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Teaching Philosophy - Epidemiology

From determining what behaviors, genes, and risk factors affect the development of certain cancers, to preventing the spread of HIV through sex education and the evaluation of needle exchange programs, to averting the outbreak of salmonella, the field of public health, and particularly, epidemiology, is rewarding and gratifying. As an epidemiologist, I am thrilled to be in a discipline whose aim is to understand diseases and disease processes so that the health and lives of everyone can be improved. I have always desired a career in health that would impact people's lives, however I confess I had not always known whether such a career existed. There is a well-known idea within the public health realm that the best public health is not seen – it is the diseases, accidents, and outbreaks that were avoided – but these efforts also limit the awareness and importance of the work that is done and the field itself. One of my main objectives as an educator in epidemiology is to foster an overall appreciation and recognition for the discipline, especially for students in other areas of public or clinical health. For students planning a career in epidemiology, I anticipate cultivating and refining the critical thinking, communication, and methodological skills necessary for these future public health workers to be successful in their research and careers so that they could then go on to improve the lives of many more people.

My personal experience with learning the epidemiological concepts and methods has involved a mix of traditional lectures and applied practice, and I intend to incorporate both of these processes in my own teaching. Fortunately, the manner of teaching epidemiology can be easily tailored to the various learning styles of the students, which can be gauged through solicitation of feedback in the form of course evaluations and surveying students early in the semester, as well as through performance on assignments and exams and class participation. The reality, though, is that epidemiology is a broad field and no amount of coursework can cover all the content, so focusing on teaching the methodology and developing the critical thinking and communication skills necessary for students to be successful in their own preferred area of research is most important. Since students have a variety of health interests, which are often fueled by their own personal experiences with certain diseases, finding what appeals to them and developing assignments, discussions, and examples tailored to their passions is the best strategy to learn these skills.

To enhance the learning, it is vital that an educator recognizes students' different learning styles and incorporates a variety of teaching strategies. I applied this idea while a graduate student instructor for an Introduction to Epidemiology for non-epidemiology students. Most students are resistant to taking this class because of a lack of confidence with and a fear of math and statistics. Further, many do not understand the relevance of epidemiology to their own disciplines. As a result, students usually begin the course with a negative attitude. To overcome these challenges, we presented the same material in a variety of ways, including creating reading and lecture guides for students who rely more on literary material, constructing practice problems for students who prefer application, and offering tutoring sessions for students who required more one-on-one interaction. We also tailored homework problems to relate to their different disciplines, so that students can see how their knowledge of epidemiology methods can enhance the understanding and growth in their own fields. Throughout the semester of teaching this course, I maintained a positive attitude and passion for the material and while students were not necessarily eager to become epidemiologists by the end of the class, they did finish the

course with a greater appreciation for epidemiology research and methodology and a friendlier demeanor and attitude towards epidemiology as a whole.

While it is vital to employ reliable teaching strategies in the classroom, I strongly believe that the attitude I maintain while in the classroom greatly enhances the learning. Whether I am working with epidemiology or non-epidemiology students, my general approach to teaching remains the same: to possess a genuine care and respect for my students and to maintain a constant curiosity and growth for knowledge of the field.

The great impact a professor's teaching compassion can have on students was evident to me while I was a student taking a chronic disease epidemiology course, which obligates students to apply what was learned in previous introductory classes with the culmination of a mock-NIH grant proposal. It can be a challenging class and students often struggle with the writing. I recall the professor recognizing the students' anxiety and making herself available on a Saturday to meet with each student individually about their proposal. Based on my experience with this course, I realized that as an educator it is important to sincerely care about your students and to appropriately demonstrate this care in a way that is supportive to each student's needs and learning style. In contrast, I also interacted with the graduate student instructor of this course who was not timely over email and was defensive when I posed questions about my homework and my scores. As a doctoral student, I have since had an opportunity to be a graduate student instructor twice for this same course and because of the negative experience I had with my graduate student instructor, I made a conscious effort to be open to listening to the students' questions, ready to explain what they may have misunderstood, and to be accessible beyond my obligatory office hours. I recognized that students employ a variety of coping strategies when handling challenging material, and I therefore learned to interact with students differently depending on their needs. Furthermore, students who recognize and appreciate that their instructors have gone above and beyond what is necessary typically work hard to ensure that the additional effort and time given to them was not in vain.

I also believe that a good teacher is one who is not only competent in their field, but is also always striving to learn more. Proficiency in one's field fosters confidence, which is important when one needs to exhibit authority over a class. However, I also feel that educators who recognize that they do not know everything (and are not ashamed to admit it), but who aim to constantly improve their own knowledge can better relate to students because they continue to be students themselves. The field of epidemiology is constantly growing, and my research focus on the developmental origins of disease and health is an area that is rapidly growing. I recognize that I still have a lot to learn and I would like to not only continue to make contributions to my field, but to continue to inform students about the newest methodologies.

The field of public health and epidemiology is humbling and underappreciated. As students and professionals become absorbed in the methodology, terminology and content, it is easy to lose sight of the overarching motivation to improve people's health. I believe that approaching my teaching with compassion, respect, patience, and curiosity ensures that my students will garner the same attitude when they are doing their own research or in their own interactions with people as public health professionals.