Human Resources Development for middle level eye-care workers in Eastern Africa

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Introduction

Two workshops on human resources development (HRD) for VISION 2020 in Eastern Africa were held in Dar es Salaam and Addis Ababa in April 2005. The current status of human resources in eye care in Tanzania and Ethiopia was reviewed and action plans for meeting VISION 2020 targets and strengthening human resources were proposed.

Participating in the workshops were representatives from the respective ministries of health, ophthalmologists, representatives from institutions involved in research and the training of various cadres of eye care workers, medical directors of eye units, regional eye coordinators and representatives from NGDOs involved in blindness prevention. Observers from Malawi and Zambia attended the workshop in Dar es Salaam, while in Addis Ababa, it was attended by observers from Uganda and Kenya.

Professor Adenike Abiose (International Agency for the Prevention of Blindness, IAPB), Dr Hannah Faal (IAPB), Dr Paul Courtright (Kilimanjaro Centre for Community Ophthalmology, KCCO) and Dr Amir Bedri (CBM) facilitated both workshops.

This paper summarises HRD in Tanzania and Ethiopia as discussed in the workshops, as well as data provided by the participants from Malawi, Zambia and Uganda.

Tanzania

The United Republic of Tanzania has a population of 36 million inhabitants and is divided into 21 regions and 119 districts. There are about 350,000 blind people in Tanzania, most of them from cataract (50%), corneal scars (20%) and glaucoma (10%).

Few sub-Saharan countries have the quantity and spread of manpower available here (particularly mid-level manpower). Tanzania also has facilities and faculty for training all cadres of eye care workers both for local needs, as well as for neighbouring countries.

According to data from 2004, there were 25 ophthalmologists, 29 cataract surgeons, 52 optometrists and 179 ophthalmic nurses working in Tanzania. There is uneven distribution of ophthalmologists in the regions, with Dar es Salaam alone having more than half the total number of ophthalmologists in the country. About 50 optometrists are believed to be currently without employment and there is no ophthalmic instrument technician in the country.

Tanzania has 54 eye surgical teams (total number of ophthalmologists and cataract surgeons) with an average productivity per team of 203 cataract surgeries per year and the cataract surgical rate is 325 (based on data from 2002). After training, many middle level eye

care workers (cataract surgeons and ophthalmic nurses) are assigned to duties unrelated to their specialised training.

The best way to improve human resources and service delivery to meet VISION 2020 goals in Tanzania is to increase the productivity of existing manpower within the next five years. This can be achieved by strengthening teams (including making use of programme managers), and ensuring that training of mid-level staff is project-driven. There is need for collaboration between the training institutions, each of which should adopt a geographic area to work in for training and post-training supportive supervision of middle-level workers. Finally, priority should be given to underserved areas like the Southern Region.

Ethiopia

Ethiopia, with a population of 70 million, is the second most populous country in Sub-Saharan Africa. It is divided into 9 regions and 2 federal cities.

The prevalence of blindness is estimated to be 1.25%, which results in 875,000 blind and a further 2,625,000 people with low vision. The available human resources are by far inadequate to tackle the problem of blindness.

Currently, there are 76 ophthalmologists, 7 cataract surgeons, 121 ophthalmic nurses and ophthalmic medical assistants, 5 optometrists, 11 optometry technicians, and 258 integrated eye care workers. More than 62% of the ophthalmologists and the majority of other eye care cadres reside in the capital, Addis Ababa. The regions Afar, Benshangul-Gumuz and Gambella have no ophthalmologist or cataract surgeon at all.

There are two facilities for training of ophthalmic nurses with annual production of 30. There is one training institution for ophthalmologists, which graduates 4-6 ophthalmologists per year. However, there is still no training programme for cataract surgeons, refractionists/optometrists and low vision technicians despite plans in the 5-Year National VISION 2020 plan.

In 2003, the CSR was 350 and the average productivity per surgical team was 350 377. There is a potential to increase productivity by making appropriate use of available resources.

Besides the need to increase the number of ophthalmologists and ophthalmic nurses and starting training programmes for cataract surgeons, refractionists/optometrists and low vision technicians, training in community eye health, management and leadership, team building, advocacy and social marketing skills are perceived to be essential.

Malawi

Malawi has a population of 11 million and is divided administratively into 3 regions. The human resources situation is characterised by a shortage of both ophthalmologists and middle level eye care workers.

Seven ophthalmologists currently serving in the country are all based in Blantyre and Lilongwe, two of the three regional capitals. There is no ophthalmologist in the Northern Region. In addition, there are 3 cataract surgeons, 60 ophthalmic clinical officers, 11 ophthalmic nursing officers, 3 refractionists/optometrists, 2 instrument technicians, 4 patient counsellors, 2 accounts clerks and about 800 community health workers. None of the hospitals has a programme manager.

Although Malawi trains middle level eye care workers both for local needs and neighbouring countries, the number of cataract surgeons and ophthalmic nurses is very low because of lack of a clear career structure for these cadres. Curricula for ophthalmic clinical officers and cataract surgeons will soon be reviewed, and a clear distinction made between ophthalmic clinical officers, cataract surgeons, ophthalmic nursing officers and refractionists. Advanced diplomas will replace the diplomas currently conferred after training in order to facilitate career advancement and development. Following this review, 5 cataract surgeons, 15 ophthalmic clinical officers, 10 ophthalmic nursing officers, and 10 optometrists will be trained by 2010.

Three additional ophthalmologists will be trained by 2010, while one of the tertiary centres is expected to be upgraded, equipped and staffed to a national paediatric ophthalmology referral centre. There is also need to train programme managers and patient counsellors.

The national CSR for 2003 was 825 and the average productivity per team was 908. Malawi plans to attain a CSR of 1500 by 2010.

Zambia

Zambia is a land-locked country with a population of 10.5 million and a surface area of 752,610 square kilometres. It is divided into 9 provinces and 73 districts.

There is a shortage of all cadres of eye-care workers with unequal distribution within the country.

Of the 15 ophthalmologists currently in the country, 11 are located in the capital, Lusaka. Five ophthalmologists are involved in outreach activities. Six of the 9 provinces currently do not have an ophthalmologist and the goal is to have at least 1 ophthalmologist per province. Currently, there are 4 cataract surgeons, 40 ophthalmic clinical officers, 7 ophthalmic nursing officers, 2 instrument technicians, 4 optometrists and 3 refractionists. The latter are currently not working as refractionists and need retraining.

The CSR in 2003 was 390 and the average productivity per surgical team was 216 cataract surgeries per year. The target CSR for 2010 is 750-1000.

For this target to become a reality, the following cadres of eye care workers will be trained by 2010: Five ophthalmologists (currently in training), 11 cataract surgeons, 24 ophthalmic clinical officers, 35 ophthalmic nursing officers, 5 optometrists, 5 refractionists and 1 instrument technician. Ophthalmologists are currently trained in Nairobi (Kenya) and Moshi (Tanzania), while mid-level workers are mainly trained in Malawi and South Africa.

It is envisaged to start local training programmes for ophthalmologists and the mid-level cadre, as well as to develop subspecialties like paediatric ophthalmology and vitreo-retinal surgery in Zambia.

Uganda

Uganda has a population of 24.4 million inhabitants. Administratively, it is subdivided into 11 regions and 56 districts

There are currently 26 ophthalmologists, 18 ophthalmic clinical officers, 5 cataract surgeons, 6 refractionists, 5 programme managers and 3 ophthalmic instrument technicians.

Uganda has two postgraduate programmes in ophthalmology with a combined intake of 1-2 students per year. The low intake is due to a lack of applicants. Considerable effort needs to be put into the training of mid-level eye care workers.

Twelve ophthalmic nursing officers are expected to be trained over the next 5 years, and each regional hospital will have 1 ophthalmic nursing officer during this period. They are currently trained in South Africa and a curriculum for local training needs to be developed.

Each year, between 10 and 12 ophthalmic clinical officers are trained in the country, and 1 cataract surgeon in Malawi. An assessment of the productivity and quality of cataract surgeons this year will give guidance on the usefulness of this cadre in Uganda.

A training programme for refractionists has recently been started with an intake of 5 each year. All refractionists will be trained further to low vision assistants.

There are three training centres for primary eye care workers, while 10 ophthalmic theatre assistants are expected to be trained each year in a dedicated training centre.

Conclusions

In East Africa, there is a shortage and misdistribution of ophthalmologists. There is need to train teams of middle-level eye care workers, built around cataract surgeons, and to increase the productivity of existing and future teams.

In most countries middle level eye care workers, cataract surgeons and ophthalmic clinical officers in particular, do not have clear career structures, making these cadres unattractive. This has prompted some countries to review the curricula for middle-level eye care workers. Countries (e.g. Ethiopia) about to introduce new cadres or start training programmes have taken this into consideration in drawing up their own plans. Capacity building in non-clinical areas such as advocacy, management, bridging strategies etc. is needed throughout Eastern Africa.

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Participants and the VISION 2020 HRD workshop in Dar es Salaam, 14th – 15th April 2005