SUMMER PROGRAMS OFFER UNDERREPRESENTED STUDENTS GRADUATE-LEVEL RESEARCH EXPERIENCE

By Mariah Bohanon

nlike many healthcare fields, public health tends to attract individuals from a variety of ethnic, racial, and socioeconomic backgrounds. A recent report from the Association of Schools and Programs in Public Health shows that the field is diversifying at a significant rate, with the number of minority students majoring in public health increasing from 38 percent in 2003 to 47 percent in 2012. Experts have noted that individuals from disadvantaged backgrounds are drawn to the field because of their interest in community well-being and social justice, as well as their desire to address health disparities faced by vulnerable populations.

Thanks in part to funding from organizations like the National Institutes of Health and the Centers for Disease Control and Prevention, summer research opportunity programs (SROPs) have become a popular way for universities to introduce underrepresented students to public health education and careers. Through these programs, undergraduates are able to explore graduate-level research in health disparities, preparing them to become the public health advocates, policymakers, and scholars of tomorrow.

Johns Hopkins University

For more than 20 years, Johns Hopkins Bloomberg School of Public Health has supported underrepresented minority undergraduates in the exploration of public health research through its Diversity Summer Internship Program (DSIP). Like many SROPs, DSIP offers students 10 weeks of intensive, full-time research under the guidance of a faculty mentor. Several factors, however, set DSIP apart.

The program accepts students



The Johns Hopkins Bloomberg School of Public Health in Baltimore, Md

from all educational backgrounds and majors — not just public health or medicine. "The purpose of DSIP is to provide a graduate-level research experience and opportunities for [those] who are interested in public health but are perhaps still trying to decide if they can see themselves working in this field," says Jessica Harrington, who oversees the program in her role as assistant director in the school's Office of Student Life.

Rather than being selected based on experience or GPA, the approximately 20 underrepresented students accepted into the program each summer — who are minority, low-income, or firstgeneration — are largely chosen based on their research interests and their ability to persist academically.

"We're looking for students who have had an upward trajectory in academic performance, because ... a lot of disadvantaged students may have trouble [adjusting] early in their college careers," explains Harrington. "We'd take an applicant who can show they've acclimated and worked hard to stay in school over someone who happens to

have a 3.9 GPA but little interest in public health."

Another unique component of DSIP is its focus on personal and professional development. While students spend 35 to 40 hours a week on independent research, they also attend weekly seminars in which Harrington teaches leadership skills and guest speakers facilitate discussions on topics such as applying to graduate school and overcoming adversity. Additionally, Harrington works one on one with the students to help them align their personal values with their professional goals and establish steps for achieving those.

She says that the participants' personal values are often reflected in their research topics. Many of them apply to the program because a social justice issue or health disparity — the water crisis in Flint, Mich., for example has piqued their interest, Harrington adds. Often, this leads them to want to understand other public health issues that disproportionately affect vulnerable populations. Past research projects have included studying the effects

of alcohol advertisements aimed at minorities, evaluating wellness programs for young people in local low-income neighborhoods and those in foster care, and studying HIV prevention for Native American populations.

University of Maryland, **College Park**

At the University of Maryland, College Park (UMD), the School of Public Health's Summer Research and Training (UM STAR) program provides up to 15 minority and firstgeneration undergraduate students with two consecutive summers of intensive research, professional development, and social support.

James Hagberg, PhD, a kinesiology professor who serves as co-director of the program, says its goal is to expose disadvantaged students to the experience of working in advanced public health settings with leading

scholars. "One of our primary purposes is to show these students some of the professional opportunities that are out there that aren't available at their home institutions," he says, adding that the program prioritizes applicants from Minority-Serving Institutions and smaller schools. "When we get 1,200 applicants a year and can only accept eight to 10, one of the things we're going to look for is where a student is coming from and if this program can help broaden their horizons."

UM STAR students reside together in on-campus housing and participate in team-building exercises from the first day they arrive at UMD, which helps them establish a strong support network and shows them that being underrepresented doesn't mean being alone, says Hagberg. "Students have told me that this program is a wonderful experience," he says, "and the best part is being surrounded by these

incredibly smart, motivated people from similar backgrounds."

A requirement for admission to the program is a vested interest in pursuing public health or medicine at the graduate level, and participants come from a variety of academic majors. Hagberg encourages them to use the UM STAR experience as an opportunity to explore areas of public health they may be unfamiliar with. "I try to assign applicants to faculty mentors who match their research interests, but I also let them know that there are a lot [of public health issues] out there they may have never seen before," he explains.

Program participants who have an interest in minority health disparities will often choose to research both the causes of and possible solutions to these issues. One popular topic, Hagberg says, has been examining why certain minority populations, including Asian Americans and African Americans,



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Left: UM STAR students participate in a team-building exercise at the Adventure Program facility on UMD's campus in College Park, Md. Right: PrIMER participants attend an MSPH seminar in New York City. (photo via Columbia University Mailman School of Public Health)

don't avail themselves of cancer screenings as early or as frequently as whites. Having the ability to explore this topic over the course of two summers has allowed students to dig deep and resulted in some of them helping to create local intervention initiatives; one such program involves working with African American churches to increase awareness of and access to cancer screenings.

Columbia University

At Columbia University Mailman School of Public Health (MSPH), minority students from colleges across New York City are able to participate in graduate-level research at an Ivy League university. The school's Program to Inspire Minority Undergraduates in Environmental Health Science Research (PrIMER) provides two full years of funding, advisement, and professional development training for college juniors and seniors from the City University of New York City College, Hunter College, and John Jay College of Criminal Justice.

"Ideally, students start PrIMER the summer before their junior year, so they have two summers of fulltime research," explains Nina Kulacki, director of academic programs at MSPH. "They also have the opportunity, but are not required, to work a few hours each week during the academic year in addition to a number of other professional development

opportunities we offer."

PrIMER students are from underrepresented racial and ethnic backgrounds; have strong academic coursework experience in math, biology, and chemistry; and are interested in exploring environmental health science. However, experience in the discipline is not required. "We want to offer [participants] the chance to get exposed to the idea of environmental health science with the hope that they go on to pursue it at the graduate level," explains Kulacki.

Through the program, students explore the health disparities that typically affect minority populations in urban settings. Additionally, many of their research projects take an indepth look at the complex factors that contribute to environmental health risks for underserved New York City communities.

One student's ongoing project is a study on the health effects of large distribution centers — those that bring a multitude of trucks, buses, and industrial activity - on underserved residential neighborhoods in the Bronx, Kulacki says. "It's a large project, and the hope is that the student will continue pursuing the topic in a graduate program," she says. "He's gaining valuable insight into how underrepresented populations have to be diligent about fighting for their neighborhoods, why data collection is so important, and how to present this information to legislators to show that

the community is being harmed."

In addition to research support, PrIMER consists of weekly professional development seminars throughout the summer, where students work with MSPH faculty to prepare conference abstracts, cover letters, and research presentations. "Essentially, we want these undergraduates to have a graduate-level research portfolio that many students at their level may not have," Kulacki says. "We treat them just like graduate students so they can really experience what it's like to have these types of professional interactions."

During the academic year, when PrIMER participants return to their home institutions, they can receive funding to continue working on their projects up to five hours per week. They also attend regular, one-on-one meetings with Kulacki to discuss personal goals and communication skills, as well as stay connected with the university through optional weekly seminars and oncampus social activities — an important focus of the program.

"We know that schools like Columbia may feel unapproachable because of their Ivy League status," says Kulacki, "but this program allows us to show these students that we really want them to spend time with us, do research, and learn about some of the environmental health effects issues going on in the world around them."

Mariah Bohanon is a senior staff writer for INSIGHT Into Diversity.