Commentary

Leadership of the Department of Epidemiology of the Johns Hopkins Bloomberg School of Public Health in Its First Century

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This commentary reviews the contributions of each of the 7 Chairs of the Department of Epidemiology from the Department’s inception in 1919 to the advent of the Centennial Celebration of the Johns Hopkins Bloomberg School of Public Health in 2016. The founding Chair, Wade Hampton Frost (1919–1938), was among the handful of foundational thinkers in the discipline of epidemiology. Kenneth Maxcy (1938–1954) and Philip Sartwell (1954–1970) oversaw the Department through the epidemiologic transition from a preponderance of morbidity and mortality due to infectious diseases to a preponderance of noncommunicable diseases. Abraham Lilienfeld (1970–1975) and Leon Gordis (1975–1993) were perhaps best known for their mastery of teaching, influencing generations of both medical and public health students. Jonathan Samet (1994–2008) oversaw a major curriculum revision and expanded the Department significantly, and David Celentano (2008–) is working to rebalance the practice of epidemiology with the etiological foundations of epidemiology. All Chairs were a product of their times, and their research focus and portfolios influenced the direction of the Department. Future generations of Johns Hopkins students will be influenced directly or indirectly by the heritage of these Chairs’ actions and those of their faculty.

education; history of epidemiology; leadership

Abbreviations: AIDS, acquired immunodeficiency syndrome; HIV, human immunodeficiency virus; USPHS, US Public Health Service.

As the seventh Chair of the Department of Epidemiology, I would like to take the Chair’s prerogative to reflect on the contributions of my 6 predecessors, covering the period 1919–2008 and concluding with my term to the present. I was personally well acquainted with the fourth to sixth Chairs, having learned the science of epidemiology from Abraham Lilienfeld, worked closely with faculty on research and teaching in the Department for decades under the direction of Leon Gordis, and then served as Deputy Chair under Jonathan Samet from 2005 to 2008. Each Chair served within the context of the day, whether it was the diseases affecting the population (e.g., the influenza pandemic), the new tools that became available (real-time polymerase chain reaction, whole genome sequencing), or opportunities that arose for new collaborations. Chairs can lead, delegate, find consensus, or even follow their faculty. Each of the Chairs of the Department has left their mark on the Department in different ways. In this review, I highlight what I consider to be the major contributions of each Chair to the Department and to the discipline (see Figure 1).

William Henry Welch (1850–1934), the inaugural Dean of the School, was born in Connecticut on April 8, 1850 (1). Welch studied medicine at the Columbia University College of Physicians and Surgeons in New York. Welch next studied bacteriology in Germany and became one of the premier scientists in that field in the United States. He was recruited to Johns Hopkins in 1885, where he served as Chair of the Department of Pathology. He later was named Dean of the School of Medicine and then interim President of the University. Welch was the guiding force behind the establishment of the School along the lines of the German model of “institutes of hygiene.” His focus on an “institute” suggested the primacy of research over teaching; similarly, he preferred the term “hygiene” over “public health.” This approach married
Figure 1. Timeline of the tenure of Chairs of the Department of Epidemiology of the Johns Hopkins Bloomberg School of Public Health, 1916–2016. MACS, Multicenter AIDS Cohort Study.
the disciplines of public health with fundamental basic scientific research underlying these disciplines. On June 12, 1916, the Rockefeller Foundation awarded $267,000 to the Johns Hopkins University to establish the School of Hygiene and Public Health, the first such institution in the United States. This somewhat gangly name was a compromise between those advocating a School of Public Health aligned with the English model and an “institute of hygiene” based on the German model (1). The inaugural class consisted of 8 students, admitted in October 1918. Welch, along with his colleague W. H. Howell, founded the American Journal of Hygiene in 1920, which was renamed the American Journal of Epidemiology in 1965 and remains in publication to this day (volume 183 is currently in press), produced by the Department of Epidemiology in conjunction with Oxford University Press.

**Wade Hampton Frost** (1880–1938) was Welch’s choice for the first faculty position in epidemiology at the new school. A renowned influenza researcher, Welch approached Frost in 1919, when the US Public Health Service (USPHS) assigned him to Washington, DC, following the influenza pandemic, where he was to organize US morbidity statistics. After talking over his options on how he might best assist the development of the public health field with Rupert Blue, Surgeon General of the USPHS, Frost was assigned to Baltimore “on loan” to the Johns Hopkins University. Frost served as the inaugural chair of epidemiology, appointed as Senior Lecturer in the fall of 1919 and then Professor in 1921. Frost resigned his commission in the USPHS in 1929 (retaining a tenure in the fall of 1919 and then Professor in 1921. Frost resigned his commission in the USPHS in 1929 (retaining a reserve commission) to devote all of his efforts to the School and the development of epidemiology as a discipline at Johns Hopkins (2).

Frost had a somewhat limited bibliography by today’s standards (totaling 63 publications, although he died prematurely at age 58). He developed many of the methods commonly used in observational epidemiology and the statistical techniques that remain in use today. The body of his work included the ravages of the day—typhoid fever, tuberculosis, influenza, and poliomyelitis. His plan of instruction in “the natural history of infectious diseases” included 20–30 lectures outlining principles and field methods, replete with examples, student group laboratory exercises based on manipulating real data using statistical methods linked to epidemiologic principles, a focus on student fieldwork in real-life conditions, critical reviews of the literature, and a thesis project to be conducted by the student under the direction of a faculty member (2). This vision of doctoral education in the discipline of epidemiology emerged from Frost’s experiences of practicing epidemiology while in the USPHS. While the breadth of lectures has grown in number today and the methods greatly expanded, Frost’s approach to epidemiology education should be very recognizable to today’s faculty and students.

Frost had many long-term collaborators, but no partnership was more fruitful than his collaboration with Lowell Reed of the Department of Biometry and Biostatistics in the School. It was this collaboration that culminated in the “Reed-Frost epidemic model” (3). As Thomas Daniel notes in his 2004 biography, *Wade Hampton Frost, Pioneer Epidemiologist, 1880–1938: Up to the Mountain*, [why] “neither Frost nor Reed published any of the methodological advances they developed during their joint teaching remains a curious enigma” (2, p. 154). An exception was the landmark paper on the analysis of birth cohorts from successive cross-sectional mortality data (4).

Field investigation was one of the central foci of student education. Two such centers were envisioned, one rural and one urban. The first center for student field placements was the Washington County Training Center in Hagerstown, Maryland, a rural county located approximately 70 miles (112 km) from the School. The Washington County Health Demonstration was founded in 1921 jointly between the School, the Maryland State Health Department, the USPHS, the Rockefeller Foundation, and the Security Cement and Lime Company of Hagerstown. Access for students was difficult, however, due to the distance and the lack of transportation between Baltimore and Hagerstown. As a result, most students attended for only a week’s time. This was grossly insufficient for learning how to apply epidemiologic methods in the field. Alternatively, the urban training site, the Eastern Health District, located just blocks from the School, which was financially supported by the Rockefeller Foundation and the USPHS, was geographically positioned to ensure participation by students and eminently successful in providing field training opportunities. While the distance to Hagerstown from Baltimore is now less of a problem, transportation issues continue to hamper our students’ ability to take full advantage of this training site.

Frost was the editor of the slim but elegant volume entitled *Snow on Cholera. Being a Reprint of Two Papers by John Snow, M.D.* (5), published by the Commonwealth Fund in 1936. These classical papers are foundational in the education of epidemiologists throughout the world.

Frost developed esophageal cancer in 1937; he died on May 1, 1938, a few weeks shy of his 58th birthday. As Abe Lilienfeld (the fourth Chair of the department) noted in 1973 (6), his insights into epidemiologic methods were manifold, and his contribution to understanding the epidemiology of infectious diseases was without parallel in his time. While he had a relatively short academic career, his impact on the discipline of epidemiology was immense and has been noted by many historians of public health (1, 2).

**Kenneth F. Maxcy** (1889–1966) became the second Chair upon Frost’s death in 1938, a post he held until 1954. A pediatrician and bacteriologist trained at Johns Hopkins, Maxcy focused on public health despite its “limited income, insecurity of tenure, administrative burden, and lack of prestige”! (1, p. 164). At the end of World War I, where he served as a Captain in the US Army Medical Corps, he enrolled in the School of Hygiene and Public Health as a Rockefeller Fellow, and he received his doctorate in 1921. He received mentoring and lifelong support from Wade Hampton Frost. His first position was establishing the Public Health Laboratory for the state of Kansas, with financial support from the Rockefeller Foundation. He joined the USPHS for a period of 8 years, attaining the rank of Surgeon, where he investigated malaria in the South (1).

Maxcy was renowned for his work in rickettsial infections in the southeastern United States, most notably the epidemiologic, clinical, and laboratory study of typhus infection. He identified rodents as the natural reservoir of the disease, with transmission to humans via insect parasites. He then was
assigned to the Hygienic Laboratory in Washington, DC, the precursor of the National Institutes of Health. At the urging of Wade Hampton Frost, Maxcy left the USPHS in 1929 to accept a Professorship at the University of Virginia. In 1936 he accepted a post at the University of Minnesota as Professor of Public Health and Preventive Medicine, but his tenure was brief, as he returned to Johns Hopkins as a professor of bacteriology and briefly oversaw the Department of Bacteriology upon the death of William W. Ford, the Chair. He then shifted to the Department of Epidemiology in 1938 upon Frost’s demise. At Johns Hopkins, Maxcy continued to build the Department, adding faculty and forming links with other departments in the School (1). The numbers of students and the curriculum slowly grew over time.

Maxcy was a highly sought-after epidemiologic consultant for a wide range of public health issues. He was a Scientific Director of the International Health Division of the Rockefeller Foundation, the American Red Cross, and the Armed Forces Epidemiological Board. In the 1940s he was the recipient of a national award from the National Foundation for Infantile Paralysis to establish the first poliomyelitis laboratory. His work established that polio transmission occurred person-to-person rather than via any suggested vectors (most notably water). One of his gargantuan efforts was editing the fifth edition of Rosenau’s *Preventive Medicine and Hygiene* in 1949 (7); this was the premier textbook in public health and the source of most contemporary epidemiologic methods. Upon his retirement (in 1954) he became Professor Emeritus, a position he held until his death from Parkinson’s disease in 1966. As Wood and Wood concluded in their brief biography, “his epidemiological predictions regarding this disease (murine typhus) were, in many ways, just as remarkable as the classic studies of John Snow on cholera and the Broad Street pump” (8, p. 166).

Philip Sartwell (1908–1999) became the third Chair of Epidemiology in 1954. A native of Salem, Massachusetts, he attended medical school at the Boston University School of Medicine and received a master’s degree from the Harvard University School of Public Health in 1938. He served in the Surgeon General’s Office in the Army during World War II. He was recruited to the Johns Hopkins School of Hygiene and Public Health as an assistant professor in 1947. He focused on the new polio vaccine in the 1950s, vaccinating and evaluating vaccine efficacy among children attending the Baltimore City public schools. With the advent of the Asian flu epidemic of 1957, he investigated vaccine effectiveness and concluded that the vaccine was partially effective. In 1958, predating the *Surgeon General’s Report on Tobacco and Health* (released in 1964), he wrote to the *Baltimore Sun* about the dangers of tobacco smoking with regard to health. In the mid-1960s, to great national attention, he pointed out the association between combined oral contraceptive use and vascular problems in women. These 2 examples clearly demonstrate his vision of the changing landscape of epidemiology and its new focus on manmade risk factors for chronic disease.

Sartwell continued the tradition of Kenneth Maxcy in updating the 10th edition of *Maxcy-Rosenau Public Health and Preventive Medicine* (9). Sartwell is perhaps best known for his seminal 1950 paper entitled, “The distribution of incubation periods of infectious disease,” published in the *American Journal of Hygiene* (10). He demonstrated that the incubation periods of many infectious diseases show a consistent pattern, using 3 types of observations: known single simultaneous-exposure epidemics; known but not simultaneous-exposure epidemics; and unknown outbreaks in which the epidemiologic curve might suggest simultaneous exposure. He originated the use of logarithmic plots of the incubation period and defined the “estimated median,” and he showed that the frequency curve of incubation times took the form of a lognormal curve (11). These observations underlie contemporary knowledge of epidemic theory. We now understand that epidemic curves and incubation periods are quite systematic, whether for infectious diseases or chronic diseases. Sartwell’s insights demonstrated a continuing fascination with disease dynamics that have their origins in Frost’s and Maxcy’s work some 30 years before, and which remain in vogue in contemporary infectious disease modeling efforts.

Abraham M. Lilienfeld (1920–1984), a New York City native, received his A.B. degree from the Johns Hopkins University in 1941 and his M.D. degree from the University of Maryland in 1944. He completed an internship and residency at West Baltimore General Hospital and then served in the US Army. He received an M.P.H. degree from the Johns Hopkins School of Hygiene and Public Health in 1949 and joined the faculty in 1950 as a lecturer. He was promoted to Assistant Professor of Epidemiology in 1952. Lilienfeld then joined the State University of New York at Buffalo School of Medicine and Roswell Park Memorial Cancer Institute in 1954 as an associate professor, returning to Johns Hopkins in 1958 as Professor of Chronic Diseases. In 1961 he was appointed Chair of the Department of Chronic Diseases, and he served in that capacity until the department merged with the Department of Epidemiology in 1970 (upon Sartwell’s retirement), which he chaired from 1970 to 1975.

Expanding Sartwell’s work on the incubation period, with his student Haroutune Armenian, Lilienfeld showed (12) that the distribution of nontransmissible diseases after common exposures to environmental risk factors also followed a lognormal distribution, with examples including exposure to the atomic bomb and bladder cancer, exposure to dye and the risk of leukemia, etc. After he resigned from the chairmanship due to health problems, he remained actively engaged in research, teaching, and academic administration, serving as Acting Chair of the Department of Behavioral Sciences from 1983 until his death in 1984.

Lilienfeld is acknowledged as one of the “greats” in epidemiology internationally, for his teaching, research, and contributions to the discipline. He set a standard for teaching in the early 1970s, when he was viewed as a teacher’s teacher. His 1976 text, *Foundations of Epidemiology* (13), published by Oxford University Press, was used for decades in many introductory epidemiology courses and was the first comprehensive treatise on the conceptual framework and methods of epidemiology. He was the author of 6 additional textbooks on research methods, cancer epidemiology, developmental disability, and genetic issues in public health. His scientific publications (14), numbering 155 peer-reviewed publications in a foreshortened career, covered the interpretation of screening tests, cerebral palsy and other congenital malformations,

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epilepsy and maternal risk factors, cancer (breast, cervical, urinary bladder, lung, skin, stomach), and cardiovascular diseases, among others. The range of his interests and his focus on the development of methods for incorporating epidemiologic investigations into causal thinking and drawing inferences about how risk factors lead to unequal distributions of disease in populations were hallmarks of his contributions to the discipline.

Leon Gordis (1934–2015), a native New Yorker, received his B.A. from Columbia University in 1954 and a Bachelor of Hebrew Literature degree from Jewish Theological Seminary in New York the same year. He completed his M.D. at the State University of New York Downstate Medical Center in Brooklyn in 1958, followed by an internship and residency at Jewish Hospital in Brooklyn. He was a Fellow in Pediatrics at the Johns Hopkins School of Medicine (1962–1966) and a Research Fellow in Pediatrics at Sinai Hospital of Baltimore (1963–1965). He was awarded an M.P.H. in 1966 from the Johns Hopkins School of Hygiene and Public Health and a Dr.P.H. in chronic diseases/epidemiology in 1968, completing his doctoral dissertation on rheumatic fever under Abe Lilienfeld.

Dr. Gordis first joined the faculty as Assistant Professor of Pediatrics in 1968, was appointed Associate Professor of Epidemiology in 1971, and was promoted to Professor and Chair of Epidemiology in 1975 (with a joint appointment in Pediatrics). During his career as Chair from 1975 to 1993, he was course director of Principles of Epidemiology in the School of Public Health (from 1975 to 2006) and course director of Clinical Epidemiology in the School of Medicine (from 1980 to 1997). Thus, he personally instructed generations of public health and medical students at Johns Hopkins in the discipline of epidemiology, with considerable wit and humor. Indeed, he probably won more “Golden Apples” for teaching excellence from students than any other faculty member in the School, being so honored at each point of eligibility.

Gordis is best known for his textbook Epidemiology (15), which is now in its fifth edition, published in 2014. This text expanded greatly on Lilienfeld’s Foundations of Epidemiology and has been updated every 4–5 years as the field changes and develops. The book has been almost universally adopted for use in most introductory epidemiology courses in the United States, and continues the teaching approach first developed by Wade Hampton Frost. The Department of Epidemiology requires this text for its introductory epidemiology courses, and the lectures, while updated, remain true to the tradition established by the award-winning presentations made by Dr. Gordis (though perhaps without his famous jokes and quips). Gordis also edited Epidemiologic Reviews from volume 3 (1981) through volume 14 (1992). His scientific productivity includes journal articles, commencing in the 1960s, on topics ranging from lysosomes and disease to pediatrics, rheumatic fever prevention and care, genetic screening, cancer epidemiology, and advanced epidemiologic methods.

Gordis stepped down as Chair in November 1993, and Haroutune K. Armenian (1942–) served as Acting Chair (1993–1994) during the search process for the sixth Chair. Armenian was born and raised in Beirut, Lebanon, and received his undergraduate (1964) and M.D. (1968) degrees from the American University of Beirut. He received his M.P.H. in 1972 and his Dr.P.H. degree in 1974 from the Department of Epidemiology in the School of Hygiene and Public Health at Hopkins. He then joined the epidemiology faculty of the School of Public Health at the American University of Beirut as Assistant Professor, and was later promoted to Associate Professor in 1979. He served as Acting Dean of that school from 1981 to 1983, and was formally appointed Dean from 1983 to 1988 and Professor in 1984.

Armenian returned to Johns Hopkins in 1988, where he was appointed Professor of Epidemiology and Deputy Chair of the Department from 1988 to 1993 under Leon Gordis. He taught generations of epidemiologists the case-control method. He is the author of the well-regarded text The Case-Control Method: Design and Applications (16) and coedited with Sam Shapiro Epidemiology and Health Services (17), both published by Oxford University Press. Armenian was a prolific author on epidemiologic methods (particularly the use of parish and other official records), on the epidemiologic impacts of civil conflict and natural disasters, and on a variety of noncommunicable diseases (cardiovascular, cancer, diabetes, etc.). He was Editor-in-Chief of Epidemiologic Reviews from 1989 to 2002. Armenian resigned from his position in 2008 and became Professor in Residence in the Department of Epidemiology at the University of California, Los Angeles. In addition, he served as President of the American University of Armenia from 1997 to 2010.

Jonathan M. Samet (1946–), a Virginia native, became the sixth Chair of the Department of Epidemiology in 1994, following an international search. He completed his A.B. at Harvard College in 1966 and received his M.D. in 1970 from the University of Rochester School of Medicine and Dentistry. He was an intern in medicine at the University of Kentucky Medical Center in Lexington (1970–1971) and did his residency in medicine at the University of New Mexico Affiliated Hospitals in Albuquerque (1973–1975), specializing in pulmonary medicine. He then pursued a Research Fellowship in Clinical Epidemiology at the Channing Laboratory at Harvard Medical School (1975–1978), and he received an M.S. degree in epidemiology from the Harvard School of Public Health in 1977. He joined the University of New Mexico as Assistant Professor of Medicine in 1978, was promoted to Associate Professor in 1982, and was made Professor of Medicine in 1986, when he was appointed Chief of the Pulmonary Division. Samet was recruited to Johns Hopkins in 1994 and named Professor and Chair of Epidemiology. He was granted a joint appointment in the departments of Medicine and Oncology at the School of Medicine. During his tenure at Johns Hopkins, he was the founding director of the Institute for Global Tobacco Control and the founding codirector of the Risk Sciences and Public Policy Institute.

Samet has over 650 publications in the peer-reviewed scientific literature, where he has investigated diverse health issues using epidemiologic methods. His research has focused on the health risks of inhaled pollutants, namely particles and ozone in outdoor air and indoor pollutants, including groundbreaking research on radon and secondhand smoke. He has contributed a rich body of literature on the occurrence and causes of respiratory diseases, emphasizing the risks associated with cigarette smoke (18). Through the Institute for
Global Tobacco Control, Samet was deeply engaged in international efforts to identify tobacco-related risk factors, guide policy development, and support prevention efforts globally. He plays major leadership roles at the US Environmental Protection Agency and the Food and Drug Administration. He has received many international awards in recognition of his leadership and was elected to the Institute of Medicine of the US National Academy of Sciences in 1997.

While at Johns Hopkins, Samet led a major revision of the departmental curriculum for epidemiology students. While Principles of Epidemiology remained intact for the M.P.H. program and nonepidemiology students, the Epidemiologic Methods sequence (4 consecutive courses over 1 year) was developed and refined. Advanced epidemiologic methods, examples, and principles are now covered in much greater depth. This new course sequence truly updated the teaching of epidemiology at Johns Hopkins and is now refined annually.

In August 2008, Dr. Samet accepted the positions of Professor and Flora L. Thornton Chair of the Department of Preventive Medicine at the Keck School of Medicine, University of Southern California, and Director of the USC Institute for Global Health.

David D. Celentano (1951–) served as Acting Chair of the Department of Epidemiology from 2008 to 2009 upon Jon Samet’s departure and was appointed the seventh chair of the Department of Epidemiology in September 2009, following an international search. Celentano is the first nonphysician to lead the Department, in some ways reflecting changes in the discipline over time. He is a product of Johns Hopkins education—his B.A. (1972) was in physiological psychology and his M.H.S. (1975) in mental hygiene, and his Sc.D. degree (1977) was received from the Department of Behavioral Sciences. His dissertation addressed epidemiologic methods for estimating the prevalence of alcoholism in the community. The research was conducted under the direction of Professor George W. Comstock, director of the Training Center for Public Health Research in Hagerstown from 1962 until his death in 1997. Celentano joined the faculty of the Department of Behavioral Sciences in 1978 but taught epidemiology with Dr. Comstock for many years.

Celentano worked with Sam Shapiro, director of the Health Services Research and Development Center, on cancer control issues in the State of Maryland. In 1983 he helped conduct the Multicenter AIDS Cohort Study, an investigation of the risk factors for and natural history of human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) among men who have sex with men, a study that is ongoing today. He also worked on the development of the AIDS Link to the Intravenous Experience (ALIVE) Study, a companion natural history study of HIV/AIDS among injection drug users in Baltimore. He was promoted to Professor in 1989 for his studies on the behavioral epidemiology of many common conditions and joined the Department in 1996.

In 1990, he began a collaboration with Kenrad Nelson in northern Thailand including virtually all key populations affected by the HIV/AIDS epidemic, with funding from the National Institutes of Health in support of epidemiologic studies and randomized controlled trials (19). In 1998 he began collaborating in Chennai, India, with Dr. Suniti Solomon and later with Dr. Sunil Solomon with ongoing National Institutes of Health funding for community-randomized controlled trials of HIV prevention. This work was conducted with the collaboration of Professor Shruti Mehta in the Department (20). Throughout this time, a solid foundation in epidemiologic methods was essential in guiding our research program for an epidemic that was rapidly changing.

Celentano’s educational mission in the Department of Epidemiology has been 2-fold. With the collaboration of Drs. Stephen Gange and Elizabeth Golub, a parallel course sequence for practitioners of epidemiology has been developed (now renamed Epidemiologic Inference in Public Health I and II) as an option for those not seeking an in-depth education in epidemiologic methods. Second, he is guiding a departmental effort promoting digital epidemiology instruction. Many core courses have been recorded and are now actively taught online, with new students becoming engaged in the study of epidemiology without ever setting foot on the campus. A new online Master’s degree with an epidemiology focus is in preparation for a launch in 2016. Active learning methods are being integrated throughout the curriculum.

Leadership is demonstrated by many faculty members who have not held the position of Chair. Dr. Moyses Szklo has trained legions of cardiovascular and clinical epidemiologists in his long career in the Department and has served as Editor-in-Chief for the American Journal of Epidemiology since 1988. Professors Neal Nathanson and Philip Sartwell established Epidemiologic Reviews in 1979, achieving very high impact factors among public health journals. Moyses Szklo was Editor-in-Chief of Epidemiologic Reviews from 1985 to 1988, and was followed by Haroutune Armenian (1989–2004) and Dr. Michel Ibrahim (2003 to the present). Each of these luminaries of epidemiology has had a major impact on the direction of the discipline through this highly regarded journal.

Many other faculty have had a significant influence on the Department’s directions and the education of its students. Dr. Alex Langmuir (1910–1993) influenced legions of epidemiologists through the Epidemic Intelligence Service at the Centers for Disease Control and Prevention, putting the “shoe leather” into epidemiologic practice. Dr. George Comstock (1915–2007) was a central figure in the Department for nearly 50 years, educating scores of students with his calm and effective teaching style. Drs. Bernice Cohen and Earl Diamond first brought genetics to the field of epidemiology, while Dr. Genevieve Matanoski was critical in the development of occupational and environmental epidemiology, and Dr. Curt Meinert established clarity in how randomized controlled trials should be conducted. Drs. B. Frank Polk, Alvaro Muñoz, Stephen Gange, and many other faculty in the Department have been international leaders in the development and growth of HIV/AIDS epidemiology. With 125 current faculty members, leadership in many focal areas of epidemiology is seen today in the Department.

The leadership of the Department of Epidemiology over its first century has been marked by continuity and (mostly) seamless transitions between Chairs. Most of the Chairs have been recruited from outside the University; only Gordis and Celentano were internal hires. The faculty has grown enormously, from a handful in Frost’s day to 125 full-time faculty.
members today. The faculty’s research and teaching over the years has traditionally focused on both epidemiologic methods and the application of these methods to contemporary problems of societal significance. During the first 30 years of the Department’s existence, infectious diseases drew the most attention. With the epidemiologic transition to noncommunicable diseases midcentury, the focus of research and new methods shifted accordingly. The HIV/AIDS epidemic of the 1980s developed a new cadre of researchers in what had become a backwater niche in epidemiology: the study of diarrheal disease and sexually transmitted infections.

Today the Infectious Disease Epidemiology and General Epidemiology and Methodology tracks comprise over half of our faculty, due to the massive funding for HIV/AIDS research received from the National Institutes of Health. We continue to develop and refine methods in support of changes in disease epidemiology, with new foci on aging, a redoubling of effort on the traditional sources of morbidity and mortality (cardiovascular diseases and cancers), the rapid increase of noncommunicable diseases among persons with treated HIV, and new emerging infections, including severe acute respiratory syndrome (SARS), Middle East respiratory syndrome coronavirus (MERS-CoV), Ebola, and Zika virus. The demands for epidemiologic training and research continue to draw the best and brightest faculty and students to the Johns Hopkins Bloomberg School of Public Health. Future generations of epidemiologists trained at Johns Hopkins will be directly and indirectly influenced by the leaders who preceded them in the first century of epidemiologic research, practice, and education.

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