Eye Care Community Outreach: The Ghanaian Experience

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From left to right: Robert Dolo, Taygan Yilmaz, Kartee Karloweuh

**Robert Dolo** Ophthalmic Nurse

He completed his nursing education at the Wilfrid J. Harley College of Health Sciences (United Methodist University) in Liberia. He received his advanced diploma in ophthalmic nursing from the Ophthalmic Nurses Training School (Korle Bu Teaching Hospital) in Ghana. He also received his diploma in leadership in disaster public health systems management and infectious disease from the Defense Institute for Medical Operations from the USA Embassy in Liberia. He conducts outreaches in rural Ghanian villages, regularly sees patients at the Unite for Sight Screening Centre in Achimota, and assists in surgical procedures at the Crystal Eye Clinic.

**Taygan Yilmaz** Masters of Public Health Student (The Dartmouth Institute for Health Policy and Clinical Practice)

He finished his undergraduate education at Fordham University and was a 2008 Unite for Sight volunteer in Ghana.

**Kartee Karloweuh** Ophthalmic Nurse

He completed his nursing education at the Wilfrid J. Harley College of Health Sciences (United Methodist University) in Liberia. He received his advanced diploma in ophthalmic nursing from the Ophthalmic Nurses Training School (Korle Bu Teaching Hospital) in Ghana. He conducts outreaches in rural Ghanian villages, regularly sees patients at the Unite for Sight Screening Centre in Achimota, and assists in surgical procedures at the Crystal Eye Clinic. He is a member of the Mdecins Sans Frontieres International Association in addition to the Nurses and Midwives Association of Liberia.
From left to right: Dr. James Clarke, Taygan Yilmaz

**Dr. James Clarke:** Dr. Clarke is a graduate of the University of Ghana Medical School. He completed his internship at Korle Bu Teaching Hospital (Ghana) and a general surgery residency at Saarland University (Germany). He obtained a postgraduate diploma in ophthalmology from the West African Postgraduate Medical College. In addition, he holds a diploma in community health and tropical medicine from the Institute of Hygiene and Tropical Medicine (Germany). He sees patients regularly at the Crystal Eye Clinic (Accra) and performs a variety of ophthalmic surgical procedures. He is currently the sole ophthalmologist in Ghana performing cornea transplantation. He is a member of the American Academy of Ophthalmology and serves on Unite for Sight’s medical advisory board. He provides eye care to Unite for Sight in addition to performing surgeries for Unite for Sight patients.

**Taygan Yilmaz**
Map of Ghana located in green (Courtesy of SMART).

Map of 10 administrative regions in Ghana (Courtesy of Gyasi, Community Eye Health, 2006).
The Ghanaian flag was introduced in 1957 after independence from the British Empire. The red band symbolizes the blood of the nation's freedom fighters, the yellow signifies Ghana's wealth, and the green is indicative of Ghana's forests. The black star represents the lodestar of the emancipation of the black man.

Current Eye Care Status in Ghana

- In a population of approximately 23 million people, there exists 52 ophthalmologists and 216 ophthalmic nurses (Gyasi, Community Eye Health, 2006).

Worldwide Blindness Statistics

- 7.1 of the world’s 38 million blind people live in sub-Saharan Africa (Lewallen, Br J Ophthalmol, 2001).

- Africa has 1 ophthalmologist per 1,000,000 population (Sommer, Arch Ophthalmol, 2004).

- Approximately 50% of the blindness in sub-Saharan Africa is due to cataracts (Lewallen, Br J Ophthalmol, 2001).

- Nearly 60% of all cases of blindness are found to occur in women (Lewallen, Br J Ophthalmol, 2001).

- There are approximately 300,000 blind children in Africa (Lewallen, Br J Ophthalmol, 2001).

- Many of the causes of childhood blindness are completely avoidable, since they are preventable or treatable (Gilbert, Epidemiology of Eye Disease, 2003).
Kasseh

(Greater Accra Region)
School children awaiting screening.

Community members awaiting screening.
Ophthalmic nurse providing eye health education for the community with a translator to his right.
Ophthalmic nurse and local volunteer setting up a visual acuity chart for screening.
Eye Care Community Outreach: The Ghanaian Experience

Ophthalmic nurse listening to a patient complaint prior to examination.

Ophthalmic nurse obtaining a child's medical history from his schoolteacher.
Ocular examination by ophthalmic nurse.

Ocular examination performed by volunteer.
Dispensing of medications.

Children prescribed sunglasses.
Prayer service for patients who will be undergoing an operation.

Local children who have been screened.
Asofan

(Greater Accra Region)
UNITE FOR SIGHT!
FREE EYE EXAM TODAY
Local church members celebrating during Easter services.

Local church members celebrating during Easter services were then screened after church services ended.
Volunteers alongside ophthalmic nurse.

Patients awaiting screening.
Patients awaiting screening.

Patients awaiting screening.
Volunteer obtaining a patient’s visual acuity. Once the patient’s visual acuity was obtained, he or she went to the community center (as seen in picture) to receive an ocular examination.

Volunteers obtaining patients’ visual acuities.
Volunteers sorting out the correct prescriptions of reading glasses and sunglasses. The ophthalmic nurse (featured in the background) unloads the medications for the day’s screening.

Volunteer explaining the correct use of medications and reading glasses to a patient.
Volunteer labeling the dosage of a given medication for a patient.
Volunteer explaining to a grandmother (with the help of a translator) how she should administer a vitamin A capsule to her grandchild.

Volunteer (with the help of a translator) explaining to a patient how to correctly take care of his reading glasses.
Mafi Aklamador
(Volta Region)
Community members awaiting screening.
Registration and chief complaints obtained from patient.
Community center in which screening took place.

Patients await ocular examination.
Translator assisting the ophthalmic nurse in the explanation of his findings on examination to a patient.

Volunteer obtaining a blood pressure reading of a patient.
Volunteers awaiting patients' arrival to the glasses dispensing table.

Reading glasses that are prescribed to patients.
Sasekope
(Volta Region)
Entrance to outreach site.

Outside view of school and culture center.
Visual acuity station. It is common during outreach visits to find the most suitable site for visual acuity testing as most outreach sites are not equipped to perform visual acuity in an indoor setting.

Local women assisting in the departure of the volunteers.
Volunteer at glasses and medications stations.

Volunteer dispensing reading glasses through the help of a local translator.
Anomabo
(Central Region)
Town chief with volunteers prior to screening.

Patients greeting volunteers and waiting to register.
Patients waiting to get visual acuity testing.

Volunteers measuring the distance from which patients need to sit in order to ensure accurate visual acuity testing (20 metres).
Volunteer explaining the dosage of a medication to a patient.

Patients selecting sunglasses after receiving their eye examinations.
Asebu
(Central Region)
Church in which screening was held.
Ophthalmic nurse during examination of a patient with volunteer.
Atlas of Various Eye Disorders
Corneal scar located in a patient's right eye.

Corneoscleral laceration with resultant chemosis in the left eye of a patient.
Dislocated lens with secondary glaucoma.

Corneal scar secondary to trauma.
Glaucomaticous left eye with secondary cataract.

Symblephara and corneal neovascularization in an elderly woman.
Bilateral diabetic cataracts in a male believed to be in his 40's.

Phthisis bulbi in an elderly woman.
Bilateral mature cataracts in an elderly woman.

Corneal scarring secondary to blunt trauma from a broomstick.
Non-functional, post-traumatic right eye in a male patient.

Kissing pterygia in an elderly woman.
Esotropie right eye in a female patient.

Cataractous right eye and corneal scarring in the left eye.
Acute red eye.

Conjunctival hyperemia secondary to trauma four days prior to examination.
Uveal prolapse of a female patient's left eye.

Preseptal cellulitis in a male teenager.
Subconjunctival hemorrhage in the right eye of a female patient.

Three-year old child with enucleated eyes secondary to retinoblastoma.
Trachoma in three young children. Note the swollen eyelids.

Buphthalmos and epiphora in a young child with congenital glaucoma.
Crystal Eye Clinic
Crystal Eye Clinic

Medical Lab Services

Services Provide

Consultation
Eye surgery
Refraction
Spectacles
Medical Lab Services

P.O. Box AN 12994, Accra-North

Tel: 021-514 722/3
Outside View of Crystal Eye Clinic.
Registration office.

Optical shop.
Hallway leading to examination room, refraction room, and operating theatre.

Refraction room.
Volunteers in waiting room.

Volunteers prior to entrance into the operating theatre.
Patients awaiting surgery. Ophthalmic nurse delivers a retrobulbar block (regional anesthetic) to pre-operative patients.

Pre-operative patient after receiving bilateral retrobulbar blocks. The red balls are used to relieve pressure.
Operating theatre with nurses preparing for each case.

Surgeon creating scleral tunnel.
Surgeon performing extracapsular cataract extraction.

Surgeon removing cataract.
Eye Care Community Outreach: The Ghanaian Experience

Surgeon preparing eye for intraocular lens insertion.

Prior to intraocular lens insertion.
Surgical instruments used in standard extracapsular cataract extraction.

Post-operative patient rising on operating table momentarily after a bilateral cataract operation.
Hypermature cataract in another patient.

Dense cataract and pterygium removed from a patient’s left eye.
Painful blind eye with conjunctival hyperemia.
Excision of cornea prior to exenteration.

Exenteration (removal of eye contents with retention of the globe).
March 2008 Unite for Sight volunteers outside of the operating theatre with ophthalmic nurses and the ophthalmologist.