



## The Power of Mentoring

### Neuro-Psychiatric Epidemiology

It's one thing to be renowned in a specific scientific field. It's another when a cornucopia of kudos—in this case for teaching and mentoring—is layered into the mix.

A gamut of neuro-psychiatric epidemiologists at Harvard School of Public Health are standouts in both arenas. Among them is Deborah Blacker, MD, ScD, a geriatric psychiatrist skilled in epidemiological research, a rare breed in itself. A clinician, researcher and teacher specializing in the early recognition and genetics of Alzheimer's disease, Blacker holds joint appointments at Harvard School of Public Health (HSPH) and Massachusetts General Hospital (MGH), where she directs the Gerontology Research Unit and is an investigator at the Massachusetts Alzheimer's Disease Research Center. Her HSPH colleague, neuro-psychiatric epidemiologist Sebastian Schneeweiss, MD, ScD—one of the world's leading experts on pharmacoepidemiology—is also acclaimed for mentoring. With a research focus on drug safety, effectiveness and policy, Schneeweiss holds joint appointments at HSPH and Brigham & Women's Hospital (BWH).

As Blacker and Schneeweiss both reflect, mentoring comes in a variety of forms. Waxing effusive about Blacker's mentoring talents is HSPH's Olivia Okereke, MD, MS, who originally met Blacker as a resident in the MGH-McLean Hospital Psychiatry Residency Program, and later was advised by her in HSPH's psychiatric-epidemiology training program. "Deborah has been pivotal for me. Her training was critical to my understanding measurement methods, knowing how to select survey questions, designing studies, statistical programming and research ethics," says Okereke, now an eminent geriatric epidemiologist and psychiatrist in her own right.

Based at HSPH and BWH, Okereke focuses on health and lifestyle factors—and related biomarkers—associated with late-life depression and cognitive decline. Blacker's mentorship has involved shaping her career trajectory, says Okereke. "I always knew I wanted to be a geriatric psychiatrist, but seeing her, with her epidemiological hat, opened my eyes. There are so few people in my field; it's hard to know how to chart the course. She was the go-to person on every kind of question. She's had an enormous impact."



Professor Deborah Blacker with  
Professor Alberto Ascherio

## World Beyond Books

One indispensable component of mentoring is professional connections. For Okereke, Blacker facilitated a pivotal link to HSPH faculty Francine Grodstein, ScD, who has been a primary mentor to Okereke in neuropsychiatric epidemiology since Okereke's training days. Grodstein is director of The Nurses' Health Study, the largest and longest-running exploration of factors influencing women's health, and has been instrumental in involving Okereke, the study's first psychiatrist. "Olivia has given the study a pioneering focus on mental health in older persons," says Grodstein. "She has expanded the study's reach in mental health beyond documenting treatment to prevention—something the field had not addressed before—and helped guide prevention strategies for millions of elderly."



Professors Deborah Blacker and  
Olivia Okereke

### Mentoring vs Teaching

The difference between mentoring and teaching is subtle but important. Teachers offer information directly. Mentors go above and beyond, guiding as well as sharing information; they offer clarity that helps bring out an individual's talents and abilities. Blacker and Okereke agree that mentoring is broader and more holistic than teaching. "It's about career development, which takes place in the context of life development," says Blacker. Okereke echoes the assessment, relaying that Blacker gave her house-buying tips: "Deborah understands you can't mentor someone in their career if you don't understand their life."

### Mentoring's Wide Span

At the more junior end of the mentoring spectrum is John Jackson, ScD, who earned his doctoral credential in 2013 and is continuing in a post-doctoral position at HSPH. As part of his doctoral thesis, Jackson utilized a novel methodology developed by HSPH biostatistician Tyler VanderWeele, PhD, a member of HSPH's Causal Inference group, to explore why some antipsychotics result in higher mortality than others in dementia patients. "The methodological tools represent a different perspective in epidemiology," says Jackson of the first-ever pharmaco-epidemiological study using these novel methods; the study's goal was to understand how different antipsychotics lead to mortality differences among patients who suffer strokes, hip fractures and other adverse, possibly drug-related events. "Researchers often look at the relationship between drug use and an adverse event separately from drug use and mortality. They don't examine the entire pathway from drug use to adverse event to mortality. The mediation analysis tools developed by Dr. VanderWeele may help us identify which adverse events are responsible for the increase in mortality."



John Jackson

In addition to crediting VanderWeele with providing a cutting-edge tool, Jackson points to a long lineup of other HSPH mentors, in various areas of concentration, pivotal to his professional development. Key among them is pharmaco epidemiologist Schneeweiss, Jackson's thesis advisor: "He was invaluable for his vast knowledge of drug safety, for providing access to large databases of patient health insurance claims, and for helping me think through many complex issues in the data," Jackson says. "He also taught me to embrace chaos and be brave in exploring new data sources." Jackson offers kudos to Blacker, as well, for her astute feedback that "forced me to be crystal clear in my understanding of the clinical picture."

From Schneeweiss' perspective, "being embedded in a close-knit, interdisciplinary research group was critical for John's—and all doctoral students'—development. Mentoring is about learning by observing and being surrounded by faculty, of various specialties, in a highly successful operation."



Professor Tyler  
VanderWeele

As Schneeweiss implies, facilitating introductions to important investigators is a key component of mentoring. Calling it matchmaking, Blacker connected Jackson to Okereke to gain more detailed input on uses of medications in the elderly, and to Anand Viswanathan, MD, PhD, a stroke neurologist at MGH, for a more refined view of stroke and how it's reported in the medical claims Johnson used.

Also instrumental to Jackson was Blacker's guidance on AlzRisk, Blacker's novel MGH/HSPH collaboration to develop a website ([www.alzrisk.org](http://www.alzrisk.org)) assessing suspected non-genetic risk factors for Alzheimer's disease. Jackson's role was developing tools that facilitate comprehensive literature reviews to uncover gaps and summarize current knowledge; half a dozen other HSPH students and graduates have learned the methods, and served as data curators on the site, and some have published in peer-reviewed journals. The project is one of scores of collaborations incorporating epidemiology into research that Blacker, Schneeweiss, and many other HSPH faculty have galvanized between the School and institutions in Boston and beyond.



John Jackson with fellow  
HSPH Epi SD graduate, Shanshan Li

Taking a long view of mentoring's impact, Jackson says: "We come to Harvard with a lot of hopes and dreams, and mentoring makes sure you get the most out of the experience. Mentors give you a framework for making effective decisions on your own, which is a life-long tool, and share a perspective that only years of experience can bring."

The perspectives that mentoring nurtures, multiplied by the numerous specialists who practice the art, is a hallmark of the Epidemiology Department's educational approach. As Okereke puts it, "mentoring has implications beyond the individual. It's about investing for a long-term yield. It's hard to calculate, but the downstream benefits overwhelm any costs associated with it." Like many of her HSPH neuro-psychiatric colleagues, Okereke is a sterling case in point: She has paid it forward to scores of emerging epidemiology talents, Jackson included.