PREVENTION report

U.S. Public Health Service February/March 1995

Risk Communication:

Working With Individuals and Communities To Weigh the Odds

Risk communication (RC) is a complex, multidisciplinary, multidimensional, and evolving process of increasing importance in protecting the public's health. Public health officials use RC to give citizens necessary and appropriate information and to involve them in making decisions that affect them—such as where to build waste disposal facilities.

In its most familiar form, RC is associated with dialogue in environmental health decision-making about such community issues as air pollution, hazardous waste sites, lead, pesticides, drinking water, and asbestos. Risk communication can also help promote changes in individual behavior such as in informing homeowners about the need to check for indoor radon or lead-based paint.

Principles of Risk Communication

The National Research Council (NRC) defines risk communication as "an interactive process of exchange of information and opinion among individuals, groups, and institutions." The definition includes "discussion about risk types and levels and about methods for managing risks." Specifically, this process is defined by levels of involvement in decisions, actions, or policies aimed at managing or controlling health or environmental risks. (See Figure 1 on page 2 for the seven RC principles.)

Risk communication theory and practice may include public participation and conflict resolution, and be intertwined with risk assessment and risk management—concepts usually not addressed by traditional health communication models. Traditional messages about health risk tend to flow one way to motivate individual behavioral change among stakeholders and policymakers. Effective risk communication is an exchange, a two-way process with participation seen as an individual's and a community's democratic right. Conflict resolution can be a goal because risk information often is controversial—community members, activists, government officials, scientists, and corporate executives may disagree about the nature, magnitude, or severity of the risk in question. RC can highlight more clearly the nature and size of the conflict, leading the way to a more informed dialogue. RC can support a consensus-building process but is not designed to eliminate dissent. Informed dialogue and consideration of community concerns facilitate effective policy- and decisionmaking if RC principles are applied.

According to the National Research Council, the RC "process can be considered successful only to the extent that it, first, improves or increases the base of accurate information that decision makers use, be they government officials, industry managers, or individual citizens, and, second, satisfies those involved that they are adequately informed within the limits of available knowledge." Ultimately, measurement of RC success depends on the purpose of the exchange. For example, an increase in the number of homeowners aware of radon as a problem is a different measure of RC accomplishment than the number of people who take action.

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"If we think (the people) are not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion."

Thomas Jefferson*

Figure 1. Principles of Risk Communication

There are seven cardinal rules for the practice of risk communication, as first expressed by the U.S. Environmental Protection Agency and several of the field's founders:

1. Accept and involve the public as a legitimate partner.
2. Plan carefully and evaluate your efforts.
3. Listen to the public's specific concerns.
4. Be honest, frank, and open.
5. Coordinate and collaborate with other credible sources.
6. Meet the needs of the media.
7. Speak clearly and with compassion.

Source: *Seven Cardinal Rules of Risk Communication.* Pamphlet drafted by Vincent T. Covello and Frederick H. Allen. U.S. Environmental Protection Agency, Washington, DC, April 1988, OPA-87-020.

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Foundation of Risk Communication

Risk communication is a relatively new field. In the mid 1980s RC became recognized as a necessary component in risk management and community decisionmaking in environmental and occupational health as the Nation faced mounting concern over toxic wastes, nuclear power plants, and hazardous materials. Since the first national conference on risk communication in 1986, the RC field has matured and gained greater interest and attention among agencies, policymakers, the media, and the public.

Risk communication has grown out of the work in methods for estimating risk to humans exposed to toxicants and in research directed to how individuals perceive risk. In 1983 the NRC's *Risk Assessment in the Federal Government: Managing the Process* provided the framework for improving risk assessment. In 1986, the U.S. Environmental Protection Agency (EPA) established its guidelines for carcinogen risk assessment, the first Federal agency to do so. Three years later the NRC published *Improving Risk Communication*, describing the basis for successful risk communication.

Benefits and Barriers

Risk communication benefits include improved decisionmaking, both individually and collectively. The purpose of the exchange and the nature of the information have an impact on the benefits. Depending on the situation, personal and community anxieties about environmental health risks can be reduced or increased. For example, a goal might be raising concern about radon and prompting action.

Other benefits of the RC process include a better educated public, an appreciation of limited resources and difficult choices, increased coordination between various levels of government, and the development of working relationships between diverse interest groups such as the Sierra Club and the Chemical Manufacturers Association, to name an example from a project in the State of Washington. As citizens become more involved as participants, they become part of and contribute to the solution.

Because the RC process is so deeply embedded in broader social issues, barriers and problems are many. A key barrier is the term "risk" itself—how it is measured, described, and perceived: Interested parties perceive risk differently. People do not believe that all risks are of the same type and size. Many consumers do not understand probabilities—a .05 probability is less comprehensible than the statement, "5 of 100 people have an increased risk for a disease." Figure 2 on page 4 shows some of the factors influencing risk perception.

Conflicting risks and messages, difficulty of translating scientific information, and disagreement on what is the risk itself and how to assess it present other problems. Barriers also exist in agencies' lack of RC expertise and in organizational cultures unfamiliar or uncomfortable with two-way processes.

Public and Private Sector Activities

Public and private organizations are studying ways to overcome the problems and barriers to effective risk communication. Within the Public Health Service (PHS), U.S. Department of Health and Human Services (DHHS), the Environmental Health Policy Committee's new Subcommittee on Risk Communication and Education has set priorities for policies, training, and evaluation. In its 1994 report, "Recommendations To Improve Health Risk Communication," the subcommittee presented an analysis of RC policies and procedures across PHS agencies with the goal of helping public health professionals carry out RC activities. The subcommittee plans to publish the *Health Risk Communicator*, a quarterly newsletter that will provide a forum for the exchange of news and ideas about contemporary health risk communications.

Recently the subcommittee assessed agencies' RC interests and activities, including the National Aeronautics and Space Administration's hazards communication program and RC training in the Army, Navy, and Air Force. RC issues are on the agendas of the Peace Corps, U.S. Department of Energy (DOE), and

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* From Jefferson's letter to William Charles Jarvis, September 28, 1820.

National Coordinating Committee on School Health

The National Coordinating Committee on School Health (NCCSH) met on February 16, 1995, to discuss how consolidation of Federal programs will affect school health. The committee was cochaired by Tom Payzant, Assistant Secretary for Elementary and Secondary Education, U.S. Department of Education; Amanda Manning, Associate Administrator for Food and Consumer Service, U.S. Department of Agriculture (USDA); and J. Michael McGinnis, Deputy Assistant Secretary for Health, Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services (DHHS).

All three cochairs expressed that these are challenging times with consolidation and reinvention of government efforts underway, but that the NCCSH must continue to move forward in dealing with school health issues.

The National Safe Kids Campaign previewed the 1995 campaign, SAFE KIDS Check America, to take place May 6-13, 1995. The Family Safety Check, a 10-item checklist outlining how families can make their homes and communities safe, will be distributed to an estimated 2.7 million 3rd to 6th graders. The focus this year is school-based, with other areas of outreach including celebrity endorsements, bicycle rodeos, safety fairs, national and local media coverage, and involvement with the National Governor's Association.

Kate Fothergill of the School Health Policy Initiative described an effort to fill the void for national coordination of technical assistance and advocacy for school-based health services. A meeting will be held June 23-25, 1995, in Washington, DC to identify issues and propose a national structure/organization, tentatively called the National Assembly on School-Based Health Care. For more information, contact Ms. Fothergill, (202)408-7697.

Department personnel presented their perspectives on how consolidation of Federal programs will affect school health. USDA has made strengthening nutrition education a top priority, while Education and DHHS are focusing on preserving the accomplishments made for children during the 103rd Congress, mainly programming affected by the Crime Bill. All three departments will be consolidating. Legislative experts Adele Robinson of the National Association of State Boards of Education and Diane Shust of the National Education Association followed up the Administration's presentations with updates on the latest congressional proposals.

To help implement an NCCSH action plan, proposals were made to develop working groups around health education, infusing health education into teacher preparation, and nutritional issues in the school health setting. Committee members also expressed interest in becoming more involved with promoting the public image of school health programs.

Recommendations were made to the Interagency Committee on School Health, the Federal counterpart of this committee, to set performance standards for paraprofessionals in the school health setting, set up data gathering infrastructure, including materials on training, and broaden the interdisciplinary training and coordination of professionals.

For more information on NCCSH activities, please contact Kristine I. McCoy, Office of Disease Prevention and Health Promotion, (202)205-8180.

MEMBERSHIP

American Academy of Family Physicians
American Academy of Pediatrics
American Alliance for Health, Physical Education, Recreation and Dance
American Association of Colleges for Teacher Education
American Association of School Administrators
American Cancer Society
American College Health Association
American Dental Association
American Federation of School Administrators
American Federation of Teachers
American Heart Association
American Indian Health Care Association
American Lung Association
American Medical Association
American Nurses Association
American Psychological Association
American Public Health Association
American Public Welfare Association
American School Counselor Association
American School Food Service Association
American School Health Association
Association of Maternal and Child Health Programs
Association of State and Territorial Health Officials
Council of Chief State School Officers
The Council of the Great City Schools
National Alliance of Black School Educators
National Association for Asian and Pacific American Education
National Association of County and City Health Officials
National Association of Community Health Centers
National Association of Elementary School Principals
National Association of School Nurses
National Association of School Psychologists
National Association of Secondary School Principals
National Association of Social Workers
National Association of State Boards of Education
National Coalition of Hispanic Health and Human Services Organizations
National Conference of State Legislators
National Education Association
National Governors Association
National Mental Health Association
National Parents/Teachers Association
National School Boards Association
National School Health Education Coalition
Society for Nutrition Education

Figure 2. Factors Influencing Risk Perception

People's perceptions of the magnitude of risk are influenced by factors other than numerical data.

Risks perceived to ...	are more accepted than risks perceived to ...
Be voluntary	*Be imposed*
Be under an individual's control	*Be controlled by others*
Have clear benefits	*Have little or no benefit*
Be fairly distributed	*Be unfairly distributed*
Be natural	*Be manmade*
Be statistical	*Be catastrophic*
Be generated by a trusted source	*Be generated by an untrusted source*
Be familiar	*Be exotic*
Affect adults	*Affect children*

Source: *A Primer on Health Risk Communication Principles and Practices*. Prepared by Max R. Lum, Ed.D., M.P.A., and Tim L. Tinker, Dr.P.H., M.P.H. Washington, DC: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry. 1994. Adapted from *Acceptable Risk* by Baruch Fischoff, Sarah Lichtenstein, Paul Slovic, Stephen Derby, and Ralph Keeney. New York: Cambridge University Press. 1981.

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National Institute of Occupational Safety and Health.

Within PHS, the Agency for Toxic Substances and Disease Registry (ATSDR) has funded workshops, developed materials, and increased its capabilities in RC. Most recently, ATSDR has published *A Primer on Health Risk Communication Principles and Practices* and expanded its electronic communications activities with a home page on the Internet.

Through its World Wide Web site, ATSDR provides Internet users with database access and other resources and promotes more universal access to risk information. Many government units have established electronic bulletin board systems, hotlines, and clearinghouses to make databases and all forms of information available. The National Institute of Environmental Health Sciences offers a toll-free number and other services through its ENVIRO-HEALTH Clearinghouse.

Last year, the former Subcommittee on Risk Communication and Education of the Committee To Coordinate Environmental Health and Related Programs sponsored a workshop on *Applied Evaluation Methods for Health Risk Communications*. Health and risk communicators from PHS and other Federal agencies discussed evaluation methods, strategies, and needs and reviewed case studies. Proceedings will be published this spring.

Rutgers' Center for Environmental Communication conducts research on how to improve communication about environmental issues and distributes a list of more than 100 publications available from the center, including a manual for government risk communicators. (Figure 3 displays questions from a popular center publication.)

Other universities and researchers are studying elements of RC. With funding from the National Science Foundation and the U.S. Department of Agriculture, Penn State University is investigating how people change their perceptions after receiving information about climate changes and threats. Carnegie Mellon University researchers are developing "mental models" or intuitive theories of how risks operate. The Center for Risk Communication and the Lawrence Hall of Science at the University of California-Berkeley have developed RC materials for young people and are studying how risk perceptions are formed in the early years.

Organizations are putting RC theories into practice. The National Association of County and City Health Officials (NACCHO) provides training and materials and soon will release *Don't Hazard a Guess: The Essential Guide to Communities, Hazardous Waste Sites, and Local Public Health.* This handbook has a chapter on RC principles and discusses the importance of community involvement and RC

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Figure 3. Communicating With the Public: 10 Questions To Ask

1. Why are we communicating?
2. Who is our audience?
3. What do our audiences want to know?
4. What do we want to get across?
5. How will we communicate?
6. How will we listen?
7. How will we respond?
8. Who will carry out the plans? When?
9. What problems or barriers have we planned for?
10. Have we succeeded?

Excerpted with permission from *Communicating With the Public: Ten Questions Environmental Managers Should Ask.* Caron Chess, Billie Jo Hance, and the Center for Environmental Communication.

Spotlight

Environmental Justice

The paradigm of environmental justice has emerged out of this reality: Minority and low-income populations suffer both disproportionate exposures to environmental hazards in the communities where they live, work, and play, and disproportionate burdens of poor health and disease. Indeed:

- There are clear differences among racial groups in terms of disease and death rates.
- A large proportion of racial minorities reside in metropolitan areas and may be systematically exposed to higher levels of certain air pollutants.
- Since racial and ethnic minorities comprise the majority of the farm workforce, they may experience higher than average risk from agricultural chemicals.

Under this paradigm, diversity and the characteristics, values, and norms of groups take on great importance. For example, although overall risk from industrial releases to surface waters may be low, certain groups—specifically subsistence and sports fishers eating large quantities of fish drawn from contaminated water—potentially face higher impacts. Although the current focus is on racial and socioeconomic groups at risk, environmental justice is expanding to encompass geographic, gender, age, international, and intergenerational issues.

The environmental justice movement started at the grassroots level during the 1980s when groups targeted environmental issues in racial minority and low-income communities. For example, Mothers of East Los Angeles protested a proposed incinerator. Regional and national organizations formed to embrace environmental cleanup and conservation activities. After a 2-year study, in 1992 the U.S. Environmental Protection Agency's (EPA) Environmental Equity Workgroup concluded that racial minority and low-income populations are disproportionately exposed to lead, selected air pollutants, hazardous waste facilities, contaminated fish tissue, and agricultural pesticides in the workplace.

Last year President Clinton signed Executive Order 12898 calling for Federal agencies to achieve environmental justice for low-income and minority populations. Activities are expected to include materials development, media relations, and efforts in two-way communication as well as training and technical assistance, research and data collection for assessing risks and health effects by income and race/ethnicity, and the targeting of highest-risk populations. The U.S. Department of Health and Human Services will release its strategy by the end of this year.

Until recently, the principles and practices of risk assessment, management, and communication did not address the cultural and linguistic requirements of environmental justice. Seldom mentioned were race, income, and other characteristics that might influence the distribution of risks and benefits. Often the grassroots, religious, and other organizations in those communities were ignored. Now, as the EPA Workgroup stated, "Any effort to address environmental equity issues must include all segments of society: the affected communities, the public at large, industry, people in policy-making positions, and all levels and branches of government."

RESOURCES

Government Agencies

Agency for Toxic Substances
and Disease Registry
Division of Health Education
Public Health Service
U.S. Department of Health and Human Services
1600 Clifton Road, Mailstop E33
Atlanta, GA 30333
(404)639-6206; Tim Tinker, Dr.P.H.
Internet: http://atsdr1.atsdr.cdc.gov:8080/atsdrhome.html

Toxicology Data Network (TOXNET)
Medical Literature Analysis and Retrieval
System (MEDLARS)
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894
(301)496-6531
Internet: http://www-toxnet.nlm.nih.gov

U.S. Environmental Protection Agency
Public Information Center
401 M Street SW., Room 3404
Washington, DC 20460
(202)260-2080; FAX (202)260-6257
Risk Communication Information Line
(publications only)
202-260-5606; Lynn Desautels, Ph.D.
Internet: http://www.epa.gov
gopher.epa.gov

ENVIRO-HEALTH Clearinghouse
National Institute of Environmental
Health Sciences
100 Capitola Drive, Suite 108
Durham, NC 27713
(800)643-4794; FAX (919)361-9408

Other

Center for Environmental Communication
Cook College
Rutgers The State University of New Jersey
P.O. Box 231
New Brunswick, NJ 08903-0231
(908)932-8795

Center for Risk Communication
39 Claremont Avenue, Suite 71
New York, NY 10027
(212)222–7841
(212)749–3590 FAX

National Association of County
and City Health Officials
440 First Street NW., Suite 500
Washington, DC 20001
(202)783-5550; Heidi Klein, Director,
Environmental Health Programs and Policies
(202)783-1583 FAX
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In The Literature

Environmental Health

An update on blood lead levels in pediatric patients of a neighborhood health center and an analysis of sources of exposure. H.T. Blumenthal and R. Mayfield. *Journal of the National Medical Association* 87 (February 1995): 99–104.

A decline in occupied housing units and in soil lead levels may help reduce children's exposure to environmental lead.

In 1976, researchers determined the blood lead levels of children in a predominantly black neighborhood in St. Louis, MO, and conducted followup studies every year until 1993. In the areas studied, the total population declined by 13.1 percent between 1976 and 1993, while the number of children younger than 5 years of age increased by almost 8 percent. Over this period, the number of occupied housing units declined by 11 percent, unoccupied housing increased by 39 percent, and total housing declined by 14 percent. Soil lead levels were four times higher in 1978 than in 1990. Between 1976 and 1993, the mean blood lead level among children in the study group decreased from 34.2 g/dL to 9.3 g/dL, or below 10 g/dL—the level proven to cause adverse health effects. [Editor's note: 9.3 g/dL is more than two times the national mean blood lead level of 3.6 g/dL for 1–5-year-olds.]

Environmental health and African Americans: challenges and opportunities. B. Walker, Jr., N.J. Goodwin, and R.C. Warren. *Journal of the National Medical Association* 87 (February 1995): 123–29.

African Americans experience greater exposure to environmental hazards than other population groups. Realizing that disease among African Americans may have an environmental basis may be important in improving their health.

Sixty percent of African Americans (15 million) live near abandoned toxic waste sites, and cleanup programs for these sites take 20 percent longer to be placed on the national priority action list. African Americans live with higher air pollution and are exposed to carcinogenic and other toxic agents. These environmental risks are associated with increased morbidity and mortality, as well as developmental delays in children. African Americans also have a harder time preventing environmentally provoked diseases because they are more likely than other groups to be poor, to lack health insurance, and to have to travel further to obtain medical care. The authors make the following suggestions for meeting the challenges to improving African Americans' health: initiate a comprehensive national birth defects monitoring and research program and a clearinghouse on birth defects research; improve environmental data with regard to releases of toxic substances, accidental spills, and toxic waste disposal; revise policy and regulatory programs to reduce the risk of pesticide exposure in infants and children; and provide medical students with a fuller understanding of the environmental causes of disease.

Maternal and Infant Health

The Minnesota Prenatal Care Coordination Project: successes and obstacles. C. Skovholt, B. Lia-Hoagberg, S. Mullett, et al. *Public Health Reports* 109 (November/December 1994): 774–81.

Prenatal care providers will improve practices and collaboration as a result of personalized education and support.

The Minnesota Department of Human Services began the Minnesota Prenatal Care Initiative (MPCI) in 1988 to improve and expand prenatal care services for Medicaid-enrolled women at high risk for poor birth outcomes. The Minnesota Prenatal Care Coordination Project presented education and technical support for providers as they implemented MPCI. Project participants took part in 12 regional workshops throughout the State, had one-to-one contacts with nurse consultants, and received newsletters and a guidebook. As a result of the Prenatal Care Coordination Project, the numbers of Medicaid-enrolled women who received risk assessment and enhanced services were doubled, and provider participation increased by one-third. Greater collaboration among community providers and improved communication between State and local health care agencies also resulted. Low physician attendance, resistance to changes in practice, dissatisfaction with the enhanced services package and level of reimbursement, and problems with implementation protocols were obstacles to the implementation of the program.

Cancer

Effect of distance and travel time on rural women's compliance with screening mammography: an UPRNet study. N.E. Kreher, J.M. Hickner, M.T. Ruffin, et al. *The Journal of Family Practice* 40 (February 1995): 143–47.

Women living in rural areas and receiving mammograms are not affected by distance, travel time, or transportation barriers.

Between March 15 and June 1, 1993, women over 40 years old and living in rural northern Michigan were given a questionnaire about mammography when they visited one of 12 family practices in the Upper Peninsula Research Network (UPRNet). The questionnaire asked about

demographics, knowledge of and attitudes toward mammograms, and geographic barriers to receiving mammograms. A total of 416 women made up the study group. Women were classified as "current" if they had had a mammogram in the previous two years for those aged 40 to 49, and for the previous year for women aged 50 years and older. Eighty-eight percent of respondents had had at least one mammogram. Women classified as "current" had higher educational levels, health insurance, and a higher household income. Most of the women did not consider lack of transportation or distance to travel as barriers to obtaining a mammogram. However, only 67 percent of the "not current" group believed a woman needed a mammogram every 1 to 2 years, whereas 91 percent of the "current" group reported believing a woman needed a mammogram every 1 to 2 years.

HIV Infection

Lack of HIV transmission in the practice of a dentist with AIDS. H.W. Jaffe, J.M. McCurdy, M.L. Kalish, et al. *Annals of Internal Medicine* 121 (December 1, 1994): 855–59.

In a study of the practice of a dentist with acquired immunodeficiency syndrome (AIDS), no evidence was found of either dentist-to-patient or patient-to-patient transmission of human immunodeficiency virus (HIV).

The authors studied the practice of a Miami, Florida, dentist with AIDS to determine whether dentist-to-patient or patient-to-patient transmission of HIV had occurred. The dentist acknowledged that he had not followed recommended infection control procedures. Researchers interviewed the dentist's former employees and reviewed the medical records of the dentist and 6,474 of his former patients. Of these patients, 1,279 (19.8 percent) were known to have been tested for HIV infection, and 24 of those (1.9 percent) were HIV positive. Four other patients with HIV infection were identified through case-finding activities. These 28 HIV-positive patients were interviewed, and 19 acknowledged having engaged in drug use or in sexual behaviors that could have resulted in HIV infection. Analysis of genetic sequences from the dentist and 24 of the patients with HIV infection did not indicate that the virus strains were linked.

"It won't happen to me": perceived risk and concern about contracting AIDS. S.I. Mishra and S.A. Serxner. *Health Values* 18 (November/December 1994): 3–13.

Understanding why some people consider themselves to be at risk for contracting AIDS but are not concerned about this risk is important in targeting prevention efforts. Intervention programs should address understanding the notions of "risk" as well as reinforcing and facilitating preventive behaviors.

Between fall 1988 and spring 1991 in Orange County, California, researchers randomly interviewed 3,260 people (1,852 females and 1,408 males) 18 years and older to assess their levels of AIDS-related perceived risk and concern about contracting AIDS. Forty-five percent of males and 49.7 percent of females surveyed considered themselves to be at risk for contracting AIDS, and 36.5 percent of males and 34.6 percent of females were concerned about this risk. Nearly 57 percent of respondents aged 18 to 34 years perceived themselves at risk compared to 52.3 percent of those aged 35 to 49 years. The better educated respondents were more likely to perceive themselves at risk than those with lower levels of education. Unmarried Anglo males who know someone with AIDS were most likely to perceive themselves at risk but were least likely to be concerned about contracting AIDS.

Clinical Preventive Services

Patient-perceived barriers to preventive health care among indigent, rural Appalachian patients. D.M. Elnicki, D.K. Morris, W.T. Shockcor. *Archives of Internal Medicine* 155 (February 27, 1995): 421–24.

Adequate education about preventive measures and removing barriers to these measures are important in helping indigent populations receive preventive care.

Researchers surveyed 188 new patients at a clinic for the indigent in rural Appalachia about their use of six preventive health measures: blood pressure screening, cholesterol level, current diphtheria-tetanus immunization, mammography, Pap smear, and physical examination. Sixteen percent of patients had not had blood pressure screening; 60 percent had not had cholesterol screening; 67 percent had not had diphtheria-tetanus immunizations; 69 percent had not had a mammogram; 22 percent had not had a Pap smear; and 32 percent had not had a physical examination. Eighty-five percent of patients were lacking at least one preventive measure. The most common reasons given for not having had these measures were lack of knowledge about prevention (51 percent) and cost (36 percent). Seventy-two percent of patients said that they would have these preventive measures performed if barriers were removed.

Nutrition

High prevalence of overweight and short stature among Head Start children in Massachusetts. J.L. Wiecha and V.A. Casey. *Public Health Reports* 109 (November/December 1994): 767–73. Preschool children from low-income families are at risk for short stature and are at increasing risk for obesity.

Researchers consulted 1988–91 annual screening data from Massachusetts Head Start programs; data was available for an average of 2,664 children per year. The children's average age was between 36 and 59 months. Height and weight measurements were compared with National Center for Health Statistics reference populations. From 7.3 to 8.8 percent of children were below the fifth percentile of height for age each year, and from 1.2 to 3.3 percent were underweight. In each year overweight (weight for height above the 95th percentile) was most prevalent, ranging from 9.6 to 13.3 percent and demonstrating a statistically significant upward trend. The prevalence of overweight and short stature varied by race and ethnicity. A statistically significant upward trend in overweight was observed among Hispanic children. Children who were 48 months of age or older were more likely than younger children to be overweight.

Tobacco

Making the most of a teachable moment: a smokeless-tobacco cessation intervention in the dental office. V.J. Stevens, H. Severson, E. Lichtenstein, et al. *American Journal of Public Health* 85 (February 1995): 231–35.
Brief dental office interventions can be efficient in reducing the use of smokeless tobacco.

At a health maintenance organization in the Pacific Northwest, dentists, receptionists, and hygienists were given a 2-hour training session about how to deliver a smokeless tobacco intervention program. Male patients aged 15 years and older who reported current use of smokeless tobacco became participants in the study. After the dental cleaning and examination, patients watched a 9-minute videotape discussing the health consequences of smokeless tobacco use. Following the video, hygienists attempted to get patients to set a quit date; 43 percent of the participants set a quit date before leaving the dental office. The preintervention group (n=58) received only the questionnaire and dental examination, the intervention group (n=245) received the full intervention program, and the usual care (n=273) group received no program. Interviewers followed up with the subjects by mail or telephone 3 and 12 months after the intervention. At 3 months, 32.2 percent of the intervention group reported abstinence from smokeless tobacco. At 12 months, 33.5 percent of the intervention group reported having stopped using smokeless tobacco. In comparison, only 19 percent of the preintervention group and 21.3 percent of the usual care group reported abstinence from smokeless tobacco at 3 months, and 20.7 percent of the preintervention group and 24.5 percent of the usual care group had stopped using smokeless tobacco at 12 months.

Alcohol and Other Drugs

Lower legal blood alcohol limits for young drivers. R. Hingson, T. Heeren, and M. Winter. *Public Health Reports* 109 (November/December 1994): 738–44. At least 375 nocturnal, fatal single vehicle crashes would be prevented annually if all States adopted .00 or .02 percent blood alcohol limits (BALs) for drivers aged 15 to 20.

To assess the impact of lower legal BALs for drivers aged 20 years and younger, researchers compared 12 States with 12 nearby States matched for legal drinking age and timing of changes in the law. Among drivers aged 15 to 20, fatal crashes involving a single vehicle at night are three times more likely than other fatal crashes to be alcohol-related. During the postlaw period, the proportion of these fatal crashes declined 16 percent among young drivers targeted by lower BAL laws, but rose 1 percent among drivers of the same age in comparison States where BALs were not changed. The proportion of fatal crashes that involved single vehicles at night declined 22 percent among drivers in States with .00 percent BALs, whereas it declined only 2 percent among drivers of the same age in comparison States. Among those drivers targeted by .02 percent BALs, the proportion of nocturnal, fatal crashes involving single vehicles declined 17 percent, but rose 4 percent in comparison States. In States with the lowered levels for young people, the proportion of fatal nocturnal single-vehicle crashes among adults declined 5 percent, while it declined 6 percent in the group of comparison States.

Violent and Abusive Behavior

Abusive head trauma: the relationship of perpetrators to their victims. S.P. Starling, J.R. Holden, and C. Jenny. *Pediatrics* 95 (February 1995): 259–62. Abusive head trauma, or shaken baby syndrome, is the most common cause of morbidity and mortality in physically abused infants, especially among boys. Male caretakers are potentially more

dangerous than females, abusing infants twice as often as females.

Researchers reviewed the medical charts of 151 infants in Colorado who suffered abusive head trauma to determine the perpetrator of the abuse. Caretakers were classified by level of certainty: confession to the crime, convicted of or charged with the crime, or strong suspicion by the staff. Victims ranged in age from 3 weeks to 24 months, with a median age of 5 months. More than 60 percent of the abused children were boys. Twenty-three percent of the children died as a result of the abuse, although death rates for the boys and girls did not vary significantly. Male caretakers were 2.2 times more likely to cause head trauma in infants than females, with fathers, stepfathers, and mothers' boyfriends committing 68.5 percent of the crimes. Fathers accounted for 37 percent of the abusers, followed by boyfriends at 20.5 percent. Female baby sitters represented 17.3 percent of the perpetrators, while mothers were responsible for only 12.6 percent of the cases. While men were more likely to abuse infants, men and women were equally likely to injure a child fatally.

Unintentional Injuries

Household chemical exposures: field testing a prevention brochure. C. Ng, E. Stone, and P.D. Blanc. *Health Values* 18 (November/December 1994): 24–31. Public education may be an important strategy in preventing household chemical inhalation among ethnic minorities.

Researchers surveyed the potential outreach population for an educational brochure on household chemical hazards distributed by the San Francisco Bay Area Regional Poison Control Center. Forty persons each were interviewed in English, Cantonese, and Spanish; 89 percent of respondents were ethnic minorities. Respondents were asked to rate the potential hazard of household activities (mixing bleach and another cleaner together and spraying insect spray in a closed room) and the use of specific product types. Participants then read the pamphlet and were asked about the use of 13 other household chemical products. Before reading the pamphlet, 62 percent of those surveyed rated the potential hazard of bleach product mixing as dangerous, while 91 percent of participants rated closed-space spraying as dangerous. After reading the pamphlet, 78 and 94 percent of participants rated bleach product mixing and closed-space spraying as dangerous, respectively. Twenty-five percent of the persons interviewed reported past respiratory symptoms from product use, especially from bleach and insecticides.

Crosscutting

Correlates of smoking, stress, and depression among women. S.L. Sheahan and M. Latimer. *Health Values* 19 (January/February 1995): 29–36. Smoking among women is linked with stress and coping. Health care providers need to consider a woman's stress levels and socioeconomic status prior to initiating a smoking cessation program.

Researchers randomly surveyed 322 urban Kentucky women aged 18 to 55 to determine the prevalence of smoking; compare levels of stress, depression, and emotional support between smokers and nonsmokers; and determine the relationships among smoking, stress, and depression. Of these women, 208 were nonsmokers, 92 were smokers, and 33 were former smokers. Respondents were predominantly white (85 percent) and married (64 percent). The mean education and incomes were 13.67 years and $32,000, respectively. Smokers had significantly lower levels of education and income and were more likely to be single. Forty-seven percent of smokers reported that work stress greatly influenced their smoking behavior, and home stress was very influential for 29 percent of the smokers. Whereas depression did not significantly alter smoking behavior, smoking was a method of coping with stress for many smokers.

The association between leisure-time physical activity and dietary fat in American adults. E.J. Simoes, T. Byers, R.J. Coates, et al. *American Journal of Public Health* 85 (February 1995): 240–44. Public health messages about either diet or physical activity also should include the other because Americans who have the fattiest diets also exercise the least.

Researchers analyzed data from the 1990 Behavioral Risk Factor Surveillance System for information on physical activity and fat intake. The study sample consisted of 29,672 white adults. Participants had been asked about their diets, their leisure-time physical activity level, and demographic information. Researchers found that physical activity decreased with age and smoking, increased with education and alcohol consumption, and decreased with a higher fat intake. Those respondents who were younger, were less well educated, smoked, and had not had their cholesterol screened had the highest fat intake. Conversely, the more physical activity a person performed, the lower his fat intake.

MEETINGS

Violence in America Rx: An Ounce of Prevention. Washington, DC. Sponsored by Physicians for a Violence-Free Society; (214)590–8807. **May 4–7, 1995**.

Children Deserve Better 2000. Lake Buena Vista, FL. Sponsored by the Center for Substance Abuse Prevention, Ounce of Prevention Fund of Florida and Consortium of Comprehensive Addiction Programs; Carolyn Moore, (813)570–3014. **May 6–9, 1995**.

1995 Annual Meeting of the American Pediatric Society. San Diego, CA. (703)556–9222. **May 7–11, 1995**.

18th Annual National Conference of the National Rural Health Association. Atlanta, GA. (816)756–3140. **May 17–20, 1995.**

148th Annual Meeting of the American Psychiatric Association. Miami, FL. Gus Cervini, (202)682–6142. **May 20–25, 1995**.

American College Health Association Annual Meeting. Chicago, IL. (410)859–1500. **May 23–27, 1995**.

30th Annual Meeting of the U.S. Public Health Service Professional Association. Orlando, FL. (703)243–1301. **May 28–30**.

American College of Sports Medicine Annual Meeting. Minneapolis, MN. (317)637–9200. **May 31–June 3**.

Primary Health Care for the Older Woman: Update 1995. San Francisco, CA. Sponsored by the University of California San Francisco/Mount Zion Center on Aging; Mary Henderson, (415)750–4170. **June 3, 1995**.

North American Stroke Meeting. Denver, CO. Sponsored by the National Stroke Association; C. Volcke, (612)623–2457. **June 8–10**.

Annual Meeting of the American Diabetes Association. Atlanta, GA. J.H. Graham, (703)549–1500. **June 8–13**.

Annual Meeting of the American Medical Association. Chicago, IL. James Todd, (312)464–4470. **June 18–22**.

Activities

In Funding

The American Heart Association will accept grant-in-aid applications in 20 areas of research, including behavior studies, coping strategies/stress management, health promotion, lifestyle modification, preventive therapeutics, and risk factors. The 3-year support award is $40,000 annually, maximum, plus 10 percent overhead. Doctoral degree is required. Deadline to apply is July 1. Contact the National Center Division of Research Administration, (214)706–1453.

The National Institute of Child Health and Human Development (NICHD) will sponsor clinical trials necessary for Food and Drug Administration approval of new contraceptive drugs and devices. NICHD anticipates initiating evaluation of as many as seven spermicides, four male condoms, three female devices, and two contraceptive drugs between 1995 and 1999. Copies of the Master Agreement Announcement may be obtained from Paul J. Duska, Contracts Management Branch, NICHD, Executive Building, Suite 7A-07, 6100 Executive Blvd., MSC 5710, Bethesda, MD 20892–7510.

The National Institute of Mental Health (NIMH) and National Institute on Drug Abuse are encouraging research applications that address the issue of relapse to high-risk behaviors after behavior change. Research is needed to develop methods and techniques to understand, prevent, and/or change high-risk sexual and drug-abusing behaviors and to maintain long-term behavior change. Research is encouraged to identify psychological, social, and cultural factors that contribute to relapse. The program announcement is available from Willo Pequegnat, Ph.D., Office on AIDS, NIMH, Parklawn Building, Room 10–75, 5600 Fishers Lane, Rockville, MD 20857; (301)443–6100.

The National Library of Medicine (NLM) is sponsoring planning grants for education and training of health sciences librarians. NLM has identified four priority areas for further development: evolving role of the health sciences librarian; professional education programs for health sciences librarians; lifelong learning programs for health sciences librarians; and broadening recruitment into the profession. The request for applications may be obtained from Frances E. Johnson, Division of Extramural Programs, NLM, Building 38A, Room 5S–520, Bethesda, MD 20894; (301)496–4221.

The National Institute on Drug Abuse (NIDA) has an ongoing program announcement to support a program of research on health services to drug abusers at high risk for HIV/AIDS. For more information, contact Frank M. Tims, Ph.D., Services Research Branch, NIDA, 5600 Fishers Lane, Room 10A–30; Rockville, MD 20857; (301)443–4060.

In Video

Cultural Diversity in Healthcare, a new videotape from the American Journal of Nursing Company, teaches healthcare workers how to build better relationships with patients and coworkers and improve a patient's response to treatment in an era of increasing cultural diversity. An awareness of and sensitivity to cultural differences improves communication among healthcare staff and with patients. To order a copy of the 22-minute videotape for $250, contact American Journal of Nursing Company, 555 West 57th St., New York, NY 10019–29611; (800)CALL–AJN (225–5256).

To help patients learn and understand their rights and responsibilities when using a managed health care program, the National Rural Health Association has produced a videotape and accompanying brochure in English and Spanish. *Patients' Rights and Responsibilities Under Managed Health Care* tells the patient, in a physician's office or clinic setting, how managed health care plans work. The patient may then take a brochure home for future reference. Funded by the Bureau of Primary Health Care, each video costs $20 and comes with a sample brochure. Additional brochures may be purchased in packets of 25 for $10. A complete set of one video, one packet of English brochures, and one packet of Spanish brochures costs $35. To order, send advance payment to National Rural Health Association, Publications Department, One West Armour Blvd., Suite 301, Kansas City, MO 64111.

The Bureau for At-Risk Youth has announced a new seven-video series entitled *Parenting Difficult Adolescents*. The series profiles seven troubled teens and their parents as they encounter such problems as gang involvement, eating disorders, substance abuse, defiant behavior, depression, and teen sexuality. The video program features dramatized skits and commentary from teens, parents, and child behavior experts. Parents learn how to recognize problems, resolve disagreements, de-escalate conflicts, set limits, and seek professional help when necessary. For more information, contact Bureau for At-Risk Youth, 645 New York Ave., Huntington, NY 11743; (800)99–YOUTH (999–6884).

In Print

Alcohol and Other Drugs

The American Medical Association (AMA) has published a two-part *Policy Compendium on Tobacco, Alcohol, and Other Harmful Substances Affecting Adolescents*. This book is intended for policy makers and health professionals and discusses their roles and responsibilities in the prevention and treatment of adolescent use of tobacco, alcohol, and other harmful substances. The compendium contains policy recommendations from each organization affiliated with the AMA National Coalition on Adolescent Health. For more information, contact AMA, Order Department, P.O. Box 109050, Chicago, IL 60610; (800)621–8335.

Clinical Preventive Services

America's Children: Triumph or Tragedy, by Charles N. Oberg, MD, MPH, Nicholas A. Bryant, and Marilyn L. Bach, PhD, has been published by the American Public Health Association (APHA). The book states that the representation of America's children among the poor and disadvantaged has grown at an unprecedented rate. The authors propose a solution to this problem in the form of an "Integrated Children's Network" of six interlocking "gears" necessary for the health of our children: economic security, medical care, shelter, proper nutrition, child care, and early education. The cost for APHA members is $10.50 and for nonmembers is $15. To order, call (202)789–5667.

Sexually Transmitted Diseases

Education Programs Associates (EPA) now offers two comprehensive, easy-to-read booklets about reproductive health. *What is Right for You: Choosing a Birth Control Method* provides the latest information on 13 birth control methods, including Norplant, Depo-Provera, and the female condom. *STDs: What You Need to Know* features the latest public health guidelines on preventive health behaviors. Spanish-language adaptations of both booklets are also available. To order, contact EPA, 1 West Campbell Ave., Building D, Campbell, CA 95008; (408)374–3720.

Mental Health and Mental Disorders

A catalog of mental health materials is available from the American Psychiatric Association (APA). The *Let's Talk About Mental Illnesses Catalog* features time and money-saving audience-targeted guides, issue-oriented fact sheets, "how-to" idea books, a camera-ready book that provides everything to create localized pamphlets and advertisements, low-priced clearance items, educational comic books in English and Spanish, and more. For a free 1995 catalog, contact APA, Division of Public Affairs, Dept. MCAT95, 1400 K St. NW., Washington, DC 20005; (202)682–6324.

Heart Disease and Stroke

A new report by the National Heart Attack Alert Program, *Emergency Department: Rapid Identification and Treatment of Patients with Acute Myocardial Infarction*, discusses the scientific basis for early care and makes a number of recommendations for reducing emergency department delays in the identification and treatment of heart attack patients. For a complimentary copy of the report (NIH publication 93–3278), contact the National Heart, Lung, and Blood Institute Information Center, P.O. Box 30105, Bethesda, MD 20824–0105; (301)251–1222.

Etcetera

In 1993, 40,115 people died in motor vehicle crashes, and 24,530 became homicide victims. Motor vehicle crashes cost approximately $137 billion annually, compared to $19 billion each year for victims of personal and household crimes. In the United States, **one motor vehicle fatality occurs every 13 minutes, and one murder occurs every 21 minutes**. For a copy of the brochure *Saving Lives and Combating Crime*, contact Police Traffic Services, National Highway Traffic Safety Administration, NTS–41, 400 Seventh Street SW., Washington, DC 20590.

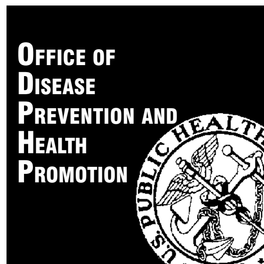
(continued from page 4)

strategies. NACCHO is packaging for release this summer its 1-day training course for developing skills in RC and working with communities. NACCHO's sponsorship of such RC projects follows an assessment in which members ranked RC first in their educational needs for addressing environmental health problems.

Next Steps

Scheduled for publication in the April issue of the journal *Risk Analysis* are the proceedings of a national symposium on RC in 1994 where academics and practitioners explored next steps for agencies. Sponsors were DOE (through the National Conference of State Legislatures), EPA, National Cancer Institute, and the National Science Foundation. When describing the challenges of RC and their needs, participants described three priorities for research, training, and action. First is the **how** of public participation—how to begin and facilitate a dialogue given conflicts and issues related to relationships, data, interests, structure, and values—how to integrate outside concerns with agency decisionmaking. Second is the **how** of communicating with different social and cultural groups—a broad need with particular significance in the environmental justice movement (see *Spotlight*). Needed is guidance on language, format, and distribution of messages and materials. The third **how** concerns evaluation—measuring RC success and outcomes.

Effective RC is important to the accomplishment of many Healthy People 2000 objectives, including the 16 objectives for environmental health that cover a broad range of exposure media—air, water, soil, and groundwater—as well as a variety of pollutants such as radon, toxic chemicals, and lead. Also necessary is a clear and common vision of environmental risk communication's role in prevention. Ongoing public and private efforts in RC evaluation research, training, and technical assistance will help the Nation address environmental health as a continuing and serious public concern into the next century.



The mission of the Office of Disease Prevention and Health Promotion (ODPHP) is to provide leadership for disease prevention and health promotion among Americans by stimulating and coordinating Federal activities. ODPHP is organized into five areas: prevention policy, clinical preventive services, nutrition policy, health communication, and community action.

Committee Oversight

National Coordinating Committee on Clinical Preventive Services

National Coordinating Committee on School Health

National Coordinating Committee on Worksite Health Promotion

Prevention Report is a service of the Office of Disease Prevention and Health Promotion, Public Health Service, U.S. Department of Health and Human Services, Switzer Building, Room 2132, 330 C Street SW., Washington, DC 20201.

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