



UNIVERSITY of MARYLAND SCHOOL of MEDICINE

DEPARTMENT OF EPIDEMIOLOGY AND PUBLIC HEALTH



A HISTORY 1833-2023



Innovative Research,
Education *and*
Clinical Care *for*
Improving Public Health

1833-2023

Much of the supporting documentation for this history was drawn from *1807-2007: University of Maryland School of Medicine – The First Two Centuries* by Larry Pitrof of the Medical Alumni Association of the University of Maryland. We appreciate his generous permission to incorporate information from that engaging source. In addition, our thanks go to Richard Behles, historical librarian/preservation officer at the University of Maryland Health Sciences and Human Services Library, for his invaluable assistance in locating such resources as course catalogs. Most of all, we extend our deep gratitude to the individuals who shared their memories and perspectives in interviews, bringing the work of the department to life.



DEPARTMENT OF EPIDEMIOLOGY AND PUBLIC HEALTH

Programs and Divisions

DEGREE PROGRAMS

- MPH
 - Biostatistics (joint program with UMBC)
 - Clinical Research
 - Epidemiology and Preventive Medicine
 - Human Genetics and Genomic Medicine
- MS
 - Epidemiology and Human Genetics
 - Epidemiology and Preventive Medicine
 - Molecular Epidemiology
 - Human Genetics and Genomic Medicine
 - Gerontology (joint program with UMBC)
 - Toxicology
- Certificates
 - Clinical Research
 - Middle East Research Ethics Training Initiative

DIVISIONS

- Biostatistics and Bioinformatics
- Cancer Epidemiology
- Genomic Epidemiology & Clinical Outcomes
- Gerontology
- Preventive Medicine
- Perry Point cooperative Studies Program
- Translational Toxicology
- Service centers
 - Clinical and Translational Research Informatics Center
 - Biostatistics
 - Translational Genomics Laboratory

While epidemiology has always played a role in the relationship between disease and population health, medicine has historically focused mainly on the health and disease of the individual patient.

Over time, society has more prominently recognized and appreciated the influence of population health on the health care of individuals. Perhaps one of the most significant cultural turning points for this progression in the last century was the COVID-19 pandemic.

In reality, and as this history illustrates, the Department of Epidemiology and Public Health at the University of Maryland School of Medicine has played a pivotal role in addressing many of our generational challenges in medicine, including zoonotic infections from Ebola and influenza to SarsCoV2 and monkey pox, as well as the rapid emergence of antibiotic resistance; climate medicine; the aging epidemic; the obesity epidemic; the addiction epidemics in all their forms; as well as the classic waves after pandemics, like economic disruptions and mental health challenges, from overdoses and suicides to gun violence – all affecting the health of Marylanders.

From the early studies of yellow fever and malaria to today's cutting-edge research and scientific discoveries, the Department of Epidemiology and Public Health has been at the forefront of public health discovery. This department's impact has profoundly improved the health and well-being of Maryland's citizens for nearly two centuries.

The Department of Epidemiology and Public Health consistently ranks near the top in total

NIH funding among the country's epidemiology departments in medical schools – number 1 for the second year in a row among all U.S. public medical schools according to the Blue Ridge Institute for Medical Research. This is an outstanding achievement that we are very proud of.

In addition to its considerable research successes, the department has also served as a leader in the training of future public health scientists and practitioners. With degree programs in epidemiology, gerontology, public health, and clinical research, as well as research projects in locations across the globe, from Bangladesh to Brazil, the department has been providing a premier education since 1833.

Above all, this history highlights the outstanding work of the department's faculty, staff, students, and alumni. I look forward to the department's continued success and the positive impact of its work on health, both locally and globally.

With enthusiasm and commitment,



Mark T. Gladwin, MD
Dean, University of Maryland School of Medicine
Vice President for Medical Affairs, University of Maryland, Baltimore
John Z. and Akiko K. Bowers Distinguished Professor



LEADERSHIP TIMELINE



- 1833 Dr. Robley Dunglison, head, Materia Medica and Therapeutics, Hygiene and Medical Jurisprudence
- 1954 Dr. Maurice C. Pincoffs, head, Department of Preventive Medicine and Rehabilitation
- 1958 Dr. George Entwisle, head, Department of Preventive Medicine and Rehabilitation, with a Division of Physical Medicine and Rehabilitation that becomes a separate Department of Rehabilitation Medicine in 1970
- 1971 Dr. Maureen Henderson, head, Department of Social and Preventive Medicine
- 1975 Dr. Charlotte Ferencz and Dr. Curtis Meinert, successive 15-month terms as acting chairs, Department of Social and Preventive Medicine
- 1978 Dr. Irving I. Kessler, chairman, Department of Epidemiology and Preventive Medicine
- 1988 Dr. James Hudson, interim chairman, Department of Epidemiology and Preventive Medicine
- 1991 Dr. Paul D. Stolley, chair, Department of Epidemiology and Preventive Medicine
- 1999 Dr. Jay Magaziner, interim chair, Department of Epidemiology and Preventive Medicine
- 2000 Dr. J. Glenn Morris Jr., chair, Department of Epidemiology and Preventive Medicine
- 2007 Dr. Jay Magaziner, interim chair, Department of Epidemiology and Preventive Medicine
- 2008 Dr. Jay Magaziner, chair, Department of Epidemiology and Preventive Medicine — which, in 2010, becomes the DEPARTMENT OF EPIDEMIOLOGY AND PUBLIC HEALTH



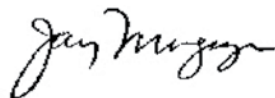
Letter from the current Chair

I am pleased to share with you this history of the Department of Epidemiology and Public Health at the University of Maryland School of Medicine. As I read through these pages, I am struck by the important role the department has played as a catalyst and platform for interdisciplinary collaboration at the University of Maryland throughout its 190-year history. Indeed, since its inception as an influential force in preventive medicine when Robley Dungleson was appointed professor material medica and therapeutics, hygiene, and medical jurisprudence in 1833, and taught the first course in preventive medicine, department faculty have advocated an integrated approach to interdisciplinary research, practice, and training, recognizing the wealth of knowledge to be gleaned from their colleagues across campus and institutions and harnessing this expertise to implement highly successful education and research programs. In the 40 years that I have been in the department, I have witnessed the expansion of the department from preventive medicine to also do research and train students in epidemiology, and more recently in clinical research and public health practice.

As you will read department faculty lead and occupy significant roles and continue to be on the cutting edge of epidemiological research and population health. During the past few years, the world has experienced a pandemic, and the department's infection control professionals immediately took a lead role in preparing our medical system to deal with the many challenges they would face and continue to face as a result. During the past decade, the department has enjoyed impressive growth adding a new division of Global Health Sciences and supporting a campus-wide program in Health Equity and Population Health. During the past decade, the department also has excelled in its research achieving a very high ranking among like departments in schools of medicine, as high as number one among public institutions and four among all schools. From the preventive medicine residency program, the first training program in the department, to the doctoral and masters' programs in epidemiology and human genetics, and gerontology, to the professional Master of Public Health degree program, and the masters and certificate programs in clinical research designed to increase the research capabilities of faculty outside the department, the department has been instrumental in training cadres of preventive medicine residents, epidemi-

ologists, gerontologists clinical scientists, and public health professionals. The department also plays a key role in preparing medical students to understand principles of epidemiology and biostatistics through its active involvement in the medical school teaching programs. The soaring popularity of these programs speaks to the importance of the subject matter and the high caliber of our faculty, staff, and students. Through our strong alumni network, we continue to build on the long history of success in preventive medicine, public health research and practice. The department's strong spirit of collaboration and collegiality continues to drive its success in transforming the health of the citizens of Baltimore, the State of Maryland, and beyond. I look forward to being part of the department's next chapter on the road to 200 years.

THE DEPARTMENT'S STRONG SPIRIT OF COLLABORATION AND COLLEGIALLY CONTINUES TO DRIVE ITS SUCCESS IN TRANSFORMING THE HEALTH OF THE CITIZENS OF BALTIMORE, THE STATE OF MARYLAND, AND BEYOND.



Jay Magaziner, PhD, MSHyg, Professor and Chair
Department of Epidemiology and Public Health
University of Maryland School of Medicine

■ 2023

190 YEARS



DR. JOHN BEALE DAVIDGE

LAYING THE FOUNDATION: 1807-1832

In December 1807, the Maryland General Assembly passed legislation establishing a medical college, but its future success was far from certain. Chartered as the College of Medicine of Maryland, with Dr. John Beale Davidge as dean of the faculty, the school was born in turmoil, the result of intense lobbying by the local medical community after Dr. Davidge's anatomy course was invaded by angry protestors, who destroyed the building in which he was teaching. They were objecting, among other outrages, to the common practice of grave-robbing to provide subjects for anatomical study.

■ 1807

Baltimore's natural harbor, crowded with commerce and human migration, provided ideal conditions for communicable diseases, while poor sanitation contributed to outbreaks of cholera, malaria, tuberculosis, diphtheria, typhus, and typhoid fever. The "depletion theory" of medicine prevailed, including cupping, purging, blistering, and bleeding. Common medicines included mercury, opium, and arsenic.



Baltimore was then a thriving community of 40,000, with a natural harbor that fostered trade and prosperity. Infectious diseases were rampant, however, and medical treatments and tools were rudimentary. The infant mortality rate was 30 percent, and the average life expectancy was a brief 34 years.

Medical practitioners were competing with barber-surgeons, street-corner apothecaries, and clerical charlatans. Medical credentials were not well established, and respect for the profession was in short supply.

Passage of this legislation, then, was promising. It granted authority to a board of independent regents — composed of the state board of medical examiners, the president of the college, and its professors — who would be responsible for educating physicians. The medical faculty invested in their future by providing financing for a building at the corner of Lombard and Greene streets, on land owned by John Eager Howard. It opened for classes in November 1812, even though it was not yet finished.

That same year, the state re-chartered the medical college as the University of Maryland, adding the areas of arts and sciences, law, and divinity. It thus became the first university in the nation to be founded with a medical school as its educational center.

Davidge and several other faculty members had been teaching medical classes in their living rooms since the mid-1790s, with admittance by lecture ticket. The practice continued into the 1820s, well after the medical school was chartered, and the popular but unapproved classes created tension among the faculty. Divided loyalties, financial difficulties, lack of progress in building a comprehensive university curriculum, and initiatives by competitors left the medical school defenseless when, in March 1826, the Maryland legislature stripped the regents of their authority. Power was transferred to the governor and a state-appointed board of trustees.

A more complete account of this turbulent time in the school's history can be found in *1807-2007: University of Maryland School of Medicine — The First Two Centuries*. In short, the regents fought back with a legal counsel team of prominent attorneys and rising star Daniel Webster — but their efforts failed, creating a chaotic situation in which two different schools were operating for a time as the University of Maryland. In 1839, after 13 years of contention, the Maryland Court of Appeals reversed the lower court's decision and restored authority to the regents.



“The medical school at the University of Pennsylvania enjoyed a preeminent place in medical education in the country, along with Harvard, Dartmouth, and Columbia. Dr. Benjamin Rush of Philadelphia, considered by many to be the father of American medicine, gained fame by his theories and treatment of yellow fever, which he thought was contagious. In 1793, when the yellow fever epidemic hit Philadelphia and killed about a quarter of the city's population, Rush insisted on quarantines, which obviously had a devastating economic impact. But Drs. John Davidge and Nathaniel Potter of Maryland both felt that Rush's theories were wrong, and the resulting controversy created some animosity between our two schools. Davidge never really clarified his reasons for believing the fever was not contagious, but he did write about it. Potter, on the other hand, slept with a towel — soaked in secretions from his patients with yellow fever — draped around his neck. He did not get sick, and while the experiment didn't prove anything conclusively, his bold exercise in self-experimentation helped put the Maryland medical school on the map.”



Dr. Milford “Mickey” Foxwell
Associate Dean for Admissions
University of Maryland School of Medicine
From an interview on May 2, 2011

■ 1811

Dr. John Crawford, professor of natural history, explained his radical belief in a correlation between insects and human illness. He had been praised for administering a viral vaccine for smallpox in 1800, but colleagues and patients rejected his new theory. Two years after his death in 1813, the school established a medical library with the purchase of 500 volumes from his collection.

■ 1812

The medical college was re-chartered by the state as the University of Maryland, becoming the first university in the nation to be founded on a medical school.



DR. ROBLEY DUNGLISON



THE EARLY YEARS: 1833-1953

In 1833, the School of Medicine established the nation's first medical course in preventive medicine. It was taught by Dr. Robley Dunglison, the esteemed physician for presidents Jefferson, Madison, Monroe, and Jackson. Dunglison became professor of materia medica and therapeutics, hygiene and medical jurisprudence — the forerunner of epidemiology and public health. In 1835, Dunglison published *Elements of Hygiene*, the first major work on preventive medicine in the world.

■ 1833

The faculty offered the nation's first course in preventive medicine.

■ 1842

Dr. Elisha Bartlett, professor of theory and practice of medicine, published a detailed analysis of signs and symptoms of typhus and typhoid fever, agreeing with Drs. Davidge and Potter of Baltimore and refuting the theories of Dr. Benjamin Rush of Philadelphia.

Trouble was brewing in the nation, however, and school leaders feared that a civil war would ruin the entire enterprise. When the war came, some students left to fight for the Union or the Confederacy, but others remained. More than 100 students were enrolled each year from 1860-1865. The school survived financially, in part, by charging the government for each hospitalized soldier.

From the medical school's early years forward, faculty members conducted research and published the results. Some theories stirred controversy, while others were readily adopted. From 1833 to 1954, the areas of inquiry that would become epidemiology and public health were wrapped into the general curriculum and indicated by a professor's title, as versions of materia medica and therapeutics, hygiene and medical jurisprudence.

In 1898, Dr. Charles H. Jones became a pioneer in preventive medicine and carried a more modern title — professor of hygiene and public health. As Commissioner of Health of the City of Baltimore as well, he guided construction of the city's sewer system and improved the quality of drinking water. He prepared legislation that called for pasteurization and better methods of milk distribution, reducing the rates of typhoid fever and intestinal infections.

In 1913, the school's publications listed "Medical Jurisprudence and Hygiene" as a separate specialty taught by one professor, Dr. Joseph T. Smith. By 1919, the Bulletin offers study in "Hygiene and Preventive Medicine," with lectures for third-year students that "... will encompass all of the fundamental subjects, air, water, soil, food, disposal of wastes, etc. leading to the fourth year when communicable diseases of all kinds will be considered."

The school's focus shifted in the 1930s from education aimed at private practice to education geared toward public service. Once again, larger events intervened. During World War II, the medical school helped staff the reactivated 42nd Medical Hospital, first formed in World War I, and the newly created 142nd Hospital.

Working at the Pasteur Institute in North Africa as a member of the U.S. Army Typhus Fever Commission, Dr. Theodore E. Woodward, Class of 1938, conducted studies that in 1942 showed that one dose of an inactivated typhus vaccine protected against the disease. Later, on the faculty at Maryland, Woodward directed clinical studies on the efficacy of chloromycetin, showing it to be an effective treatment for scrub typhus fever in Malaysia and Rocky Mountain spotted fever in Maryland.



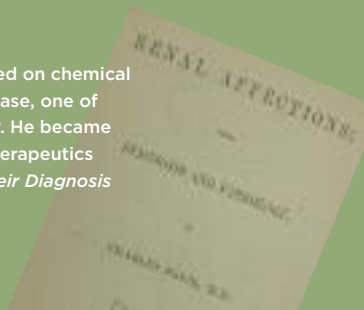
Dr. Theodore E. Woodward, Class of 1938



■ 1848



Charles Frick, Class of 1845, reported on chemical changes in blood as a result of disease, one of the first such reports in the country. He became professor of materia medica and therapeutics and published *Renal Affections: Their Diagnosis and Pathology*.



■ 1862



Dr. William Alexander Hammond, professor of anatomy and physiology, was named surgeon general of the U.S. Army during the Civil War. He developed the first military hospital and medical system in the world, including methods for maintaining military records and compiling data.



DR. MAURICE C. PINCOFFS

EMPHASIZING RESEARCH: 1954-1977

By 1954, the word “epidemiology” was included in school publications. A new Department of Preventive Medicine and Rehabilitation was described in the School of Medicine Catalogue as providing “instruction in the principles of public sanitation, control of infectious disease, epidemiology, the preventive aspects of medical care programs and the operation of home, clinic and hospital programs of rehabilitation.” The fourth year of study included, in conjunction with the departments of Psychiatry and Medicine, a survey of patients’ homes “in which consideration is given to the family inter-relations, the economic situation, the dietary habits, the sanitation and the physical characteristics of the home as they influence the patients’ illness.”

■ 1865



Dr. Isaac Edmundson Atkinson received his degree from Maryland at the age of 19. Later, during a smallpox epidemic in the city, he was tapped to head the vaccination effort. Among other titles at Maryland, he was professor of materia medica and therapeutics from 1886 to 1900.

Dr. Maurice C. Pincoffs, chair of the Department of Medicine from 1922 to 1954, became head of the new Department of Preventive Medicine and Rehabilitation in 1954. He was well known and admired across the country for, among other noteworthy accomplishments, helping to transform rickettsial diseases from lethal to curable infections.

Meanwhile, Dr. Theodore Woodward, who succeeded Pincoffs as chair of the Department of Medicine, had recruited Dr. George Entwisle to the Maryland faculty. In 1958, Entwisle succeeded Pincoffs as head of the Department of Preventive Medicine and Rehabilitation. In 1959, Entwisle established the department's first medical residency program.

During the 1960s, the University hospital racially integrated its wards, and the world's first Shock Trauma Center opened to treat patients suffering from traumatic injuries. The 1969-1971 catalog carried a more complete description of the departmental course of study, which included a year of applied preventive medicine. Students, who were assigned patients with a chronic disease, served as "health advisors" to the patients and their families. Faculty initiated programs ranging from geriatric health services to improved methods of data collection to smoking cessation for high-risk populations.

During the tenure of Dr. John Murray Dennis, dean of the medical school from 1973 to 1990, Maryland developed into a major research institution, with increased faculty and research support. The Department of Preventive Medicine and Rehabilitation had already helped pave the way for this golden age of research with significant projects and findings of its own.

As early as 1965, the department received research funding to collect and analyze data from the national Maternal and Infant Care Program, which involved more than 50 MIC clinics across the country. With subsequent long-term studies — the University Group Diabetes Program, the National Coronary Drug Project, the Diabetic Retinopathy Study, and the Coronary Drug Project Aspirin Study — faculty became recognized as early developers of methodology for collaborative clinical trials.

By 1971, Entwisle was principal investigator of the department's portion of a long-term, 14-center, cardiovascular disease study — the Hypertension Detection Follow-up Program (HDFP) — that looked at hypertension medications in various demographic populations. The study established the efficacy of hypertension control among those whose pressures had previously been considered of little or no risk.



Dr. John Murray Dennis

■ 1894



Sylvan H. Likes, Class of 1893, proposed the use of prophylactics to curb venereal disease. His ideas were criticized as encouraging vice and immorality.



DR. MAUREEN HENDERSON

DEPARTMENT OF SOCIAL AND PREVENTIVE MEDICINE

- Education
- Health Services
- Clinical Investigation

In 1971, Dr. Maureen Henderson became head of the renamed Department of Social and Preventive Medicine, which was organized into three divisions — Education, Health Services, and Clinical Investigation. She was the first woman to serve as head of a department at the School of Medicine, and she brought into the department interdisciplinary faculty members from the Institute of International Medicine and the Office of Health Care Programs. She recruited Dr. Dick Morton to take charge of the education division, and he immediately energized medical school teaching and raised the department's credibility among the students.

Henderson's tenure at Maryland was particularly remarkable for its research funding and accomplishments. One renowned, long-term study was the Multiple Risk Factor Intervention Trial, referred to as MRFIT ("Mister Fit"). Henderson, Dr. Roger Sherwin, Dr. Mary Sexton, and other researchers at 20 different clinical centers looked at risk factors for coronary heart disease — such as smoking, high cholesterol, and high blood pressure — in more than 12,000 high-risk men.

These well-funded projects created valuable spin-offs, such as Sexton's study on maternal smoking and pregnancy outcomes. She and biostatistician Dr. Richard Hebel became regarded as one of only three teams in the world with top-level expertise in this area. Another spin-off was the 24-hour blood pressure study in adolescents directed by Dr. Charlotte Ferencz.

Other studies, such as the University Group Diabetes Program and the Coronary Drug Project, were supported by the department's Division of Clinical Investigation, headed by Dr. Christian R. Klimt, and its Research Services Branch. Clinical investigation teams coordinated the large-scale cooperative trials, and by the time the 1977-1979 catalog was published, it described the division's "strong point" as expertise in data collection and statistical theory related to randomized clinical trials — "unique among schools of medicine and of public health." The advent of computers facilitated every aspect of departmental research, making large-scale epidemiologic studies possible through technology and skilled statisticians.



Dr. Roger Sherwin

■ 1898-1900



Henry R. Carter, Class of 1879, provided evidence supporting an earlier theory that yellow fever is carried by an insect and is not contagious. A U.S. Army Yellow Fever Commission went to Cuba in 1900, with Walter Reed in charge and James Carroll, Class of 1891, second in command. When Carroll exposed his arm to a laboratory mosquito and was bitten, he contracted the fever but recovered, solving the contagion mystery. Carter, Carroll, and their associates were nominated for the Nobel Prize for their work, which led to a vaccine in the early 1900s.



The Baltimore-Washington Infant Study, designed in the early 1970s, involved Dr. Charlotte Ferencz and other departmental researchers. The study identified risk factors and possible interventions related to congenital heart disease — factors that included maternal diabetes, family genetics, and certain drugs. The study did not receive widespread attention when it was published, but in time, its value was recognized. Researchers now often use the findings as a touchstone for new studies — and Dr. Ferencz’s contributions in congenital cardiovascular malformations earned a MERIT Award from the National Institutes of Health. With talented faculty and significant funding, the department was poised for success in the new era.



■ 1903



Samuel T. Darling, Class of 1903, was highly regarded as an epidemiologist and expert in tropical diseases. He gained international recognition for his laboratory research and field studies of malaria, hookworm disease, and dysenteric disorders. During work in Panama, he described the disease of disseminated histoplasmosis and warned that it would eventually reach Baltimore. His prediction proved true, and in 1938, the first case in Maryland was reported by Dr. Robert G. Wright, professor of pathology, and Dr. Frank W. Hachtel, chair of the Department of Bacteriology (1924 to 1954).

■ 1907

Davidge Hall Centennial Celebration



Witness to History: January 6, 2011

Doris Entwisle, PhD

On behalf of the late Dr. George Entwisle,
Head 1958-1971



Dr. George Entwisle
Social and Preventive
Medicine

Before my husband George came to Maryland, he was in a MASH unit in Korea that was devoted to severe diseases typical of Asia — like typhus.

The biggest problem was something called hemorrhagic fever, and because of the very serious mortality rate, it got people's attention. One was Ted Woodward, chair of the Department of Medicine at Maryland and probably the leading person in infectious disease at the time. He recruited my husband to come to Baltimore.

In 1958, when the well-respected Maurice Pincoffs died, George took over as head of the Department of Preventive Medicine and Rehabilitation. He continued in that role until 1971, when he had serious health problems and stepped down — but he continued his research.

George became part of a 14-center study — the Hypertension Detection Follow-up Program (HDFP). He directed the Baltimore part from 1971 until it ended sometime in the mid-80s. People had begun to realize that you could use various kinds of drugs to treat hypertension.

The Baltimore center was the only one that included middle class blacks in the study. George had about 1,000 middle-class and lower-income blacks whom he followed for seven years. In other places, like Salt Lake City, there were people in the study who didn't drink much. Another sample in Boston included fewer blacks but plenty of low-income people. There were centers in Jackson, Mississippi, and Claxton, Georgia. It was a

wide-ranging study, and they were trying to cover racial and socioeconomic differences. Of course, they had people of both genders. The sample was designed so they could begin to see to what extent being well off or being poor was a factor, how people followed recommendations, and how different drugs worked.

They were trying to decide, among other things, when hypertension should be treated — at what level they were going to prescribe drugs. When they began the study, it was pretty routine for people not to be put on drugs until their diastolic, the lower level, was 100 — and as a consequence of the study, they lowered that to 90. There were about 20 million people who fell into that gap.

George was instrumental in hiring Rich Hebel, who was trained as a mathematical statistician. That long-term hypertension study was really an epidemiological study, and at that time in medicine, the application of statistical models was pretty much on the cutting

GEORGE ENTWISLE ENLARGED THE INTELLECTUAL SCOPE OF THE DEPARTMENT. HE MOVED BEYOND THE BUSINESS OF PREVENTIVE MEDICINE. THE WHOLE IDEA OF DOING RESEARCH IN THE AREA WAS A NEW ONE.

■ 1907

The University added departments of law, dentistry, pharmacy, and training for nurses at the hospital. A centennial celebration, originally planned to focus on the medical school, was expanded to include the entire University.

edge. With Rich, the quality of their research jumped to another level.

Another person, Mary Sexton, was trained as a sociologist and had a lot of research skills and interests. She did the first study showing, through a randomized smoking cessation trial design, that regular smoking is injurious to fetuses.

George enlarged the intellectual scope of the department. He moved beyond the business of preventive medicine. The whole idea of doing research in the area was a new one.

George was intellectually egalitarian and he was also very open to women participating, which was unusual at that time. He didn't object that I had a career, and someone like Mary Sexton might not have been hired in another place, even though she had valuable skills. His broad interests led him to think that a person trained in a social sciences discipline like sociology could make an extremely important contribution to medicine. I don't think he was consciously promoting women; he simply didn't rule them out.

He liked solving problems, and he worked in a very important period in the evolution of the science of medicine, when computerization and large-scale epidemiologic studies were made possible through technology.



Dr. George Entwisle
with his wife Doris



Witness to History: October 5, 2010



J. Richard Hebel, PhD
Professor and Biostatistician
1966-

I came to the department in January 1966 as an NIH biostatistics intern. My training was in mathematical statistics, but I knew very little of its application in medicine and nothing about epidemiology.

George Entwisle was chairman at the time, and he saw to it that I had access to wonderful mentors such as Maureen Henderson and Matt Tayback. In April 1966, George hired me as an assistant professor.

IRVING KESSLER TOOK OVER AS CHAIRMAN IN 1978. HIS MODEL FOR THE DEPARTMENT WAS THAT OF A MINIATURE SCHOOL OF PUBLIC HEALTH. IT MADE SENSE BECAUSE OUR FACULTY COVERED MOST OF THE DISCIPLINES.

Eventually, I found out that another group on campus was involved in coordinating large clinical trials. It was headed by Chris Klimt and included a number of talented biostatisticians: Curt Meinert, Paul Canner, and a graduate student by the name of Dave Wilson (later a prominent member of the department). This group was brought into the department as a division by Maureen Henderson when she became chair in the early 1970s.

Biostatistics and epidemiology remained unpopular with the medical students. They felt that we had little to tell them that was relevant to their future careers as physicians. In 1971, Maureen recruited Richard Morton, an obstetrician with training in epidemiology and a degree in public health from UCLA. He was put in charge of the medical school teaching and proceeded to win awards from the students year after year. Thanks in large part to his efforts, we gained respect, and a few students in each class actually became interested in public health as a career.

In 1975, Maureen left for the University of Washington. We had several years without a permanent head but Charlotte Ferencz and Curt Meinert served admirably as acting chairs. Irving Kessler took over as chairman in 1978. His model for the department was that of a miniature school of public health. It made sense because our faculty covered most of the disciplines.

One of Irv's major accomplishments was getting us started in graduate education. We already had a residency training program but, in order to be board certified in preventive medicine, our residents had to take MPH courses at Hopkins. Under Irv's leadership, we secured state approval for a master's degree in preventive medicine and a PhD program in epidemiology. To firm up funding support for the department, Irv sought consulting agreements with University Hospital and the State Health Department. We did get some work with the Hospital but eventually that dried up. Toward the end of the



■ 1918

Administrators suspended fall classes because of the Spanish flu, which primarily affected young adults. The virus killed 600,000 Americans and 20 million to 40 million people worldwide. When medical school classes resumed, they included female students for the first time.

1980s, funding was tight and a number of faculty sought positions elsewhere. Irv stepped down as chairman in 1988.

A small group of the senior faculty met to provide some input for the new search committee and to recommend an acting chair. I was chosen to approach Jim Hudson, a health services researcher with an appointment in the department. He agreed and I remember him saying he would like to make it fun to come to the office again. He proved to be just the calming influence we needed at that time.

When Paul Stolley became chairman in 1991, he was interested in putting emphasis on medical school teaching. The School of Medicine was going in the direction of increased small group teaching and decreased lecture time. Paul fit right in with that philosophy and became chairman of the school's Curriculum Committee. Paul was an excellent researcher who still saw patients regularly. He brought the department back to its roots in epidemiology.

Paul resigned in 1999 and after a one-year search process, Glenn Morris was named chairman. He was previously the head of the Hospital Epidemiology Division in the Department of Medicine and gave us more credibility in infectious disease. After a failed attempt to bring a school of public health to the University, Glenn left in 2007. Jay Magaziner succeeded him immediately as chairman. Jay was already well established in aging research and, despite his new executive duties, he remains very much involved in that arena to the present. Under his stewardship, the department as a whole today is very strong.



J. Richard Hebel, PhD



Witness to History: April 13, 2011

Maureen Henderson, MD, DPH
Professor 1968-1975
Head 1971-1975

I joined the Department of Preventive Medicine in 1960 as an instructor, becoming a professor in 1968 and chair in 1971, when it was called the Department of Social and Preventive Medicine. I was with the department until 1975.

I had an appointment in general medicine, too, and in addition to teaching, we treated patients, both black and white, who were low income. The clinics were absolutely separate —

THE MOST WONDERFUL THING ABOUT THE SCHOOL OF MEDICINE WAS THAT THE UNIVERSITY OF MARYLAND HAD A LOT OF FLEXIBILITY. WE HAD A VERY GOOD CURRICULUM, BUT WE COULD MODIFY AND CHANGE THINGS. WE HAD A LOT OF VERSATILITY. EVERYBODY AT MARYLAND WAS INTERESTED IN WHAT EVERYBODY ELSE WAS DOING, AND WE WERE VERY COLLABORATIVE.

separate units, separate buildings. It was something totally out of my experience, being English, but that was the way it was. There wasn't a feeling of tension because we were looking after people who appreciated the care. We dealt with the problems of the times, like bad infections and tuberculosis. I got tuberculosis from patients when I was still in England, and it was before antibiotics. Treatment meant isolating people and collapsing their lungs, which took several years. Mine was collapsed for three or four years, and during that time, I couldn't work with patients — so I took a degree in preventive medicine to use the time properly. But it was difficult.

I was one of the first women to do medicine, and that big change was because of the war [World War II]. The men were called up as soon as they graduated, and they had to train women. We were accepted but we were rare, and we were not encouraged.

Maryland was very different, although it was much more like England than the

West Coast. I had been recruited to go to Boston, but I met a couple from Maryland when I was working at a hospital in London and we became very good friends. One of them was a surgeon at Maryland, and he persuaded me to switch. Maryland was fun, and I enjoyed it very much.

One of the first things that happened to me in Maryland was that some of the department heads came to me and said they had a box at the baseball game, and even though I would know all about cricket, they wanted me to know enough about baseball that I could enjoy it for the rest of my life. They taught me all about baseball, and I've enjoyed it ever since. It was a wonderful gift.

In 1962, the University of Maryland recommended me for the John and Mary R. Markle Scholarship in Academic Medicine. I was the only woman out of 12 candidates in the Southeast group that year, and I received the award in 1963. It changed my life. It provided support for spending up to two months a year at

different places, and I traveled to various countries all over the world to learn. It was marvelous. It put me in touch with what was going on in medicine in the rest of the world, and I brought that back to my colleagues and students.

It would have been very unusual in England for a woman to be a departmental chair, but not so in this country. One of the reasons I came here was because women could be professors. But the playing field was never level. They expected women to get married, have children, and work short, part-time jobs. The salary was always half or a third of what men would receive for the same job. But that was the beginning for women, and because I was breaking new ground, I knew I couldn't change everything all at once

Our department was very pleasant, very congenial. It had a great advantage in that it was part of the School of Medicine and was very well integrated with the clinical departments there. We had a lot of good exchanges between departments. We recognized that people with various

specialties needed to work together to take care of the problems of the people.

The most wonderful thing about the School of Medicine was that the University of Maryland had a lot of flexibility. We had a very good curriculum, but we could modify and change things. We had a lot of versatility. Everybody at Maryland was interested in what everybody else was doing, and we were very collaborative.

In 1974, I was elected as a member of the Institute of Medicine at the National Academy of Sciences, and I've received several awards since then. Ultimately, I was invited to the University of Washington to address new challenges, but I thoroughly enjoyed Maryland, and I have lifelong friends from the medical school.



IN MEMORIAM
Dr. Maureen Henderson
[1926-2012]

As this history was being designed, we were saddened to learn of the passing of Dr. Henderson in December 2012. We are deeply grateful for her contributions to this history and to our department.

■ 1920

University regents and the state's General Assembly agreed to merge Maryland with the State College of Agriculture to create the University of Maryland Baltimore and College Park — a public university. The School of Medicine at the time was associated with 15 hospitals and three outpatient dispensaries.

Witness to History: September 29, 2010

Roger W. Sherwin, MD
Professor 1970-1998

The department was very small when I joined it in 1970. I was recruited from Hopkins by Dr. Maureen Henderson, who already had her own academic group and who succeeded Dr. George Entwisle as chair soon after I arrived. My research focus at Hopkins had been mainly on nutrition, both as it relates to fetal growth and to heart disease, using randomized clinical trials. In late 1971, a Request for Proposals came from the National Heart and Lung Institute (NHLI) for contracts to participate in a large clinical trial, the Multiple Risk Factor Intervention Trial, abbreviated to MRFIT and affectionately known as Mister Fit, as it still is. Funded in June 1972, MRFIT

was a collaborative trial, eventually involving 20 clinical centers that were looking at the prevention of coronary heart disease by intervening on known risk factors — smoking, high blood cholesterol, and high blood pressure.

Dr. Henderson, Dr. Mary Sexton, and I were the original faculty involved with our center of the study, and it occupied most of my research time over the next 11 years. It was a long, large study, and we were lucky to be one of the first eight clinical centers that were funded at least a year before the remaining centers received funding. As such, we were represented on most of the committees appointed to design the study. I was traveling most weeks for the 18 months of the design period, and Dr. Sexton was chosen to direct the training of all the intervention staff from the 20 clinical centers.

One of Dr. Henderson's first decisions as chair was to incorporate into the department a group, founded by Dr. Christian Klimt, which had previously been free-standing on the health campus. Several

years later, Dr. Klimt founded the independent Maryland Medical Research Institute (MMRI), and gradually, most of Dr. Klimt's research was funded through MMRI rather than our department.

One member of Dr. Klimt's group in particular, Dr. Curt Meinert, continued to devote most of his time to research within the department. He was subsequently appointed head of a new Division of Clinical Trials in the Department of Epidemiology at Hopkins. He also wrote the definitive text on the subject and founded the Society for Clinical Trials. Soon after he went to Hopkins, a monthly seminar on clinical trials was established jointly by the MMRI, Dr. Meinert's division at Hopkins, and our department. This seminar institutionalized the extensive activity related to clinical trials in Baltimore. A circle was completed when Dr. Michael Terrin, who had been president of the MMRI, recently returned to our department as a full-time professor. He has since been funded by the NIH for a \$30 million

MY OVERRIDING IMPRESSION OF THE DEPARTMENT HAS ALWAYS BEEN OF COOPERATION AND MUTUAL SUPPORT.

■ 1922

John S. Fulton, Class of 1881, was appointed director of the Maryland State Board of Health. Before that, as a Maryland faculty member, he led the charge for the first registration law that required reports of patients with tuberculosis.

program to coordinate stem-cell research throughout the country.

In the early 1990s, the department was especially fortunate to attract four new faculty, each with a prior interest in women's health and each of whom came with an established reputation. Dr. Ellen Silbergeld had a background in biochemical genetics and won one of the so-called "genius awards" from the MacArthur Foundation soon after she joined us. Dr. Patricia Langenberg, a mathematician and statistician, joined the department when her husband was appointed chancellor of the statewide University System of Maryland. Dr. Trudy Bush, an epidemiologist and internationally prominent expert in reproductive endocrinology, came to us from Hopkins. Dr. Kay Dickersin, who received her doctoral training under Dr. Meinert in the Division of Clinical Trials at Hopkins, transferred her appointment from the Department of Ophthalmology of our medical school. Dr. Dickersin also had a

longstanding avocation as a well-known advocate for women with breast cancer.

Under the leadership of Dr. Langenberg, these four individuals collaborated to form a consortium dedicated to women's health and established an annual national symposium on the subject. Dr. Bush died at a tragically early age and Drs. Silbergeld and Dickersin both returned to Hopkins (where Dr. Dickersin succeeded Dr. Meinert as head of the Division of Clinical Trials). However, Dr. Langenberg has both maintained and enlarged the department's focus on women's health by being chosen to lead one of a small number of centers for women's health sponsored by the NIH.

We didn't do much in cancer research until we became affiliated with the Cancer Center of the medical school and Dr. Stephen Havas joined the department in 1988. Several of our statisticians work with the Cancer Center, and one has been based there. After President Nixon "declared war" on cancer in the early 1970s, the National Cancer Institute had about twice the funding of the National Heart, Lung

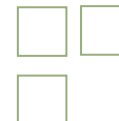
and Blood Institute (as it had become), even though many more people were dying from those diseases than they were from cancer.

My overriding impression of the department has always been of cooperation and mutual support. Not only has much of our research involved collaboration with other institutions, but most of it has also involved collaboration among our own faculty members, both within our department and with faculty of other departments.

From a small group of about six when I arrived, the department grew to more than 80 faculty when Dr. Glenn Morris became chair in the early 2000s. He combined the department with the Division of Infectious Disease of the Department of Medicine and brought in all of its faculty. Under the current leadership of Dr. Magaziner, the department remains large with about 48 faculty.



Dr. Roger W. Sherwin





1812-2002

The Davidge English Elm is believed to have been planted upon completion of the medical building in 1812.

The building, Davidge Hall, is the oldest medical building in the United States used continuously for medical education.

As the tree grew, the University also grew to become a great institution. Unfortunately, the University lost the aging English Elm tree in 2002, and with it, an important symbol.



■ 200 YEARS

The English Elm grew to be 75 feet tall.



■ THE ELM LIVES ON

Handcrafted ironwork representing the elm, by Bruce Jarrell and Anatoly Rudik, fills two windows in the Campus Center.

Witness to History: May 12, 2011

Mary Sexton, PhD, MPH
Faculty Member 1970-2003
Director of Academic Programs
1989-1998

I joined the department around 1970 as a research assistant. When I finished my dissertation, I was appointed assistant professor and remained in the department until my retirement as a full professor in 2003.

When I came, the chair was Dr. George Entwisle, who was very interested in preventive medicine and had a clinical component, a preventive medicine clinic. I taught medical students depending on curriculum needs. The Department of Preventive Medicine, which became Social

and Preventive Medicine, also changed its focus from time to time to strengthen skills in public health and medical research. We taught things like alternative health care delivery and principles of epidemiology. After graduate programs were initiated, I was director for ten years, and we taught courses related to the master's in preventive medicine and later, the PhD in epidemiology.

The department was quite successful in its research activities and took part in large multi-clinical research programs. My initial attraction was an opportunity to evaluate the effectiveness of a nationwide maternal and child health program. Then there was a large research program focused on hypertension and myocardial infarction. I participated in the hypertension and cardiovascular studies and then did my own investigator-initiated research portfolio. Many of my own projects were related to the larger projects so, for example, I had a maternal smoking and pregnancy outcome study that related to my experience with a large project called MRFIT — Multiple Risk Factor Intervention Trial.



Mary Sexton, PhD, MPH

The vibrancy of research activity was very exciting. I appreciated the opportunity to discuss research issues with colleagues and benefit from their experiences, to raise important public health questions, to bring evidence to clinical and policy decisions, to interact with researchers in all different stages of their careers, and to guide the next generation of medical and graduate students. There was always important work to be done in a very supportive environment.



THE VIBRANCY OF RESEARCH ACTIVITY WAS VERY EXCITING.
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ISSUES WITH COLLEAGUES AND TO INTERACT WITH
RESEARCHERS IN ALL DIFFERENT STAGES OF THEIR CAREERS.

■ 1929

William F. Elgin, Class of 1887, became an expert on the smallpox vaccine, developing a method for preserving vaccines at subfreezing temperatures to maintain their potency and creating a dried vaccine for use in tropical climates.

Witness to History: January 7, 2011



Judith D. Rubin, MD, MPH
Director, Preventive Medicine
Residency Program 1984-2005

I came to the University of Maryland in August 1973 and was a resident in Preventive Medicine through June 1977, with one year spent full time in Pediatrics to finish my pediatrics residency. I retired officially in 2005 and have since had a part-time contractual appointment.

In the 1970s, a preventive medicine residency involved getting an MPH or similar degree and then doing practical rotations. But the department at Maryland didn't have a graduate program, so

our residents would get the MPH at Hopkins. When Dr. Kessler became chair, he wanted us to have our own degree program, and he was one of the main forces behind getting it.

Having a graduate program was really big for us. The first degree was a master's program, the MS in Epidemiology and Preventive Medicine, and the MS students consisted mainly of the residents in preventive medicine. That MS degree was part of their post-MD training. I was director of the Preventive Medicine Residency Program from 1984 to 2005. The MS program was pre-MPH, as the MPH program is much newer. The PhD program was put on hold, and then resurrected.

I'm really a clinician/educator, and with half-time appointments in peds and preventive medicine, I saw patients until I retired. I also love medical school teaching. There's a course called Introduction to Clinical Medicine, where students learn interviewing skills in the first year and physical diagnosis skills in the second

year. I think I was the only person in the department to teach in that course, and it was important that our department had some representation among clinical faculty.

Running the residency program was another highlight for me and led to things that I've done subsequently. I currently work for ACGME, the organization that accredits all the medical residencies and fellowships in the country.

Other than education, the thing that was huge for the department and dates way back is research — strong science, strong epidemiology. Chronic disease was always a huge division, and there was early work on hypertension and diabetes. When Dr. Magaziner came in, there was a focus on gerontology, and it's still one of our strongest divisions. Biostatistics is also strong and very supportive of the research on the rest of the campus. Teaching and research are both real strengths that have been present for four decades.

The size of the department keeps changing, but there has always been a lot

ONE OF THE MOST AMAZING THINGS ABOUT BEING AT MARYLAND IS HAVING THIS PROFESSIONAL CAMPUS, WHERE THERE ARE STRONG SCHOOLS IN EVERY DISCIPLINE. THE WILLINGNESS OF PEOPLE IN DIFFERENT SCHOOLS TO WORK TOGETHER HAS ENRICHED EDUCATION, RESEARCH, AND CAMPUS LIFE.

■ 1948

Harry M. Robinson Jr., Class of 1935, initiated studies that showed the efficacy of broad spectrum antibiotics in patients with venereal diseases.

of collegiality. When I first came, not everybody was young, but there was this youthful feeling. We used to go to journal clubs at people's homes, and the atmosphere was friendly and informal. We've had our ups and downs with leadership, but we continued to be productive; people did their work. We had a strong infrastructure of solid faculty and people with solid working and personal relationships. The fabric was strong.

One of the most amazing things about being at Maryland is having this professional campus, where there are strong schools in every discipline. The law school has this strong health law program; the School of Social Work and School of Pharmacy are among the most well-known in the country; the Dental School was the first of its kind and has an excellent reputation. Dr. Stolley and I both taught epidemiology in the Nurse Practitioner Program in the nursing school. Our initial MPH program was for dual-degree students who were also getting a degree in law, nursing, pharmacy,

dental, social work, or medical. There are fertile opportunities in multiple disciplines as well as multiple specialties in medicine. The willingness of people in different schools to work together has enriched education, research, and campus life.



Dr. Judith Rubin — Pediatrics, 1977

Witness to History: February 22, 2011

Charlotte Ferencz, MD, MPH
Professor, 1973-2003
Acting Chair, 1975-1976

After I joined the faculty in 1973, we created the Baltimore-Washington Infant Study. I worked on it even after I officially retired, until about 2003. We wrote two books — the first described how the study was done, and the second, which came out in 1997, described the results. The study was also the basis for several papers.

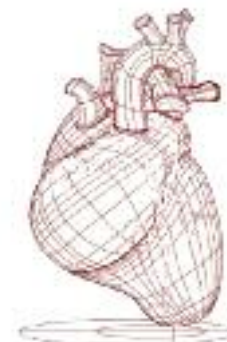
The study looked at risk factors and possible interventions that would prevent or reduce congenital heart disease. It involved cardiology centers at Hopkins, Maryland, Children's in Washington, Howard, Georgetown, and George Washington. All of the cardiologists were very

collaborative. Five or six interviewers traveled around the area getting the family history — exposures during pregnancy, what kind of work the parents did, whether they smoked, anything that might have had an influence on the outcome. Maternal diabetes, for example, has a big effect on the outcome, not only with heart disease but other malformations that are preventable.

Then there were drugs that were suspected of causation or influencing development of the heart — and family history, of course, because a lot of it is genetic. The study was very well designed and set up by Dr. Genevieve Matanoski at Hopkins. Dr. Judith Rubin and Dr. Judy Wilburn were also important in setting it up and following it. We interviewed about 8,000 families — half were cases and half were controls. I understand that when people do this type of research now, they start by comparing to our data, and the study is often quoted.

Another study on the epidemiology of infant mortality looked at the possible

Dr. Charlotte Ferencz



I CAME INTO A VERY STRONG DEPARTMENT AND WAS INSPIRED,
AS MOST OF US WERE, BY DR. HENDERSON. IT WAS A VERY
CREATIVE PLACE.

factors associated with outcomes, like diabetes. Dr. Mary Sexton and Dr. George Entwisle were in charge of the Maternal and Infant Care Program at Maryland and investigated infant mortality as part of President Johnson's Great Society legislation. I believe 98 nurses in Baltimore were involved. When a birth certificate came to the Health Department, they noted certain characteristics they called risks — a mother was younger than 17 or older than 35, was black, had a lot of children before — that might indicate the mother needed attention. The things they found — neglected, improperly fed infants — were absolutely astounding.

Unfortunately, infant mortality in Baltimore is still shocking. Well, in 1973 and '74, we were doing something about it. More young women got prenatal care. Programs in the schools identified them, and a lot of active nurses did follow-up work. Young social work trainees went into the homes to help. Medical students took a class called Social Pediatrics, where

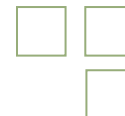
they were trained to approach a family very positively and intervene on many of these social ills.

We had good teaching and fieldwork programs. One student went to the Eastern Shore and looked at the cholera antibodies in watermen who were exposed to the organisms but didn't have the disease. They were compared with Seventh-day Adventists who don't eat seafood. We learned that oysters concentrate the organisms, and I never ate oysters after that. One student, Geoffrey Rosenthal, used part of the Baltimore-Washington Infant Study data for his PhD and was a ray of sunshine in my life. He's now the chief of Pediatric Cardiology at Maryland.

I had barely arrived when Dr. Henderson left and I became acting chair for 15 months. Then Dr. Meinert served as interim for 15 months before Dr. Kessler became chair.

I came into a very strong department and was inspired, as most of us were, by Dr. Henderson. It was a very creative

place, and a group of us often ate lunch together and exchanged ideas. The chair now, Dr. Magaziner, has also done a fantastic job. He makes people feel good, and that's important in a leader.



■ 1950

Morton I. Levin, Class of 1930 and chief of the Department of Epidemiology at Roswell Park Memorial Hospital in Buffalo, New York, directed the first convincing study that linked cigarette smoking to lung cancer.



The EVOLUTION of EPIDEMIOLOGY as a SCIENTIFIC DISCIPLINE

— by Roger Sherwin, MD

The School of Medicine and EPH at the Forefront of Innovation and Discovery

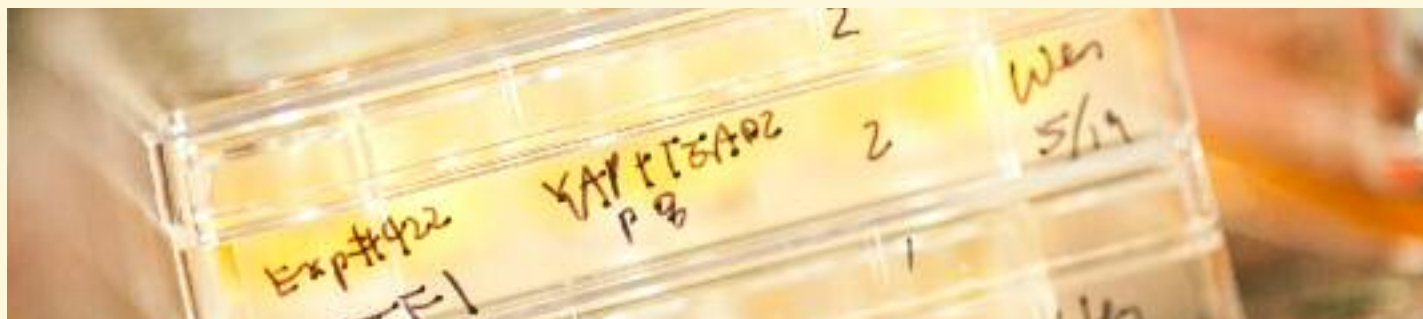
To the world at large (and to many health professionals) the word “epidemic” still means an outbreak of infectious disease above the normally occurring (or “endemic”) level in a population. The original meaning of the term “epidemiology” was thus the study of the characteristics of such epidemics of infectious disease in order to learn how they might be controlled or prevented. Not until the years following World War II, when it became clear that certain non-infectious diseases such as lung cancer and coronary heart disease had been increasing rapidly in frequency since the early years of the 20th century, did the term “epidemic” begin to be applied to these diseases. It was realized that some of the methods developed to study epidemics of infectious disease could be adapted and extended to study, explain, and ultimately control such outbreaks of non-infectious disease. The University of Maryland School of Medicine graduate Morton Levin was among the first to establish an association between cigarette smoking and lung cancer. Other studies, notably that at Framingham, Massachusetts, established associations of cigarette smoking, high blood cholesterol, and high blood pressure with coronary heart disease and stroke. Another School of Medicine graduate, Abraham Lillien-

feld, wrote one of the first textbooks to embrace non-infectious (or so-called chronic) disease epidemiology and was perhaps the first to use the term “experimental” epidemiology to denote studies which intervened on known risk factors as distinct from “observational” epidemiology. Lillienfeld founded the Department of Chronic Disease at the Johns Hopkins School of Hygiene and Public Health and came to be recognized as the “father” of chronic (or non-infectious) disease epidemiology. When his Department was merged with the pre-existing Department of Epidemiology, previously devoted exclusively to infectious disease, Lillienfeld became its new chairman.

The principle of randomized trials was first established by a biostatistician, Ronald Fisher, in the context of agricultural experiments early in the 20th century. When that principle came to be applied to medical therapeutic experiments in the middle of the century, such “clinical trials” were largely designed and analyzed by biostatisticians. It gradually became clear, however, that many of the methods of data collection and analysis for clinical trials were closely related to those already used in observational epidemiology. It also became clear that clinical trials which manipulated risk factors, such as blood cholesterol or blood pressure, had the potential to provide proof of the etiologic role of such risk

■ 1953

Leonard T. Kurland, Class of 1945, began research in Guam that led to identification of the three major forms of amyotrophic lateral sclerosis. A professor of epidemiology at the Mayo Clinic, Kurland is considered the father of neuroepidemiology.



factors for the diseases with which they had been shown to be associated in observational epidemiologic studies (e.g., Framingham). Dr. Christian Klitt, himself an epidemiologist and former faculty member of our department, was the pioneer in the development of large-scale collaborative (i.e., multi-centered) clinical trials in the 1960s. The high degree of collaboration between biostatisticians and epidemiologists required in the conception, design, execution, analysis, and interpretation of clinical trials became increasingly clear. The recognition of collaborative clinical trials as a branch of epidemiology finally became institutionalized when Curt Meinert, a faculty member of our department, was appointed as head of a new Division of Clinical Trials of the Hopkins' Department of Epidemiology. Meinert subsequently founded the Society for Clinical Trials, published the definitive textbook on clinical trials, and became the first editor of the new journal, *Clinical Trials*. Meinert had also mentored the doctoral education at Hopkins of Kay Dickerson who, having been a faculty member of our department, succeeded Meinert as head of the Division of Clinical Trials at Hopkins.

Throughout its long history the University of Maryland has had a distinguished record in both the clinical and epidemiological study of infectious disease. Graduates of the University of Maryland School of Medicine had major roles in the development of the epidemiology of non-infectious disease, and more recently members of our department pioneered the origin of experimental epidemiology.

Much of the extraordinary decline in most infectious diseases in the 20th century, at least half of the decline in coronary heart disease and stroke in the last 45 years, and the more recent decline in lung cancer is attributable to knowledge gained from both observational and experimental epidemiology.



THE PUBLIC HEALTH PERSPECTIVE: 1978-2013

Building on a golden age of research achievements, the department continued those pursuits while turning more attention to revamping the curriculum and emphasizing public health objectives. Dr. Irving Kessler became chair in 1978 and served for ten years. Under his leadership, the department gained approval to grant graduate degrees in preventive medicine and epidemiology, built a Preventive Medicine Residency Program, consolidated computer services within a Health Data Management Center, created a rapid reporting cancer registry, and developed a Division of Medical Informatics, a Division of Health Policy and Administration, and a Division of Gerontology.

■ 1974



Myron M. Levine, MD, DTPH, and Richard B. Hornick, MD, established the Center for Vaccine Development, which developed life-saving typhoid and cholera vaccines and became the world's largest and most diverse academic vaccine development enterprise.

By mid-decade, hospital and health services as well as health behavior modification were subjects of faculty interest and activity. The department developed computerized health risk appraisal instruments, clinical trials to determine drug efficacy, and studies in tropical and infectious diseases. Departmental research was noted in cardiovascular diseases, environmental risk factors in congenital heart disease, maternal diabetes and adverse health outcomes in offspring, and medical monitoring of asbestos-exposed workers.

Another research strength was in the area of gerontology, with several studies directed by Dr. Jay Magaziner, who would later become chair of the department. Of particular note was a study of the physical, mental, and social repercussions of hip fracture in the elderly — a program of research that became the largest of its kind in the world.

In 1988, Kessler stepped down as chair and Dr. James Hudson served as interim chair until Dr. Paul Stolley was named chair in 1991. The school course catalog of 1992-1993 lists programs in clinical epidemiology, biostatistics, environmental and occupational health, health services administration and evaluation, health services research, medical effectiveness research, gerontology, behavioral science, maternal and child health, and health economics and medical informatics, as well as interdisciplinary programs in cancer research, geographic medicine, and infectious diseases. A new program of international health, aimed at prevention and control of infectious and tropical diseases, began operating a viral hepatitis research project in Egypt, under the direction of Dr. G. Thomas Strickland, in cooperation with a Naval Medical Research Unit in Cairo.

Stolley was tapped by vice dean Dr. Frank Calia to spearhead reforms to the School of Medicine's entire educational curriculum — a revamping that was suggested by the accrediting body, the Liaison Committee on Medical Education (LCME). In 1994, despite resistance from the faculty, the curricular reforms were introduced. They reduced lecture time in favor of small-group sessions and problem-solving exercises. Computer labs appeared in Howard Hall, and each student was equipped with a laptop. The Class of 1998 became the nation's first medical class required to take informatics training.

By 1994, faculty members were examining genetic as well as environmental risk factors associated with disability, and research on hip replacement outcomes and treatment of Lyme disease had gained increased attention. The catalog noted emphasis on a



healthy lifestyle, including “smoking cessation and diet modification.” It also says, “Women’s health throughout the life cycle has become a recent research concentration: musculoskeletal and reproductive health are of particular interest.” Leading the charge in women’s health was Dr. Patricia Langenberg, who joined the faculty in 1990 and became vice chair of the department in 1995.

In 1998, Dr. J. Glenn Morris Jr., professor of medicine, epidemiology, and preventive medicine, guided a medical team that examined people who had been exposed to Pfiesteria-infested waters. Morris became the department’s chair in 2000, bringing with him the Hospital Epidemiology Group from the Department of Medicine. He also initiated an interdisciplinary MPH program that involved the University’s six professional schools.

The climate in the decade of the 2000s was encouraging for the area of public health, and Morris advocated building the department into a fully realized school of public health. A robust faculty, divisional structure, and grant support were in place, and the idea gained approvals at the highest levels in the University. The department was moving toward accreditation as a school of public health when leadership and funding changed and a school was formed in College Park but not in Baltimore.

Morris left in 2007 to direct the University of Florida’s Emerging Pathogens Institute. The work of the department continued, including research related to gerontology and the epidemiology of infectious diseases. After a year as interim chair, Dr. Jay Magaziner assumed the position of departmental chair. His research has been focused on three interrelated areas of aging — the consequences of hip fracture, health and long-term care, and methods for studying older populations — with the aim of improving quality of life for elders. Prior to becoming chair, Magaziner developed a training program in the Epidemiology of Aging and a course, The Epidemiology of Aging, that was among the first of its kind in the country. He was also one of the founding co-directors of the two-campus Gerontology Doctoral Program and the UM-wide Center for Research on Aging.

The department’s name was changed again in 2010 to “Epidemiology and Public Health,” reflecting the direction of departmental priorities. The department retains a prominent role in the medical school curriculum, where faculty teach basic research methods and biostatistics. It has become a center for large projects in gerontology and geriatrics and for interdisciplinary research and training in infectious diseases and infection



Dr. Jay Magaziner with
Norma Lynn Fox, 1983

■ 1978

The nation’s first state-wide Emergency Medical System linked 20 referral centers, 51 hospital emergency departments, a state police fleet of Med-Evac helicopters, and more than 300 ambulance companies.



control. With the addition of Drs. Edson Albuquerque and Edna Pereira and their team from the Department of Pharmacology and Experimental Therapeutics, where Dr. Albuquerque served as chair, the newly formed Division of Translational Toxicology has become a national leader in biodefense. The department is strengthening capabilities in the area of basic clinical and transformational informatics and applying those technologies, for example, to novel mHealth programs that utilize mobile devices to improve healthcare services and research. It is building service capacity by providing methodological and biostatistical expertise.

The department's work in hospital epidemiology and infectious disease epidemiology has been nationally recognized. Along with expert training for medical students, graduate students, and health professionals, the department's hallmarks include innovative research, skilled analysis of data, and the translation of knowledge into clinical practice and community-based interventions that improve public health.

The department now includes six divisions: Biostatistics and Bioinformatics, Cancer Epidemiology, Gerontology, Genomic Epidemiology & Clinical Outcomes, Preventive Medicine, and Translational Toxicology; two of these involve partnerships with the Marlene and Stewart Greenebaum Cancer Center.



Dr. Edson Albuquerque



Dr. Edson Albuquerque, 2012



■ 1980-2013

The Inner Harbor is a historic seaport, tourist attraction, and landmark of the city of Baltimore, which helps draw students to the University.

Witness to History: January 31, 2011



Irving I. Kessler, MD, MPH, DrPH
Chairman 1978-1988

I was a professor at the Johns Hopkins Medical Institutions at the time I accepted the chair of this department in 1978. Shortly thereafter, the faculty voted to change our name from Department of Social and Preventive Medicine to Department of Epidemiology and Preventive Medicine. That better reflected an increasing emphasis on epidemiological reasoning and a closer linkage to clinical medicine, two objectives that were strongly approved by Dean John Dennis and the School of Medicine faculty.

The decades immediately preceding and following my chairmanship were, in some respects, an idyllic period for clini-

cally based epidemiologic research and teaching, but my new administrative duties inexorably terminated most of my own studies. For a while, I continued to publish on herpes viruses and cervical cancer, the health effects of artificial sweeteners, and relationships between nicotine and Parkinson's disease. At the same time, I began to notice an abrupt decline in the classical approaches to epidemiological research, as law firms openly advertised for patients to sue their doctors, and federal and state regulations on research multiplied. Drug manufacturers and other commercial interests began to dominate what was once largely a province of the National Institutes of Health and other public and nonprofit agencies. Who would deny that undertaking a biostatistical analysis based on existing data sets is simpler and less demanding than mounting a de novo study of carefully selected human patients who have developed, or are destined to develop, a disease of interest?

Some of my new administrative duties, while onerous, were challenging and

ultimately worthwhile. For example, the department had never had an academic program leading to any academic degree. Three or four years of rather intensive effort in Baltimore, College Park, and Annapolis eventually led to official approval from the Maryland State Government and University of Maryland president (now chancellor) for the department to grant both master's and PhD degrees in public health and preventive medicine. This marked a joyful moment as the department could now look forward to producing new generations of young physicians and other students with certified training in public health and preventive medicine at these higher levels. Almost immediately a growing number of well-qualified physicians and other qualified applicants began to be attracted to the department, a consequence evident to this day.

A second, related administrative accomplishment during this era was establishing the independence of the department's Preventive Medicine

INTENSIVE EFFORT EVENTUALLY LED TO OFFICIAL APPROVAL FROM THE MARYLAND STATE GOVERNMENT AND THE UNIVERSITY OF MARYLAND FOR THE DEPARTMENT TO GRANT BOTH MASTER'S AND PHD DEGREES IN PUBLIC HEALTH AND PREVENTIVE MEDICINE. THIS MARKED A JOYFUL MOMENT IN THE DEPARTMENT.



■ 1981

Faculty Photo



■ 1982

Faculty Photo

Residency Program. Traditionally, our residents were sent to Johns Hopkins for all or most of their academic coursework. We undertook a long and difficult effort, in the face of objections from policy makers in both institutions, that led eventually to the establishment of an independent and free-standing program based in the medical school. The department could now compete effectively with public health programs offered by public health schools and medical schools around the world.

Another achievement for the department during this time had to do with the advent of modern computer technology. Although this level of red tape could be easily tolerated by most medical school departments, it posed an existential threat to our department's future growth and development. Compounding the dilemma was the absence of funds from any source for the purchase of essential computer equipment.

At the time, the department depended on a single Wang computer, a rather primitive advance over the electric type-

writer, and faculty members were individually responsible for all aspects of their data processing and programming needs.

Reasoning that, in the absence of potential dollars from the dean's office and the state of Maryland, the only realistic funding sources were the individual faculty members' research grants, the following proposal was put forth: We would establish a Health Data Management Center (HDMC) with a staff of data processors, coders, and programmers for the entire department.

Each faculty member who was the principal investigator of an active grant or contract would place his or her computer-related research funds into a departmental central "pot." The department would then guarantee that donor faculty members would have all of their requisite computer and data processing needs satisfied while, at the same time, faculty and students who lacked computer funding would receive as much assistance from the department as feasible. The proposal at heart was to develop a department-based data processing center offering services to all students

and faculty, giving priority to those who transferred their computer funds into the HDMC.

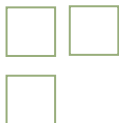
Since there were no existing medical school data centers established in this fashion anywhere else, the proposal was initially controversial but was eventually adopted and, in my understanding, proved highly successful. Among other virtues, it opened up career pathways for data processors, coders, and computer specialists who could spend their professional careers in the HDMC of the department, rather than periodically be compelled to seek other jobs when a faculty member's research funds were depleted.

A number of interesting developments resulted from the establishment of the Health Data Management Center. The first was the creation of a health maintenance program designed for gymnasias and health clubs that were at that time evolving rapidly throughout the country. Central to our program was the generation of an individualized printout for each club member that would monitor smoking and

■ 1983

Baltimore Hip Studies began. The first project examined mortality and changes in activity in a cohort of 982 admissions to seven Baltimore area hospitals.





other health-related practices, hypertension, changes in diet and weight, and offer an epidemiologically valid prescription for proper health maintenance. The program was one of the earliest to be developed in the health maintenance field but, unfortunately, lacked an adequately supported public relations component for long-term success.

A second offshoot of the HDMC was the Maryland Cancer Registry. Although I had long been involved in cancer studies, one recurrent issue could never seem to be resolved: People living next to a trash dump or in a neighborhood where multiple cancers had been reported would often ask the health department, their Congressman, or their doctor whether their physical environment created a higher-than-expected incidence of disease. Except for baseless reassurances, no definitive answer was forthcoming. Existing cancer registries, such as those of the World Health Organization and the state of Connecticut, were woefully deficient and generally months or years behind case registration. What was needed, in my view, was a rapid reporting cancer registration system

that would allow the capture of all recently reported cancer cases of every type occurring among Maryland residents. I proposed to then Mayor William Donald Schaefer that we develop such a system and, following stiff competition from Johns Hopkins, the department was awarded a long-term grant for the development of a rapid reporting cancer registry. The registry became fully functional after several years of intensive development but, to the chagrin of many, came to be regarded as a political football and was taken over by the state of Maryland.

Toward the end of my tenure, as I reflected on the rapid growth of our Health Data Management Center and the successful development of the Maryland Cancer Registry, I decided to develop a Division of Medical Informatics. The rationale was to utilize our epidemiological faculty, our existing computer specialists, and our close working relationships with the clinical departments to form the basis for the new division. The hope was to attract young physicians and other medical experts to enroll in a degree program that would enable

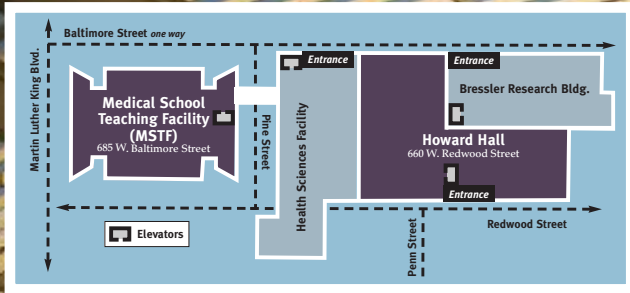
them to solve specific computer-based health problems that they had encountered in their own work, and simultaneously, to attract computer experts to enroll in a degree program that would educate them in a specific medical domain in which they could apply their computing skills. Our department was the first in Maryland, and perhaps anywhere, to develop a Division of Medical Informatics.

There are obviously many more recollections concerning these ten years at Maryland that might be mentioned. Let me simply add two final memories: first, our establishment of the Maryland Gerontological Association with the collaboration of Dr. Matthew Tayback of Johns Hopkins, an effort that led to a major expansion of research and teaching in gerontology under the later departmental chairmanship of Dr. Jay Magaziner; and second, my surprise home run hit at a departmental intramural game, which suggested that a career in baseball might have proven even more exciting than the one I chose!

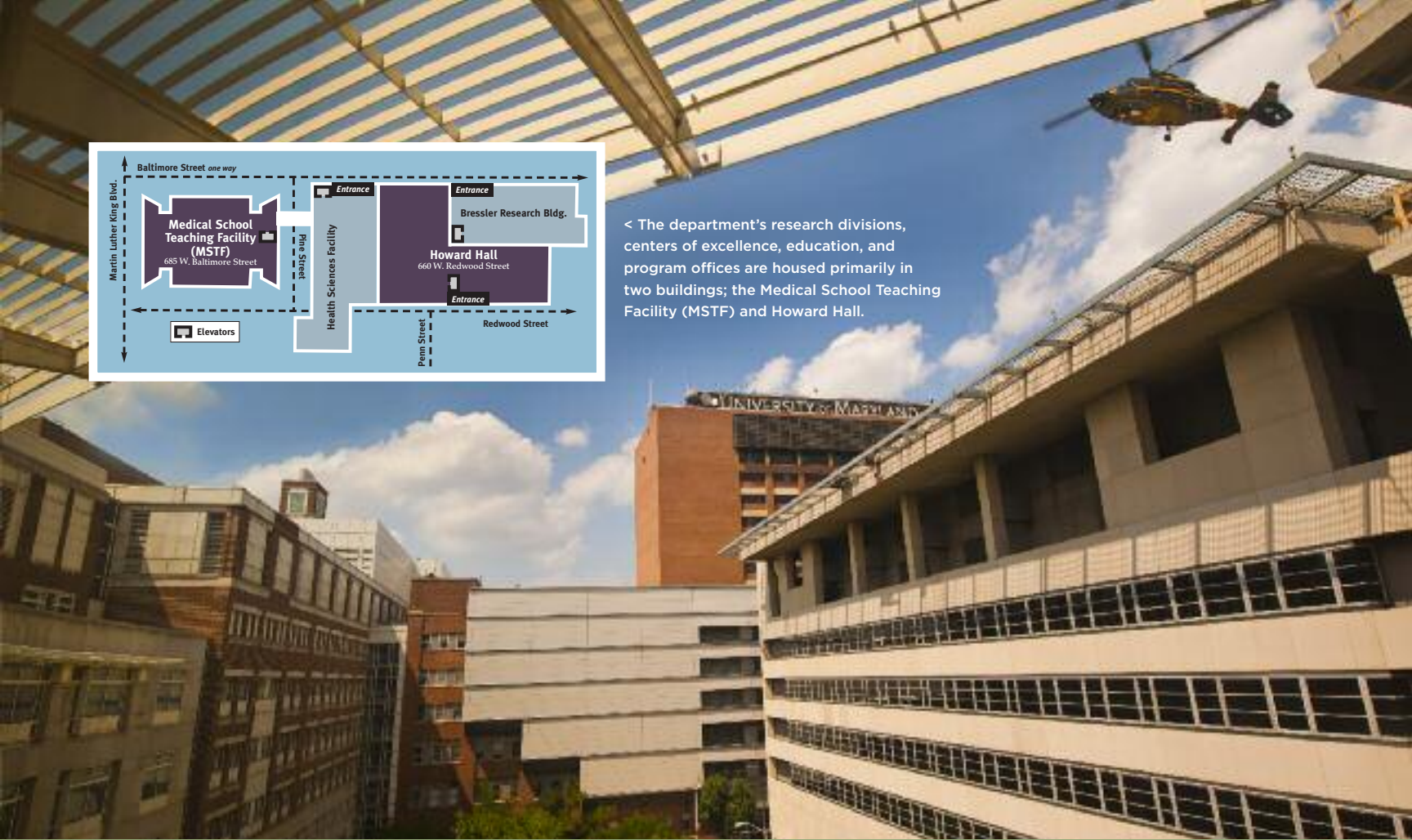
■ 1983

Faculty Photo





< The department's research divisions, centers of excellence, education, and program offices are housed primarily in two buildings; the Medical School Teaching Facility (MSTF) and Howard Hall.



■ 1983

The Long-Term Care Project started under the co-leadership of Jay Magaziner, Francis Palumbo, James Tenney, and John Warren.



Witness to History: July 12, 2011

James Hudson, MD
Professor 1982-1991
Interim Chairman 1988-1991

I came to the department in 1982, after having been with the Association of American Medical Colleges for a number of years, upon my appointment as the associate dean for academic administration for the School of Medicine. I had an interest in quality assessment and health services research, and it seemed appropriate that I also join the Department of Epidemiology and Preventive Medicine, chaired by Dr. Kessler.

I PIGGY-BACKED ON SOME OF THE STUDIES AND COHORTS THAT JAY MAGAZINER HAD DEVELOPED EARLIER, AND WE WERE ABLE TO GET A FIVE-YEAR GRANT TO EXPLORE THE RESULTS OF PEOPLE WITH VARIOUS TYPES OF HIP FRACTURE REPAIR AND TOTAL HIP REPLACEMENTS FOR OSTEOARTHRITIS.

Irv Kessler had a dream of creating, around his department, a school of public health at Maryland. Setting up a Division of Health Policy and Administration was part of his idea of expanding epidemiology into other realms of public health. Since I had been working both with the American Medical Colleges and overseas on issues related to health services research, he graciously appointed me as head of that division.

After Irv resigned, I served the department as interim chair for three years, from 1988 until Dr. Stolley took over as permanent chairman in 1991. My job was to do what I could to restore some sense of importance to the department. So I talked with Wendy Cohan, who was the department administrator, and we planned a series of retreats. We got the faculty together and I think we did a pretty good job of getting everybody to express themselves. We tried to be completely ecumenical and democratic, working out space as well as direction of the program, and we also had several sessions where we

got together recreationally. All that seemed to help.

The department continued to expand, and I was fortunate to get a \$5 million grant to form a patient outcomes research team that looked at outcomes of the varying systems of hip fracture management. I piggybacked on some of the studies and cohorts that Jay Magaziner had developed earlier, and we were able to get a five-year grant to explore, through use of Medicare administrative data, the results of people with various types of hip fracture repair and total hip replacements for osteoarthritis. We published a number of papers, and that was my last big thing before I retired.

After I finished as acting chairman and had the five-year research grant, I also got out of the dean's office and went full time in the department. Other faculty members were doing traditional research on controlled clinical trials, and there was a series of studies on women's

■ 1985

Faculty Photo



health. Drs. Ferencz and Magaziner received MERIT Awards from NIH.

Several people in the department, including Jay Magaziner and Leonard Scherlis, a former chief of cardiology in the Department of Medicine, were involved in teaching medical students. Jay and I organized a seminar course for medical students around comparative analysis of various systems of health care financing. We had a number of faculty both within the University and also some people from the Health Care Financing Administration, and we occasionally had guest speakers from Hopkins.

I can't seem to learn how to retire. I bought a farm down in Tennessee, and now I'm working with the Tennessee State University Health Research Group on an analysis of rural practice patterns throughout the state.

Dr. Magaziner deserves a lot of credit for bringing the department to where it is now. It's going great guns — it's impressive.



Witness to History: January 6, 2011



Kathleen M. Fox, PhD
First Departmental PhD
Graduate 1991

I n 1991, I was the first to graduate from the department with a PhD in epidemiology. I had been working for the National Institutes of Health on the Baltimore Longitudinal Study on Aging, so I was already working in the field of gerontology and wanted to develop my skills and expand my research expertise.

My interests have always been on the research side, and the department was extremely active in all types of research

MY MOST VIVID MEMORIES ARE OF GOOD COLLABORATION AND WILLINGNESS TO ALLOW ME TO BE PART OF THE CRITICAL RESEARCH THAT WAS GOING ON AT THE TIME. DR. JAY MAGAZINER HAD HIS HIP FRACTURE PROJECTS CALLED THE BALTIMORE HIP STUDIES, AND I WORKED WITH HIM ON EXPANDING THE ASSESSMENTS FOR RECOVERY FROM HIP FRACTURE (INCLUDING NEUROMUSCULAR FUNCTION) AND MANAGED THE ANALYSIS.

projects that had exceptional value for me. Also, the caliber of the faculty and their variety of interests gave me broad exposure, not only to gerontology but also to areas like infectious diseases and maternal and child health.

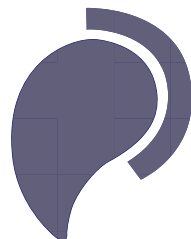
Because they were building the degree program as I was progressing through it, I had a lot of flexibility, and they tailored some courses for the three of us who were doctoral candidates. The faculty allowed me to be part of their research projects, and I even started doing some independent research. The epidemiology skills and expertise I developed allowed me to work in a number of different areas, but I focused on chronic conditions that typically affect older individuals — osteoporosis, hip fractures, osteoarthritis, and diabetes.

Dr. Roger Sherwin was studying risk factors for osteoporosis and fractures and had a large longitudinal study through an NIH grant. It was a multi-center study, including Baltimore, Pittsburgh, Portland, and Minneapolis. We had a total of about

9,600 women in the study, with 2,400 in the Baltimore region. I used the study as a sounding board and patient population for my PhD dissertation. I developed a survey and disseminated it to learn about reproductive factors and how they influence later development of osteoporosis. It was an amazing opportunity.

For me, the program was the right pace, the right access to faculty, the right research interests. It was a perfect fit. My experience equipped me to become an independent researcher and investigator. Within the first year of graduation, I received an NIH First Investigator's Award. Now I have my own company called Strategic Healthcare Solutions, LLC, and I provide research support for biotech and pharmaceutical companies. I love it.





THE BALTIMORE HIP STUDIES

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

Since 1983, researchers in the Division of Gerontology of the Department of Epidemiology and Public Health have been conducting studies on recovery from hip fracture. The goal of this work is to describe changes that occur post fracture and to identify and evaluate ways to optimize recovery. Initially examining mortality and effects on activity among hip fracture patients, the program has extended this work to examine changes in bone mineral density and body composition post fracture and identify promising interventions for enhancing recovery.

■ 1986

Faculty Photo



Witness to History: January 6, 2011

Paul D. Stolley, MD, MPH
Chair 1991-1999



I came to the Department of Epidemiology and Preventive Medicine as chair in 1991 and left in 2002, but I stepped down as chair in 1999. For 15 years, I had been at the University of Pennsylvania School of Medicine.

One of the things the Maryland dean — and Dr. Calia, who was vice dean — wanted me to do was to chair the Curriculum Committee for the School of Medicine, which I did for almost five years. The curriculum was heavily based on lecture, and the accrediting body threatened to withdraw its approval unless there was a change. The faculty resisted because a departure from lectures would take more of their time, and many had come to think of their jobs as doing research.

My main interest was in cutting down the lectures so they would not be the main way of transmitting information. We would emphasize oral presentations by the students rather than regurgitation. We would teach critical reasoning and problem solving in small group sessions that were interactive and would meet on a weekly basis.

I democratized the department as well. Promotion and faculty recruitment became a faculty decision, with the chair having veto power. That took away a lot of the power of the chair and gave the faculty more responsibility. Having the chair be more of an organizer was a big change.

We offered master's degrees in public health and epidemiology, and we re-started a doctoral program in epidemiology. The faculty had to become entrepreneurs, raising much of their salaries from research grants and, at the same time, putting a hefty amount of time into teaching. The NIH would often approve a grant that they would then not fund, or would under-fund. It was pretty brutal. I tried to

guarantee, especially in recruiting new faculty, that for at least three years, they would get departmental support while they got on their feet with grants.

I was never very interested in dollars. I wanted to know what important questions were addressed and solved. How did our work benefit society? Were any problems addressed in the neighborhoods surrounding the University? What were the outcomes? Was research being done to answer questions of commercial interest without having scientific value?

A lot of faculty were working on very important questions. Dr. Magaziner was doing work on falls and hip fractures, risks, and methods of intervention. The Women's Health Research Group was started while I was chair — I think we were among the first to do that, and we were devoted to it.

I was personally working on violence intervention, first identifying risk factors and then intervening to try to prevent people from becoming repeat victims of gun violence. We worked with emergency

I WANTED TO KNOW WHAT IMPORTANT QUESTIONS WERE
ADDRESSED AND SOLVED. HOW DID OUR WORK BENEFIT SOCIETY?



■ 1987-1989

*Perspectives in Pediatric
Cardiology* edited by
Dr. Charlotte Ferencz

room physicians, intensive care units, and the trauma center. The work involved counseling and the support of a social worker — and I actually had a parole officer assigned to the project by the state. It was partly sociological, but we were using epidemiologic methods, and our project stimulated intervention programs around the country.

Before 1960, the field was dominated by physicians, but it became more interdisciplinary, especially in epidemiology, where a lot of people got doctorates but didn't have medical degrees. Also, at the time I left, our department's faculty was more than 50 percent female. During my time, departmental governance changed drastically, research expanded, we established the Women's Health Research Group, and we got the doctorate approved. We revamped the entire medical curriculum and sent fourth-year students on internships. That was a lot of change.



Frank M. Calia, MD, MACP
Vice Dean for Clinical Affairs 1992- 2012
University of Maryland School of Medicine
Interviewed on October 13, 2010, retired 2012

"In 1992, I had come into the dean's office as the vice dean. We were under pressure from the medical school accrediting agency, the LCME, to change the curriculum. I was charged with oversight of the process, but there was tremendous resistance. I was able to take a group of chairs and associate deans with me to a seminar in curriculum change at Harvard. I took people I knew were in favor of change and people who were bitterly resistant to it. One of the people I took was Paul Stolley. He was one of the brightest and most insightful chairs, a basic internist, a good doctor. Paul had credibility, and he became my closest ally.

"We appointed Paul the chair of the Curriculum Committee during this critical time. Paul was the ultimate democrat and diplomat. Autocratic leadership is efficient, top down, but Paul believed in building consensus. When people are digging in their heels, that approach can take forever, and I was impatient. But Paul was an inspiration. He was smart and convincing, and we got the changes we needed.

"We had had a terribly traditional curriculum. Students were lectured at for eight hours a day, five days a week. They were quizzed incessantly, and they needed to develop better insight into how clinically relevant the material would be. We needed to integrate the basic and clinical sciences and reduce rote memorization. We needed to incorporate new areas of science — genomics, for example, and informatics.

"We threw out the student requirement to own a microscope, as all slides had been digitized. We required everybody to have a think pad/personal computer — the first school in the country to do that. We went to two hours of lecture a day and two hours of small group and/or lab.

"Students had to learn how to solve problems. They were given a clinical problem and were expected to go to the library, go to the computer, and access the primary source of information. Medicine is a lifelong commitment to learning, and they needed to learn that in medical school."

■ FIVE DECADES

Dr. Calia taught for more than five decades, helping hundreds of students.



Witness to History: May 31, 2011

Geoffrey Rosenthal, MD, PhD
First Departmental MD/PhD
Graduate 1992

I started medical school in 1985, became primarily a graduate student two years later, and went back to clinical training around 1990. I was writing my doctoral dissertation and working on my research while I was doing my clinical training.

My wife remembers times when I was tired and frustrated and all that goes along with working hard at something that matters, but I remember it all very fondly.

TRAINING IN EPIDEMIOLOGY AND PUBLIC HEALTH CREATES A TOOL KIT, AND THOSE TOOLS CAN BE APPLIED IN DIFFERENT WAYS. WHEN I THINK ABOUT HEALTH CARE RESOURCES, OR HOW TO IDENTIFY WHERE AN INFECTED POPULATION MAY BE UNDERSERVED, OR ABOUT THINGS THAT ADMINISTRATORS AND CLINICIANS HAVE TO THINK ABOUT, THE PUBLIC HEALTH TRAINING ALWAYS FORMS THE RIGHT QUESTIONS.



I was working on a master's degree in biostatistics and epidemiology from Georgetown when I applied to Maryland. I was accepted into the MD/PhD program before I was accepted to medical school. The Department of Epidemiology and Public Health was very welcoming. Because I had studied epidemiology and statistics at Georgetown, they allowed me to participate in teaching some of the basic classes for the medical students.

During my first two years of medical school, I wrote my master's thesis. It was part of a larger initiative that was looking at the nutritional status of people in rural poor counties in the United States. My piece of this larger study was to look at

the infant mortality rate and the rate at which babies were born with low birth weight, so I was already thinking about public health issues surrounding moms, nutrition, and babies. That area of research led me into the clinical area where I now practice.

When I was still a full-time student, I connected with Dr. Charlotte Ferencz, who was wonderful and a great mentor for me. Now, many years later, I continue to apply the lessons I learned from her. At the time, Dr. Ferencz was the principal investigator of the Baltimore-Washington Infant Study. She invited me to collaborate and work on data that were within the study. Because I had studied low

birth weight in my master's thesis, she suggested that I look at birth weight in infants with congenital heart disease.

Dr. Ferencz had this infectious enthusiasm about her topic. She was very involved with trying to understand medicine as it pertained to public health. She wanted to think about prevention and how it all might fit. As part of taking me under her wing, she involved me in the Teratology Society, a scientific and academic organization that focused on birth defects.

From that connection, and conversations with Dr. Ferencz, I came up with my doctoral research topic — looking at fetal growth in kids with congenital heart disease beyond birth weight, including other measurements that were taken during the early newborn period, and trying to understand how growth abnormalities were or weren't related to the heart disease that the fetuses had in the eighth week of pregnancy. She and others on my committee were fantastic. They taught me everything I know and still use.

I'm primarily a clinician and an admin-

istrator, and I have several roles. First, I'm professor of pediatrics in the University of Maryland School of Medicine. Then I have hospital titles: I'm director of the Children's Heart Program and executive director of Pediatric Critical Care Services. One of the things about leadership in medicine is that titles don't mean as much as the people who work with you, and what's really nice are the teams of people I work with now.

My degrees have been incredibly valuable and have opened all kinds of doors. My training started at Georgetown but was really polished here at Maryland. The tools that went along with that training have created so many opportunities for me. With regard to research, they have allowed me to help other investigators understand the information that comes back, to frame a question in a way that makes it answerable, or to understand how to consider evidence. In the clinical realm, it has allowed me to understand evidence-based medicine in a way that many other clinicians don't.

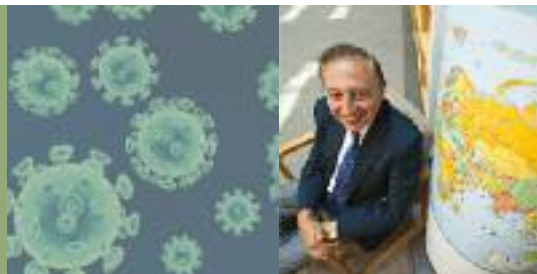
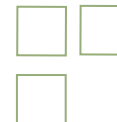
It has also created opportunities for me

in health policy. In one of my roles outside Maryland, I chair the Pediatric Advisory Committee to the FDA, where I work with experts at the FDA and industry and academic medicine to try to understand ways to make drugs safer for kids. That door was opened because of my involvement in epidemiology over the years.

My message here depends on who the reader is. If the reader is a potential donor, then I would say that donations or any philanthropic support to the Department of Epidemiology and Public Health has the potential to impact literally thousands to millions of people in a favorable way.

If I'm speaking to a student, I would just say that the possibilities are really infinite. Training in epidemiology and public health allows you to think about the problems facing our neighbors and our communities in ways that doctors don't naturally think of them. From my perspective, the ability to frame problems in a public health context has been nothing but enriching.

If the reader is a teacher, just tell them that I love them.



■ 1996

The Institute of Human Virology, headed by Dr. Robert C. Gallo, opened to bring together basic science, clinical research, epidemiology and prevention, animal models, and vaccine studies involving AIDS and other viral diseases.

Witness to History: August 10, 2011

Patricia Langenberg, PhD
Vice Chair of EPH 1995-
Director of the Graduate
Programs 2001-2011

I came to the department in 1990, from the School of Public Health at the University of Illinois at Chicago. This was around the time Paul Stolley came and my husband was coming here as chancellor. The medical school was really the only place that was appropriate for the work I had been doing, and I found the department to be very collegial. The people were friendly and

BIRCIWH SCHOLARS ARE WORKING ON PEDIATRIC NUTRITION, SCHIZOPHRENIA, AND BREAST CANCER. ONE IS CLASSIFYING WEIGHT TRAJECTORIES IN WOMEN, AND YET ANOTHER IS LOOKING AT DEPRESSION AND SLEEP IN WOMEN. WE ORGANIZE THE AWARDS TO MATCH THE STRENGTHS OF THIS CAMPUS — STRENGTHS THAT INCLUDE AGING IN THIS DEPARTMENT AS WELL AS THE SCHOOL'S STRENGTHS IN PHYSIOLOGY AND THE BRAIN, NEUROSCIENCE, AND HORMONES.

were doing interesting work — and since I've been here, we've had excellent leadership.

As a biostatistician, I've worked with a number of people who originated studies in women's health. One of the primary people doing research in the area when I came was Kristen Kjerulff, who did a major study of hysterectomy. But Paul Stolley really got me involved with women's health when he and Roger Sherwin asked me to develop a network of people interested in the area.

We established the Women's Health Research Group in 1997, a grassroots movement that became accepted as a unit in the department. What really made it work was that an administrator, Roxanne Zaghab, managed to get an unrestricted educational grant from a pharmaceutical company, an award of \$150,000 a year for five years, half of which was for infrastructure — organization and communication. The other half was to support small grants, and that really made a difference. We managed to fund five or six small seed grants per year for five years.



We also organized annual seminars and symposia on topics from smoking to emerging concepts in women's sexuality to gender aspects of pain to health and weight. Most of our topics have become very important since then. Trudy Bush, a well-respected researcher in women's health, joined our campus from Johns Hopkins, and she and I ran the Women's Health Research Group for quite a while.



■ 1997

Davidge Hall was designated a National Historic Landmark by the U.S. Department of the Interior.

She was a seminal thinker with bright ideas, interested in cardiovascular health, reproductive hormones, and in menopause — and her premature death was a tragedy. Another person who did significant research here in women's health was Jodi Flaws, who left for the University of Illinois.

People now are so pressed to bring in grant funding that they don't have the time that we had 10 years ago to build networks — or the networks now are electronic. But the Women's Health Research Group is the sponsor of our Building Interdisciplinary Research Careers in Women's Health (BIRCWH) grant. We're beginning our third five-year grant from the NIH Office of Research in Women's Health, which provides \$100,000 per year for each of four scholars and another \$100,000 that covers infrastructure costs. It's a mentored career development award, where selected scholars get salary support and quite a lot of mentoring — plus, 75 percent of their time is released from teaching or clinical

work so they can pursue research. That's the most valuable part of this award.

I knew a bit about running graduate programs from previous experience, so Paul Stolley asked me to organize a group to study whether we should reactivate the PhD program. I assembled members of the faculty, and we did a survey and quite a lot of study and interviewing. We put the pros and cons together and presented them to the faculty, and the final vote was to reinstitute the PhD program. Mary Sexton took it in hand and was a wonderful director. When Mary left, I became director, and that has been extremely satisfying. We now have first-rate graduate students from very good places, and they work closely with faculty mentors. We have a highly quantitative program and we can give a great deal of personal attention to our PhD students.

The nice thing about being a biostatistician is that whenever somebody comes with a new piece of research, there's something more to learn. I've been very lucky.



■ 1997

The Women's Health Research Group, a multidisciplinary campus-wide organization designed to foster collaboration at UM, was created by Patricia Langenberg, PhD.



■ 1998

The Center for Research on Aging was established under the leadership of Andrew P. Goldberg, MD, and Jay S. Magaziner, PhD, MSHyg. The Department of Epidemiology and Public Health's strength in aging research was a major factor in the establishment of the Center.

Witness to History: March 1, 2011

J. Glenn Morris Jr., MD, MPH, TM
Chair 2000-2007

I was in the Department of Medicine at the University of Maryland and headed the Division of Hospital Epidemiology there when, in 2000, I was recruited as chair of the Department of Epidemiology and Preventive Medicine. I served as department chair until 2007.

When I came to the department, I brought the Hospital Epidemiology Group from the Department of Medicine with me. Hospital epidemiology had

traditionally been covered by the Division of Infectious Diseases within the Department of Medicine. In 1997, we had an expanding and increasingly recognized program in hospital epidemiology, and we had split that out as a separate division. Before my arrival, the department had had one operational division, the Division of Gerontology, with other faculty members within the department not affiliated with a division. With the inclusion of Hospital Epidemiology, it made sense to move to a divisional structure for the entire department, which we did.

The resultant department was clearly one of the outstanding departments of epidemiology in the country. In the early 2000s, the department grew and the grant funding increased to the point where we were ranked number two nationally in grant funding for departments of epidemiology within colleges of medicine.

At that time, there was a national movement toward the creation of new schools of public health. A report from the Institute of Medicine recommended

further focus on public health, so we began talking about the possibility of moving from being a department within the college of medicine to being a free-standing college of public health. We had the faculty, the divisional structure, the grant income, and everything else. If we had moved to become a school of public health at that point, we would have ranked 15th in terms of grant funding for schools of public health.

The proposed school would serve an important need in the region, that of training on more of a local operational level, where people could come for public health training and degrees for reasonable prices.

We got initial approval to move forward from the University president, and we went to the Board of Regents for the University of Maryland, who approved the creation of a school of public health. We began the process of obtaining accreditation through the Council on Education for Public Health (CEPH). We met all the criteria for

I WOULD CHARACTERIZE MY TIME THERE AS MOVING THE DEPARTMENT TOWARD CREATING THE NECESSARY AREAS OF EXPERTISE REQUIRED FOR A SCHOOL OF PUBLIC HEALTH. IT WAS A TIME OF RAPID EXPANSION — GROWTH BOTH IN TERMS OF FACULTY AS WELL AS GRANT SUPPORT. IT WAS A TIME OF HIGH ENERGY AND GREAT PRODUCTIVITY.

■ 2000



Dr. Carol O. Tacket, professor of medicine, successfully produced a potato-based vaccine to combat Norwalk Virus, which is spread by contaminated food and water.



accreditation, with training across five different subject areas.

Between 2003 and 2006, I had focused on building the department to create the additional areas of expertise — environmental health, social and behavioral sciences, areas where there wasn't pre-existing expertise. I worked to create the critical mass that we would need to be accredited. When we put in our application for accreditation, we had 54 faculty members and had assembled broad-based expertise in public health with the assumption that we would become a school.

We then ran into difficulties with funding, and it became obvious that we were not going to be able to move forward with the new school. I left the department and Dr. Magaziner was asked to step in as interim chair.

It was an unfortunate episode, in my view, because the department has a long and illustrious history and it was well on its way to becoming one of the premier schools of public health in the country. It had the potential to become a truly out-

standing school. What ended up happening is that a school of public health was created on the University of Maryland College Park campus and not on the professional school campus.

Despite this setback, I would characterize my time there as moving the department toward creating the necessary areas of expertise required for a school of public health. It was a time of rapid expansion — growth both in terms of faculty as well as grant support. It was a time of high energy and great productivity.



■ 2003



Dr. Alessio Fasano, head of the Center for Celiac Research and the Mucosal Biology Research Center, concluded the largest epidemiological study on the disorder ever conducted in the U.S. With more than 13,000 subjects, the study showed that celiac disease affects as many as one percent of the population.

■ 2005



The National Institute of Allergy and Infectious Diseases, fearing a pandemic of avian flu, asked Maryland's Center for Vaccine Development to test the flu vaccine.

Witness to History: February 18, 2013

Jay Magaziner, PhD, MSHyg
Professor 1982-
Interim Chair 1999, 2007
Chair 2008-

In 1982, I was a postdoctoral fellow in psychiatric epidemiology and aging at the University of Pittsburgh. Dr. Kessler invited me to give a talk in Davidge Hall at an annual Symposium on Aging and Health that he had initiated a few years earlier. I did not realize I was being considered for a job, though I was looking for one at the time: I had an infant daughter and my postdoc was due to end later that year. After two challenging days at the University and a successful talk, Dr. Kessler offered me a position as an assistant professor. I accepted, and 30 years later, I am chair of

the Department of Epidemiology and Public Health. During these years, I served as interim chair twice, once in 1999 and again in 2007, before becoming “permanent chair” in 2008. I have also had the great pleasure of working with four chairs and many wonderful faculty, students, and professional staff, and participated in valuable changes that have extended the department’s education and research collaborations.

All of our chairs have brought changes to the department and encouraged me to extend the research and educational pursuits in which I was most interested. Dr. Kessler had a unique and forward-looking vision for the department and challenged the status quo in many ways. He hired me because he understood that the population was aging and that gerontology was going to take off as an important area for education and research. He had a marked impact on my career path, and it was under Dr. Kessler that I developed the Division of Gerontology, one of the department’s first divisions and



currently its largest. Educational programs were also important to Dr. Kessler, and he developed the first departmental doctoral and master’s degree programs, which continue to grow.

Sustaining Dr. Kessler’s vision after he stepped down, Dr. Hudson also brought a strong health services and public policy perspective to the department during the Clinton years, when health care in the

ONE OF THE DEPARTMENT’S GREATEST STRENGTHS IS ITS INTERDISCIPLINARY NATURE, WHICH HAS BEEN IMPORTANT IN MY WORK THROUGHOUT MY CAREER.

■ 2009



The School of Medicine received a \$30 million grant to coordinate a consortium of the nation’s most prominent scientists in the field of stem cell research under the leadership of Michael L. Terrin, MD, CM, MPH, professor of epidemiology and public health.

■ 2010

Faculty



U.S. was starting to change. It was during this time that I had the opportunity and great pleasure of working with him and Dr. Leonard Scherlis to run one of the first courses in health care organization in a U.S. medical school. The course, of which I am very proud, was offered for more than a decade.

The next chair during my tenure in the department was Dr. Stolley. He emphasized medical education in addition to scholarship, faculty involvement in making important decisions for the department, and the importance of collaboration with colleagues in other School of Medicine departments. During these years, I played a major role in extending the Division of Gerontology's involvement with other aging-related research groups on campus, and became co-founder and co-leader of a new Center for Research on Aging, a campus-wide research program.

About a year after Dr. Stolley stepped down as chair, Dr. Morris joined the department and assumed that role. He

had many ideas about expanding the reach of the department through education, research, and service. Among his many contributions to the department was the introduction of a Master of Public Health Program that involved the six professional schools on the campus. This program broadened the department's involvement in education and research with other schools on campus. Dr. Morris was also very supportive of our new joint UMB/UMBC Doctoral Program in Gerontology that I helped to develop and co-lead for 10 years.

One of the department's great strengths is its interdisciplinary nature, which has been important in my work throughout my career. I was trained as an interdisciplinary researcher and believe that scientific pursuit is advanced by collaborations that involve multiple perspectives focusing on a specific problem or cluster of related issues. To do serious work in gerontology, where my own research and education have focused, requires collaboration with scientists in

multiple disciplines. The University of Maryland's Baltimore campus, with its six professional schools, has been ideal for that. Over the 30 years that I have been at the University, I have worked with investigators from all of the schools on campus, and collaborative activity among departments and schools has greatly expanded.

Two important departmental partnerships that were established since I became chair involve the Marlene and Stewart Greenebaum Cancer Center. One of these merges biostatisticians in the department's Division of Biostatistics and Bioinformatics with the biostatistics group in the Cancer Center. We also initiated a partnership between the Cancer Epidemiology Division and the Cancer Center. The head of this new unit has a primary appointment in the Department of Medicine, which represents a departure from traditional organizational approaches. Investigators across the campus and on other UM campuses are engaged in this effort.

■ 2011

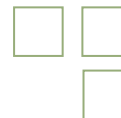
The School of Medicine established the Clinical and Translational Sciences Institute to foster the translation of fundamental science to patient care and community health.



The department has changed names several times over the years to reflect emerging issues. When Robley Dunglison was hired in 1833, he taught a course in Preventive Medicine. “Social Medicine” and then “Epidemiology” were added later. In 2010, while I was chair, the name was changed to Epidemiology and Public Health and a separate division of Preventive Medicine was established. We wanted to emphasize that we’re doing more, covering a lot more territory, and are directing our efforts to both clinical and community populations.

We are now moving in new directions by strengthening our involvement with other schools on our campus and embarking on new collaborations with other campuses. The most recent of these is expansion of our MPH program through a proposed collaborative school of public health with colleagues in the School of Public Health at College Park. As with many of the changes over the 180-year history, some uncertainties are associated with this new venture. But like other

education and research areas that have developed over the years, this latest initiative also promises to provide many opportunities that may allow department faculty, professional staff, and students to accomplish even more.



■ 2011

Public Health Graduates



■ 2011

Faculty





EPIDEMIOLOGY AND PUBLIC HEALTH FOR BALTIMORE AND BEYOND: 2013-2023

Change will not come if we wait for some other person or some other time. We are the ones we've been waiting for. We are the change that we seek. – Barack Obama

To borrow from another famous quote about change, it may have been one of the only constants in the last ten years. The Department of Epidemiology and Public Health has grown, evolved, and adapted through shifting social tides, trends in medicine, new leadership at several levels, and the uncertainty of a global pandemic. The department is now home to seven divisions that reflect the fluid nature of what the world requires of public health researchers and epidemiologists. Our work has expanded to make room for the roles of artificial intelligence, machine learning, and big data. And during this period of growth and change, we've found ways to hold space for the community in our endeavors. Community-based and community-engaged research is a steadfast pillar of the department, and our work continues to be rooted in values that seek to eliminate health disparities and improve health conditions for the people of Baltimore and beyond.

Shaping the Future of Public Health by Rebuilding the Foundation



CHANGEMAKER:

Diane-Marie St. George, PhD

When Master's in Public Health (MPH) Program Director, Dr. René Royak-Schaler, suddenly passed away in 2011, the Capstone Director at the time, Dr. Diane-Marie St. George wanted to know what she could do to help steady the ship. Department Chair, Dr. Magaziner, asked her to take on interim directorship of the MPH Program, and Dr. St. George, who soon became director, has been in the role ever since. The program was first accredited in 2009 for 5 years and, under Dr. St. George's leadership,

received a full reaccreditation for 7 years in 2014. Since that time the program has consistently met its enrollment target of 20-25 students per year. The program has seen increased diversity in the student body and faculty complement in the past 10 years. The inclusion of Preventive Medicine Residents and other dual-degree students from across the professional school campus not only enhances the diversity of the program, but also the interprofessional learning environment for students, and has always served as a focal point for the program.

Historically, the program was founded as a Masters' program exclusively for students who were already on campus to earn a fellowship or some other advanced degree. However, it quickly became evident that there was an unmet need for a single degree program, and so the MPH program expanded, and now has more single-degree students than students of any other kind.

Broad and diverse prospects and potential are the hallmarks of the MPH

program at the University of Maryland School of Medicine. Freestanding programs exist all over the country to train public health professionals to enter the workforce in a targeted geographical area. Due to the nature of the location of this program in downtown Baltimore City, students are exposed to local and state level agencies that span the state, as well as industry careers such as health consulting, health insurance, research institutions, and federal health agencies. This MPH program exists to prepare students for a vast array of public health settings, in addition to embedding public health practice and policy in other health professions through its dual degree programs.

In 2016, the MPH program embarked on a transformative journey of its own. To come into compliance with new Council for Education in Public Health (CEPH) criteria, Dr. St. George led the program through a complete overhaul, scrapping all aspects of the pre-existing program and rebuilding

WE BENEFIT GREATLY FROM BEING IN A RESEARCH-INTENSIVE MEDICAL SCHOOL, AND WE LEAD WITH THE MOST IMPORTANT THING FOR STUDENTS: WHICH IS TO BE PREPARED FOR THE PUBLIC HEALTH WORKFORCE AND THE EXPERIENCES THEY WILL HAVE THERE.

■ 2 0 1 3

Gifts from generous donors led to the establishment of four new funds, including the Dorothy and Morris Magaziner Aging Research Scholarship Fund, which continues to benefit graduate students pursuing aging research careers today.

from the ground up, starting from a blank slate. Using the guidance from the CEPH), the national accrediting body for public health programs, and stakeholders including alumni, students, and faculty, the program was reworked and reimaged resulting in a more integrated program. This process included keeping some pieces from the original program and developing new courses and curriculum. The process was guided by asking what the MPH program needed to do to position itself to deliver the best training possible in curating an impeccably and objectively great student experience. To do so, the MPH program brought in new faculty, like Director of Health and Human Services, and Baltimore County Health Officer, Dr. Gregory Branch, among others, to teach and prepare students to enter the public health workforce. The new curriculum, and all the courses included, are scaffolded in a way to best meet the needs of the student. This is accomplished by leading with

health equity. Health equity forms the foundation of the MPH program, and everything else the students are taught fits into the intentional health equity framework.



THE CENTER FOR INNOVATION IN DIAGNOSIS transforms medical diagnosis to become more evidence-based, precise and meaningful in order to assure that patients get the right test for the right patient, leading to the right action and preventing Diagnostic Error. The Center creates educational medical diagnosis tools to make probability more intuitive for clinicians and the general public, changing the paradigm for medical testing to a pragmatic, probability-based approach.

Preparing the Next Generation of Epidemiologists



CHANGEMAKER:

Joanne Dorgan, PhD, MPH

Dr. Dorgan joined the Department of Epidemiology and Public Health in 2013, as a tenured professor; her research focuses primarily on identifying hormonal determinants of cancer, particularly breast cancer, and hormonal mechanisms by which environmental and behavioral exposures, as well as genetics, affect cancer risk. In the ten years since her arrival, Dr. Dorgan has worked closely with her counterpart at the University of Maryland College Park (UMCP), Dr. Cheryl Holt, Associate

Professor of Epidemiology and Public Health and Associate Director for Community Outreach and Engagement. Together they were instrumental in obtaining comprehensive status for the University of Maryland Greenebaum Comprehensive Cancer Center (UMGCC), of which Dr. Dorgan is the Co-Leader for the Population Science Program. The Population Science Program draws on scientists and researchers from the University of Maryland Baltimore (UMB) and UMCP Campuses, as well as people from the University of Maryland Baltimore County (UMBC) and Morgan State University (MSU). The group is comprised of a diverse array of epidemiologists, behavioral scientists, psychologists, nutritionists, exercise physiologists, and health and environmental researchers. Dr. Dorgan and her team have found a way to incentivize the coming together of numerous disciplines under the umbrella of the UMGCC.

There have been many successes and accomplishments in the last ten years; earning comprehensive status was a major one which required group effort and has also resulted in a lot of individual success in getting awarded grants – the major activity of the center. Faculty in the division collaborate heavily with their colleagues in biostatistics and widely across the cancer center. Dr. Dorgan projects that these collaborations will continue to grow in importance in the ten years to come as cancer epidemiologists begin to focus more on larger, more complex data sets, especially from new “big data” sources. Currently the Division of Cancer Epidemiology, which Dr. Dorgan leads, is developing a shared service center focused on big data in the UMGCC and working with people in the University of Maryland Medical System (UMMS) on big data issues and how to bring together a cancer focus in big data. The Division was awarded funding from

NOBODY IS IMMUNE TO CANCER, SO IT'S OF GLOBAL IMPORTANCE ACROSS THE LIFESPAN.



■ 2014

The MPH program earned a 7-year reaccreditation, a major national accomplishment.

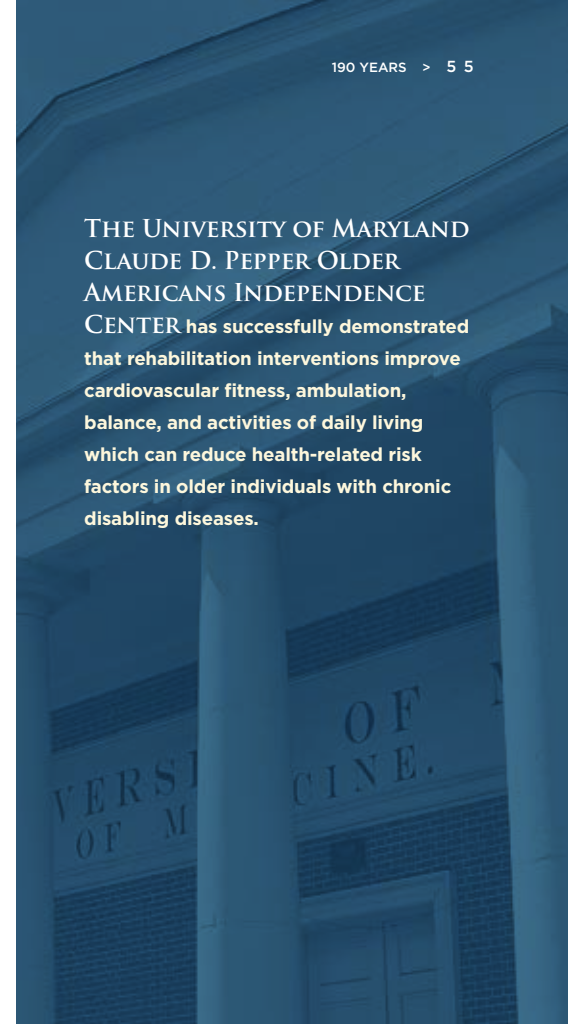
the US Food and Drug Administration (FDA) to develop a UMGCC Medicare database which will provide the infrastructure to support a wide variety of research. This initiative includes efforts to better integrate the data collected by electronic health records regarding social determinants of health.

Dr. Dorgan explains that epidemiologists conduct research to identify causes of diseases in populations, as well as determinants of outcomes among people who have cancer thereby helping the research mission of UMB in identifying the determinants of cancer risk and outcomes. “The importance of our work has an impact for everyone, we are identifying risk factors as well determinants of cancer risk and outcomes and we conduct research across the lifespan, as well as nationally and globally.” The Division of Cancer Epidemiology works on a variety of different cancers in Baltimore, across the US, in collaboration with other groups,

and over a large footprint in Africa particularly in Nigeria. Not only is the division a dedicated group of researchers and teachers who work hard on their own research, but they represent a committed group of educators fostering the development of their students and training the next generation of cancer epidemiologists.



THE UNIVERSITY OF MARYLAND
CLAUDE D. PEPPER OLDER
AMERICANS INDEPENDENCE
CENTER has successfully demonstrated
that rehabilitation interventions improve
cardiovascular fitness, ambulation,
balance, and activities of daily living
which can reduce health-related risk
factors in older individuals with chronic
disabling diseases.



Helping to Change Our Understanding of Public Health



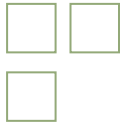
CHANGEMAKER:

Sania Amr, MD, MS

Public health physicians focus on preventing health problems from occurring or recurring in the community and its population, while other medical discipline physicians focus on treating sick or injured individuals. Dr. Sania Amr, Professor Emerita, wants people to understand what public health is. “People do not understand what public health is,” she explained, “most focus on individual medicine.” The Department of Epidemiology and Public Health is

a basic science department in a medical school, and Dr. Amr sees this as the place from which to educate physicians in medical academia about Public Health. “Public Health is the basis for a lot of policy, and it leads to prevention, which is the most important thing,” she explains “One of the main reasons for improving the understanding of medical professionals and the general public about Public Health and its objectives, is to promote understand and acceptance of the types of diseases and problems that public health professionals attempt to cure and solve.” This understanding can lead to increased funding for the profession. Dr. Amr points out that public health is not a lucrative branch of medicine like some others; grateful individual patients are rare, as the impact is larger and measured on the scale of neighborhoods and communities, not by the individual who is grateful for the care received from a single or small team of providers. Philanthropy that is driven by

the gratitude of wealthy patients and their families for the care they receive, has been a major source of income for advances in healthcare research, and education, but it rarely contributed to the public health field despite the need for a trained workforce. Throughout her career, and before her retirement, Dr. Amr made it her mission to demonstrate the mission of the Department of Epidemiology and Public Health to raise awareness of the intention of public health professionals.



TO EDUCATE AND PREPARE PHYSICIANS TO ADDRESS THE POPULATION HEALTH PROBLEMS, WHETHER ACUTE (PANDEMIC, EPIDEMIC) OR CHRONIC (PREVENTING DISEASES AND THEIR COMPLICATIONS), FINANCIAL SUPPORT IS ESSENTIAL; PHILANTHROPY SHOULD BE ONE OF THE CONDUITS TO ACHIEVE IT.

■ 2014

Inaugural Renee Royal-Schaler Memorial
Lecture was hosted by the Department.

Driving Policy and Practice in Infection Prevention and Control

**CHANGEMAKER:**

Anthony Harris, MD, MPH

Dr. Anthony Harris has been a member of the department for more than 20 years and serves as director of one of its largest divisions, The Division of Genomic Epidemiology and Clinical Outcomes. As indicated by its name, the division is home to faculty with roles in infectious diseases, infection control and policy, and genome sciences. When the COVID 19 Pandemic eclipsed the US Healthcare System in 2020, the experienced, licensed infectious disease physi-

cians and infection preventionists that make up the Maryland Infection Control Group worked tirelessly to provide front-line infection control consulting services to acute care hospitals, ambulatory surgical centers, long term care facilities and ambulatory settings across the country and worldwide. Results of their research during this time have informed CDC guidelines, nation-wide healthcare policies, and barrier precaution best practices around the world.



IT HAS BEEN A PLEASURE TO WORK IN THE DEPARTMENT FOR OVER 20 YEARS. GREAT LEADERSHIP HAS BEEN SHOWN BY DRS. JAY MAGAZINER AND GLENN MORRIS. THE DIVISION UNDER MY LEADERSHIP AND THE LEADERSHIP OF DR. MARY CLAIRE ROGHMANN HAS GROWN AND BEEN A PRODUCTIVE ENVIRONMENT FOR RESEARCH, TEACHING, AND PATIENT CARE.

From the Very Youngest to the Very Oldest: Heart, Lungs, and Blood

**CHANGEMAKER:**

Michael Terrin, MDCM, MPH

The department has continued its long history of preventive and translational research in cardiovascular and pulmonary diseases as evidenced by the valuable interdisciplinary research carried out by Dr. Michael Terrin. Dr. Terrin joined the Department of Epidemiology and Public Health in 1982. As one of the historians of the department, Dr. Terrin weaves a detailed tale of the evolution of the department from more than 40 years ago,

“THE INVESTMENT IN PREVENTIVE MEASURES IS WORTH EVERY NICKEL. CHANGING THE WORLD SO THAT PEOPLE NEVER BECOME DESPERATELY ILL IS AT LEAST AS VALUABLE AS CHANGING THE WORLD SO THAT A FRACTION OF THE PEOPLE WHO DO BECOME DESPERATELY ILL HAVE A BETTER SHOT AT RECOVERY.”

when Dr. Irving Kessler was chair of the department, to present day where Dr. Terrin still works side by side with current chair, Dr. Jay Magaziner, who joined the department around the same time four decades ago.

Over the course of his storied career, Dr. Terrin’s research has led to discoveries that alter the course of disease in people, from the very youngest patients to the very oldest patients. Abdominal aortic aneurysms affect 5-10% of older Americans and, if left untreated, can be fatal. This is a fairly large public health concern that inspired Dr. Terrin and his research team to translate tremendous amounts of bench data in animal models while designing their current clinical trial examining the effects of doxycycline on abdominal aortic aneurysms. What they have found is that doxycycline, while it does not make a difference in the growth of abdominal aortic aneurysms, reduces levels of aging related markers of chronic

inflammation – another concern for individuals and healthy aging. This clinical trial has consumed much of Dr. Terrin’s attention over the past ten years and yielded many beneficial findings for the noninvasive treatment of abdominal aortic aneurysms.

With regards to patients at the opposite end of the spectrum, the very start of a person’s life, Dr. Terrin has collaborated with the Department of Pediatrics to help with a study which started from scratch with pharmacokinetics and pharmacodynamics to determine whether there is any preliminary evidence and proper regime for treating very premature neonates with azithromycin to help them to grow up and live healthy lives without severe bronchopulmonary dysplasia.

Dr. Terrin has also been very involved in the application of stem cell research, which has utility across the life span. Interstitial fibrosis is the second most common serious disease in older



■ 2016

The Gerontology
Ph.D. Program
turns 15 years old.

populations, which affects the lungs after COPD. Through his work on this disease, he came to learn that one type of lung disease occurs as a result of inborn errors of the lung cells; pulmonary fibrosis is a consequence of genetic mutation in the lung cells and is the most common cause of interstitial fibrosis and lung transplant in pediatric populations. “There is so much basic knowledge to be gained about the cells in the lungs and what they do. It’s really quite far from well-established, and just coming into focus now.” Dr. Terrin’s work in stem-cell application promises to have impact for generations to come.

Dr. Terrin hopes that, because of the work of he and his colleagues in the Department of Epidemiology and Public Health, we will all have a better understanding of the disease processes that afflict the public at large and that this understanding produces sound preventive measures for safe and

efficacious treatments that can relieve the misery of these conditions. “The investment in preventive measures is worth every nickel. Changing the world so that people never become desperately ill is at least as valuable as changing the world so that a fraction of the people who do become desperately ill have a better shot at recovery.”



THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE CENTER FOR RESEARCH ON AGING

coordinates and facilitates research and research training in those areas of gerontology that transcend traditional disciplinary lines and are amenable to an interdisciplinary approach to critical issues in aging research.

■ 2016

The Program in Health Disparities and Population Health was formally announced by the department.

Changing the Way We Understand our Patients: The PROMIS of Patient-Reported Outcomes



CHANGEMAKER:

Ann Gruber-Baldini, PhD

Dr. Ann Gruber-Baldini has been in the Department of Epidemiology and Public Health for over 20 years. She has witnessed the expansion of the department and its growth beyond its roots in traditional epidemiology. She, and others, have played a large role in the areas of teaching related to public health, epidemiology, and human genetics, and credits the inclusion of the MS in Clinical Research and the MPH programs with contributing to the weave of the fabric of the department. Notably, Dr. Gruber-Bal-

dini points to the research interests and activities of the department as they've grown into areas of aging and infectious disease, along with the movement toward molecular epidemiology techniques.

Ten years ago, if you had asked Dr. Gruber-Baldini whether she'd be able to collect cognitive measures on an older person, remotely and virtually, she would have told you, "No way." As with so many things, the COVID-19 pandemic forced a paradigm shift, and Dr. Gruber-Baldini adapted. She was able to recruit human subjects, collect measurements of cognition with people over age 65, and continue successfully running her studies without disruption. It's a testament to the adaptability of the research, and the ability of the researchers to elicit new and imaginative ways forward in the face of disruption.

Dr. Gruber-Baldini is currently working on a large project that could alter the landscape of public health in the ten years to come. A project called

WE KNOW SO MUCH MORE ABOUT THE GENETIC MAKEUP OF HUMANS THAN WE DID TEN YEARS AGO, AND IT'S AN ENORMOUS THING TO INTERACT WITH.

PROMIS looks at Patient Reported Outcomes Measurement Information Systems, which was developed by National Institutes of Health (NIH) as part of a toolbox for researchers and scientists, and has seen significant uptake in the clinical world. This prompted Dr. Gruber-Baldini to ask how patient self-reports are impacted by a person's cognitive function. With specific concern for aging adults, Dr. Gruber-Baldini's research is investigating the cognitive threshold at which there is a shift in how people are able to understand and answer questions requiring self-report. This can include questions about physical function,

THESE ARE MAJOR MILESTONES IN MOVING FORWARD ISSUES RELATED TO PERSONAL HEALTH AND UNDERSTANDING THE ENTIRE ENVIRONMENT, AND THE SOCIAL AND PERSONAL INTERACTIONS GOING ON WITH PEOPLE.



Blue Ridge Institute
for Medical Research

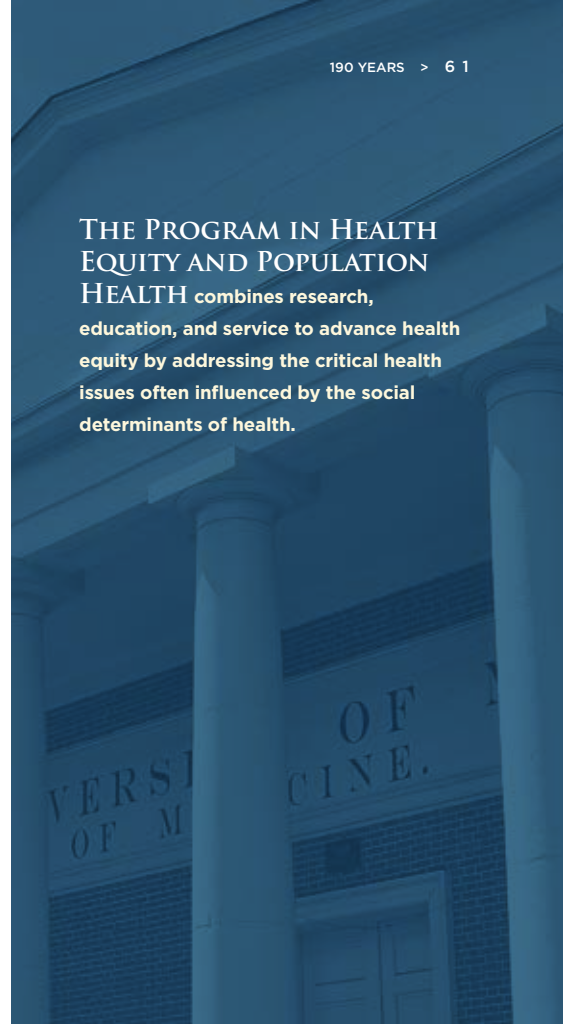
■ 2018

The 2018 Blue Ridge Report on NIH funding ranked EPH #4 among like departments in schools of medicine nationwide and ranked EPH #1 among public institutions.

anxiety, and depression. The project has significant relevance for neurologists, gerontologists, psychologists, and physicians, among others, in how they take care of their aging patients. “We are learning so much more about how people report on their own functioning and quality of life, and at what point we should rely on other sources for people who can no longer answer reliably for themselves.”



THE PROGRAM IN HEALTH EQUITY AND POPULATION HEALTH combines research, education, and service to advance health equity by addressing the critical health issues often influenced by the social determinants of health.



Building Bridges to the Future by Building Bridges to the Community



CHANGEMAKER:

Wendy Lane, MD, MPH

Dr. Lane first came to the department as a PGY 3 Preventive Medicine Resident after completing a Pediatrics and Preventive Medicine Residency at UNC Chapel Hill. Wanting to get more research experience, Dr. Lane took a position where she worked from a desk at the end of the hall in suite 100. Eventually, Dr. Lane moved into that office and throughout her time in the department most of her research was focused on epidemiology, risk factors,

screening, and prevention of child abuse. Her interest in prevention was what led to Dr. Lane’s enrollment in the department’s MPH program and her ongoing work in maternal and child health, pregnancy, post-partum, and early years of life, and trying to discover what could be done to improve the well-being of young children. Borne of this passion for maternal and child health was her role in B’More for Healthy Babies.

With assistance from the Patient-centered Involvement in Evaluating effectiveness of Treatment (PATIENTS) program in the School of Pharmacy, the B’More for Healthy Babies team obtained funding from the American Association of Medical Colleges and began to work as a direct partner with community members, which includes individual community members who join meetings and provide feedback on how to work best with and engage the community, professionals, religious leaders, healthcare agency leaders, the Director of the Special Sup-

plemental Nutrition Program for Women, Infants, and Children WIC, and local school leaders. B’More for Healthy Babies is also advised by a group of local mothers who have gone through the B’more for Healthy Babies program. This group of moms came up with the idea of setting aside funds for community projects like planting flowers outside a local community center and working to clean up and make the area more welcoming and feel safer. This effort, in turn, helped engage more individuals in participating in the program.

It was, in part, due to this type of work that Dr. Magaziner invited Dr. Lane to be one of the initial directors of the Program in Health Equity and Population Health when it came under the umbrella of the Department of Epidemiology and Public Health. The program continues to operate today and is a thriving hub for research on health disparities.

THE OUTREACH ASPECT OF B'MORE FOR HEALTHY BABIES TRULY TAKES PLACE IN THE COMMUNITY. DURING PERIODS OF SOCIAL DISTANCING AND RESTRICTIONS RELATED TO COVID-19, THE TEAM PIVOTED TO DO A LOT OF ONLINE WORK SO THAT THEY COULD STILL REACH PEOPLE AND PROVIDE INFORMATION TO THEM.



■ 2019

2019 MPH Graduates.

ANNUAL DR. EDSON X. ALBUQUERQUE ENDOWED LECTURE IN TRANSLATIONAL TOXICOLOGY



World-renowned for his groundbreaking findings in the field of cholinergic transmission in the central and peripheral nervous systems, Dr. Edson X. Albuquerque was a long-standing leader at the University of Maryland School of Medicine. He served as Chair of Pharmacology from 1974 to 2010 and as Director of the Division of Translational Toxicology that he found in the Department of Epidemiology and Public Health from 2010 until his sudden death in 2018. This annual lecture series is supported by generous gifts from Dr. Albuquerque's family and friends and was created specifically to bring outstanding leaders in the various fields of translational health sciences to the University of Maryland Baltimore community to foster the exchange of new ideas, and, thereby, give continuity to Dr. Albuquerque's legacy, which lives in the many lives he touched and discoveries he made

ANNUAL RENÉE ROYAK-SCHALER LECTURE IN HEALTH EQUITY



This annual lecture is supported by a generous gift from the family of the late Renée Royak-Schaler, PhD, MEd. Devoted to cancer prevention among African Americans and to the elimination of disparities across the continuum of cancer care, Dr. Royak-Schaler also directed the University of Maryland School of Medicine Master of Public Health (MPH) Program until her sudden death in 2011. The aim of her family's gift is to bring the best scholars and policy makers in the country to the university to present their work on pressing issues in health disparities and health equity, and to bring much-needed visibility to this important topic.

■ 2020

Average extramural funding reaches \$1m per faculty member mark and has remained at this level.

Epidemiology of Infectious Disease: “We had the skills to stop the spread of COVID”

**CHANGEMAKER:**

Mary-Claire Roghmann, MD, MS

Mary-Claire Roghmann came to the University of Maryland School of Medicine when she chose a residency in Internal Medicine at the University of Maryland Medical Center in 1990, and she has been steadfast at the University of Maryland since that time. After an infectious diseases fellowship in the division of Infectious Disease in the Department of Medicine, she got to know the Department of Epidemiology

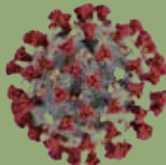
and Public Health while completing her Masters in Epidemiology and Preventive Medicine and serving as the Chief Resident in the Department of Medicine. Eventually joining the department and taking over the MPH Research Practicum from Dr. Pat Langenberg, she says, “many of the people that I met as a part of my MPH courses became faculty, colleagues, and mentors, and still are to this day.”

As an infectious disease physician, according to Dr. Roghman, there is no question that COVID19 obliterated a lot of the research plans of the Division of Genomic Epidemiology and Clinical Outcomes that she led at its inception, but because of their unique combination of clinical and research interest in infectious diseases, the group was able to play a large role in COVID19 recovery. Dr. Roghman’s role has been mainly in nursing homes. The work in nursing homes was very hands-on: enrolling patient, sampling, assessing epidemiology at the unit and

sample levels. From Dr. Roghman’s early research in preventing the spread of antibiotic resistant bacteria, much of the work over the years came to fruition during the pandemic. The work of the division led to a new form of infection control precautions called barrier precautions which, as of July 2022, is now standard of care in all nursing homes – an enormous endeavor and tremendous accomplishment. The division continues to work diligently to help people implement the standards they have developed.

As they learned with COVID19, it can be nearly impossible to predict the future of the work in this division. Dr. Roghman pointed out that scientists in her division currently have K awards to work on projects using secondary data that will likely be a predominant theme when it’s time to reflect on the 200th anniversary of the department. The division will continue to focus on infectious disease epidemiology and make

THE WORK OF THE DIVISION LED TO A NEW FORM OF INFECTION CONTROL PRECAUTIONS CALLED BARRIER PRECAUTIONS WHICH, AS OF JULY 2022, IS NOW STANDARD OF CARE IN ALL NURSING HOMES - AN ENORMOUS ENDEAVOR AND TREMENDOUS ACCOMPLISHMENT.



■ 2020

EPH faculty and the Maryland Infection Control Group collaborate at UMB, across the US, and around the world to address the Covid-19 pandemic.

its mark in research using diverse data sources. However, their true strength will always lie in the sheer range of studies they are able to do using qualitative and quantitative approaches, and in both observational and intervention studies. The work of this division is special because they answer questions that are clinically relevant to the populations they work with. “It’s why,” Dr. Roghman explained, “when COVID19 hit, I have never felt so useful. I had the skills that were needed to develop ways to prevent the spread in nursing homes, and for that I am grateful.”



THE CLINICAL AND TRANSLATIONAL RESEARCH INFORMATICS CENTER is a service center within the department whose purpose is to accelerate the translation of scientific discoveries from the basic science bench to clinical studies, bedside practice, and community intervention, through use of information technologies and informatics. The highly qualified team and informatics tools and resources provide a strong centralized body that can cater to the needs of studies of all sizes within the University of Maryland community and elsewhere.

Translating the Future: From the Lab to Real Life

**CHANGEMAKER:**

Istvan Merchenthaler, MD, PhD, DSc

Dr. Istvan Merchenthaler is a neuroscientist and neuroendocrinologist who joined the Department of Epidemiology and Public Health in 2004. Dr. Merchenthaler found himself with a fantastic laboratory and so he recruited others to join him and to conduct basic science research related to menopause. With an interest in Women's Health, Dr. Merchenthaler does research in developing estrogen treatment and therapy for hot flashes, which affect 40-50 million women at any given time in the US. He also investigates other menopause-related symptoms like depression, anxiety, sleeplessness, and cognitive decline, all of

which are brain specific-symptoms. Dr. Merchenthaler found that hot flashes can be treated with estrogen very efficiently but there can be a lot of side effects, so he is searching for an alternative.

Dr. Merchenthaler's group identified that the surface area of the body with elevated temperature during a flush is the nose area on the face of the monkey. As a result, they were successful in getting funded and continuing their research using several rhesus macaques to monitor their nose temperatures with an infrared approach that is totally non-invasive, and they will continue to investigate whether the new compound they developed will eliminate hot flashes. A huge contribution to science and women's health, the study has been going on almost 16 years, with large grants from the National Institutes of Health supporting the preclinical studies in rats before moving on to monkeys.

Four more monkeys will begin trials this year, and each year 4 more monkeys will be added to the study for a total of

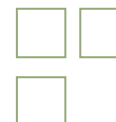
16 monkeys by the end of the grant in 2025. Dr. Merchenthaler has discovered over the years that there is a natural connection between his research and the Center for Research on Aging, and he was recently funded by the Claude D. Pepper Older Americans Independence Center to study the effect of brain selective estrogen in combination with physical exercise.

Dr. Merchenthaler is currently looking for a synergistic effect of brain selective estrogen and physical exercise in old mice. Being in the Department of Epidemiology and Public Health has benefited the Division of Translational Toxicology, and likewise the faculty doing research on aging. If successful, these experiments will add a wealth of information to epidemiological studies on aging. Through collaboration, finds from these studies can have real world impact on women's health and older Americans. Improvements in the treatment of menopause can reduce the negative impact that aging can

IF YOU WANT TO DEVELOP A DRUG, YOU NEED THE PERFECT ANIMAL MODEL WHICH, IN THIS CASE, IS THE PRIMATE MODEL. WE STARTED WITH ONE MONKEY.

have on health outcomes, depression, and social isolation. Additionally, for women being treated for breast cancer, an effective brain-selective estrogen therapy could reduce or eliminate some of the negative side effects related to chemotherapy, without the risky side effects for the cancer itself. Dr. Merckenthaler acknowledges that a portion of the journey was the exercise in learning a common language, but now working in tandem, the experts across the divisions in the department are translating their language into real world impact and improvements in health for Americans.

ONE COMMON UNDERSTANDING BETWEEN NEUROSCIENTISTS AND GERONTOLOGISTS IS THAT THE MOST EFFECTIVE TREATMENT FOR DELAYING ALZHEIMER'S AND COGNITIVE DECLINE IS PHYSICAL EXERCISE.



■ 2021

Jay Magaziner, Ph.D., MS Hyg, Professor and Chair, Department of Epidemiology and Public Health, was named the University's Researcher of the Year for Founder's Week 2020.



Leaving a Statistically Significant Legacy

CHANGEMAKER:

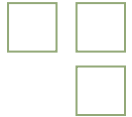
Larry Magder, PhD

Biostatistician and professor, Larry Magder, joined the Department of Epidemiology and Public Health in 1994, making him one of the longest-term standing faculty members in the department. Dr. Magder is a historian for the department, recalling and reminiscing about his many colleagues and mentors over the year, including former Chairman, Paul Stolley, who Dr. Magder remembers as an idealistic epidemiologist and great mentor. Dr. Magder recalls a number of colleagues who helped shepherd his career, including Dr. Pat Langenberg, among numerous others. A favorite memory of the cozier

days of the 90s when the department was much smaller, and in fact his Division of Biostatistics and Bioinformatics was home to just 4 faculty members, is the Lunch Club. Dr. Magder, who led the division for several years previously, recalled that people would bring in dishes to share with each other following seminars, and the close-knit nature of the department that made it such a nice place to work.

Dr. Magder has been a part of a lot of research projects during his time in the department, but perhaps his biggest contribution has been teaching. Dr. Magder has taught at every level, and many students have heard his philosophy on the role of statistics in science. Dr. Magder would like to leave a legacy of how people use statistics in science and helping people to avoid how he thinks it is often misused. Through teaching career development classes for faculty, classes in the PhD program, most biostatistics class in the department's graduate program, including

teaching basic scientists now, and having designed the first biostatistics class in the MPH program, Dr. Magder has had a lot of opportunity to impact people's understanding of statistics and leave a legacy for the future of statistics in science.



DR. MAGDER WOULD LIKE TO LEAVE A LEGACY OF HOW PEOPLE USE STATISTICS IN SCIENCE AND HELPING PEOPLE TO AVOID HOW HE THINKS IT IS OFTEN MISUSED.

Cultivating the Future for Children Around the World

**CHANGEMAKER:**

O. Colin Stine, PhD

Colin was an excellent teacher and basic science leader in the department. He has retired from his official duties, but his work continues to have important implications for the future. In emerging countries, 5-10% of children experience poor growth, which can lead to illness, poor health, cognitive impairment, and generally less than optimal outcomes. Dr. Stine, through his work in the Division of Genomic Epidemiology and Clinical Outcomes, has identified different types of bacteria that impact the way children grow and mature. This has led to advancements

in how bacteria can be used to culture excess milk in small farming communities into yogurt that can promote the healthy growth of children from under-resourced communities. Excess milk is in danger of becoming a waste product for small dairy farmers, and introducing bacteria to produce yogurt helps eliminate this waste by turning it into something nutritious for children who may be at risk of low growth, helping to address a major health disparity for a major proportion of the world's children.



DR. STINE, THROUGH HIS WORK IN THE DIVISION OF GENOMIC EPIDEMIOLOGY AND CLINICAL OUTCOMES, HAS IDENTIFIED DIFFERENT TYPES OF BACTERIA THAT IMPACT THE WAY CHILDREN GROW AND MATURE.

■ 2022

The Department of Epidemiology and Public Health hosted the Inaugural Edson Albuquerque Endowed Lecture in Translational Health Sciences.

THE VIEW AHEAD...

The historical and contemporary information about the department included in this publication point to a longstanding tradition of success, innovation, and collaboration. Our platform for transdisciplinary collaborations is a cornerstone of the work we do and forms an integral part of the foundation from which we imagine a bright future. In 190 years, our valuable partnerships with other disciplines, departments, schools, and campuses have only expanded and strengthened. We are on the Road to 200 Years as a department, and I'm proud of the road we've traveled to arrive here. The Department of Epidemiology and Public Health is an integral part of the fabric of the School of Medicine. We are pivotal in harnessing the strengths of other programs and resources on campus. The faculty of this department model the hard work it takes to deepen collaborations for meaningful impact, and the passion and commitment required for the type of work that improves the health and well-being of the public. Throughout history, the researchers and academic clinicians that make up this department have been agents of change, and their contributions will continue to grow and make a difference in our changing world. — Jay Magaziner, PhD, MSHyg

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"Witness to History" first-person accounts were taken from telephone interviews (and one in-person interview) with individuals named on dates noted.

"Witness to History first person- accounts.... "Changemaker" stories were adapted from virtual interviews conducted from December 2022 - March 2023.

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