

CONCEPTS OF PRIMARY EYE CARE

Eye Diseases

TRACHOMA
VITAMIN A DEFICIENCY
ONCHOCERCIASIS
Focal diseases
Start in childhood

CATARACT
GLAUCOMA
(DIABETIC RETINOPATHY)
Affect mainly adults
Occur everywhere

ACUTE RED EYE
Affects any age
Occurs everywhere

Activity

PRIMARY PREVENTION
– in the community through PHC
SECONDARY PREVENTION
– identify and treat in the community

IDENTIFY AND REFER
FOR TREATMENT

DIAGNOSE AND TREAT
or DIAGNOSE AND REFER

Who Can Be Involved

Teachers / Community Leaders
Traditional Birth Attendants / Healers
Primary Health Care Workers
Community Based Rehabilitation Workers
General Physicians

Community Based Rehabilitation Workers
Primary Health Care Workers
Optometrists
General Physicians

Primary Health Care Workers
General Physicians

Essential Components of Primary Eye Care

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Introduction

Primary eye care activities cover the following two areas of community health services.¹

1. Clinical service component
2. Eye health protection and promotion component

It is most important that most activities are initiated and sustained by community members themselves. The eye sector helps the community, complementing what they do in their day-by-day activities.

The essential elements of primary eye care should be determined by careful study providing a 'community diagnosis', based on an epidemiological approach. The study will list community eye problems in order of priority. To this end the study should be planned to include the following information:

1. **Magnitude: M** – prevalence and incidence, given by the number of community members suffering from particular conditions and new cases expected in a given period of time.
2. **Implication: I** – social and economic consequences from the condition, given in terms of expenditures, work loss, absence from school, etc.

3. **Vulnerability: V** – availability of effective means of intervention.
4. **Cost: C** – resources needed for control programmes.

Priority may be known from:²

$$\text{Priority} = (\mathbf{M} \times \mathbf{I} \times \mathbf{V}) / \mathbf{C}$$

This is a simple model illustrating scientific application in planning. It should avoid instinctive preferences based only on clinical experiences.

Service Components of Primary Eye Care

Service in the community should be sufficiently comprehensive to cover aspects of primary, secondary and tertiary prevention targeted for all community members whether they have or do not have eye problems. This is the point where community-based care differs from hospital-based services.

It begins with an understanding of any community at a point in time, and recognises three groups of people in need of eye care screening:

1. Healthy group.
2. The group with certain eye diseases or problems.
3. The group at risk of eye diseases or problems.

Hence, services should not only be clinical, but equal or more attention is needed for people without disease. Primary eye care, therefore, covers the whole range of eye health care for all community members.

Primary Eye Care

Clinical Service Component

Community diagnosis precedes primary eye care activities and may give a different outlook regarding eye health of individual communities. This leads to adapted service components, according to social and economic standards, as well as the available system of health care. Essential elements, therefore, vary accordingly and may not include only the well known major blinding conditions. In addition, common eye disorders found in individual communities require simple but adequate services

WHO GUIDELINES FOR PRIMARY EYE CARE

- 1 **Conditions to be recognised and treated by a trained primary health care worker**
 - Conjunctivitis and lid infections
 - Acute conjunctivitis
 - Ophthalmia neonatorum
 - Trachoma
 - Allergic and irritative conjunctivitis
 - Lid lesions, e.g., styte and chalazion
 - Trauma
 - Subconjunctival haemorrhages
 - Superficial foreign body
 - Blunt trauma
 - Blinding malnutrition
- 2 **Conditions to be recognised and referred after treatment has been initiated**
 - Corneal ulcers
 - Lacerating or perforating injuries of the eyeball
 - Lid lacerations
 - Entropion/trichiasis
 - Burns: chemical, thermal
- 3 **Conditions that should be recognised and referred for treatment**
 - Painful red eye with visual loss
 - Cataract
 - Pterygium
 - Visual loss; <6/18 in either eye

particular to that community. Decisions, therefore, should be made, not according to clinical interest, but from a public health point of view. Conditions which are simple to prevent and manage and common to many communities are included in primary eye care services. This is true, for example, for reading problems among the elderly, and seasonal conjunctivitis may well need equal attention. In general, the World Health Organization provides the guidelines given on page 19.³

Based on the WHO guidelines and available data, the model initiated in Thailand, which started primary eye care in 1981, integrated the following conditions into primary health care:

- Cataract (age-related/‘senile’ type)
- Trachoma and its late complications



Discussion on the common eye diseases for community volunteers: mostly teachers, traditional healers and senior students. An ICEH slide set is being used. Vivekananda Mission Asram, West Bengal, India

Photo: Anup, New Stylo, Chaitanyapur

Table 1: Primary Eye Care Integration Matrix

PHC PEC	Health education	Family planning & MCH	Food & nutrition	Safe water & basic sanitation	Extended programme of immunisation (**)	Essential drugs	Control of local endemic diseases (****)	Care for mild ailments (‘simple’ treatment)
Cataract Surgical Non-surgical	+++ ++	+ for congenital cataract	NA	NA	NA	++ post operation care	+++ case finding, referral & community care	+++ case finding, referral & community care
Trachoma Active Complications	+++ ++	+++		+++ ++	NA	+++ tetracycline ointment	trachoma programme +++ +++	trachoma programme +++ +++
Glaucoma Acute attack Angle-closed(+)	++ ++	+ for congenital glaucoma	NA	NA	NA	++ pilocarpine eye drops		++ pilocarpine eye drops
Eye injuries	++	+++ accident prevention		++ improve environment	NA	+++ tetracycline ointment		+++ tetracycline ointment
Corneal ulcer	+++	+++ accident prevention	NA	NA	measles immunisation	+++ tetracycline ointment		+++ tetracycline ointment
Eye infections EKC Chronic	++ ++	+++ ++	NA	++ ++	NA	+++ ++	disaster management sometimes	+++ tetracycline ointment
Ophthalmia neonatorum	+++	+++	NA			+++		+++ immediate referral
Pterygium Surgical Non-surgical	++ +	NA	NA	++ ++	NA	NA		++ referral
Refractive error & Reading difficulties	++	++ family screening	NA	NA	NA	+ providing simple spectacles		+ providing simple spectacles
VA less than 0.05 (<3/60)(***)	++	++ family screening	NA	NA	NA	NA		++ referral

(*) In many instances, angle-closure glaucoma refers to the acute attack, with one eye already blind and prophylaxis required for the second eye. Secondary glaucoma is common among neglected age-related cataract patients.

(**) EPI staff are good health communicators, educators and gather community information.

(***) Diabetic retinopathy is common in some communities. This is the category 4 in the WHO categories of visual impairment.

(****) The cataract backlog might be regarded as an endemic disease in the given region, like tuberculosis, malaria and leprosy, etc. Trachoma, and its control is also relevant here. When the conditions are well controlled, they become part of a successful integrated health programme in that locality.

Table 2: Cataract Programme at Community Level

Level	Individual	Family	Community	1st level of contact (Health Centre)	1st level of referral (District Hospital)
Action	Aware of own vision. Slowly progressing, painless visual impairment, either one or both eyes. Respond to health workers after screening. Prompt report to eye team for operation.	Help bringing the cataract patient to eye unit. Encourage operation and prepare hospitalisation. Adequate post-operative care and suitable home and out-door activities.	Co-operate with health workers and visiting eye personnel in surgical care. Surgical subsidies for the poor.	Co-operate with visiting eye team in community activities. Co-ordinate community in the cataract programmes.	Co-operate with visiting eye team and preparation of service sites. Post-operative follow-up. Proper care for complicated cases.
Input	Health education, posters, booklets, etc.	Health education, posters, booklets, etc.	Primary eye care course. Primary eye care kits, manual and guidelines, records and reporting systems.	Primary eye care course, minimum supplies and equipment, records and reporting systems.	Short, clinical training, minimum required supplies and equipment. Monitoring/supervision.

- Eye injuries
- Corneal ulcer
- Glaucoma, acute attack and cases with one blind eye
- Ophthalmia neonatorum
- Eye infections
- Pterygium*
- Refractive errors and reading difficulties
- Conditions with visual acuity less than 0.05(<3/60)**
 (* Highly prevalent in Thailand)
 (** Implies possible cases with disorders of the posterior segment of the eye, which may need referral).

Almost similar conditions were identified in Myanmar, then Burma, which also began primary eye care in 1981. Hence, all the above are essential elements in the clinical services of primary eye care in this part of the world. The same is also true for primary eye care in Vietnam, Laos and Cambodia, and even in China.

Other regions of the world have their own particular needs. For example, where onchocerciasis is highly prevalent, special action is needed in the primary eye care context.

Integration Matrix

Primary eye care should not be planned separately from primary health care. That is, primary eye care is regarded as an entry

point, with primary health care, which goes to the heart of community. It is important to understand that primary health care is the mother system into which primary eye care, or basic eye care, is



Cultural evening on health care in India

Photo: Anup, New Stylo, Chaitanyapur

integrated. Careful situational analysis is, therefore, absolutely necessary for effective primary health care in the targeted community, with special attention to its essential elements.

The matrix given in Table 1 shows how integration can proceed on the premise that health care is established.

Cataract Programmes and Primary Eye Care

A cataract programme can be a good example of primary eye care working effectively within the framework of pri-

mary health care. The success of these programmes, within primary eye care, has been seen in many countries.⁴ Activities largely rely on community involvement, as in case finding and mass referral. The surgical eye team can play its role cost effectively, provided the community preparations are completed well in advance of actual surgery.

The activities start with a short training course for community health workers in the recognition of cataract, followed by door-to-door visits. Multi-stage screening is part of primary eye care in case finding, and encouraging patients to present for surgery. At the same time, information on eye care should be made available throughout the community by all known means. Possible community activities are summarised in Table 2.

References

- 1 *Strategies for the Prevention of Blindness in National Programmes: A Primary Health Care Approach*, WHO/Geneva, 1984: 12.
- 2 Ruderman A P. General Economic Considerations. In: Reinke W A ed. *Health Planning, Qualitative Aspects and Quantitative Techniques*. Baltimore: Waverly Press Inc., 1978: 114-6.
- 3 See 1 above at 26.
- 4 Srisuphan V. *Mass Cataract Intervention in the Context of Primary Health Care. Proceedings of WHO Inter-country Workshop on Prevention of Blindness*, Vientiane, Lao PDR, 1995: 84-92.

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In co-operation with the Afro-Arab Society of Ophthalmology and the World Health Organization Collaborating Centre for the Prevention of Blindness, the IAPB Africa Region is hosting an Ophthalmological Congress in Lilongwe, Malawi. For further information contact:

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