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Tyrrell County Trip Reflection

The trip to Tyrrell County was an incredibly rewarding experience. Adding our service to the positive impact others have made to the community over many years was an honor I felt deeply. Many people in the local community with whom we worked offered their thanks, told us how much they appreciated us, and expressed how our involvement in their community made the town a better place. The experiences I had there opened my eyes to the growing need for access to health care, health education, economic stability, and community advocacy.

Review and Lessons Learned on The Trip

While on the trip, I participated in a variety of activities. On two different occasions, I went to Pocosin Arts and helped with a variety of tasks including weed pulling, moving cabinets and power washing the deck outside of the riverfront property that they are refurbishing. During this time, I got to know the people that work at Pocosin. They talked about me the history behind the town, the rising and falling of the Scuppernong River and how it affects the town, and the fact that owning a small business in the town can be challenging at times.

The next day, a few fellow students and I worked with the physical education (PE) teachers at the middle/high school. A few of those students had created a workout program and class schedule, and the remainder of us helped them implement it. It was a very team-based approach, and we came away with insight into instrumental the physical education teachers were in the development of these teenagers. I helped out at the elementary school the next day, in their PE class, and had the same feeling. Their teacher, Terry, was dedicated and effective, but just

needed the resources and donations to ensure that her students could have a fulfilling life in her class and out in life.

I saw one patient on each of my two home visits. Both patients I had conditions that could be treated or managed at a variety of locations around the triangle, but since these individuals lived in Columbia, NC, they didn't have regular access to a medical doctor or an allied health team.

The activity that I co-led was the College Mentoring Session. Growing up in a privileged area where a vast majority of students attend college and had college mentors assigned to us, it was saddening to see that the students at Columbia High School won't have the same opportunity.

Finally, the meeting with the community leaders was incredibly informative. We spoke with the principal at the elementary school, a small business owner, the librarian, and the pastor at a church in the community. They all come from different socioeconomic backgrounds, making a powerful statement that all of them were united on a common cause: improving health in their community.

Throughout these collective experiences, I learned about the current state of the county, the people that reside within it, and the things that they would like to see changed. I also learned that the elderly residents generally do not like change, which makes implementing different health practices and services challenging. Hearing all of their thoughts and brainstorming different approaches with them was illuminating, and taught me that community change involves a substantial amount of people from within the community who are invested in that change.

Social Determinants of Health and Their Impact on Rural Communities

When discussing social determinants of health, we need to consider both downstream determinants and upstream determinants.¹ Downstream determinants are things such that are visibly or immediately noticeable in a community.¹ For example, the downstream determinants that we noticed from reading Tyrrell County's statistics were high rates of obesity, smoking, access to exercise opportunities, and sexual transmitted infections.² It is easy to point a finger and say, "you should stop smoking", or "it's easy to lose weight, you just need to exercise". However, before we make these accusations, we need to consider upstream determinants of health.¹ Things working behind the scenes within a community, such as low socioeconomic availability, or lack of health education, are considered to be upstream determinants. These things are usually the best things to address when trying to make a positive change in health within a community.

Three major upstream social determinants of health that apply to communities in rural North Carolina are economic resources, access to healthcare, and education on living a healthy lifestyle.¹ Deficits in these upstream determinants usually lead to a wide array of downstream determinants. Because of that cause and effect pattern, we need to consider these upstream determinants when addressing community health in rural counties.

In small, isolated communities in North Carolina, such as Tyrrell County, it is sometimes difficult to sustain a thriving economy. For Tyrrell County, one of their problems is that their town is small and lacks large hotels or enticing amenities, making it easy for people to pass through on their way to the outer banks. Tourism is limited for that reason. The most significant portion of their economy is agriculture, (~9x the average for counties of similar size³) which isn't a particularly lucrative profession. It is important to consider that income from agriculture

doesn't spread the wealth to other individuals outside of the farms. Income from agriculture also fluctuates with significant weather events, making the income it generates relatively unpredictable. Furthermore, family farming doesn't create many jobs for individuals outside of the owners of the farm. As a result of this, members of the community don't generate very much income. The median household income for the county is listed at \$32,165, which is just above half of the median household income for the state of North Carolina.^{3,4} Areas with low socioeconomic status tend to see larger rates of poor health status due to inability to afford the necessary resources.

Healthcare accessibility and affordability is another upstream social determinant of health. This determinant is limited in some isolated communities. One example of this is apparent in Tyrrell County, where there is only one nurse practitioner that works part-time. For the remainder of the week or any services outside of the practitioner's scope of care, individuals need to drive over 30 minutes to Edenton for family medicine or 90 minutes to Greenville to reach a major hospital. This means that for individuals who don't have a car, are unable to drive, or don't have a family member that can take them, health care is virtually inaccessible. I witnessed this when completing my home visits. Both individuals we worked with had conditions or situations that had exacerbated due to remote healthcare, expensive healthcare, or lack of health care resources.

The final upstream determinant to consider, which is likely the most important one, is education on how to live a healthy lifestyle. Completion of a comprehensive education is correlated with a healthy diet, adequate exercise, attaining a job (and therefore, having the income to afford a healthy lifestyle), access to social and economic resources, reduced stress, and familial stability.¹ The key word here is 'comprehensive'. A comprehensive education includes

health education courses. Some schools, especially in rural counties, don't provide their students with a comprehensive health education due to financial, political, or religious reasons in that area. Because of this, these rural counties don't learn the adverse side effects of things like vaping or unsafe sexual intercourse. This leads to a higher number of individuals addicted to tobacco products or an increased incidence of teenage pregnancy and sexually transmitted diseases. Also, these courses may not educate the students on a healthy diet, which leads to increased obesity, cardiovascular problems, or other health complications.

In conclusion, Tyrrell County's downstream determinants of increased incidence of smoking, obesity, health-related diseases, teen pregnancy, and sexually transmitted diseases are rooted in poor upstream determinants. During the trip, I could realize why this was the case, and understood the importance of spending our time in schools, senior centers, and significant social hubs educating and providing resources to individuals in the community from all walks of life. I also appreciated that people were willing to allow us to enter their homes and provide them with resources that they may not receive otherwise, due to the aforementioned poor access to health care. Because of this, I believe that we made a difference, and I hope that us identifying and addressing upstream determinants will ultimately lead to an improvement in downstream determinants, resulting in a happier and healthier community in Tyrrell County, North Carolina.

Impact of Social Determinants of Health on the United States

While on this trip, it became apparent to me that healthcare access is an important factor that we must consider when discussing health problems in the United States. It is a well-known fact that the United States has seen a drastic rise in obesity over the past 20-30 years when compared to other countries. This is something that Americans continue to struggle with, and are doing

their best to improve in. Unfortunately, high levels of obesity tend to lead to a variety of health issues, resulting in a reduced lifespan. Coincidentally, life expectancy is another factor that the US is showing poor marks in, especially in rural areas.⁵ As of 2018, 28.7% of Americans living in urban counties are considered obese, whereas 34.2% of individuals living in rural counties are considered obese.⁶ Coincidentally, the average life expectancy for Americans is 78.8 years, with life expectancy for men in rural counties being 74.5 years.⁵ Comparatively, the average life expectancy for Asian/Pacific Islanders is 87.7 years.⁵ In this region, Thailand had the highest percentage of citizens considered to be obese, with only 6.8% fitting this definition.⁷

It is clear that the rural aspects of the United States, who tend to be suffering in social determinants of health, tend to have worse health problems, and as a result, reduced life expectancy. A study published at the beginning of this year found that this disparity exists, and has been slowly increasing over the past 36 years.⁸ Interestingly enough, they found that education, race, and level of rurality (rough statistic based partially on population per square mile) were the primary social determinants that played a factor in this disparity.⁸ They also identified that the main element of education that contributed to this disparity was health education.⁸ Health education has benefitted urban areas immensely, and the lack of it in rural areas has led to many problems.

Furthermore, the increasing trend of people moving to urban areas has diminished access to healthcare in rural areas, partially because healthcare companies can't open sustainable clinics in areas of low population. Therefore, to improve healthcare in rural areas, we will need to find a way to reward clinics for opening locations in those towns. We will also need to continue to find ways to ensure that students in rural areas have a complete and comprehensive health education.

How Does This Affect My Future?

Before this trip, I thought that physical therapy and occupational therapy were the only medical professions whose focus were treating people holistically. However, after embarking on this trip, I found that many more allied health professions do the same. As I step forward into my professional career, I will continue to work with other healthcare professionals. As we treat patients together, I will make sure that I am treating my patients holistically. I am still considering their physical therapy diagnoses and functional impairments, but, I am also ensuring that they have all of the resources they need outside of the clinic, even if it isn't related to physical therapy. I will do my best to provide education in any way that the patient needs, and direct the patient and their family towards the appropriate resources.

Outside of the clinical setting, I will advocate for patients, friends, and relatives that live in underserved areas. If access to healthcare, education, or nutrition is not available in an area where I am living, have relatives living, or have a connection to, I will do my best to start a program that could change one, or all of those factors. I will work with healthcare providers across a variety of disciplines near those areas to figure out the best way to make a change. A societal shift in health at the national level starts with a change in health at the community level. The people that are most integral in that are health care providers. As a healthcare provider, I will do my best to ensure that everyone I connect with has their social determinants of health fulfilled. In doing that, they will be able to lead a healthy lifestyle.

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