

April 24: Sandra Ford, a drug technician at the U.S. Centers for Disease Control (CDC) in Atlanta, Georgia, writes a memo detailing a surge in unusual requests for the drug pentamidine—one of 10 drugs that are used so rarely that the federal government stockpiles the nation's supply through a special arrangement with the Food and Drug Administration.^{1,2}

Pentamidine is typically used to treat patients who have <u>Pneumocystis carinii pneumonia</u> (PCP), a rare lung infection.^{3,4} Unlike more familiar forms of pneumonia, PCP generally affects only those with severely weakened immune systems, including those undergoing chemotherapy for end-stage cancer. Past requests for the drug have always come to Ford with an explanation about the patient's underlying condition. But the requests Ford has been receiving since February 1 have no explanations—all the patients are young, previously healthy, gay men and almost all live in New York City. Ford's memo is the first alert to CDC that mysterious cases of immune system collapse are now occurring.⁵

May 18: In an article for the biweekly gay newspaper *The New York Native*, Dr. Lawrence Mass becomes the first journalist to write about the unusual illnesses affecting gay men. The column, titled "<u>Disease Rumors Largely Unfounded</u>," reports a curious increase in cases of PCP in the city—most of which (5 or 6 of 11) have been among gay men with no obvious immunodeficiencies. Dr. Steve Phillips, a CDC Epidemic Intelligence Officer who has been assigned to the New York City Department of Health tells Mass, "What distinguished these victims is not how or where they were exposed so much as why they got the disease."



June 5: The CDC publishes an article in its Morbidity and Mortality Weekly Report_(MMWR): Pneumocystis Pneumonia—Los Angeles. The article describes cases of PCP in five young, white, previously healthy gay men. The article's authors, Los Angeles immunologist Dr. Michael Gottlieb, local internal medicine specialist Dr. Joel Weisman, CDC epidemiologist Dr. Wayne Shandera 10, and their colleagues report that all the men have other unusual infections as well, indicating that their immune systems are not working. Two have already died by the time the report is published and the others will die soon after.

This edition of the MMWR marks the first official reporting of what will later become known as the AIDS (<u>Acquired Immunodeficiency Syndrome</u>) epidemic.¹¹

NOTE: The report does not mention the race of the patients. That omission, perpetuated by media coverage in the earliest years of the epidemic, will lead to a widespread belief that AIDS affects only white, gay men—with devastating long-term effects for Black and Latinx communities.¹²

-+-0&--+-

June 5: The same day that the MMWR is published, New York dermatologist <u>Dr. Alvin Friedman-Kien</u>^{13,14} calls CDC to report a cluster of cases of a rare and unusually aggressive cancer—<u>Kaposi's Sarcoma</u> (KS)—among gay men in New York and California. Like PCP, KS is associated with people who have weakened immune systems.

June 5-6: The Associated Press¹⁶, the Los Angeles Times¹⁷, and the San Francisco Chronicle¹⁸ report on the MMWR article. Within days, CDC receives reports from around the nation of similar cases of PCP, KS, and other unusual <u>opportunistic infections</u> (OIs) among gay men.¹⁹

June 16: A 35-year-old, white gay man who is exhibiting symptoms of severe immunodeficiency is the <u>first person with AIDS</u> to be admitted to the Clinical Center at the National Institutes of Health.²⁰ He never leaves the Center and dies on October 28.²¹

June 16: In a conversation with his mentor, Harvard virologist Dr. Myron "Max" Essex, CDC epidemiologist Dr. Donald Francis suggests that cases of immune deficiency among gay men could be the result of a new retrovirus. ^{22,23} He is also convinced that whatever is causing the immune deficiencies is transmitted in the same way as Hepatitis B (i.e., via sex and blood). Francis is one of CDC's most valued experts on epidemics—having worked on the team that eradicated smallpox and on the Hepatitis B studies that have recently culminated in the creation of a vaccine. He will join the CDC team in Atlanta trying to identify the cause of the immune problems killing gay men.

June 18: In response to reports of PCP, KS, and other OIs coming in from around the nation, CDC establishes a <u>Task Force on Kaposi's Sarcoma and Opportunistic Infections</u>^{24,25} to identify risk factors and to develop a <u>case definition</u>²⁶ for the as-yet-unnamed syndrome so that CDC can begin national <u>surveillance</u> of new cases.²⁷ <u>Dr. James Curran</u>, ²⁸ head of CDC's Venereal Disease Control Division (VDCD), is chosen to lead the Task Force and chairs the first meeting on June 18, 1981.²⁹

July 2: The *Bay Area Reporter*, a weekly newspaper for the gay and lesbian community in San Francisco, publishes its first mention of "Gay Men's Pneumonia." The short item encourages gay men who are experiencing progressive shortness of breath to see their physicians.

July 3: CDC releases a new MMWR, Kaposi's Sarcoma and Pneumocystis Pneumonia Among Homosexual Men — New York City and California, with information on KS and PCP among 26 gay men (25 white and one Black).³¹

July 3: On the same day, the *New York Times* publishes an article entitled "Rare Cancer Seen in 41 Homosexuals." At this point, the term "gay cancer" enters the public lexicon.³³

August 11: Acclaimed writer and film producer Larry Kramer holds a meeting of over 80 gay men in his New York City apartment to discuss the burgeoning epidemic. ^{34,35} Kramer invites Dr. Friedman-Kien to speak, and he asks the group to contribute money to support Friedman-Kien's research because he has no access to rapid funding. The plea raises \$6,635. By the end of the year, Kramer and his friends will raise a total of \$11,806.55 for research on KS, PCP, and other Ols. ³⁶ In addition to those funds, Friedman-Kien will successfully petition the American Cancer Society and four private foundations for a total of \$90,000. ³⁷

August 28: The latest MMWR article, Follow-Up on Kaposi's Sarcoma and Pneumocystis Pneumonia, reports that CDC has received information on 70 additional cases of KS and/or PCP since the July 3 edition.³⁸ Of the 108 cases reported to date: 107 are male; 94% of those whose sexual orientation is known are gay/bisexual; 79% are white, 12% are Black/African American, and 11% are Latinx; and 40% of all patients have already died.

September 15: The National Cancer Institute and CDC cosponsor the first conference to address the new epidemic.³⁹ Fifty leading clinicians attend the event in Bethesda, MD, to discuss KS and other opportunistic infections and to develop recommendations for further studies in epidemiology, virology, and treatment.⁴⁰

September 21: San Francisco dermatologist <u>Dr. Marcus Conant</u> oversees the opening of the nation's first KS clinic at the University of California, San Francisco Medical Center. ⁴¹ He codirects the clinic with oncologist <u>Dr. Paul Volberding</u>. ⁴² The two physicians, with their colleagues <u>Dr. Constance Wofsy</u> and <u>Dr. Donald Abrams</u>, ⁴⁴ will guide much of the <u>early response to AIDS in San Francisco</u>.

December: At Albert Einstein Medical College in New York, pediatric immunologist <u>Dr. Arye</u> <u>Rubinstein</u> treats five Black infants who are showing signs of severe immune deficiency, including PCP.⁴⁵ At least three are the children of women who use drugs and engage in sex work. He recognizes that the children are showing signs of the same illnesses affecting gay men, but his diagnoses are dismissed by his colleagues, who insist that only gay men are at risk for the new illnesses and that the children must have <u>congenital</u> problems with their immune systems.⁴⁶

December 10: <u>Bobbi Campbell</u>, a San Francisco nurse, becomes the first KS patient to go public with his diagnosis. ⁴⁷ Calling himself the "KS Poster Boy," Campbell debuts his "Gay Cancer Journal," a newspaper column on his experiences living with KS for the *San Francisco Sentinel*. He also <u>posts photos</u> of his KS lesions in the window of a local drugstore to alert the community to the disease and encourage people to seek treatment. ⁴⁸

December 31: By year's end, the number of new cases of KS, PCP, and OIs among gay men has risen dramatically—and cases among heterosexual men and women (particularly among those who inject drugs and their sex partners) have begun to appear. The estimates of new cases in 1981 range widely, from a low of 185 diagnosed cases and 78 deaths to a high of 337 diagnosed cases and 268 deaths [PDF, 1MB]. 51

NOTE: Links inevitably get broken over time. If you find a dead link, please go first to the Wayback Machine and enter the URL of the dead link to see if they have captured the information so you can download it yourself. And please DONATE to the Wayback Machine, which is priceless to those of us who do historical research! I donate monthly and encourage you to do the same.

If you find incorrect information or can't find the weblinks you need from the Wayback Machine, please notify me by using the <u>Contact form</u>. I welcome corrections to the historical record, and I have PDFs of almost everything linked on the site. In most cases, I can provide you with the information, even if the webpage no longer exists.

END NOTES

¹Schultz, M.G., and Bloch, A. B. (2016, April). In Memoriam: Sandy Ford (1950–2015). *Emerging Infectious Diseases*, Vol. 22(4): 764–765. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4806958/

² Shilts, R. (2007). And the Band Played On: Politics, People, and the AIDS Epidemic (20th anniversary ed.). New York: St. Martin's Griffin, pp. 66, 80. Shilts recorded that, in January 1982—as CDC epidemiologists frantically tried to identify the cause of the immune challenges in gay patients—Sandy Ford went back through her records and "found drug orders for nine patients who fit the new PCP victims' profile perfectly—all cases reported during the last six months of 1980. Her search failed to turn up any gay pneumonia patients from much before 1979, strong support that this was something new" (p.80) She also searched for pentamidine requests for hemophilia patients for the same time period but found none.

³ American Chemical Society. (2017, May 15). Pentamidine: I poke holes in Gram-negative

bacteria. What molecule am I? Molecule of the Week Archive.

https://www.acs.org/content/acs/en/molecule-of-the-week/archive/p/pentamidine.html

"Pentamidine, particularly as its diisethionate (di-2-hydroxyethanesulfonate) salt, is used to treat several infectious bacterial diseases. It has been used to treat African trypanosomiasis [sleeping sickness] since 1937 and leishmaniasis since 1940." [Note: Both can be fatal if not treated.] In 1946, British drug company May & Baker was granted a U.S. patent for pentamidine. Because the drug has such a limited market in Western countries, May & Baker never invests in the costly process to get FDA approval for it, and only develops a batch of the drug about every five years. CDC has to call a year in advance as they begin to run out of the drug to ask May & Baker to create another run. (See: Juranek, D. (2018, July 9). The Global Health Chronicles: The Early Years of AIDS: CDC's Response to a Historic Epidemic (M. Chamberland). [Video] https://globalhealthchronicles.org/ohms-viewer/viewer.php?cachefile=2016_500_46JuranekDennis.xml

So pentamidine is labeled an "orphan" drug, which means it treats a rare disease or condition (typically one that is very serious and/or life-threatening) that affects fewer than 200,000 people in the United States. In 1983, Congress will pass the Orphan Drug Act (Orphan Drug Act of 1983. Pub L. No. 97–414, 96 Stat. 2049), to give drug companies certain financial benefits for developing orphan drugs that are safe and effective. See https://www.cancer.gov/publications/dictionaries/cancer-terms/def/orphan-drug

⁴ **NOTE:** For the first 20 years of the HIV epidemic, the infection is known as *Pneumocystis carinii* pneumonia, and this timeline will follow that convention.

Pneumocystis carinii pneumonia (PCP): A lung infection caused by the fungus *Pneumocystis jirovecii*. Symptoms include a cough (often mild and dry), fever, and shortness of breath. The fungus is common in the environment and does not cause illness in healthy people. Most people who get *Pneumocystis jirovecii* pneumonia have weakened immune systems due to HIV/AIDS, cancer treatments, or organ transplants. In people living with HIV, PCP is an AIDS-defining condition. https://clinicalinfo.hiv.gov/en/glossary/pneumocystis-jirovecii-pneumonia

In 2001, the international scientific community agrees to change the name of *Pneumocystis carinii to Pneumocystis jirovecii*. This decision is based on DNA analysis showing conclusively that the microbe that causes PCP in humans is a distinct phylogenetic fungal species called *Pneumocystis jiroveci*. (pronounced "yee row vet zee"), in honor of the Czech parasitologist Otto Jirovec, who is credited with describing it. This species has been difficult to find in the environment, has not been found in nonhuman hosts, and is either absent in healthy humans or present at very low levels. In contrast, *Pneumocystis carinii* is found only in rats, and *P*.

jiroveci is fairly common in humans who have depressed immune function. The name change does not affect the designation PCP for <u>P</u>neumocystis <u>p</u>neumonia. For more information, see Stringer, J. R., Beard, C. B., Miller, R. F., & Wakefield, A. E. (2002). A New Name for *Pneumocystis* from Humans and New Perspectives on the Host-Pathogen Relationship. *Emerging Infectious Diseases*, 8(9), pp. 891-896. https://dx.doi.org/10.3201/eid0809.020096

- ⁵ Pentamidine will become a key treatment for people with AIDS. The FDA will grant full regulatory approval for intravenous/injectable pentamidine for acute *Pneumocystis carinii* pneumonia in December 1984. Pentamidine Isethionate Approved for *P. carinii* Pneumonia. (1984, December). *FDA Drug Bulletin*, 14(3):25-6.

 https://babel.hathitrust.org/cgi/pt?id=mdp.39015073020458&view=page&seq=1&skin=2021
 - On July 15, 1989, the <u>FDA will grant full approval for aerosolized pentamidine</u>, which studies have shown helps to prevent people with AIDS from developing PCP. Aerosolized Pentamidine for *P. Carinii* Pneumonia. (1989, July 15). *FDA Drug Bulletin*, 19(2): 20. https://babel.hathitrust.org/cgi/pt?id=mdp.39015073020581&view=page&seq=1&skin=2021
- ⁶ Mass, L. (1981, May 18). Disease Rumors Largely Unfounded. The New York Native, p. 7. https://www.documentcloud.org/documents/20784461-native_mass_edit For Mass's retrospective on his early reporting of the AIDS Epidemic, see Mass, L. D. (2006, May 7). Larry Mass Looks Back on 25 Years of AIDS Reporting, Activism. Gay City News. https://www.gaycitynews.com/larry-mass-looks-back-on-25-years-of-aids-reporting-activism/
- ⁷ Centers for Disease Control. (1981, June 5). *Pneumocystis pneumonia*--Los Angeles. *MMWR*, 30(21);1-3. http://www.cdc.gov/mmwr/preview/mmwrhtml/june_5.htm Although the report does not mention the race of the men, at this time, "white" is generally taken to be the standard in reporting, so race is often mentioned only when the subject is "other than white." For comparison, see CDC's second publication on this topic (Note #32) which identifies the race of the patients: https://stacks.cdc.gov/view/cdc/1265
- ⁸ Fee, E., & Brown, T. M. (2006). Michael S. Gottlieb and the Identification of AIDS. American Journal of Public Health, 96(6), 982–983. https://doi.org/10.2105/AJPH.2006.088435
- ⁹ Woo, E. (2009, July 23). Dr. Joel D. Weisman Dies at 66; Among the First Doctors to Detect AIDS. Los Angeles Times. "Weisman was a general practitioner in Sherman Oaks in 1980 when he noticed a troubling pattern: He had three seriously ill patients with the same constellation of symptoms, including mysterious fevers, rashes, drastic weight loss and swollen lymph nodes. All were gay men whose problems seemed to stem from defects in their immune systems. The physician wound up referring two of the patients to UCLA immunologist Martin S. Gottlieb, who had a gay male patient with a similarly strange array of afflictions." https://www.latimes.com/archives/la-xpm-2009-jul-23-me-joel-weisman23-6 | Page

Updated: August 27, 2021

story.html

- Name 10 Shandera, W. (2017, March 8). The Global Health Chronicles: The Early Years of AIDS: CDC's Response to a Historic Epidemic (B. Miller). [Video] https://globalhealthchronicles.org/items/show/7736 Per CDC protocol for its Epidemic Intelligence Officers, Dr. Shandera is not named directly in the publication, but he played a significant role in identifying cases, writing the article, and getting it submitted to CDC for publication.
- ¹¹ Acquired Immunodeficiency Syndrome (AIDS): A disease of the immune system due to infection with HIV. HIV destroys the CD4 T lymphocytes (CD4 cells) of the immune system, leaving the body vulnerable to life-threatening infections and cancers. AIDS is the most advanced stage of HIV infection. To be diagnosed with AIDS, a person with HIV must have an AIDS-defining condition or have a CD4 count less than 200 cells/mm3 (regardless of whether the person has an AIDS-defining condition).
 https://clinicalinfo.hiv.gov/en/glossary/acquired-immunodeficiency-syndrome-aids
- ¹² In an interview for the 2011 Frontline documentary, <u>30 Years of AIDS in Black America</u>, Dr. Gottlieb confirms that the first five patients were white but notes that the sixth and seventh patients were Black men. He also says that failing to report the race of the first five patients was "an omission on our part." Gavett, G. (2012, July 10). Timeline: 30 years of AIDS in Black America. FRONTLINE. [Video] https://www.pbs.org/wgbh/frontline/article/timeline-30-years-of-aids-in-black-america/ [NOTE: This appears to contradict Randy Shilts' report that Gottlieb's fourth patient with PCP was a 36-year-old Black man. See Shilts, p. 73.]
- ¹³ McKay, R. A. (2017) Patient Zero and the Making of the AIDS Epidemic. Chicago: University of Chicago Press, p. 98.
- ¹⁴ Tanne, J. H. (1987, January 12). On the Front Lines Against the AIDS Epidemic. New York Magazine, pp. 22-31. https://nymag.com/health/features/49240/index4.html
- Kaposi's Sarcoma (KS): A rare type of cancer caused by a herpes virus and characterized by the abnormal growth of cells that line lymph and blood vessels. KS causes red or purple patches of tissue (lesions) to grow under the skin and in the lining of the mouth, nose, and throat. Lesions may also develop in the digestive tract, liver, or lungs. KS generally occurs in people with weakened immune systems. Before 1981, classic KS was typically found mainly in older people (mostly men) of Mediterranean, Eastern European, and Middle Eastern heritage, and it was not considered deadly. In people with HIV, KS is an AIDS-defining condition. It is named for Hungarian dermatologist Dr. Moritz Kaposi, who first reported the condition in 1872. https://clinicalinfo.hiv.gov/en/glossary/kaposi-sarcoma-ks

- ¹⁶ Associated Press. (1981, June 5). Pneumonia link to gay lifestyle. *The Press Democrat* [Santa Rosa, CA], p. 5.
- ¹⁷ Nelson, H. (1981, June 5). Outbreaks of pneumonia among gay males studied. *Los Angeles Times*, pp. B3, B25.
- ¹⁸ A pneumonia that strikes gay males. (1981, June 6). San Francisco Chronicle, p. 4.
- ¹⁹ Opportunistic infection: Infection that occurs more frequently or is more severe in people with weakened immune systems (e.g., people with HIV or people receiving chemotherapy) than in people with healthy immune systems. https://clinicalinfo.hiv.gov/en/glossary/opportunistic-infection-oi
- NIH is the nation's medical research agency and is an operating division of the U.S. Department of Health and Human Services. It is currently made up of 27 institutes and centers, each with a specific research agenda, often focusing on particular diseases or body systems. The NIH traces its roots to 1887, when a one-room laboratory was created within the Marine Hospital Service, predecessor agency to the U.S. Public Health Service. https://www.nih.gov/about-nih/who-we-are
- Waldmann, T. (1990, March 14). In Their Own Words: NIH Researchers Recall the Early Years of AIDS. (D. Rodrigues and V. Harden). At this time, NIH staff are unaware of the CDC reports of immunodeficiency among gay men; it is only later that they will learn that this patient is the first person with AIDS to be admitted to NIH. https://history.nih.gov/display/history/Dr+Thomas+Waldmann+Interview
- ²²See Shilts, p. 73. As a result of his work on feline leukemia (a type of cancer caused by a retrovirus) and his work to develop a vaccine for hepatitis B (which is spread in the same ways the as-yet-unnamed disease seemed to be spreading), Dr. Francis becomes convinced early on that the new epidemic is being caused by a virus that is transmitted by body fluids (e.g., semen and blood).
- Retrovirus: A type of virus that uses RNA as its genetic material. After infecting a cell, a retrovirus uses an enzyme called reverse transcriptase to convert its RNA into DNA. The retrovirus then integrates its viral DNA into the DNA of the host cell, which allows the retrovirus to replicate. HIV, the virus that causes AIDS, is a type of retrovirus. https://clinicalinfo.hiv.gov/en/glossary/retrovirus The first retrovirus, Equine infectious anemia virus, was discovered in 1904. The first human retrovirus, Human T-Cell Leukemia Virus-1 (HTLV-1), was discovered in 1980 by a team of scientists at the National Cancer Institute.
- ²⁴ Dr. Curran gives the timeline for the creation of the KSOI Task Force in his testimony during a congressional hearing on April 13, 1982. Curran's testimony is on p. 7. See:

Kaposi's Sarcoma and Related Opportunistic Infections: Hearings Before the Subcommittee on Health and the Environment of the Committee on Energy and Commerce, House of Representatives, Ninety-Seventh Congress, Second Session, April 13, 1982, Serial No. 97-125. https://babel.hathitrust.org/cgi/pt?id=pst.000014133725&view=page&seq=1&skin=2021 The subcommittee met, pursuant to call, at 10 a.m. at the Gay and Lesbian Community Services Center, 1213 North Highland Avenue, Los Angeles, Calif., Hon. Henry A. Waxman (chairman) presiding.

The date and time for the first meeting of the KSOI Task Force is documented in a memo Dr. Curran writes to 15 colleagues at CDC. Attendees were: Dr. Glyn Caldwell, Chronic Disease Division (CDD), Center for Environmental Health (CEH); Dr. William Darrow, Venereal Disease Control Division (VDCD), Center for Prevention Services (CPS); Dr. David Gordon, Immunology Division (ID), Center for Infectious Diseases (CID); Dr. Roy Ing, CDD, CEH; Dr. Dennis Juranek, Parasitic Disease Division (PDD), CID; Dr. John Stewart, Virology Division (VD), CID.

The full list of KSOI Task Force members can be found in: New England Journal of Medicine. (1982). Special Report: Epidemiologic Aspects of the Current Outbreak of Kaposi's Sarcoma and Opportunistic Infections, 306:248-252.

https://www.nejm.org/doi/full/10.1056/NEJM198201283060432 They are: David M. Auerbach, MD; John V. Bennett, MD; Philip S. Brachman, MD; Glyn C. Caldwell, MD; Salvatore J. Crispi; James W. Curran, MD (Coordinator); William W. Darrow, PhD; Henry Falk, MD; David S. Gordon, MD; Mary E. Guinan, MD; Harry W. Haverkos, MD; Clark W. Heath, Jr., MD; Roy T. Ing, MD; Harold W. Jaffe, MD; Bonnie Mallory Jones; Dennis D. Juranek, DVM; Alexander Kelter, MD; J. Michael Lane, MD; Dale N. Lawrence, MD; Richard Ludlow; Cornelia R. McGrath; James M. Monroe; David M. Morens, MD; John P. Orkwis; Martha F. Rogers MD; Wilmon R. Rushing; Richard W. Sattin, MD; Mary Ellen Shapiro; Thomas J. Spira, MD; John A. Stewart, MD; Pauline A. Thomas, MD; and Hilda Westmoreland.

- ²⁶ Case definition: A set of standard criteria for classifying whether a person has a particular disease, syndrome, or other health condition.

 https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section5.html
- Public health surveillance: The continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice. Surveillance can serve as an early warning system for impending public health emergencies; document the impact of an intervention, or track progress towards specified goals; and monitor and clarify the epidemiology of health problems, to allow priorities to be

- set and to inform public health policy and strategies. https://www.who.int/topics/public_health_surveillance/en/
- ²⁸ Curran, J. W. (1998, May 19). An Oral History with Dr. James W. Curran About His Involvement in the AIDS Epidemic. Interviewers: Victoria Harden and Carolina Hannaway. Office of NIH History, National Institutes of Health.
 https://history.nih.gov/display/history/James+Curran+Interview Curran's 3-month commitment to lead the Task Force will become a 15-year commitment to responding to AIDS. He believes he was chosen to lead the KSOI Task Force because he is the only member with a secretary to type up the notes. See Shilts, p. 71.
- ²⁹ Curran, J. (1981, June 22). Kaposi's Sarcoma (KS) and Serious Infections among Previously Healthy Homosexual Men [Memorandum]. Centers for Disease Control. https://globalhealthchronicles.org/items/show/6632
- ³⁰ Health shorts: Gay men's pneumonia. (1981, July 2). Bay Area Reporter, p. 34.
- ³¹ Centers for Disease Control. (1981, July 3). Kaposi's Sarcoma and *Pneumocystis* Pneumonia Among Homosexual Men New York City and California. *MMWR*, 30(25); p. 305-316. https://stacks.cdc.gov/view/cdc/1265
- ³² Altman, L. K. (1981, July 4). Rare Cancer Seen in 41 homosexuals. New York Times, p. A20. https://timesmachine.nytimes.com/timesmachine/1981/07/03/180485.html?pageNumber=20 The story is buried on p. A20. The New York Times will not publish a front-page article on AIDS until almost two years later, on May 25, 1983.
- ³³ Wright, J. (2006, May 8). Remembering the Early Days of 'Gay Cancer' [Radio broadcast]. https://www.npr.org/templates/story/story.php?storyId=5391495
- ³⁴ Leland, J. (2017, May 19). Twilight of a Difficult Man: Larry Kramer and the Birth of AIDS Activism. *New York Times*. https://www.nytimes.com/2017/05/19/nyregion/larry-kramer-and-the-birth-of-aids-activism.html
- ³⁵Shilts, p. 90. See also: Gay Men's Health Crisis records. Biographical/Historical Information. Manuscripts and Archives Division, The New York Public Library. http://archives.nypl.org/mss/1126#overview
- ³⁶ Kramer, L. (1989). Reports from the Holocaust: The Making of an AIDS Activist. New York: St. Martin's Press, p. 15.
- ³⁷ Facing significant budget cuts, CDC will shift funds internally to meet the challenges of determining what is causing the growing number of cases and deaths—but there will be no *new* federal funding until late 1983. See Shilts, p. 90.

See also, Fettner, A. G., and Check, W. A. (1984). The Truth About AIDS: Evolution of an 10 | Page

Updated: August 27, 2021

Epidemic. New York: Holt, Rinehart and Winston, p. 34. "[Friedman-Kien] was remarkably successful in raising money from other sources, a success not matched by any other researcher in those early years. He obtained an emergency grant from the American Cancer Society for \$50,000, and that, with the money from Kramer's group, 'helped us keep the initial research going,' he says, In addition, Friedman-Kien was able to secure funds from four private foundations, for \$10,000 each that first year, support that largely continues."

The American Cancer Society will also provide \$50,000 in funding to Dr. John Ziegler and Dr. Marcus Conant at the University of California, San Francisco/San Francisco General Hospital to support the new KS Clinic at SFGH. See: John Ziegler, M.D., Ph.D. (1994, January 28, February 16). "Oncologist: Kaposi's Sarcoma and AIDS Research in San Francisco and Globally", an oral history conducted in 1994 by Sally Smith Hughes, Ph.D., in The AIDS Epidemic in San Francisco: The Medical Response, 1981-1984, Volume IV, Regional Oral History Office, the Bancroft Library, University of California, Berkeley, 1997. https://oac.cdlib.org/view?docld=kt729005cr;NAAN=13030&doc.view=frames&chunk.id=d0e9091&toc.depth=1&toc.id=d0e9091&brand=oac4

- ³⁸ Centers for Disease Control. (1981, August 28). Follow-up on Kaposi's Sarcoma and *Pneumocystis* Pneumonia. *MMWR*, 30(33), p. 409. https://stacks.cdc.gov/view/cdc/1273
- ³⁹ National Cancer Institute and Centers for Disease Control. (1981, September 15). Summary of the Workshop on Kaposi's Sarcoma. National Institutes of Health. [Unpublished]
- ⁴⁰ DeWys, W. (1989, November 21). In Their Own Words: NIH Researchers Recall the Early Years of AIDS. (D. Rodrigues). https://history.nih.gov/display/history/William+DeWys+Interview
- ⁴¹ Dron, H. (2008, November). HIV InSite Interview with Marcus A. Conant, MD. HIVInsite. University of California, San Francisco. http://hivinsite.ucsf.edu/InSite?page=pr-wad-08-conant
 See also: Marcus A. Conant Papers, MSS 98-39, The UCSF Library and Center for Knowledge Management, Archives and Special Collections, University of California, San Francisco. https://oac.cdlib.org/findaid/ark:/13030/kt5b69q9q0/entire_text/
 - See also: Hughes, S. S. (1997, Winter). The Kaposi's Sarcoma Clinic at the University of California, San Francisco: An Early Response to the AIDS Epidemic. *Bulletin of the History of Medicine*, 71(4), pp. 661.
- ⁴² Dr. Volberding was at the forefront of the AIDS epidemic. (2017, December 1). American College of Physicians Impact. https://www.acponline.org/membership/medical-students/acp-impact/archive/december-2017/dr-volberding-was-at-the-forefront-of-the-aids-epidemic
- ⁴³ Constance Wofsy, 53, doctor who directed an AIDS program. (1996, June 9). New York Times, Section 1, p. 44. <a href="https://www.nytimes.com/1996/06/09/us/constance-wofsy-53-doctor-who-doctor-w

directed-an-aids-program.html Dr. Wofsy and Paul Volberding co-founded the AIDS Program at San Francisco General Hospital in 1983. Wofsy established herself early as an advocate not only for patients with AIDS but, in particular, for women with the disease. With a \$40,000 grant from the state, Dr. Wofsy started the first program for women with AIDS; in the beginning most participants were sex workers or women who injected drugs. See also: Krieger, L. M. (1996, June 12). Mourning for a Pioneer, Dr. Wofsy. SFGate.com. https://www.sfgate.com/news/article/Mourning-for-a-pioneer-Dr-Wofsy-3139128.php

- Milestones and accomplishments. (n.d.) University of California, San Francisco AIDS Research Institute. https://ari.ucsf.edu/about-us/milestones-and-accomplishments
- ⁴⁴ Marine, C. (2001, August 12). The Good Doctor: He's been in on the AIDS battle since the beginning. San Francisco Chronicle. https://www.sfgate.com/health/article/THE-GOOD-DOCTOR-He-s-been-in-on-the-AIDS-battle-2891131.php
 - See also: Cavallo, J. (2020, June 25). AIDS Research Led to Appreciation of the Power of Plants and Integrative Medicine in Cancer Care for Donald I. Abrams, MD. *The ASCO Post*. https://ascopost.com/issues/june-25-2020/aids-research-led-to-appreciation-of-the-power-of-plants-and-integrative-medicine-in-cancer-care-for-donald-abrams/
- ⁴⁵ Albert Einstein College of Medicine. (2011, November 22). HIV/AIDS, 30 Years Later.

 <a href="https://dev.einsteinmed.org/video/?VID=418&ts=searchMultimedia&searchMultimedia&searchMultimedia&gearchMultimed
 - See also: Tanne, J. H. (1987, January 12). On the Front Lines Against the AIDS Epidemic. New York Magazine, pp. 22-31. https://nymag.com/health/features/49240/index4.html
- ⁴⁶ Congenital conditions: Those present from birth. Birth defects are described as being congenital. They can be caused by a genetic mutation, an unfavorable environment in the uterus, or a combination of both factors. https://www.genome.gov/genetics-glossary/Congenital
- ⁴⁷ Wright, J. (2013). Only Your Calamity: The Beginnings of Activism by and for People with AIDS. [Bobby Campbell: Making the New Disease Visible]. *American Journal of Public Health*, 103(10), 1788–1798. https://doi.org/10.2105/AJPH.2013.301381
- ⁴⁸ Rink. (Photographer). (1982, Summer). The first public "Gay Cancer" photographs from a brochure mounted on Castro Street's Star Pharmacy, pictures of AIDS-related Kaposi's Sarcoma [digital image]. https://www.flickr.com/photos/rinkfoto/15268950381/in/album-72157647313235050/
- ⁴⁹ Haverkos, H. W., and Curran, J. W. (1982, November/December). The Current Outbreak of Kaposi's Sarcoma and Opportunistic Infections. CA: A Cancer Journal for Clinicians. https://doi.org/10.3322/canjclin.32.6.330. To arrive at these numbers, it was necessary to

Updated: August 27, 2021

recreate Figure 1 and separate the results from the years preceding and succeeding 1981. In addition to their 1981 numbers, Haverkos and Curran found that 43 cases of KS, PCP, and/or other OIs were diagnosed between 1978 and 1980, and there 16 deaths.

- Francis, D. P. (2012, August 16). Deadly AIDS Policy Failure by the Highest Levels of the U.S. Government: A Personal Look Back 30 Years Later for Lessons to Respond Better to Future Epidemics. Journal of Public Health Policy, Vol. 33(3), pp. 293, Table 1. doi.org/10.1057/jphp.2012.14 The data also indicate an additional 100 cases of AIDS and 30 fatalities have occurred before 1981; these diagnoses are made retrospectively after CDC develops a case definition for AIDS in 1982. Confirmed in personal correspondence with the author, December 7, 2018.
- ⁵¹ The highest estimate of immune-deficiency-related deaths for 1981 comes from the Centers for Disease Control (1989, January). HIV/AIDS Weekly Surveillance Report, p. 12, Table 7. https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-1989-vol-2.pdf

[NOTE: The number of AIDS cases and deaths vary widely, depending on the source and the year in which that source was reported. CDC's own numbers for individual years change in subsequent surveillance reports, as they receive reports for prior years that were delayed or reclassified as cases of AIDS. Because case definitions and reporting standards were not well-defined until much later (and changed over time), and there were long lags in reporting and processing the data, all numbers related to AIDS cases/deaths should be considered estimates.]