International Practicum Post-Experience Report

A Summary of my Month in La Paz, Bolivia

Bolivia is considered South America’s least developed country and so I chose to do my practicum in La Paz, Bolivia through the organization, Child Family Health International. I was very excited for my experience through this organization because it focused solely on maternal and pediatric health. Additionally, Child Family Health International offered thirty hours of one-on-one Spanish lessons which enabled me to further my language skills for use during the practicum.

Bolivia’s Health System

Bolivia’s health care system is very different from the United States. During my practicum I had the opportunity to become familiar with the health system of the country and learn about consequent health disparities that exist among Bolivians and between Bolivia and the United States. My Spanish tutor also took time to explain the formal arrangement of the system to me and this helped to clarify many similarities and differences that I had seen in my hospital experiences. Bolivia maintains a public-private system in which most are insured by the government-offered insurance policy at a relatively small monthly cost. Those who cannot afford this public health insurance policy (Seguro Social) have the secondary option of attending privately-funded clinics. These clinics are at varying costs as some are private hospitals designed for those with private funds, and others are designed to offer care to the poor and are considered private because of their funding source (non-government funded). Below I have drawn a chart of my analysis of the public health system in La Paz, utilizing a list of public and private health care centers known to me (list not extensive).


**Health System in La Paz, Bolivia**

<table>
<thead>
<tr>
<th>Public Medical Care</th>
<th>Private Medical Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seguro Social &amp; S.U.M.I</td>
<td>Privately Funded (generally by international donors)</td>
</tr>
<tr>
<td>No Seguro Social</td>
<td>Private</td>
</tr>
<tr>
<td><strong>Clinics</strong></td>
<td><strong>Hospitals</strong></td>
</tr>
<tr>
<td>many public clinics located throughout La Paz (i.e. Alto Miraflores)</td>
<td>1. Hospital Del Nino</td>
</tr>
<tr>
<td></td>
<td>2. Hospital Obrero</td>
</tr>
<tr>
<td></td>
<td>3. Hospital Materno/Infantil</td>
</tr>
<tr>
<td>(all gratis with Seguro Social but not an option without—even if you can pay the price)</td>
<td>1. Tercer a Edad</td>
</tr>
<tr>
<td></td>
<td>2. Hospital de Clinicas (baseline care gratis but many &quot;extras&quot;)</td>
</tr>
<tr>
<td></td>
<td>3. Hospital Arco Iris</td>
</tr>
<tr>
<td></td>
<td>4. Hospital de Los Andes</td>
</tr>
<tr>
<td></td>
<td>5. Hospital Boliviano-Holandes</td>
</tr>
<tr>
<td></td>
<td>6. Gastroenterologo</td>
</tr>
<tr>
<td><strong>INCREASING COST</strong></td>
<td></td>
</tr>
</tbody>
</table>

**A More Individual Experience**

Having explained what I have learned about the health care system of Bolivia I now want to delve into my experience with the system on a more individualized basis according to my in-clinic experience. Through my practicum I was given the opportunity to participate in care at four separate clinics and hospitals in La Paz during the month of August 2011. The hospitals varied in size and clientele giving me a very wide ranging experience of comparison of the health care systems in Bolivia. Through this experience I very extensively fulfilled my service and learning objectives through 4-6 hours of daily
interaction with both health professionals, other students (both Bolivian and American) and patients, during which I assisted in providing medical care under close supervision.

Hospital Del Nino

The first hospital which I visited was La Hospital Del Nino, the only public hospital for children in La Paz. La Hospital Del Nino is home to the best specialty treatments in the nation, including La Paz’s top Intensive Care Unit, inpatient Chemotherapy units and Surgical Subspecialties. Children from many of my later clinics were referred to Del Nino if any type of further testing was needed. For the one week that I spent at Del Nino, I was with a Dr. Velosco who worked within the Infectologia unit. While there, I obtained extensive experience with the treatment and wound care of Leishmaniasis, a tropical parasitic disease transmitted by the bite of the sand fly. While Leishmaniasis is not common within the city limits of La Paz, the Northern and Eastern regions of Bolivia are located in areas of the tropical rain forest and Leishmaniasis approaches endemic levels.

In addition to the medical education in the treatment of Leishmaniasis, my experience at Del Nino was significant for two reasons. When at Del Nino I was able to experience many cases of social injustice which had rendered the children sick to the hospital largely due to the indirect consequences of poverty on health care access. However, I was pleased to see that S.U.M.I. helped to account for the cost of health care, in that these children were able to receive care for their rehabilitation despite their parents’ inability to pay. In one situation, an infant boy was less than a year old and was HIV positive. His mother was a sex worker who had been neglecting the child until the father discovered his proposed paternity for the infant and brought him to the hospital. The father declared he could not pay and would not be able to bring him home but he had a very high fever and needed care. He was now in his second week at the hospital with much improvement of his status and was only there awaiting placement at a state orphanage. The second case I will discuss was that of a three-year old girl with
Down’s Syndrome who had four separate Leishmaniasis wounds and was chronically malnourished. She had also been discovered by the father of the child and was brought in due to the Leishmaniasis by the father, who stated the mother was neglectful due to mental illness. The girl is now being treated appropriately for her medical needs and will remain at the hospital until the state decides if father is eligible to take custody or if she will become a ward of the state and go to an orphanage. Both these cases, although very heart wrenching were good reflections on the quality of care the Bolivian health care system offers to young children. Despite many gaps in care for those who cannot afford, as I discovered as explained above, S.U.M.I. is the catch net for those who are vulnerable due to age. I view this as a positive policy as it displays the efforts that the Bolivian government is taking to move forward in health.

Hospital Metodista

During my second week in La Paz, I spent time at Hospital Metodista. This hospital would be my sole experience in a private practice setting while in Bolivia. At Metodista, I worked with Dra. Urzagasti – who works at this site for 4 days of the week, while she spends her Tuesdays serving Hospital Los Andes in the Neonatalogia Intensiva, I will touch upon my time at this hospital later. While with Dra. Urzagasti at her clinic near the Zona Sur in La Paz, we learned medical care for basic childhood illnesses. Additionally, I learned about Dra. Urzagasti’s upcoming venture (supported by the Bolivian government) to give weekly talks to health professionals on supporting breast feeding in new mothers. Bolivia has many of the same challenges with breastfeeding that the United States does, however attenuated this challenge is by the fact that many mothers have no other financial options but to breastfeed. Dra. continuously offered support to mothers with child feeding and nutrition. She stated (and I agree) that the most vulnerable time in a child’s growth is in the transition from breastfeeding to solid foods. She educated me on the role doctors play in nutrition in Bolivia, teaching me that although
there are dietitians in Bolivia, there are very few and they are only located in in-patient settings for the
treatment of severe acute malnutrition. Therefore, the responsibility of preventative nutrition therapy
during childhood falls on the doctors where they are able to “catch” parents with education during
routine visits.

Although my Spanish skills limited me to basic interactions with the patients, I was able to
understand ample amounts of the material Dra. was teaching to patients and she provided me with
pamphlets she had put together herself about the basics of Bolivian feeding at various ages. This
specific experience added to the fulfillment of one of my learning objectives, which focused on
culturally-appropriate patient education, because it gave me a window into understanding the nature of
doctor-patient interactions and taught me about many cultural norms in Bolivian society.

Alto Miraflores, Servicios de Los Adolescentes

Throughout the third week of my stay in La Paz, I visited a clinic in Alto Miraflores which was
called Servicios De Los Adolescentes. In this clinic we helped with prenatal care for girls/women ages
15 through 25 that were expecting children or desired to learn about contraception. The clinic is located
in an area of La Paz known as El Alto, which is a very resource-poor area of town. My experience here
was a testament to the differences in medical equipment in Bolivia versus the United States. For
example, when we took pap smears, we sprayed the slides with hairspray to preserve them and slipped
them into paper shields which were made of leftover paper. Additionally, there was no electricity at the
clinic for two of the five days that I was present. Despite this, we never once left work due to lack of
resources, helping to teach me how to use what we have available to us to fulfill our medical objectives
with each patient. The education here also reflected good use of resources, as our doctor spent time
with every mother who was underweight for gestational age. She encouraged good nutrition by
focusing on foods that they currently had available to them at little cost, and I felt it was a very good medical practice to use realistic resources to help try to fulfill “optimal objectives”.

At this clinic, I felt as if I really had a glance into the lives of many teenage girls struggling with the repercussions of growing up in poverty. All the women who visited our site lacked the facilities to visit a private clinic and all were obtaining their prenatal care gratis as a result of S.U.M.I. All the girls we saw, whose visits were to learn about contraception, had already given birth to at least one child. I think that this exhibits a knowledge gap within Bolivian society, as young girls are not taught about sex and its repercussions by anyone and only learn about sexually transmitted diseases, PAP smears, pregnancy and contraception after they have become pregnant and their OBGYN approaches them about the subject. As a result, Bolivia has a high rate of cervical cancer and their teen pregnancy (defined here as the number of 15-19 year old girls with a child) approaches one in ten (8.9%), which is twice what the United States experiences (4.1%) (1).

How bittersweet it was, to learn how to use a heart Doppler, but only to reveal a heartbeat of an unborn child to girls of seventeen. These soon-to-be mothers, as a result of this magical heartbeat, would be dropping out of school, leaving behind all hopes of higher education and a salary that would raise them out of poverty. Regardless of the heart-wrenching circumstances, this clinic taught me the most about the difficult social situations which occur in Bolivia.

Hospital de Los Andes

My final week in Bolivia, I had a very moving experience at La Hospital De Los Andes in the city of El Alto. El Alto surrounds the city of La Paz and the population is predominately poor and indigenous. The economic viability of the clientele was very similar to those in Alto Miraflores but the population was much younger, as Dra. Gutierrez sees pediatrics in La Hospital de Los Andes’ outpatient clinic for General Medicine. In El Alto, I experienced parents of children with similar complaints as at Metodista.
But most often, their children’s general health was much worse than those at La Hospital Metodista and their ability to purchase pharmaceuticals (such as fever reducers, pain relievers, or antidiarrheals) was highly limited. The children who visit this clinic are primarily covered under S.U.M.I. and their parents are much too poor to afford other clinics in the area. I would estimate that 90% of children this week were experiencing chronic malnutrition. One girl was 1 year and 4 months and was so malnourished (only 8 kg) she was unable to walk even at this age. Dra. Gutierrez spent ample time with the parents talking about nutrition, in a similar manner to Dra. Urzagasti. It was here that Dra. Gutierrez spoke with me about a current concern many Bolivian medical professionals are having with recuperation in chronic malnutrition.

**Moving Forward**

From my experience, I feel that the issue which needs to be addressed further in Bolivia asks the question: What we can do to enable recuperation from stunting in children? As explained to me by Dra. Gutierrez, many Bolivian doctors do not approach chronic malnutrition and height stunting in visits of a primary medical care or acute medical problems, because they do not have the opinion that anything can be done to promote catch-up growth. It was Doctura’s thought that children had recuperative abilities to overcome height stunting until at least the age of five years old with the proper nutrition and facilities. However, she was not aware of much research available and said many doctors in Bolivia disagreed recuperation was possible. Therefore, in my last few days at El Alto, when this issue was brought up, I decided that I wanted to delve into it further upon my return to Ohio.

Stunting is more than just a matter of height. Observational studies have associated stunting with numerous negative factors. A study by Victora in 2008 estimated that ‘height-for-age at two years old’ is the best predictor of human capital in adulthood, using a meta-analysis of multiple countries, varying in income classes. They investigated other correlations and found that height at two years of
age was positively correlated with adult income, education level achievement, and offspring height, in studies performed in developing countries. Furthermore, there were minor U-shaped associations with height at two years of age and health indicators such as blood pressure, random blood glucose concentrations, blood lipids, and infection rates (2). It is clear that many of the associations are likely common symptoms of chronic malnutrition and poverty. However, the idea that height may be a significant factor in determining income in areas of manual labor which demand high levels of physical viability is not far-fetched. This issue matters because, as Dra. Gutierrez proclaimed on my last day of clinics in Bolivia, “a child should not be banished to be short”, and acquire all the health and economic limitations that come with it. Research needs to be done on how/if we can reverse this process to free these children of a determined future.

It is common knowledge that prevention of chronic malnutrition is best and that there are many integrative health care interventions to do so. Most research to-date investigates how we can best encourage education to improve complementary feeding, along with appropriate prevention of diarrhea, a common contributor in the exacerbation of malnutrition. Agreeing, whole-heartedly that prevention of a compromised nutrition status is key, there is still a question in my mind of what can be done to best promote catch-up growth (and to what age) when the damage of stunting has already occurred.

The Doctora stated that the issue of stunting was a problem as other health professionals believed it untreatable. She stated that it was common policy to proclaim a child stunted following the World Health Organization standards of >2 Z-scores below Height-for-Age standards. If this situation was encountered in the clinic, starting at the age of two years old, Dra. Guterriez would prescribe children 10 mg of zinc for 26 weeks, as this has been clearly shown to prevent further stunting and promote catch-up growth in children. She stated that many doctors do not do this however, and
especially as the child increases in age. She stated she herself finds clear evidence for zinc’s effect on catch-up growth until the age of at least five years, but was unclear after this.

I found similar data in my literature search on the subject. It appears that 10 mg of zinc supplementation for 24 weeks significantly increases growth velocity in children (3,4,5,6). However, the studies varied in the strength of the results as well as the clinical relevance of what was statistically significant. In one meta-analysis of zinc supplementation, the overall result was an average increase in growth velocity of an additional 0.37 cm/year and this was statistically significant (3) – but can that be considered clinically significant when one Z-score on the World Health Organization Height-for-Age scale is 4-5 cm difference, depending on current age (7). However, a study by Mozaffari-Khosravi found much more significant results with 10mg zinc for 6 months with an additional 6 months follow-up for “delayed effect”. I can confidently state that enough research exists to legitimize the use of zinc supplementation to promote catch-up growth in children under five years of age. However, the varying results and the possibility of what Mozaffari-Khosravi refer to as “delayed effect” need to be investigated further, to avoid the economic burden of providing ineffective supplementation which takes away funds for more effective public health measures.

The question of at what maximum effective age catch-up growth is still possible is more difficult. There have been few studies on older children. I did review a few meta-analyses that investigate zinc supplementation in children of all ages and which found supplementation to be significantly advantageous to growth velocity (4). I reviewed one specific study included in this meta-analysis and it found showed promise in the use of 10mg zinc for 12 months in promoting catch-up growth in children from 6-14 years old, all below the 5th percentile of height-for-age. The result was an average increase of 1.7cm more in the males supplemented with zinc versus placebo, the growth velocity being 6.2cm/year for supplemented and 4.5cm/yr for placebo (the lower limit of normal growth
velocity for this age group is 4.5cm/yr) (5). The results for the females were non-significant but such a significant finding in this study calls for more research in this age group. Thus, there seems to be appropriate preliminary evidence to support the use of zinc supplementation for catch-up growth in older children.

According to my investigations, I would recommend the continued use of zinc supplementation of 10 mg for 24 weeks to promote catch-up growth in children from the age of two years old until puberty, at which point additional studies are needed to legitimize the effect of zinc. From my experience in the hospital and clinic settings in La Paz, I believe that this is a realistic measure as pharmacies are readily available at the clinics and elsewhere. Barriers would be not so much infrastructure as funding, as Dra. Urzagasti and Dra. Gutierrez spoke often of shortages of vaccinations and other pharmaceuticals considered gratis by the state. This is recently beginning to happen because the Bolivian government has declared this a responsibility at the city level and therefore the mayors must supply what is needed. It is not necessarily lack of money, but lack of accountability and/or educational resources, as the majors’ transition into their new role takes place. This is only a perspective from La Paz, where the prevalence of stunting is likely vastly less in comparison to some of Bolivia’s Amazonian areas where poverty levels are estimated at 82%, the poverty level in urban Bolivia is 53.9% (8). In the Amazonian areas, I could not speak on the potential for implementation as my experience would not qualify me to. However, I do know that clinics, although minimal, have been established by the government in various parts of the country and therefore the infrastructure for supplementation to promote catch-up growth might be present.

My practicum in La Paz, Bolivia has been irreplaceable. It not only opened my eyes up to many disparities in health, but it has helped me realize many different ways of caring for people of varying cultural beliefs. Furthermore, it has helped me approach subjects of nutrition and medicine with a
greater sense of immediacy in my work. Global health takes a new perspective when you can relate situations you research to real situations you encountered on the ground; for example, my above research on zinc supplementation – the importance of treatment versus prevention would never have been so real if I would not have had this experience. Likely, I would have accepted the conclusion that the best answer was always prevention and that in future generations it would be that simple – we would prevent most childhood stunting. However, after visiting Bolivia, I realize the incredible impact that our stunted children today will have on the generation to come, and how this in itself will inhibit part of our ability to prevent stunting in these future children. I see now why we need more research on how stunting can be reversed if we are to develop quickly into a better nourished world. This is only one example, but I feel that it will affect all my endeavors in research and development because I can extrapolate this experience into many situations with my now greater sense of openness and increased cultural understanding.


Alto Miraflores
Servicios de Los Adolescencias

View of Alto Miraflores

Of the Clinic
This is in a part of town at the top of the bowl where most of the poorest people live. Note how steep the streets are!

Me, the Social Worker and the Dra.

The Consultorio
The small table on the right is ALL of our supplies.
Hospital de Los Andes

Christina walking into the clinic.

Our Consultorio

Rachel & I
Rachel is Dra.’s assistant (she’s 11 years old). She lives in El Alto and is a patient of the Dra. Someday she wants to be a Dra. also! So our Dra. wanted to help motivate her and make sure she has some good influences in education to stay through until she reaches her goal.
Views of El Alto
VIEWS OF LA PAZ

From my kitchen with Mt. Illamami in the background.
From my bedroom window at my homestay.

Plaza de San Francisco & Calle Sagarnaga

Blueberry Café near my home stay-
A frequent meeting stay

The Autobus- Our daily form of transport.
MY HOMESTAY

Martha on the right.

My Bedroom.