Community-Based, Participatory Research in Lawrence, Massachusetts, Flags Environmental Health Hazards and Fuels Education and Action

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Collaboration among community residents, environmental scientists, and local health agencies and providers in the Casa de Salud (Health House) project informs the environmental health agenda for Lawrence, Massachusetts, a largely Latino-populated city suffering from industrial decline, antiquated rental housing, and myriad environmental hazards. For example, when Casa learned from residents that local botanicas sold mercury in capsules for ritual purposes, the project conducted a community-based, participatory research study that documented and described extensive mercury use among Spanish-speaking residents; in response, the Casa project partners generated educational outreach activities in Spanish and English. This report describes this community-based, participatory research study.

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The city of Lawrence, Massachusetts, is the state’s oldest planned industrial community. Nearly two centuries after cotton mills flourished here along the Merrimack River, the city bears environmental scars from years of industrial...
use, compounded by unemployment and poverty left behind by the region’s industrial demise. Furthermore, rental housing built more than seventy years ago exposes families to myriad health hazards in the course of daily life. Lawrence’s children have high levels of asthma with nearly 10 percent of public school students affected and extraordinarily high lead levels, almost three times the average rate for Massachusetts.

Lawrence has a significant Latino population—the current school-age population is more than 80 percent Hispanic—and a per capita income under $10,000. However, community and government efforts to address environmental health threats have conspicuously lacked input from the city’s Latino residents. In 2000, the Casa de Salud (Health House) environmental justice project was launched to ensure Latino residents an active role in confronting the city’s environmental health problems. The project is managed by Boston-based JSI Center for Environmental Health Studies and has been funded by community-based, participatory research grants from the U.S. Environmental Protection Agency and the National Institute of Environmental Health Sciences.

Casa’s approach is to foster mutual education among environmental scientists, health care providers, and local Latino residents. JSI and the Greater Lawrence Family Health Center, a local health care provider, bring to Casa up-to-date environmental health information, evidence-gathering techniques, and frameworks for building community action and driving policy change. A local social services agency, Family Service, Inc., hired a Latina coordinator to manage the activities that engage residents. The participating residents, in turn, contribute their first-hand knowledge about the community’s concerns, beliefs, and daily life. The multipartner collaboration keeps the work toward a healthier environment on an effective and mutually agreed-upon path.

The engine that drives Casa de Salud is its cadre of “Casa Leaders.” The Casa Leaders are a group of local, Spanish-speaking residents whom the project hired and then trained—in Spanish—in research methods, outreach work, and environmental health issues. For some, the part-time job represents a personal leap toward professional opportunities. The Casa Leaders regularly convene community meetings, or charlas, conducted in Spanish, to identify and address local environmental problems.

Usually held in Casa Leaders’ homes, the charlas provide information to Latino residents in a culturally familiar setting and in their first language. More important, the meetings produce conversation among the Casa project partners that illuminates the context in which environmental health threats exist and that provides new information for “outsiders” about hazards that are prevalent in the community.
From the start, the community meetings informed, if not defined, Casa’s environmental health agenda for this densely populated city. In the first charla, residents identified excessive amounts of trash as a priority issue. Conversation quickly revealed the problem’s complexity: trash attracted rodents and cockroaches, which caused indiscriminate use of pesticides, which, in turn, increased vulnerability to respiratory illness. Residents provided strong, qualitative evidence of the real and disturbing effects on the community of chronic, excessive trash and its related problems; for example, a day care worker offered a first-hand observation, “Almost every kid has asthma.”

The detailed and specific information garnered from residents attending the charlas helps Casa to develop appropriate outreach materials and hands-on educational programs in English and Spanish. For example, knowledge of community concerns about asthma led the Casa partners to develop training materials and presentations on asthma triggers and indoor air issues for use at subsequent charlas. Thus, the Casa Leaders were able to respond to their neighbors’ concerns with relevant information and encourage them to take personal and political actions to better the situation.

While the charlas inform the expanding environmental agenda for Lawrence by gathering local residents’ health conditions, perceptions, and demands into the public discourse, they also stimulate concrete community action to improve conditions. For example, more than fifty auto body shops are nestled within Lawrence’s densely populated residential blocks, many adjacent to homes, schools, and playgrounds and many owned by Latinos. To address rampant emissions and unsafe practices of the auto body shops, Casa developed a Spanish-language, person-to-person worker health and safety campaign, implemented by a Latino resident. The Casa activities have helped to place environmental concerns on the Lawrence city government’s radar screen, and the city’s mayor has established a health task force.

With several years of experience behind them, the Casa Leaders in spring 2003 conducted a formal research study to investigate a little-known community health threat: the ritual use of mercury. In some Latino cultures, sprinkling mercury around one’s home or car, adding it to a bath or a perfume, and burning it in a candle are practices believed to bring good fortune and ward off evil. Botanicas (stores for herbal and other religious, spiritual, and alternative health items) sell capsules that contain nine grams of mercury—more than ten times the amount contained in a household thermometer. Traditional practices require the user to open the capsule to sprinkle the mercury where good fortune is desired. However, releasing mercury into the environment can cause neurological damage and is particularly hazardous to pregnant women and young children.
When the Casa Leaders informed Casa project partners that local botanicas were selling capsules of mercury for ritual use, Casa’s environmental scientists validated the Casa Leaders’ concerns by developing a brochure (in English and in Spanish) to educate residents about the dangers of ritual mercury use. Furthermore, the Casa partners agreed on the need to document the nature and prevalence of this practice. A grant from the Environmental Justice Office of the Massachusetts Executive Office of Environmental Affairs funded JSI to direct a mercury study in Lawrence. The survey instrument developed by JSI was locally field-tested with the Casa Leaders, who reviewed the survey to ensure that it was appropriate and could be used effectively in the Lawrence Latino community.

In June 2003, the Casa Leaders surveyed nearly nine hundred Spanish-speaking residents at festivals, barber shops, laundries, day care centers, churches, supermarkets, and other community places where Latino people gather about their knowledge, beliefs, and use of mercury. The survey documented extensive ritual mercury use in Lawrence. The findings showed that almost 40 percent of respondents either knew someone who had used mercury for religious, spiritual, or health purposes or had used it themselves. The Casa survey found that 108 people sprinkled mercury around a child’s crib, 152 burned it in candles, 143 applied it to their skin, and 91 swallowed it in a drink. Although the Casa Leaders were the ones who called attention to ritual mercury use in the first place, they were as surprised as anyone else by the results. The survey responses suggest that many have used mercury in a way that carries a health risk of which they may be unaware. Furthermore, the study found that some botanica owners who cater to Latino customers were also unaware of mercury’s hazards.

The mercury survey findings have guided the Casa project to undertake community education. The Casa Leaders and project partners are distributing the brochures in Spanish and English, and future outreach activities will aim to spread information about mercury’s dangers and encourage the use of alternative, nontoxic herbal substances also available from the botanicas. While not attempting to change people’s religious or cultural practices, the Casa Leaders aim to spread information about the hazards of mercury use.

Casa’s effectiveness depends on creating and sustaining a mutual dialogue in Lawrence among Latino residents and the scientists and health providers working to bring evidence-based strategies to bear on environmental improvements. Because the Casa Leaders are community members, their perspectives help call attention to the most pressing issues and are critical to documenting the actual prevalence of local health hazards and suspected harmful practices. The Casa Leaders also model for their neighbors a
proactive attitude that encourages people who ordinarily might feel powerless to speak up and take action on their own behalf.

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