



PHARMACY SERVICE WITH PASSION IN KENYA, AFRICA

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KENYA, LOCATED IN WESTERN Africa, is home to a place called Ahero, and a nearby village named Masara. Ahero and Masara are underserved rural areas in desperate need of health care and other resources. In Kenya, the Student Health Assistance Rural Experience (also known as SHARE-Kenya) started with the dream of a young boy named Bonyo Bonyo; this intelligent boy who lived in the village of Masara was given the opportunity to study at a private school by a local judge. Bonyo Bonyo arrived at this school, after leaving his family behind and climbing the mountains in Kenya for days. At this school he grew and developed into a very smart young man, who, after he completed his studies, was offered a scholarship to study medicine in the United States of America. However, he faced an interesting problem—he needed a plane ticket to take advantage of that scholarship. Thus, Bonyo Bonyo traveled back to his home village of Masara and asked both family and friends to help him raise enough money for that ticket. In return, he promised to bring back medical treatment and doctors from the United States.

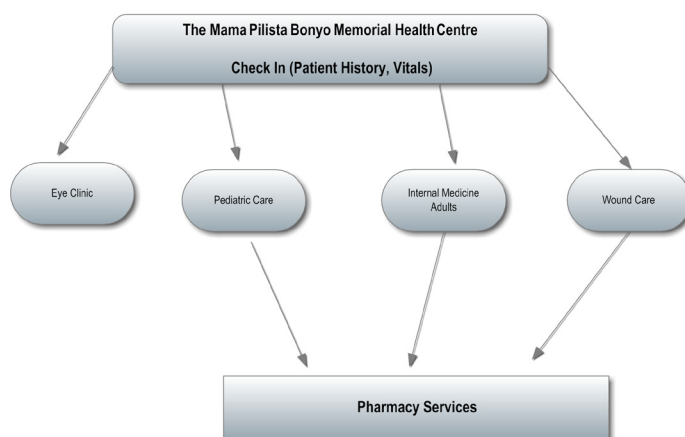
In 1995, Dr. Bonyo Bonyo fulfilled his promise and brought the first group of medical students from The Ohio University College of Osteopathic Medicine back to his village. In December of 2006, the clinic he had planned and worked for was finally finished and officially dedicated. The Mama Pilista Bonyo Memorial Health Centre is the only source of health care to the thousands of people who live in this area. Yearly, SHARE-Kenya gives medical students, pharmacy students, physicians, pharmacists, health care professionals, and volunteers the opportunity to serve this area of rural Kenya.

In November of 2008, fourteen pharmacy students from Ohio Northern University and preceptors Kristen Finley, Pharm D. and Annette Enlow, Pharm D., participated in the program and embarked on a mission trip between Thanksgiving and Christmas that lasted three and one-half weeks. To prepare for this experience, this 16-member medical mission team met six months prior to departure. They discussed common disease states that they would treat in Kenya, and each person received a handbook that contained contact information, immunization prevention, personal health tips, and a reading list of recommended books on tropical medicine. These



students brought the practice of pharmacy to a very receptive and appreciative patient population, a patient population like no other. The experience gained by this group would also prove to be unique. The pharmacy team filled many roles in this distinctive place. The diseases they encountered were not typical of what they had seen in the United States. The most common diagnoses that this medical team treated included malaria, typhoid, schistosomiasis, HIV, TB, intestinal parasites and worms, malnutrition, upper respiratory tract infections and pneumonia, and fungal infections. Because of limited supplies and facilities, the students and practitioners used national guidelines for treatment; they also were forced to “think outside the box.” The first line of treatment was not always available, but most of the time an effective treatment was available.

The clinic members worked in a fashion of organized chaos. Intake was the first step for the patients. At this first step, vitals and a history were taken (with the help of translators). The pharmacy team was an essential component of the intake process, often staffing the majority of positions. Team members took blood pressures, temperatures, respiratory and heart rates, and histories. Once patients completed this intake process, they were seen by a doctor and proceeded to the eye clinic for eyeglasses or sunglasses, if needed. A wound care clinic was also available. The final step for all patients in this health care process was to enter the pharmacy (see Flowchart). Pharmacy student involvement took place throughout the entire flow of the process. If they chose to do so, pharmacy students had the opportunity to work together with physicians in all the various stations, including intake, wound care, and the eye clinic.



The pharmacy team from Ohio Northern University played a significant role in the care provided to the patients of Masara. Not only did they dispense thousands of medications to patients, but they also counseled every single patient who received treatment. During the first hour of the day, the team members made up pre-packaged medications, which were often prescribed, such as vitamins, analgesics, and antibiotics. The pharmacy was one of the busiest stations in the clinic because almost every patient needed medication. Fur-



thermore, most patients received from three to six medications. In the pharmacy, the patient's intake card was presented; on the back the diagnoses were listed. Based on the information on this card, team members would decide how to treat the patient. Students, with guidance from their preceptors as we needed, would choose the medication and appropriate doses. Each dispensed medication was recorded on the card. Next, the individual patient would be counseled about each medication and how to use it with the help of translators. The patients were so appreciative for the medical treatment and medications that were provided to them that any existing cultural differences were not an issue. Throughout this more than three-week trip, both students and teachers also had the opportunity to collaborate with two local pharmacists and more than twenty medical translators from the area. These individuals were a huge asset to the SHARE-Kenya program, because they were able to translate medical information to patients.



This process seemed relatively simple, but there were many challenges along the way. This was the first time many of students dealt with the responsibility of choosing medications and selecting the appropriate dose of the medications for patients without constant verification by a pharmacist. Almost all of these patients were not familiar with taking medications. Team members became very creative regarding labeling systems, since many of those being treated could not read. For pediatric suspensions, each medication was given its own dosing cup, and the proper dose was designated by a line drawn on it with a marker. Often symbols were used to match the dosing cup with the proper medication bottle, since more than one medication was required for most children. For example, a member may have drawn a "star" on the amoxicillin bottle and dosing cup, while a "smiley face" was used on the acetaminophen bottle and dosing cup. Therefore, the parent would not mix up which dosing cup went with which medication. After trying to organize medications appropriately, often patients had to be shown how to open childproof caps, which was not an easy task. Among other things, patients were shown how to use inhalers and spacers. Counseling on GERD and heartburn prevention and treatment as part of a Heartburn Awareness Challenge project through APhA-ASP (American Pharmacists Association Academy of Student Pharmacists) was a part of this mission. The APhA-ASP chapter (from Ohio Northern) had collected several heartburn medications to supply to the medical mission trip, as well as a



handout in the Swahili language that discussed healthy eating tips and ways to prevent heartburn. Although at first the team was unsure of how many patients truly suffered from heartburn, they did counsel and provide medications to over 400 individuals with the condition. Additionally, several antimalarial and antiparasitic medications were given to many, many young children and adults. One of the most commonly encountered problems was that the majority of patients suffered from pain. Countless people were given NSAIDs, acetaminophen, and other various pain relievers. All patients were also provided with a 30- to 45-day supply of a multivitamin until supplies ran out. Because the pharmacy was the last step in this health clinic, members here also became the bearer of bad news toward the end of the trip when medications ran out, especially pain relievers and vitamins.

The entire SHARE-Kenya trip was quite a remarkable and unforgettable experience. Future SHARE-Kenya groups could certainly expand to include health care professionals from all different backgrounds, such as dentistry, ophthalmology, and physical and occupational therapy. Even without a health care background, volunteers were still needed to help direct patients throughout the health center and work on other nonclinical tasks. Donations for medical supplies and medications would gladly be accepted for the patients in need of care and treatment in Masara. Even though hundreds of supplies and medications were collected for this specific trip, it was extremely difficult to explain to patients who had traveled for hours that these items had been completely given out. Monetary donations would also make a great difference, and these can be made to the CARE-Kenya organization. Money that is collected can be used for clean water, electricity, furnishing examination rooms, preventative tests/screenings, and staffing other health care professionals to work in the clinic. It is a hope that with financial support the clinic will one day be open year round. This hope is close to becoming a reality as support for the clinic continues to grow. The amount of personal and professional growth that has resulted from the SHARE-Kenya trip has been incredible, and the experience has carried both students and teachers through tough situations back in the United States. This particular medical mission team treated more than 3,500 patients in this underserved area, where 70 percent of the population lacked access to health care. The need for health care continues to grow in Africa, and our team feels blessed to have been able to contribute through the efforts of SHARE-Kenya. If you would like to find out more information about SHARE-Kenya or would like to contribute, please visit the following website: <http://care-kenya.org/>

