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R25 Practicum Report

Global Health Specialization

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This report is a claim to the feasibility of a productive 10-day physical therapy service learning trip to Merida, Mexico where my colleagues and I worked at the Catholic mission facility Ciudad Vicentina and provided comprehensive care and education to the residents and staff. This experience served to provide better care within the realm of physical therapy and general wellness to those at Ciudad Vicentina and to educate myself and my colleagues on the issues surrounding the circumstances at adult shelters like Ciudad Vicentina and how to best serve them in the future from the context of Global Health.

When we arrived to Ciudad Vicentina, we were welcomed and given a general tour of the facility, spanning from the sanctuary where mass was held to the living quarters where residents slept. The overall functioning of Ciudad Vicentina was such that it did not seem that the sisters, who were directing the care of the residents and the upkeep of the facility, had made preemptive preparations to create a false appearance of their day-to-day operation. Instead, it appeared quite consistent and transparent and the sisters openly invited our input in all areas over the course of our stay. This aspect of our visit made our work much easier and must be taken into consideration when examining the potential of our efforts for other applications in health service.

Some of our first goals during the trip were to become familiar and establish trust with the residents and staff and to create a list of agendas that we could address under the auspices of physical therapy or general wellness to improve the overall circumstances of those at the facility. Upon arriving to the physical therapy gym we met Fanny, the full-time rehabilitation worker at the facility. She explained that she used to work in the kitchen previously and expressed a desire to the sisters to work in rehabilitation under the mentorship of the regularly visiting volunteer physical therapists who had more formal training. She started several months before we arrived and received some training on modalities and basic exercises and was hoping to be evaluated and educated as needed by our service group.

Fanny's routine at the time was mostly heat modality, massage, passive stretching, and very basic and universally applied standing exercises within the parallel bars. Her practice was nothing like we would expect in the United States. There was no formal evaluation and use of clinical decision-making and evidence to guide treatments. Many of her treatments are considered outdated in our country and lack the functional component necessary to improve patient independence, an essential component of contemporary physical therapy. Nothing was documented at this facility, so no procedures were based on prior findings unless the performed by the same worker and were remembered. This type of disparity in healthcare training and procedures is well-documented in international settings, especially within resource poor facilities¹.

We immediately saw the prospect for long-term change within Fanny. She was in a position to have a great effect on the residents and showed promising

enthusiasm for improving her practice. At the encouragement of my supervising professor, I undertook the task of providing the majority of Fanny's physical therapy mentorship during our stay. Although there were a myriad of interventions applied by our team to improve the facility with respect to physical therapy and general wellness from modifications to wheelchairs, walkers and other devices to direct care of residents, this report will mostly focus on the education provided to Fanny who was the full-time rehabilitation worker at Ciudad Vicentina. It was the focus and what I considered to one of the most sustainable interventions we could provide.

During the first couple days that I worked with Fanny, I requested that she show me her typical routine with each patient. I made it clear that I wanted to collaborate our ideas for treatment and that I was eager to learn from her and the other staff. I was careful to avoid providing too many suggestions or too technical of information so that she could follow along and would remember my feedback without taking notes. After I watched her proceed with her treatment with each patient she would ask what I thought. If the treatment was safe but not ideal, which was usually the case, I would tell her I liked the treatments and that I wished to show her another treatment that will also be beneficial for the patient. It was not my intention to revamp Fanny's entire routine.

With most patients, Fanny reasonably addressed the flexibility, strength, pain, etc. in an isolated fashion, but did not tie these aspects together by way of functional practice. Because research has shown the importance of functional practice in rehabilitation, I prioritized educating Fanny on the purposes and

procedures for these types of treatments. I taught her how to use activities like sitting, standing and walking as all-encompassing exercises. I explained that each of these activities were incredibly effective at improving or maintaining the body's flexibility, strength, bone density, cardiovascular endurance, balance, and coordination when applied correctly². Over the course of the trip I showed her how to help the patient practice functional activities appropriately.

Patient safety was also made a priority. Fanny demonstrated unsafe handling with a few residents and also spoke of past instances of unsafe practices that led to accidents. In each instance that we observed unsafe handling, such as improper guarding during standing activities or improper lifting during transfers, we attended to the situation carefully to avoid accidents and respectfully discussed with Fanny why the technique was not safe. We immediately showed her alternative techniques and practiced them with her several times. We also taught Fanny how to gait train several types of patients, since she recalled some past instances in which patients fell during walking activities in the physical therapy room.

Treatment efficiency was made a third priority, because we realized that Fanny was motivated by this aspect of care and may be unwilling try the more involved treatments we taught her if she doesn't have enough time. We introduced the concept of group exercise, in which the therapist facilitates exercises with multiple patients of approximately the same exercise tolerance simultaneously or consecutively. Physical therapy in this format has the potential to improve treatment efficiency and foster support among its participants. Research has demonstrated its efficacy in community-dwelling and institution-dwelling elderly

populations^{3,4}. We also introduced the concept of home exercise programs, in which each patient is instructed on a short list of exercises (related to in-clinic treatment) to complete independently outside of physical therapy each day. Home exercise programs are useful, because they can promote sustainability in the physical changes achieved in the clinic and can reduce the overall visits.

In the first several days I collaborated with Fanny, she stated she preferred to remain hands-off and would often disappear while we were working with patients. She had left a few times while I was explaining a treatment to her and had gotten distracted by something the patient or the translator said. This behavior made it very hard to instruct Fanny fully on an activity during the first few days. I also became aware that my teaching had not fully resonated from previous days when I had observed she was not applying the ideas I showed her about a patient we saw together.

Based on these observations, I began to request that Fanny directly participate during our collaborations and that she demonstrate the treatments independently before the patient was finished working with us. I explained to her that this would help me be a better teacher for her and would aid her learning. This was more time intensive, but it helped me realize that Fanny was not fully comprehending my explanations during our collaborations, even though she stated she had understood. By watching her imitate my demonstrations I was able to better gauge her understanding and I could then modify my teaching methods accordingly to progress her towards independence. Hands-on practice is also an

important element of the Information-processing model of memory for achieving long-term retention of knowledge⁵.

On the final days of our visit, Fanny demonstrated a greater competence in functional treatments and safe patient handling. She executed a number of new techniques independently and was more curious about other treatments. She did not seem convinced of the efficacy of the efficiency methods that we suggested, but she could perform them. She seemed excited and appreciative for the tools she was given. She has a great untapped potential so I hope our efforts will be continued in future visits.

I took away a great deal of insight from this trip. It gave me a deep appreciation for education to healthcare workers in international settings. I believe that knowledge is truly power in the realm of global health. Fanny was given the tools to do infinitely more than our group could accomplish during our short trip. My experience taught me the value of hands-on instruction and participation and I discovered with both staff and patients that demonstration is a universal form of communication and an important way to relate understanding.

In this trip I also learned the capacity in which community cohesion can serve to bolster efforts to provide shelter and a good quality of life where material resources or technical expertise was lacking. Ciudad Vicentina is a great example of this phenomenon. It had very few formally trained staff and a small amount of medical supplies, yet it provided care for nearly a hundred residents with a great diversity of needs who would otherwise be forced to live on the street to live a shorter life in a state of neglect. The facility was materially and socially resourceful.

Very few supplies were thrown away, even if they were permanently broken or had been replaced by better equipment. Many of the residents who had the capacity to work were given jobs, typically to provide some aspect of care for the more disabled residents.

This experience gave me a full appreciation for the amount of work required to organize the resources and means for a trip such as this, but only partial understanding of its logistics. Our lodging, the majority of our food, and our worksites were organized by the supervising faculty. This had its advantages and disadvantages. I was able to apply greater focus on physical therapy practice within an international setting, since I did not run into many of the rigors that come with organizing one's traveling and working in a foreign country. It was clear that our group had the benefit of all the previous years' experience after I heard the many stories of past challenges from lodging and safety to establishing contact with facilities abroad and maintaining relationships. I must thank the School of Allied Medical Professions for facilitating this trip so well as it will remain a constant comparison for my own pursuits in global health. There are skills within this process than one can only acquire by being involved and so I must keep this in mind for future trips.

Above all, this trip has given me inspiration. There are an incredible amount of possibilities to enable disenfranchised groups of people around the world and I was privileged witness and play a part in many. The trip has invigorated a long held wish I've had to use the opportunities I've been given to make a difference for those given little or none. I would like to thank those responsible for creating the R25

International Practicum for making this experience and this wish all the more possible.

References:

1. Fonn, S. Linking public health training and health systems development in sub-Saharan Africa: Opportunities for improvement and collaboration. *Journal of Public Health Policy*. 2011; 32(1): 44-51.
2. O'Sullivan SB and Schmitz TJ. *Physical Rehabilitation* 5th Ed. Philadelphia, Pennsylvania: F.A. Davis Company; 2007.
3. Rubenstein L, et al. Effects of a Group Exercise Program on Strength, Mobility, and Falls Among Fall-Prone Elderly Men. *J Gerontol A Biol Sci Med Sci*. 2000; 55(6): 317-321.
4. Holmerova I, et al. Effect of the Exercise Dance for Seniors (EXDASE) program on lower-body functioning among institutionalized older adults. 2010; 22(1): 106-119.
5. Bastable, SB. *Nurse as Educator: Principles of Teaching and Learning for Nursing Practice* 3rd Ed. Sudbury, Massachusetts: Jone and Bartlett Publishers; 2008.

Pictures: Soon to come

These are pictures from my service learning trip in Merida, Mexico. They were mostly taken at Ciudad Vicentina, an adult shelter run by the Catholic mission where a supervising professor, two rehabilitation students, and I worked during our trip.



A nursing student and patient at Ciudad Vicentina



Gait

Gait training with a patient with post-stroke (top) and evaluating the effectiveness of a toe lift device during standing and walking (bottom)



Ciudad Vicentina's courtyard



Wheelchair modifications and tire replacement



A bingo game for the residents



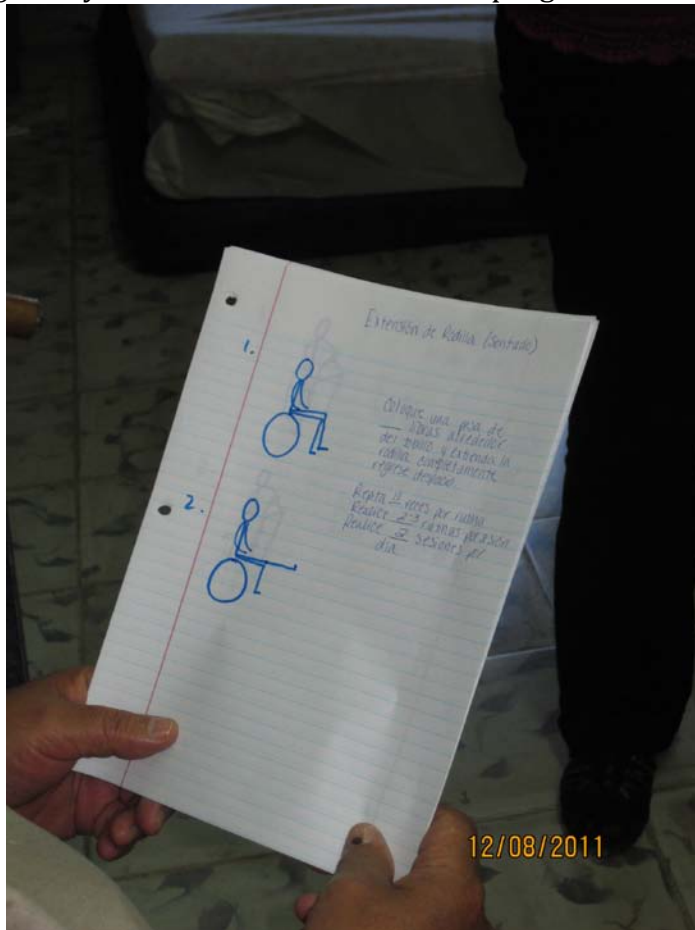
Just before transfer training (top) during gait training (bottom):



More wheelchair modifications (top) and teaching lifting technique (bottom)



Showing Fanny how to write home exercise programs from scratch



Teaching Fanny how to perform safe gait training with a patient



Teaching Fanny how to cue the patient to transfer from standing with the walker to sitting in the wheel (top), teaching a nurse how to perform a dependent transfer a patient from wheelchair to a low mat (bottom)

