

# History 300. Epidemic Diseases Throughout History

Fall 2004

Tuesday, Thursday 4:00 - 5:30 PM

1427 Mason Hall

Professors Joel Howell and Powel Kazanjian

## Course Overview

In this course students will study the history of epidemics from antiquity to the twenty-first century, including Athenian plague, medieval leprosy, as well as HIV/AIDS and SARS in contemporary society. Themes will include the nature of demographic and epidemiological change, the social and cultural significance and impact of each scourge, the organized public health response to each epidemic, and the development of medical therapeutics and technologies. This course will demonstrate how studying responses to an epidemic can provide insights into the nature of a specific society. It will also provide a historical perspective from which to consider the expectations the lay public now has for health professionals to contain today's epidemics, including those resulting from biologic warfare.

## Course Structure

- 1) Sessions will consist of presentations by the instructors and discussion of the readings.
- 2) Attendance is required. Much class material is not duplicated by the readings.
- 3) Students will write **seven** very short weekly responses (approximately 2 longish paragraphs) that respond to questions from the readings. These papers should demonstrate a) completion and comprehension of the readings, and b) active intellectual engagement with the material. You may want to use the study questions to help direct your thinking and writing, or you may wish to develop themes that occur to you independently. These responses are due once a week, at the Tuesday class. There are 15 weeks of class. No response is due the first week, the week of **Oct. 12 (midterm exam)**, **Nov. 23** (the week the longer paper is due), or **Dec 14 (Final week)**. Everyone may choose four additional weeks as "paper-free weeks;" thus, each student should hand in **7** responses during the term.
- 4) Midterm: in class, **OCTOBER 14th**. Students will choose from several short-answer and essay questions.
- 5) 7-8 page paper on a primary source, due **November 23**, in class. This primary source may be selected from one of the required readings, or may be chosen by the student after discussion with one of the instructors.

6) Take-Home Final Exam, available by 5:30 am on Tuesday, December 14; due Thursday, December 23, by 5:00 p.m. The exam will require approximately 8 pages of writing, typed, double-spaced.

Grade Breakdown:

- Attendance and Participation: 10%
- Weekly responses: 25%
- Midterm 20%
- Paper 20%
- Final 25%

There are no prerequisites.

## Course Schedule

*Week 1 - Tuesday Sept 7, Thursday Sept 9. Sessions 1, 2*

Introduction: Introduction to the course, expectations of students and instructors.

**Patterns of some historic circumstances in which outbreaks to be reviewed in this course occur will be discussed.** Central themes of the course will be introduced, which will include how some aspects of ideas about epidemics persist over time, whereas others change.

Athenian Plague in 430 B.C. The Athenians considered intentional poisoning of the water supply by outsiders as a potential cause of the epidemic. Thucydides speculated that seeds, or semina, were responsible for the contagiousness of the disease. Later, Ovid attributed the epidemic to the anger of the vengeful Juno. Thucydides was also a sufferer. Personal accounts of the epidemic will be reviewed.

Reading (Coursepack):

- Hippocrates, *Of the Epidemics. The Genuine works of Hippocrates* (London: The Sydenham Society, 1849), 99-141.
- Thucydides, *Book II, History of the Peloponnesian War* (Oxford: Clarendon Press, 1881), 135-140.

*Week 2 - Tuesday Sept 14, Thursday Sep 16. Sessions 3, 4*

Athenian Plague in 430 B.C. (continued)

Reading (Coursepack):

- Ovid, *The metamorphoses of Ovid, The Seventh Booke* (London: G. Bell and Sons, 1889), 161-191.

Leprosy in Twelfth Century Europe. Leprosy was viewed as a just punishment for those who behaved sinfully. Skin spots were considered the sign of impurity and identification for a ritual of ceremonial expulsion from society to lazarettos. Objects touched by an unclean individual were subject to a process of disinfection.

Reading:

- Nancy G Siraisi, *Medieval & Early Renaissance Medicine. An introduction to knowledge and practice* (Chicago: University of Chicago Press, 1990), 48-114.

Week 3 - Tuesday *Sept 21*, Thursday *Sep 23*. Sessions 5, 6

Leprosy in Twelfth Century Europe (continued)

Reading:

- Nancy G Siraisi, *Medieval & Early Renaissance Medicine. An introduction to knowledge and practice* (Chicago: University of Chicago Press, 1990), 115-152.

Black Plague in mid-14<sup>th</sup> Century Europe. During this period, theories of disease causality ranged from magical, astrological, and religious to scientific. Folk practitioners based their practices on the former theories, while learned practitioners invoked scientific and philosophic considerations. Tensions arose when organized plague tractates conflicted with religious measures. Quarantines, as well as the devastation of the population from plague, impacted wages and the trade economy.

Reading (Book and Coursepack):

- Nancy G Siraisi, *Medieval & Early Renaissance Medicine. An introduction to knowledge and practice* (Chicago: University of Chicago Press, 1990), 17-48.
- Grant, Edward, *A Source Book in Medieval Science* (Cambridge: Harvard University Press, 1974), 700-720, 752-759, 769-774, 787-791, 799-802.

Week 4 - Tuesday *Sept 28*, Thursday *Sep 30*. Sessions 7, 8

Black Plague in mid-14<sup>th</sup> Century Europe. (continued)

Reading (Book and Coursepack):

- Original Publications of *The Black Death*, translated by Rosemary Horrox (Manchester: Manchester University Press, 1994), 158-203. Selections include “The report of the Paris medical faculty,” October 1348; “Fifteenth century treatise on the pestilence,” and “Ordinances against the spread of plague,” 1348; “The transmission of plague,” 1362; “Plague regulations of Bernabo Visconti, Lord of Milan,” 1374.

Syphilis in 16<sup>th</sup> and 17<sup>th</sup> Century Europe. Responses to the new disease of syphilis included blaming people from foreign lands for importing it from foreign lands. A personal account from Von Hutton reflects the difficulties of coping with the protracted course of the illness and the disdain for the disabling toxicities of antimonial therapies advocated by learned practitioners.

Reading (Coursepack):

- Antonio Benivieni, *On the Hidden and Marvelous Causes of Disease and Healing*, trans. Charles Singer (Oxford: Blackwell Publications, Ltd, 1954), 3-43.

- Ulrich von Hutten, *On the French Disease*, trans. Thomas Poynel, canon of Martin Abbey (London: Thomas Berthelet, 1533), 1-20.
- Fracastoro, *Syphilis, or, the French disease*, trans. H Wynne-Rinch, (London: William Heinemann, 1935), 63-107.
- Marsilio Ficino, *The Book of Life*, trans. Charles Boer (Dallas: Spring Publications, 1980), 83-100.

Week 5 - *Tuesday Oct 5, Thursday Oct 7* . Sessions 9, 10

Virgin Soil Epidemics (Smallpox and Malaria) in 18<sup>th</sup> Century Colonial America.

Theories on the trans-Atlantic epidemiology and demographics of the epidemics invoked both religious and scientific influences. Preventive measures and therapeutics were based on these theories.

Reading (Coursepack):

- Alfred Crosby, “Virgin Soil Epidemics as a Factor in the Aboriginal Depopulation in America,” *William and Mary Quarterly* 33, No. 2 (Apr., 1976): 289-99.
- John Heckewelder, *An account of the History, Manners, and Customs of the Indian Nations Who Once Inhabited Pennsylvania and the Neighbouring States* (Philadelphia: American Philosophical Society, 1819), 220-244.
- David Zeisberger, *History of the Northern American Indians [1779-1780]*, ed. Archer Butler Hulbert and William Nathaniel Schwarzze (Ohio State Archeological and Historical Society, 1910), 23-27, 148-150.

Virgin Soil Epidemics (Smallpox and Malaria) in 18<sup>th</sup> Century Colonial America. (continued)

Reading (Coursepack):

- Roy Merrens and George Terry, “Dying in Paradise: Malaria, Mortality, and the Perceptual Environment in Colonial South Carolina,” *Journal of Southern History* 50:4 (1984): 533-50.
- Daniel Drake, *Practical Essays on Medical Education and the Medical Profession in the United States* (Roff & Young: Cincinnati, 1832), 5-19, 44-59.

Week 6 - *Tuesday Oct 12, Thursday Oct 14*. Sessions 11, 12

Midterm examination.

Mothers and babies and handwashing. Women on the streets of Vienna who entered the hospital for childbirth knew which providers to seek and which to avoid. Hand-washing could eliminate much of the differential in death. Yet the value of hand-washing was not readily adopted. The etiology of the idea and the reasons for resistance to it will be explored.

Reading (Coursepack):

- Ignaz Semmelweis, *The Etiology, Concept, and Prophylaxis of Childbed Fever*, trans K. Codell Carter (Madison: U Wisconsin Press, 1983): 61-119.

Week 7 - Tuesday Oct 19, Thursday Oct 21. Session 13

Fall study break.

Cholera in 19<sup>th</sup> Century America and the germ theory. The sanitation movement in public health in the mid 19<sup>th</sup> Century was crusade for pure air, pure water, and pure food. An organized effort to prevent disease as well an aesthetic movement designed to create a happier world, it was a humanitarian doctrine that succeeded efforts to control the epidemic by mollifying a vengeful deity.

Reading (Book and Coursepack):

- Charles E. Rosenberg, *The Cholera Years, The United States in 1932, 1849, and 1866* (Chicago: University of Chicago Press, 1962), 1-152.
- Charles V Chapin, "Dirt, Disease, and the health officer," *American Public Health Association: Papers and Reports* 28 (1902): 296-299.

Week 8 - Tuesday Oct 26, Thursday Oct 28. Sessions 14, 15

Cholera in 19<sup>th</sup> Century America and the germ theory (continued)

Reading (Book and Coursepack):

- Charles E. Rosenberg, *The Cholera Years, The United States in 1932, 1849, and 1866* (Chicago: University of Chicago Press, 1962), 152-242.
- Girolamo Fracastoro, "Contagion, Contagious Diseases, and their Treatment," in *Milestones in Microbiology*, ed. Thomas Brock (Madison: University of Wisconsin Press, 1999), 69-75.
- J Henle, "Concerning miasmatic, contagious, and miasmatic-contagious disease," in *Milestones in Microbiology*, ed. Thomas Brock (Madison: University of Wisconsin Press, 1999), 76-79.

Tuberculosis and the germ theory of disease. Were specific microorganisms the cause of specific diseases? How do we know? The elucidation of what we now see as the "cause" of tuberculosis, a disease then responsible for a tremendous amount of death each year, served as the model for much of what was to come.

Reading (Coursepack):

- Lawrason Brown, *Rules for Recovery from Pulmonary Tuberculosis* (Lea & Febiger: Philadelphia, 1923), 12-25 & 64-67.
- Lester S. King, *Medical Thinking* (Princeton: Princeton University Press, 1982), 16-69.

Week 9 - Tuesday Nov 2, Thursday Nov 4. Sessions 16, 17

Influenza pandemic in the 20<sup>th</sup> Century. The scientific public health sanitary measures that were based on the germ theory of the late 1880s proved ineffective against influenza, as the overall mortality far exceeded the deaths in WWI battle. Although vaccines for other infections, such as diphtheria, were available by 1917, none had been developed for influenza.

Reading (Coursepack):

- Alan Chase, “The devastating influenza pandemic,” in *Magic Shots: A human and scientific account of the long and continuing struggle to eradicate infectious diseases by vaccination* (New York: William Morrow and Co, 1952), 191-204.
- Richard Collier, “Doctor Doctor, Do Something,” in *The Plague of the Spanish Lady, The Influenza Pandemic of 1918-1919* (London: Macmillan, 1974), 161-183.

Syphilis and race in Tuskegee. For almost 40 years, the United States government systematically prevented African-American men from being treated for syphilis? Who knew about these experiments? Why did they go on for so long? Could it happen again?

Reading (Coursepack):

- Jesse J. Peters et al, “Untreated Syphilis in the Male Negro,” *Journal of Chronic Diseases* 1 (1955):127-148.
- Susan M. Reverby ed, *Tuskegee's Truths* (Chapel Hill: University of North Carolina Press, 2000), 15-34 (which is Allan M. Brandt, “Racism and Research”, originally published in the *Hastings Center Report* 8 (December 1978): 21-29)); 35-38; and 431-442 (which is Vanessa Northington Gamble, “Under the Shadow of Tuskegee,” originally published in the *American Journal of Public Health* 87(1997):1773-87)).

Week 10 - Tuesday Nov 9, Thursday Nov 11. Sessions 18, 19

Polio and Smallpox in 20<sup>th</sup> Century America. After the implementation of effective vaccines on a widespread basis, the incidence of polio has been reduced, and smallpox has not reappeared for over two decades.

Reading (Book and Coursepack):

- Alan Chase, “Vaccines make eradication of paralytic poliomyelitis possible,” in *Magic Shots: A human and scientific account of the long and continuing struggle to eradicate infectious diseases by vaccination* (New York: William Morrow and Co, 1952), 293-308.
- Sinclair Lewis, *Arrowsmith* (London: Penguin Books Ltd., 1924): 1-200.

HIV pandemic in the 20<sup>th</sup> Century. The disease originated in discrete epidemiological patterns in the 1980s, but had spread worldwide by the 1990s. Tensions between individual civil liberties and public health measures became evident as measures to prevent spread to susceptible individuals proved ineffective, and, paradoxically, have been undermined in the age of potent HIV drug therapies. Personal accounts of HIV-infected people will be reviewed.

Reading (Book and Coursepack):

- Sinclair Lewis, *Arrowsmith* (London: Penguin Books Ltd., 1924): 200-243.
- Alan Brandt, "AIDS from Social History to Social Policy," in *AIDS: The Burdens of History*, ed. Elizabeth Fee and Daniel M Fox (Berkeley: University of California Press, 1988), 147-168.
- Editorial, "Time to Act: Global Apathy Towards HIV/AIDS is a Crime Against Humanity," *Lancet* 360 (2002):1710-11.

*Week 11 - Tuesday Nov 16, Thursday Nov 18. Sessions 20, 21*

HIV pandemic in the 20<sup>th</sup> Century. (continued)

Reading (Coursepack):

- Tony Barnett and Alan Whiteside, "HIV-AIDS-The Current Situation," in *AIDS in the Twenty-First Century. Disease and Globalization* (New York: Macmillan, 2002), 9-23.

Nosocomial infections in the 20<sup>th</sup> Century. New diseases, including drug-resistant bacteria, resulted from technological advances that unleashed dangers that could not be controlled by preventive or therapeutic measures. Infections due to these bacteria originated within hospitals, but soon were no longer limited to spreading within them.

Reading (Coursepack):

- Paul Ehrlich, "Modern Chemotherapy," in *Milestones in Microbiology*, ed. Thomas Brock (Madison: University of Wisconsin Press, 1999), 163-175.
- Gerhard Domagk, "A Contribution to the chemotherapy of bacterial infections," in *Milestones in Microbiology*, ed. Thomas Brock (Madison: University of Wisconsin Press, 1999), 195-199.
- Berton Roueche, "Something Extraordinary," in *Eleven Blue Men and Other Narratives of Medical Detection* (New York: Berkley Co, 1947), 139-58.
- Joseph Gots, "The Detection of Penicillinase-Producing Properties of Microorganisms," *Science* 8 (1945): 309.
- Maxwell Finland, "And the walls come tumbling down. More antibiotic resistance," *New England Journal of Medicine* 299 (1978): 770-773.

- Calvin Kunin, “Antibiotic armageddon,” *Clinical Infectious Diseases* 25(2) (1977):240-1.

*Week 12 - Tuesday Nov 23, Session 22.*

Medicine in the movies: Screening of epidemic diseases as portrayed in historical films to be shown in class.

*Week 13 - Tuesday Nov 30, Thursday Dec 2, Sessions 23, 24*

Infectious diseases in a state institution. Much of what we now believe to be true about the different types of hepatitis comes from 1950s experiments done at the Willowbrook State School in Staten Island, New York, in which mentally challenged children were intentionally infected with hepatitis. What justifications were offered for these experiments? Were those justifications valid then? Now?

Reading (Coursepack):

- Henry K. Beecher, "Ethics and Clinical Research," *NEJM* 274(1966):1354-1360.
- Saul Krugman et al, "Infectious Hepatitis: Evidence for Two Distinctive Clinical, Epidemiological and Immunological Types of Infection," *JAMA* 200(1967):365-373.
- Joseph Dancis, "Presentation of the Academy Medal to Saul Krugman, M.D.," *Bull. N.Y. Acad. Med.* 54 (1978): 910-914.
- David J. Rothman, "Were Tuskegee & Willowbrook 'Studies in Nature' ?" *The Hastings Center Report* 1982(12): 5-7.

Emerging infections. Technologic advances has allowed the travel industry to facilitate spread of endemic infections limited to discrete geographic regions, such as West Nile virus and SARS, to global epidemics. Quarantines, as well as the devastation of the population from plague, impacted wages and the trade economy.

Reading (Coursepack):

- Joshua Lederberg, “Infection Emergent,” *JAMA* 275(1996):243-45.
- Richard Preston, “Crisis in the hot zone,” *The New Yorker*, October 26, 1992, pp 58-62, 64-76, 78-81.
- Jane Brody, “The spread of mosquito-borne viruses is just a matter of time,” *New York Times*, Tuesday, August 7, 2001, sec. D, pages 1,8.
- Lyle Petersen and Duane Gubler, “West Nile Virus,” *JAMA* 290(2003):524-27.
- “China Wakes Up,” *The Economist*, April 26, 2003, 18-20.
- Joseph Kahn, “Quarantine Set in Beijing Areas to Fight SARS. Thousands are Isolated as Alarm Spreads,” *New York Times*, Friday, April 21, 2003, sec. A, pages 1, 10.
- Keith Bradsher and Lawrence Altman, “Isolation, an Old Medical Tool, Has SARS Fading,” *New York Times*, Saturday, June 21, 2003, sec. A, pages 1, 6.



- Henry Masur and Clifford Lane, “SARS: Providing Care in the Face of Uncertainty,” *JAMA* 289 (2003):2861-2862.

*Week 14 - Tuesday Dec 7, Thursday Dec 9. Sessions 25, 26*

Diseases resulting from biologic warfare. Microbiologic knowledge combined with military technology was willfully used by aggressors with the intention of harming susceptible victims.

Reading (Coursepack):

- Clifford Lane and Anthony Fauci, “Bioterrorism on the Home Front: A New Challenge for American Medicine,” in *Bioterrorism. Guidelines for Public Health Management*, ed. Donald Henderson and Thomas Inglesby (Chicago: AMA Press, 2002), 7-10.
- Editorial, “Terror in the Mail,” *New York Times*, Friday, November 23, 2001, sec. A., p. 22.

Diseases resulting from biologic warfare. (continued)

Reading (Coursepack):

- Editorial, “Bioterror Vaccines,” *New York Times*, Sunday, October 21, 2001, sec. E, p. 14.
- John Grabenstein and William Winkenwerder, “US Military Smallpox Vaccination Program Experience,” *Journal of the American Medical Association*; 289 (2003): 3278-3282.

*Week 15 - Tuesday Dec 14. Session 27.*

Summary and Reflections: Patterns of social responses to several epidemics, including plague in the fourteenth century, syphilis in the sixteenth century, and AIDS in the 20<sup>th</sup> century may be appreciated. A survey of the biologic and cultural ramifications of epidemics reveals that the expectation of conquering disease is a utopian ideal that, with the exception of polio and smallpox, is without historic precedent. Lay expectations for medical healers to ameliorate or eliminate today’s epidemics may be considered within this overall historical context.