

The Future of the Northwestern Public Health Program

Discussion moderated by Osefame Ewaleifoh (OE).

Participants are Michael Fagen, PhD/MPH (MF); Laura Rasmussen-Torvik, PhD/MPH (LRT) and Darius Tandon, PhD (DT).



OE: Why is there a need for the Master of Public Health degree (MPH) in the public health field and what makes the program at Northwestern University (NU) unique?

MF: The MPH is the professional level practice degree in public health [and is a standard in the field]. This degree and the need for a professional degree in public health have been around for a long time. Tulane established the very first School of Public Health over a hundred years ago, and Harvard followed their lead about a year after.

[Why one needs a public health degree is] a great question because in public health practice, especially in governmental organizations like state and local health departments, a lot of people who do public health work do not have public health training. It's considered a huge issue in the field. Folks end up, in governmental public health in particular making crucial public health decisions without the proper [comprehensive] training in public health and its practice. There is a growing recognition that the MPH is a necessary professional-level practice degree for public health.

We at NU are unique in that we have all the resources of a large, extremely reputable research university with the benefits of the small size of a program as opposed to a School of Public Health. We have fewer than 100 students but those students have access to all the resources that Northwestern University, the Feinberg School of Medicine, and the Institute for Public Health and Medicine offer, [all located] here in Chicago. We are not the only MPH program in this area, but Chicago is a rich laboratory for public health practice and we are well-connected to very important governmental and community-based public health organizations. Our students do their field experiences (FE) and what we call the culminating experience (CE, often referred to as the capstone project) in partnership with these organizations. So NU is the unique combination of a major, well resourced, and prominent research university located in an extremely rich laboratory and city with the personal attention that only a small program can provide.

LRT: I have an MPH in epidemiology myself, and one thing that I think is great about an MPH is the strong emphasis on core courses and [core course] consistency across all MPH programs. If you run into another MPH graduate



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anywhere in the country you speak the same language, you have [shared] fundamental methodological understanding, and shared topic areas of understanding. You don't always see that with other degrees. Having an MPH degree can be helpful in government because it facilitates communication between people even if they end up focusing on different areas. One of the things that is particularly great about the Northwestern MPH is that it is really well integrated into the broader medical school community. The interplay between public health and medicine is very well represented here not only because we are housed in the medical school but also because many of the instructors are involved in both public health and medical research.

OE: What does an MPH, specifically an MPH at NU, prepare you for?

MF: This question speaks to what historically distinguishes our MPH degree and what will continue to distinguish the evolving MPH program at NU with the launch of two new areas of concentration. Up until this time our MPH degree has been what is known as a generalist degree, which means that it didn't have an area of specialization or specific focus but covers all of the core [required] content areas. Almost half of all courses were electives, which means that students mix and match courses based on their interests and course availability. This came from the roots of our program as a dual MPH/MD program and that flexibility was required to accommodate medical students. The same goes for another large portion of our students—PhD students who are in full-time programs in addition to the MPH. Our traditional students have had areas of focus and specializations based on their primary degree.

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A significant change going forward is that we are offering two new areas of specialization, called concentrations, within the evolving MPH program: Epidemiology, and Community Health Research. These two concentrations will be incredibly valuable in the public health workforce and to potential employers, since they will give our students great skills related to data and analytics. Epidemiology is considered the core science of public health. Community health is becoming increasingly prominent as the need has grown considerably for people who not only can work well with community partners in the planning, development, and execution of programming, but who can also work with data and independently conduct community engaged research. Not only will our students have their default area of specialization through medicine or their PhD program, they will also have the specialization from the concentrations in our evolving MPH program.

OE: How did you decide on the choice of concentrations recently created in the NU MPH program?

LRT: There are really two factors that drove the choice of the Epidemiology concentration. First, there is still a large workforce demand for epidemiologists at state health departments, national health organizations, and local health departments as well as in research organizations. There are lots and lots of opportunities for epidemiologists, and even though there are lots of [epidemiology-focused] MPH programs the demand for epidemiologists continues to grow. It was just a logical fit.



David Gleason

The other reason was that we have enormous strength in epidemiology at NU. The Department of Preventive Medicine is one of the most highly ranked in the country and very well known for a number of large cohort studies. Dr. Jeremiah Stamler, chair of the department for years, was one of the early founders of the field of cardiovascular epidemiology. So the growing demands in the workforce for epidemiologists and the strength of program at NU were the two big reasons for the choice to concentrate epidemiology in the new MPH curriculum.



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DT: Laura's comments on the need for epidemiology can really be also applied to the Community Health Research concentration. Number one, [this choice] is work force related. Michael alluded to the fact that there are different settings where individuals with expertise in community health research can plug in. I think that that's true—anything from a community based organization to school systems to the public health system will employ [people] with strong skills in community health research.

There's also [related] expertise here at NU. The Center for Community Health has a number of core faculty and affiliated faculty who are doing community-engaged research and are really interested. In 15 to 18 months I have seen significant growth in the number of faculty who are doing work in community health research. I think it's a really nice time to marshal our faculty resources towards something focused, and I believe the new MPH concentration in community health research is a nice way to connect these resources.

OE: How do the new MPH concentrations affect course work and practicum training experiences?

DT: I think it's both [coursework and practical training]. Right now, for community health research, we have a really strong set of core courses and we have a nice set of elective courses. I envision growing that set of elective courses over the next few years to really build on the core courses we have. For example, there is a community-engaged research course that we will be offering as a core course. I envision students really liking that but then wanting more and perhaps us developing a more advanced course that might be more case-based in application.

So, I think developing course-work is part of it but as I mentioned, we have many faculty who are doing community health research and I think that there is a nice opportunity for students to be working with faculty across disease or health areas. I do mental health research, and I have colleagues in the Center for Community Health who do HIV research, hypertension research, and diabetes research. I think there's a nice opportunity for placements with faculty working in a variety of different settings and on a variety of different health issues.

LRT: For Epidemiology, students will be taking a 3-course epidemiology sequence that was previously associated with the Master's of Science in Epidemiology and Biostatistics (MSEB) program. We'll share that course now, and students should expect to get faster paced, more intense epidemiology methodological training. The other new exciting course is a Statistical Analysis System (SAS) data analysis course [which will be a 3 hour lab class], that I think will be very important and valuable. Also, the third course in the sequence will integrate epidemiology principles and active application of SAS. This ensures that students get almost two semesters of SAS training—the first being focused on getting comfortable with the program and the second more focused on applying the program. Statistical programming in SAS or other [computer] languages is an incredibly useful and tremendously valuable skill.

Concerning non-curriculum related changes, as the concentration director I am actively out in the community finding specific epidemiology Field Experience (FE) placement opportunities. I want specific placement opportunities for students interested in Epidemiology that examine the distribution of disease and the determinants of disease using data from all sorts of sources. In addition, if students see a data set during

their field experience that they want to explore for a Culminating Experience (CE), we want to encourage them to pursue that. As the concentration director I am taking a very active role to ensure our students get strong methodological and statistical education here at NU. Some agencies out in the city have that, some lack that, some have great need for help with data analysis. We want to give our students strong analytical training and connect them to these agencies for some really interesting CE projects.

O.E: How effectively do the new MPH concentrations prepare future graduates for new workforce demands?

DT: Speaking for Community Health Research, there is clearly a trend in wanting to see the workforce understand and be able to execute community engaged research—that is, research that is done within community settings—so I don't think this is something unique to NU. Something we're beginning to see across the board from the

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Institute of Medicine report is the requirement from big funders such as the NIH, PCORI, and foundations who really [demand] community based research in their funding requirements. Individuals getting course work experience in this area will be well positioned for a variety of different roles within or outside academia. The experiences for students in the community health research concentrations are going to vary based on where students get placed and I think that that's a good thing. The NU Center for Community Health has a lot of tentacles out to the community; it has linkages with community partners as well as a variety of what I call clinical community settings, such as community health centers and pediatric primary care practices in the community, [where we have NU faculty working in some capacity]. Students interested in

community health research can easily find a health setting in an area that is of interest to them. One of the big things for the FE and CE is ideally trying to link those two together as in my experience it takes some time to really feel like you are integrated into a setting. So by doing an FE and CE in the same setting, students can have some continuity and depth of experience working in a particular context [in community health research].

LRT: I think anyone pursuing graduate education needs to take a long hard look at what the job trends are in that field and should understand what post-graduate jobs really look like in the field. Sometimes jobs resemble what you study in school and sometimes they don't—that's the case for all graduate education. For epidemiology, there's so much emphasis in the health care world right now on measurement—trying to capture how much disease we have and then trying to understand if what we're doing to prevent or treat the disease is actually [working]. Epidemiology is measuring disease and associations, so those skills are in high demand right now. I really hope that the new concentration in Epidemiology can be the bridge that connects students to the epidemiological resources in the department of preventive medicine.

MF: Both of these concentrations will train students to use data, be good with measurement, be analytically oriented, and these skill sets are so transferable and applicable over so many different domains. And clearly [it is] the direction that not just health and health care and public health are moving but that society at large is moving toward. So that is our



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emerging brand, our distinction, our identity: that we, perhaps more than any other MPH program out there, are going to be really strong at preparing our graduates in data and measurement and analytic domains. There are lots of community health concentrations across the nation—but there is no focus currently on community health *research* training. We believe this area is both unique and incredibly relevant. Here at Northwestern we have the requisite research environment to develop this strong training in community health research and make a positive impact on public health practice.

OE: Upon graduating with an MPH in Epidemiology or Community Health Research from Northwestern, what are my career options?

LRT: Epidemiology MPH graduates have tons of options. Of course, I have to mention health departments as health departments (local, county, state, and national) really want MPH students. National health agencies such as the CDC and the NIH hire epidemiology MPHs, and a lot of students go to different community organizations with epidemiology MPHs, particularly organizations that are interested in measurement questions. Some MPHs stay in academia as there are a lot of project manager roles for students with epidemiology MPHs—strong skill sets in measurement are increasingly important in the studies that are going on in academia. I [also] know people doing data analytics for health insurance companies such as Blue Cross Blue Shield, in hospital settings, or other health care companies. There are lots of interesting job options post-graduation.

DT: Someone graduating with an MPH with a concentration in community health research will have much of the same options [as someone with an epidemiology concentration]. I can see our graduates working in many types of community settings, like Chicago Public Schools or the Governor’s Office of early childhood development. They are always looking for folks who have strong community research and development skills to help design and implement evaluations, research projects, services, and interventions that they’re funding. I think the project coordinator role within academia is a place for graduates with a MPH as there is a lot more funding for projects requiring the adoption of community health research and community-engaged research. This translates to more opportunities for graduates who understand what community health research is and how to design research with community health partners—[people] who understand what it means to not just be in your office designing research but designing research with community partners that would be an effective intervention in a community setting. I see a lot of these graduates taking on project coordinator roles in academic medical centers.

MF: Our graduates from the new concentrations will be even better positioned for these opportunities than they would have been in the past. Still, I think the real growth area is going to be in the private sector, which Laura alluded to. If we are sharp and think innovatively, we will place our students in the private sector in insurance companies, health plans, start-ups, and all sorts of places that we have not traditionally thought MPHs can or would go. And the reason we will succeed is that our students will have these data, measurement, and analytic skills that are going to be transferable and cut across industries, sectors, and job types. To my mind, most MPH programs have been challenged to place graduate students outside of non-traditional job types and sectors—we intend to change that here at NU.