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## **Public Health Goes Global**

Sarah Webb **United States** 21 March 2008

Traditional public health issues include worldwide problems such as malaria and diarrheal diseases, but international outbreaks of newer, more mobile diseases such as avian influenza and SARS serve as a contemporary reminder that public health is a global issue. "The global health field has both been around forever and is brand-new," says Hannah Kettler, a program officer for the Bill and Melinda Gates Foundation in Seattle, Washington.

"The global health field has both been around forever and is brand-new." -- Hannah Kettler, Bill and Melinda Gates Foundation

Global health now means thinking about challenges for the whole planet, both to protect everyone from emerging health problems and to combat existing challenges that stem from poverty. But traditional players such as the World Health Organization (WHO) and newer entrants such as the Gates Foundation believe that solving such complicated problems will require an international effort that involves the public and private sectors and creative people who work in health, science, engineering, policy, and business. Despite global problems from so many different directions, many of these

scientists share a single source of fulfillment: the feeling of having a direct and positive impact on people's lives.

## **COMING FULL CIRCLE**

For as long as she can remember, Nina Grove has wanted to find a way to make a difference in the world. She was always interested in biology and medicine, but her interest in public health really took off when she traveled in Kenya and Tanzania during a year off from college in 1976, just as the last cases of smallpox were being addressed. "Many of these diseases that I'd never encountered or knew about were still prevalent in this part of the world," she says.

She got an undergraduate degree in biology and later

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went on to get two master's degrees, one in medical microbiology and the other in public health, at the University of California, Berkeley. She intended to become a public health microbiologist, but when she graduated there weren't many job opportunities in public health. She ended up taking a job in quality control at Genentech in 1985. "[Genentech] really wanted to focus on unmet medical needs, and so it fit my criteria of helping others," she says. She eventually moved into project management and regulatory affairs and supervised the launch of several drugs.

In 2006, Grove found an opportunity to take her extensive drug-development experience back to her public health roots. She now works for the Institute for OneWorld Health, a nonprofit pharmaceutical



Nina Grove

company in San Francisco, California, that finds ways to bring drugs to the global marketplace that, in many cases, pharmaceutical companies have shelved as unprofitable. As the vice president of commercial strategy and planning and the director of the malaria program, she's working on a new method of producing artemisinin, a critical component in the recommended malaria drug cocktail, and helping to bring it to market.

Although she hadn't necessarily planned to work at Genentech, Grove says the convergence of drug-development experience and public health training gave her the right skill set to move into her new job at OneWorld Health. "Now I feel like it was meant to be," she says.

Kettler faces the same types of challenges at the Gates Foundation but with a focus on the policy and finance angles. She works with external partners and funders and other technologyand science-focused teams in the foundation to facilitate research and development on lowcost drug therapies. She started at the Gates Foundation in 2003, coming to the global health field by way of a Ph.D. in industrial economics. "I'm a multidisciplinary person at heart, and I'm attracted to solving problems rather than doing analysis," Kettler says. "I think there's a real opportunity to change the paradigm for pharmaceuticals. And if we can figure out an opportunity to make global health a business proposition for some, I actually think it will have an effect on industry more broadly."

## **CLOSING THE LOOP**

For some global health professionals, working in global health means working directly with stakeholders on larger social issues. As a pediatrician, Mary Young saw how the social problems of poverty and neglect can affect children's health and well-being. Her interest in those issues and in preventive medicine led her to pursue a doctorate in public health.

Now, she's the child development knowledge coordinator for The World Bank in Washington, D.C. Her team looks at the synergy between health, nutrition, and nurturing. "A child can't differentiate hunger for affection and hunger for food," she says. Her group creates programs for developing countries that encourage early childhood development as an investment in the country's economic future.

Young and her team present these programs to a country's education minister. If a program goes forward, Young works with the government or local organizations to implement it and track its progress. The progression from working in clinical medicine to working on the issues related to early childhood development "closed the loop for me," Young says.

## **CHARTING A COURSE IN GLOBAL HEALTH**

The experiences of Grove, Kettler, and Young illustrate the many educational paths that can lead to a global health career. A master's of public health (MPH) is often considered a basic requirement, whereas a doctorate of public health (Dr.P.H.) is mainly for those who want to do public health

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research. For Ph.D.s interested in moving from forprofit to nonprofit drug development, an MPH might not be necessary, Grove says. But if you want to move into the on-the-ground work of implementing health programs and providing access to drugs in the communities that will use them, public health training will be important.

Pointing to her interdisciplinary training in medical anthropology, Margaret "Peggy" Bentley, associate dean of global health at the <u>University of North Carolina School of Public Health</u> in Chapel Hill, encourages science undergraduates considering a career in the field to think broadly and take courses in the social sciences and humanities. If you're going to work on problems that affect other countries, you need to understand other cultures, she says. Also,



Peggy Bentley

take advantage of opportunities to study or work abroad. The ideal candidate for an MPH program typically has a few years of work experience.

Sales, marketing, and communications skills play an important--and possibly underappreciated--role in global health work. "Inventing [an idea] is fine," Young says, "but selling it is equally if not more important." If you're going to talk to a minister of finance, "you need to come up with something that could really grab him," a brief message that doesn't oversimplify but makes a point. And global health careers can demand heavy travel loads. Even with the Internet and teleconferencing, building partnerships and dealing with real-world problems requires face-to-face interactions.

Jobs at high-profile organizations such as WHO, <u>UNICEF</u>, and the Gates Foundation will probably go to people with considerable experience. A new graduate is more likely to start out in a research division at a nongovernmental organization (NGO) or in an internship that, one hopes, evolves into a job.

#### THE JOB OUTLOOK

Despite the increasing awareness of the global nature of public health, predicting the job outlook in the field is difficult, says Bentley, whose public health school is integrating global issues throughout the curriculum and will soon be known as the Dennis and Joan Gillings School of Global Public Health. At this point, there are plenty of jobs, particularly at large, faith-based NGOs, but she expects the market to tighten. That said, people with a focus on a particular area such as clean water or nutrition and who know how to work in communities and develop and evaluate interventions should be able to find work.

Because of the greater understanding of public health work both locally and globally, Bentley says it's a good time to be in the field. "It is absolutely marvelous to be working in communities with people, whether it's in North Carolina with underserved communities or in Bangladesh with mothers and mothers' groups. It's a privilege to do it, and there's really a lot of fulfillment," she says. After a 25-year career, "I'm still getting on and off airplanes with a big smile."

#### **GATES FOUNDATION'S GRAND CHALLENGES EXPLORATIONS**

Earlier this month the Bill & Melinda Gates Foundation unveiled its Grand Challenges Explorations grant competition to encourage research that leads to more innovative solutions to global health issues. The foundation plans to use an expedited application and review procedure, requiring only a two-page application and no preliminary data. Registration by 15 May 2008 is required, with applications accepted between 31 March and 31 May 2008. GrantsNet has an overview of the program, while the foundation's Web site has full details.

Sarah Webb has a Ph.D. in bioorganic chemistry. She writes from Brooklyn, New York. Comments, suggestions? Please send your feedback to our editor.

Photos. Top: Randy Montoya, Sandia National Lab. Middle: Orange Phtography. Bottom: courtesy of Peggy Bentley

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