homes for heavy metals, several pesticides, and polycyclic aromatic hydrocarbons. This is one of three projects launched last summer under NHEXAS (ES&T, September 1995, 398A) to determine the distribution of exposure to the substances in the general population. The data will be analyzed over the next year, researchers said. (Photo courtesy of WESTAT.)

CATHERINE M. COONEY



seen the study but is familiar with much of the underlying research. ATSDR does solid work, Suk said, but substantial data gaps limit the conclusions it can draw. Exposure levels, for example, are very hard to determine, and the scientific community has little information about the toxicity of

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Jeffrey Lybarger
Director, ATSDR Division
of Health Studies

many of the chemicals and chemical mixtures found at Superfund sites, he said. Suk called on Congress to increase health research funding as it reauthorizes Superfund.

However, Nandan Kenkeremath, majority counsel for the House Commerce Committee, is skeptical about ATSDR's findings. "Our general view is that we are wasting money on excess hypo-

thetical and imaginary risks," he said. Superfund sites often are in industrial or other areas where people are exposed to toxic agents from many sources or in poor communities where lack of medical care could explain disease incidences, he added.

Nevertheless, the House's proposed Superfund reauthorization bill (H.R. 2500) would give ATSDR more authority in some cleanup decisions, such as remedy selection. "Our bill takes a very strong stance on public health driving Superfund decisions," said Kenkeremath. The Republican-led House felt comfortable increasing ATSDR's authority because in several cases the agency has gone to a Superfund site, tested children's blood-lead levels or other problems, and found a significantly lower health risk than EPA's risk assessments predicted.

ATSDR has a broad range of responsibilities that include evaluating the nature and extent of contamination at Superfund sites, evaluating the existence of exposure pathways, determining the size and susceptibility of exposed populations, and conducting health studies that compare disease and mortality data with exposures to site-related contaminants. —PAT PHIBBS