

1950 1960 1970 **1980** 1990 2000

## EIS Profile

**EIS Officer:** Helene Gayle

**Age:** 45

**Hometown:** Buffalo, NY

**EIS Assignment:** As a pediatrician, Gayle initially focused on issues of childhood malnutrition. After EIS, Gayle joined CDC's growing AIDS effort, conducting some of the first research on the infection among adolescent populations, including mother-to-child transmission in developing countries and HIV in minority populations.

**Years in EIS:** 1984-1986

**Education:** Barnard College of Columbia University (B.A., 1976); University of Pennsylvania (M.D., 1981); Johns Hopkins University (MPH, 1981).

**Where She Is Today:** Gayle resides in Atlanta. Since 1995, she has served as director of CDC's National Center for HIV, STD and TB Prevention. In that role, she provides scientific, managerial and policy leadership for surveillance, research and prevention and control activities related to HIV/AIDS, sexually transmitted diseases and tuberculosis. She is an Assistant Surgeon General and Rear Admiral in the U.S. Public Health Service.



## Tracing the Routes of Transmission of a Frightening New Disease

*...It is one of the five leading causes of death in the world.*

*...Some 36 million people are infected worldwide.*

*...There are 40,000 new infections in the U.S. each year.*

These statistics, of course, refer to the AIDS epidemic, a household word for acquired immunodeficiency syndrome that has come to be synonymous with isolation, pain and death. In 1981, it was an unknown agent that was attacking a specific segment of the population – gay men.

Long before Hollywood celebrities raised awareness about AIDS by donning red ribbons, a handful of EIS public health heroes combated prejudice, public apathy,

government budget cuts and bureaucratic red tape, to trace the early cases of AIDS. In the process, they identified the key risk factors, pinpointed the virus' sometimes alarming transmission paths and raised awareness about how to safeguard against becoming infected.

“It was a difficult public health challenge to deal with. It was a very frightening disease, and because of the very serious nature of it, many people didn't want to talk about it. EIS officers understood this and did an outstanding job, often under very difficult circumstances, gathering epidemiological data to determine who was at greatest risk and the factors that determined people's risk. They then began to develop policies and programs aimed at reducing the spread of HIV, the virus that is responsible for AIDS,” says Helene Gayle, director of CDC's National Center for HIV, STD and TB Prevention.

One of the first EIS officers on the scene was Wayne Shandera, EIS 1980, who was assigned to the Los Angeles County Health Department. In early 1981, he was asked to consult on four cases of young men who had been healthy until being stricken with *Pneumocystis carini* pneumonia, a fungus which causes opportunistic infections in immunosuppressed patients. All were homosexuals. Shandera knew of a fifth case involving a young man who had died the month before. To have five such cases in the same city affect a single segment of the population spelled epidemic. Similar cases were cropping up in San Francisco and New York City. Soon after the Los Angeles case findings were published in CDC's *Morbidity and Mortality Weekly Report* (MMWR), a full-scale EIS investigation was launched.

“CDC did what it does best –it followed the science, which forms the basis for making solid public health policies,” says Gayle, a pediatrician who was assigned to research nutrition as an EIS officer. Following her EIS assignment, Gayle recognized the public health importance of HIV and, in 1987, she joined CDC's growing AIDS effort. She did some of the first research on the infection among adolescent populations, including mother-to-child transmission in developing countries and HIV cases in minority populations.

“When I came into the EIS, HIV was still new – it was still a mysterious disease. It wasn't clear in a lot of people's minds if this was something that was actually going to be around a long time,” Gayle recalls.

She notes that a core group of EIS officers made major contributions in detecting and publicizing AIDS prevention at the very beginning. One such person was Harold Jaffe, a young doctor in CDC's sexually transmitted disease (STD) program. In 1981, he found his job at risk after CDC's budget was cut. He was quickly recruited into the EIS class of 1981, a move that kept him working on the outbreak investigations since EIS officers were exempt from the cutbacks. He was joined by other EIS officers – including

Mary Guinan, his colleague in the STD program, Martha Rogers from CDC's viral disease program, Harry Haverkos from the parasitic disease program and David Auerbach, a Los Angeles-based EIS officer.

"We developed a case definition and started conducting national surveillance. We also interviewed some of the first cases because none of us really knew what this disease looked like," Jaffe recalls. Based on a case-control study completed in early 1982, EIS investigators strongly believed that whatever the agent was, it was being sexually transmitted. However, because the disease had struck only the gay population, many people considered the disease a "curiosity." "Most people in the public did not think they were at any particular risk," Jaffe says.

That soon changed when EIS investigators detected the disease in children and in blood transfusion recipients beginning in 1982.

"The scariest moment was when we were doing an investigation of a child in San Francisco who appeared to have AIDS. At the time, there were no known cases of it in children; we thought it only occurred in adults. We knew that the child had been transfused so we asked the San Francisco Health Department to do a look-back investigation to determine who the donors were. When they created the list and cross-matched it to the list of AIDS cases, there was a match. I remember talking to Dr. Selma Dritz, the infectious disease specialist at the San Francisco Department of Public Health, and thinking, 'My God. It's in the blood supply. How many other people have gotten it that way?' It was a chilling moment."

He and other CDC staff publicized their findings, and by early 1983, the CDC had described the routes of transmission of the agent even though the agent had yet to be identified.

"It's really remarkable to go back and look at the sequence of events. We really worked out the epidemiology of the disease and developed prevention recommendations before the virus was identified," Jaffe says.

Jaffe has spent the last 20 years focused on HIV/AIDS prevention. He currently serves as director of CDC's HIV, STD and TB laboratories. The laboratories are focused on developing more accurate, rapid tests that can detect all the new types of HIV as well as supporting CDC's work on HIV vaccines.

While the work of EIS and other CDC staff in the fight against HIV and AIDS continues, the war is far from over.

"We're still dealing with a disease that has no vaccine and no cure and preventing its spread depends on changing behaviors that are very difficult to change, particularly over one lifetime," Gayle says. "This is an epidemic that is growing exponentially around the world as well as expanding to new populations."

“I think CDC has done a good job in the face of many challenges. And two decades after the beginning of the epidemic, we still have people who are tremendously dedicated to making an impact on HIV and AIDS in this country as well as throughout the world.”