Human Resource Development

Gullapalli N Rao MD
L V Prasad Eye Institute
Banjara Hills
Hyderabad – 500 034
India

The major goal of VISION 2020 : The Right to Sight is to make high quality eye care services available, accessible and affordable to all, through a sustainable delivery system. One of the key pre-requisites is the development of adequate, appropriate human resources. An analysis of current practices reveals problems related to number, quality of training, distribution and utilisation of various categories of eye care personnel. Fundamentally, most eye care delivery services in developing countries lack appropriate human resource planning and, therefore, implementation of services is seriously affected.[1]

Human resources are required for primary, secondary and tertiary levels of eye care, to provide the medical/technical, management/administrative and community eye health services. This is best carried out by an 'eye care team'. Some of the services can best be achieved by integrating them into general health care systems in various communities.

For effective eye care delivery to underserved populations, we have evolved a comprehensive model covering initially a population of 500,000. Table 1 illustrates the human resource structure for these centres and the benefits of the team approach.

The team essentially comprises one ophthalmologist supported by optometrists, ophthalmic technicians and ophthalmic nurses, a biomedical and maintenance technician, a management group and a support services group.

All training is provided at the L V Prasad Eye Institute (LVPEI) or by its staff at the centre concerned. After training, close monitoring of the performance is maintained for two years by LVPEI. This model typically provides outpatient services to 12,000 to 15,000 outpatients, 1500 to 1700 intraocular surgical procedures, with about 60 percent absolutely free of cost. It further provides complete door-to-door screening of about 300,000 of the population with 90 to 100 percent community-based rehabilitation of the incurably blind, and better than 100 percent cost recovery by the third year. This output can be doubled by a subsequent 30 percent increase in staff over three years. This model demands the following:

- Close linkage with a training / tertiary care centre
- Linkage with the local community
- Good infrastructure
- High quality training of all personnel
- Prompt and high quality service.

All members of the staff, with the likely exception of the ophthalmologist, should be selected from the local community.

The demand for different categories of personnel varies across regions. Unfortunately, there is a tremendous shortage of all eye care professionals globally, the problem being most acute for categories other than ophthalmologists. Most countries either have very poor or no infrastructure for such training, leading to a disproportionate higher number of ophthalmologists. In such circumstances, ophthalmologists perform tasks that do not require their level of training.

Teaching and educational materials are vital for human resource development

Photo: Murray McGavin

Table 1: Human Resource Structure for a Centre Serving 500,000 in India

Category	Number	Functions	Qualifications
Ophthalmologist	1	Medical and surgical care	Residency + comprehensive ophthalmology fellowship
Optometrists	2	Initial evaluation, refraction, tonometry, etc. and patient instruction	2–4 years training (post – class 12)
Ophthalmic Technicians	2–3	Community screening, CBR and linkage with primary health care	1–2 years training (post-class 12)
Ophthalmic Nurses	6	Operating rooms and inpatient wards	1 year training (post-class 10)
Management Group:			
• Administrator	1	Overall administration	1 year training (post-college degree)
• Accounts / Stores	1	Accounts and inventory management	1 year training (post-class 12)
• Medical Records	1	Maintenance of medical records	l year training (post – class 12)
• Patient Counsellors	3	Outpatient registration, inpatient and surgical counselling	1 year training (post – class 12)
Maintenance Technician	1	Repair and maintenance of equipment and building	1 year training (post – class 10; basic technical training)
Support Services	8–10	All support services as identified	1 month training or or as required
• Patient Support			
• Housekeeping			
• Security			
• Transport			

In general, the following factors need attention for human resource development for eye care in most developing countries. Each of these 10 listed factors require further expansion and explanation – beyond the scope of this short article.

1. Development of a uniform 'basic minimum' curriculum for residency training of ophthalmologists.
2. A largernumberoftrainingprogrammes to enhance the skills of already qualified professionals. This will go a long way towards improving the quality of care. India is an example.
3. Design of an appropriate matrix of human resource requirement for the different systems of eye care delivery.
4. Pilot projects should be carried out to find a solution to the complicated issue of under-utilisation and unequal distribution of ophthalmologists.
5. Improve or develop an infrastructure of acceptable standards. Develop guidelines to ensure basic minimum standards.
6. Increase the availability and accessibility of educational materials. Many excellent resources are available such as those of the American Academy of Ophthalmology, which should be adapted globally with appropriate modifications. The International Resource Centre at the International Centre for Eye Health, London, provides teaching and educational materials, including this Journal. Six other resource centres are being developed over the next 3 years in India (LVPEI), Pakistan, Tanzania, South Africa, Nigeria and Colombia.
7. Development of a global network of training centres with exchange of knowledge through electronic conferences, discussions, consultations and educational materials.
8. Development of a large number of training programmes for all categories of eye care professionals.
9. Career advancement mechanisms should be explored and created for all categories of health care workers that will help stabilisation of the eye care workforce.
10. Institution of monitoring and evaluation mechanisms followed by implementation of recommendations.

The funding for these various programmes is a major issue which will need to be addressed by local and national health care authorities.

The aim ultimately should be to train an ophthalmic technician to provide a comprehensive eye care service through a (small) vision centre for each 50,000 population. This certainly demands a major effort to develop training programmes throughout the world.

VISION 2020: The Right to Sight is a plan to intensify global efforts to eliminate needless blindness. Human resource development is vital to the successful execution of this plan. The resources are available but the mechanisms to exploit them should be put in place.

Reference

1 Dandona L, Dandona R, Shamanna BR, Naduvilath T J, Rao GN. Developing a Model to Reduce Blindness in India: The International Centre for Advancement of Rural Eye Care. *Indian J Ophthalmol* 1998; **46**: 263–68.

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