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SUPPORTING VISION 2020: THE RIGHT TO SIGHT

IMPORTANCE OF AFFORDABLE EYE CARE

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Introduction

The Global Initiative for the Elimination of Avoidable Blindness (Vision 2020: The Right to Sight) sets a major challenge requiring a significant increase in the provision and uptake of eye care services. If the increasing trend in blindness is to be reversed, then access to eye care services needs to be made more widely available. One of the most significant barriers to accessing these services is affordability. The shrinking economies of many of the world's poorest countries is placing increasing pressure on health care budgets that are already severely over stretched. Competing demands from life threatening diseases such as AIDS, malaria, and TB are pushing eye health services further down the agenda list of public health priorities. Simultaneously, the increasing cost of health care is forcing



Waiting for eye care in Uganda

Photo: Murray McGavin

many governments to reform the structure of their health delivery systems. Many are choosing to introduce cost recovery mechanisms, as a means of controlling the overall rising costs of providing health care services.

Articles in this issue focus primarily on the supply issues of service delivery, looking particularly at how increasing opera-

tional and manufacturing efficiencies can reduce costs to an affordable level. But to place affordability within the reach of ordinary people, their families and the communities in which they live, we also need to understand the demand issues which place additional cost burdens that do not allow access to eye care.

The costs are many and complex and the intention of this article is to explore what these might be (direct and indirect), and to offer some suggestions as to what might be done in order to make eye care more affordable to those who can least afford it.

Direct Costs

In an effort to provide sustainable services, many public and NGO health care providers throughout the world are increasingly moving towards the introduction of user fees. However, in reaching out to poor and marginalised communities, the effects of these strategies are widely believed to have negative outcomes on both utilisation and equal-

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Appraisal study carried out in India, 40% of respondents quoted such indirect costs, as the major reason for non-attendance. Here, the cost of lost income to attend treatment for both the individual and their accompanying minder, as well as concerns about the length of recovery time, were given as the main reasons for not accessing services.⁴ This is particularly interesting because the recovery time for cataract surgery (which if performed early, is only a matter of a few days with ECCE and an IOL implant) is more likely to be affected by associated complications arising from late presentation. As the onset of cataract is painless and is characterised by a slow decline in vision, the pressure of affordability delays the decision to come forward early, thus increasing the risk of complications and, consequently, lengthening the time of recovery and cost to the individual and their families.

Another study in Uganda recorded reasons such as 'too busy' to be a major deterrent for accessing services.⁵ Here the issue is one of 'opportunity cost' where in a typically rural subsistence community the meeting of basic living needs, such as food production to feed the family, override all other concerns (like the gradual clouding of vision) which are regarded as non-essential.

Once vision deteriorates to a point where daily functions can no longer be performed, the sufferer soon becomes completely dependent on other family members for their sustained well-being. Even at this point where the problem has become obvious, barrier studies have shown that people still may not present for such reasons as 'no one to accompany them' or 'family opposition'. There is no doubt that in many very poor communities, the opportunity cost of a family member accompanying a blind relative to hospital may be too great a price to pay, if the lost time is at the expense of providing the family with basic needs such as food. Elderly people suffering from cataract blindness frequently have little say over how the family resources are utilised and, in this respect, 'family opposition' may well be an expression of discrimination, where the family concludes that investment of minimal resources on an ageing relative is of little value when weighed against other competing demands.

As we have seen, the issues of affordability are many and complex and whilst barrier studies show a remarkable similarity of results, it is also true that there will be variation in cost deterrents, depending upon the circumstances of specific situations. The challenge is to design a delivery

system that is sensitive and responsive to these cost barriers in order to make eye care more affordable.

Making Eye Care More Affordable

Making eye care more affordable to those who can least afford it, requires specific strategies that target the root causes of both direct and indirect cost barriers. Such strategies might include the following;

Reducing the burden of direct costs

- Promote community based screening and treatment – extend the reach of services into the community and reduce the burden of travel costs for patients
- Provide financial support for transport and food – encourage those who are particularly poor to come forward for surgery, by offering incentives that reduce the cost burden
- Introduce a user fee structure that does not deny affordable access – implement a cross subsidy pricing structure (to include free service where necessary) where wealthier patients pay more to subsidise poor patients through the offering of value added services (e.g., private rooms)
- Reduce unit cost of service provision – increase operational efficiency and volume of output (e.g., number of operations)
- Reduce the need for repeated visits – create a 'one stop' referral and/or treatment service, to reduce the burden of unnecessary travel and time costs for patients
- Mobilise community resources – encourage communities themselves to support the treatment of poor patients out of their own resources.

Reducing the burden of indirect costs

- Raise awareness about the cost of blindness – motivate people to come forward

early by advertising the cost of blindness compared to the cost of treatment

- Promote ECCE with IOL surgery – the use of this surgery dramatically reduces patient recovery time compared to ICCE with aphakic correction
- Identify and train community eye health carers – working closely with the community, identify motivated 'carers' to assist by accompanying patients coming forward for surgery/treatment
- Introduce demand management strategies – structure service management to meet the variations of seasonal peaks in demand, to reduce patient waiting time.

There is little doubt that affordability significantly limits the reach of many eye care programmes. If Vision 2020 (The Right to Sight) is to achieve its very worthwhile goals, greater efforts are needed to reduce the costs of access, particularly in the design of service provision, so that eye care can truly become an accessible right for all.

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Cost Containment in Eye Care

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Voluntary eye hospitals committed to serving the community must understand the reality of increasing costs due to inflation, advancements in medical technology and changing expectations of staff and patients. However, these costs are often not matched by the patients' paying capacity. While increasing income, through increased user fees or donations are financial options which will be considered, this article will focus on cost containment.

Conditions for Effective Cost Control

Though cost containment is influenced by the health care systems that exist, certain organisational conditions have to be in place for them to be effective. The leadership has a strong role in this. The organisational leadership must be within the eye care system and be available to the organisation whenever required (as opposed to hospitals run by Government or Religious Organisations wherein the leadership is often outside the hospital system and not readily available). Delayed or inappropriate decisions tend to increase costs and inefficiency. It is also important that the leadership promotes a culture of cost consciousness.

Standard clinical and administrative protocols are necessary to institute and review cost containment measures without affecting quality, productivity or patient satisfaction. The first table lists the various factors that influence costs.

Variable Costs

Variable costs are mostly made up of clinical consumables, stationary, etc. Cost savings in this area require good inventory management and group purchasing for better prices. Good materials management, to reduce wastage through storage and pilferage, will again reduce the variable costs.

However, reviewing the clinical protocols and eliminating investigations, procedures and medications that do not contribute to quality, productivity, good outcome or patient comfort can result in greater reductions in variable costs. Setting up a good clinical information system is necessary for making such evidence based decisions.

Fixed Costs²

In health care organisations, the fixed cost could account for as much as 70% of the total recurring expenditure and hence deserves the most attention. Investment in infrastructure, size of the facility and staffing are the major determinants of fixed costs. While leasing out a part of the building, reducing staff or better negotiations of maintenance or salary contracts could be some of the options to reduce fixed costs, the focus in cost containment must be more on reducing the 'fixed cost component within the overall unit cost' of service through optimum utilisation of the infrastructure. This focus will lead to continuous efficiency improvements resulting in



Bilateral cataract in a young woman

Photo: Murray McGavin

sustained cost containment. Seasonal variations in patient load affect capacity utilisation and thereby affect the costs. Salaries constitute the major proportion of fixed

Factors Contributing to Cost Containment¹

Parameters	Factors Affecting Cost Containment
1. Leadership and Attitude	<ul style="list-style-type: none"> Concerned about cost Instituting a culture of cost consciousness Being available for timely decisions Viewing the patient as a partner in the healing process
2. Increasing the uptake of eye care services	<ul style="list-style-type: none"> Forecasting and planning for expected workload Utilisation of community resources
3. Human Resources	<ul style="list-style-type: none"> Job description Workload variations versus manpower planning Recruitment and selection Employee retention
4. Building and Infrastructure	<ul style="list-style-type: none"> Appropriate size and design Appropriate building technology and material Flexible and functional building design Durability and ease of maintenance
5. Supplies, Instruments & Equipment	<ul style="list-style-type: none"> Group purchasing Inventory management Models easy to repair and service Appropriate technology Preventive maintenance
6. Systems & Procedures	<ul style="list-style-type: none"> Standardisation Periodic review to eliminate unnecessary systems

Definitions Relating to Cost

Capital Cost:	Cost of land, building, major equipment, etc.
Fixed Cost:	Costs that have to be incurred regardless of the level of activity. e.g., salaries, interest, depreciation, annual maintenance contracts, etc.
Variable Cost:	Costs that vary directly with the level of activity. e.g., cost of sutures, IOLs, medicines, etc.
Recurring Cost:	Sum of Fixed and Variable costs
Unit Cost:	Fixed cost + Variable cost per Unit of service
Marginal Cost:	Additional cost in an ongoing production/service set up to produce one more Unit of service or commodity.

Note: Several cost items tend to have, within them, elements of fixed and variable costs. e.g., electricity, housekeeping.

<i>Unit Cost of Cataract Surgery</i>	
$\frac{\text{Fixed cost apportioned to cataract surgery}}{\text{No. of cataract surgeries}} + \text{Consumables cost per surgery}$	

costs. Thus, the staff utilisation pattern, especially that of the ophthalmologists, has a direct impact on costs. The factor that has the most impact on 'unit fixed cost' is productivity. The simplified exercise,³ shown in the box below, illustrates that as productivity increases to match capacity, the unit fixed cost reduces to a fourth and the total cost comes down to almost a third.

Cost Containment Strategies

- **Daily Planning:** In addition to long range or annual planning it is essential to plan for the next day and ensure that all resources/supplies are organised and all concerned staff are informed. The patient load, availability of staff and requirement of supplies can be determined with a high level of reliability the previous day. Emergency procurements and delays in service delivery increase the cost.
- **Clinical Process:** A patient protocol based on an integrated path for diagnosis, investigations, admission, surgery and follow-up would substantially reduce delays and associated costs.
- **Personnel Costs:** Hospital is a labour intensive organisation. Staff salaries constitute a major percentage of the total operating expenditure. Hence, it is

important that salary packages are designed keeping this in view. Incentives linked to surgeries adversely affect the cost reductions that come from increased productivity.

- **Work Culture:** Developing a positive work culture reduces bureaucracy, promotes teamwork and a commitment to patient care. All of these have a very direct impact on costs.
- **Local Production of Consumables:**⁴ Many housekeeping supplies, bandages, cotton pads, swabs, etc. can be produced locally (if less expensive than buying them). This also gives an opportunity to involve the clinical staff when there is no patient care.
- **Managing Seasonal Variations:**⁵ Productivity is governed by the patient load, which tends to have seasonal and also daily fluctuations. It is necessary to find ways of accommodating the demand and, when this is not possible, activities like staff training, painting or vacation time for staff can be scheduled accordingly.
- **Appropriate Use of Human Resources:** Since salaries are a major element of fixed costs, these require special attention. The ophthalmologist's time is both expensive and in limited supply.

Delegating routine, repetitive and measurement related clinical tasks to well trained ophthalmic technicians can significantly increase the productivity of the ophthalmologists.

- **Community Participation in Outreach:** One resource that is hardly used is the community. In many programmes, the hospital staff does the publicity, arranges a campsite, necessary furniture, etc. All these activities can be better carried out by the community, often at no cost to the hospital. When the community comes in as an equal partner, the camp attendance also goes up.
- **Other Strategies:** These include developing in-house competence for instruments/equipment maintenance, instituting appropriate recycling systems for waste products, regular review of cost data and administrative systems, such as daily review of revenues and expenditures, control over expenses through formal procedures for approval, and independent audit of all internal records.

Role of Hospital Administrator

The above principles and strategies need to be translated into action and systems appropriate to local settings and day-to-day practice. These systems require periodic

Consider an Eye Hospital with the following Resources, Performance and Expenditures:

A. Resources:

<u>Facilities:</u>		<u>Staff:</u>	
Beds :	50	Ophthalmologists :	2
Equipped Operating Theatre :	1	Paramedics :	9
IOL surgery sets :	2	Housekeeping staff :	6
		Office & Security staff :	6
<u>Capacity of the Above Resource :</u>			
• From bed capacity perspective :	4,000 surgeries assuming 80 surgeries per bed (average stay of 3 days)		
• From the staff perspective :	2,000 surgeries, assuming 1,000 surgeries per surgeon		

B. Annual Performance:

Out-patient visits :	20,000	Cataract/IOL Surgery :	500
Admissions :	600	Other Surgeries :	50

C. Annual Expenditure (All figures in US\$):

<u>Fixed Costs:</u>		<u>Variable Costs (for cataract surgery only):</u>	
Salaries :	35,200	Sutures, Drugs, etc. :	2,660
Electricity :	1,330	IOLs (450 @ \$6.44) :	2,700
Maintenance :	1,250	Instruments replacement :	750
Other fixed costs :	2,220	Stationery :	230
		Other variable costs :	660
Total Fixed Costs :	40,000	Total Variable Costs :	7,000

D. Unit Cost per Cataract Surgery (All figures in US\$):

Assuming that 80% of fixed costs are incurred in providing cataract surgery, cost per surgery for the current output, for 1,000 surgeries and at capacity of 2,000 surgeries will workout as follows:

Number of Cataract Surgeries	Total Fixed Cost(US\$)	Unit Fixed Cost (US\$)	Unit Variable Cost (US\$)	Total Cost (US\$)
500	32,000	64	14	78
1000	32,000	32	14	46
2000	32,000	16	14	30

review and changes, arising out of new developments, changes in the infrastructure, staffing or patient complaints or suggestions. It requires a person who can pay constant attention and be responsible – one of the roles of the hospital administrator or manager. For this role to be effective, it is necessary that this person is trained in hospital management and, ideally, does not have a dual clinical role. However, the person needs to work closely with clinical staff to reduce the length of stay, eliminate unnecessary investigations, drugs and therapies, and bring about economies in the use of supplies, facilities and human resources. He or she has to devote enough time and attention in reviewing and improving systems and procedures, such as planning for services and facilities, and scheduling of staff and patients for optimum utilisation of resources to enable cost containment.

Conclusion

Cost containment is a continuous organisational process. A narrow and too simple approach will not necessarily be of benefit. It is a complex interaction of technical, organisational and human factors, which needs committed leadership, good attitudes of staff and a system approach. Higher expenses per surgery do not necessarily mean higher quality. Hospitals that provide quality service, and in large volume relative to their size, tend to have lower unit costs through better systems. On the whole, cost containment should be viewed as one of the strategies to enhance efficiency in eye care delivery.

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Abstract

Rates of Hospital Admissions for Primary Angle Closure Glaucoma among Chinese, Malays and Indians in Singapore

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Steve K L Seah
Paul T K Chew**

Aim:

To estimate the rates of hospital admissions for primary angle closure glaucoma (PACG) in Chinese, Malays and Indians in Singapore.

Methods:

A population-wide hospital discharge database in Singapore was used to identify all hospital admissions with a primary discharge diagnosis of PACG (International Classification of Disease-CM code: 365.2). The Singapore census was used for denominator data.

Results:

Between 1993 and 1997 there were 894 hospital admissions for PACG. The

mean annual rate of PACG admissions was 11.1 per 100 000 (95% confidence interval (CI), 10.4, 11.8) among people aged 30 years and over. The annual rate was highest for Chinese (age and sex adjusted rate: 12.2 per 100 000), which was twice that of Malays (6.0 per 100 000) and Indians (6.3 per 100 000). Females had two times higher rates than males in all three races (age adjusted relative risk: 2.0, 95% CI: 1.7, 2.3).

Conclusion:

Malay and Indian people had identical rates of hospital admissions for PACG, which were only half the rates compared with Chinese.

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Financial Sustainability

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Background

In developing countries it is most important that eye care programmes provide quality eye care services to communities in the long term. However, they must be financially sustainable within a reasonable period of time.¹ Methods of sustainability have to be introduced from the very beginning of any eye care programme for these to benefit the community in the long term.

The L V Prasad Eye Institute (LVPEI), a not-for-profit, tertiary eye care hospital in Hyderabad, India, has been involved in setting-up a permanent infrastructure for eye care in underserved rural areas.²⁻⁵ Details of this infrastructure, which include rural eye care centres and community programmes, have been described elsewhere.⁴ From the beginning, barriers to eye care, accessibility, availability and affordability, were taken into consideration. This resulted in the setting up of the first rural satellite eye care centre, the Bhosle Gopal Rao Patel Eye Centre at Mudhol village, in the poor district of Adilabad in the southern Indian state of Andhra Pradesh. Successful and self-sustainable functioning of this Centre prompted LVPEI to develop other rural eye care centres in Andhra Pradesh which are well on their way to become financially self-sustainable. We describe in this article the systems that made Bhosle Gopal Rao Patel Eye Centre financially self-sustainable.

Bhosle Gopal Rao Patel Eye Centre (BGRPEC)

Staff

A total of 25 staff, including one ophthalmologist, work at this Centre. The majority of the staff were drawn from local communities, and were trained for varying periods of time at LVPEI. During the training period, area-specific jobs were assigned to

staff, with the emphasis on hands-on training. On completion of training, they were recruited as employees of the rural eye care Centre with performance-related increases in salary and promotion.

Service Provision

At this Centre, standard secondary level eye care services are provided utilising reasonable facilities and equipment, and adhering to the highest quality standards. The services provided include refraction, detailed eye examination, medical treatment, and operations such as cataract surgery with an intraocular lens, glaucoma surgery, lid surgery, and lacrimal duct surgery. The systems and staffing of the eye care Centre currently allow for examination of 12,000–18,000 out-patients and 1,200–1,800 operations in a year. The overall infrastructural design, with the necessary additional staffing of BGRPEC, has the capacity to cater for a maximum of 40,000 out-patients and 5,000 operations in a year.

The charter of this Centre calls for the provision of 50% of all services free of cost to the economically underprivileged in the society, with the remaining 50% realised on payment of charges by those who can afford to pay. Patients are triaged in to paying and non-paying categories for eye care service delivery based on their socio-economic status. Assessment is by experienced eye care personnel, called counsellors. For patients who are advised to undergo surgery, the counsellor considers the paying capacity of these patients by assessing the total family income. This includes the possession of a ration card provided to families with a monthly income below a certain level, and possession of other assets. Surgical services for paying patients are offered in a tiered



All patients are counselled and assessed

Photo: B R Shamanna

system wherein the type and quality of the surgical services provided are the same and the difference is only in the facility of accommodation. Non-paying patients who are advised surgery are offered the same surgery at no cost to them. In addition to the medical and surgical services, optical and pharmacy shops are an integral part of this Centre. A cafeteria is also available and this caters for the needs of the patients and staff alike.

Capital Investment

Local and international non-governmental organisations and local philanthropists helped LVPEI set up this rural eye care Centre to meet the needs of a population of 500,000, spread over 3 districts in the two states of Andhra Pradesh and Maharashtra. The capital investment towards the setting up this Centre was approximately Rs. 81.3 lakhs (US\$ 189,000), details of which are shown in Table 1.

Financial Self-sustainability

The service delivery figures for BGRPEC since the Centre was established have shown an increase in the number of out-patients seen and operations performed. While the ratio of paying to non-paying out-patients was 50:50 (Fig. 1), the operations maintained a ratio of 35:65 respectively (Fig. 2). Average cost-recovery per month for monthly income and expenditure was used as a measure to assess financial sustainability over every 6 months period.

Table 1. Initial Investment for Capital Items at BGRPEC, Mudhol

Item	Amount in Lakhs of Indian Rupees (Thousands of US\$)*	
Land & Development	1.75	(4.0)
Buildings	61.17	(142)
Generator	2.54	(5.9)
Air conditioner	0.52	(1.2)
Furniture and fixtures	5.04	(11.7)
Equipment	10.11	(23.4)
Kitchen equipment	0.17	(0.4)
Total	81.30	(188.6)

*1 US\$ = Rs. 43.20

Financial Sustainability

Cost-recovery was calculated as a ratio of income divided by expenditure and was expressed as a percentage. Standard for-

pharmacy shops were major sources of income. Expenditure related to salaries of personnel, purchase of medical consum-

proper patient-care systems with equal emphases on medical and management systems, well-trained clinical and non-clinical staff working as a team, and the support of the local community.

The standard and quality of clinical care at BGRPEC is a major factor in reaching financial self-sustainability. The quality of service does not differ for those who pay and those who do not pay for the service. BGRPEC is also able to address the barriers to eye care services in relation to accessibility, availability and affordability of the services.

Optimum utilisation of staff, intelligent purchasing and use of consumables through bulk central purchase, and minimum wastage are other factors that have contributed to financial sustainability. BGRPEC has also demonstrated that having strong links with social development organisations for community relations and mobilisation, and political will, are as important in achieving financial sustainability, as are systems within the Centre itself.

The experience with BGRPEC has demonstrated the importance of good training for clinical and non-clinical staff, a team approach to eye care, provision of good quality eye care services, and community support, all of which can lead to financial self-sustainability. Sustainable and optimally functional eye care systems is an important element of any approach that hopes to substantially reduce blindness in the long-term.⁶

Fig. 1: Out-patients seen at BGRPEC, Mudhol, 1997 to 1999

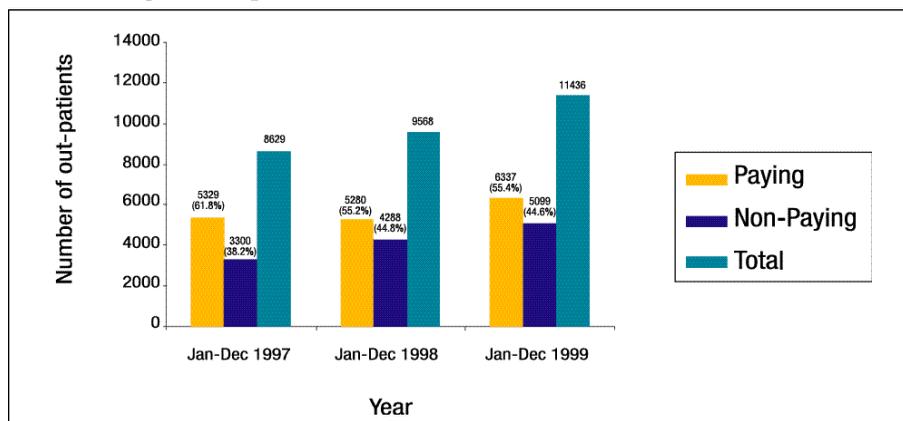


Fig. 2: Operations performed at BGRPEC, Mudhol, 1997 to 1999

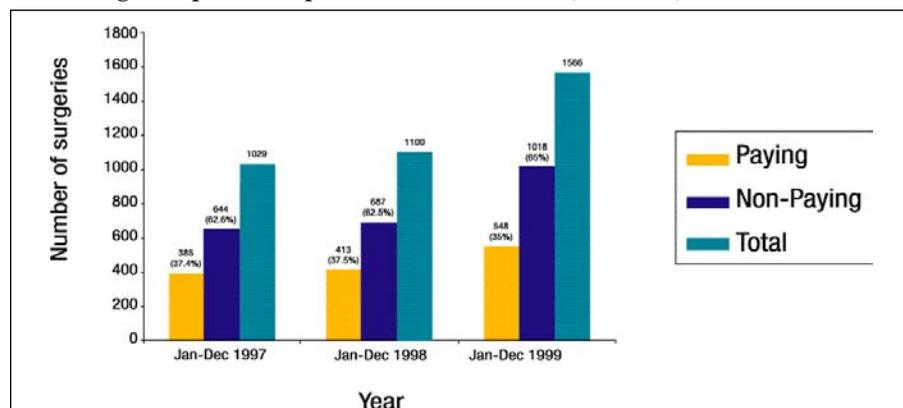
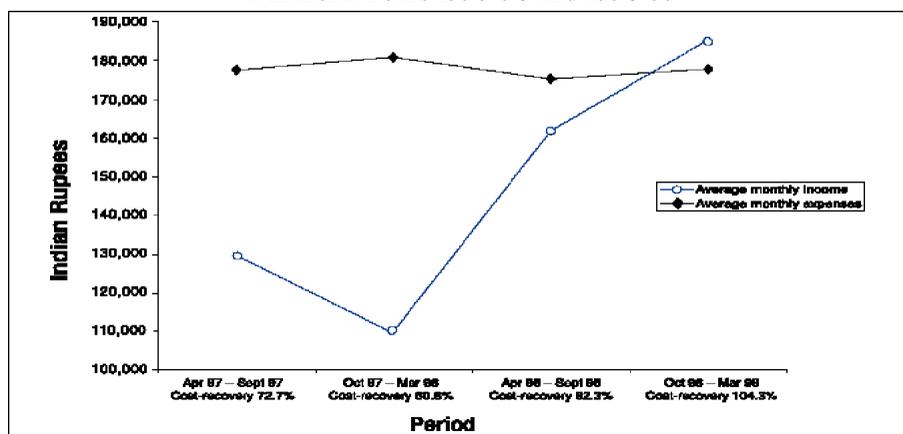


Fig. 3: Cost-recovery for BGRPEC, Mudhol Financial Years 1997-98 and 1998-99



materials that are used at BGRPEC for recording income and expenditure on a monthly basis provided the basis for calculating cost-recovery. Recurrent grants received and depreciation (reductions in value) on capital and equipment were not included in these calculations as they are calculated on a yearly basis in our system.

Income resulted from the eye care services provided, sales from optical and pharmacy services, from the cafeteria, and interest on the bank deposit. The surgical services and sales from the optical and

ables, optical and pharmacy shop requirements, payment of electricity and other bills, cafeteria, and office expenses.

The average monthly cost-recovery for the operating costs increased from 72.7% in the first half of 1997-98 to 104.3% in the last half of 1998-99 (Fig. 3).

Achieving Financial Self-sustainability

Within 3 years BGRPEC became financially self-sustainable. This achievement can be attributed to the establishment of

Acknowledgement

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Extra Funds are Needed for Vision 2020: The Right to Sight

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Sydney

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The Vision 2020 campaign was conceived as a fundraising concept because the incidence of avoidable blindness in developing countries was increasing faster than available resources to tackle the problem. Without extra resources the levels of avoidable blindness will double over the next twenty years.

Avoidable blindness is a major health problem in less developed countries because large numbers of people do not have access to eye health personnel, equipment and consumables. Blindness prevention is very attractive to potential donors because it is one of the few areas of public health where things can be done. In comparison to other public health issues, blindness prevention can be very cost effective. Hence the Vision 2020: The Right to Sight campaign.

Good Planning is Needed

Fundraising for Vision 2020 cannot be done in isolation from the special development needs of blindness prevention. Money alone will not solve the problem. Funds raised must be well targeted and effectively used.

Fundraising and resource mobilisation to help train eye health workers, to acquire equipment, to help with the supply of consumables and to develop management systems will be the key to the success of Vision 2020.

It will be necessary to explain to funders that different approaches will be needed in different places to implement Vision 2020. It is not simply a matter of transferring technology and techniques that might work in New York or London to a remote province in China, rural India or in an African village.

For example, by lowering the cost of cataract surgery to around US\$25 – US\$50 per eye in some developing countries (significantly lower than the US\$1,000 plus it costs in many developed and developing countries), it begins to be possible for even the poorest-of-the-poor to benefit from modern eye surgery. In many places this

has happened. In Vietnam it is now estimated that 100,000 people per year have their sight restored through modern eye surgery which is paid for with local money. Countries like India, Nepal and Pakistan have also made dramatic progress, and cost recovery makes this self-sustaining.

So if cost recovery is a critical strategy in blindness prevention, funds also need to be raised to pay for the development of cost recovery work.

Fundraising Cannot Marginalise Local Input

Many people in developed countries believe that nothing can be done in a developing country without help from wealthy developed country donations. The reality is that the contribution from foreign donors is unlikely to work without strong, committed and effective local involvement. It is most important that the Vision 2020 campaign explains and communicates that local capacity building is the key to success. This will also help attract the kind of donor who can work more effectively with the Vision 2020 campaign.

Unique Selling Point to Funders – 80% of Blindness is Avoidable

It is rare to find positive, life changing and cost effective examples of development aid and health care. The Vision 2020 campaign needs to develop strategies to exploit its unique fundraising advantage.

Affordable, high quality eye care can be



Hundreds waiting for an eye examination in Bangladesh

Photo: Murray McGavin

made available to disadvantaged blind people in developing countries, 80% of whom are estimated to be avoidably blind. There are few other examples of such a powerful selling point to funders.

The numbers of avoidably blind people are huge – it is estimated around 1,000 million of the world's poorest people will be targeted to benefit from the Vision 2020 campaign. Fortunately, we live at a time when it is possible for something to be done. The Vision 2020 campaign is based upon the idea that we know what to do and we know how to do it.

How Much Extra Money is Needed?

The Vision 2020 campaign currently contributes around US\$100 million to blindness prevention work through NGOs such as Lions International, Agenzia Internazionale Per La Prevenzione Della Cecita, Al Noor Foundation, Christian Blind Mission International, Sight Savers International, Helen Keller Worldwide, Orbis International, International Centre for Eye-care Education, Operation Eyesight Uni-

COMMUNITY EYE HEALTH WORKSHOPS

The workshops at the following venues are designed for eye health workers who are working or plan to work in Community Eye Health. Applicants must be resident in the region to which they apply.

Colombia: April 2001

Pakistan: April 2001

Tanzania: June 2001

India: July 2001

Nigeria: September 2001

Letters of enquiry should be sent to:

Graham Dyer, ICEH, 11-43 Bath Street, London, EC1V 9EL

Fax: 00 44 (0)20 7608 6950 E-mail: graham.dyer@ucl.ac.uk

Vision 2020: The Right to Sight

versal, Organisation pour la Pr vention de la C cit , The Carter Center, The Fred Hollows Foundation and some 60 other organisations.

It is estimated that an extra US\$100 million per year is needed.

How Do We Reach the Funders?

A wide range of sources will be targeted. These include:

- wealthy foundations
- governmental and inter-governmental donors, such as the European Union and the World Bank
- the corporate and business communities
- individual donors.

Because Vision 2020 has a wonderfully positive unique selling point, the chances of success with these funders are high.

Competition is so great with funders that a poorly thought out approach is unlikely to bring results. Under pressure from organisations such as the International Monetary Fund, governments the world over are shrinking their public sector. Government funds from developed countries for development aid is therefore falling as a percentage of the donor country's own annual income, i.e., gross nation-

al product. Unfortunately this decline in official funding is happening at a time when companies around the world are driven by shareholders who demand the highest returns possible on their investments. The capacity of private companies and industries to donate funds for development work is therefore also under great pressure.

Immensely wealthy individuals such as Bill and Melinda Gates, Ted Turner and other philanthropists have to some extent filled the gap created by the reduction in government and corporate generosity. But the demands upon these people, foundations and organisations is extraordinary. So Vision 2020 must be very well organised, clever and inventive to get to the front of the ever growing queue of those fundraising.

An international Vision 2020 Executive Director, who will be located with the World Health Organization in Geneva, is also being recruited. A key responsibility of this position will be fundraising.

National Vision 2020 Entities

SomecountriessuchasAustralia,Indiaand the United Kingdom have either decided or are considering establishing national Vision 2020 organisations to co-ordinate

activities better within their own countries. The Vision 2020 logo and name is being registered as a trademark in a wide range of countries so that the good name of Vision 2020 can be professionally managed and protected. Fundraising guidelines and other organisational matters are also being developed.

National Vision 2020 entities will play an important part in helping facilitate fundraising.

Fundraising Strategy

Fundraising is a discipline involving a wide range of sophisticated techniques. These techniques include direct mail, telemarketing, bequests (legacies), special events, capital campaigns (to raise money for infrastructure and equipment) and public appeals.

Vision 2020, through its members and partners around the world, has access to highly developed fundraising expertise. Sharing knowledge, contacts, fundraising skills and expertise amongst the wide range of groups and individuals involved will be crucial to successful Vision 2020 fundraising. Guidelines on how to handle these matters are being developed. □

ROYAL COLLEGE OF OPHTHALMOLOGISTS 17 Cornwall Terrace, Regent's Park, London NW1 4QW, UK



Diploma Examination in Ophthalmology DRCOphth

ANNOUNCING A CHANGE TO THE STRUCTURE

From November 2001, there will be no Practical Refraction section in the Diploma examination

The New Diploma Examination (DRCOphth) is a test of ophthalmic knowledge including relevant basic sciences and clinical skills for candidates who have worked in ophthalmology for one year (full-time or equivalent). This work experience need not have been gained in the UK

**Information, Exams syllabi, Applications from:
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the above address**

Or tel: 00 44 (0) 20 7935 0702

Or fax: 00 44 (0) 20 7487 4674

Or e-mail: rco.exams@btinternet.com

Or visit the College website www.rcophth.ac.uk

UK and Overseas Examination Calendar 2001

Exam	Dates of examination	Location	Closing date
Part 1 MRCOphth	23-24 April	UK, India	12 March
	8-9 October	UK, India, Egypt	27 August
Part 2 MRCOphth	18-22 June	UK	7 May
	10-11 October	India	27 August
	5-9 November	UK	24 September
Part 3 MRCOphth	12-15 March	UK	29 January
	17-21 September	UK	6 August
	11-12 October	India	27 August
DRCOphth	25-28 June	UK	14 May
	19-20 November	UK	8 October

Overseas locations:

**Aravind Eye Hospital, Madurai, Tamil Nadu, India
The British Council, Cairo, Egypt**

Food Acceptance and Selection: Activities for Promoting Pro-Vitamin A Foods Among Young Children in Urban Slums

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Marathe M

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Introduction

Nutrition education initiatives aimed at promoting desirable change in vitamin A behaviour have led to varying degrees of success in several Asian countries.¹ However, failures have also occurred because the nutrition education methods used have not led to the desired behaviour change. Nutrition education, in the past, has too often been conducted in an unimaginative way.² In order to change eating habits, communicators must learn what motivates food behaviour by mothers and young children and other key household or community members. Understanding the factors that constrain children from following desirable dietary practices will help to find practical and acceptable solutions for improvement of food and dietary behaviour. Dietary and eating habits are largely formed during early childhood, and healthy eating habits acquired at this age will provide sustainable nutrition and dietary benefits. Vegetables and fruits are generally disliked by young children and one of the ways of promoting pro-vitamin A food intake is using a food based approach through effective nutrition communication. The present study made a preliminary attempt to understand the natural choice and spontaneous selection of fruits and vegetables by pre-school children in an urban slum site in the city of Mumbai, Western India.

Subjects and Methods

Study Site

The study was a project of the Child Eye Care Charitable Trust, a non-governmental organisation (NGO) in one of the slums in Mumbai. The area where the study sample or subjects resided was typically charac-

terised by overcrowding, poverty and low literacy among the mothers and families. Ignorance, misconceptions about vitamin A foods and infant feeding practices were widespread among mothers of the pre-school children. The study sample included a random sample of eighty pre-school children aged 3 to 5 years and their mothers, who were recruited to participate in a nutrition education programme at the field site of the project. This was done to identify the spontaneous preferences of vegetables and fruits of their young children.

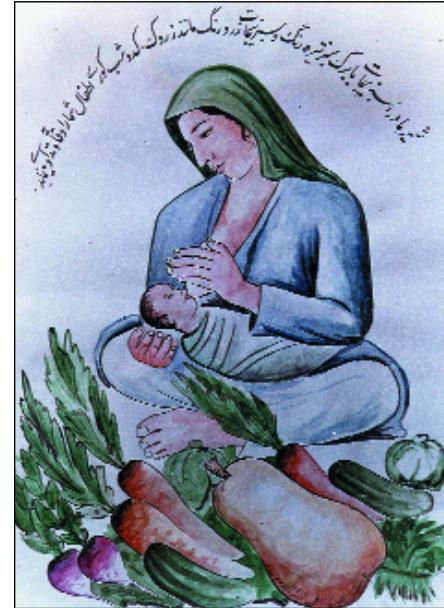
The study was carried out at the community centre in the project's field site, as the children visit with their mothers for health services, growth monitoring and health education and promotion. The facilities are provided as part of the NGO's activities.

Study Process

As an initial activity in the health education sessions, the children were made to recite poems and rhymes in order to create a lively atmosphere and evoke interest in the activities that followed.

The study was then carried out in two stages.

1. A variety of **locally available vegetables and fruits and those commonly eaten** by the families were displayed in the activity centre on a table. Each child was asked to select any number of fruits and vegetables which he or she liked or wanted. The selection was observed and the order of selection was also noted down. This activity was initially carried out in a sub-sample of 10 children to find out the general trend in food selection. The pro-vitamin A rich vegetables displayed were fresh carrot, tomato, pumpkin, cabbage, dark green leafy vegetables (DGLV) commonly available in Mumbai, such as spinach, fenugreek leaves, radish leaves, colocasia leaves, etc., while fruits included orange and papaya. The commonly consumed vegetables were potato, cauliflower, lady's fingers, brinjal, french beans and fruits were apple, banana and sapota.
2. A variety of **pro-vitamin A fruits and vegetables** was displayed and each child was asked to select any number of fruits and vegetables which they liked or



Prevention of Vitamin A deficiency.
A poster in Central Asia

Photo: M Murtaza Farrahmand

wanted most. The choice or selection of the items was noted as also was the order of selection. This was undertaken in 80 pre-school children to study the selection of pro-vitamin A foods in detail with a view to planning a dietary improvement action programme strengthening wise food selection and behaviour. The foods displayed included fresh carrot, cabbage, DGLV, tomato, pumpkin, orange and papaya. Mango was not displayed since it was not in season.

Record sheets were used to note the most commonly selected vegetables and fruits, and scores were given to foods which were selected in greatest frequency. Reasons for selection of the foods by the children were also noted.

Knowledge, attitudes and practice (KAP) of mothers towards usage of pro-vitamin A vegetables and fruits were also noted as part of the study.

Results

In the first stage, it was observed that children selected the bright, attractively coloured vegetables and fruits, mainly pro-vitamin A foods. It was noted that yellow-orange fruits (YOF)(21 pick-ups), yellow-orange vegetables (YOV)(12) and DGLV (5) received a higher pick-up than other fruits and vegetables (5).

Among the YOVS, carrot received the highest (10) pick-ups, and 80% selected it as first choice, followed by tomato (6) and pumpkin (5). Orange and papaya received the same pick-ups (6 each). Among other vegetables and fruits, cauliflower and banana received only one pick-up each and apple two, as less preferred choices. Potato is readily available and easily affordable by most families in slums and is acceptable among young children. It also provides the commonly required bulk in their diets. Other vegetables and fruits, that is, lady's fingers, brinjal, french beans and sapota were not selected by the children.

Similar findings were observed in an earlier study by Verghese et al in 1992,³ where orange, tomato and carrots were selected by most children and the brightness of colour was cited as one of the reasons for selection. A strong preference was observed for the bright coloured pro-vitamin A foods over the more familiar and commonly prepared other vegetables and fruits.

The findings of the second stage activity found that among the pro-vitamin A foods, orange and carrot were selected most often or had highest pick-ups (81.3% and 73.8%), whereas cabbage, DGLV and papaya received lower pick-ups. Pumpkin and tomato received moderate pick-ups. Considering the order of selection, children selected orange (53.8%), carrot (44%) followed by pumpkin (29.7%) as first choices. DGLV and cabbage were selected as the fourth and fifth choices by a greater proportion of children (66.6% and 42.9%). Selection choice of papaya and tomato ranged from first to fifth choice.

KAP Study of Mothers

Mothers were questioned on their knowledge, attitudes and practices with regard to the intake of pro-vitamin A rich vegetables and fruits. It was found that 23.1% of the children did not like to eat DGLV and a mere 2.3% of the mothers attempted to include these vegetables in different form, acceptable to the child. It was also observed that 13.8% of the mothers in the slum area did not give DGLV during the rainy season due to sanitary and hygiene factors. Other foods not consumed were pumpkin by 54% and papaya by 51%, and reasons stated were, they were 'hot', 'caused illness' and 'not tasty'. Orange was avoided by 15% during illness or at other times due to the belief that it aggravates cough and colds.

Conclusion

The study helped to provide some preliminary basis for planning innovative dietary intervention activities for young children in the community especially targeted towards addressing vitamin A nutrition, for example, poems based on pro-vitamin A foods: colours and uses, aiming to foster good food habits from an early age. It is likely that children can influence the purchase and selection of foods in the market by picking up/asking for attractive pro-vitamin A foods, thus motivating mothers to purchase the same. The feel of food is also important to young children, and they enjoy foods that can be picked up with the fingers, such as carrot, mango, etc.⁴

Children, therefore, can be given pieces of raw carrot, tomato or fruits like papaya,

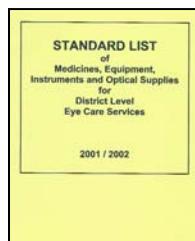
orange and mango when cheaply available in season, and can be educated in a sustained and interesting manner over a period of time, in addition to providing nutrition education to their mothers. Pre-school children are also almost constantly active. Their interest is readily diverted from food but they do enjoy colourful and attractively served meals.⁵ Colourful, handy recipes prepared with YOVS and DGLV in combination with other staple ingredients will add colour to the meal and the child can get attracted/motivated to eat. Vegetables prepared in this manner are more acceptable.⁶

Exploiting the natural and attractive colours of pro-vitamin A vegetables and fruits to advantage in nutrition education, and developing suitable and palatable food preparations, can help guide children positively towards wise food selection from an early age.

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- 5 Savarirayan S (1986). Child Development. Sheth Publ., Mumbai, India.
- 6 Bhattacharjee L I (1989). A study of dietary factors in the genesis of Vitamin A deficiency. PhD Thesis, SNDT Women's University, Mumbai, India. □

Standard List of Medicines, Equipment, Instruments and Optical Supplies for District Level Eye Care Services



In response to the need for up-to-date information about appropriate and affordable ophthalmic supplies, the **International Resource Centre of ICEH** has published a new edition of the Standard List of

Medicines, Equipment, Instruments and Optical Supplies (2001) for eye care services in developing countries.

The List, which will be updated annually, is compiled by the **Task Force of the International Agency for the Prevention of Blindness** (a group of international non-governmental organisations concerned with prevention of blindness). There are sections on eye medicines, examination equipment, ophthalmic surgical instruments, eye drop production equipment, teaching materials, spectacles and low vision aids. It includes ordering and price

details as well as a list of suppliers.

Cost: Free to eye health workers in developing countries. £5.00 elsewhere. Please make cheques in UK£ or US\$ payable to **University College London**.

For further information and orders, please contact:

Sue Stevens, International Centre for Eye Health, 11-43 Bath Street, London EC1V 9EL, UK. Fax. +44 20 7250 3207; E-mail: eyeresource@ucl.ac.uk

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Developing a Course Curriculum

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South Africa

In the last article in this series we looked at the different teaching methods that we can use. Now that we have some ideas on *how* to teach, the question arises: *what* do we need to teach? How do we decide what students need to learn? How do we decide what to include in a course, and what to leave out? Fortunately, there is a clear path that we can follow (Abbatt and McMahon, 1993) which is shown in Figure 1.

Describing the Job

In health care the reason for training is clear: we expect those who are being trained to do their work well. This means that we have to define exactly what the job is, and what we want the learners to perform. If we think carefully about it, we will see that a job is made up of tasks. We, therefore, have to start by listing the tasks that our health worker should be able to perform competently. How do we arrive at this list of tasks? Here are some ideas:

- We watch skilled health workers at work, and write down what they do every day
- We ask the health workers themselves to tell us which tasks they perform in their daily work. We ask other health team

members (e.g., managers) the same question

- We consult official documents, such as job descriptions for that category of worker
- We look at available health statistics, and from that we work out what the health worker should be able to do.

Some tasks on the list will be more important than others. This may be because they are done more frequently, or because there will be serious consequences if they are badly done.

It is important to think widely at this stage. Some people think that the only task that health workers have is to treat sick people. However, they have many other important tasks as well. Here are some of them:

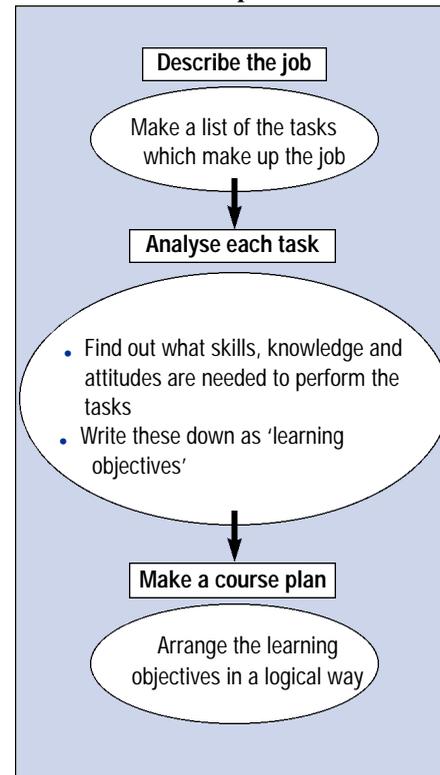
- Management tasks – e.g., maintaining the drug supply; keeping financial records; managing time properly
- Tasks related to preventing disease and promoting health – e.g., health education
- Tasks related to teamwork – e.g., resolving conflicts
- Tasks related to communication – e.g., writing a referral letter.

Such tasks must also be included in the task list.

Analysing the Tasks

What do people need to learn, to perform a task competently? In a previous article we saw that they need to learn both *skills* and *enabling factors*. This means that we have

Fig. 1: The Process of Curriculum Development



to look at each task, and work out the knowledge, attitudes and skills that the worker needs to learn to perform that task properly. Table 1 provides an example for an ophthalmic assistant.

After this analysis we know exactly what the students have to learn. In fact, the items in the right hand column become our 'learning objectives'. We simply rewrite them as follows:

When you have analysed a couple of tasks you will notice that some tasks share the same 'learning objectives'. This is especially true for the communication skills and the attitudes, but also for basic subjects like anatomy and physiology.

Making a Course Plan

When you have finished analysing all the tasks, you will have a large number of learning objectives (Table 2).

Table 2: At the End of the Course the Students Should Be Able To:

- Examine the optic nerve head with the ophthalmoscope
- Measure intra-ocular pressure using a Schiötz tonometer
- Decide when to treat a person with POAG
- Explain to a patient how to take treatment for POAG
- Describe the anatomy of the eye
- Demonstrate an encouraging and supportive attitude towards patients with POAG – and so on.

Table 1: Task–Diagnosing and Managing a Patient with Primary Open Angle Glaucoma (POAG)

Manual skill	<ul style="list-style-type: none"> • Fundoscopy with an ophthalmoscope • Measuring intra-ocular pressure using a Schiötz tonometer • Recording visual fields.
Decision-making skill	<ul style="list-style-type: none"> • Deciding when to treat • Deciding how to treat • Deciding when to refer.
Communication skill	<ul style="list-style-type: none"> • Explaining to a patient how to take treatment • Explaining the need to continue with treatment.
Knowledge	<ul style="list-style-type: none"> • Anatomy of the eye • Physiology of the aqueous humour • Pathophysiology/ course of the disease (treated/ untreated) • Epidemiology of the disease • Drugs used (mode of action, dosage, side-effects) • Problems experienced with treatment.
Attitude	<ul style="list-style-type: none"> • Encouraging and supportive.



A community eye health worker in Afghanistan

Photo: M Murtaza Farrahmand

These now have to be fitted into a timetable. As you do this, you have to keep the following in mind:

- The material must be presented in a logical sequence. This means two things:
 - * Firstly, we need to group things together that belong together. For example, we group everything around trachoma together: the causative organism, epidemiology, prevention, treatment, etc.
 - * Secondly, some things have to come before others. For example, students need to learn basic optics before they learn to do refraction.
- You have to fit into the time available for the course. Somehow there is always too little time – which means that you have to prioritise. Some learning objectives have to be left out, or made shorter. You also have to avoid unnecessary duplication and repetition.

Curriculum Reform and the 'SPICES' Model

Curricula are always changing, as teachers try to remain up-to-date and to eliminate problems. Over the last 20 years, however, there have been strong movements in many countries, to improve the quality of training of health workers. Harden et al. (1984) describe these changes as follows:

- **Student centred:**
The most important consideration is that students should learn excellently. Teacher convenience and status come second.
- **Problem based:**
Students learn to solve problems (clinical and management ones) rather than just memorising facts.
- **Integrated:**
We now teach many subjects together – all those parts which deal with a specific problem. We no longer teach separate 'subjects'.
- **Community based:**
Students learn new knowledge and skills in community settings, and not just in large hospitals as in the past.
- **Electives:**
The curriculum is not completely fixed – students get some opportunities to pursue their individual interests.
- **Systematic:**
We make sure that students learn to manage all important problems, by planning practicals carefully. We no longer just put them into the ward (or clinic) and hope for the best!

You will notice that the first letters of the six words spell 'SPICES'. This is a good checklist, to evaluate our present curricula and to see where we may have to change.

In the next article in this series we are going to discuss the assessment of our students – how can we find out if they have learnt what they should learn? Watch this space!

- You have to consider the teaching methods you are going to use. For example, practicals take more time and need more teaching staff
- You have to consider the facilities that are available for training. If your own institution cannot offer enough places for practicals, students may have to travel to other sites.

References

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- 2 Harden R M, Sowden S, Dunn W R. Educational strategies in curriculum development: the SPICES model. *Medical Education*, 1984; **18**: 284-97.

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Problem Based Learning (PBL)

In traditional training courses the teachers work out what the students need to learn, and systematically make sure that they learn it. PBL is different. As its name says, this method bases all learning on problems. It works like this. There are no lectures. Instead, the students are presented with a problem – usually a clinical one. Working in small groups, and under the guidance of a tutor, the students themselves work out what they need to know, and what skills they need, to manage this problem. They then go to the library, and to the wards and clinics, to learn the necessary knowledge and skills.

For example, one problem may be that of a patient with entropion and corneal scarring. The students work out that they need to learn about the clinical course of trachoma; the causative organism; its treatment (medically and surgically); its prevention (improved water supply and sanitation, community participation, etc.); its epidemiology; other causes of corneal scarring; and so on. This one problem, therefore, makes the students learn a large number of topics and skills.

The teachers still have to work out the content of the curriculum. But by carefully selecting the right problems, and enough of them, they make sure that students will cover the whole curriculum. The difference is that the students themselves 'discover' what they need to learn, rather than being given all the information by their teachers.

PBL has several advantages above traditional courses:

- Learners learn how to solve a problem by themselves, in a systematic way. This means that they can do it again in future, when they are faced with a new problem.
- The learners only learn what is needed to solve the problem. There is less danger of learning a lot of unnecessary information.
- Learners learn deeply rather than superficially, because they are actively involved.

CORRECTION

Teaching and Learning Detlef R Prozesky

J Comm Eye Health 2000; **13**: 60-61.

The Editor apologises that in the two tables on p.60 'tarsorrhaphy' should have read 'tarsal rotation'.

The DU-AL Corporation

John Sandford-Smith, in his letter in the last issue of the Journal (**13**: 62), referred to the uncertainty facing the DU-AL Corporation.

This company has now been acquired by:

**Restored Sight Projects Ltd.,
Singleton Court,
Wonastow Road,
Monmouth, UK.
Fax: +44 01600 716 744**

Cataract Surgery

Dear Sir

I refer to the above subject that was brought up by Dr John Sandford-Smith in the *Community Eye Health Journal* (*J Comm Eye Health* 2000; **13**: 62).

The recommendations given for promoting ECCE with IOL implants are good, depending where you are and who is doing the surgery. In Africa, where eye services are poor or almost non-existent, this recommendation seems less appropriate. The recommendations given are more suitable for developed countries outside Africa. One question we should ask ourselves is why couching is so popular in Northern Nigeria. The answer is simple. Couching is a simple procedure, done in a convenient setting, by trusted (traditional) healers, with visual benefits. I am not supporting couching, but trying to point out that intracapsular cataract extraction should still be recommended in underdeveloped countries, especially in rural areas. We can learn from patients' motivation in accepting couching, to educate people in utilizing available eye services in their community. For many in Africa, this will mean getting a safe ICCE done in a rural setting by a non-ophthalmologist, where an operating microscope and a YAG laser are still years away. I feel that ICCE should not be relegated to the history books.

After some years of doing ECCEs at our hospital, we have found that many of those who underwent ECCE have devel-

oped blindness again due to the opacification of the posterior capsule; this has damaged the reputation of the Blindness Prevention Programme in the community. Blind people and relatives feel cheated by the outcome a few years after surgery. This is now being dealt with by resuming ICCEs with anterior chamber IOLs.

However, I am not against the recommendation for ECCE with IOL implants, but agree with Dr John Sandford-Smith's suggestion not to condemn ICCE with anterior chamber lens implants until a good audit and a retrospective analysis has shown that the results of ICCE are significantly inferior to ECCE in situations where YAG lasers and top quality microscopes may not be available.

One more point. If ECCE surgery is really the way to go in rural Africa, then my appeal is to the donor agencies to train the available ophthalmic personnel in ECCE techniques with lens implants and the use of the YAG laser, and then equip them with the instruments in question. This will then be a big jump forward in ophthalmology for Africa, one to which I am very much looking forward.

J Fumpa DCEH
Ophthalmic Clinical Officer
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Kasempa
Zambia

Dear Sir

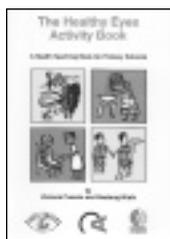
The question posed in John Sandford-Smith's letter (*J Comm Eye Health* 2000; **13**: 62), which asks if there is still a place for intracapsular cataract surgery, is pertinent but not new. I wrote two similar letters in 1992 (*Br J Ophthalmol* 1992; **76**: 127-8 and *BMJ* 1992; **304**: 1249) drawing attention to the difficulties to be overcome before changing from intracapsular to extracapsular cataract surgery.

Rural Africa, where I practice, cannot be compared to USA/UK/Europe where those who make policy live and work. There is no YAG laser in Benin for example. What should my patients do when they get opacification of the posterior capsule? If tomorrow a generous donor gave me a YAG laser I would still need to be trained to use it and I would need a reliable supply of electricity and some means of getting the laser serviced and repaired.

What my patients want from me is to regain their vision. What I try to provide is an affordable, accessible and modern eye service that can, in the long term, become sustainable. Surgeons should be encouraged to use whatever techniques gives, in their hands, consistently reliable results for their patients. One of the reasons that so many eye clinics are under-used is because patients do not see better after cataract surgery. The surgeons who master one technique and satisfy their patients' desire for restored clear vision are never short of work.

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BP 924
Parakou
Republic of Benin

The Healthy Eyes Activity Book



Victoria Francis
&
Boateng Wiafe

This is an activity book for primary school children to teach them how to look after their eyes. It contains a mixture of class activity, home activity and class discussion outlines to encourage the children to learn by doing, not by telling. It includes many stories and drawings written by children. The notes to teachers explain that children are encouraged to be active as they use the book: the book does not tell them all the answers. Children are encouraged to tell their own stories, draw pictures

in the empty spaces or colour other drawings in the book.

Children in Ghana, Kenya and Zambia contributed insights and material for the book, which was pre-tested by children in Zambia prior to production. The book itself was devised and developed by Victoria Francis and Boateng Wiafe, with the support of **Sight Savers International** and the **International Centre for Eye Health**. This reprinting is generously funded by **Task Force SIGHT AND LIFE**.

Available from:
The International Resource Centre
International Centre for Eye Health
Institute of Ophthalmology
11-43 Bath Street
London, EC1V 9EL
Fax : + 44 (0)20 7250 3207
E-mail: eyesource@ucl.ac.uk

Also available from:

SIGHT AND LIFE
PO Box 2116
4002 Basel
SWITZERLAND
Fax: + 41 61 688 19 10
E-mail: sight.life@roche.com

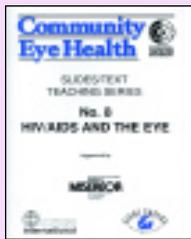
Some free copies are available for developing countries.

The price of copies ordered from the International Resource Centre is UK£3.00 /US\$5.00 including post and packing. Please make your cheque payable to **UniversityCollegeLondon**. Only cheques or banker's orders drawn on UK£ or US\$ accounts can be accepted.

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New 2001 Publications!

HIV/AIDS AND THE EYE



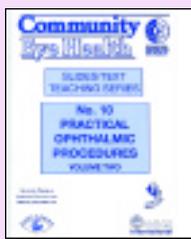
This new teaching slides/text set, written by **Professor Philippe Kestelyn**, addresses the eye involvement in HIV infection and AIDS – introducing the clinical disease, modes of transmission and prevention of infection. Ocular complications discussed include minor opportunistic infections (e.g., molluscum contagiosum), tumours (e.g., Kaposi's sarcoma) and retinal microvasculopathy (e.g., cyto-

megalovirus retinopathy). The differential diagnosis of CMV retinitis highlights retinitis due to toxoplasmosis and acute retinal necrosis (ARN) and PORN associated with herpes zoster.

Further slides and text consider HIV/AIDS and the eye in relation to syphilis, tuberculosis and neuro-ophthalmic disease. The study pack also contrasts HIV/AIDS in children and adults and reviews the risks of transmission between patients and from patient to eye care provider.

This set, which comprises a handbook (56pp) and 24 photographic and graphic slides, can be used in the classroom or for individual study. Funding has been provided by **Misereor, Sight Savers International** and **Christian Blind Mission International**

PRACTICAL OPHTHALMIC PROCEDURES; VOLUME TWO



This slide set, the second volume in a planned series of four, is designed to equip the student with six ophthalmic skills:

- Eyelid control during eye examination
- Examining a baby or young child
- Everting the upper eyelid
- Removing a sub-tarsal foreign body

- Epilation of eyelashes
- Cutting of eyelashes

These skills build on the first six basic procedures and knowledge gained from Volume One. Volumes Three and Four will seek to increase further this knowledge and develop expertise in the ophthalmic clinical setting.

The procedures should be taught by an experienced teacher, offering supervised practice, with the slides and text used as a teaching aid.

This set, written by **Ms Sue Stevens**, comprises a 32pp handbook and 24 slides. Funding has been provided by **Foundation Dark and Light, Sight Savers International, Christian Blind Mission International** and the **Stanley Thomas Johnson Foundation**.

Slide sets available from:
International Resource Centre, ICEH, Institute of Ophthalmology
 11-43 Bath Street, London, EC1V9EL, UK;
 Fax: 44 20 7250 3207;
 E-mail: eyesource@ucl.ac.uk

Price: UK£20.00/US\$36 + P&P each
 UK£15.00/US\$27 + P&P each is the Developing Countries' Special Rate

Post & Packing: Please add £3.00/\$5 (surface) or £5.00/\$9 (airmail) per item.

Please make your cheque payable to **University College London**. Only cheques or banker's orders drawn on **UK£ or US\$ bank accounts** can be accepted. Major credit cards also accepted.



Community Eye Health

supported by

Christian Blind Mission International



Sight Savers International



International Glaucoma Association



Tijssen Foundation
 The Netherlands

Foundation Dark and Light



Dutch Society
 for the
Prevention of Blindness