

# Defining Moments in *MMWR* History: The AIDS Epidemic, *Pneumocystis* Pneumonia --- Los Angeles 1981

[Announcer] This program is presented by the Centers for Disease Control and Prevention.

[Dr. Rasmussen] Welcome to *Defining Moments in MMWR History*. I'm your host, Dr. Sonja Rasmussen, Editor-in-Chief of the *MMWR*.

On June 5, 1981, *MMWR* published a report of *Pneumocystis* pneumonia in five previously healthy young gay men in Los Angeles, California. This report was later acknowledged as the first published account of what would become known as human immunodeficiency virus, or HIV, and acquired immunodeficiency syndrome, or AIDS. It was the first of many *MMWR* reports that led to a better understanding of this new condition.

Today, I'm talking with Dr. Harold Jaffe, a member of the original CDC Task Force assigned to study this mysterious new disease. Dr. Jaffe previously held a number of leadership positions at CDC, including directing the National Center for HIV, Sexually Transmitted Diseases, and Tuberculosis Prevention, and most recently, as CDC's Associate Director for Science. Thank you for joining me today, Dr. Jaffe.

[Dr. Jaffe] Oh, happy to be with you.

[Dr. Rasmussen] Take us back to this time. What did you and other CDC experts do when you first heard about these cases?

[Dr. Jaffe] Well, these cases described *Pneumocystis* pneumonia in persons without any obvious cause of immune deficiency. One advantage we had was, one of the few drugs available to treat *Pneumocystis* was a drug called Pentamidine isethionate. There was so little demand for it that it was only available through CDC's parasitic disease drug service. So we asked the drug service to review requests that they'd received for this drug, seeing if there were any causes that didn't have some obvious cause for immune deficiency. There were a few, so it told us that there were some cases going on in addition to what had been reported in the *MMWR*. Also, at that time, we started taking phone report forms from physicians who said that they saw similar cases in other cities, such as New York City and San Francisco.

[Dr. Rasmussen] In addition to *Pneumocystis* pneumonia, what signs and symptoms did these young men have?

[Dr. Jaffe] Well, these men were very ill. From their *Pneumocystis* they had fever; shortness of breath; they all had some form of *Candida* yeast infection including in the mouth, which is called thrush, and some of them had it in the esophagus, which would cause difficulty swallowing. They also had evidence of cytomegalovirus infection, and the three that were tested showed evidence of profound cellular immune deficiency.

[Dr. Rasmussen] What did you and others at CDC first suspect as the cause?

[Dr. Jaffe] It really wasn't at all clear, we were just very puzzled by what this meant. We thought it was possible that it represented infection with some sort of immunosuppressive agent, either one that we knew about and had perhaps assumed a new virulent form or perhaps some new infectious agent. We also wondered whether there were something unique about environmental exposures that were occurring in gay men that might be immunosuppressive, so particularly we were interested in the use of nitrite inhalants or poppers that were very common in the gay community.

[Dr. Rasmussen] What kinds of studies did you do to try to figure this out?

[Dr. Jaffe] Well, the first thing we did was develop a case definition, and then we asked physicians from across the country to start reporting cases to their state and local health departments, which they did, and it gave us a better idea of where the disease was occurring. We also interviewed cases in an open-ended way to try to find out more about their lifestyles and determined that these men had very sexually active lives—lots of sex partners—and also lots of drug use. And then in the fall of 1981 we began a national case control study in San Francisco, Los Angeles, Atlanta, and New York.

[Dr. Rasmussen] What did that case-control study show?

[Dr. Jaffe] Well, comparing the cases to other homosexual men who didn't seem to have the disease, we found that the cases were much more sexually active. They, on average, had twice as many sexual partners per year; they tended to have anonymous sex partners that they met in bath houses; they had higher rates of other sexually transmitted infections, such as gonorrhea and syphilis; and they also did have a lot of drug use, as well. When we looked at a multivariate analysis, it appeared that the biggest difference involved sexual activity, but we couldn't entirely rule out the possibility that there was some drug use that was contributing as well.

[Dr. Rasmussen] Tell us about the role the *MMWR* reports played.

[Dr. Jaffe] The *MMWR* was really important in a number of ways. First of all, it simulated case reports by physicians around the country. We often got calls from physicians saying, "You know, I saw a case like this. I didn't know what it was. Now I see that it's part of this illness that you're describing and want to report it to you." Secondly, it helped us identify the spectrum of disease. It wasn't just *Pneumocystis*. It was other opportunistic infections; malignancies, particularly Kaposi's Sarcoma, were being reported. And the *MMWR* really was the main vehicle for describing key epidemiologic findings, for example the first transfusion cases, cases in hemophiliacs, in heterosexual partners, and transmission of whatever it was—we didn't know what it was—from mother to child. We also used the *MMWR* to publish key guidelines and recommendations.

[Dr. Rasmussen] What were some of the lessons learned from the outbreak and from the response?

[Dr. Jaffe] I think one thing that isn't appreciated, but it's really important, is the role of astute clinicians in recognizing unusual diseases. So, physicians had seen this disease for a while, but it took Michael Gottlieb and his colleagues in Los Angeles to say, "This is something really odd. We need to report it." And that message is still one that's important today. AIDS also was the prototypic emerging infectious disease, and we now recognize that this is a recurring problem that we still see today. And I think finally, it helped us understand the role of community involvement in dealing with infectious diseases, for example, the gay community was extremely helpful in helping us to formulate questions to ask, cases...once we knew what the risk factors were... to disseminate that information to the gay community at a time that the population-at-large in the mainstream media really wasn't paying much attention to it.

[Dr. Rasmussen] What strategies were recommended to prevent transmission of this virus, and what recommendations were made to protect healthcare workers?

[Dr. Jaffe] Well, the healthcare worker recommendations actually came first. In November 1982, the *MMWR* had a report that was directed towards clinical and laboratory workers that said, "We don't know what the cause of this is, but it looks like a bloodborne infection. It looks like Hepatitis B, in terms of its transmission patterns, and that the same occupational guidelines for prevention of Hepatitis B would be appropriate for this disease. In March 1983, an interagency task force consisting of CDC, FDA, and the NIH published the first guidelines for prevention for the community-at-large, and they emphasized things like the need for persons with AIDS to avoid having sex and possibly transmit the disease, that having multiple partners would increase the risk, and the persons at increased risk should refrain from donating blood. I think what's remarkable is that these guidelines were all developed before we knew the cause. It wasn't until two months later that Luc Montagnier and his colleagues in Paris described an unusual retrovirus which they called LAV, which turned out to be the cause. So, in a way, this demonstrates the power of epidemiologic studies to understand new diseases and even prevent them before we know the cause.

[Dr. Rasmussen] Dr. Jaffe, thank you for joining me today. *MMWR* is proud of its role in communicating critical findings of this investigation and response. For more information on this outbreak, or to learn more about the latest in public health, visit [cdc.gov/MMWR](http://cdc.gov/MMWR).

Until next time, this is Dr. Sonja Rasmussen for *Defining Moments in MMWR History*.

[Announcer] For the most accurate health information, visit [www.cdc.gov](http://www.cdc.gov) or call 1-800-CDC-INFO.