

Self-Sustaining Community-Based Primary Eye Care

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Introduction : The FOCOMETER and InFOCUS

Four years ago the FOCOMETER was described as a new refractive device for developing countries.¹ The instrument was designed to provide accurate and reliable determinations of visual refractive errors, including correction for astigmatism, for people in poor and remote areas, without the need for complicated procedures or electricity. A non-profit primary eye care development organisation, InFOCUS (Interprofessional Fostering of Ophthalmic Care for Underserved Sectors) was established in 1995. Its purpose was to distribute the FOCOMETER, to train users and to help create access to affordable primary eye care for large, medically underserved populations.

Through the generous efforts of numerous volunteer and goodwill organisations massive vision screening and primary eye care 'camps' have been conducted throughout the developing world. In spite of this, very large populations remain without access to primary eye care, and with serious consequences due to uncorrected refractive errors. Among the medically underserved, at least 400 million people – or, as expressed by the late Joe Taylor, about 30 of every 100 patients² – are still in need of visual refractive correction in order to carry on productive lives. The



Tanzania VPEP's (Village Primary Eye Care Providers) learning Focometry protocols from Optometry Professor Vlerian Lyimo and Dr Simon Gould

Photo: IB Berger & BR Kazdan

capacity of eye care specialists (ophthalmologists, optometrists, ophthalmic nurses and technicians) to provide the necessary care is limited. The main problems are an insufficient number of health care workers capable of delivering primary eye care; poor distribution of eye care specialists practising in remote or urban poverty areas, and a lack of or inadequate equipment and supplies (spectacles and pharmaceuticals). Many excellent projects have shown that primary eye care *can* be delivered to the most difficult-to-serve communities (FOCOMETERs are currently being used in over 40 countries). However, the vast majority in virtually every developing country, and many in medically isolated areas of wealthy countries, remain outside the reach of reliable, permanent services.

Strategies : Target Populations

The strategy InFOCUS uses is to equip village and community health workers, primary eye care providers and other community-based interested individuals with the knowledge and skill to improve vision, prevent blindness and improve health, while earning an income in the process through the sale of eye glasses. This approach was developed in direct response to the World Health Organization Bamako Initiative, a recommendation for income-generating efforts to be established in local communities.³ Programmes



Karen refugees from Burma using the FOCOMETER

Photo: IB Berger and BR Kazdan

recently begun in India, Tanzania, Thailand, Mexico and Brazil illustrate different models for InFOCUS strategies. All involve village-based primary eye care providers trained to assess eye health, offer eye health education, prescribe and dispense eyeglasses, and treat or refer individuals presenting certain eye and systemic diseases. InFOCUS programmes, therefore, include standardised training and supervision of village-based primary eye care providers by local eye care professionals or public health authorities. It has been found that each primary eye care worker can earn an adequate income by serving a population of around 10,000. The Table shows the target populations for trained village-based primary eye care providers.

Lori Nayanjyot (India) is a private company where the eye care workers are paid a salary. It is expected that after one year of operation, the 16 Lori Nayanjyot primary eye care providers will each be examining about 20 patients per day, (i.e., 6,000 per

Table: Examples of Primary Eye Care Programmes utilising Village-Based Self-Sustaining InFOCUS Strategies (see Footnotes)

Programme	Location	Number of village-based primary eye care providers trained	Target patient population
Lori Nayanjyot, Pvt. Ltd.	Jalgaon District, Maharashtra State, India	16	160,000
Tanzania Healthy Eyes & Clear Vision Program	Kilimanjaro Region, Tanzania	11	110,000
Thailand	Refugee villages along Thai-Burma border	220	2,200,000
Mexico	Texas-Mexico border towns	50	50,000 (children)
Brazil	Selected remote and poor towns throughout the country	20	20,000

year) and dispensing about 2,000 spectacles per year. At this rate, 1.6 years are required by the Nayanjyot team to examine the entire target population. In Tanzania, the programme is run by optometrists and the Ministry of Health. InFOCUS trained 11 village-based eye care technicians, who receive a salary from the district optometrists. In Thailand, a large refugee population is served by village medics trained to incorporate primary eye care into their health care programme. In communities along the Texas-Mexico border, Rotary Club members examine children and sell affordable eye glasses to those who need them. In Brazil, opticians from the eastern part of the country establish eye care outlets in interior towns and villages, supplying both the FOCOMETER, training and 'wholesale' affordable spectacles to village-based workers. This approach is now embraced by almost 200 vision and health care agencies, missionary groups, volunteer eye care professionals and government agencies, who have acquired FOCOMETERS and are providing training to support permanent programmes.

Economic Initiatives: Appropriate Technologies : Preventive Protocols

Economic incentives from the sale of affordable eye glasses motivate village-based providers and encourage expansion into neighbouring communities. The availability of affordable spectacles from existing suppliers (primarily in India) is increasing due to the increased volume of dispensing at the village level. InFOCUS is also investigating new and appropriate technologies (e.g., generating lenses from

liquid monomers and polymerization) which can be brought closer to the target populations. In addition, preventive protocols (e.g., ivermectin and vitamin A distribution, dry eye protection, and health education for sanitation and control of eye infections) are gradually being incorporated into the InFOCUS training curriculum.

The programmes described above are demonstrating that even in the poorest areas, people are willing and able to pay for eye care services when they are available in their own villages. Equipped with the FOCOMETER, training and a reliable source of low-cost spectacles, community-based providers are helping several underserved populations become substantially self-reliant for primary eye care services. These programme models may serve as prototypes for replication in areas with large unmet needs for basic vision services.

For further information about InFOCUS or to obtain a FOCOMETER, contact InFOCUS, 327 Tealwood Drive, Houston, Texas 77024, USA or by e-mail: rady@ibm.net.

InFOCUS has also established the Center for Primary Eye Care Development in conjunction with several universities to promote training and research for organizations involved with international health development.

References

- 1 Berger IB. The FOCOMETER... a new refractive device for developing countries. *J Comm Eye Health* 1995;8:12-13.
- 2 Taylor J. Manpower development in prevention of blindness. First Alan Johns' Memorial Lecture. The Partnership Committee for

Prevention of Blindness (The World Health Organization with Non-Governmental Organizations), 20 February 1997.

3 The Bamako Initiative. The World Health Organization. Bamako, Mali, 1987.

Footnotes

India: Khalil S. Process Evaluation Report, Lori Nayanjyot Pvt., Ltd., Jalgaon, Maharashtra, India, 1998 (unpublished). Was conceived, implemented and currently directed by David Dunaway.

Tanzania: The Tanzania Healthy Eyes and Clear Vision Program is being developed by Valerian Lyimo, Vice-Principal of the School of Optometry, Moshi, Tanzania; Dr Simon Katenga, Division of Preventive Services, Tanzania Ministry of Health, and Dr Simon Gould, InFOCUS.

Thailand: Primary eye care development for refugee populations in southeast Asia has been undertaken by Dr Jerry Vincent with support from the American Refugee Committee, the International Rescue Committee, the United States Agency for International Development, and InFOCUS.

Mexico: Rotary International District 5930, under the leadership of W W Janecek, District Governor; LeRoy Forester, Past-President of the Alice, Texas Rotary Club, Romulio Garcia, Current President of the Alice, Texas Rotary Club, and the Rotary Club of Ciudad Miguel Aleman in Mexico, have pioneered and developed the international eye care programme for children along the Texas-Mexico border.

Brazil: Rural primary eye care development in Brazil has been organised by Dr Leda Antunes Clark, InFOCUS.

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Abstract

Compliance with Timolol Treatment in Glaucoma

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Purpose

To assess levels of compliance in elderly patients on timolol eyedrops for glaucoma.

Methods

A postal questionnaire was sent from the general practitioner to 86 patients over 55 years of age on repeat prescriptions for

timolol eyedrops. The questionnaire asked details about the duration of treatment, family history, the level of understanding of the disease and the importance of treatment, other regular medication, side-effects attributed to the drops and how often patients omitted their drops. A search of practice and local hospital dispensing data was carried out to assess how frequently monthly repeat prescriptions for timolol eyedrops were actually dispensed over a 12 month period. This allowed a total volume to be calculated for each patient.

Results

Twenty-four percent of patients admitted to omitting eyedrops either occasionally or frequently. Fifty-one per cent were found to have had insufficient drops dispensed to comply with treatment as prescribed. In non-compliant patients the mean period without drops was 85 days of the year, with a maximum of 165 days.

Conclusion

Compliance with treatment is poor and patients underestimate their level of defaulting when questioned.

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