hazardous substances & Public Health

A publication of the Agency for Toxic Substances and Disease Registry

Volume 1, Number 1 November 1990

Hazardous substances and public health in the 1990s

William L. Roper, M.D., M.P.H.
Administrator, Agency for Toxic Substances and Disease Registry (ATSDR)

Every public opinion poll indicates that Americans are deeply concerned about the environment and related public health impact. As we were recently reminded during Earth Day 20 celebrations, we must think globally, tending to the health of the planet, and act locally, to prevent or clean up waste and toxic hazards. We know now that we must take steps to prevent or reduce human contact with deleterious amounts of hazardous substances even as we continue to learn more about the public health impact of individual substances.

Thinking globally leads us to understand the importance of local action. Environmental health professionals at the state and local levels know best what the pressing concerns in their area are, but they can learn much from the successes of others. Unfortunately, news of one state's actions often fails to reach health professionals in other areas who are facing similar issues and problems.

We hope that *Hazardous Substances and Public Health* will provide environmental health professionals with a forum for such an exchange. Effective communication is crucial in public health. Environmental health workers need information on programs and strategies aimed at mitigating adverse health effects of exposure to hazardous substances. They need to know of activities in other states and areas of the country, new research findings, effective educational materials and training programs, and how recent actions by federal agencies may affect them.

Hazardous Substances and Public Health is intended to serve these information needs. We hope that you will learn from it and that you will use it so that others may learn from you. Environmental health education and disease prevention efforts go hand-in-hand. By sharing our thoughts and coordinating our actions, we can create a more efficient network to meet the many challenges we face.

Environmental health

The role of the Agency for Toxic Substances and Disease Registry

Barry L. Johnson, Ph.D.
Assistant Surgeon General
Assistant Administrator, ATSDR

No one can fail to be aware of the dangers posed by hazardous substances in the environment. Daily reminders of the threats greet us in media coverage of asbestos, mercury, lead, radon, pesticides. Those of us in the field of environmental health are particularly aware of the problems. One of these is developing effective communication about environmental hazards. This newsletter is one effort being made by ATSDR to improve our collective awareness of the public health implications of hazardous substances in the environment.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry

Much remains to be done, but progress is evident in many of the activities reported here. For example, ongoing research projects at the National Toxicology Program are yielding better toxicological information.

Although a relatively new federal agency, ATSDR has a number of developments of possible interest to our readers. Since the Superfund Amendments and Reauthorization Act (SARA) was enacted in 1986, the following developments have occurred:

- Health assessments have been conducted for 951 sites on the National Priorities List (NPL).
- A disease surveillance program linked to environmental databases has been established that builds on health outcome databases funded in 10 state health departments.
- Registries of persons exposed to trichloroethylene, dioxin, and other selected substances have been established.
- An average of 4,000 consultations have been provided yearly on the health implications of hazardous substances, including approximately 1,000 each year on emergency releases of hazardous substances.
- A priority list of 225 Superfund hazardous substances has been developed with EPA.
- More than 100 ATSDR *Toxicological Profiles* describing the toxic properties and human health effects of 94 hazardous substances have been produced.
- Criteria for determining research needs for entries on the priority list of hazardous substances have been developed and published.
- A comprehensive health and medical education program concerning hazardous substances has been implemented.
- A comprehensive report on the nature and extent of childhood lead poisoning in the United States has been prepared and submitted to Congress.
- A comprehensive draft report to Congress on the health implications of medical waste has been prepared and released for public review.

In a relatively brief time, the Agency has assumed an important role in addressing the health problems associated with toxic waste in the environment. This role has been developed in close association with states, local agencies, community groups, and private sector organizations. Our readers share that role. We hope that you will find *Hazardous Substances and Public Health* a valuable resource for your work and that you will share with us news of your own efforts in environmental public health services. We look forward to hearing from you.

hazardous substances & Public Health

Hazardous Substances and Public Health is published by the Agency for Toxic Substances and Disease Registry. The contents are in the public domain and may be reproduced and distributed without permission. The staff welcomes contributions and comments from readers. All correspondence should be addressed to: Managing Editor, Hazardous Substances and Public Health, Agency for Toxic Substances and Disease Registry, 1600 Clifton Road, NE, Mailstop E33, Atlanta, Georgia 30333.

Assistant Administrator
Agency for Toxic Substances and Disease Registry
Barry L. Johnson, Ph.D.

Director, Division of Health Education
Max Lum, Ed.D.

Managing Editor — **Teresa L. Ramsey**

Staff Writer — **Lydia Ogden Askew**

Editorial Assistants — **James Carpenter, Susan Perdue**

Graphics Staff — **Terry Meranda, Cindy Latham, Laura Northen**

Medical waste hazards addressed in report to Congress

A report to Congress says that medical waste presents little danger to the general public, but recommends further study of the risks for certain occupational groups. As mandated by Congress, the report will be released in November by ATSDR, says Maureen Lichtveld, senior medical officer at the Agency and coordinator of the project.

In 1987 and 1988, public outcry followed washups of needles and other medical waste onto beaches. The report was ordered by Congress as

continued on page 5

Highlights of the ATSDR Medical Waste Report

What it contains:

"(1) A description of the potential for infection or injury from the segregation, handling, storage, treatment, or disposal of medical wastes.

"(2) An estimate of the number of people injured or infected annually by sharps, and the nature and seriousness of those injuries or infections. ["Sharps" are needles, scalpel blades, etc.]

"(3) An estimate of the number of people infected annually by other means related to waste segregation, handling, storage, treatment, or disposal, and the nature and seriousness of those infections.

"(4) For diseases possibly spread by medical waste, including Acquired Immune Deficiency Syndrome and hepatitis B, an estimate of what percentage of the total number of cases nationally may be traceable to medical wastes."

(from the Medical Waste Tracking Act of 1988)

Key Findings

Sixteen conclusions are listed in the report. Some key findings are listed below.

- **The general public's health is not likely to be adversely affected by medical waste generated in the traditional health care setting.**
- **The increase of in-home health care provides opportunities for refuse workers collecting residential trash and the general public to come in contact with medical waste.**
- **Certain occupational categories—including janitorial and laundry workers, nurses, emergency medical technicians, and refuse workers—may be at increased risk for medical waste-related human immunodeficiency virus (HIV, the virus that causes acquired immunodeficiency syndrome) and hepatitis B virus (HBV) infection and disease. However, regulations recently proposed by the Occupational Safety and Health Administration (OSHA) should decrease workplace medical waste-related injuries and infections nationwide.**
- **Illicit intravenous drug users, a group with high rates of HIV and HBV infection, are a significant source of discarded sharps. It is thought there are approximately 1.1-1.3 million illegal IVDUs nationwide. A lack of data prevents estimating the potential HIV and HBV infection rates from IVDU-related waste, but the general public could be at risk.**
- **Health care workers are more likely to be infected with HIV from contact with medical waste sharps as the number of infected patients increases.**

Key Findings *continued*

- Persons coming in contact with medical waste outside the health care setting have a very low potential for HIV infection. The reason: scientific studies report that numbers of the human immunodeficiency virus (HIV) rapidly decline once outside a living host. However, the hepatitis B virus (HBV) does remain viable for an extended time outside a host. The authors of the report warn that the potential for HBV infection after contact with medical waste is likely to be higher than that associated with HIV.

  An estimated 162 to 321 HBV infections and 81 to 160 hepatitis B disease cases could occur annually as a result of contact with medical waste sharps. A maximum of <1 to 4 cases of AIDS annually are estimated to occur among health care professionals.

- Medical waste can be effectively treated by chemical, physical, or biological means, such as chemical decontamination, autoclaving, incineration, irradiation, and sanitary sewage treatment. Research indicates that medical waste does not contain any greater quantity or different types of microbiological agents than residential waste, and that viruses present in solid waste tend to adsorb to organic matter and deactivate. Therefore, medical waste can be disposed of in sanitary landfills, provided procedures to prevent worker contact with this waste during handling and disposal operations are strictly employed.

Medical Waste Recommendations

- A consistent national definition of medical waste from a public health standpoint is needed. That definition should include the following categories: cultures and stocks, pathological wastes, blood and blood products, animal waste, sharps, selected isolation waste, and unused discarded sharps.

- Work practices of the occupational subgroups frequently contacting medical waste (listed above) should be evaluated by relevant government and private sector organizations to determine appropriate protective measures and to develop effective personal protective equipment.

- Occupational health and surveillance data should be collected for occupational subgroups whose frequency of injury, infection, and disease related to medical waste are of public health concern and are not well-described—for example, janitorial and refuse workers, waste site workers, and home health care providers.

- Guidelines are needed for management of medical waste generated by in-home health care.

- Training in the proper management of medical waste should be provided to workers likely to come in contact with it, including home health care workers. Additionally, relevant information on the potential for infection and disease related to medical waste should be made available to the public, including in-home health care patients.

- The development of new technologies for medical waste management should be encouraged. In addition, waste reduction, recycling, and reclamation should be undertaken.

Medical waste *continued from page 3*

part of the Medical Waste Tracking Act of 1988, which required ATSDR to address the public health implications of medical waste.

According to Dr. Lichtveld, the most pressing concern for future medical waste disposal comes from in-home health care products, not from hospitals. More illnesses are being treated outside the hospital setting as the population ages and chronic diseases like AIDS cause patients to require ongoing care. "We know a lot about what hospitals generate and how much they generate. But we don't know much about in-home health care—what is generated or where it goes," she said. "And nursing homes are another question."

To investigate the public health implications of medical waste, the authors of the report tried to determine how many people come into contact with medical waste and what the incidence of disease was among them. The investigation involved three population groups: health-care providers, waste handlers, and the general public. The general public usually does not come into contact with medical waste unless it is generated by in-home health care and improperly discarded. The public may also encounter needles discarded by illicit intravenous drug users.

A variety of sources were contacted to provide data for the report, including federal agencies, unions, environmental groups, and state licensing boards. Seventeen states participating in the project conducted a survey to collect data for the report. Health-care workers (patient care and nonpatient care), waste haulers and handlers, and incinerator managers were queried about their contacts with medical waste.

The numbers of people employed in these occupational subgroups and the type of involvement that causes contact are estimated in the report. Some of these groups, such as refuse workers and housekeeping staff of hospitals, are not usually addressed in the literature on medical waste and health-care-related occupational injuries such as needlesticks. All these data had to be collected for the first time.

The data gathered for the report include information on medical waste disposal from Canada, Germany, and France, a comprehensive review of the existing literature on medical waste, and recommendations for future investigations. "We have a unique database at this point," said Dr. Lichtveld.

In gathering the data, investigators had to define when health-care products become medical waste. They decided that it was when the item had been discarded.

However, the investigators found that a number of conditions had to be met for contact with medical waste to cause an adverse health reaction. First, a viral pathogen must be present. Second, there must be a sufficient number of virion present to transmit the disease. Third, there must be a portal of entry, such as a needlestick or open cut. Finally, the host must be susceptible to the disease.

Despite the furor raised by medical waste, studies by the Marine Conservancy indicate that it accounts for only .01% of all waste collected and analyzed on beaches. "Most of the waste," says Dr. Lichtveld, "is plastics."

Case Studies in Environmental Medicine to aid physicians

A 5-year-old boy is brought to a pediatrician by his mother, who is concerned that her child is "hyperactive." At a parent-teacher conference last week, the kindergarten teacher said that he seems impulsive and has trouble concentrating, and so recommended evaluation by a pediatrician as well as by the school psychologist. The mother states that he has always seemed restless and easily distractible, but that these first 6 months in kindergarten have been especially trying. The mother works in an automobile radiator repair shop, where the boy often comes to play after school. The child is small for his age, and his speech is slightly impaired.

Case Studies *continued from page 5*

A 60-year-old woman visits her doctor with complaints of low back pain, which is causing progressive difficulty in walking. The woman, who is a heavy smoker makes jewelry to sell in her husband's shop. She uses abrasive grinders, soldering tools, and various raw materials in her work. The work area is very dusty, with little ventilation and no mechanical exhaust system. The woman admits to smoking and eating in the work area.

The hypothetical characters described above have been exposed to hazardous substances. Will their doctors be able to identify the exposures and take the proper steps to treat these patients? Many physicians lack up-to-date knowledge of the human health effects of environmental toxicants. Now physicians and other health professionals can review a new series of self-instructional materials called *Case Studies in Environmental Medicine*, which is designed to guide physicians through the diagnosis and treatment of illness caused by exposure to hazardous substances.

Each case study opens with a list of specific objectives, a stand-alone case report concerning a specific hazardous substance, and the opportunity to respond to several pretest questions about the case. A didactic presentation of up-to-date information about the chemistry, toxicology, symptomatology, and patient treatment for the substance follows. The evaluation consists of a series of questions that allow practitioners to test their understanding of the material. Responses to the questions are provided to assure optimum learning benefit. After completing the case study, participants may apply for continuing medical education (CME) credit. The reports will be offered in a format suitable for loose-leaf binders, so physicians can file them for handy reference.

Medical professionals assisted in the preparation of the series. The following organizations participated in the effort: American Medical Association, American Academy of Family Physicians, American College of Occupational Medicine, American College of Emergency Physicians, Association of State and Territorial Health Officials, and the Society of Teachers of Family Medicine.

The topic of each case study is a specific chemical on the National Priorities List. Chemicals to be studied in the series are arsenic; asbestos; benzene; cadmium; chromium; cyanide; dioxins; lead; methylene chloride; polyaromatic hydrocarbons (PAHs); polychlorinated biphenyls (PCBs); tetrachloroethylene; radon; trichloroethylene; and vinyl chloride. Another set of fifteen issues is planned.

The first patient described above has been exposed to lead; the second, to cadmium. For more information about the series, contact Donna Orti, ATSDR, Division of Health Education, E33, 1600 Clifton Road, Atlanta, GA 30333; telephone (404) 639-0734.

"Smart bugs" may be answer to environmental toxicants

In several recent oil spills—last year's Valdez incident in Alaska's Prince William Sound, the Mega Borg explosion in the Gulf of Mexico this past June, and a July collision between two barges and a tanker in Texas' Galveston Bay — a clean-up technology was used that many experts feel may be the best solution to myriad hazardous waste problems throughout the United States and the world.

Bioremediation—using biological agents (bacteria, fungi, and other naturally occurring flora) to reclaim soils and waters polluted by substances hazardous to human health or the environment—shows promise for a variety of applications, from oil spills to in-ground decontamination of toxicants, observers report. The technology is increasingly being used to clean up humankind's ill effects on nature—and the resulting ill effects visited on ourselves.

According to Guy R. Lanza, Ph.D., bioremediation is "the best answer right now" for some

sites, although not complex sites with multiple synthetic, metal, and organic pollutants. Lanza, the chairman of the Department of Environmental Health at East Tennessee State University's School of Public and Applied Health, lectured on bioremediation at a recent national conference of environmental health professionals in Charlotte, NC.

Like many bioremediation experts, Lanza emphasizes that the technology is in its infancy, and that much more research is needed. "You could use all the bioremediation in the world," he says, "and if it still doesn't eliminate human health risks, it's not worth it."

Despite many experts' claims that bioremediation is cheaper and better than many other clean-up methods, troubling questions surround its use. Some critics warn that new and dangerous compounds may arise from the breakdown of existing toxicants. And they charge that the rate of cleanup offered by bioremediation is slow.

"Bioremediation...is not the cure-all for environmental pollution problems"

Lanza agrees that bioremediation is not always a suitable solution to contamination. He notes, for example, that trichloroethylene (TCE), a compound common to Superfund sites, can be broken down anaerobically, but it's usually degraded into vinyl chloride. "The problem is, vinyl chloride is a proven carcinogen, whereas TCE is only a suspected carcinogen."

"Bioremediation has its limitations—it is not the cure-all for environmental pollution problems," says Ronald M. Atlas, Ph.D., a professor of biology at the University of Louisville who has been active in bioremediation for more than 20 years. "Microorganisms degrade some synthetic pollutants, such as DDT, slowly and only under special conditions. And they fail to degrade some synthetic compounds, such as plastic polymers."

Al Bourquin, vice president of research for ECOVA Corp., a high-technology hazardous waste remediation firm specializing in biotechnology, says there is no valid reason to anticipate any problems with the application of unaltered microbial bioremedial methods. "The public applies natural organisms to the environment every day. We're just manipulating the organisms' ability to carry out certain functions." In response to claims that bioremediation is time-consuming, Bourquin notes that bioremediation can be very fast or very slow, depending on the type of contaminant, the type of soil, and the concentration of the contaminant.

The EPA is currently using bioremediation at less than 5% of Superfund sites nationwide, reports chemical engineer Stephen Lingle, deputy director of the Office of Environmental Engineering. "This is still a technology in its early stages, and there is limited information available on its effectiveness. There is a need for further research." He notes that unaltered microbial bioremediation "appears to be safe—these are organisms that occur in nature." But he says that close monitoring is required to ensure adequate protection of the ecosystem.

Clean Sites report focuses on the rural poor, groundwater issues

A report assessing the effect of groundwater contamination on rural poor counties claims that such areas may have undetected contamination of groundwater. However, according to the report, once added to the Superfund list, sites in such areas receive at least as much attention from EPA as other sites.

Groundwater supplies 25% of the water used in urban areas for household and industrial purposes. But in rural areas, where wells provide most of the water, an estimated 95% of water demands are supplied by groundwater.

The report, released March 23 by Clean Sites, criticizes the federal procedure used to select contaminated areas for inclusion on the National Priorities List (NPL). Because one of the criteria used in EPA's Hazard Ranking System to evaluate sites for inclusion on the NPL is the number of

people at risk from hazardous waste, sites in rural areas may be ranked lower than sites in more populous areas. The report calls this a "bias against less populated areas."

The EPA selects Superfund sites from a listing on the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). According to the report, CERCLIS sites in rural poor areas are less likely to be added to the NPL. Only NPL sites receive Superfund funding for remediation and cleanup.

In rural areas, an estimated 95% of water demands are supplied by groundwater

The group's major complaint is that drinking water is not adequately tested to determine whether there is contamination or a potential for contamination. "Our primary concern," write the authors of the report, "is whether adequate efforts are being made to evaluate drinking water quality in many cases where site documents indicate that drinking water is threatened." They recommend that EPA or state agencies should take the following steps to prevent exposure to contaminated groundwater used for drinking water or to groundwater potentially contaminated at sites that fail to qualify for the NPL:

"Monitor groundwater drinking supplies to ensure that people do not drink contaminated groundwater;

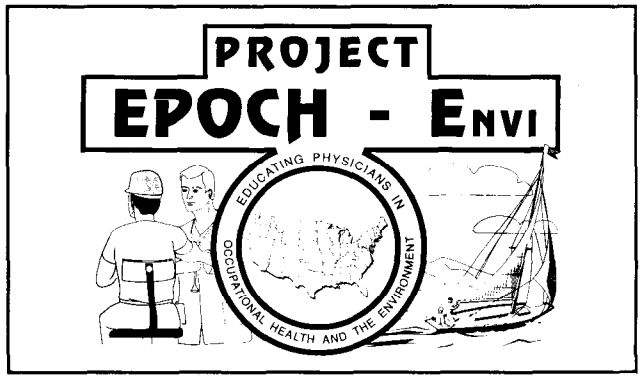
"inform local officials and residents when there is reason to be concerned about the quality of their drinking water; and

"provide residents with alternative water supplies, if necessary."

The report, "Hazardous Waste Sites and the Rural Poor," can be obtained by calling Clean Sites at (703) 683-8522. Copies are $8.00.

Southern medical schools to promote environmental health

Through the cooperation of five southeastern medical schools, 18,000 primary care residents are being introduced to the principles of occupational and environmental medicine. Although educators have come to realize the importance of incorporating occupational and environmental medical training into primary care residency curricula, such programs have been difficult to develop.



The project, called Educating Physicians in Occupational Health and the Environment (EPOCH-ENVI), will use grand rounds, seminars, preceptorships, and self-instructional materials such as the ATSDR *Case Studies in Environmental Medicine* to instruct their residents. The program is jointly funded by the National Institute for Occupational Safety and Health and ATSDR. It now includes the Duke University Medical Center, the University of South Florida, the University of Alabama at Birmingham, the University of Kentucky at Louisville, and West Virginia University. The five schools have recently begun working with other medical schools in their respective states to expand the program.

The year 2000 objectives for environmental health

Americans are urged to make lifestyle changes in order to live longer, healthier lives in a report issued recently by the Department of Health and

Human Services (DHHS). *Healthy People 2000: National Health Promotion and Disease Prevention Objectives* is the third in a series of DHHS publications to announce goals and strategies for public health. The keynote of the report is prevention. "We can no longer afford to ignore the fact that prevention is the single most important factor in maintaining good health," said Secretary of Health and Human Services Louis W. Sullivan, in releasing the report.

Preventive measures to improve environmental health include reducing toxic releases and preventing human exposure to contaminants. Environmental health is the topic of sixteen of the year 2000 health objectives for the nation. The objectives for environmental health highlight the need for more research into the effects of toxic substances on human health, reducing hazardous substances in the environment, and specific measures to prevent exposure to such substances as lead. (See below for a listing of the objectives.)

Increasing our knowledge of the health effects of exposures to toxic substances is essential, according to the report, which warns that "the most difficult challenges for environmental health today . . . come from what is not known about the toxic and ecologic effects of the use of fossil fuels and synthetic chemicals in modern society."

The report emphasizes the need to learn more about the specific effects of toxic agents on human health. However, until that goal is achieved, the amount of contaminants in the environment must be reduced to prevent adverse exposures. Steps to prevent well-understood health risks such as lead are a focal point. The report cautions that current "hazards to human health . . . are dramatically different" from hazards in the past, and calls for "extensive research" into their effects.

The year 2000 objectives were developed by a consortium of more than 300 national organizations and state and territorial health departments, organized by the Public Health Service and the National Academy of Sciences' Institute of Medicine. The final document was presented by Dr. Sullivan at a national conference September 6th, where public health professionals made plans for implementing the new strategies.

Healthy People 2000, Chapter Eleven: Environmental Health

Health Status Objectives

11.1 Reduce asthma morbidity.

11.2 Reduce the prevalence of serious mental retardation among school-aged children.

11.3 Reduce outbreaks of waterborne disease from infectious agents and chemical poisoning.

11.4 Reduce the prevalence of blood lead levels exceeding 15 µg/dL and 25 µg/dL among children aged 6 months through 5 years to no more than 500,000 and zero, respectively.

Risk Reduction Objectives

11.5 Reduce human exposure to criteria air pollutants.

11.6 Increase to at least 40% the proportion of homes in which homeowners/occupants have tested for radon concentrations and that have either been found to pose minimal risk or have been modified to reduce risk to health.

11.7 Reduce human exposure to toxic agents by limiting total pounds of toxic agents released into the air, water, and soil each year.

11.8 Reduce human exposure to solid waste-related water, air, and soil contamination, as measured by a reduction in average pounds of municipal solid waste produced per person each day to no more than 3.6 pounds.

11.9 Increase to at least 85% the proportion of people who receive a supply of drinking water that meets the safe drinking water standards established by the EPA.

11.10 Reduce potential risks to human health from surface water, as measured by a decrease to no more than 15% in the

Healthy People *continued from page 9*

proportion of assessed rivers, lakes, and estuaries that do not support designated beneficial uses in 1988.

Services and Protection Objectives

11.11 Perform testing for lead-based paint in at least 50% of homes built before 1950.

11.12 Expand to at least 35 the number of states in which at least 75% of local jurisdictions have adopted construction standards and techniques that minimize elevated indoor radon levels in those new building areas locally determined to have elevated radon levels.

11.13 Increase to at least 30 the number of states requiring that prospective buyers be informed of the presence of lead-based paint and radon concentrations in all buildings offered for sale.

11.14 Eliminate significant health risks from National Priorities List hazardous waste sites, as measured by performance of clean-up at these sites sufficient to eliminate immediate and significant health threats as specified in health assessments completed at all sites.

11.15 Establish special collections for recyclable materials and household hazardous waste in at least 75% of counties.

11.16 Establish and monitor in at least 35 states plans to define and track sentinel environmental diseases.

National Toxicology Program conducts research on hazardous substances

Health professionals who become involved in studying the health effects of substances found at Superfund sites are often frustrated by the lack of specific information available. Many existing studies necessarily devote much space to identifying data gaps. The need to increase knowledge about the health effects of environmental contaminants is so severe that it is among the national priorities identified in the health objectives for the year 2000.

Researchers in the Department of Health and Human Services (DHHS) are working to fill those gaps. The DHHS National Toxicology Program (NTP) conducts toxicological testing on substances that are most frequently found at sites on the National Priorities List (NPL) and have the greatest potential for human exposure. The effort was initiated through an interagency agreement with ATSDR, which supports a variety of research projects that focus on improving assessments of exposure and health effects.

The studies conducted are designed to determine levels of exposure that present a significant risk to human health. Often these studies include an assessment of the substance's ability to cause cancer, reproductive toxicity, and birth defects. Since the inception of this testing program, 48 chemicals or chemical classes have either been tested or have been selected for testing. These include volatile organic compounds, phthalate esters, phenols, inorganic compounds, chlorobenzenes, inorganic compounds, and several chemical mixtures.

During 1989, approximately 25 Superfund-related substances were undergoing testing. Toxicological testing on approximately 18 sub-

stances has been proposed for 1990. The results of these studies are used by regulatory agencies such as the Food and Drug Administration and EPA, various environmental and industrial groups, and by ATSDR, to improve its ability to conduct health assessments at NPL sites.

In the future, this existing program will be integrated and coordinated with the Agency's developing substance-specific research program. This congressionally mandated program requires that the Agency initiate research on profiled substances where adequate information is not available to determine health effects. The program must include the following elements as necessary to supplement existing information:

- laboratory and other studies to determine short, intermediate, and long-term health effects;
- laboratory and other studies to determine organ-specific, site-specific, and system-specific acute and chronic toxicity;
- laboratory and other studies to determine the manner in which such substances are metabolized or to otherwise develop an understanding of the biokinetics of such substances; and,
- collecting data on human health effects where possible.

For more information on this program, contact Dr. William Cibulas, Jr., of the ATSDR Division of Toxicology, at (404) 639-6000.

Conference to address environmental contamination in minority communities

This December, a groundbreaking conference will address the issue of environmental contamination in U.S. minority communities. Sponsored by ATSDR, the first National Minority Health Conference, "Focus on Environmental Contamination," will bring together national experts from the scientific and environmental communities to discuss the issue of hazardous substances in the environment and their relation to minority populations.

Conference speakers will detail three topics:

Demographics—How many minority people are exposed to hazardous substances in the environment? Are the numbers of exposed minorities proportionally greater than the numbers of those exposed in the general population?

Health perspectives—Do factors including nutritional status, lifestyle and socioeconomic influences, and psychosocial impacts cause hazardous substances to affect people of color in America disproportionately?

Health communication and health education—How do federal, state, and local environmental and health agencies effectively disseminate and communicate environmental health information to minority communities?

Speakers' presentations will be practical rather than theoretical and will focus on problem-solving and problem identification. For example, demographic presentations will cover, among other topics, methods to obtain demographic data on residents near waste sites and how to use those data to evaluate minority health issues. Health perspectives discussions will focus on approaches to assessing the health effects of toxicants and on the interplay of chemical exposures and existing disease. Finally, health communication speakers will discuss areas such as environmental health communication for migrant workers and the Native American community, as well as the roles played by poverty and poor medical care in the development of cancer.

The National Minority Health Conference is part of ATSDR's 2-year-old Minority Health Initiative. The ongoing initiative was undertaken to investigate the health problems of racial and ethnic minorities related to hazardous substances in the environment.

For more information on the Initiative or the conference, please contact Dr. Cynthia Harris, Chief, Community Health Branch, at (404) 639-0600.

PREVENTION 91

Building An Economic Framework

Explore the economics of prevention at the eighth annual national preventive medicine meeting in Baltimore, Maryland. National experts will participate in sessions on such topics as the cost-effectiveness and efficacy of prevention, rural health problems, nutrition, underserved populations and access to preventive services, environmental health, injury and violence, genetics, substance abuse, and many other timely and important issues.

Attend computer demonstrations, workshops, special interest group meetings, and meet representatives from public and private agencies concerned with the broad range of preventive medicine activities.

Take part in this exciting program. Earn CME credit. Contact the Meeting Manager at (202) 789-0006 for Prevention 91 registration information.

Calendar

November 7-9 Recent Developments in Risk Assessment for Hazardous Waste Disposal. Harvard Educational Resource Center for Occupational Safety and Health. Call Daryl Bichel at (617) 432-3314.

November 26-28 Superfund '90. Sheraton Washington Hotel, Washington, D.C. Contact Hal Bernard, Hazardous Materials Control Research Institute, 9300 Columbia Boulevard, Silver Springs, Maryland 20910; (301) 587-9390.

December 4-6 ATSDR National Minority Health Conference. Atlanta, Georgia. Contact Dr. Cynthia Harris at (404) 639-0600.

December 5-6 CDC and ATSDR Symposium on Statistical Methods for Evaluation of Intervention and Prevention Strategies. Atlanta, Georgia. Call Mike Vanchiere at (404) 639-3071.

December 7-8 Current Issues and Controversies in Health. Call Daryl Bichel at (617) 432-3314.

DEPARTMENT OF
HEALTH & HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry (E-33)
1600 Clifton Road, N.E.
Atlanta, GA 30333

FIRST-CLASS MAIL
POSTAGE & FEES PAID
PHS/CDC
Permit No. G-284