## Medicine and public health on the front lines

## | Quinn Armstrong

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Above: Since 1972 (left) to today's COVID-19 crisis (right), Tulane's MD/MPH joint degree program has had an impact on organized medicine and the quality of health care in communities around the world. Graduates of the program treat individuals with disease and also assess the impact of — and find solutions for — disease at the population level. (1972 Jambalaya yearbook image courtesy Tulane Special Collections with photography by Wade Hanks, Right photograph by Sally Asher) Tulane's MD/MPH joint degree program has trained physician leaders for 50 years — and counting.

Tulane University was founded in 1834 by physicians committed to fighting the public health crisis facing New Orleans at the time. That dedication to the interface between public health and medicine continues today in the prestigious MD/MPH joint degree program, committed to preparing the next generation of physician leaders to effectively address medical and public health challenges of the 21st century and beyond.

The MD/MPH program celebrates its 50th anniversary this year and has grown to be one of the most popular of its kind. The program is open to students who have been accepted to Tulane School of Medicine with a goal to pursue an MD with an MPH from the Tulane School of Public Health and Tropical Medicine simultaneously.

Nearly 1,200 students have graduated from the program since its inception. The first five joint degree students graduated in 1972. Today, between 30 to 40 students graduate from the program each year, with about 140 students currently enrolled at any one time, according to Dr. M. "Tonette" Krousel-Wood (PHTM '91), professor of medicine and epidemiology and associate dean for public health and medical education.

"This program is training physician leaders who will practice at the critical interface between medicine and public health, where they not only are able to treat individuals with acute and chronic diseases, but they also have a skill set to assess the impact of these diseases and implement solutions at the population level," said Krousel-Wood.

When the joint degree was established in 1971, it was one of the first of its kind in higher education and was novel because it allowed students to meet all requirements for both degrees within the four-year medical school curriculum. The Tulane program serves as a model for MD/MPH combined degree programs nationwide.

Krousel-Wood, who also serves as the associate provost for the health sciences, said the joint degree appeals to the altruistic nature of Tulane medical students who want to change the world and set themselves apart. Tulane offers several public health concentration tracks for students to pursue — epidemiology, community health sciences, environmental health science, health policy and management, biostatistics and data science, and tropical medicine.

"Tulane strives to empower our future physicians with the knowledge and skills to engage their patients and their communities for improved health, addressing the social determinants of health and building health resilience for all."

DR. M. "TONETTE" KROUSEL-WOOD, leader of the MD/MPH program

Tulane offers merit-based scholarships plus research scholarships that acknowledge excellence and support advancement of science. The research awards pair MD/MPH candidates with mentors, which helps build a cadre of talented physician-scientists. Krousel-Wood, a successful physician-scientist herself, is a Tulane-trained MPH and said the degree "was a game changer for me." In addition to her role leading the MD/MPH program, she is currently principal and co-investigator on several National Institutes of Health-funded studies. Her main research focus has been in chronic disease management, primarily in hypertension and cardiovascular disease. With the current pandemic, she has expanded her work to lead the statewide Louisiana Community Engagement Alliance against COVID-19 disparities in vulnerable populations.

Joint degree graduates pursue a broad array of careers in medicine and public health. Krousel-Wood and other Tulane co-authors published an article in 2012 that followed graduates over 10 to 20 years, comparing their career pathways with other graduates who only pursued an MD. The study found that MD/MPH graduates, compared to MD-only graduates, were more likely to practice primary care, work at an academic institution or government agency, conduct public health research, receive NIH or other federal research grants, and advance medical knowledge through peer-reviewed publications.

An unexpected trend that Krousel-Wood has noted over the last 10 years is an increased number of joint degree graduates pursuing medical subspecialties, including surgery. She said public health education adds value to medical training across the spectrum. "Understanding the broader population perspective that goes beyond the individual patient is important when you're looking at your treatment outcomes, infection rates and success rates of procedures in pursuit of providing the

highest quality medical care, regardless of your specialty."

Tulane students who pursue the joint degree often go on to make a real impact in the communities they serve. Pairing a degree focused primarily on the individual patient with one that considers the population is creating tomorrow's physician leaders who see health through a broader lens, making it clear that integrating medical and public health education strengthens both elements for students in the program.

Dr. Jerry Zifodya (M '13, PHTM '13), a Tulane assistant professor in pulmonary/critical care, is on the front lines taking care of COVID-19 patients in New Orleans, investigating the impact of the disease on vulnerable groups and disseminating his findings through peer-reviewed publications. Zifodya took part in a study that found patients hospitalized with COVID-19 who had a combination of high blood pressure, obesity and diabetes were over three times more likely to die from the disease.

Another graduate of the program, Dr. Joseph Kanter (M '10, PHTM '10), is Louisiana's assistant secretary for the Office of Public Health. Kanter is regularly in the headlines informing the community about COVID-19 prevention strategies and translating COVID-19 statistics into actionable public communications.

"They're making a difference," Krousel-Wood said of graduates like Zifodya and Kanter.

If it wasn't clear before the COVID-19 pandemic, the current health crisis has made it apparent how vitally important it is to not only take care of individuals who are acutely and chronically ill but also simultaneously implement population-based preventive measures to ensure a healthy community, particularly among the most vulnerable.

This article originally appeared in the Tulanian Magazine.