R25 Funded Practicum Report

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SAMP 760 S

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Introduction

The R25 funding was sought to help offset the costs of participating in SAMP 760 S, an annual service-learning practicum in Merida, Yucatan, Mexico. The 2011 trip was from November 29th through December 10th. The 12-day trip included multiple sites suitable for occupational therapy (OT) and physical therapy (OT) intervention and activities.

In 2011, the course included three OT students and twelve PT students, along with one OT and 5 PT faculty members. Typically, a clinical site on a single day was visited by one or two teams, each team consisting of one professor and two students. So, five sites were visited most days. Each team leader served as the individual advisor for team members during the trip. In addition to clinical sites, all students and professors participated at several facilities/institutions several evenings (two foster care type sites) and a Saturday morning (nursing facility).

The trip to Merida and the Yucatan peninsula provided excellent cultural learning opportunities. Trip participants were able to visit Mayan ruins, museums, exhibits, monuments, and historical centers/areas, as well as sample local cuisines.

Goals and Learning

The focus for learning was on three goals written prior to arriving in Merida. Once in Merida, they were reviewed and approved by my faculty advisor. The goals were written to allow for both clinical and non-clinical learning. The discussion in this section is based around the three goals.

The first goal was: To gain a basic level of proficiency working with an interpreter during therapy sessions with a client. The measurement for this goal was time, specifically the time elapsed for an evaluation or treatment session, which would take longer with an interpreter, but

shorten with experience working with one. An example of success was that two sessions with one patient were conducted at the beginning of a week and at the end of the week. The second session was conducted in about 50-60% of the time of the first, after working with the interpreter for several days. I felt the goal was met and my advisor agreed with me.

The second goal was: To learn one or more clinical techniques/tips/approaches that I could use in the future. The measurement for this goal was the learning of a technique/tip/approach. This goal was accomplished several times: sensory testing on a patient with Parkinson's Disease; construction of a wrist flexion, MP extension, and IP extension immobilization splint; and an effective technique for upper extremity range of motion screening on a patient in a wheelchair.

The third goal was: To gain insight into Latin culture in order to more effectively establish rapport with local patients. The measurement for this goal was the attainment of such an insight. During this trip, that insight was the appreciation of the significant importance of the Mayan culture and its influence on the Yucatan peninsula. The people in Merida and the Yucatan were clearly very proud of their Mayan heritage, and there were many examples of clients discussing Mayan influence and history, and the Mayan language, which some people still spoke. This insight about Mayan culture and by extension Yucatan culture provides an easy avenue for establishment of rapport with clients, not to mention a continuous learning experience for the clinician/student.

All three goals were met during the course of the Merida trip. Periodically assessing progress and ultimately achieving them provided a balanced learning structure and areas of focus that enriched the trip experience.

Relevant Health Topic Discussion

Most of the patients we saw had one and usually more than one physical deficit and many of them had mental health issues (particularly noticeable at Divina) as well. Such deficits were expected. However, across the sites, vision issues were apparent, ranging from mild impairments to total blindness. From an occupational therapy perspective and most relevant to the patient's seen on this trip, vision loss of any kind impacts many activities of daily living (e.g., bathing, dressing, feeding, functional mobility, personal device care, personal hygiene and grooming) (AOTA, 2008).

In several patients, I observed what I believed to be severe cataracts. I could not help but wonder that given the socioeconomic status of many (most) of the patients that we saw, that professional intervention was not possible. Cataracts and treatment (i.e., surgery and corrective lenses) in the Mexican population will be the focus of this discussion.

Cataracts, which cause the loss of ocular lens transparency, are a huge global health problem with about half of the cases worldwide being in developing countries (Sanchez-Castillo et al., 2001). Sanchez-Castillo et al. (2001) estimated the prevalence of cataract blindness in Mexico to be about 230,000. The prevalence is high among low-income Mexicans (Sanchez-Castillo et al., 2001). Given observations during the trip, this prevalence level is not surprising.

Known physiological/chemical mechanisms that lead to cataracts include: Oxidation, osmotic stress, and chemical adduct formation. Risk factors are: Diabetes, excessive exposure to radiation (e.g., X-rays and ultraviolet light), nutrition, use of some medications, and possibly acute periods of dehydration (Sanchez-Castillo et al., 2001).

In the 1990s and 2000s, surgical eye camps formed to treat cataracts in low-income individuals. It is not know how prevalent the camps are today. In the early 2000s, Sanchez-

Castillo et al. (2001) used patients in these camps to study the nutritional and health status of people with cataracts. Following this study of 81 people and their matched control group, the Sanchez-Castillo et al. (2001) concluded that their study, which they described as preliminary, further study of nutritional status of the poor was required for age-related cataracts in low-income, semi-tropical areas at altitude and with diets poor in riboflavin and niacin. If a strong causal link is ever found, it would provide another avenue for intervention, and a preventative one that would perhaps be inexpensive to implement. No additional articles on this topic were found, however.

A study on refractive lenses and visual acuity in 2008 found that 74 of 86 patients had improved acuity with refractive correction (Lowery, Leasher, Gibb, & Schell, 2008). While this may not be an option for severe cases, it is promising for mild ones.

Surgery for cataracts is nothing new. Its origins are 3,000 years ago and routine and successful surgery dates back to the 18th and 19th centuries in Europe, the United States, and Mexico (Lozano-Alcazar, 2009). In fact, as Lozano-Alcazar (2009) argues, cataract surgery in Mexico has been practiced at the same level as in Europe and the U.S. So, the technology is for effective surgical intervention is apparently in Mexico. Moreover, advancements continue to be made. A study in 2007 in Tijuana, Mexico followed the successful correction of myopia with light-adjustable lenses following cataract surgery (Chayet et al., 2009). The main issue for patients like the one seen on the Merida and many other Mexicans is likely access, which is a significant problem in Mexico (Kirby, 2006).

Very much related to access is funding. A successful study of a Mexican pediatric cataract program concluded that lack of financial support could create problems for sustainability

(Congdon, Ruiz, Suzuki, & Herrera, 2007). If pediatric funding is questionable, this likely does not bode well for other populations, particularly the elderly.

Clinical Sites

Responsibilities

I principally visited four clinical sites: Divina Providencia or "Divina" (five days), Hermanits de los Ancianos Desamparados Asilo Celerain or "Celerain" (two days), Reina de Paz or "Reina" (one day), and Unidad Universitaria de Insercion Social San Jose Tecoh or "Uni." (one day) . Three of the four sites – Divina, Celerain, and Reina - were nursing facilities, primarily for the elderly. Divina and Reina clientele were essentially homeless people that were given shelter, food, and basic care. Celerain was geared more toward the upper middle class and above, and had a small therapy staff. Uni was a clinic associated with Universidad Autonoma de Yucatan or "UADY." We visited UADY's rehabilitation program's facilities after visiting Uni.

Responsibilities at all four sites included: Conducting screenings/evaluations (range of motion, muscle testing, and occupational performance), therapeutic intervention (exercise/activities and splints/orthotics/adaptive equipment), and/or adaptive equipment repair. Adaptive equipment repair, particularly wheelchairs, was a major focus at Divina.

Site Feedback

Facility leadership and residents at all four sites warmly welcomed our teams. Each site had been visited during earlier trips so there was some level of familiarity, particularly between the professors and facility leadership in most cases.

All three nursing facilities were safe internally, although Reina and Divina were not in the safest areas of town. That said, Merida does not apparently have the crime problem seen elsewhere in Mexico. Celerain was physically in much better and cleaner condition than Reina

and Divina, both of which have some neglected maintenance issues and cleanliness, which although not terrible, could definitely be improved. Divina burned trash outside in an open courtyard. The smoke was both an annoyance and a long-term health hazard for residents and staff members. Uni was clean, spacious and well-kept.

Unique Experiences

One experience that I will always remember and value was an unexpected one. While visiting Uni, Dr. Ann Kloos, my team lead and advisor, was approached by a staff member to screen a woman with Parkinson's disease. Uni/UADY staff and faculty knew of Dr. Kloos' expertise in basal ganglia disorders.

During the course of the next 60-90 minutes, Dr. Kloos coached the other three students and me through various neurological screens used for Parkinson's - e.g., sensory, visual, balance, gait, etc. The unexpected session with Dr. Kloos and a Parkinson's patient was one of the many jewels of the trip.

Another notable experience was making a splint for a patient. While this was somewhat expected (we had taken splint material to Merida), it was somewhat rare and may happen only once or twice during a Merida trip if at all. Making the splint was an exciting opportunity because I had just completed a splinting course and was able to immediately use this newly acquired skill to help a patient.

Specifically, on the third clinical day, I made a splint with the help of another student, Kaitlin Woods, and an OT professor, Lisa Tucker. The splint was for the right upper extremity of a patient with contracture that had developed over the 22 years following a stroke. To increase range of motion and help increase functionality limited by contracture and provide protection if needed, a 'wrist flexion, MP extension, and IP extension immobilization' splint was constructed.

Overall Assessment of Service Learning Experience/Rotation

I had high expectations for this trip given past stories about it, the amount of time we prepared for it, and its cost and time commitment, which included delaying most final exams and a few other assignments until Winter break. I can confidently say that my expectations were surpassed. The clinical experiences were outstanding and we were able to see a lot of patients and do a number of screens, interventions, and repairs. Planned academic exercises like the daily reflection sessions enriched the experience. The cultural aspects of the trip were outstanding. The faculty did a great job of choosing cultural excursions to sites (e.g., ruins and monuments) and exposing us to local cuisine. Our housing was perfect: A beautiful large house with ample sleeping quarters and bathrooms, living spaces, and at an excellent location.

The other main benefit was that I made a lot of great new friends. Sharing the Merida trip with them was an integral part of the every aspect of the experience.

Advice for Future Students

I highly recommend the Merida service-learning clinical. The best advice that I can give is to be really engaged in all aspects of the trip, meaning clinical/academic and non-clinical/non-academic. You will work hard and be somewhat sleep-deprived by the time the trip is over, but the sacrifices will be well worth the effort.

Some travel and logistical tips include:

- Use a credit card to pay for big ticket items (like gifts) so you can conserve cash for when you need it.
- Do not take more than $US 200.
- There are not a lot of money exchange opportunities so make the most of your exchanges by planning ahead, especially near the weekend when you will be on an excursion.

- Do not over-pack. Two-to-three pairs of slacks and half a dozen polo shirts should be plenty. Take enough underwear for the entire trip, though.
- If you do not speak Spanish, do not worry. The interpreters we used were excellent. However, knowing a few words is always helpful.

Visual Story

Figure 1 - Casa Millsaps

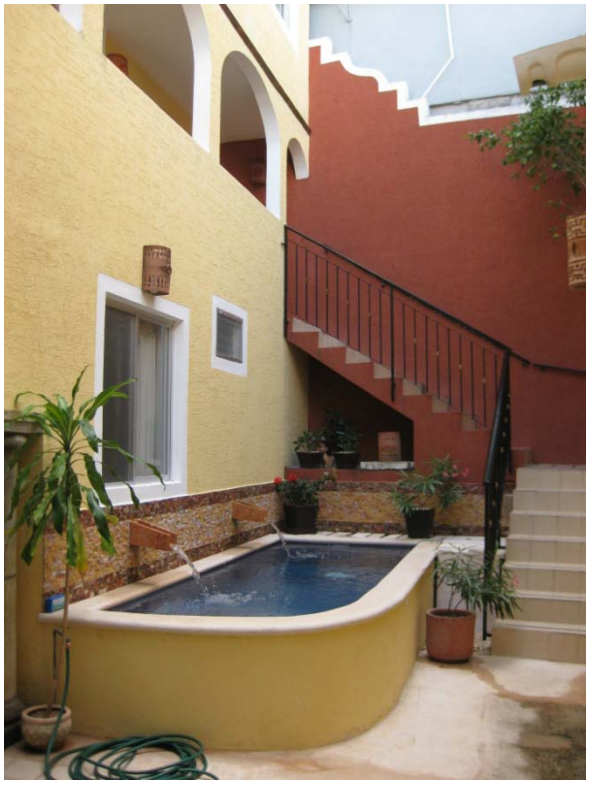

Figure 2 - Casa Millsaps Courtyard

Figure 3 - Meeting in the Dining Room

Figure 4 - Typical Bedroom

Figure 5 - Reina Front Entrance

Figure 6 - Team Photo at Reina

Figure 7 - Celerain Front Entrance

Figure 8 - Celerain Courtyard

Figure 9 - Team at Celerain

Figure 10 - Divina Front Entrance

Figure 11 - Men's Area at Divina

Figure 12 - Team Wheelchair Repair Session at Divina

Figure 13 - Team at Uni with PD Patient

Figure 14 - UADY Rehabilitation Program Building

Figure 15 - UADY Rehab Gym

Figure 16 - Splint for Patient at Celerain

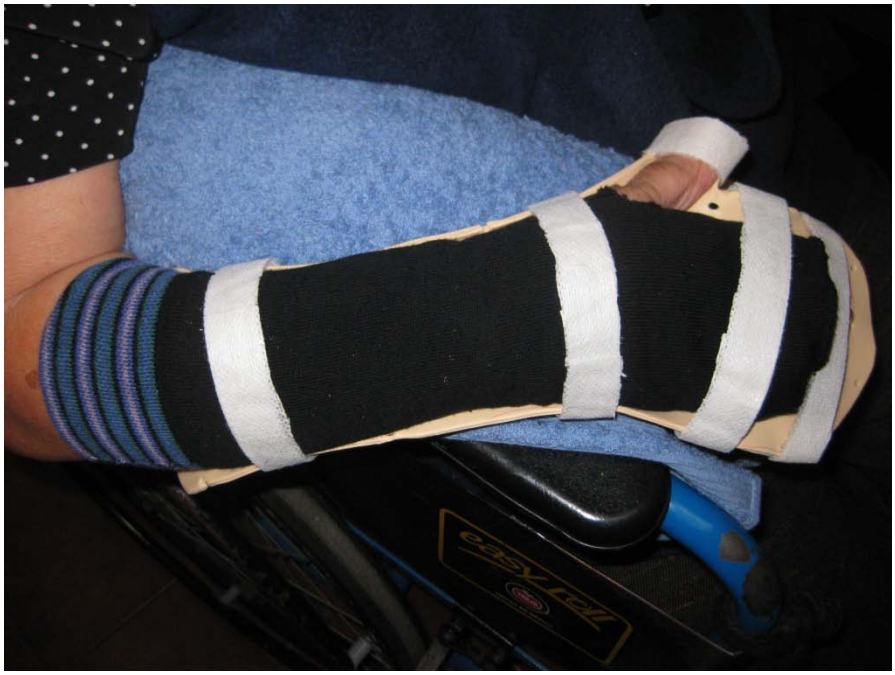

Figure 17 - Splint on Patient

Figure 18 - Team with Splint Patient

Figure 19 - "The Castle" Mayan Pyramid at Chichen Itza

Figure 20 - Cenote (Sinkhole) near Chizen Itza

Figure 21 - Main Cathedral in Merida at Night

Figure 22 - Mayan People Monument in Merida

Figure 23 - Group Photo in Casa Millsaps

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