

THE ART OF ERADICATION

E-rad-i-cate: 1. to pull or tear up by the roots, to remove entirely, extirpate, get rid of. 2. in public health, to achieve zero disease globally as a result of deliberate efforts.

Its formal name says everything: dracunculiasis, or “affliction with little dragons.” In the early 1980s, Guinea worm disease struck millions from western India to Senegal. Victims become infected when they drink from ponds or wells containing tiny freshwater crustaceans that themselves have swallowed microscopic worm larvae. In infected humans, the larvae grow inside the body to about a yard long, then migrate to the skin, where they eventually burst through, slowly and painfully. As HSPH alumnus Donald Hopkins, MPH '70, put it, “Guinea worm disease is one of the most terrible human afflictions.”

He should know. Hopkins' greatest legacy may be the eradication of Guinea worm disease. While at the U.S. Centers for Disease Control and Prevention (CDC), he launched in 1980 the Guinea Worm Disease Eradication Program, an exhaustive search for the worm in some of the world's most inhospitable environments. From 1987 to 1997, he led the Guinea worm disease initiative at The Carter Center. With no vaccine in sight, eradication relies on simple filtering technologies and robust networks of community health workers. As a result of Hopkins' dogged efforts, Guinea worm disease has fallen from 3.5 million cases in 1986 to fewer than 600 cases globally in 2012. In 2013, the number is expected to be even lower. Today, Hopkins directs all health programs at The Carter Center.

Hopkins' public health triumphs overlap and often intertwine with those of William Foege, whose surveillance/containment immunization strategy ushered in the eradication of smallpox. Drawing on Foege's inspiration and advice, Hopkins served as a medical epidemiologist and director of the Sierra Leone Smallpox/Measles Program from 1967 to 1969. In 1974, he became assistant professor of tropical medicine at HSPH, teaching the subject that originally drew him to public health. By 1978, Hopkins became the assistant director for international health at the CDC, reporting directly to Foege, and went on to serve as the agency's deputy director from 1984 to 1987 and as acting director in 1985.

Earlier this year, in an article in the *New England Journal of Medicine* starkly titled “Disease Eradication,” Hopkins wrote that “The unique power of eradication campaigns derives from their supreme clarity of purpose, their unparalleled ability to inspire dedication and sacrifice among health workers, and their attractiveness to donors, all of which are needed to overcome the barriers to successful eradication.” In 2013, polio and Guinea worm disease are the only officially sanctioned targets of eradication campaigns.

What will it take to reach a target of zero? Not only international cooperation and political will, but also people like Bill Foege and Don Hopkins, who themselves seem infected by boundless optimism. As Foege is famously fond of saying, “Some things have to be believed to be seen.” And as Hopkins recently told a newspaper interviewer, “I'm sort of immunized against pessimism.”



Donald Hopkins examines children in Nasarawa, Nigeria in 2007.



Donald Hopkins