



2009 A2Z Child Blindness Program
Partners Meeting, Washington, DC
November 2-3, 2009

**Sustainable Vision and Eye Care for
Rural Malawi**

Collaboration between:

International Eye Foundation, Eyes for Africa, Penya
Optical, QECH Blantyre Lions Eye Unit

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Project area, services, infrastructure

- Southern region pop 5.3 million, rural, poor
- Blantyre district 809,397 (46% <15 yrs)
- High blindness rate (.8-1%)
- Little data on RE and demand for spectacles
- QECH/BLEU referral hospital
(3 ophthalmologists; OPD 25,000; 800 surgery)
- Penya Optical: a social enterprise
(1 qualified optometrist in public sector;
6,000 exams/refractions per year)
\$14,000/year to hospital sustainability fund



Summary of project approach

QUESTIONS

- What is the need/ demand for spectacles in schools; in rural areas?
- Can strategies to meet children's needs be integrated into adult services? Advantage and disadvantages?
- Are people willing and able to pay for spectacles? Are the costs to provide optical services sustainable?
- How to leverage capacity of Penya Optical to train "refractionists" and serve rural population?



Summary of project approach

OBJECTIVES

- Train 4 new refractionists (1 yr)
- Screen 40 primary schools (changed to 65 secondary schools)
- Screen at 27 outreach events (changed to 65) for general population at health centers, trading centers, estates
- Follow up 30 children who received cataract surgery
- Training in behavior communication methods

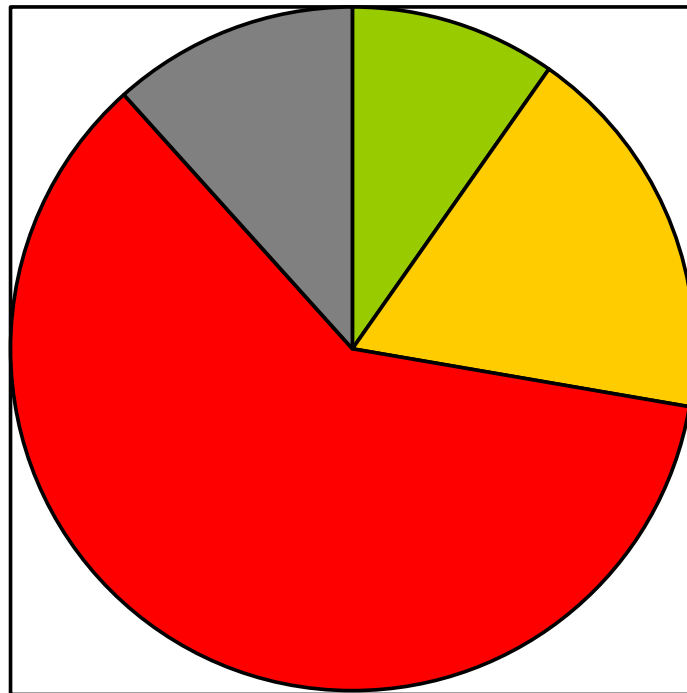


Progress toward objectives (18 mons)

- 4 refractionists trained (3 Malawi, 1 Zambia)
- 65 (100%) gov't secondary day schools
 - 11,659 students (24% <15 yrs) screened
 - 625 teachers screened
- 65 outreach days at 39 locations in 4 districts
 - 3,823 screened
 - 1,240 refracted
 - 1,179 spectacles
- Follow up on 15 children who received cataract surgery

Results – 11,659 students screened

Students

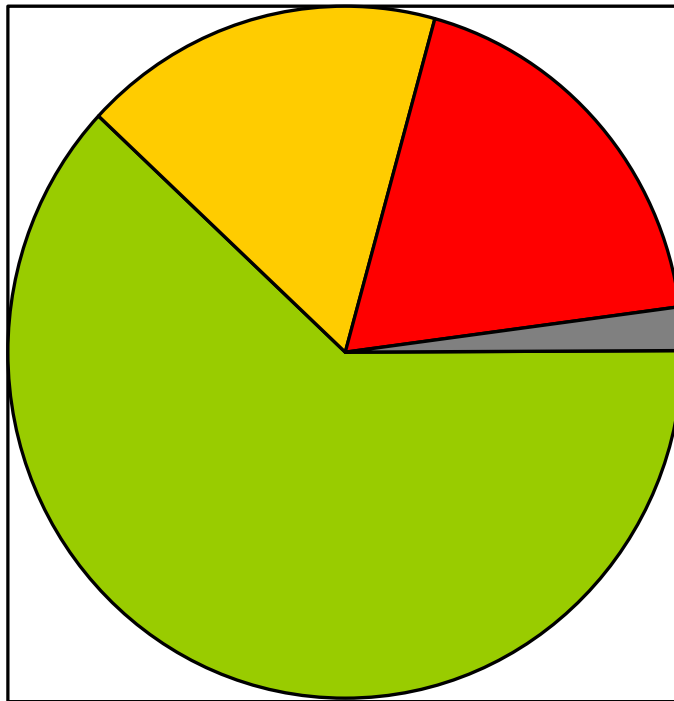


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- 310 (2.7%) identified with a visual problem
- 240 (2%) found with visual acuity 6/12 or worse
- 139 (60%) refracted, 109 (78%) prescribed spectacles, 75 (69%) students received spectacles free
- 624 received simple treatment
- 45 students referred to clinic

Results – 625 teachers screened

Teachers

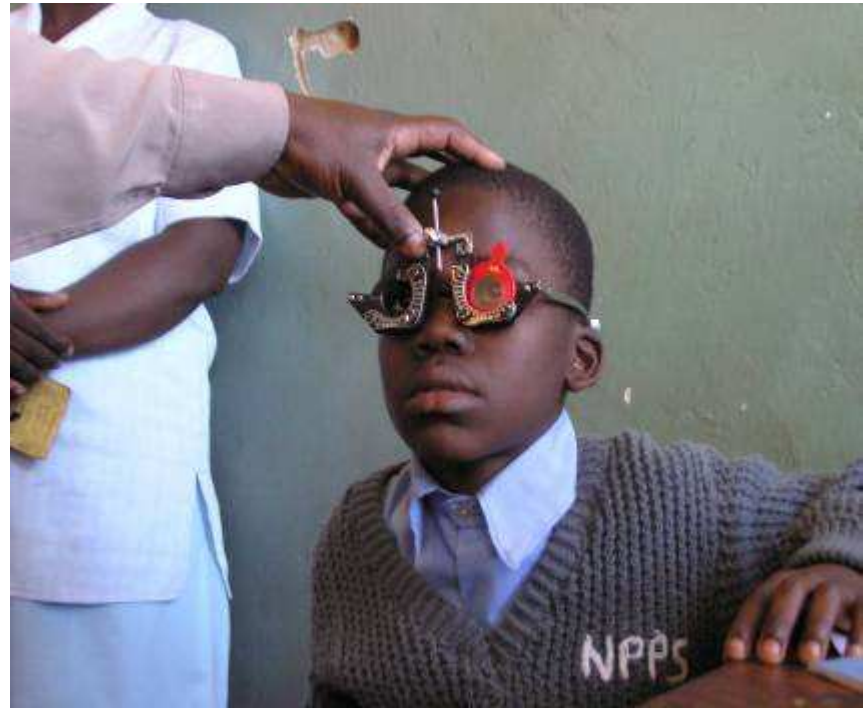


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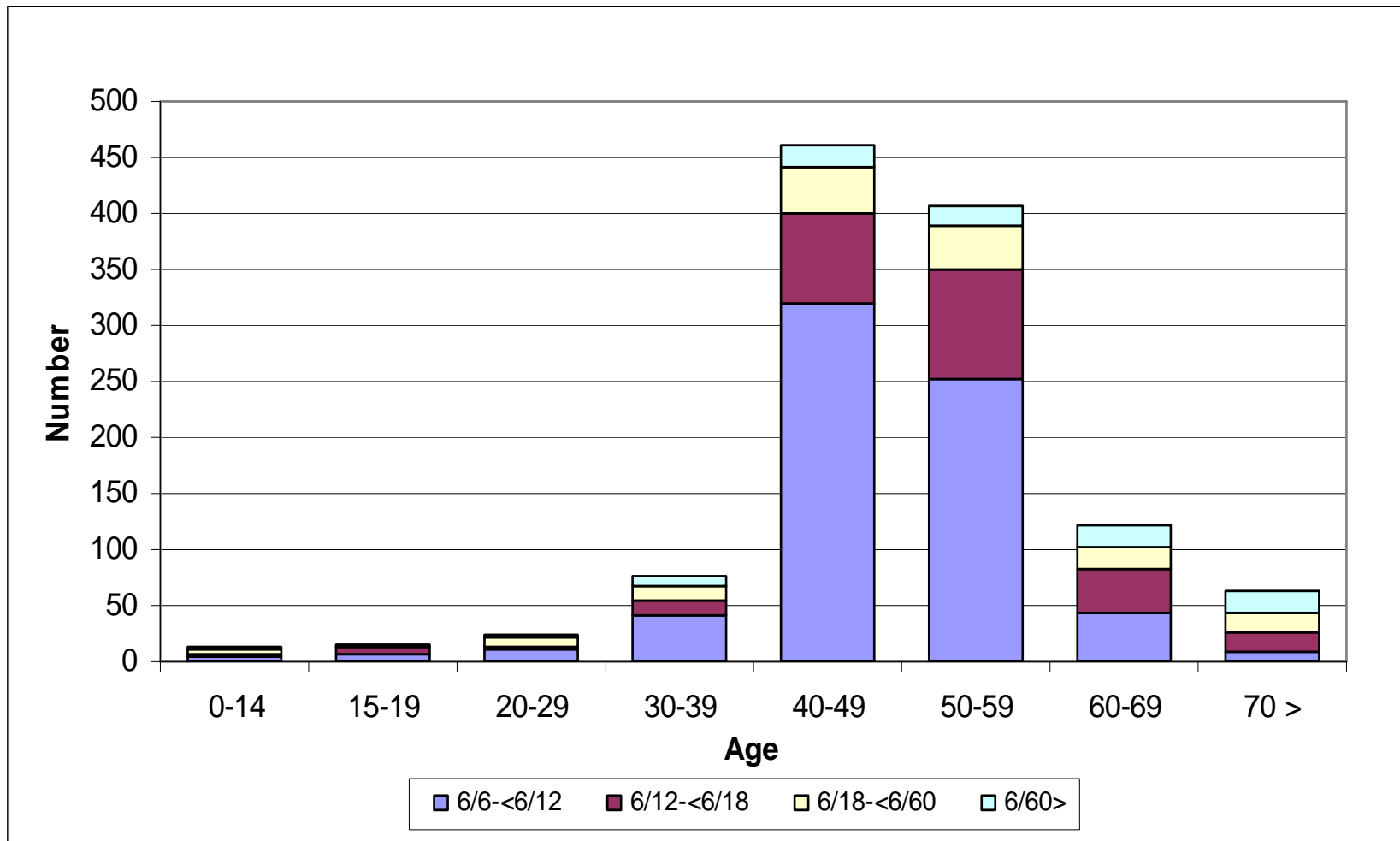
- 429 (69%) with a visual problem
- 150 received a pair of spectacles
- 76% presbyopia, 21% myopia
- Grateful for pair of made to order spectacles; often first pair or replaced an older pair of used/free spectacles
- Majority willing to pay \$3 for new spectacles

Results – 3,823 community patients

- 48% female; 10% (392) children <15 yrs of age
- 43% (1,641/3,823) with a visual problem
- 76% (1,240/1,641) refracted
- 87% (1,079/1,240) willing to pay \$3/pair
- 86% presbyopia
- 22% (855) treated
- Referrals: 5% refraction, 12% treatment, 15% surgery (419 cataract and 150 other surgery)



Community patients – visual acuity



Results – Community patients rec'd spectacles by age & condition

Age	Nearsighted Myopia		Farsighted Hyperopia		Reading Presbyopia		M & Presbyopia		Sub total		Total
	M	F	M	F	M	F	M	F	M	F	
0-14	0	0	4	6	0	3	0	0	4	9	13
15-19	1	6	1	5	1	1	0	0	3	12	15
20-29	3	6	1	2	5	5	1	0	10	13	23
30-39	12	9	0	0	27	25	2	1	41	35	76
40-49	6	11	0	0	210	212	12	10	228	233	461
50-59	8	6	0	0	228	138	15	5	251	149	400
60-69	5	3	0	0	74	38	7	1	86	42	128
70 >	5	5	0	0	36	10	7	0	48	15	63
	40	46	6	13	581	432	44	17	671	508	1,179

Results - Cost & Sustainability

Cost Analysis	Outreach	Revised	School	Revised
Expenditure avg.	\$537	\$158	\$485	\$89
Revenue avg.	\$52	\$78	\$12	\$27
No. persons screened	59	59	189	189
No. refracted	34	34	6	6
No. specs. disp.	18	18	6	6
No. treated	13	13		
No. cataract identified	6	6		
Cost recovery R/E	10%	49%	2%	30%
Cost per person screened	\$9	\$3	\$3	\$0.5
Cost per refraction	\$16	\$5	\$81	\$15
Cost per spec. dispensed	\$30	\$9	\$81	\$15
Cost per persons treated	\$41	\$12		
Cost per cataract identified	\$90	\$26		

67% to 80% salaries/ per diem



Challenges

- Manpower - many demands (competition for) optometrist/ refractionists for clinic, training, and outreach
- Poor economic conditions/ family priorities/ Low level of knowledge about RE and role of spectacles
- Strengthen coordination and referral system on all levels
- Reduce cost of outreach, increase screening output and price to reduce unit cost
- Pediatric surgery capacity/ infrastructure not in place



Conclusions, lessons learned

- Refractionists - intensive training under supervision with practice; dedicated positions
- Schools – low demand; screening a priority when RE <2% (less in primary)? Teachers need eye care; high cost; comprehensive school health program?
- Community – low/moderate demand; few children; new prescription vs. donated free; majority will pay if on-site refraction and spectacles; integration opportunities (419 cataract); CR<50%
- Surgery follow up – late presentation = poor results; comprehensive services prerequisite

Thank you for the opportunity to provide refractive and optical services to children and families and to share our experience with you.

