

COURSE SYLLABUS: revised for Piedmont Project, 20 June 2004

The History of Public Health and the Environment
Emory University Rollins School of Public Health (BSHE 579)
Fall, 2004: Weds 12 to 2

NOTE: I have infiltrated environmental issues into each week's readings and discussion. See Changes below in syllabus to include environmental issues in red or where issues already are reflected in the readings: NOTE: this course could easily be revised as an undergraduate offering

Please check the course blackboard website frequently for any updates to the syllabus.

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Course Description:

The goal of this class is to explore the history of American public health in comparative perspective, **with an emphasis on environmental issues**. We will examine the role of infection, nutrition, genetics, immunity, **environment** and behavior and the scientific and philosophical systems that underlie our understanding of them as "causes" of disease. Second, the course will examine the social and **environmental factors** in that have influenced population health including an examination of the categories of race, class, gender, and sex.

As we will discover there are many ways to define public health and thus there are multiple histories of public health. If a history is to be a useful tool for public health practitioners, it must attempt, so far as possible, to avoid framing the questions we ask about the past in terms how we define public health in the present. By examining the history of public health through the lens of those issues that framed population health concerns, we will gain insight into the assumptions that frame current public health responses.

Objectives:

By the end of the semester, students should be able to:

1. Define the difference between public health and medical health in historical and **environmental** perspective. Students should be able to articulate the way biological, environmental, and social/cultural factors interact in “disease” production and how an understanding of these influences can influence prevention strategies.
2. Explain the difference between disease, syndrome, and illness. Students should be able to explain how signs and symptoms contribute to the broader understanding of diseases, syndromes, and illnesses as they relate to the population health.
3. List historical examples of the changing definitions of public health in a variety of cultures and times.
4. Explain how population health is framed and how public health responds, using tools such as epidemiology, biostatistics, environmental health, health education, and qualitative/quantitative research methods.
5. Provide examples of how race, class, gender, and sex have influenced modern responses to public health crises.
6. Compare and contrast the response to public health issues in different times and different cultures.

Relationship to the Mission of Rollins School of Public Health:

The school's mission is to acquire, disseminate, and apply knowledge to promote health and prevent disease in human populations. Rollins School of Public Health comprises of six academic departments and three interdisciplinary centers: behavioral sciences and health education, biostatistics, environmental and occupational health, epidemiology, health policy and management, international health, the Center for Injury Control, the Center for Public Health Practice, and the Women's and Children's Center. At the Rollins School of Public Health (RSPH), students learn to identify, analyze, and intervene in today's most pressing public health issues. By participating in this foundation course students garner insight to the history of public health in the United States and other countries, while gaining and understanding of the rules for determining causation in public health and how those rules have developed over the years. By applying clinical, behavioral, pathological, and laboratory evidence students will apply critical thinking skills to past, present, and future public health crises.

Class Organization:

Although there are a number of ways to organize the history of public health, this course will take a modified chronological approach in which issues affecting population health will also be examined comparatively. For instance, we will examine an initial epidemic of a particular disease and then compare it to later reoccurrences and to outbreaks in different geographic areas. In this way we should reach a more complex understanding of how particular population health issues have been understood in different times and places and what those responses may illuminate for current and future outbreaks.

Our historical examination will call on the tools and disciplines of public health-- including epidemiology & biostatistics, environmental health, health policy, health education, and qualitative/quantitative methods—recognizing, at the same time, the extent to which these tools and disciplines have been constructed and shaped by the categories of public health concerns. What constitutes public health concerns, like so much else in medicine, have been greatly

influenced by economics, politics, culture, and society. Nevertheless, the role of organic mechanisms cannot be ignored in any history of public health. Thus, we will also become familiar with the biological mechanisms of disease to the extent that they influence and inform political, social and cultural experience of public health.

A related goal of this seminar is to examine the rules for determining causation in public health and how those rules have developed and mutated. Thus we will explore the historical development of biomedical and epidemiological criteria for determining causality and definition of disease based on clinical evidence, pathology, laboratory data, and exposure. The seminar will examine these criteria in the context of the contribution of cultural, environmental, and political factors. Having done this, we expect that seminar participants will be able to critically evaluate more general claims of disease causality.

Assignments:

Using a problem-based approach, seminar members, working in teams, will explore an issue in the history of public health not explicitly examined in the course readings and syllabus and offer tentative explanations for determining its risks to health in an historical and comparative framework. **Each topic must include an environment component.** Topics will be selected in consultation with the instructor. Teams will begin their collaborations in January. Each team will examine the cultural, historical, **environmental**, and epistemological assumptions that have framed the understanding of what constitutes necessity and (in)sufficiency in the etiology and of a selected disease or condition associated with the history of public health. In addition, teams will then relate their final projects, in a cumulative manner, to major issues discussed in the class (e.g. issues of stigma and TB/Typhoid outbreaks; **pollution and cholera**). Teams will make presentations for the seminar meeting at the end of April. Details of the final assignments will be posted on the blackboard homepage early in the semester.

Student Involvement:

As a seminar, this course is designed to be interactive. In order to facilitate a high level of discussion, students are required to:

1. Read the assigned reading prior to the class meeting and to participate in discussions. The quality of participation in seminar discussions will influence the final grade.
2. Come to all class meetings on time. If you are unable to attend a meeting, or will be late, please inform me in advance. Unexcused absences and lateness will be reflected in your final grade.
3. Each week students a question or issued will be posed on Blackboard and students will be required to prepare a 1-2 sentence exposition to answer the question or to respond to the issues raised. These responses will be based on the main claim(s) of *each* reading. Students will then provide 2-3 discussion questions based on these responses. The questions should reflect underlying themes or issues arising from the specific readings for the week as they are informed by the issues that have emerged during the semester. These paraphrased theses and questions must be posted on the course homepage by 5:00 p.m. on the Monday prior to the class meeting.

To post your weekly summary paper, go to the "Discussion Board" area and locate the current unit for the week. Please "respond" to the unit's thread, which has been designated.

Writing Assignments and Grades:

A detailed description of the oral and written assignments is found in section three. Briefly, teams will have two reports due: (1) March 2: abstract and bibliography of team project (2) Presentations for a class conference on April 20 and April 27, 2004.

Course grades will be determined as follows:

Seminar participation, **30%**;

Weekly Postings, **20%**

Abstract and Literature Review, **10%**;

Final Project (Presentation, Poster, and Paper) **40%**

15% presentation – most of this will be focused on content but some attention will be given to method of delivery, and ability to address questions.

5% poster – again content, presentation, and ability to handle questions during poster presentations

20% paper – content, logic of position, and quality of coverage on chosen issue.

REQUIRED and SUGGESTED TEXTS

The following are *required* texts for the course (available at the Emory bookstore):

Wills, Christopher. *Yellow Fever, Black Goddess: The Coevolution of People and Plagues*. Reading, MA: Addison Wesley, 1996 (Book thesis is that disease cannot be understood without a wider understanding of ecology and impact of interaction between humans and their physical environment).

Watts, Sheldon. *Epidemics and History: Disease, Power, and Imperialism*. New Haven: Yale University Press, 1997.

Recommended:

Garrett, Laurie. *Betrayal of Trust: The Collapse of Global Public Health*. Indiana: Little Brown, 2000.

Useful Reference Tools:

Kiple, Kenneth F., editor. *The Cambridge World History of Human Disease*. New York: Cambridge University Press, 1993.

COURSE ASSIGNMENTS

1 September: Introduction: What is/was Public Health? What Constitutes etiology in Public Health?

Sources for Discussion:

Wills, Christopher Wills , "The Delicate Balance Between Life and Death," in *Yellow Fever, Black Goddess: The Coevolution of People and Plagues* Reading, MA: Addison Wesley, 1996, 3-49 (examines epidemics as part of ecological process).

Rosenberg, Charles E. "Introduction: Framing Disease: Illness, Society, and History," in *Framing Disease: in Cultural History*. Charles E. Rosenberg and Janet Golden, eds. New Brunswick: NJ: Rutgers University Press, 1991, pp. xiii-xxvi.

Aronowitz, Robert A. "Making Sense of Illness: Science, Society, and Disease." New York: Cambridge University Press, 1998, pp. 1-18.

Evans, Alfred S. "Concepts and Background of Causation," and "Causation and Occupational Diseases" in Evans, *Causation and Disease: A Chronological Journey*. New York: Plenum Publishing Co, 1993, pp. 1-12.

Recommended:

Sutter, Morley C. "Assigning Causation in Disease: Beyond Koch's Postulates," *Perspectives in Biology and Medicine*, 39 (1996): 581-592.

?? Sept: Last Day for Drop/Add

8 September: Black Death: Bubonic Plague or Was it?: *What understanding the Environment of people and rats may Reveal*
Reading:

Wills, Christopher Wills , "Chief Monster That has Plagued the Nations, yet," in *Yellow Fever, Black Goddess: The Coevolution of People and Plagues* Reading, MA: Addison Wesley, 1996, 53-102 (environmental influences on plague).

McEvedy, Colin. "The Bubonic Plague," *Scientific American*, 258 (1988): 118-123.

Cunningham, Andrew. "Transforming Plague: The Laboratory and the Identity of Infectious Disease," in *The Laboratory Revolution in Medicine*, edited by Andrew Cunningham and Perry Williams, Cambridge: Cambridge University Press, 1992, pp. 209-244.

Risse, Guenther B. "'A Long Pull, A Strong Pull, and All Together': San Francisco and Bubonic Plague, 1907-1908." *Bulletin of the History of Medicine*, 1992, 66: 260-286.

Recommended:

Cohn, Samuel, J. "The Black Death: End of a Paradigm," *American Historical Review*, 107 (June, 2002), 703-738.

Garrett, Laurie. "Filth and Decay : Pneumonic Plague Hits India and the World Responds," in *Betrayal of Trust: The Collapse of Global Public Health*. Indiana: Little Brown, 2000, pp. 15-49 (review of 1992 outbreak in India as part of wider environmental pressures).

15 September: Smallpox

Reading:

Crosby, Alfred. "Conquistador y Pestilencia," in *The Columbian Exchange: Biological and Cultural Consequences of 1492*, Alfred W. Crosby, Westport, CN: Greenwood, 1972. (Not new, but emphasizes environmental role in smallpox)

Leavitt, Judith Walzer, " 'Be Safe, Be Sure.' New York City's Experience with Epidemic Smallpox," in *Sickness and Health in America: Readings in the History of Medicine and Public Health*, Editors Judith Walzer Leavitt and Ronald L. Numbers, 3rd revised ed., Madison: University of Wisconsin Press, 1997, 407-417 pp. 385-389.

Mack, Thomas. "A different view of smallpox and vaccination." *The New England Journal of Medicine*, 348, no. 5, 2003, 460-463.

Recommended:

Breman, J.G., & Henderson, D.A. "Diagnosis and management of smallpox." *New England Journal of Medicine*, 346, no. 17, 2002, 1300-1308.

Watts, Sheldon. "Smallpox in the New World and the Old," in *Epidemics and History: Disease, Power, and Imperialism*. New Haven: Yale University Press, 1997, pp. 84-121.

(useful Background in Baxby, Derrick. "Should Smallpox Virus be Destroyed? The Relevance of the Origins of Vaccinia Virus," *Social History of Medicine*, 9 (1996): 117-119.

AND

Razzell, Peter. "The Origins of Vaccinia Virus--A Brief Rejoinder," *Social History of Medicine*, 11 (1998): 107-108.)

22 September: Cholera: *population growth and water-borne illness*

Reading:

Wills, Christopher. "Chapter 6: Cholera, The Black One," in *Yellow Fever, Black Goddess: The Coevolution of People and Plagues*. Reading, MA: Addison Wesley, 1996, pp. 105-130 (emphasis on population pressures and water-borne illness).

Rosenberg, Charles. "Cholera in Nineteenth-Century Europe: A Tool for Social and Economic Analysis." *Comparative Studies in Society and History*, 8, 1966, 452-463.

Watts, Sheldon. "Cholera & Civilization: Great Britain and India, 1870 to 1920," in *Epidemics and History: Disease, Power, and Imperialism*. New Haven, Yale University Press, 1997, pp. 167-212.

Arnold, David. "Cholera and Colonialism in British India." *Past and Present*, no. 113, 1986, 118-151 (looks at cultural assumptions and their impact on environment resulting in exacerbation

of pollution and disease)..

Recommended:

Shears, Paul. "Recent Developments in Cholera." *Current Opinion in Infectious Diseases*, 14, 2001, 553-558.

*29 September: Tuberculosis & Typhoid Fever: Public Health Interventions that "Worked"?
TB: Pathogen or Environment?:*

Readings:

Dubos, Rene and Jean Dubos. *The White Plague: Tuberculosis, Man, and Society*. New Brunswick and London: Rutgers University Press, 1987, pp. iv-xxxiv; 94-228. (examines rise and fall of TB as part of greater ecological cycles)

Hunter, Tera W. "Tuberculosis as the 'Negro Servants' Disease," Chapter 9 in Hunter, *To 'Joy My Freedom: Southern Black Women's Lives and Labors after the Civil War*. Cambridge, MA; London: Harvard University Press, 1997 (shows how racism leads to neglect of environmental factors in TB).

Recommended:

Feldberg, Georgina D. "Coping with Koch's Challenges: Bacteria, Biologics, and the Economy of Disease," in Feldberg, *Disease and Class: Tuberculosis and the Shaping of Modern North American Society*. New Brunswick, NJ: Rutgers University Press, 1995, pp. 36-80.

Typhoid Fever: Quarantine or Prejudice:

Readings:

Wills, Christopher. Chapter 7: "A Cleverer Pathogen" in *Yellow Fever, Black Goddess: The Coevolution of People and Plagues*. Reading, MA: Addison Wesley, 1996, pp. 131-145. (examines how changes in environment and population density, lead to typhoid out break and spread)

Leavitt, Judith Walzer. "'Typhoid Mary' Strikes Back: Bacteriological Theory and Practice in Early Twentieth Century Public Health," *ISIS*, 83(1992): 608-629.

Mendolsohn, J. Andrew. "'Typhoid Mary' Strikes Again: The Social and Scientific in the Making of Modern Health," *ISIS*, 986(1995): 228-277.

6 October: Malaria: The World's Greatest Killer (NEW Topic ADDITION)

Reading: ALL readings below examine persistence and spread of malaria in environmental context

Watts, Sheldon. "Yellow Fever, Malaria, and Development: Atlantic Africa and the New World, 1647-1928," in *Epidemics and History: Disease, Power, and Imperialism*. New Haven: Yale University Press, 1997, pp. 213-268.

Wills, Christopher. "An Augue Very Violent," in *Yellow Fever, Black Goddess: The Coevolution of People and Plagues*. Reading, MA: Addison Wesley, 1996, pp. 149-185.

Humphreys, Margaret, Chapter 2 "The Mist Rises: Malaria in the 19th Century," in *Malaria: Poverty, Race, and Public Health in the United States*. Baltimore: Johns Hopkins University Press, 2001).

Packard, Randall M. "Malaria Dreams: Postwar Visions of Health and Development in the Third World," *Medical Anthropology*, 17 (1997): 279-296.

6 October: ABSTRACTS DUE ABSTRACTS DUE

13 October : The Decline of Infant Mortality: Public Health, or Medical Science Reading:

McKeown, Thomas. "Food, Infection, and Population." *Journal of Interdisciplinary History*, 14 (1983): 227-247. Examines the extent to which knowledge about the multi-factorial elements of disease influence health and health policy.

Condron, Gretchen A., Henry Williams, and Rose A. Cheney. "The Decline of Mortality in Philadelphia from 1870-1930: The Role of Municipal Services," in *Sickness and Health in America: Readings in the History of Medicine and Public Health*, Editors Judith Walzer Leavitt and Ronald L. Numbers, 2nd revised ed., Madison: University of Wisconsin Press, 1985, pp. 385-389 (suggests that better public health measures—clean water, sanitation, etc. were most important factors in decline of infant mortality in early 20th century US).

Brown, JoAnne. "Purity an Danger in Color: Notes on Germ Theory and the Semantics of Segregation in Gaudilliere & Lowy eds. *Heredity, and Infection: the History of Disease Transmission*, New York, Routledge, 2003, 101-131.

Galishoff, Stuart. "Germs Know No Color Line: Black Health and Public Policy in Atlanta, 1900-1918." *Journal of the History of Medicine*, 40 (1985): 22-41(Looks at how racism influences environmental policy and yet how shared environment, makes it impossible to ignore health of marginalized communities).

For Further reading:

Marks, Harry, Gretchan A. Condron, Richard A. Meckel, Gerry Kearns, and Samuel Preston. "Demography and History around 1900: A Symposium on the Fatal Years," *Bulletin of the History of Medicine*, 68(1994): 85-128.

Grob, "Stopping the Spread of Infection," from *The Deadly Truth: A History of Disease in America*, Harvard Univ. Press, 2003, Ch 8 pp. 180-216.

20 October: Sickle Cell Anemia: **How a Molecular Disease is influence by environmental change**

Readings:

Wailoo, Keith, "Race Pathologies, Apparent and Unseen," in *Dying in the City of Blues: Sickle Cell Anemia and the Politics of Race and Health*. Chapel Hill, Univ. of North Carolina Press, 2001, pp. 55-83 (will use as a vehicle to examine why SCA appeared to be a new disease; will discuss how environmental improvements, especially in the water supply, made it possible for children with SCA to survive infancy and thus enable researchers to both identify the disease and develop interventions that prolonged life of the afflicted).

Tapper, Melbourne. "An 'Anthropology' of the 'American Negro': Anthropology, Genetics, and the New Racial Science, 1940-1952," *Social History of Medicine*, 10 (1997), pp. 263-289.

For Further Reading:

Feldman, Simon D. and Alfred E. Tauber. "Sickle Cell Anemia: Reexamining the First 'Molecular Disease'," *Bulletin of the History of Medicine*, 71 (1997), pp. 623-650.

Wailoo, Keith. "A Disease *Sui Generis*: The Origins of Sickle Cell Anemia and the Emergence of Modern Clinical Research, 1904-1924." *Bulletin of the History of Medicine*, 1991 (Summer), 65(2), pp. 185-208.

27 October: Tuskegee Syphilis Study:

Reading:

Brandt, Allan M. "Racism and Research: The Case of the Tuskegee Syphilis Study," in *Sickness and Health in America: Readings in the History of Medicine and Public Health*, pp. 331-343. Editors Judith Walzer Leavitt and Ronald L. Numbers, 2nd revised ed., Madison: University of Wisconsin Press, 1985.

Jones, James H. "Nothing Learned Will Prevent, Find, or Cure a Single Case," in *Bad Blood: The Tuskegee Syphilis Experiment*. New York: New York Press, 1993, pp. 188-219.

Wills, Christopher. Chapter 9: "Syphilis and the Faustian Bargain" in *Yellow Fever, Black Goddess: The Coevolution of People and Plagues*. Reading, MA: Addison Wesley, 1996, pp. 186-211. (Shows how the rise of syphilis and persistence reflected environmental pressures, including climate and human cultural practices and esp how the bacteria itself was the result of changing environmental forces.)

Watts, Sheldon. "The Secret Plague: Syphilis in Western Europe and East Asia, 1492-1965" in *Epidemics and History: Disease, Power and Imperialism*. New Haven: Yale University Press, 1997, pp. 122-166 (will use to show how climate change resulted in variations in treponema presentations in host).

Suggested reading:

Benedek, Thomas G. and Jonathan Erlen. "The Scientific Environment of the Tuskegee Study of Syphilis, 1920-1960" in *Perspectives in Biology and Medicine*, 43:1 (1999): 1-30.

3 November: Addiction, Mental Health and Public Health: A Problem of Classification

Read:

Brandt, Alan. "The Cigarette, Risk, and American Culture," *Daedalus*, 1990: 155-776.

Sullum, Jacob, "Smoke Alarm," in *For Your Own Good: The Anti-Smoking Crusade and the Tyranny of Public Health* (New York: The Free Press, 1998), pp. 138-180 (examines role cigarette smoke versus other environmental pollutants).

Colin Talley, **Howard I. Kushner**, & Claire E. Sterk, "Lung Cancer, Chronic Disease Epidemiology, and Medicine, 1948-1964," *Journal of the History of Medicine*. 2004, 59:329-373. (examines scientific evidence and claims about smoking—will use to explore the extent to which focus on cigarettes may have resulted in de-emphasis on other environmental pollutants and lung cancer).

10 November: HIV/AIDS and the Environment (Public Health students learn a great deal about HIV/AIDS, but little about how environmental changes led to increased spread of AIDS—thus this section will focus on that aspect)

Readings: (All these readings examine environmental change and spread of HIV/AIDS)

Grmek, Mirko D. "Some Unorthodox Views and a Selection Hypothesis on the Origin of AIDS Viruses." *Journal of the History of Medicine and Allied Sciences* 50, no. April (1995): 253-273.

Garrett, Laurie. "Hatari: Vinidogodogo: The Origin of AIDS." in Garrett, *The Coming Plague: Newly Emerging Diseases in a World Out of Balance*. New York: Penguin, 1994, pp. 281-389.

Wills, Christopher, "AIDS and the Future of Plagues," in *Yellow Fever, Black Goddess: The Coevolution of People and Plagues*. Reading, MA: Addison Wesley, 1996, pp. 215-253.

17 November: Chronic Disease Epidemiology, the Environment, and the future of Public Health: (new emphasis).

Read:

Wills, Christopher, "Safety in Diversity," in *Yellow Fever, Black Goddess: The Coevolution of People and Plagues*. Reading, MA: Addison Wesley, 1996, pp. 254-271. (Overview of environmental issues raised in the course)

Grob, G. "The Discovery of Chronic Illness," AND "No Final Victory" from *The Deadly Truth: A History of Disease in America*," Harvard Univ. Press, 2003, Chaps 9 & 10 pp. 216-275. (Will look at environmental factors in chronic disease).

24 November: No Class—Thanksgiving break

1 December: Team Presentations

8 December: Team Presentations

Possible topics and readings that could form the basis for a team collaboration (Also suggestions for further reading in the History of Public Health—**All topics must consider environmental impact.**