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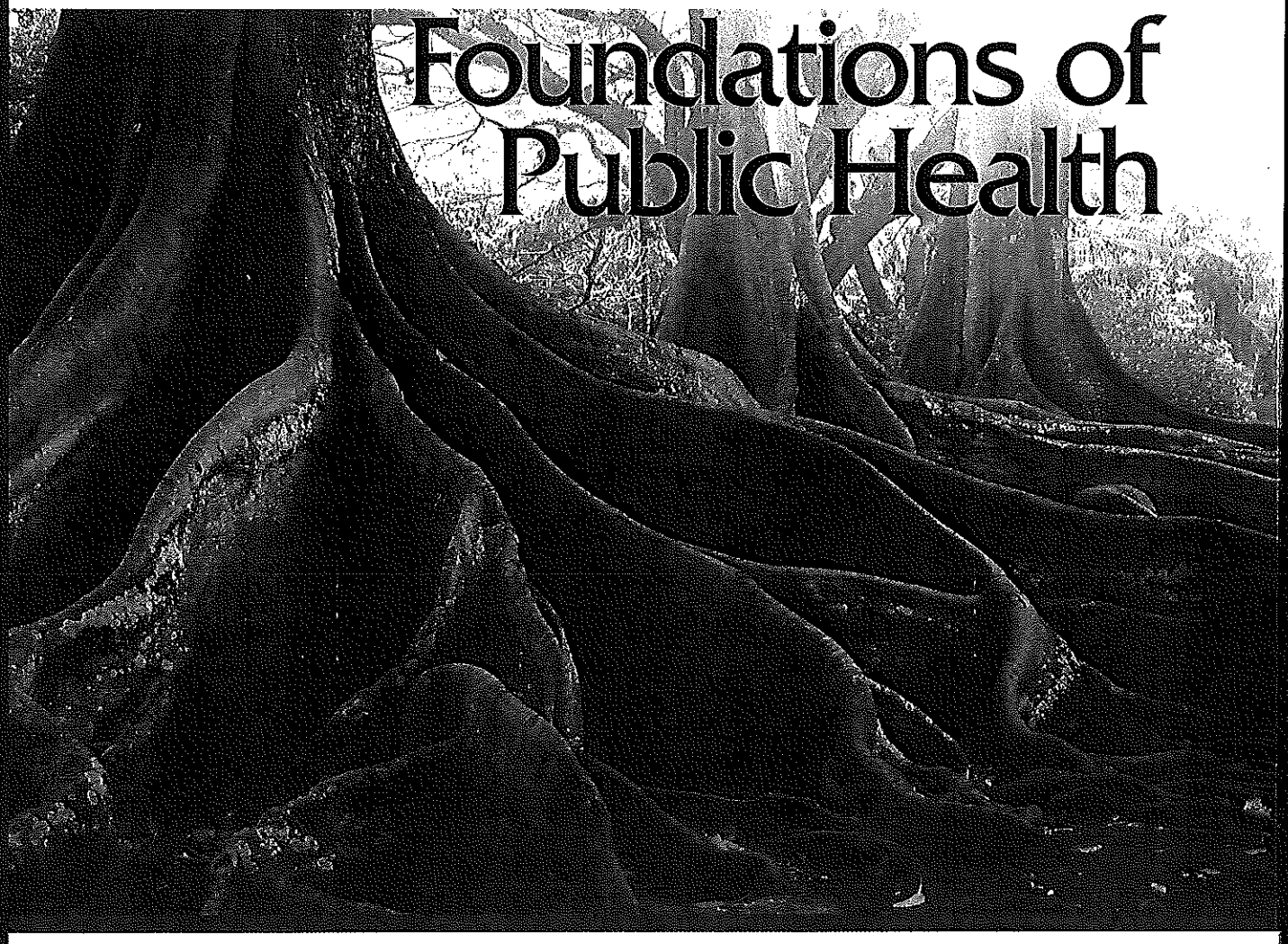

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CHAPTER

16

Approaches to Policy and Advocacy

Linda M. Whiteford

This chapter presents an interdisciplinary perspective on the use of social and behaviorally based research to provide the foundations for effective advocacy and resultant policy change. It is written by a medical anthropologist with master's degrees in public health and anthropology, a doctorate in cultural anthropology, and years of research in the health arena. The perspective discussed in the chapter combines the theoretical frameworks of medical ecology and the political economy of health. The three case studies that form the core of the chapter demonstrate the power of interdisciplinary research and its applicability to the world of policy and advocacy. In addition, the research illustrates the importance of multilevel frameworks that incorporate both the physical and the sociopolitical environments in public health interventions. It draws on research conducted in Latin America and the Caribbean, included to show how research can provide information for advocacy used to effect policy. At first glance, the three case studies may appear to be disparate and unconnected. The topics are varied, as are the locations. The first case study

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follows an attempt to curtail a cholera epidemic in northern South America. The second study follows families in Ecuador being forced to evacuate their homes and communities because of the imminent danger of a volcano exploding and killing them. The third study looks at the Cuban development of an innovative and effective primary health care (PHC) model.

What do the case studies share, and how do they help us understand how research can shape policy? What can we learn from them about the social and behavioral foundations of public health? One point each of the case studies demonstrates is that research objectives and applications need to be identified as the research is being designed, not later. Research aimed to shape policy must recognize its potential target audiences and make sure to collect data that are meaningful to those audiences, as well as data that will expand members' ways of thinking. If one is hoping to shape, for instance, disaster response policy, data must be collected about such actual occurrences, documenting both the strengths and the failures of such policy as they occur in real time, with real people, and with real options. In the second Case Study, Disaster Response in Ecuador, we followed people who had been evacuated and resettled, interviewed them, and interviewed public officials, the Civil Defense authorities, and members of the local, state, and national governments. But what we brought to the discussion that had not been provided before were the words and opinions, hopes, and losses of the people resettled, and the policymakers wanted to hear what they had to say.

Too often, policymakers are unaware of the local realities and the real-time needs of people affected by the policies they make. Moreover, policymakers rarely have the time (or the skills) to conduct the kind of fieldwork that would provide them with that information. That is why researchers who are interested in shaping policy are in an enviable position to supply policymakers and advocates with critically needed information.

Each of the three cases provides a different story, but they all share a commitment to research criteria that makes them useful for both advocacy and policymaking. They are all multidisciplinary, bilateral, and multisite. In addition, they all highlight the importance of simultaneous local and global involvement, training, and monitoring, and they all are based on a careful review of current literature in their areas and the expansion of the research questions initially derived from that review. And last, perhaps most important, they all return to their various constituencies—the community, the state, the neighborhood, the agency or organization, and the intellectual discipline—research results in usable and appropriate forms.

CASE STUDY Cholera in Ecuador

The first case shows how research that incorporates participants from various stakeholder or interest groups increases the likelihood of the results being used to shape advocacy or policy. In addition, it demonstrates the power of participatory research methods. In 1991, an epidemic of cholera began in Peru and for 2 years spread across South America. Before it was over, more than 9,000 people had died and many more had been sickened by it (Whiteford, 1993; Whiteford et al., 1999). Cholera is an acute intestinal infection with a short incubation period that produces an

enterotoxin causing copious amounts of watery diarrhea. If left untreated, cholera can quickly result in severe dehydration and death. It is particularly deadly among children and the elderly, those who are immunologically compromised, or anyone who is nutritionally or otherwise physically stressed. It has been called "the blue death" because patients nearing death from cholera have been known to turn a shade of blue or gray from the loss of fluids circulating in their bodies (Kiple, 1993).

Cholera holds a significant place in the history of understanding disease transmission due to John Snow's classic 1853 study of the cholera outbreak in London (DeSalle, 1999). Snow demonstrated that cholera was a waterborne disease by removing the handle of the Broad Street water pump (and thus making access to the water in that system unavailable), thereby stopping the spread of cholera along the lines of that water system. It was not until later that it was learned how the toxin was introduced into the drinking water (it was seepage from a contaminated cesspool that leaked the cholera bacteria into the Broad Street water system), but Snow was able to show that cholera was transmitted through contaminated water.

Waterborne diseases such as cholera are intimately affected by human activities. These activities may be related to development (dam building and associated human resettlement), inadequate water and sanitation infrastructure (open or undisinfected water systems, human or animal defecation in or near water systems), or even labor migration (returning migrants can re-infect water systems). In addition, patterns of water usage are shaped by cultural beliefs, gender-based labor patterns, history, and geography. Once the cholera bacteria is introduced into the human host by the ingestion of water contaminated with human or animal feces or urine containing the pathogen, the means to disrupt transmission will depend on factors such as the location (urban or rural population), population size (concentrated or dispersed), access to resources (water and sanitation infrastructure), cultural identity (beliefs about disease transmission, animals, the environment), and power (status, agency) of the people experiencing the outbreak.

In the Ecuadorian case, the governmental and international health authorities were able to control the outbreak in the urban centers within the first 15 months of the initial epidemic through commonly understood public health measures: improved hygiene through waste disposal and hand washing. However, the rural, dispersed, and indigenous communities of the Andean highlands continued to suffer from ongoing deaths due to the disease. The Environmental Health Project (EHP), the water and health component of the Camp, Dresser, and McKee (CDM) company, agreed to work with the Ecuadorian government to study the situation and make recommendations to reduce the continuing cholera-induced suffering in those communities. Along with May Yacoob, a medical anthropologist working for EHP, a field team was put together to conduct research on five highland communities in southern Ecuador that had continuing high levels of cholera. I was the Team Leader representing EHP. We created a national team composed of a physician from the Ecuadorian Ministry of Health (Dr. Carmen Laspina) and an Ecuadorian psychologist trained in nonformal education (Dr. Mercedes Torres). With May Yacoob in the United States and the three of us working in the field, we began the project.

Ecuador is one of the smallest countries in South America, located in the northwest between its larger and more powerful neighbors, Colombia and Peru. Ecuador straddles the equator (hence, its name), situated in both the northern and the southern hemispheres. Geographically limited

(260,000 sq. km), it encompasses both an extraordinary natural biodiversity of birds and plants and a rich cultural diversity.

Indigenous cultures such as the Shuar, Chachis, and Achuar compose some of the more than 14 distinctive ethnic groups (Perrottet, 1993). Most travelers to Ecuador know the two primary cities—Quito, the Andean capital between the two cordilleras of volcanoes that create the "spine" running from the north to the south of Ecuador, and Guayaquil, the large coastal city on the Pacific side of the country. Other travelers know the Amazon in the south or the famous weaving center, Otovalo, in the north. While the cool, high mountains of the Andes attract many visitors, the lush and fascinating Amazon region draws others. Birders and hikers from around the world visit the Galapagos, Ecuador's offshore islands, with unlimited fascination.

As a secondary center of the Spanish Empire, Ecuador never experienced the degree of glory or endured the hardships that Peru and Colombia did, but its customs and architecture reflect many cultural and physical inheritances from the Spanish occupation. Along with these, Ecuador adopted beliefs about European superiority, with the result that indigenous groups are among the most economically deprived in the country. They live in the remote regions with limited access to resources, including water and sanitation. The 20 townships where the epidemic continued to rage were in five states, two along the Pacific coast and three inland, in the highlands.

The three mountain states with the highest ongoing rates of cholera were Chimborazo, Cotopaxi, and Imbabura; they also have the largest concentration of indigenous people in Ecuador. These are states rich in indigenous traditions, festivals, rituals, and cultural beliefs and practices. All five states share high levels of poverty and the structural violence maintained by distance, both geographic and social, from power. The three mountainous states suffered also because their population was predominately indigenous, rendering them targets for prejudice and further isolating them from access to resources.

The methodology we employed brought three levels of teams to work together: what we called the national team; a regional team composed of representatives from various nongovernmental, governmental, and private agencies working in the region; and a local team of members of the community. The teams were selected to represent those groups that were stakeholders, with a special interest in the area. Individuals were invited to join the teams so that we could learn from them about their work, to train them in methodologies that they could later employ (such as community mapping), and to make them the repositories of the "institutional knowledge" of the project. Our goals were (1) to use local and EHP teams in order to identify cholera-related adult behaviors in high-risk communities, with the objective of isolating behaviors and beliefs associated with potential increased risk of cholera; (2) for all three teams to gather and analyze data on environmental and domestic health behaviors; (3) to develop and implement local interventions to change high-risk behaviors; (4) to establish a locally controlled monitoring system; and (5) to train people from the local and regional teams to monitor and document ongoing activities.

We developed a local health intervention model, the Community-Based Participatory Intervention (CPI) (see the References for more details on CPI.). We trained 55 individuals in community education techniques and leadership skills, conducted ethnographic and

epidemiologic research, and designed and led community-based interventions (Whiteford, Laspina, & Torres, 1996).

The project successfully identified beliefs and behaviors implicated in the spread of cholera and brought about a sustained reduction of cholera in the two project states. Using a critical medical anthropology perspective, the teams identified several actions that directly and indirectly facilitated the spread of cholera: defecation in fields or other areas close to living and eating activities; substandard hygiene related to water; water insecurity; consumption of food prepared by street vendors as well as the conditions in which they served food; food preparation and distribution during religious and community festivals; and contact with migrants returning from endemically infected coastal areas. In addition, we identified contributing environmental conditions, such as the disposal of hospital waste in open canals from which downstream residents drew their drinking water.

Research that has policy as an aim must also be cognizant of the larger context in which policymakers operate. In the cholera example, neoliberal global pressures and their resultant policies shaped the larger context in which any sustained cholera control would occur. In the late 1990s, as national governments turned their attention to global trade, they further excluded the marginalized, rural, indigenous communities from basic services. The decentralization of responsibilities often associated with neoliberal reforms frequently resulted in an increased burden on local communities. Such communities found themselves responsible for the provision of clean water or sanitation—infrastructures that the central government had failed to establish. Placing the responsibility on local communities to provide the necessary resources for developing or maintaining infrastructure made adequate water and sanitation impossible for the poor.

In the case of the cholera epidemic in Ecuador, the beliefs and behaviors of individuals in the most highly affected communities were relatively easy to identify. People recognized ways to change their own behaviors in order to reduce the likelihood of cholera, provided they could pay for soap, chlorine, and household water storage tanks. With resources made available through project funds, five target communities in two states (Chimborazo and Cotopaxi) were successful in controlling cholera and sustaining the reduction. The participatory methodology and the investment of stakeholders allowed the communities to identify geophysical barriers to care, such as population dispersion, the lack of piped water or sanitary systems, distance from urban centers and their resources, and the need for labor migration because of the lack of local jobs.

In addition, the perspective incorporated the importance of local beliefs and actions that became the framework for changes identified and supported by the community, such as increased hand washing, disposal of fecal materials away from water storage, and awareness of disease transmission routes such as common bowls for food sharing either at ritual occasions or on the street.

A final, and initially unanticipated, effect of the project was the development of leadership among both young people and women—groups traditionally excluded from leadership positions in traditional Quechua societies. When I returned to these communities on another project 10 years later, I learned that two of the community leaders from our cholera-reduction project had gone on to complete college and then returned to their communities as leaders, and cholera was no longer present in any of the five research communities. The data we generated; the analysis we conducted; and, in particular, having teams drawn from the community, statewide institutions,

and the Ministries of Health and Education resulted in findings that were able to inform local, regional, and national policies. The participatory methodology employed was written into education and health plans, and the participants—from all three levels—continued to employ the participatory methodologies in their work. The participants became advocates, and the research was incorporated into regional and national policy.

CASE STUDY Disaster Research in Ecuador

The second case study demonstrates the power of local knowledge and its necessity to inform policy. Resettling populations to remove them from hazards is an oft-used strategy, preferred by policymakers and disaster managers alike. Populations often settle near rivers (that may flood), near volcanoes (that may explode), in valleys (that may experience mudslides), or near oceans (with tsunamis) for reasons related to the quality of the soil, the fish in the ocean, and the temperate climate in the valley. Since governments cannot move the ocean, the volcano, or the river, they often choose to relocate the people who have settled near the hazard. Once relocated, the resettled people are rarely queried about their experience; hence, policymakers have little or no information about what happens to people once they are moved. Without that information, policymakers only know that the people are no longer in the line of danger, but they know nothing about how the loss of home, the disruption of social networks, and the loss of employment affects the lives of those resettled.

In October 1999, government authorities in Ecuador, in consultation with the director of the Geophysical Institute (H. Yepes, personal communication, February 4, 2000) decided that the danger of an eruption from the Tungurahua volcano and the possible consequential loss of life necessitated an immediate evacuation of the communities surrounding the tourist community of Baños, Ecuador. Some residents who were being affected by ash or threatened by mudflows had already voluntarily evacuated (United Nations Office for the Coordination of Human Affairs [OCHA], 1999). The evacuation became mandatory on October 15, 1999; people residing in the hazard risk zone were given approximately 36 hours to leave the area. Because the civilian Civil Defense force was unable to force their friends and neighbors to leave, the military enforced the evacuation (Cable News Network [CNN], 1999). In the 36 hours that elapsed between the announcement of the evacuation and the closure of the community, people left, resisted, hid, were found, and were forced out. Those least able as well as those least willing to leave felt the greatest effect of the military force. An estimated 26,000 people were moved to more than 60 locations, including private homes, hostels, and government shelters in the provinces of Tungurahua and Chimborazo, where some remained for more than a year. According to the Ecuadorian Red Cross, the Civil Defense set up 125 sites as temporary shelters, and the official count of evacuees in shelters rose to 2,443 early in November (Cruz Roja Ecuatoriana, 1999a, 1999b).

The presence of a potential disaster does not necessarily imply that either the political authorities or the local populations will take the threat seriously, particularly in terms of planning to leave their homes and belongings. Therefore, when an evacuation is enforced, people are often

in a state of shock, frightened, disbelieving, and ultimately unprepared to leave. During the 1999 evacuation, people first sought to find their family members so that they could evacuate together and then tried to find family or friends living outside the evacuated areas to whom they could go for shelter. They piled into cars, stuffed their belongings onto trucks, locked up their houses, and moved in with family members in Ambato, Riobamba, or even as far away as Quito. That is, if they had cars or trucks and if they had families who would let them live with them. Many of the middle- and upper-class Bañenos left in the first 24 hours of the evacuation because they could locate their family members by telephone, they could contact friends and families in other cities to ask them to take them in, and they could move their family and belongings in their own private cars and trucks.

Others were not so fortunate; their family members may have been day laborers working away from home and not accessible by telephone. Thus, to evacuate together, families had to wait until each of their members heard about the evacuation and came home. If they could find others to take them in, and public transportation to get there, then they went to stay with friends in other cities. More often than not, by the time the family was reunited, the evacuation was well under way and public transportation was not available. Private trucks rented for the trip went back and forth along the single narrow road between Baños and Ambato (an hour's journey each way) ferrying people and their few belongings. Within hours, the road was clogged with people trying to leave either on foot or in the few available vehicles. In the last hours before the military closed the road, military trucks picked up those who were still in and around Baños. Many could not find family or friends to take them in, some were evacuated to government shelters, and others were resettled. It is clear that the poorest of the poor seem to have disappeared, and many have not returned to the hazard area. Official records of the number of people relocated in shelters or resettled to other areas are unclear, but in the most rural areas it appears that the poorest went farther into the countryside. They were not found in either the government shelters or in the resettled areas.

While the government made an attempt to resettle people where their children could continue their schooling, the resettled individuals were away from the temperate and lush ecological zone of Baños. Some from Baños were relocated to the community of Quimiag, located in the high sierra, where it is cold, damp, and moist for most of the year. Local Quimiag families contributed housing to the evacuees, but the resettled families had little furniture, no heat, and few blankets. In addition, the resettled families had lost their household gardens and chickens, as well as their neighbors and extended families—traditional means of support in times of crisis. Their kids got sick more often than kids from local families, who were not resettled, and resentment gradually grew. Local Quimiag residents came to believe that the resettled families were receiving "unfair" amounts of support from international and national aid societies, while the resettled families became suspicious of their nonresettled neighbors.

Resettled families had no recourse to settle disputes, a situation epitomized by the apparent generosity of an absentee landlord who offered the resettlement group his land on a steep hillside to plant potatoes. The resettled families called for a community workgroup (*minga*), and men, women, children, pregnant women, and women with babies on their backs or at their breasts all worked the hillside. After several weeks of cultivating the mountain slope and terracing the

fields, they planted the potato crop. They were successful. Their crop came in, and the families anticipated food for the winter and potatoes to sell. However, before they could harvest the crop, the landlord took back his land and the crop with it. The community had nothing to harvest, nothing to eat, and no seed potatoes for the following year. They were living on borrowed land with no rights and no official paper to support their claims. Sadly enough, the story is neither apocryphal nor unique to this resettled group.

Agricultural practices in the area were also seriously compromised by hazardous events, including volcanic ash. For example, the water supply for agriculture was usually taken from a local canal. However, in January 2000, flow of water in the canal was interrupted due to a landslide. The evacuees were told by agronomists that there would be no water from this source for at least 6 months. They then began to collect rainfall and were determined to find water from another source, by whatever means: "*Tenemos que encontrar agua de cualquier manera.*"

What emerges is a picture of the poor bearing the greatest burden for a social policy that unfairly targets them because of their relative inability to resist. The effects of the resettlement policy, so favored by emergency planners, is not equally distributed among various groups within the population but rather is concentrated among the working poor. It is the poor who, because they were dependent on public transportation, had to rely on the military to move them from their homes to a government-sponsored alternative shelter. It is they who find themselves being resettled rather than staying with friends or even in shelters. And it is their children who suffered the most negative health consequences. Children whose families were relocated were sick more often than those in shelters.

Furthermore, children in the resettled communities did not have the same access to health care as did children in shelters. The Provincial Health Directorship in the two states to which families were evacuated in 1999 took active responsibility for health in the government-sponsored shelters, particularly that of children. In contrast, those families resettled in small communities scattered throughout the two states did not receive the same level of attention. They were left to visit local clinics, health posts, or other places if they were sick enough and someone could be found to take them.

Resettling families following an emergency evacuation, therefore, can have unhealthy consequences, especially for the children. They are removed from their extended kin, from schoolmates, and from their routines. They are put into situations where their families are experiencing extreme stress as they struggle to settle somewhere new, find economically productive ways to support their families, and adjust to new surroundings, people, and expectations.

The data strongly suggest that resettlement is an unhealthy policy for children in many aspects. They fall between the various systems established to protect the youngest and most vulnerable. With scarce resources available, the public health system focuses its attention on the concentration of people evacuated into shelters, leaving scattered, resettled families to fend for themselves.

Emergency evacuation and resettlement policies can have unhealthy consequences, and furthermore, they can exacerbate already existing social cleavages. Not all people are resettled; usually, only those without other resources are identified for resettlement. The Ecuadorian research also suggested that there are ways to improve the resettlement experience that are generalizable and should be of concern for public health workers.

These data can be used to provide information to advocates and to facilitate improvements in public health policies. They are aimed at improving the health of those resettled by reducing the stress associated with the experience, and rather than making resettlement a punishment for those without access to other resources, resettlement could be a positive option. To make it such an option, the following steps should be taken: (1) town meetings and discussions should be held to inform community members of hazard risks and the remedial options available, including the resettlement of families in the event of disaster; (2) resettlement strategies should be made available to all members of the community at risk, especially when confronted with the potential of catastrophic disasters; (3) resettlement sites should be found similar to the site being vacated so that lifestyle, agricultural practices, and the like are transferable; (4) resettlement policies should include specific attention to the ongoing health care of the families after they have been relocated; (5) resettled families should be provided legitimate ways to gain ownership of the land on which they are resettled; and (6) government protection should be provided to families after they have moved.

The public health lessons learned from this analysis are important for community activists and advocates, disaster mitigation planners, civil defense authorities, and governmental policymakers. The lessons are that social and behavioral research should help policymakers situate their policies in the lived realities of daily life as well as in the larger political and economic context. For the researcher, this means that we must understand the social and cultural cleavages in the fabric of the society being studied and document the distribution of power in the society. Failure to recognize and be cognizant of the constraints and possibilities imposed by these contexts limits the efficaciousness and applicability of any recommendation, whether to policymakers or advocates.

Policies that are developed without input from the affected population or uninformed by the lived realities of those affected are doomed to failure. In the case just described, the researchers worked with and shared study findings with diverse stakeholders, including local, regional, and national politicians and policymakers in Ecuador; the international community of disaster management; the authorities in the Ecuadorian Civil Defense and Geophysical Institute, the Ministry of Health; and our colleagues in our professional disciplines. As a result, the research findings have been used by advocates to help shape civil defense and evacuation policies.

CASE STUDY Health Research in Cuba

The third case study is about a model of health care, particularly PHC. The aim of this study was not to shape Cuban health care policy but rather to provide information to policymakers in international health care agencies and national policymakers outside Cuba. To do that, data were gathered from a variety of sources, including international health agencies such as the World Health Organization (WHO), the Pan American Health Organization (PAHO), the United Nations (UN), the Population Reference Bureau (PRB), and the Population Council, because their data are generally accepted and considered reliable. Those data were then triangulated with extensive statstical reports provided by the Cuban government. In addition,

I spent periods of time in Cuba over a span of 12 years interviewing health professionals, clients, and visiting health posts in various Cuban cities. A significant component of this long-term project was working collaboratively with Cuban social scientists and medical practitioners. Because entry to Cuba is restricted for U.S. citizens, it is important to note that all this research was legally conducted with the appropriate permissions from U.S. and Cuban government officials. The research resulted in numerous academic publications and presentations at professional meetings. However, trying to reach policymakers required another form of information presentation. To address this issue, my colleague Laurence Branch and I translated our research into a book designed for policymakers.

The resultant book, *Primary Health Care in Cuba: The Other Revolution* (Whiteford & Branch, 2007), was written so that students, researchers, practitioners, and policymakers interested in public health could see how one country put into practice an effective public, PHC system. Public health researchers have long been concerned both with the Alma Ata Declaration of 1978, which set forth the PHC agenda, and with the many failures to sustain PHC effectively since then (Heggenhougen, 1984; Janes, 2004; Morgan, 1990, 2001; Walsh & Warren, 1979; Whiteford 1990). Equally significant in the current public health literature is the role of equity, both relative and absolute, as a predictor of health outcomes, as noted in Chapter 3 (Heggenhougen, 2005; Wilkerson, 1992, 1996; Wilkerson & Marmot, 2003). The Cuban experience offers important lessons regarding the reduction of socioeconomic disparities and improvements in health status (Pardo, Márquez López, & Rojas Ochoa, 2005).

The following case study highlights the Cuban PHC system as an example of a successful translation of policy into practice. How do we begin to understand Cuba and its ability to produce a PHC system that some argue is second to none in its coverage and continuity of care? The Cuban model of PHC depends on both governmental and citizen participation, an extensive network of family medicine practitioners, widespread preventive services, and epidemiologic surveillance. There have been significant and continuous improvements in mortality and morbidity rates for the Cuban population, particularly for those living in the rural areas. The most significant improvements occurred in the areas of infant, child, and maternal health and the control and eradication of some infectious and contagious diseases. To understand how Cuba was able to succeed in increased distribution and access to health care while reducing disease rates, we need to review the evolution of the Cuban PHC model.

The 1959 Revolution, the subsequent Soviet economic support, the U.S. embargo against trade with Cuba, and Castro's longevity and unflagging commitment to public health as a basic human right each separately and together have shaped the development of health policy in Cuba. As Chomsky (2000), Feinsilver (1993), and others have noted, the development of the Cuban health care system was shaped by three assumptions that were central to the Revolution: (1) Health was the responsibility of the state; (2) health was a social as well as a biological issue; and (3) health was a national priority, requiring participation from all sectors of the government and civil society. Added to this list, as Chomsky notes, is the fact that Cuba refused to accept the concept that less economically developed countries could not support primary and preventive medicine while simultaneously supporting tertiary or hospital-based care (p. 333). This refusal to concede responsibility for health care allowed Cuba to create a complex health care system comparable with those in the more developed world rather

than relying exclusively on primary care and referring patients to other countries for more advanced care.

In 1962, the Cuban government introduced an innovative form of municipal polyclinic, using the multispecialty health center as the basic building block for ambulatory care. The polyclinics, staffed by a general-practice physician, a nurse, an obstetrician/gynecologist, a pediatrician, and a social worker (Feinsilver, 2002), were charged with providing health care for workplaces, child care centers, homes, and neighborhoods.

These municipal polyclinics became the core of the nascent Cuban PHC model. They were charged with providing health screening; conducting vaccination campaigns, blood drives, and neighborhood cleanup activities (especially in relation to mosquito-borne disease, since these cleanup activities were actually vector control drives); and organizing community participation through community-based social organizations. The polyclinic model that came before the family doctor program emphasized technological interventions and biomedical approaches—lifestyle issues and behavioral medicine were given a low priority, with little attention being paid to family and community life (Iatridis, 1990). While these aims and emphases may not appear unusual, as they are common practices in many places, the model did not meet the goals set by the Cuban government. The government wanted vigorous local involvement, significant attention to the social factors influencing health, and an overt and articulated focus on improving lifestyle choices for health.

Building on a series of assessments that showed dissatisfaction, in 1984, the government introduced the *family doctor model.* The assessments showed that both patients and practitioners felt that while the community medicine model was an improvement over the previous model, it provided unequal quality of care—polyclinics that served as training centers for health practitioners provided better-quality care than nonteaching polyclinics. Social factors contributing to health continued to be undervalued, while biological/technological approaches and interventions for health and illness were considered primary (Novás & Sacasas, 1989).

The family doctor program, as the name implies, put doctor and nurse teams into communities throughout Cuba, where they were responsible for the health of the families in their neighborhoods. The government placed health posts throughout the country and built above them an apartment for the doctor's family. In addition to providing housing and the health post itself, the program explicitly tied the medical team to the community. Teams were held responsible for the health outcomes of people in their catchment areas. Perhaps the most fundamental change initiated by the family doctor program was this innovation of having a doctor and nurse live in the neighborhood for which they were responsible and the identification of a geographically defined area with approximately 120 to 150 designated families (Feinsilver, 2002; Gilpin, 1991; Whiteford, 1998b, 2000). Because residential mobility is restricted in Cuba, the family doctor program personnel got to know the people in their assigned area. Unlike clinics in other parts of the world, where targeted audiences are defined by their income, age, or pathology (e.g., pediatric practices or infectious disease specialty clinics), the medical team in a family doctor program was assigned to cover the health care needs of a population by their geographic location.

Part of the program's continuous-care regimen was attention to ongoing health problems, assessment and risk evaluation, and observing people in their behaviors outside the clinical setting. Rather

than seeing people only when they came into the clinic for treatment, as is commonly the case elsewhere, the doctor-nurse team observed people in their everyday lives. This allowed medical practitioners to assess behavioral risks as well as medical complaints, to observe lifestyle patterns, and to intercede before conditions required hospitalization (Whiteford, 1998a, 1998b, 2000).

While the Cuban case is clearly used to demonstrate the success of its PHC model, I am not suggesting that any policymaker simply replicate the model in another country. The Cuban model is idiosyncratically Cuban. What makes the model work in Cuba is the complex response to Cuban culture, history, and political organization, and even to the U.S. embargo against Cuba. The takeaway lessons generated from this case are that expensive medical technology is not necessary for effective community-based preventive care, that contradictions within a system are inevitable and can be useful, and that the collaborative roles of the state and the community are necessary for the health of the public.

CONCLUSION

These three cases show how research employing theories, methods, and analysis from the social and behavioral sciences can be used to shape policy. Policymakers have little time to conduct research, gather data, or conduct analyses, but their policies depend on these functions. Data incorporating an understanding of how life is lived, as well as how it is measured, are critical to the design of useful policies that can be translated into effective and sustainable programs.

As the Ecuador case shows, public health practitioners were successful in stemming the cholera epidemic in the urban areas, but without information grounded in social and behavioral research, they struggled with understanding the continued emergence of the disease in the rural indigenous areas. In the second case study, Ecuadorian governmental officials and members of the Civil Defense used their knowledge of effective ways to reduce community vulnerability by evacuating communities, but they failed to account for the importance of "home" and "place" to those evacuated. In our final case, that of PHC in Cuba, public health officials did understand the significance of having a medical practitioner living in the neighborhood to whom the residents could turn in times of need or even just with questions. Having a trusted and reliable member of the community who was responsible—along with the community itself—for the health of its members resulted in improved health outcomes.

Research that incorporates historical, cultural, and environmental processes is crucial in the transformation of "fantasy" policies into real-world and applied practices. And that is, after all, an important aim of effective public health.

REFERENCES

Cable News Network. (1999). *Evacuations ordered as Ecuadorian volcano threatens* [Electronic version]. Retrieved October 17, 1999, from www.cnn.com/WORLD/americas/9910/17/ecuador.volcano/index.html

Chomsky, A. (2000). The threat of a good example: Health and revolution in Cuba. In J. Y. Kim, J. V. Miller, A. Irwin, & J. Gershman (Eds.), *Dying for growth: Global inequality and the health of the poor* (pp. 331–357). Monroe, ME: Common Courage Press.

Cruz Roja Ecuatoriana. (1999a, October). *Un nuevo volcán amenaza Ecuador* (Ecuador: Informe Especial). Quito, Republic of Ecuador: Author.

Cruz Roja Ecuatoriana. (1999b, November). *Erupciones de los volcanes Guagua Pichincha y Tungurahua* (Ecuador: Informe Especial No. 5). Quito, Republic of Ecuador: Author.

DeSalle, R. (1999). *Epidemic! The world of infectious disease.* New York: The New Press.

Feinsilver, M. (1993). *Healing the masses: Cuban health politics at home and abroad.* Berkeley: University of California Press.

Feinsilver, M. (2002). Three decades of health reform: 1960–1990. In L. Barberia, A. Castro, & D. Nemser (Eds.), *Seminar on Cuban health system: Its evolution, accomplishments and challenges—December 11, 2001* (pp. A21–A25). Cambridge, MA: David Rockefeller Center for Latin American Studies. Retrieved October 4, 2005, from www.medanthro.net/docs/castro_cuba.pdf

Gilpin, M. (1991). Update—Cuba: On the road to a family medicine nation. *Journal of Public Health Policy, Spring,* 83–103.

Heggenhougen, H. K. (1984). Will primary health care efforts be allowed to succeed? *Social Science and Medicine, 19*(3), 217–224.

Heggenhougen, H. K. (2005). The epidemiology of inequity: Will research make a difference? *Norsk Epidemiologi, 15*(2), 127–132.

Iatridis, D. (1990). Cuba's health care policy: Prevention and active community participation. *Social Work, 35*(1), 29.

Janes, C. R. (2004). Going global in century XXI: Medical anthropology and the new primary health care. *Human Organization, 63*(4), 457–472.

Kiple, K. F. (Ed.). (1993). *The Cambridge world history of human disease.* Berkeley: Cambridge University Press.

Morgan, L. M. (1990). International politics and primary health care in Costa Rica. *Social Science and Medicine, 30*(2), 211–219.

Morgan, L. M. (2001). Community participation in health: Perpetual allure, persistent challenge. *Health Policy and Planning, 16*(3), 221–230.

Novás, J. D., & Fernández Sarcasas, J. A. (1989). From municipal polyclinics to family doctor-and-nurse teams. *Revista Cubano de General Integral, 5*(4), 556–564.

Pardo, C., Márquez López, M., & Rojas Ochoa, F. (2005). Human development and equity in Latin American and the Caribbean. *MEDICC Review, 7*(9).

Perrottet, A. (1993). *Ecuador: Insight guides.* Hong Kong: Apa Publications. (Published and distributed in Ecuador by Ediciones Libri Mundi)

United Nations Office for the Coordination of Human Affairs (OCHA). (1999). *Ecuador—volcanoes Guagua Pichincha and Tungurahua: OCHA situation report No. 3* (OCHA-GENEVA-99/0182). Retrieved October 18, 1999, from UN Office for the Coordination of Humanitarian Affairs, Geneva, www.reliefweb.int/rw/rwb.nsf/db900sid/ACOS-64DBA8?OpenDocument&rc=2&emid=VO-1999-0584-ECU

Walsh, J. A., & Warren, K. S. (1979). Selective primary health care: An interim strategy for disease control in developing countries. *New England Journal of Medicine, 301*(18), 967–974.

Whiteford, L. M. (1990). A question of adequacy: Primary health care in the Dominican Republic. *Social Science & Medicine, 30*(2), 221–226.

Whiteford, L. M. (1993). International economic policies and child health. *Social Science & Medicine, 37*(11), 1391–1400.

Whiteford, L. M. (1998a). Sembrando el futuro: Globalization and the commodification of health. In M. B. Whiteford & S. Whiteford (Eds.), *Crossing currents: Continuity and change in Latin America* (pp. 264–270). Upper Saddle River, NJ: Prentice Hall.

Whiteford, L. M. (1998b). Children's health as accumulated capital: Structural adjustment in the Dominican Republic and Cuba. In N. Scheper-Hughes & C. Sargent (Eds.), *Small wars: The cultural politics of childhood* (pp. 186–203). Berkeley: University of California Press.

Whiteford, L. M. (2000). Idioms of hope and despair: Local identity, globalization and health in Cuba and the Dominican Republic. In L. M. Whiteford & L. Manderson (Eds.), *Global health policy/local realities: The fallacy of the level playing field* (pp. 57–78). Boulder, CO: Lynne Reinner Press.

Whiteford, L. M., Arata, A., Torres, M., Montaño, D., Suarez, N., Creel, E., et al. (1999). *Diarrheal disease prevention through community-based participation interventions* (Activity Report No. 61). Arlington, VA: CDM, Environmental Health Project.

Whiteford, L. M., & Branch, L. (2007). *Primary health care in Cuba: The other revolution.* New York: Rowman & Littlefield.

Whiteford, L. M., Laspina, C., & Torres, M. (1996). *Cholera control in Ecuador: Behavior-based control activities.* Arlington, VA: CDM, Environmental Health Project.

Wilkerson, R. G. (1992). National mortality rates: The impact of inequality? *American Journal of Public Health, 82*(8), 1082–1084.

Wilkerson, R. G. (1996). *Unhealthy societies: The afflictions of inequality.* London: Routledge.

Wilkerson, R. G., & Marmot, M. (Eds.). (2003). *Social determinants of health: The solid facts.* Copenhagen, Denmark: World Health Organization, Regional Office for Europe.