

I first became interested in MDR/XDR-TB management during an Honors seminar here at UMD called *The Ecology and Evolutionary Biology of Infectious Diseases*. I was fascinated—and disturbed—by the rapidity with which drug-resistant TB strains had proliferated over the past few decades. The epidemiology underlying drug-resistance intrigued me, but I was especially interested in the geopolitical and socioeconomic factors that had transformed an eminently treatable disease into a global epidemic. Why were poor people unable to adhere to first-line TB drug regimens? How are government-administered DOTS programs inadvertently amplifying patterns of resistance? What public health “infrastructure”, broadly defined, must be developed to stem the tide of MDR/XDR-TB? I thought this was such an intellectually rich field of exploration: these questions broach the confluence of microbiology, evolutionary biology, medical sociology, economic development, and public policy.

My interest in this area could not have been timelier, because the MDR/XDR-TB epidemic has recently garnered significant attention within the international public health community. There is a burgeoning body of scientific literature on the subject, and it was relatively easy to find the information I was after. I relied heavily upon scientific journals, including *The Lancet*, the *Journal of Clinical Infectious Diseases*, the *Journal of Infectious Diseases*, the *Journal of Medical Microbiology*, the *American Journal of Respiratory and Clinical Care Medicine*, the *International Journal of Tuberculosis and Lung Disease*, and the *British Medical Bulletin*, to name but a few. The UMD online research port was an indispensable tool throughout the research process, as I found databases such as PubMed, Medline, and the World of Microbiology & Immunology replete with articles on the subject. Because I divided my research into three broad areas—the MDR/XDR-TB burden, the dearth of adequate drugs and diagnostics for MDR/XDR-TB, and the obstacles to MDR/XDR-TB healthcare delivery—I would use keywords from these three categories to refine my search terms. I tended to use sources that were widely cited in key publications by the World Health Organization and the Stop TB Partnership, along with other NGOs working directly in the field of TB management (Partners in Health, for instance). Transcripts of international conferences on MDR/XDR-TB were particularly valuable, because they cross-referenced hundreds of new academic publications on the subject.

I was extremely fortunate to have found a wonderful mentor and advisor in Dr Benjamin Rosenthal, the professor of the *Infectious Diseases* Honors seminar. Dr Rosenthal recognized my passion for this line of research, and gave me invaluable feedback along the way. He suggested that I begin by thoroughly describing the situation, in its biological and social intricacies. He encouraged me to envision and explore different public health paradigms in which the risk of MDR/XDR-TB transmission was vastly minimized. He suggested that I first seek to understand the epidemic on a global scale, before zeroing in on any particular high-burden geographic region. In doing so, he pushed me to transcend strict exegesis; he encouraged me to analyze the MDR/XDR-TB epidemic with an eye towards making specific prescriptive recommendations for its containment. He encouraged me to adopt a multidisciplinary approach that could elaborate the dimensions of the epidemic in a holistic, comprehensive manner. Above all, he encouraged me to be ambitious in this endeavor, and I am extremely grateful for that liberty.

The term paper I wrote for his class is just the beginning! In the course of my research, I realized that I would like to write an Honors thesis on the subject. I am working with Dr Rosenthal presently to identify which aspects of my initial paper would prove the most fertile ground for further exploration. Broadly construed, my thesis will devise a rubric of mandates and incentives that can vastly minimize MDR/XDR-TB transmission in urban India. To this end, I hope to travel to Mumbai this summer under the auspices of the Tata Institute of Social Sciences (TISS) to continue my research on the incidence of MDR/XDR-TB in severely resource-limited urban settings. The emergence of drug-resistant tuberculosis in urban India makes it an ideal case study for my research. On a more personal level, as an aspiring physician, I hope to dedicate my life so that others can lead longer, healthier, and more dignified lives. I am particularly interested in infectious disease management, and hope to develop new paradigms for combatting drug-resistance in overburdened and underdeveloped settings. I hope to one day work at the forefront of medical development, marrying my love of clinical medicine with my passion to advance social justice for the most marginalized populations in society.