



American Journal of EPIDEMIOLOGY

Volume 147

Number 3

February 1, 1998

Copyright © 1998 by The Johns Hopkins University
School of Hygiene and Public Health

Sponsored by the Society for Epidemiologic Research

THE COLUMBIA UNIVERSITY SCHOOL OF PUBLIC HEALTH 75TH ANNIVERSARY ISSUE

Introduction

Mervyn Susser

This special issue of the *American Journal of Epidemiology* commemorates the 75th anniversary of the founding of the Columbia University School of Public Health. First, the School gives thanks to the *Journal* for sustaining the commitment it made with the first such special issue (1). That issue properly celebrated the founding of the first school of public health at the Johns Hopkins University. Consistent with its usual high standards, for the Columbia anniversary issue the *Journal* required conformity with its requirements on epidemiologic peer review and content. The Columbia School of Public Health owes thanks to the *Journal's* editorial board for undertaking the far-from-negligible chore of editing and reviewing the papers submitted. The entire faculty of the School was invited to participate. The editors' judicious hands enabled a broad range of papers to survive the *Journal's* always-rigorous review process. A number of authors, for various reasons, had not completed revision of their papers by the deadline date, and these papers will appear in subsequent issues of the *Journal*.

The papers included in this issue convey the flavor at Columbia both of epidemiology today and, in some part, of its history in public health. With my allies at the School in assembling this material, Jack Elinson and Robin Roy, I believe that readers whose interests are not as parochial as those of a single school will yet find some nourishment here. We perceive in these papers general significance for public health as well as for epidemiology, intertwined as they are. This being an epidemiology journal, I shall deal first with epidemiology, and second with public health.

With regard to the epidemiology on display herein, it is at once apparent that it covers multiple levels of organization, from molecular to ecologic. Although in

recent years many epidemiologists have seemed reluctant to range freely across so broad a territory, we can appeal to the multilevel thinking and practice of many of the historic leaders of the field. Among them we can count, from the 19th century, such founding figures of the modern discipline as William Farr, John Simon, John Snow, Max von Pettenkoffer, Rudolf Virchow, and several others, and from early in the 20th century, Ronald Ross, Joseph Goldberger, Major Greenwood, and Wade Hampton Frost.

Among the contemporaries of this latter group, Haven Emerson—grand-nephew of Ralph Waldo Emerson—earned a place by his works (2). An 1899 graduate of the Columbia College of Physicians and Surgeons, he first taught physiology and clinical medicine. He turned to public health in 1913, became Commissioner of Health for New York City in 1915, joined the US Army Medical Corps in 1916 when the United States entered World War I, and in 1917 was appointed epidemiologist to the American Expeditionary Force in France (3). After the war, he returned to Columbia.

In the epidemiology of the interwar period in the United States, Emerson was a major figure. In his 50-year retrospective of the American Epidemiological Society (3), John Paul lists him among the 10 or fewer US epidemiologists in the 1920s who truly comprehended the emerging discipline of the time. Thus, he was essentially the founder (together with Edward Godfrey) of the now-prestigious American Epidemiological Society in 1927, and was its guiding light and long-serving first secretary. He was also the instigator and first secretary of the Epidemiology Section of the American Public Health Association that same year.

During Emerson's tenure as the first director of the Institute of Public Health at Columbia's College of Physicians and Surgeons from 1922 to 1939, his not-undistinguished epidemiology faculty (Alton Pope, Durward Jones, and later Edward Godfrey and Albert Hardy) were graced with the title of Assistant Professor. Among leading medical schools of the time, this title was perhaps less lowly than it appears today. Only in 1940 were Ernest Stebbins in epidemiology and John Fertig in biostatistics appointed the first full professors in the School of Public Health.

Stebbins went on to a distinguished career as Commissioner of Health for New York City and as Dean of the Johns Hopkins School of Hygiene and Public Health. E. Gurney Clark succeeded Stebbins in 1947, having done important studies at Hopkins on the natural history of syphilis. Like Emerson, he too was an epidemiologist of broad gauge. Clark was perhaps best known for his pioneering text, written with Hugh Leavell, on preventive medicine (4), with its well-structured guide to epidemiologic investigation and its still-famous classification of primary, secondary, and tertiary prevention. Clark's most imaginative endeavor was his studies, more or less contemporary with those of George Pickering at Oxford, of blood pressure in the population at large. He aimed to carry out the first full-scale examination of essential hypertension and its social, environmental, and personal antecedents (5). For this purpose, he enlisted the help of the Bureau of Applied Social Research in the University, famously the breeding ground for many of the best research sociologists of the time. Clark himself was laid low by malignant hypertension, and in the later 1950s his faculties began to fail. Several papers were published during that period (6–11), however—among them, a then-unique statistical application borrowed from the social sciences for testing the reliability and variability of blood pressure measures (7–9).

In 1966, the search committee for Clark's successor (chaired by Ray Trussell, with Ernest Gruenberg and Jack Elinson) was looking to continue an epidemiology program of broad social scope. It settled on me, then visiting from Manchester University; and, together with Zena Stein, I was persuaded. (The committee was assuredly influenced by my first book, coauthored with William Watson, on sociology in medicine (12).) I occupied the chair from 1966 through 1978, when I assumed the founding Gertrude H. Sergievsky chair of the Sergievsky Center for Neurodevelopmental Epidemiology.

Our chosen research territory, somewhat to its cost, deviated from the mainstream interests of the national funding agencies. Ernest Gruenberg—the first psychiatrist with a doctorate in epidemiology—and I ob-

tained funds from the National Institute of Mental Health for the world's first psychiatric epidemiology training program in 1967. (I had a relevant book in press at the time (13).) Upon Gruenberg's departure, Bruce Dohrenwend, at my urging, redesigned the program with new funds, as he describes in this issue (14).

A year or two later, Zena Stein and I were able to do likewise for the study of mental retardation. This was accompanied by a strong concentration in research on neurodevelopment (15, 16) and on reproductive epidemiology (17). A further innovation was the acceptance by the Graduate Faculties of the University of an epidemiology Ph.D. program which admitted holders of baccalaureate degrees in social or mathematical sciences or biology directly from college, and not only persons with the usual master's degrees.

Two books flowed directly from the needs of the program. I recruited the young Joseph Fleiss (later brilliantly to succeed John Fertig) to teach a course on the fourfold table, for which no systematic text then existed. His seminal book on rates and proportions resulted (18). Moreover, in the late 1960s, multivariate and multilevel analysis was an area in which social scientists and statisticians were making inroads. The demands made on causal inference and interpretation, however, had barely begun to penetrate the sanctum of epidemiology. Challenged as to the relevance and content of such supposed esoterica by a faculty long in place, I essayed to breach the gap myself in lectures and a book (19). Over the years in the Division of Epidemiology, we also built durable links with clinical departments—pediatrics, psychiatry, obstetrics, and medicine in particular—and trained several faculty with joint appointments in all of these areas.

Jennifer Kelsey occupied the chair in epidemiology from 1983 to 1991. Her strong record at Yale University, where she obtained her Ph.D., had made her a national authority in two areas: musculoskeletal disorders and cancer of the female reproductive tract. These added a new focus to our training and research. She brought with her a recently completed textbook (20) to augment the teaching program, and trained a new generation of researchers, many of them women, in her areas of interest. She was succeeded in 1995 by Geoffrey Howe. Previously head of the Medical Research Council Cancer Epidemiology Unit in Canada, he is an international authority in the epidemiology of cancer and radiation.

We turn now to the broader canvas of the School of Public Health. In the first paper appearing in this issue, Annette Ramírez de Arellano and the late Samuel Wolfe tell the story of the founding of the Institute of Public Health at Columbia (21). Along with Harvard University, Columbia lost out to the Johns Hopkins

University in 1921 in the competition to be the Rockefeller Foundation's choice as the world's first school of public health. In 1922, however, all three universities received legacies from the estate of Joseph DeLamar. Columbia's share was \$5 million (real money in those days).

Haven Emerson was then appointed first director of the Institute of Public Health at Columbia. Described as "the last Puritan" (3), Emerson was an indefatigable campaigner for the public health and, to the last, for the prohibition of alcohol (a position which he defended with mortality statistics). His selected papers, published in 1949 in honor of his 75th birthday (2), show him committed to prevention across the entire health spectrum by means of epidemiologic research and health education. Early on he was talking of the necessity for vital statistics, and arguing for the appropriate collection and use of hospital data, for the importance of heart disease prevention, and for the need for mental hygiene and the prevention of mental disorder. He also promoted the fields of occupational health and administrative medicine.

The story of public health at Columbia during Emerson's tenure, however, is rather less gratifying than the heft and range of his thinking. As Ramírez de Arellano and Wolfe show, the University had had a program in public health under consideration since 1903, with distinguished senior faculty from several disciplines committed to the idea (21). Despite the unmatched combined resources of the University and the City of New York, the Columbia bid failed to win the prize, for two reasons. First, President Nicholas Murray Butler was unwilling to accord the proposed school the independence as a Faculty that the Rockefeller Foundation desired. Second, the medical school did not then have the cohesion in its clinical ranks that the Foundation thought necessary. In retrospect, these reasons are shaded by irony.

In my view, the wisdom of the first ground—the strength that flows from autonomy—has been tested and vindicated. Unlike Hopkins and Harvard, Columbia University has not been independent of its medical school. The result is that, although Columbia has had faculty to match in many areas, over the years it has not had the financial strength, freedom of action, and accompanying growth that have attended its two competitors. Despite the huge and various population on its doorstep, both its facilities and its students have been fewer, if not always lesser.

The irony lies in the second ground, the apparent weakness of Columbia's clinical facilities. Within the same decade as the failure to win Rockefeller munificence, the College of Physicians and Surgeons and its several affiliated hospitals had been consolidated into

the massive Columbia-Presbyterian Medical Center, the first such academic medical center anywhere; and with its several hospitals on one site, it was and remains especially renowned for its clinical strength.

In one respect, this transformation of P & S (the long-standing sobriquet of the College of Physicians and Surgeons) brought to the School of Public Health the boon of close proximity to the biomedical and clinical sciences, needed to inform both understanding and research. But nothing grows in the shade of the baobab tree. A large penalty was paid in lack of independence and control. The DeLamar endowment, large as it was, proved too tempting to the medical school to be left intact.

In the face of such dependence, the School nonetheless has made substantial national and, in the best sense, parochial contributions to public health. Among these, one may count the academic innovations that brought medical care and health systems under the umbrella of the public health curriculum (as outlined in some detail in an accompanying commentary (22)); the early ushering in of joint academic programs with the Department of Psychiatry in a Division of Community Psychiatry (under Viola Bernard) in the late 1950s, as well as in the Division of Epidemiology, as noted above; and the initiation of the first independent Division of Sociomedical Sciences (under Jack Elinson) in 1968. At the local level, since its inception the School has sustained joint activities with numerous New York City communities and health institutions. Besides the roles of Emerson and Stebbins as city and state health commissioners, multiple exchanges of faculty and city commissioners (of both health and hospitals (22)) cemented and informed enduring relationships between the School and the City, and not least with the surrounding community. In Harlem and at Harlem Hospital Center, the School and its several divisions continue an active engagement of more than 30 years' standing. In surrounding Washington Heights, the Division of Population and Family Health maintains—perhaps uniquely for a school of public health—both family planning and school-based health clinics.

This brief account of a 75-year span by someone who was a participant observer for more than 30 of those years is surely distorted by a personal perspective that no lens can render perfectly objective. It is plain that the School was shaped by the times; yet its contributions as an institution, however much they reflected their times, have not been negligible. Its leaders have had vision, and, in the course of things, they have had scotomata as well. They have grasped some great opportunities, and they have failed to realize others.

One has good grounds to hope, I believe, that a tradition which has aimed high for academic excellence, and equally high for the health of populations, whether local, national, or international, will enable the School to rise to its future challenges.

REFERENCES

1. Szklo M. Anniversary issue—the Editor-in-Chief's perspective. (Editorial). *Am J Epidemiol* 1991;134:1013.
2. Emerson H. Selected papers: published on the occasion of his 75th birthday, 19 October 1949. Battle Creek, MI: W K Kellogg Foundation, 1949.
3. Paul JR. An account of the American Epidemiological Society: a retrospect of some fifty years. *Yale J Biol Med* 1973;46:1–84.
4. Leavell HR, Clark EG. Preventive medicine for the doctor in his community: an epidemiologic approach. 3rd ed. New York, NY: McGraw-Hill Book Company, 1965.
5. Recess Commission on Hypertension. A symposium on essential hypertension: an epidemiological approach to the elucidation of its natural history in man. Proceedings of a conference jointly sponsored by the Recess Commission on Hypertension of the Commonwealth of Massachusetts, the Columbia University School of Public Health, and the Bureau of Applied Social Research, Columbia University. Boston, MA: Recess Commission on Hypertension, Commonwealth of Massachusetts, 1951.
6. Clark EG, Glock CY, Vought RL. Studies in hypertension. I. An epidemiological approach to the natural history of essential hypertension. *J Chronic Dis* 1956;4:231–9.
7. Glock CY, Vought RL, Clark EG, et al. Studies in hypertension. II. Variability of blood pressure measurements in the same individuals over a three-week period. *J Chronic Dis* 1956;4:469–76.
8. Clark EG, Schweitzer MD, Glock CY, et al. Studies in hypertension. III. Analysis of individual blood pressure changes. *J Chronic Dis* 1956;4:477–89.
9. Glock CY, Vought RL, Schweitzer MD, et al. Studies in hypertension. IV. Comparison of reaction of three tests for hyper-reactivity among 204 volunteers. *J Chronic Dis* 1956;4:490–8.
10. Glock CY, Lennard HL. Studies in hypertension. V. Psychological factors in hypertension: an interpretative review. *J Chronic Dis* 1957;5:174–85.
11. Lennard HL, Glock CY. Studies in hypertension. VI. Differences in the distribution of hypertension in Negroes and whites: an appraisal. *J Chronic Dis* 1957;5:186–96.
12. Susser M, Watson W. *Sociology in medicine*. 1st ed. London, England: Oxford University Press, 1962.
13. Susser M. *Community psychiatry: epidemiologic and social themes*. New York, NY: Random House, 1968.
14. Dohrenwend BP. A psychosocial perspective on the past and future of psychiatric epidemiology. *Am J Epidemiol* 1998;147:222–31.
15. Stein Z, Susser M, Saenger G, et al. Famine and human development: the Dutch Hunger Winter of 1944–1945. New York, NY: Oxford University Press, 1975.
16. Rush D, Stein Z, Susser M. Diet in pregnancy: a randomized controlled trial of nutritional supplements. New York, NY: Alan R Liss, 1980. (Birth defects original article series, vol 16, no. 3).
17. Kline J, Stein Z, Susser M. Conception to birth: epidemiology of prenatal development. New York, NY: Oxford University Press, 1989.
18. Fleiss JL. *Statistical methods for rates and proportions*. New York, NY: John Wiley and Sons, Inc, 1973.
19. Susser M. *Causal thinking in the health sciences: concepts and strategies of epidemiology*. New York, NY: Oxford University Press, 1973.
20. Kelsey JL, Thompson WD, Evans AS. *Methods in observational epidemiology*. New York, NY: Oxford University Press, 1986.
21. Ramírez de Arellano A, Wolfe S. "For the study of disease and the prevention thereof...": origins of the Columbia School of Public Health. *Am J Epidemiol* 1998;147:203–8.
22. Elinson J, Katz M, Ramírez de Arellano A, et al. *New York models in medical care: research, education, and implementation at Columbia during the Trussell years*. *Am J Epidemiol* 1998;147:209–12.