

HISTORY OF EPIDEMIOLOGY II: EPIDEMIOLOGY & PUBLIC HEALTH

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Course Syllabus

This course will examine the development of modern epidemiological methods in the 19th and 20th century, through weekly readings of original texts--classic and not-so-classic. Emphasis will be placed on exploring the links between epidemiological methods, concepts of disease and public health practice. This half of the course deals with chronic disease and social epidemiology.

Students should come to class prepared to discuss the weekly readings. Course requirements include participation, and preparation of two short papers analyzing the weekly readings.

Week 1: THE SOCIAL CAUSATION OF DISEASE: PELLAGRA

Required Readings:

"Discussion Pellagra Symposium," Southern Medical Journal 9 (1916), 31-42.

"Report of the Pellagra Commission of the N.M.A.," Journal of the National Medical Association 10 October-December (1918), 163-166.

Joseph Goldberger, G.A. Wheeler and Edgar Sydenstricker, "A Study of the Relation of Family Income and Other Economic Factors to Pellagra Incidence in Seven Cotton-Mill Villages of South Carolina in 1916," in Goldberger on Pellagra, ed. Milton Terris. Baton Rouge: Louisiana State University Press, 1964, 225-267.

Background:

Daphne Roe, "A Plague of Corn" The Social History of Pellagra. Ithaca: Cornell University Press, 1973.

Elizabeth Etheridge, The Butterfly Caste. A Social History of Pellagra in the South Westport: Greenwood Publishing, 1972.

Edward Beardsley, A History of Neglect. Health Care for Blacks and Mill Workers in the Twentieth-Century South. Knoxville: University of Tennessee Press, 1987.

Gerald M. Oppenheimer, "Paradigm Lost: Race, Ethnicity and the Search for a New Population Taxonomy," *American Journal of Public Health*, (2001) 91, 1049-1055.

Week 2: SMOKING, CANCER AND PUBLIC HEALTH

Required Readings:

Richard Doll and A. Bradford Hill, "Lung Cancer and Other Causes of Death In Relation to Smoking. A Second Report on the Mortality of British Doctors," *British Medical J* 2 November 10, (1956), 1071-1081.

R.A. Fisher, "Lung Cancer and Cigarettes?" *Nature* 182 (1958),108.

R.A. Fisher, "Cancer and Smoking," *Nature* 182 (1958), 596.

Jerome Cornfield, William Haenszel, E. Cuyler Hammond, Abraham Lilienfeld, Michael D. Shimkin, and Ernst L. Wynder, "Smoking and Lung Cancer: Recent Evidence and A Discussion of Some Questions," *J of the National Cancer Institute* 22 (1959), 173-203.

Bernard G. Greenberg, "Problems of Statistical Inference in Health with Special Reference to the Cigarette Smoking and Lung Cancer Controversy," *Journal of the American Statistical Association* 64 (1969), 739-758.

Background:

Colin White, "Research on Smoking and Lung Cancer; A Landmark in the History of Chronic Disease Epidemiology," *Yale J of Biology and Medicine* 63 (1990), 29-46.

Christopher Sellers, "Discovering environmental cancer: Wilhelm Hueper, post-World War II epidemiology, and the vanishing clinician's eye," *Am J Public Health* 87 (November, 1997), 1824-35.

William H. Wynder, "Tobacco as a Cause of Lung Cancer," *American Journal of Epidemiology* 146 (1997), 687-694.

Week 3: AIR POLLUTION

Required Readings:

W.P.D. Logan, "Mortality in the London Fog Incident, 1952," *Lancet* i (February 14, 1953), 336-338.

Michelle L. Bell and Debra lee Davis, "Reassessment of the Lethal London Fog of 1952: Novel Indicators of Acute and Chronic Consequences of Acute Exposure to Air Pollution," *Environ Health Perspectives* 109 (2001), Suppl 3: 389-394.

Bill Luckin, "Town, Country and Metropolis: The Formation of an Air Pollution Problem in London, 1800-1870," in Dieter Schott, *Energie und Stadt in Europa* (Franz Steiner Verlag, 1997), 78-92.

- 1) In what senses is air pollution a problem?
- 2) How does air pollution cause bad health? How do we know?

Week 4: Lead

Required Reading:

Barbara Berney, "Round and Round It Goes: The Epidemiology of Childhood Lead Poisoning, 1950-1990," *Milbank Quarterly* 71 (1993), 3-39.

James L. Pirkle, et al., "Exposure of the U.S. Population to Lead, 1991-1994," *Environmental Health Perspectives* 106 (1998), 745-750.

Gerald Markowitz and David Rosner, "'Cater to the Children': The Role of the Lead Industry in a Public Health Tragedy," *AJPH* 90 (January 2000), 36-46.

- 1) What are the health effects of lead? How are they discovered?
- 2) Who is responsible for the lead problem?

Week 5: RADIATION

Required Readings:

Gilbert W. Beebe, "Reflections on the Work of the Atomic Bomb Casualty Commission in Japan," *Epidemiologic Reviews* 1 (1979), 184-210.

Stephen W. Lagakos and Fredrick Mosteller, "Assigned Shares in Compensation for Radiation-Related Cancers," *Risk Analysis* 6 (1986), 345-357.

Irwin D. Bross and Neal S. Bross, "Do Atomic Veterans Have Excess Cancer. New Results Correcting for the Healthy Soldier Bias," *American J of Epidemiology* 126 (1987), 1042-1050.

- 1) How do you measure the effects of radiation on health?
- 2) Why is data on doses a problem?

Background:

M. Susan Lindee, *Suffering Made Real. American Science and the Sufferers at Hiroshima*. Chicago University of Chicago Press, 1994.

JoAnne Brown, "The Social Construction of Invisible Danger. Two Historical Examples," Andrew Kirby, ed. *Nothing to Fear. Risks and Hazards in American Society* (Tuscon: University of Arizona Press, 1990), 39-52.

Week 6: THE EPIDEMIOLOGY OF A CHRONIC DISEASE

Ancel Keys, "Prediction and Possible Prevention of Coronary Disease," *American J of Public Health* 43 (November, 1953), 1399- 1407.

D.M. Berkson, J. Stamler et al., "Socioeconomic Correlates of Atherosclerotic and Hypertensive Heart Disease," *Annals of the New York Academy of Sciences* 84 (December 8, 1960), 835-850.

Jacob Yerushalmy and Herman E. Hilleboe, "Fat in the Diet and Mortality from Heart Disease," *New York State J of Medicine* 57 (1957), 2243-2254.

Jeremiah Stamler, "Diet and Coronary Heart Disease," *Biometrics* 39 (March, 1982), Supplement: 95-114.

1) What kind of evidence existed that the American diet was causing high levels of heart disease? What objections were made to this evidence?

2) What was the nature of the dietary problem: e.g. which constituents of the diet were responsible? How do we know?

Week 7: MAMMOGRAPHY

Required Readings:

Sam Shapiro, Philip Strax, Louis Venet, "Evaluation of Periodic Breast Cancer Screening with Mammography: Methodology and Early Observations [1966]," reprinted in *CA-A Journal for Clinicians* 40 (March/April, 1990), 111-125.

Steven N. Goodman, "The Mammography Dilemma: A Crisis for Evidence-Based Medicine?," *Annals of Internal Medicine* 137 (3 September 2002), 363-365.

O. Olsen, P. Gotzsche, "Systematic Review of Screening for Breast Cancer with Mammography," [http://image.thelancet.com/lancet/extra/full report.pdf](http://image.thelancet.com/lancet/extra/full%20report.pdf)

Jane Wells, "Mammography and the Politics of Randomised Controlled Trials," *BMJ* 317 (31 October 1998), 1224-30.

1) What is the "mammography dilemma"? What kind of a crisis does it pose for evidence based medicine?

2) Who should get screened for breast cancer? Who should decide?

Background:

William C. Black and H. Gilbert Welch, "Advances in Diagnostic Imaging and Overestimations of Disease Prevalence and the Benefits of Therapy," *NEJM* 328 (April 29, 1993), 1237-1243.

Barron H. Lerner, "Great Expectations: Historical Perspectives on Genetic Breast Cancer Testing," *AJPH* 89 (1989), 938-944

Week 8: Silicosis: The Rise and Fall of an Occupational Disease

Gerald Markowitz and David Rosner, "The Limits of Thresholds: Silica and the Politics of Science, 1935 to 1990," *AJPH* 85 (February 1995), 253-262.

Silicosis: Historical Documents

1) What are the interests of labor unions, employers and workers in controlling occupational exposure to dust?

2) Is silicosis a disease?