

Thirty Years into the AIDS Pandemic

JUNE 5, 1981: A QUIET DAY IN NEW ENGLAND. REAGAN IS entering the first few months of his presidency; Pleasant Colony, a long shot, has just won the Kentucky Derby; the Los Angeles Dodgers are well on their way to winning the World Series four months hence; and a weekly medical journal of the United States Public Health Service, a prescient publication called *Mortality and Morbidity Weekly Report*, carries a brief article reporting that five young Los Angeles males had contracted a rare form of pneumonia caused by the *Pneumocystis carinii* organism. All five patients had also previously been victim to still other fungal and viral infections. Two of these five had already died and the other three were terminally ill.

What made this cluster of infectious disease cases worthy of report? These five young males were each victim to a succession of very rare infections caused by organisms which customarily are incapable of causing disseminated infections in normal adult humans. These uncommon infections are now referred to, collectively, as opportunistic infections since they generally do not attack humans unless some intermediary factor (such as widespread, invasive cancer, severe malnutrition or extensive exposure to radiation) has intervened by depressing the body's immune system and thus rendering it vulnerable to otherwise innocuous organisms; and each of the five, although unbeknownst to each other, shared a lifestyle involving homosexual intimacy.

June, 2011, defines the 30th anniversary of this infectious disease that began its apparent existence in Los Angeles, and later, New York City and San Francisco and is presently burdening every continent of the world, rivaling the bubonic plague of the 14th Century and the influenza pandemic of 1918 as one of the great pestilences of mankind.

What have we learned, in these three decades, about this new disease? Certainly, in 1981, the causative agency was a total mystery. But this much was evident: the disease—as yet unnamed—was transmissible from one human to another by more than one route: there was mounting evidence of venereal transmission, either homosexually or heterosexually; further, that the blood of its victims carried the infective pathogen as indicated by the increasing incidence of the disease amongst those intravenous drug users who jointly employed contaminated syringes and needles. New cases of this disease, later to be called AIDS, were also appearing in hemophilia patients who required multiple blood transfusions (thus providing still further evidence that AIDS was also blood-borne).

The nameless scourge was given a formal name in 1982: **Acquired Immune Deficiency Syndrome (AIDS)**. And by 1983-84 the causative agent, a new retrovirus, was isolated and identified in both Paris and Bethesda laboratories. And now called **Human Immunodeficiency Virus (HIV)**. By 1985 it became evident to the most refractory of bigots that AIDS was not a moral retribution for homosexuality but a widespread viral disease, transmitted by multiple pathways including heterosexual

intimacy; that both males and females were victimized by the pestilence; and that even new-born infants may contract the disease, *in utero*, if their mothers had been infected.

In 1986, and in the absence of a reliable preventive or therapeutic agent, the United States government advocates a stringent education program about the biological nature of the disease and the use of condoms.

In 1986, field tests for the first antiviral drug, zidovudine, is undertaken. And in 1987 the World Health Organization launches a global campaign to educate the public on the means by which HIV is spread. New York City begins an experimental needle exchange program, despite much opposition; it proves to be successful and with no concomitant increase in intravenous drug addictions. By 1990, more Americans have died of AIDS than the total armed forces mortality incurred during the Vietnam war. And by 1994 AIDS has emerged as the leading cause of death for Americans ages 25 to 44.

At the onset of the 21st Century, thanks to a widespread educational program and the availability of effective medication, the AIDS pandemic in America has reversed itself, in contrast to Africa and Asia where the disease continues to spread unabated, with the majority of its victims now women.

What can be said, as of 2011? Effective treatment is now available and there are promising leads for an AIDS vaccine. Despite this:

- More than one million Americans are now living with AIDS and about 18,000 die each year.
- In 2009, an estimated 2.6 million humans were newly infected; and globally, nearly 2 million died of AIDS.
- In the same year, nearly 17 million children were thus orphaned by the ravages of AIDS.
- In some regions of sub-Saharan Africa, as many as one adult in four are now infected with HIV.
- Globally, there are more than 33 million people currently burdened with HIV/AIDS and only 15% of whom are under active treatment.

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The author and their spouse/significant other have no financial interests to disclose.

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