

# UC Berkeley School of Public Health Protecting and Promoting Health around the World

Faculty at the School of Public Health are actively engaged in addressing the health challenges of today's world. Listed are just a few examples of their myriad international efforts:

## ASIA

**Bangladesh:** Allan Smith has worked extensively with WHO in Bangladesh to assess the problems of arsenic in drinking water. He directs the Arsenic Health Effects Program, which is planning a major study of exposed children assessing their lung development and respiratory symptoms resulting from arsenic. The program is also conducting studies in Argentina, Chile, and India.

**China:** Teh-wei Hu has worked on tobacco control and health care reform in China for 15 years. With funding from the Fogarty International Center, National Institutes of Health, he and colleagues have worked closely with China CDC, major Chinese universities, the World Bank, and WHO to study the impact of tobacco control on public health and the Chinese economy. These findings have helped China's government and the People's Congress in their tobacco control policy making, particularly with China's pending ratification of the Framework Convention of Tobacco Control. Hu has also assisted China in organizing a rural health insurance program, consulted on the establishment of the National Health Insurance Program in China, and restructured the entire fee schedule for the Hong Kong public health care system.

**China:** Robert Spear leads a long-term collaborative project centered on understanding, monitoring and controlling the transmission of the intestinal parasite *Schistosoma japonicum* in rural communities. The collaboration with the Sichuan Institute for Parasitic Disease involves the collection of data using new technologies, such as global positioning systems for mapping and geographic information systems for managing epidemiological and ecological data in an integrated data model.

**China:** In response to the devastating SARS epidemic, Arthur Reingold was invited to give an annual one-week course in infectious disease epidemiology and control at Chinese University of Hong Kong. The course trains physicians, nurses, and other health professionals in the application of epidemiologic methods to current and possible future infectious disease threats.

## NORTH AMERICA

**China:** Martyn Smith has been studying the effects of exposure to benzene. He and colleagues recently found that Chinese factory workers exposed to low levels of the chemical had significantly lower blood cell counts compared to workers who were not exposed.

**India:** Kirk Smith's group is exploring the relationship between indoor air pollution from use of solid fuels and tuberculosis in case-control studies with colleagues in three states using a multi-center design, in addition to developing new exposure assessment techniques with Indian colleagues at various sites using newly developed smart, cheap, data-logging particle monitors.

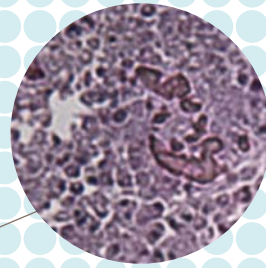
## EUROPE

**Ireland:** S. Katharine Hammond toured Ireland lecturing about passive smoking in anticipation of the country's workplace smoking ban. While in Ireland, she assisted in designing and implementing a study of secondhand smoke in the pubs before and after the ban.

**Switzerland:** Richard Feachem directs the Global Fund to Fight AIDS, Tuberculosis and Malaria, a global public-private partnership aimed at attracting and disbursing additional resources to prevent and treat these diseases. This partnership between governments, civil society, the private sector and affected communities represents a new approach to international health financing.

## SOUTH AMERICA

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EUROPE

ASIA

AFRICA



## UC Berkeley School of Public Health Protecting and Promoting Health around the World, *continued*

### AFRICA

**Afghanistan:** Malcolm Potts has worked to help women in Afghanistan and other countries in Africa and Asia that were war-torn after bloody conflicts. He has studied relationships between rapid population growth, civil conflict, and terrorism, finding that terrorists are most likely to come from countries where birth rates are high, family planning is hard to obtain, and women have little power.

**Mozambique:** Ndola Prata is team leader of a joint project with the CDC Global AIDS Programme, the Institute for Global Health, and Tulane University, aimed at addressing the immediate need for capacity building for HIV/AIDS monitoring and evaluation. The group provides assistance in establishing and enhancing HIV/AIDS monitoring and evaluation systems. In addition, Prata and colleagues develop and deliver related courses based on the training gaps identified in a capacity needs assessment completed in July 2004.

**South Africa, Kenya, and Tanzania:** Barbara Abrams is investigating a novel method to help reduce postnatal mother-to-child transmission of HIV in developing countries. Breastfeeding can cause up to one third of the 800,000 infections that occur annually in infants, but in resource-poor areas where safe and affordable infant formula is not available, mothers may not have a choice. Abrams is focusing on one alternative infant feeding option recommended by WHO: heat-treated breast milk. She is working with collaborators at UC Davis, California Dept. of Health Services, and in South Africa, Kenya, and Tanzania to design a simple heating method that a mother could use in her home which would inactivate HIV and retain the nutritional value, and to determine the acceptability and feasibility of mothers using this option.

**Tanzania and Nigeria:** Ndola Prata is working with African and Asian colleagues on community-based projects to reduce maternal mortality due to postpartum hemorrhage. Traditional birth attendants are trained to diagnose postpartum hemorrhage and follow a protocol for administering misoprostol in home births. The goal is to test whether traditional birth attendants can effectively manage postpartum hemorrhage cases in households, where most deliveries occur. There is also a similar project in Bangladesh.

**Uganda:** Since 2001, Arthur Reingold has been conducting research on anti-malarial drug resistance in collaboration with Philip Rosenthal and Grant Dorsey of the University of California, San Francisco, and Moses Kanya of Makerere University in Kampala, Uganda.

**Uganda:** The Center for Entrepreneurship in International Health and Development, codirected by Nap Hosang and Martha Campbell, has been working with the USEPA to create capacity to manufacture a cleaner-burning biomass stove for rural Uganda.

**Uganda and Tanzania:** Martha Campbell has assembled evidence of many types of barriers to family planning, which she views as the principal cause of stalled high birth rates, rather than couples' desire to have large families. Examples are misinformation, including perceived dangers of contraception; doctors prohibiting local health workers from providing some reproductive health services; financial costs; and inconsistent delivery of commodity supplies. Campbell's studies also include India.

### THE AMERICAS

**Bolivia:** Jack Colford is principal investigator of the BoliviaWET (Water Evaluation Trial), an NIH-funded collaboration between UC Berkeley, the Swiss Tropical Institute in Basel, Switzerland, and the University of San Simon in Cochabamba, Bolivia. This study near Totora, Bolivia, will compare the rates of gastrointestinal illness in children in 11 villages where residents are being trained to use solar water disinfection (by placing plastic bottles on their roofs for 6 hours each day) with 11 other villages that will receive training in this water treatment method next year. Alumnus Daniel Maeusezahl is the project director and collaborating principal investigator at the Swiss Tropical Institute.

**Brazil:** Leonard Duhal is working with health planners in Porto Alegre and São Paulo, cities which have created participatory programs dealing with medical care, the promotion of health, and the connection to needs throughout the cities. Brazil has demonstrated how "Healthy Cities"—a worldwide program based on Duhal's ideas—can be a paradigm both for health and for community governance. There are now 7,500 Healthy Cities programs around the world.

**Brazil:** Lee Riley's group has been training Brazilian researchers in the methods of using molecular biology tools to study the epidemiology of TB. His group also has been conducting population-based studies in São Paulo to identify risk factors for drug resistant TB and progression to active disease after a new infection.

**Costa Rica:** In order to understand how Costa Rica is able to achieve high life expectancy with low per capita health expenditure, Will Dow and colleagues have begun a longitudinal survey following individuals for five years, collecting socioeconomic data, biomarkers of health, and allostatic load indicators of cumulative lifetime physiological stress.

**Ecuador:** Joseph Eisenberg leads a project among 21 rural villages examining how changes in the social and natural environment, mediated by road construction, affect the epidemiology of pathogens causing diarrheal disease and malaria. Using an array of disciplines that study disease at multiple levels, this study will yield new insights into the varied environmental determinants of infectious disease in transmission, as well as new integrated intervention and control strategies.

**Guatemala:** In the first randomized trial in air pollution history with normal populations, Kirk Smith's group, together with Guatemalan, British, and Norwegian colleagues, is exploring the relationship between indoor pollution from use of open wood fires used for cooking and childhood pneumonia and adult heart rate variability and lung function in a highland population of Mayan Native Americans.

**Mexico:** Paul Gertler has investigated the impact of PROGRESA, an anti-poverty program in Mexico, on health outcomes. The program combines a traditional cash transfer program with financial incentives for families to invest in children's health, education, and nutrition. In order to receive the cash transfer, families must obtain preventive health care, participate in growth monitoring and nutrition supplements programs, and attend education programs about health and hygiene. Gertler has found that the program significantly increased utilization of public health clinics for preventive care and lowered the number of inpatient hospitalizations and visits to private providers.

**Mexico:** Julia Walsh is documenting the use of a new rotavirus vaccine as a model for the rapid introduction of new biotechnologies.

**Nicaragua:** For over 15 years, Eva Harris has collaborated with colleagues at the Ministry of Health in Nicaragua to develop scientific capacity and strengthen human resources and laboratory infrastructure. For the past 10 years, their work has focused on dengue, the most prevalent mosquito-borne viral disease of humans and a major public health problem worldwide. Current projects include clinical studies aimed at improving case management and identifying biological risk factors for severe disease, pediatric cohort studies of dengue transmission in Managua, and evidence-based approaches for motivation of community participation in mosquito and dengue control.

**United States:** Since its inception in 1988, Arthur Reingold has directed the UCB-UCSF Fogarty AIDS International Training and Research Program, which has provided diverse types of training to over 300 medical scientists from designated partner countries in Asia, Africa, and Latin America. 