



Mary Woodard Lasker Award for Public Service

The wonder that is global health

WILLIAM H. FOEGE

The road to a vocation is most often influenced by many individuals rather than any real understanding of the destination. Some never know their effect and some do, but all contribute a bit of their labor, clearing a trail for a new traveler. In retrospect it is easy to see the forks in the road leading to my interest in global health, but at the time not one would have seemed very significant.

A job in a drugstore at age 13 introduced me to a world of science that I did not know existed. It involved precision, the metric system and sick people getting 'magic potions'. The pharmacist, Jim Kohlstedt, made learning fun, with an enthusiasm for everything he did.

At age 15, a body cast forced me into physical inactivity for 3 months, but this had rewards unrecognized at the time. Immobile, all of my needs were taken care of by others, usually my mother. It was sufficient time to develop an addiction to reading. Many times, over the years, I have wished for another 3 months with no responsibilities and the freedom to read without ceasing—minus the cast. My reading allowed me to roam the world in a time before television. I read the works of Albert Schweitzer and imagined life in Central Africa.

When my older sister Grace was admitted to medical school, my weekend visits to her world revealed people totally captivated by a medical environment that few others knew existed. I was accepted to and started medical school with plans to practice in a small town. But a job after school and on Saturdays at the Seattle–King County Health Department provided another new experience. Rei Ravenholt, my boss, had unbounded pleasure for everything but especially for solving problems in public health, from understanding resistant organisms in hospitals and calculating risks of public swimming pools to developing theories on the causation of cancer, the best approaches to reducing population pressures in the world and the cause of death of Merewether Lewis. I left medical school knowing I would work in public health.

It was Ravenholt who led me to the Epidemic Intelligence Service (EIS) at the Centers for Disease Control and yet another inspirational person. Alex Langmuir had formed the EIS in

1951 as a reaction to the fear forming in this country about the dangers of biological warfare. Korean hemorrhagic fever

was affecting US troops, and concern was expressed that the spread might have been deliberate. The EIS attempted to train people to understand and respond to epidemics of all kinds. Langmuir became a mentor to hundreds, involved in outbreaks, suggesting techniques, meticulously examining evidence and forcing multiple rewrites of epidemic summaries before publication. He was interested in global health and encouraged young people to obtain international experience.

In April 1963, the Peace Corps was seeking a short-term Peace Corps physician in India. It sounded interesting, and I found myself quickly overwhelmed by a new culture, heat previously unimagined, the needs and illnesses of dozens of Peace Corps volunteers, and diseases known through books alone. Making rounds at a local hospital introduced me to smallpox, malaria, typhoid and the reality that most people in the world do not present with a single problem. Whatever brings them to the hospital or clinic is on a background of malnutrition, roundworms, hookworms and a half-dozen other conditions. I was fortunate to be supervised by yet another exceptional mentor. Charles Houston was the Peace Corps representative for India; he demonstrated the ability to combine diplomacy with superb clinical skills, and had many interests. He was a legend in mountaineering circles as a team leader on K2 and an expert on high-altitude physiology—and was one more person with a passion for everything, including global health. He had developed a plan to rid India of smallpox using Peace Corps volunteers, but he was ahead of his time and the plan was rejected in Washington, DC.

While working in the EIS, assigned to the Colorado, I read a commencement address given by Nobel laureate Tom Weller to the Harvard Medical School graduating class entitled *Questions of Priority*. The argument presented was the responsibility to use the training received for the benefit of the developing world. I immediately acquired an application form for the Harvard School of Public Health and was able to spend a year with this remarkable man.

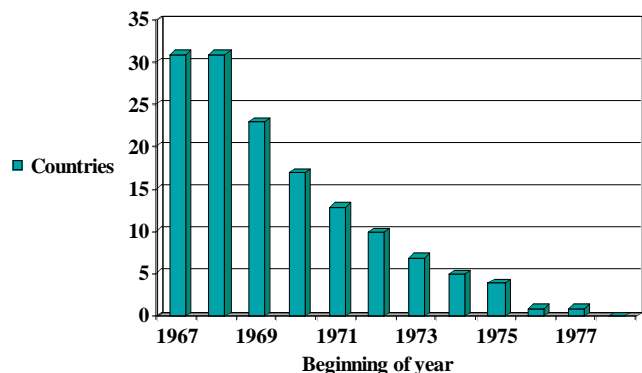


Fig. 1 Smallpox endemic countries.

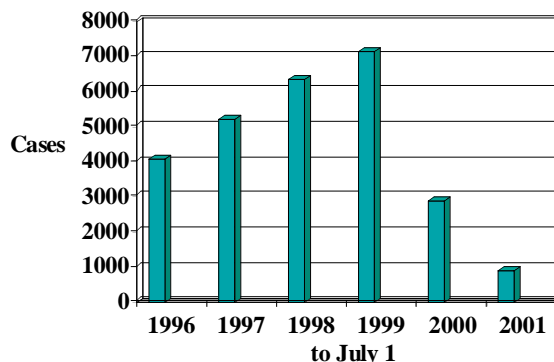


Fig. 2 Polio cases by year.

© 2001 Nature Publishing Group <http://medicine.nature.com>



The die was being cast. Wolfgang Bulle, a surgeon for many years in a church-sponsored program in India, had become a convert to public health. He agreed to sponsor a program to emphasize public health and prevention in Nigeria. This would have been my lifetime work, except that the Nigerian-Biafran civil war disrupted the program and, while waiting for peace, I became obsessed with the possibilities of smallpox eradication. The chain of smallpox transmission was finally broken in October 1977 (Fig. 1).

Who could have believed how the field of global health would change in 40 years? From smallpox eradication, the world had the audacity to tackle other vaccine-preventable diseases, and measles cases fell by over 60%, removing measles virus as the single most lethal agent in the world. In 2001, polio is claiming its final victims (Fig. 2), and guinea worm (dracunculiasis) has been reduced by over 95% on its road to elimination (Fig. 3). A new chapter is being written as the private sector provides its resources, products and expertise to the health problems of poor countries. Merck has donated Mectizan for the treatment of onchocerciasis, with over 25 million people treated per year. Now other companies are providing support for lymphatic filariasis, malaria, trachoma and other diseases relatively neglected in the past. New public-private coalitions have been developed for vaccine-preventable diseases, malaria medications, tuberculosis drug development and 'micronutrient' malnutrition. And the World Health Organization is simultaneously taking on malaria, tuberculosis and tobacco-related diseases.

But not all is positive: emerging infections, drug-resistant tuberculosis and HIV/AIDS all remind us that evolution is real and the challenges will never be eliminated. But there has been a turning point. The tools are improving and resources are increasing from foundations, governments and organizations such as Rotary International. Politicians, heads of state, the United Nations and economists are all engaging the battle. The opportunities for young people abound. In 100 years it will be clear that the 'sea change' in global health interest that took

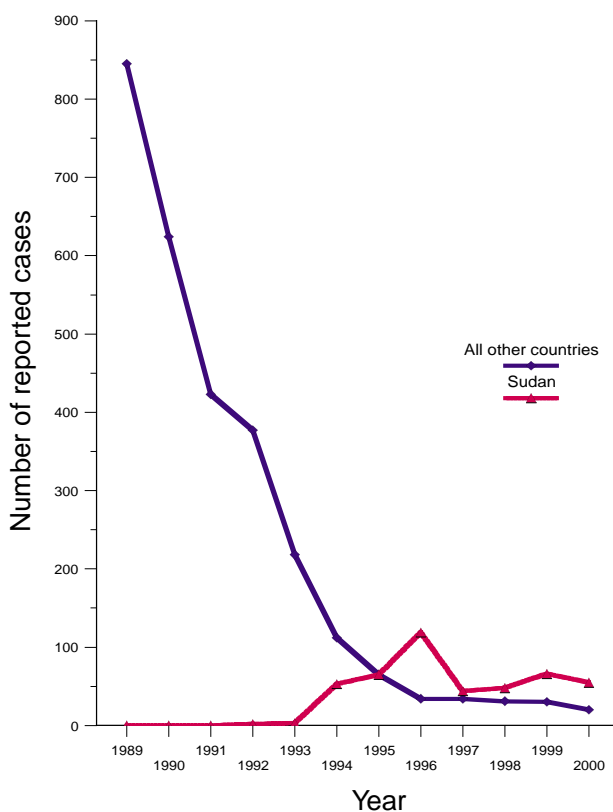


Fig. 3 Number of reported cases of Dracunculiasis by year, 1989–2000.

place in the early twenty-first century could be traced to two people: Bill and Melinda Gates.

William H. Foege
 Department of International Health
 Emory University
 Rollins School of Public Health
 Atlanta, Georgia, USA