

Tanzania Healthcare Outreach 2018

Health & Hope Foundation is an all-volunteer nongovernmental organization based in the USA. We deliver healthcare and preventative education via portable clinics to those without access to healthcare services.



Health & Hope Foundation Team on location Mara Region, Bunda, Tanzania
Let Passion Spread Compassion!

- Healthcare to include examinations and treatment of dental and vision needs as well as women’s medical care including cervical cancer screening examinations. Preventative education was provided to each patient.
- Delivery of washable menstrual kits to secondary school girls and women with education for use and care.
- Delivery of adult, child, and pre-natal vitamins and nutritional supplements education.
- Delivery of medication for intestinal worms to primary school students.
- Field Microbiology Kits and community involvement testing the safety of community water sources by level of bacterial contaminants and E. coli counts.
- Demonstration and delivery of 3 MSR 200 SE Chlorination Systems to treat unsafe drinking water at point of use.
- Opportunity to Bunda and Mwanza community members to assist and learn as HHF team members.

Community Impact Overview

Services Provided to Villagers	1226
Dental Care	451
Vision Care	594
Women’s Medical	181

565	Washable Menstrual Kits delivered
1,500	Toothbrushes provided
85,000	Vitamins delivered
1000	GI Worm Medication treatment packets delivered
50	Field Microbiology Water Tests provided
3	MSR 200 SE Chlorination Systems provided
21	Tanzanian villagers provided opportunity to participate as clinical assistants, interpreters and helpers

Dental Care



Provider: Dr. Loree Bolin, HHF Director and Team Leader, USA
 Dr. Tim Shields, USA
 Dr. Brittany Nichols, USA
 Dr. Will Nichols, USA

Patients treated: Total Procedures Provided: 451 (Average Surgeries per patient 2.3)
 Total (Male 202) (Female 249)
 Age Distribution 0-9 (3), 10-19 (25), 20-29 (53), 30-39 (92), 40-49 (104), 50-59 (197),
 60-69 (45), 70-79 (19), 80-89 (18)

Procedures and Treatment

Extraction	Routine	339
	Surgical	91
Tumor Excision		1
Cleaning		18
Filling		1
Medication provided	Analgesic	180
	Antibiotic	95
Toothbrush provided		1500
Referral to Muhimbili	Oral Cancer	1

Clinical Observations and Summary:

- Available data states 1-2 dentists per 360,200 residents of Bunda. This is not enough. The lack of access to dental care dramatically and directly limits the health and nutrition of Bunda residents.
- Data was collected per public health standards for decayed, missing, and filled teeth as well as periodontal health. Our results are as follows:
 - 100% of patients seen had dental decay. The mean was 3.3 decayed teeth; the range was 1-6.
 - 100% of patients seen had gingivitis with gingival inflammation. 96% had periodontal disease.
 - 58% of patients had teeth previously removed due to decay. The mean was 2.5 missing teeth per person; the range was 0-12 teeth.
 - Zero patients had a decayed tooth which had been restored with a filling.
- Bunda dental patients presented with acute and chronic pain and swelling related to advanced abscess and fracture of teeth no longer restorable with fillings. As a result, our priority was to extract non-restorable teeth to relieve pain, provide dental health, and comfort. Ideally, in the future Bunda residents may have access to more dentists and expanded treatment options preventing tooth loss by restoring teeth and avoiding the need for extraction.
- 94% of decay seen in Bunda occurred on posterior teeth, not the beautiful front teeth we can see in the smiles of Tanzania, and the main cause of adult tooth loss in Tanzania. A preventative program for dental sealants as available to those in developed countries would dramatically reduce this rate of decay and lost teeth.
- 21% of all extractions were “surgical” requiring use of electric dental instruments to remove the entire abscessed tooth. Many patients seen in Tanzania present with diseased roots remaining as dental instruments to remove the

entire tooth are not available to local dentists. These same tools are needed to save and restore teeth with fillings. Increase in number of dentists with electronic dental instruments will increase the numbers of patients treated and give options to save teeth and increase health.

- 99% of patients seen in Bunda had disease of soft tissues supporting the teeth. 96% of adults presented with periodontal disease. While the access to dental care is a barrier, a community education program could be initiated in schools as well as for adults.

Vision Care



Providers: Dr. Sospeter Ntoke, HHF Team Optometrist, Shinyanga, TZ
 Dr. Nimrud Mzuma, Bunda, TZ

Patients treated: Total 594 (Male 292) (Female 302)

Age Distribution 0-9 (23), 10-19 (35), 20-29 (38), 30-39 (43), 40-49 (87), 50-59 (126),
 60-69 (108), 70-79 (85), 80-89 (53), 90+ (9)

Procedures and Treatment

Glasses Provided	Presbyopia (+)	223
	Myopic (-)	189
Eye Medications	Allergy	159
	Bacterial	11
Foreign Body	Body Removal	1
Additional Diagnosis	Cataracts	135
	Pterygium	45
	Corneal Opacity	7
	Corneal ulcer	1
	Glaucoma	1
	Photophobia	1

Clinical Observation and Summary:

- The need for increased access to vision testing and glasses for visual acuity in the Bunda community is very high.
- This clinic occurred in a time of seasonal allergies so the high percent of allergy conjunctivitis seen was expected. Reminders to wash pollen off the face with water will decrease ‘itchy’ eyes and need for medications.
- Cataracts, age related aggregations of protein in the eye, pose a serious and difficult problem. This is the second major cause of adult blindness worldwide, but more common in sub-Saharan Africa with sun exposure and limited access to surgery. In Bunda the percent of cataracts is on the ‘high’ end of normal for the ages seen (many elderly patients) and for sub-Saharan Africa. The main barrier for cataract treatment for those patients over 65 to receive free government treatment is transport to Mwanza. A positive observation was seen for 14 patients who had received previous cataract surgery.
- Continued education for eye safety by wearing sun and safety glasses can help slow cataract progression, protect against pterygium, foreign bodies, and corneal ulcers.
- Our finding of glaucoma was artificially low as we lacked diagnostic testing equipment. HHF recently provided this field instrument to Dr. Ntoke so glaucoma testing can be provided in future clinics

Women's' Healthcare



Providers: Gwen Piercey, ARNP, USA
 Modesto Noah, Midwife, Medical Assistant, Bunda, TZ
 Dr. Bahati Moses, Bunda, TZ

Patients treated: Total Patients 181

Age Distribution 10-19 (19), 20-29 (45), 30-39 (41), 40-49 (36), 50-59 (13), 60-69 (14), 70-79 (8), 80-89 (2)

Procedures and Treatment

OB/Prenatal Care	32
Vaginitis	31
Pelvic Infection	5
Dermal Infection	17
Breast Problem	3
Uterine Fibroids	2
Cervical Cancer Screening	36
Abnormal Tissue Profile	20
High Grade Lesions	8 Referral to Bugando for surgery
Chronic Abdominal Pain	67 Education, medication, link with dispensary for follow up care

Clinical Observations and Summary:

- Our objective was to provide women's gynecological care as well as screening for pre-cervical cancer lesions. In the course of this outreach a wide variety of women's health care issues were diagnosed and treated.
- The status of routine health care in Bunda is good with access to medications and vaccines. Pre-natal diagnostic tools to test for anemia as well as ultrasound equipment for the fetus will improve health outcomes. HHF donated a micropipette centrifuge to test mother's blood for anemia, as well as a Fetal Doppler and baby scale to help monitor growth and development of fetus and child.
- Cervical cancer is the most frequent cancer in Tanzanian women. The results of Bunda screening exams of women age 25-50 utilizing colposcopy reflect a lesion incidence of 55%. Women with high grade lesions were referred to Buganda Hospital for care via LEEP Procedure.
 - Our visit at Shirati Hospital following the Bunda Outreach confirmed the results found from our smaller sample size. There 9000 women screened in past 5 years via naked eye without benefit of the colposcopy showed 53% have pre-cancerous lesions.
 - The current barrier to treatment for women in both Shirati and Bunda is education about the disease and travel to Mwanza for treatment. Current results at Shirati Hospital, show an added challenge as 92% of the women with high grade cervical cancer are also victims of HIV. For various reasons only a small percent of those identified for surgical referral actually proceed with treatment for cervical cancer.
- A current nationwide vaccination of Tanzanian girls was initiated in April 2018 with the HPV vaccine against Human Papilloma Virus, a known cause of cervical cancer. This will decrease this disease rate in future generations. This is a wonderful program and we are cheering for its continuation and success!!

Washable Mensural Kits *because* Education empowers communities!



Lack of access to menstrual supplies prevents girls from attending school 3 months each year. We delivered 510 washable menstrual kits to school girls in Bunda and Mwanza and 55 post-partum high-flow kits to women attending our women's healthcare clinic.

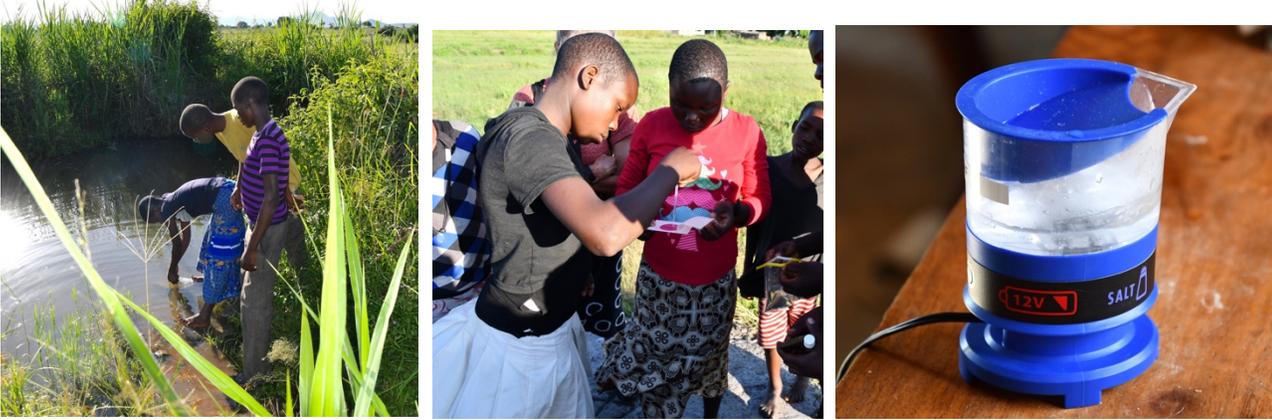
- Sewing instruction was provided in 2-day community classes attended by 35-45 women. The women are excited by this product's use and as a potential business opportunity.
- Women want to continue to make kits locally. Patterns and instructions have been provided for them to succeed.
- The cotton material for the kits is available locally and a substitute for the water proof material needed is available in Mwanza.
- Complete information for kit sewing and assembly can be found at [www. DaysforGirls.org](http://www.DaysforGirls.org)

Medication and Vitamin Delivery



- 85,000 vitamins were delivered to children, pregnant women and adults with in the scope of this healthcare outreach.
- Pregnant women were provided additional gestational supplements.
- A Menbendazole treatment regime to rid of gastrointestinal worms was provided to 1000 Primary School students and clinic patients for treatment of round and hookworm.
- Nutritional education for prevention of water, food and soil born disease and hand washing technique was provided within our healthcare outreach.

Water Safety



Fifty Field Microbiology Kits (EC-Kit) and education for testing safety of community water sources by determination of level of *E. coli* contaminants were provided. A walk to common sources of drinking water was made with local community leaders, secondary students, and teachers. Community members were taught sterile technique in field microbiology water testing, why and how to conduct testing and how to read the results. Classes to treat non-safe water were provided with 3 chlorination units which utilize electro chlorination requiring only local salt, water, and a motorcycle battery.

Results of 10 commonly used water sources tested:

- Coliform and *E. coli* contamination was found in all open pond and open well water sites, and 50% of piped well water sites in Mwanza.
- In Bunda uncontaminated water was found only at the sole pumped well site.
- Additional water sources will be tested in each community.

Three MSR 200SE Chlorine Makers were provided for community use under direction of a local leadership. This will provide:

- Chlorination of community water and education to treat unsafe drinking water at point of use.
- Potential employment opportunities to community members to provide clean safe drinking water.

Respectfully Submitted,

Loree Bolin, DDS

Director, Health & Hope Foundation

www.healthandhopefoundation.org