SUMMER GLOBAL HEALTH EXPERIENCE AT JOOTRH: KISUMU, KENYA

Solange Bayard MS2, Hannah Hoener MS2, Michele Sainvil MS2, and Valerie Valant MS2
University of Massachusetts Medical School, Global Health Pathway

BACKGROUND

During the 6 week Global Health Pathway Experience in Kenya, the majority of our time was spent on the campus of Oginga Odinga Teaching and Referral Hospital (JOOTRH). Pediatric Oncology Ward working on data extraction as part of Ann Moormann Ph.D.’s Burkitt’s Lymphoma study. In addition to the research component of our trip, we were able to visit several different departments of the hospital. Through these shadowing opportunities we learned about the challenges of treating and experiencing disease in a resource-poor environment. Additionally, we visited a birthing class, Agape Children’s campuses, Immun Workshops, and the Fistula Center and left these experiences with a better understanding of Kenyan culture.

OBJECTIVES

- Extract data from medical records of pediatric Burkitt’s Lymphoma patients at JOOTRH for an outcome analysis comparing old and updated chemotherapy protocols
- Gain exposure to the medical system of Western Kenya and learn about provider and patient challenges
- Enhance understanding of global health and how to best incorporate cultural awareness into our careers
- Increase understanding of the Kenyan community and improve conversational Swahili

BURKITT’S LYMPHOMA RESEARCH

Endemic Burkitt’s Lymphoma (BL): An aggressive childhood cancer, found in association with Epstein-Barr Virus (African type) and holoendemic malaria
- Accounts for over half of childhood cancer and 50% of all lymphomas in Western Kenya

Research
- The primary objective of the BL study is to compare treatment outcomes among the pediatric patients treated with the old vs. the new protocol introduced in December 2011
- We extracted data from the enrollee file and pulled key data points (i.e. Body Surface Area, dosing, dates, adverse effects, blood transfusions, etc.)
- Due to discontinuation of paper charts, data was often missing or difficult to find
- Standardized templates in more recent charts show improvement of documentation
- Chemotherapy regimens were often affected or interrupted by delayed diagnostic tests, unreliable drug availability, and financial constraints
- Extent of supportive care was limited compared to that provided in the United States due to both access and funding restrictions

SHADOWING OPPORTUNITIES

Oginga Odinga Teaching and Referral Hospital is a 457 bed hospital located in Kisumu, Kenya.

JOOTRH:
• The Jaramogi Oginga Odinga Teaching and Referral Hospital is a 457 bed hospital located in Kisumu, Kenya.
• In addition to general medical services, patients have access to a variety of specialist clinics, high-tech diagnostics and a 24-hour Emergency Casualty Department
• This private hospital is part of the Aga Khan Health Services international referral system and is linked to the Aga Khan University (AKU) in Nairobi and Karachi. This international referral system allows patients to be referred throughout East Africa depending on their medical need

Ahero: Ahero Sub-District Hospital is a small facility with a male and female medical ward, a pediatric ward and a labor and delivery ward.
• PI Charles Otieno, Ph.D. and his research team are investigating Chloroquine versus a Clindamycin and Quinine combination treatment of malaria

Eldoret: Eldoret Teaching and Referral Hospital (ETRH): Etiology Teaching and Referral Hospital is an 800 bed hospital in Eldoret, Kenya.
• Moi Medical College, which is a collaborating center for the World Health Organization, focuses its’ training at the hospital
• Students and residents from all over the world train at ATRH through the ATRH exchange program
• Eldoret is home to research initiatives in HIV/AIDS, malaria, and environmental studies

OTHER OPPORTUNITIES

Imani Workshops - An organization employing HIV+ artisans to promote empowerment and financial independence
• Birthing Class at a local church: Presented a basic lesson in physiological changes during pregnancy and nutrition, in addition to advocacy programming for pregnant women at work and in hospitals
• Agape Home for Boys and Girls: Assists in returning street children to their families with an 85% success rate

Fistula Clinic at JOOTRH: Partnered with the OGRA foundation, the center focuses on performing Fistula surgeries and increasing community outreach & sensitization

NEXT STEPS
• Data collected will be analyzed to determine if there were significant differences in mortality of pediatric patients with Burkitt’s Lymphoma treated with the older protocols vs. the newer protocol, introduced in December 2011
• To maintain contact with the people at JOOTRH for the development of future projects
• We will have the opportunity to apply to the ATRH exchange program and return to Etiology Teaching and Referral Hospital for a clinical rotation in our 4th year

ACKNOWLEDGMENTS

We would like to express thanks to:
Ann Moormann, Ph.D.
Jolanna Otieno, M.D., JOOTRH Medical Superintendent
Pamela Otieno, Pediatric Oncology Case Manager
Geoffrey Buckle, UMass Class of 2015 M.D. Candidate
Cliff Otieno, Ph.D. Candidate in Genetics
Charles Otieno, Ph.D. and his research team at Ahero Hospital
Jonathan Dick, M.D. of AMPATH
Wendy O’Neura, Ph.D. of Duke University
And many others who welcomed us to JOOTRH, Kisumu, and the surrounding areas of Kenya

Site Visits

Figure 1. In the University of Massachusetts lab at Kenya Medical Research Institute (KEMRI) with Cliff Otieno, Ph.D. student (second from left) and Emily, Lab technician (far right)

Figure 2. Services and rights chart posted on the wall in the pediatric oncology ward. Similar charts were seen in every hospital department at JOOTRH

Figure 3. Helping make up, porridge, donated by USAID for surgical patients while waiting nutrition students

Figure 4. The front of JOOTRH hospital

Figure 5. The University of Kansas Cancer Center is divided into a growth fraction, a late S phase, and a G2/M phase. In the growth fraction, the cells are engaged in DNA synthesis, whereas in the late S phase, the cells are engaged in DNA replication. The G2/M phase is characterized by the completion of DNA synthesis and the preparation for cell division.