



Hispanic Communities Face Unique Risks from Their Environment

While exposures to environmental hazards can affect anyone, Hispanics are at a much higher risk for some health problems due to religious and cultural beliefs in their homeland and difficulties with the English language once they immigrate. Mercury and carbon monoxide poisonings have proved to be particular problems within the Hispanic community.

The mobility of society due to immigration has made assessing and controlling environmental health hazards harder due to the movement across national borders of new products that are used in cultural, medicinal or religious practices. These products are often found in pharmacies as over-the-counter items outside the United States, but are banned or require prescriptions in the U.S. As new arrivals move between borders, they do not realize that bringing these items into the United States is breaking the law—after all, they could purchase and use these products in their homeland.

Mercury Poisoning

One such product transported across the border with regularity is mercury. Mercury toxicity varies tremendously depending on the physical form (inorganic, organic or elemental) and route of exposure. Mercury-containing substances may be inorganic or organic and vary from colorless solutions to red or white solids. Elemental mercury is a silvery-gray liquid metal which occurs naturally in the environment.

Although many products that contain mercury salts are no longer available in the United States, they are available through the world market. Elemental mercury can be purchased from many sources, including chemical supply houses, mercury recyclers, some spiritual supply houses or Botánicas, and through the Internet to meet the needs of ritualistic practitioners. Elemental mercury

spilled in the home may persist in contaminating the home for many years, even after it is thought to be cleaned up.

Inorganic mercury salts may be present in skin-lightening soaps and lotions. Because of their antibacterial and antiseptic properties, inorganic mercury salts may be contained in a variety of home medications. Mercurochrome and Merthiolate are primarily comprised of mercury salt solutions. Another home medication that contains inorganic mercury salts is calomel, a white powder. It is used for teething and has been associated with infants that developed acrodynia (painful extremities), a rare disease caused by hypersensitivity to the mercury salts. The same inorganic mercury salts also have been used in ointments for diaper rash.

Use of elemental mercury as a component or ingredient in rituals may be an additional source of mercury in the Hispanic home. It is used as a ritual material or medicine in certain religious and traditional practices (Santería, Palo, Voodoo, Hoodoo, Espiritismo, Alchemy and Wicca). Liquid mercury is believed to speed spells (quicksilver), and is used to expel evil spirits or fear (el Susto). A person may carry mercury in gelatin capsules or pouches, wear sealed glass amulet pendants or carry mercury stored in a hollowed-out nutmeg. People also sprinkle it in homes and automobiles, and add it to perfumes, oils, candles or large bowls (la Prenda) that are stored for future ritual work.

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Members of Hispanic populations in the United States have been poisoned by mercury through cosmetics and traditional religious or medical practices. For example, in 1995 and 1996, the Centers for Disease Control and Prevention and health departments in California, Texas and New Mexico identified mercury poisoning among people who had used a beauty cream produced in Mexico called "Crema de Belleza-Manning." It was later found that people who did not use the cream but were close household contacts of cream users were also exposed.

Based on these results, the states took action to protect the public's health, including advising the public to stop using the product, urging them to contact their doctors if they had used the product and informing them of how to dispose of it. Doctors were advised to contact local poison control centers about the medical management of patients exposed to mercury. The Mexican Secretary of Health also seized 35,000 containers of the product, found that it contained 8 percent mercury by weight and issued an epidemiologic alert to all border states of Mexico to enhance surveillance for cases of acute or chronic mercury intoxication.

Carbon Monoxide Poisoning

Legislators can impact other environmental hazards, such as in the use of new products or appliances that are unfamiliar to immigrants. One such example is the use of artificial



heating units and generators, which produce carbon monoxide as a byproduct. The new immigrants' lack of education in the use of these appliances and proper ventilation has resulted in deaths.

The results of Hurricanes Charley, Ivan, Frances and Jeanne in 2004 showed that Hispanic and non-English speaking populations were at higher risks for carbon monoxide (CO) poisonings. There were 167 cases of CO poisoning and six deaths in Florida from Aug. 13–Sept. 25, 2004. More than 90 percent of these poisonings and all the deaths were due to CO exposures from portable generators. Of the people poisoned, 28.1 percent were Hispanic and 21.6 percent were African-American. The final results on the effects of Katrina and Rita in 2005 are not in, although there are reports of isolated deaths from carbon monoxide poisoning where entire families have perished.

A study of CO poisoning in North Carolina in 2002 indicated that a functioning carbon monoxide alarm can protect against severe poisoning during a power outage. While many cities and counties across the United States have CO detector ordinances in place, not all do. Two cities with ordinances, Chicago and St. Louis, had significantly lower fatality rates from carbon monoxide poisoning than the group of cities without such ordinances.

The study also found:

- 4,564 CO exposures resulted in 406 fatalities.
- 57 percent of the exposures occurred in the home, accounting for 92 percent of the deaths.
- Faulty heating systems were to blame in 56 percent of the exposures and 46 percent of the deaths, with alternate heating sources responsible for 9 percent of the exposures and 26 percent of the deaths.

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How Federal Environmental Public Health Programs Address These Problems

Environmental public health programs protect the public from environmental hazards. The National Center for Environmental Health (NCEH) and Agency for Toxic Substances and Disease Registry (ATSDR) bring resources at all levels to help states, communities and cities protect the public from environmental threats to health. NCEH, ATSDR and CSG are working together to provide state officials with information they need as policymakers to protect the health of their constituents from environmental hazards.

NCEH works to identify, prevent and control diseases, birth defects, disabilities and deaths resulting from people's interactions



with their environment. It provides support to states in preparing for and responding to emergencies, investigates the effects of exposure to environmental hazards and leads national programs with states and private organizations on topics such as how to control asthma, prevent lead poisoning and assure sanitary conditions on cruise ships.

In 2002, Congress began funding NCEH to develop and provide information for a National Environmental Public Health Tracking Network to improve the health of communities. This network will link data on environmental hazards, human exposure (bio-monitoring), and health effects (e.g.,



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asthma, cancer and birth defects). This information can be used to identify hazards, craft effective public health actions to prevent or control diseases and acute health effects linked to environmental hazards, evaluate the effectiveness of preventive actions and track trends over time.

The potential power and promise of this joint effort between CDC, states and other partners to better protect public health has already been demonstrated through pilot projects. In 2005, one tracking effort in New York City resulted in the discovery of a patient with a high level of mercury poisoning. Such poisoning usually indicates exposure to mercury salt or elemental mercury. Further investigation found the patient used one of several commonly available, but illegal, skin lighteners that list mercury as the active ingredient.

The city's Department of Health and Mental Hygiene launched a wider investigation into the use of this skin lightener in the city, worked with the U.S. Food and Drug Administration laboratory and confirmed heavy mercury content in six commonly available skin-lightening products. City officials issued



alerts and press releases to health care practitioners and ordered 163 stores to stop selling the products and provide it with names of distributors.

With the funding of the new National Environmental Public Health Tracking Program, the databases of NCEH and ATSDR have become more accessible. Efforts are underway to collect these data in the same format, which will expedite the CDC's ability to investigate reports of poisonings.

Environmental public health threats associated with hazardous waste sites are addressed by ATSDR. It conducts public health assessments, consultations and health studies at and near hazardous waste sites, working closely with the Environmental Protection Agency and state and local public health organizations. It also provides grant funding, expertise



and consultation to 29 state public health agencies to train local health professionals on responses to hazardous waste site exposures and contamination.

For more information about NCEH and ATSDR, refer to the Summer 2005 edition of *Ecos* or visit www.cdc.gov/nceh and www.atsdr.cdc.gov. For more information about environmental public health tracking, visit www.cdc.gov/nceh/tracking/.

What Legislators Can Do

The harmful effects of both mercury and carbon monoxide poisoning can be lessened through education and legislation.

State legislators can take an active role to protect their constituents by providing funding opportunities to educate new arrivals on the use of substances like mercury. Supporting education programs for agencies and consumers that offer a clear understanding of Hispanic cultural practices and introducing behavioral changes when Hispanics move to the U.S. also may improve outcomes. Without such understanding, opportunities are missed to educate new arrivals and embark on a prevention opportunity. It's not always about passing laws—providing funding opportunities at the grassroots level with specific outreach efforts is often the catalyst for effecting a change through education and prevention.

Legislation, however, has been effective in reducing the threat posed by such environmental dangers as carbon monoxide poisoning. Alaska, New York, Rhode Island, Texas and West Virginia all have legislation to protect people from CO poisoning. Here are examples of the laws:

NY Executive Law § 378. The New York Uniform Fire Prevention and Building Code Act establishes that the building code must require every one- or two-family dwelling or any condominium or cooperative dwelling in the state constructed or offered for sale to have installed an operable carbon monoxide detector that meets standards set by a council.

The harmful effects of both mercury and carbon monoxide poisoning are preventable through education and grassroots opportunities to change behavior.



WV Code § 29-3-16a. As of July 1, 1998, this law requires a carbon monoxide alarm to be installed in newly constructed residential units which include or are attached to buildings that include fuel-burning, heating or cooking. It also requires any person installing a carbon monoxide detector, or doing repair work on fuel-burning heating source, cooking source or venting, to inform the occupants of the residential unit of the dangers of carbon monoxide and the instructions for the equipment installed or repaired.

States also can work with business and equipment manufacturers to prevent carbon monoxide poisoning. For example, since 2004, NCEH has been working with businesses such as Home Depot and Lowe's to provide the public with CO poisoning prevention messages in stores, including videos, PSAs over intercoms and take-home literature placed at checkout counters and by CO-producing products such as portable generators and gasoline-powered power washers and blowers.

The harmful effects of both mercury and carbon monoxide poisoning are preventable through education and grassroots opportunities to change behavior. There appears to be a need for legislation that can provide funding opportunities to support an ever-growing new population through injury prevention education. Keeping a tragic event from happening should be the goal. This article offers the opportunity for proactive partnerships between state and local governments, the private sector and the consumer through education and funding support.

For more information on preventing CO poisoning, visit www.cdc.gov/co/ (general information) and www.bt.cdc.gov/disasters/carbon_monoxide.asp (emergency-related information).

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This article is available on the Web at: http://www.healthystates.csg.org/NR/rdonlyres/60336A35-D0F9-428A-8E4D-33D117167AF1/0/CP_EcosWinter069to11.pdf.

healthy states

The Healthy States Initiative is a partnership among The Council of State Governments, the National Black Caucus of State Legislators and the National Hispanic Caucus of State Legislators. The initiative is supported by the Centers for Disease Control and Prevention.

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Funding for CSG's Healthy States Initiative is provided by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, under cooperative agreement U38/CCU424348. The contents of this publication are the responsibility of CSG's Healthy States Initiative and do not necessarily represent the official views of the CDC or CSG.



NHCSL

This article was produced by the National Hispanic Caucus of State Legislators (NHCSL). NHCSL is the pre-eminent organization representing the interests of 300 Hispanic state legislators from all states, commonwealths and territories of the United States.

Founded in 1989 as a nonpartisan, nonprofit 501(c)(3), NHCSL is a catalyst for joint action on issues of common concern, such as health, education, immigration, homeownership and economic development to all segments of the Hispanic community. NHCSL also works to design and implement policies and procedures that will impact the quality of life for Hispanic communities; and serves as a forum for information exchange and member networking, an institute for leadership training, a liaison with sister U.S. Hispanic organizations, a promoter of public/private partnerships with business and labor, and a partner with Hispanic state and provincial legislators and their associations representing Central and South America.

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