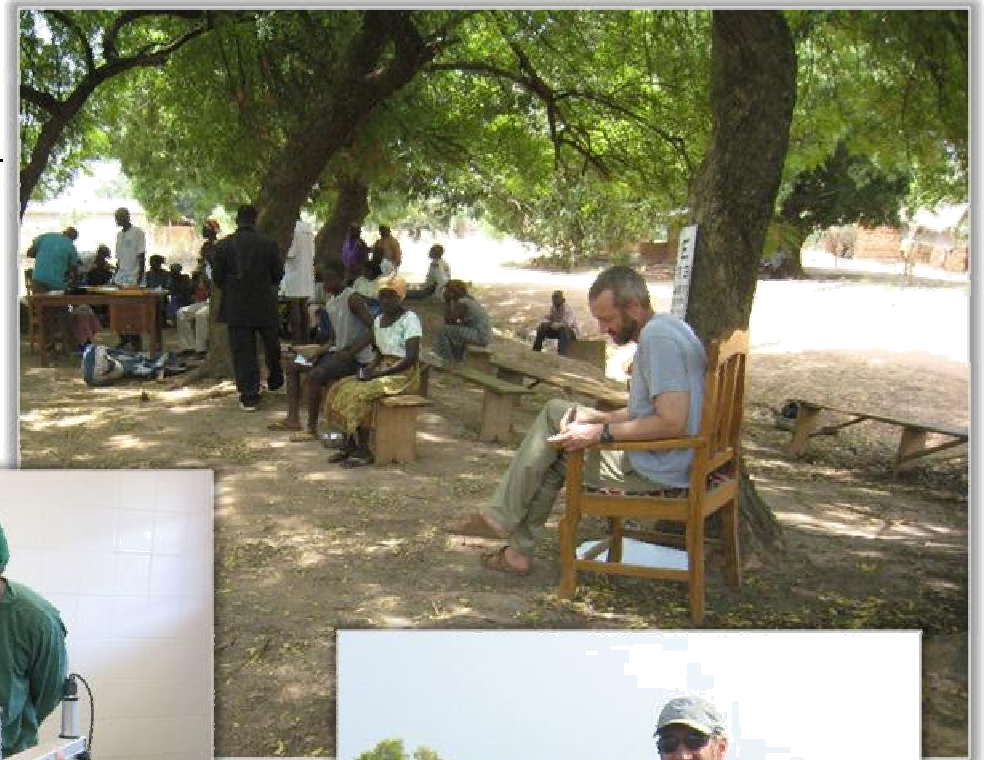


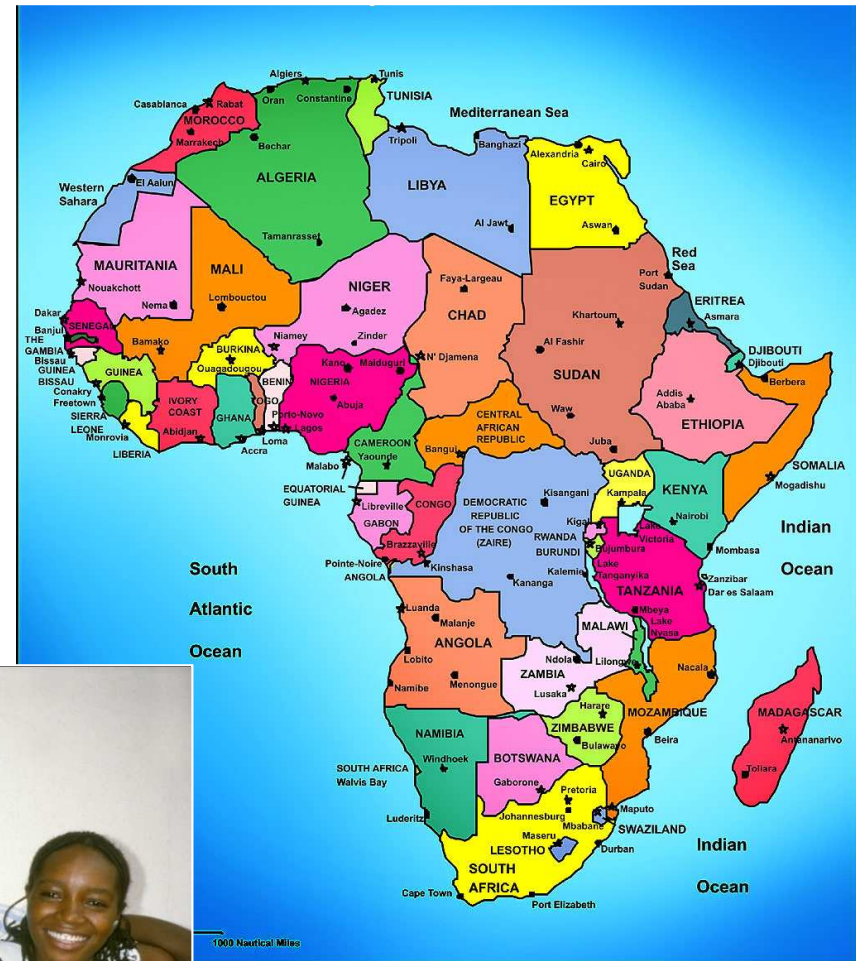
Experiences in vision health care in rural Ghana

Peter de Groot
March 2011



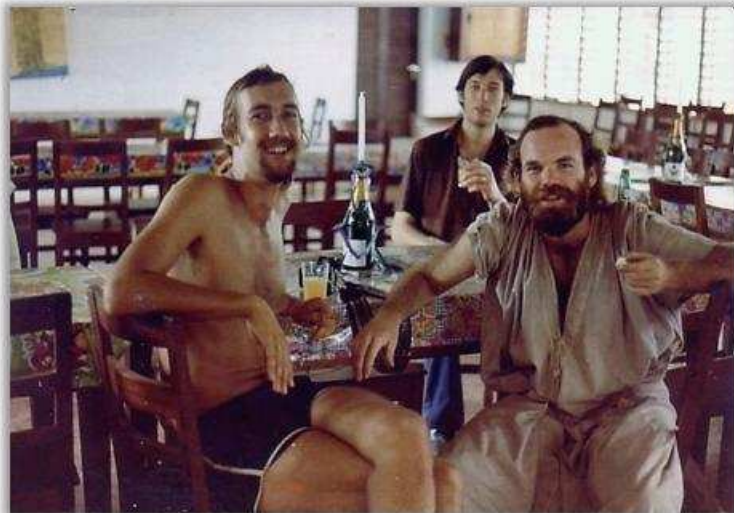
Why Africa?

- I was a Peace Corps volunteer in Benin, West Africa 1980-82, teaching high school physics
- From 1982-1992 I was a part time volunteer trainer in...
 - Burkina Faso
 - Chad
 - Gabon
 - Swaziland
 - Rwanda



Once having visited Africa...

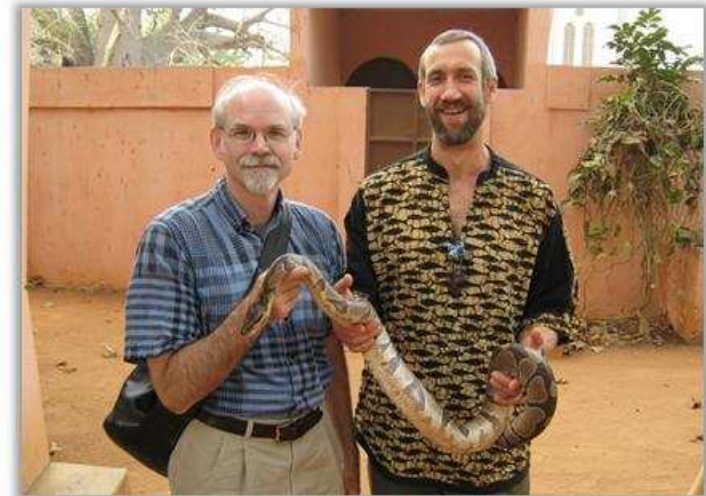
- ...many people return again and again
- My last trip to Africa was in 2007



1981



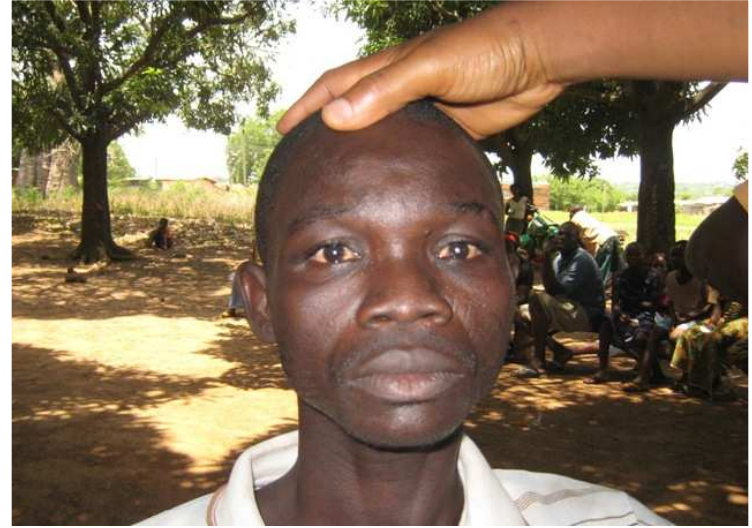
1985



2007

Why vision health care?

- Although my previous work in Africa was in Secondary Education, I witnessed first hand the effects of preventable blindness
- Eye disease is an enormous community burden and causes unimaginable, needless suffering
- Worldwide, tens of millions of people are blind or visually impaired from conditions that are easily preventable and often curable at low cost



So I became a Unite for Sight volunteer...



Unite for Sight...

- Supports eye clinics and local doctors by investing human and financial infrastructures to eliminate patient barriers to eye care
- Promotes a development model that strengthens and empowers sustainable local resources (this is a lot like Peace Corps... I like this)
- Founded by Jennifer Staples, a Yale student, Unite for Sight is now a global nonprofit organization that has provided eye care to 1,200,000 people in North America, Africa, Asia, and Latin America

...and went to Ghana

- First to Accra, then up North to Tamale and Kpandai



Trip preparation took several months

- Unite for Sight requires...
 - A rigorous application procedure with a resume, essay and professional references
 - An online course in eye anatomy and diseases
 - An extensive online course in global health delivery strategies, methods, ethics
- I also enrolled in a continuing education course in ophthalmic assisting at Middlesex Community College (instructor: Ray Dennis)

Training

- ✓ Global Impact Training Completed
Instructions For Global Impact Training
- ✓ Online Eye Health Course Completed
Be sure to submit the online course only through this login page so that your course completion is automatically recorded.
- ✓ Eye Training Certificate Received
Instructions For Training By An Eye Doctor
- ✓ Cultural Competency, Travel Abroad, and Eye Pathology Training Completed

Health & Travel

Please also review Program Site FAQs, Packing List Suggestions, and Advice From Past Fellows.

- ✓ Physician's Certificate of Good Health Received
- ✓ Registered for International SOS Security Coverage, Medical Assistance, and International Health Insurance
- ✓ Emergency Contact Information Received
- ✓ Flight Itinerary Received
Instructions For Booking Your Flight
Flight Itineraries of Volunteers Arriving and Departing on Same Dates As You
- ✓ Embassy Registration Received
- ✓ VISA Confirmation Received
References For Your VISA Application

Fundraising is part of the deal

- Unite for Sight does not have any program fees, however...
- Volunteers pay their own travel expenses and...
- Every volunteer is expected to raise funds through private donations to pay for surgeries performed during volunteer service
- I raised money using a website and personal contacts
- 100% of donations go directly to vision eye care... there are no administrative costs

Peter de Groot's Fundraising Page

This is a 100% secure website encrypted by SSL. Your personal and financial information will be fully protected.

Message from Peter de Groot:

Thank you for visiting my Unite for Sight fundraising page!

Anyone who has traveled in Africa or learned of living conditions in the developing world is aware of widespread vision health problems and blindness from easily treatable diseases and trauma. In addition to the personal tragedy of vision loss, a dramatic statistical fact is that life expectancy of blind adults is reduced by one third and blind children usually die within one to two years of losing their sight.

For 15 days in March of 2011, I will be a volunteer for Unite for Sight in Ghana. I will work with a partner clinic to screen for eye disease, implement education programs, and coordinate sight-restoring surgery for children and adults. Part of this unique experience is training in basic eye care and vision health, which I will complete prior to my volunteer service as part of my commitment to this activity. I am also personally covering all of my costs, including travel and expenses while in Ghana.

I will be working for Ghanaian ophthalmologist Dr. Seth Wanyé, MD and his ophthalmic staff at Friends Eye Centre in Kumasi, the Eye Clinic of Togo's Teaching Hospital and in villages throughout the Ashanti and Mofreba Regions. Dr. Wanyé is the only ophthalmologist in Ghana who distributes and helps with the distribution of eye care supplies.

All patients are due to be seen by the end of the month. Please...

Progress: \$2,865 Goal: \$2,500

click here!

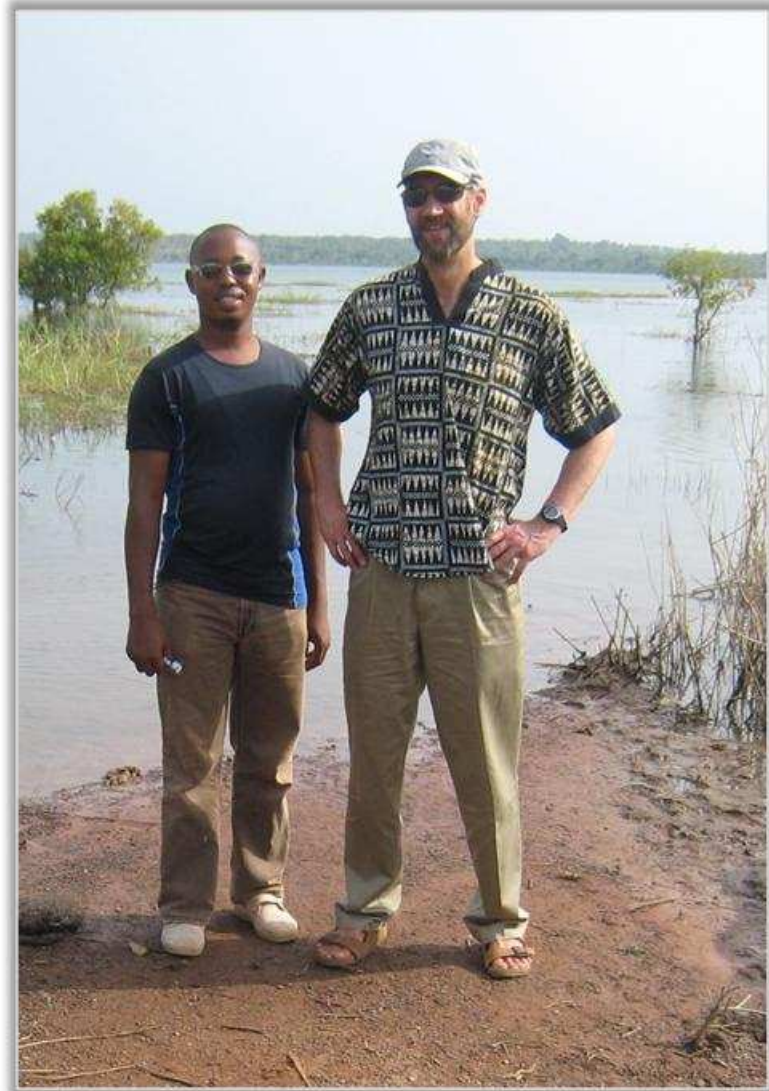
UNITE FOR SIGHT

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<http://www.peterdegroot.net/ghana.html>

In Ghana, I worked with a Ghanaians

- Unlike many medical missions staffed by Americans...
- My task was to work with outreach programs managed and staffed by Ghanaian doctors, nurses and support personnel
- I was the only Team member from outside of Ghana
- The Ghanaian Team members were qualified, dedicated, compassionate and hard working



It was a pleasure to work in such an environment

- In Ghana, and in most of my experiences in West Africa, I have found people to be open, friendly, welcoming, as well as adaptive, resilient and helpful



Outreach personnel stay in clean, simple housing



West African food is quite good!

- Fufu = pounded yam
- Banku = fermented casava and corn
- Red red = spicy red beans
- Plantains
- Common sauces or “soups”
 - Goat
 - Fish
 - Guinea fowl
 - Chicken
 - Okra



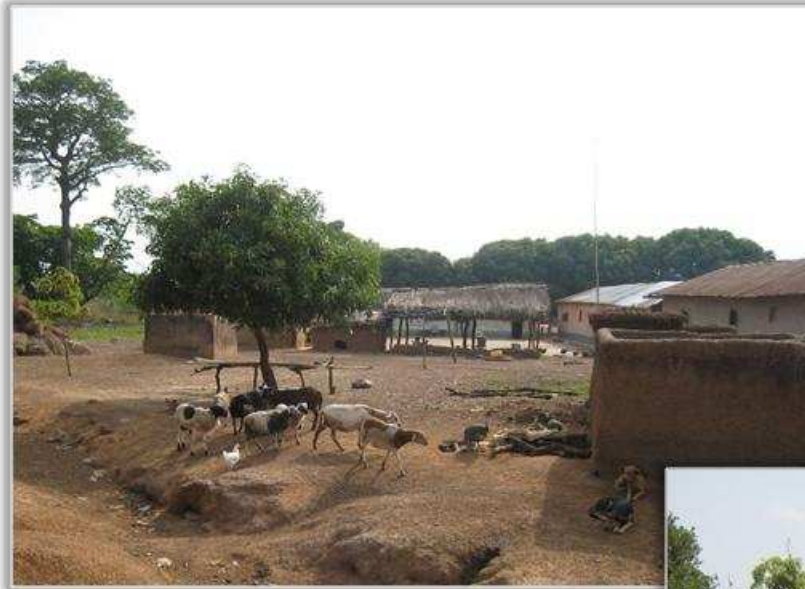
African cities and towns can be noisy and crowded



...although there is increasing access to all that the developed world has to offer



Rural life is more peaceful...



...but more precarious
because of poverty and
poor access to healthcare



Outreach programs target these remote villages



Some communities have never seen an eye doctor. The primary task is to screen the population for serious eye problems that can be addressed in a short amount of time

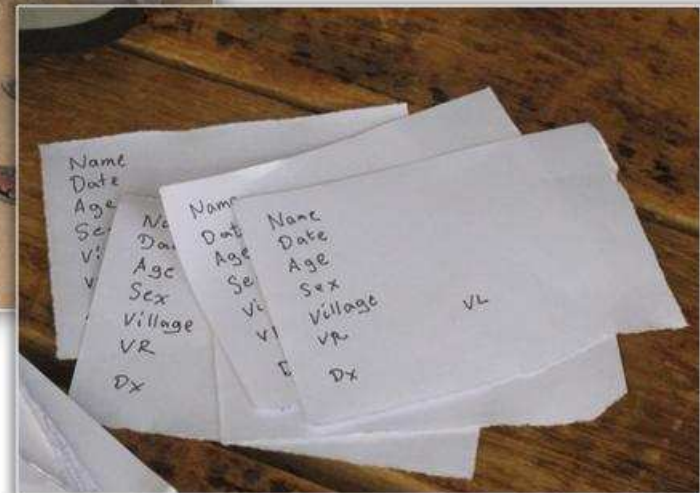
Word is spread ahead of time



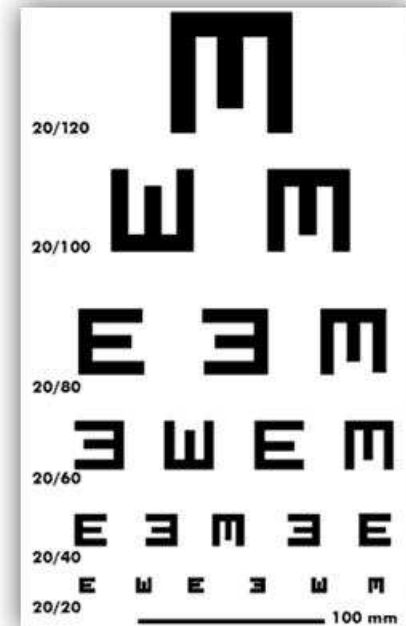
People come from miles away

With an uncertain schedule, they may wait for several hours or even days
until the Team arrives

Patients are registered by name and village

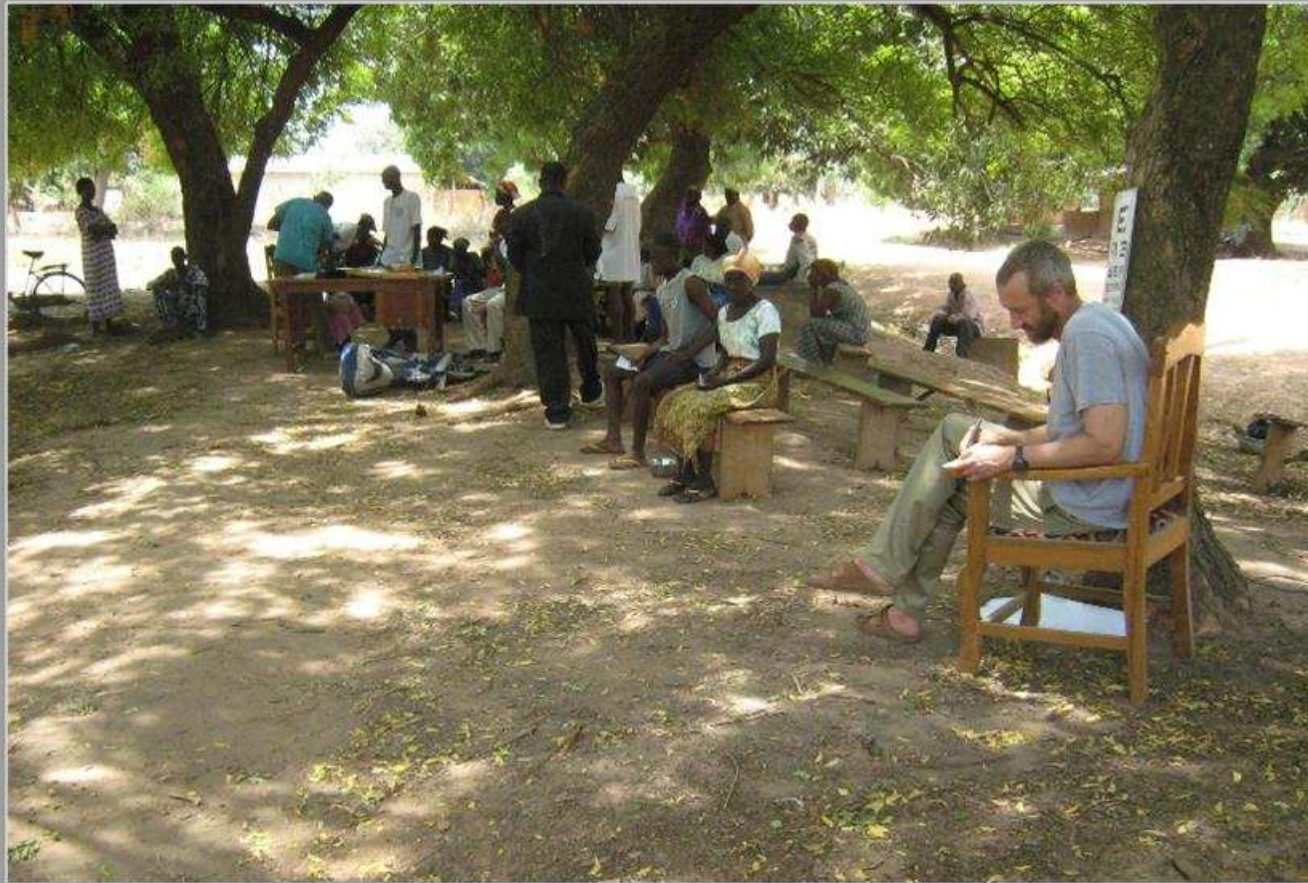


Screening begins with visual acuity testing



This is done with a special type of “tumbling E” eye chart adapted to a multi-lingual population. The patient identifies which direction the fingers of the “E” are pointing

Eye chart testing was one of my tasks



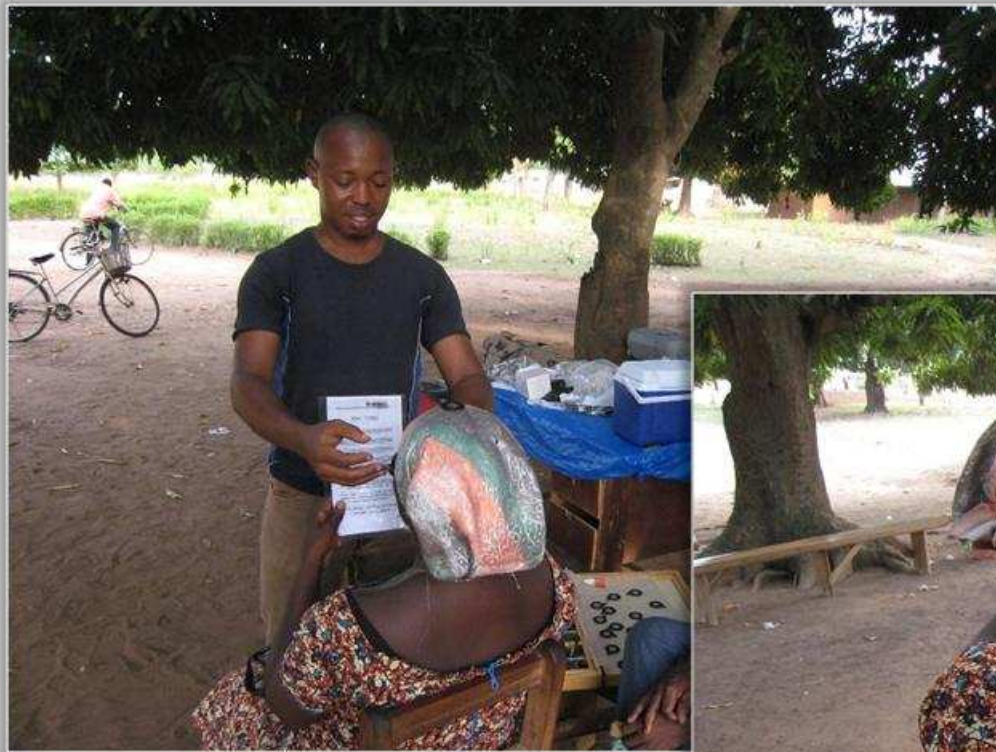
Many of the patients could not see the chart at all, so I used the “how many fingers am I holding up” test

I brought 500 pair of eyeglasses in my suitcase



300 pairs of reading glasses, 200 pairs of sunglasses
Purchased from RestoringVision.org

Reading glasses were prescribed for presbyopia



Sunglasses were also provided...

...to those suffering from UV-related conditions (pterygium) and other risks



Outreach coordinator Ali
with a patient

Sunglasses are adjusted for fit



A further eye exam identifies more serious conditions



The exam is performed by an ophthalmic nurse (Tanimu)

The most common problems that I saw were...

- Cataracts
 - Clouding of the eye lens, leading to partial or total blindness
 - Easily treatable and reversible with surgery
- Trichiasis (from trachoma)
 - Inward turning of the eyelashes, scratching and destroying the cornea
 - Treatable with eyelid surgery, but damage may be irreversible
- Pterygium (often from UV)
 - Benign growth of the conjunctiva that, untreated, obscures the cornea
 - Treatable with surgery, can be prevented with sunglasses
- Glaucoma
 - High intraocular pressure which destroys the retina
 - Treatable with drugs or surgery if diagnosed in time
- Trauma and foreign matter in the eye

Serious problems are booked for surgery



This is Dr. Seth Wanye, Team Leader and the only ophthalmologist for 2 million people in Northern Ghana

People find there way to the clinic early in the day



Often traveling from far away, without a specific appointment time.
Surgeries are performed first come, first serve.

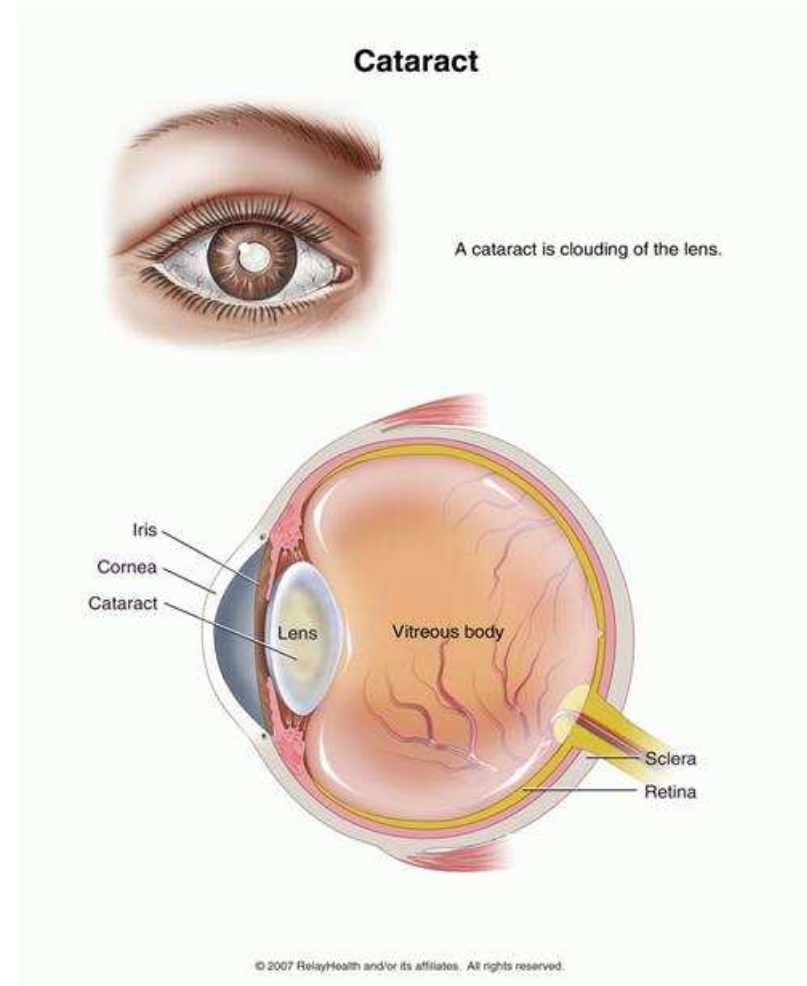
The queue inches forward



Waiting time can be more than 12 hours
Most (but not all) patients are seniors, from 50 to 95 years old

The most common surgery is for cataract

- The lens becomes cloudy, eventually completely opaque
- Common in elderly, sometimes occurs after trauma...
- A common outpatient surgery in the US, a mature cataract is rare here but very common in Africa
- Surgical procedure is to...
 - Immobilize the eye
 - Access the anterior chamber from the sclera
 - Make an incision to extract the lens from its capsule
 - Remove the lens
 - Insert an artificial intraocular lens



<http://ttopometry.com/learningcenter/ataract.jpg>

The first step is to “block” the eye

- 5ml of anesthetic is injected behind the eyeball
- This immobilizes the eye and eliminates any pain



Pressure on the eye encourages absorption of the anesthetic

There are two operating tables



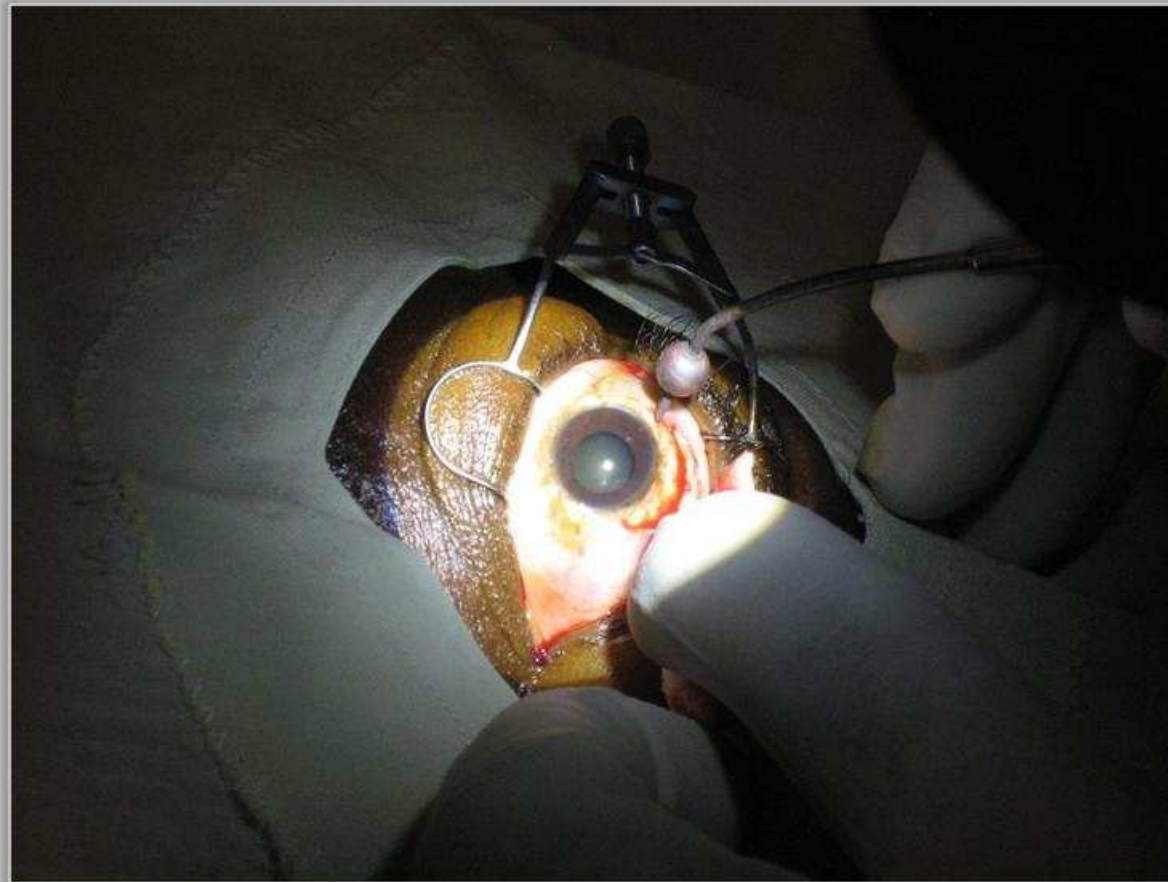
The doctor switches between tables while patients are brought in and out

The surgery begins...



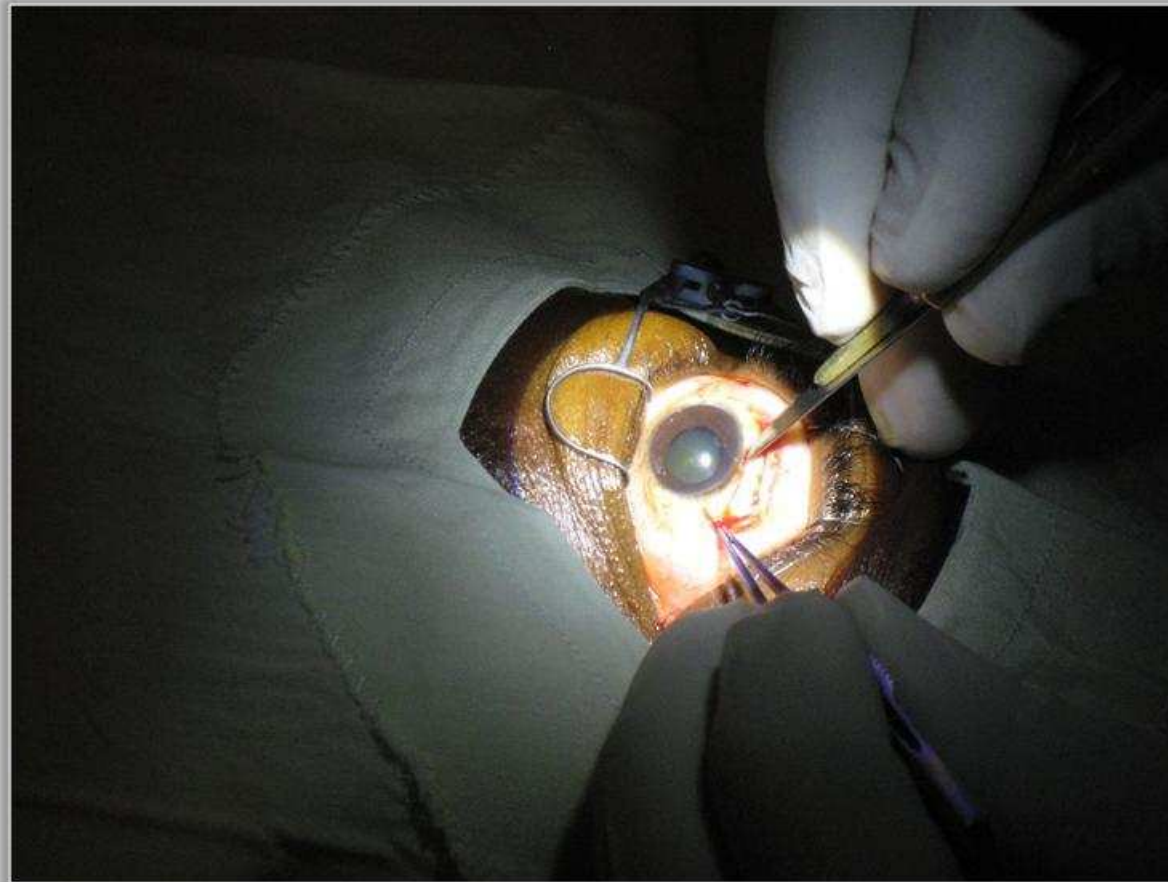
The eyelids are clamped out of the way, and the conjunctiva is cut

The wound is cauterized



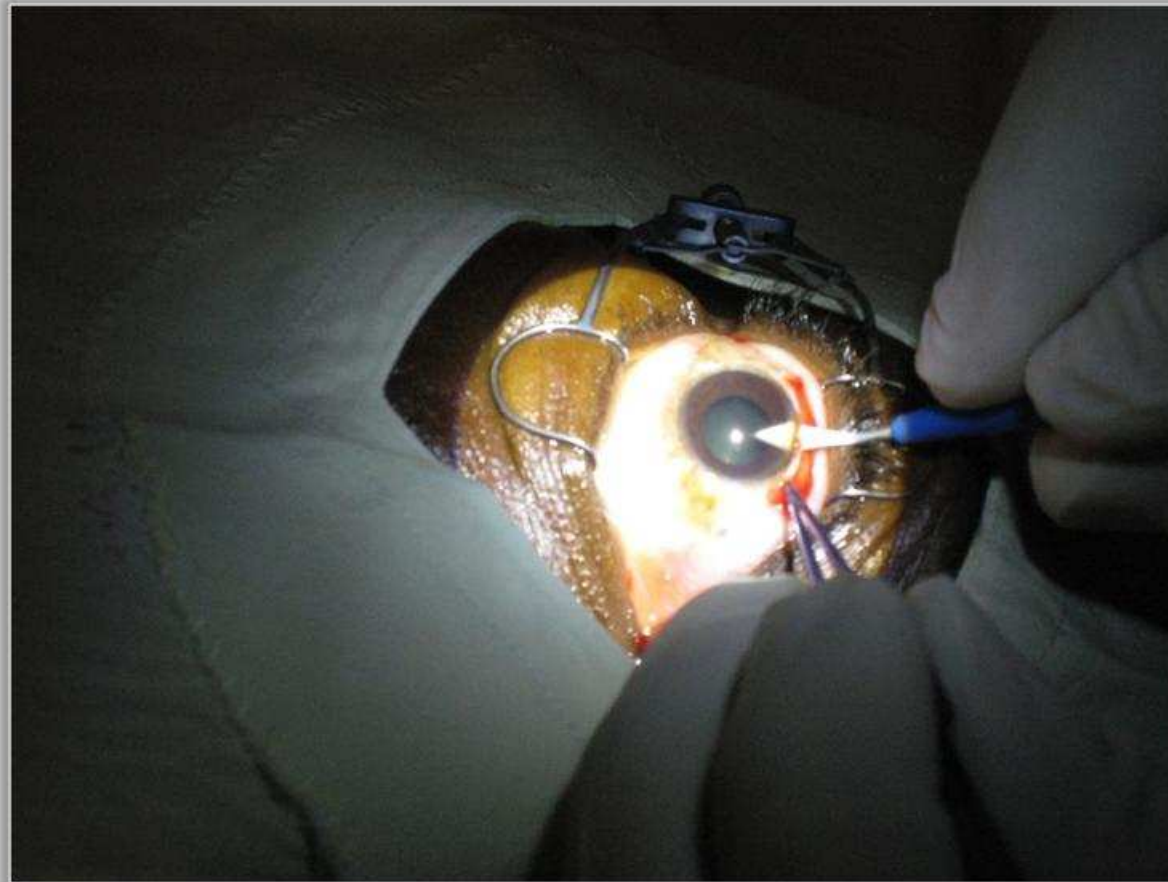
Using a special tool heated by an alcohol burner flame

The sclera is cut partway through, near the limbus



The cut must not be too deep!

The anterior chamber is entered from within the sclera



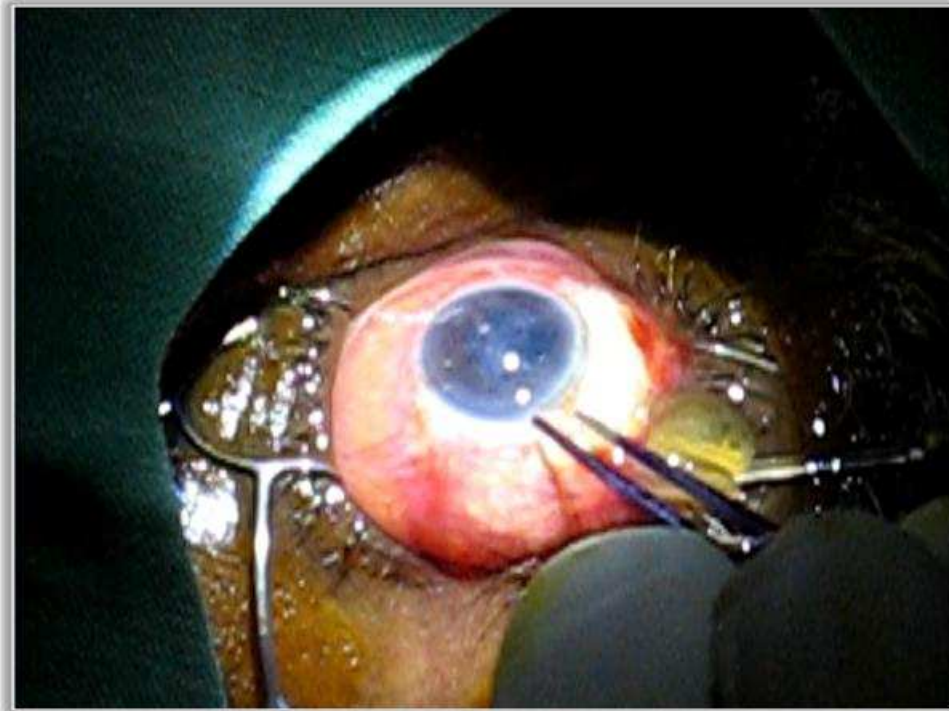
This avoids any damage to the cornea

The lens capsule is cut to free the lens



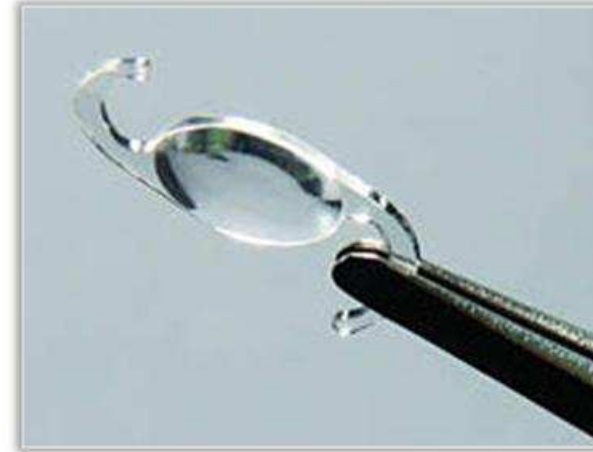
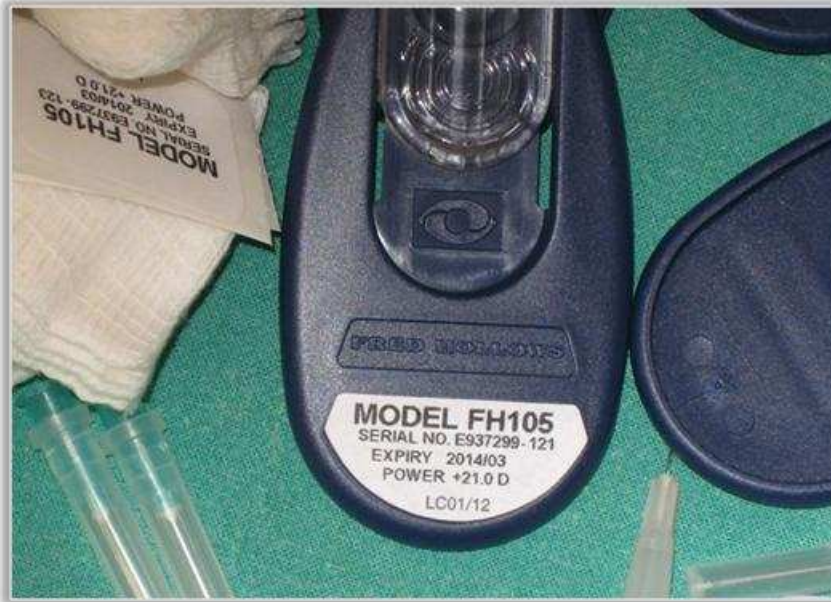
This is an Conventional extracapsular cataract extraction (ECCE), which frees the opaque lens but leaves the capsule in place so that it can later hold the artificial lens

Now the lens is removed!



Fluid pressure does most of the work

An artificial intraocular lens is inserted



The sclera is sutured, and antibiotics are injected into the conjunctiva

I found the surgery to be endlessly fascinating...



...even though I watched the whole procedure dozens of times

There were some interesting, unusual cases...

- Here you can see that the lens is dislocated, dangling off center
- This was caused by a traditional healer, who had previously attempted to move the cataract out of the way using a needle to push it back into the eye globe
- This traditional, 1000-year old method, known as “couching,” is practiced in many rural areas of the world
- The success rate is low, but it is more readily available than modern surgery
- I saw a half dozen examples of unsuccessful couching repaired by Dr. Wanye



I assisted with minor tasks



Such as applying eye shields postoperatively

The day after the surgery...



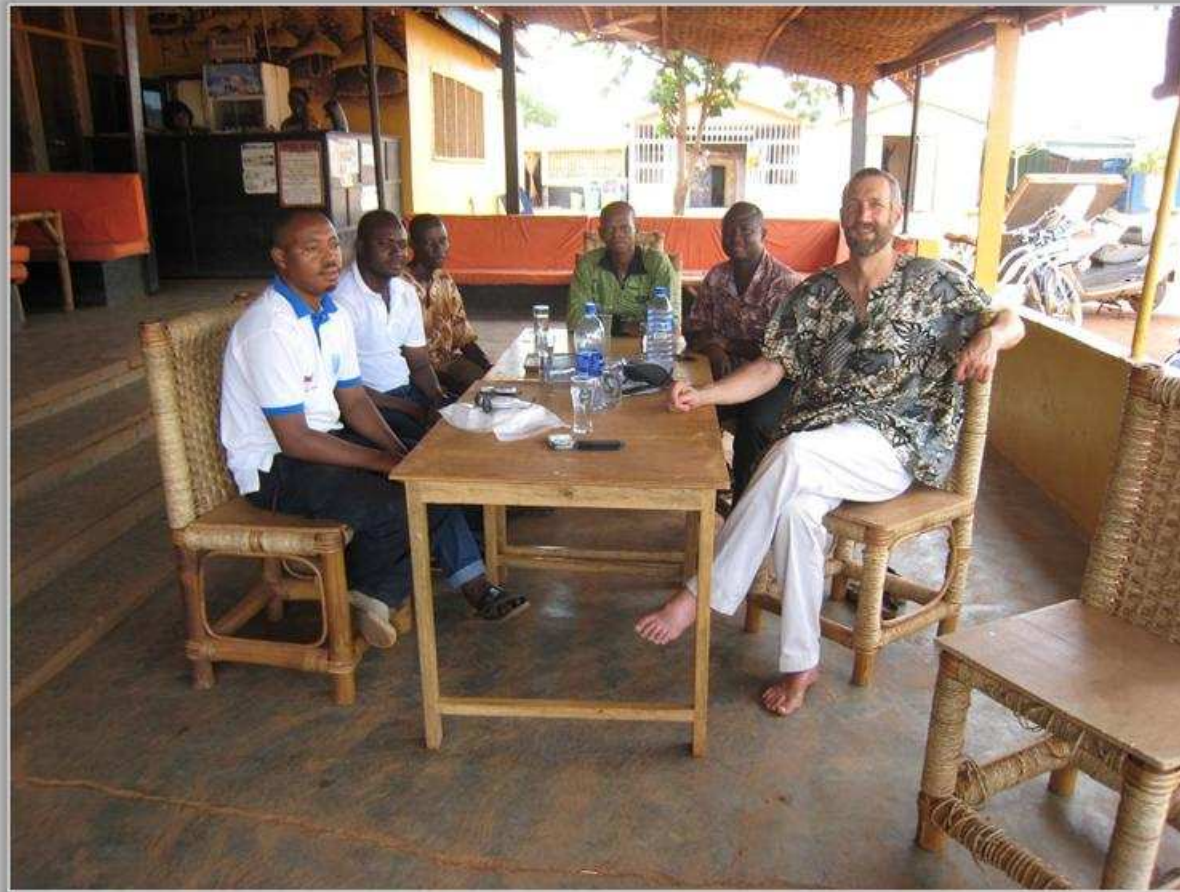
...the patches come off, the operated eye is checked, and some ointments are applied

It takes some moments to adjust to the light



Miraculously, vision is restored!
The “finishing touch” is a pair of sunglasses.

We accomplished a great deal in a few days



2000 patients screened, 500 eye glasses prescribed and distributed,
114 sight-restoring surgeries performed

Will I do it again?



Who knows? At very least, I will continue to support Unite for Sight and my new friends in Ghana

And by the way... the donation web site is still open!

**Unite for Sight
Ghana**






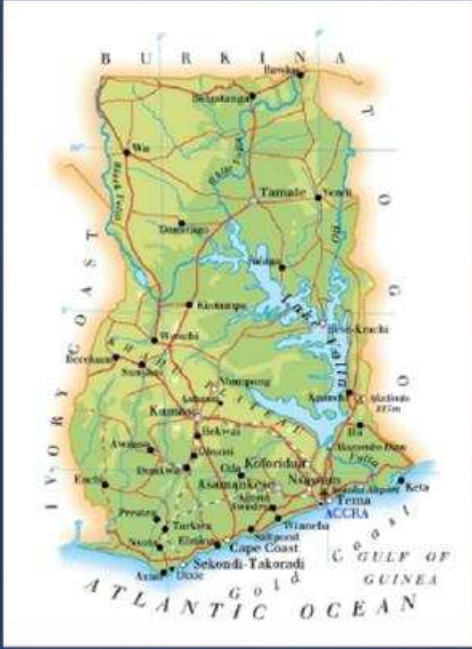

For two weeks in March of 2011, I will be a volunteer for Unite for Sight in Ghana. I will work with a partner clinic to screen for eye disease, implement education programs, and coordinate sight-restoring surgery for children and adults.

Please consider donating to Unite for Sight in support of my volunteer service. I am personally covering all of the costs of my volunteer experience. 100% of the donations will go directly to providing eye surgeries and other vision health services.

Click on the icon below, and **many thanks** in advance for your support!

- Peter de Groot

click here!



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