Volume 2
Issue 1

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The Official Newsletter of the International Learning Experience in Pharmacy

iLEAP2013

iLEAP 2013 itinerary

Week 1 – Bo & Taiama

- Bo Government Hospital
  - Pediatric Ward
  - Children's Clinic
  - Malnutrition Ward
  - Pharmacy
- Taiama Village Two-Day Clinic

Week 2 – Freetown

- Connaught Government Hospital
  - Women's Ward 9
  - Hospital Dispensary
- Pottal Private Pharmacy
- College of Medicine and Allied Health Sciences (COMAHS)
- Davidson Nicol Medical Centre
- Sierra Leone Board of Pharmacy

Redefining Study Abroad

Twelve days in Africa, lifelong memories!

Jenny Spadavecchia recounts the iLEAP experience, from start to finish.

The iLEAP team departed from John F. Kennedy Airport on May 17th, 2013 and headed to Heathrow Airport in London for a short layover. We were then on our way to Charles de Gaulle Airport in Paris to join the rest of the GSEP group. After over 28 hours of traveling, we arrived in Freetown just after midnight on May 19th, and then traveled for 4 hours via bus to Bo.

We arrived at Bo Government Hospital on the morning of May 20th. We briefly met with the Matron, and then with Dr. Niall Conroy, who gave our group a tour of the hospital (see the "Nursing Education" article for more on our experience with Dr. Conroy). After the tour, we divided into groups to work in the various wards – Pediatric, Children's Clinic, Malnutrition, and Pharmacy. The following morning, the iLEAP team returned to the hospital's Malnutrition Ward to deliver baby formula that we purchased.

Our next stop was Taiama Village, where we set up a two-day free clinic for the village residents (see the "Taiama Village Clinic" article for more information). The welcoming to the village was so magnificent, and we could not believe the parade and festivities that the villagers had prepared for our arrival. Overall, the clinic days were a tremendous success, and the iLEAP and GSEP teams were proud to have worked together in helping so many people.

We spent the remainder of our trip to Sierra Leone in Freetown, between Connaught Government Hospital, The College of Medical and Allied Health Sciences (COMAHS), Pottal Pharmacy, Davidson Nicol Medical Centre, and the Board of Pharmacy.

After a productive and thoroughly rewarding stay in Sierra Leone, the iLEAP and GSEP team returned to the United States on May 29th. Read on to learn more about the memories we made!

pharmacy on the other side, by Matt Andersen

Inside Sierra Leone's Pharmaceutical Industry

One of the benefits of continuously visiting Sierra Leone, is the relationships iLEAP is able to build with future pharmacists. Mahmoud Sesay, a graduate from the University of Sierra Leone in 2011, is now a sales representative for Miral Pharmaceuticals, a Nigerian drug company in Sierra Leone. He generously invited the iLEAP team to attend one of his presentations of the Miral product line at Davidson Nicol Medical Centre, a private primary care hospital in Freetown. While these product presentations are commonplace in the United States, traveling sales representatives are a relatively recent development in Sierra Leone—a nation with no native pharmaceutical manufacturing companies.

Sierra Leone previously hosted a single manufacturing plant which ceased operation before the civil war over ten years ago, and now imports all medications from foreign manufacturers, predominantly based in India, China, and other African nations such as Nigeria. Unfortunately Sierra Leone's dependence on drug importation carries the risk of receiving counterfeit medication, which poses a significant health threat to in a nation already plagued by a struggling healthcare system.

The Pharmacy Board of Sierra Leone is steadily developing countermeasures to eliminate the influx of illegitimate drugs, but as they work to control this problem, hospitals and pharmacies across the country must exercise discretion in product sourcing and deal exclusively with pharmaceutical manufacturers who are certified in Good Manufacturing Practices by the World Health Organization (WHO). Fortunately, Miral Pharmaceuticals maintains sufficient standards in drug production to earn WHO certification, allowing Mahmoud to promote their products with confidence.

Since the trip, Mahmoud has informed the iLEAP team of Miral's long-term plan for expansion, which includes moving a portion of their manufacturing operations into Sierra Leone. Certainly this would be a tremendous step toward economic progress, and the return of pharmaceutical manufacturing to Sierra Leone would strengthen the continuing fight against counterfeit medications while creating much needed employment opportunities.

coming together, by Julia Giuga

Clinic Care for Taiama Village

Clinic day at Taiama Village, the home town of a dear friend to GSEP and iLEAP, Ernest Ndomahina, was a touching experience for us all. The people of Taiama village gave us a warm, heartfelt, welcome. Villagers stood patiently awaiting our arrival alongside the desolate road that leads you to Freetown. Holding a banner specially designed for us, beating to their drums, singing tribal folklore songs, it finally sunk in that we were in Africa. With the personal connection to the village through Mr. Ndomahina, we were able to make all the necessary arrangements for a successful clinic day at the local clinic run by one community health worker Mrs. Alice Kanneh and four staff (3 nurses and 1 lab technician). Due to a lack of resources, Mrs. Kanneh has to travel to Bo to buy all the supplies for the clinic out of pocket since the nearest pharmacies are not well stocked. Using the cost recovery system, she charges patients just enough to cover the cost of the supplies and lives in a room of the clinic building with her children. She welcomed our help.

(Continued on page 3)

(Taiama Clinic, from page 2)

GSEP ambassadors, in collaboration with the clinic staff used an interdisciplinary approach to evaluate 128 villagers. Business students registered each patient, taking a past medical history and history of present illness. Nursing students took their vital signs and sent each patient to either the pharmacy or to our nurse practitioners for further examination. Nurse practitioners made a diagnosis and sent the patients to the pharmacy to pick up their medications. Diagnoses varied from parasitic and bacterial infections, seizure disorder, ulcers, malaria, and hypertension or hypertensive crises, which were commonly seen among the villagers. Pharmacy students, under the supervision of a licensed pharmacist, dispensed medications per request. Pharmacy students and nurse practitioners guided each other in prescribing the correct drugs for each patient. Amoxicillin and Bactrim were used to treat bacterial infection. One week supplies of naproxen, ibuprofen, and acetaminophen were dispensed to patients with aches and pain; keeping in mind the appropriateness of the medication for each patient. Some patients received anti-hypertensive medication and were kept at the clinic for close monitoring until their blood pressure dropped.

A week's supply of propranolol gave the patient enough time to keep their blood pressure controlled until they reached a physician. Other commonly prescribed drugs were albendazole for parasitic infections and combination treatment of artesunate and amodiaquine for malaria treatment and prophylaxis. We suspected one patient to have tuberculosis and another to have a seizure disorder, which required them to seek a physician as soon as possible. Many infants with fever and rash were referred to Bo Government Hospital as well. Otherwise, every patient was sent home with a hygiene pack and any needed medication including ten day supplies of multivitamins, if necessary.

Upon dispensing of medication, with the help of the staff, we provided counseling and made the necessary referrals to Bo Government Hospital for those who needed more urgent care. A local staff member was a part of every section of the clinic helping with translations and healthcare delivery.

By bringing much needed medical attention to the people of Taiama and working together, we made an impact on the lives of many who otherwise would never have received any necessary treatment. In the process we strengthened the relationship between the U.S. and Sierra Leone by working with the local villagers and providing hope to the under sourced village clinic staff.

special thanks for our fundraisers!

A special thank you to all those who organized and supported our fundraisers. Every donation makes an impact on improving patient care wherever we volunteer. Mr. Fernando Gonzalez's fishing trip (below). Dr. Anastasia Rivkin's Zumba Class at the LIU WRAC (right).

Gina Argano's Zumba Class at
Silent Thunder Karate School
494 Neptune Ave, Brooklyn, NY 11224 (below).

iLEAP

A welcoming parade led us to the site of our makeshift pharmacy for our clinic days in Taiama Village!

2013

After resting at luxurious Kona Lodge overlooking Freetown, we were ready to exchange ideas with pharmacists, pharmacy students, and nurses!

meet the 2013 iLEAP team

Initially, I did not know what to expect in Sierra Leone but I was amazed by their efficiency in spite of such limited resources. I had the opportunity to see how our knowledge of our profession could be so valuable and appreciated by villagers, who might have had the chance to see a medical professional. I hope to someday revisit and reach out to as many people as possible by continuing to educate and provide necessary training.

Julia Giuga, PharmD Candidate, 2014

Jenny Spadavecchia, PharmD Candidate, 2014

This trip was a life-changing experience, which has broadened my horizons as a future pharmacist. I was able to see firsthand the hurdles that arise without a reliable healthcare system and how the community must cope with these challenges. I am proud that I was able to educate various members of the healthcare teams and I now have better appreciation of the value of knowledge – a truly sustainable resource.

Working with GSEP and iLEAP in Sierra Leone was a tremendously meaningful opportunity, and my experiences in Africa will surely steer my growth as a pharmacist in the coming years. I am proud to have contributed toward progress in Sierra Leone's developing healthcare system, and I look forward to seeking new opportunities to address health disparities, both domestically and abroad.

Matt Andersen, PharmD Candidate, 2014

Sergelyne Antoine, PharmD Candidate, 2014

I have participated in several community outreach events on and off campus that nurtured my interest in public health. I saw iLEAP as an opportunity to compare healthcare quality between the United States and Sierra Leone. This trip allowed me to experience the differences first hand. I strongly encourage you, regardless of your major, to participate in such programs, not only to broaden your horizons but to find a new prospective on how you can use your skills to make a difference in your field. Hopefully you enjoy our newsletter so much that it inspires you to join the team!

The iLEAP team visited with the Pharmacy Board (left) and Pottal Pharmacy (right) to learn more about how the field of Pharmacy is growing in Sierra Leone.

Sharing Knowledge, Saving Lives

Jenny Spadavecchia and Matt Andersen share stories of LIU students working together with Sierra Leone's local healthcare staff to share the most valuable resource of all: knowledge.

The GSEP/iLEAP team arrived in Sierra Leone with a mission to bring innovative change and to work on sustainable inter-disciplinary projects. Upon arrivial at Bo Government Hospital, the team met Dr. Niall Conroy, an Irish doctor who had been at the hospital for four weeks and will be staying for one year. Dr. Conroy was one of four doctors currently stationed at the hospital. The team was divided into groups and placed in various wards including, Pediatric, Children's Clinic, Malnutrition, and Pharmacy. One pharmacy student and four nursing students were assigned to the Pediatrics Ward, where Dr. Niall asked for our assistance in teaching Basic Life Support to the nursing staff. He explained that the staff has been unable to successfully resuscitate babies over the past several months. The team trained the staff on infant first aid management of choking and CPR. The staff was very eager to learn the proper techniques and life saving skills. The training sessions lasted a few hours, and the nurses practiced on dummies until they managed to complete both sections flawlessly. A few staff recorded our instruction session on their cell phones for future reference. We were very impressed by the staff for their hard work and dedication.

A few days after we left Bo, we found out that our Basic Life Support training helped to save the life of a still-born baby. Hearing how our education session directly impacted patient care was enlightening and made us realize how education can create a lasting change. We hope the staff will continue to utilize the concepts that they learned and find enough value in the training to share this knowledge with future students and nurses.

Hoping to build on our success at Bo Government Hospital, the iLEAP team sought to collaborate once again with the Nursing students by hosting another staff training session at Connaught Hospital in Freetown. We offered our assistance to various staff members during our initial tour of the site on Thursday, and we were pleased to encounter the enthusiasm of the nurses in Ward 9, who expressed a great deal of interest in a medication training session with our Pharmacy students. After discussing their educational needs and interests, we agreed to review the most frequently used antimicrobials at Connaught, particularly their classifications and common dosing, uses, side effects and warnings. We also planned on reviewing practices to ensure safe medication administration, both in general terms and with respect to specific administration routes. In addition, our group created a set of poster-sized charts to aid in presenting the drug-related material, which we left at Connaught as a quick reference tool for the staff.

Nineteen nurses attended our session on Monday morning, and the iLEAP team was presently surprised when the lecture we expected to give instead became a

(Continued on page 8)

Alumni Update>>>

Victoria Rupp, Sierra Leone 2010

Upon graduation from Long Island University in 2011, Victoria Rupp moved to Memphis, TN and completed her PGY1 residency at the Memphis VA Medical Center. She completed her PGY2 residency in ambulatory care with an emphasis in academia with the University of Tennessee, and is now embarking on her next journey as an assistant professor with the University of Hawaii at Hilo. Victoria remains passionate about public health and plans to pursue a Masters in Public Health in the next several years.

West African Fistula Foundation

West African Fistula Foundation (WAFF) is an American nonprofit organization that helps provide safe and sanitary medical care for women who have been stigmatized and neglected by their communities because they suffer from fistulas—a complication of pregnancy which results in uncontrollable urination and defecation.

For more information, or to donate online, please visit:
www.westafricafistulafoundation.org

final thoughts

looking ahead to iLEAP 2014

In the interest of promoting sustainable improvements to the healthcare system of Sierra Leone, the 201 3 iLEAP ambassadors hope to pass our enthusiasm on to all future ambassadors. We sincerely hope that you gain as much as you give during your time in Sierra Leone, and we look forward to learning about all of your rewarding experiences!

(Sharing Knowledge, from page 7)

conversation. We discussed anaphylactic reactions extensively with the nurses in attendance, and we discovered that none of the medications necessary for managing life-threatening emergencies like anaphylaxis are presently available in the wards—all medications must be purchased by the patient or their caretaker at the dispensary prior to administration. The staff members were unanimously interested in changing this policy, and we look forward to facilitating their collaboration with future iLEAP groups in promoting "crash cart" development and training sessions at Connaught Hospital.

We also requested anonymous feedback from the attending staff members, who were asked to share what they enjoyed about our presentation, what could have been better, and what suggestions they had for future presentations. Some noted their excitement for learning that Blood Tonic, a popular vitamin supplement in Sierra Leone, will weaken the effects of certain antibiotic classes when the administrations of the two agents are not properly spaced. Other nurses expressed their appreciation for learning more about their "role and responsibilities as a nurse doing her best job," and that they "hope [we] will come again next year with new methods and techniques." Looking ahead to future visits, the nurses hoped to learn more about a wide variety of topics, including drug interactions, diabetes management, and analgesics, and they even suggested that we present these topics to a larger audience at the School of Nursing.

Our time with the nurses was a great success, and we were proud to learn that our discussions were meaningful, our messages were memorable, and our successors will be welcomed with open arms.

LIU Pharmacy

For more information about iLEAP please contact us by emailing **suzannagim@gmail.com** or find us online at **www.liu.edu/pharmacy**

LIU Brooklyn GSEP Global Social Entrepreneurship Project

To learn more about GSEP's mission to bring innovation and transformative change, contact **LaShaina.Dickerson@liu.edu**

a special thank you

The iLEAP5 team would like to extend a special thank you to Dr. Suzanna Gim for selecting us to go on this journey to Sierra Leone. We enjoyed learning about international pharmacy practice and hope that we were able to impart a bit of knowledge with the people of Sierra Leone.

to our 2013 donors

Thank you!

The iLEAP team thanks you for your generous donations. Your charity and kind hearts enabled us to supply Sierra Leone with needed medications and medical supplies. Your donations allowed us to provide care for so many people during our mission, and our patients were truly grateful! Because of your generosity, our mission was a great success. Thank you so much for your donations!

- Global Social Entrepreneurship Program (GSEP)
- Ernest Ndomahina and all of our friends in Sierra Leone
- The Chaminade High School family, with the help of Bro. Peter Heiskell & Mr. Casey Giordano
- Nature's Bounty, with the help of Robin Jones
- Fishing Trip Fundraiser, with the help of Fernando Gonzalez
- LIU Physical Therapy Program, with the help of Michael
- WRAC Zumba Fundraiser, with the help of Anastasia Rivkin
- Zumba Fundraiser, with the help of Gina Argano
- Basketball Fundraiser, with the help of Kenneth & Mitchell Kun
- Benedict Ho and Helen Kitsios, on behalf of Kmart
- Stella Badalova
- Linda & Lucienne Colombo
- Dr. Anthony Cutie
- Dotty & Jim Daimus
- Doreen Escalara
- Eileen Goldsmith
- Dana & Danny Hendry
- Edie & Cliff Jones
- Connie Law
- Rayhan Mahmood
- Erica & Mike Murphy
- Timothy Nguyen
- Christine O'Connell
- Maria Paladino
- Brijan Patel
- Rachel Quimson
- Axay Shah
- Viral Shah
- Dora & Tony Spadavecchia
- Maria Spadavecchia
- Steven Wang
- Our photographer, DJ Garcia