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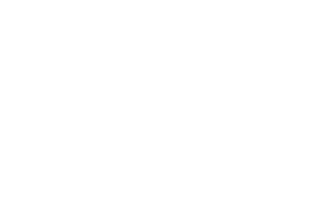
**Effective Practice**

**for Eye Care Teams**

International Agency for the Prevention of Blindness

October 2016

**IAPB Human Resource for Eye Health Working Group**

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*Cover photo: Erkan Kalenderli (from the #EyeCareForAll Photo Competition)*

**Executive summary**

Human resources (HR) for eye health is a key pillar for World Health Organization (WHO) and International Agency for Prevention of Blindness (IAPB) VISION 2020: The Right To Sight and has also been recognized as priority in the WHO Global Action Plan 2014-19. One of the objectives of GAP is to develop and maintain a sustainable workforce for providing comprehensive eye care. This includes recruitment, training, career development and retention. However, there are issues related to this as well as issues with of efficiency and effectiveness of existing HR in different parts of the world. Through these set of case studies from India, Latin America and East Africa we try to offer insight into priority points in the organization of the eye health workforce, systems for training as well as consideration of retaining and providing continuing professional development for these vital resource people.

Two case studies from India from L V Prasad Eye Institute (LVPEI) and Aravind Eye Care System (AECS) talks about ‘Team Training.’ Case study from AECS system talks about how they have addressed the issues of Allied Ophthalmic Personnel (AOP) by recruiting girls from rural areas. These girls have completed school and are trained at the AECS through a structured two-year training programme. This cadre forms over 60% of the hospital’s workforce and are trained to perform all the routine tasks. Apart from this the case study also talks about their strategy to fulfil their requirement of ophthalmologists and managers through internal pool of trainees. Similarly, the case study from LVPEI talks about how the requirement of ‘Eye Care Team’ for rural areas is met. Recruitment and retention is achieved by selecting most of the staff from local areas. The requirement of ophthalmologist is again met through the internal pool of the trainees. Both the case studies from AECS and LVPEI also talks about the strategy for improving efficiency and effectiveness of the staff as well as their continuous professional development (CPD) and career advancement strategies.

Case study from Latin America again talks about the strategy used by some organizations to recruit and train AOP for different tasks in an organization. For Africa, there are issues even with having enough number of ophthalmologists than recommended by WHO. Apart from this, there is an issue with their distribution with 70% of them residing in major cities. Case study from the College of Ophthalmology of East, Central and Southern Africa (COECSA) is an example of effective practice in eye care team development in Africa. This case study talks about how, as a first step, for the development of a unified training programme lead to establishment of East African College of Ophthalmologists (EACO) and subsequently how the COECSA was developed whose main aim was to build human resource capacity in the COECSA countries, to oversee, standardise and accredit the training of ophthalmologists, to develop continuing professional development for ophthalmologists and Ophthalmic Clinical Officers (OCOs) across the region, a mentoring programme for newly-qualified ophthalmologists and a harmonised training curricula for ophthalmologists and OCOs across all institutions.

**Introduction**

The World Health Organization (WHO), Global Action Plan (GAP) 2014-19 focuses on three major indicators to achieve its goals and objectives. These indicators include monitoring of prevalence and causes of visual impairment (VI), eye care personnel required and cataract surgical service delivery.(1) The requisite eye care monitoring personnel are ophthalmologist per million population, optometrist per million population and allied ophthalmic personnel (AOP) per million populations. However, unfortunately, the GAP does not look at the distribution of these cadres nor does it look at whether these cadres are effective and efficient enough to provide the services required. Studies have shown poor geographic distribution and uneven practice pattern of ophthalmologists (2,3) and AOP (3) across different regions of the world. Apart from this, there are also issues with efficiency and effectiveness of existing HR as seen in Africa. (4) Apart from the issues of recruitment and training, there are issues with retention of HR. Hence, we looked at some case studies from different regions of the world to understand how some of the organizations have successfully addressed the above mentioned issues.

**Case Studies**

1. **Case Studies from India**
   1. ***Aravind Eye Care System – HR Practices***

The Aravind Eye Care System, started in 1976, has now grown to become one of the world’s largest eye care providers. Each year, Aravind Eye Hospitals see over 3.7 million outpatients and perform over 400,000 surgeries. While over 50% of this care is provided free of cost or at steeply subsidized prices, much importance is given to ensuring that all patients are accorded the same high quality care and service, regardless of their economic status. Aravind, with its mission to “eliminate needless blindness”, has been able to achieve this scale with the principle of providing compassionate, high quality and affordable services in a financially self-sustainable manner.

In order to be able to deliver high quality care to such high patient volumes requires a highly efficient system. Given the lack of availability of a qualified allied health workforce for eye care – Aravind began training its own allied ophthalmic staff. Aravind is a teaching institute: Aravind has a post-graduate training programme in ophthalmology and has a unique training pprogramme for mid-level ophthalmic personnel (MLOP). The MLOP programme is unique as it recruits rural girls who have completed school and trains them through a structured two-year training programme. Every year, over 400 girls are recruited into this MLOP programme. This cadre forms over 60% of the hospital’s workforce and are trained to perform all the routine tasks such as outpatient clinic assistance, refraction, inpatient services, operating room assistance, patient counselling, medical record management, spectacle and pharmacy dispensing and housekeeping.

**Training**

Over 80% of Aravind’s staff are recruited through its own training programme – besides the MLOPs, almost all ophthalmologists enter through the residency or fellowship training programmes; the managers too undergo a year-long fellowship programme before they are posted to their respective positions. In addition, all staff joining Aravind Eye Care System, undergo an intense orientation programme.

A robust training programme and strong quality assurance systems ensures the quality of care provided by the MLOP cadre. This allows the ophthalmologists to focus on diagnosis and surgery – making them highly productive; thereby increasing the capacity of the hospital to address the large need in the community. As eye hospitals across the developing world struggle to engage and train their paramedic cadres, Aravind has created an online training resource portal – [www.aurosiksha.org](http://www.aurosiksha.org). This website shares training resources for allied ophthalmic personnel, made available for other eye hospitals.

**Value-fit**

A key step for Aravind HR model to succeed is the attention given during recruitment of the staff: the ‘value-fit’ of the candidate is given precedence over ‘skill-fit’. This is followed through with structured skill development to meet the job requirement. There is a strong focus on life cycle management. Aravind has one of the lowest staff turnover rates in the healthcare industry in the region. Aravind’s growth over the years has often been attributed to the unique culture that pervades the organisation. The founder, Dr. G. Venkataswamy was a visionary who instilled, in the organisation, the primary values of equity, compassion, transparency and sharing. Aravind continues to strive to manifest these values through its action. Continuous reinforcement through role modeling, by senior staff, keeps these values alive. Patient feedback is also used as a tool to reinforce the value of patient centeredness.

**Staff Empowerment**

Besides preparing staff through training and orientation, is the key aspect of ongoing engagement. A great amount of emphasis is placed in ensuring role clarity for all cadres. Staff are continuously engaged through regular meetings that reviews performance in an objective and participative manner. All cadres of the team participate in this meeting where data is used to review performance of the team. This encourages staff to share concerns and ideas for improvement.

**Growth opportunities**

Besides the training during recruitment, Aravind ensures that all cadres of staff undergo regular continuous education. These are mandatory sessions for the staff scheduled during the lean periods of the year. Also staff who are stationed at a particular branch are sent to one of the other Aravind branch hospitals on a “sabbatical”– this facilitates cross learning and offers a sense of rejuvenation among the senior staff.

MLOP staff who perform well are elevated to a cadre called performers. Senior staff who demonstrate leadership skills can progress into cadres with higher responsibilities such as clinic supervisors or those who are good in teaching can become tutors. During this transition they are supported with additional training and orientation to fit into these new roles.

There are also several avenues through which staff encouraged to surface their other talents: such as an artistic column in the Aravind weekly e-newsletter, Melody Fridays and AuroUtsav – a major biennial event of cultural and sports competitions.

**Continuous Improvement**

Besides Aravind’s ongoing staff welfare schemes, the HR division continuously monitors manpower utilization and performs regular manpower planning exercises for the growing and changing needs of the organization. In addition, biennial staff satisfaction surveys are conducted in order to understand staff perceptions and concerns.

* 1. ***L V Prasad Rural Eye Health Model***

**Introduction**

From its very inception, L V Prasad Eye Institute (LVPEI) has addressed the issues of recruitment, training, career development and retention at all level of its eye health pyramid (5). Each level of the pyramid has a clear delineation and demarcation of the function of HR. The focus is not on individual training but on training of the eye care team, and the roles and responsibilities of each team member are clearly defined. The concept of this team approach is based on principles of working together, task shifting and ensuring continuity of care. Also, it ensures that the team members are available, have all the required competencies, ensures maximum productivity and is responsive to need of the population. This is more important in the rural areas where often, the institute is the sole service provider, wholly dependent on the ophthalmologist for most of the tasks thus limiting productivity.

**Case study**

The LVPEI rural eye health pyramid serves a population of 0.5-1 million which is the typical population of a district. It comprises a Secondary Centre (SC) for 0.5-1 million populations linked to Vision Centre (VC) for 50,000 populations and Vision Guardian (VG) for 5,000 populations. The main function of the LVPEI rural eye health model is to provide comprehensive eye care i.e. prevention and promotion, treatment and rehabilitation, including linkages with other health care. At the level of SC, apart from diagnosis of all potentially blinding and non-blinding conditions, surgical services are also offered. The eye care team at an SC include clinical, non-clinical and support staff. An ophthalmologist heads the clinical team. Other members of the team include ophthalmic technician / vision technician (VT), ophthalmic nurse and operating room technician. Non-clinical members include eye care managers, biomedical and maintenance technician, patient counselor, store and supplies in-charge, optician, receptionist, community eye care coordinators. The support staff include housekeeping, patient care assistants, security and driver.

**Recruitment:**

The dearth of Ophthalmologists in rural areas is addressed by recruiting newly graduate ophthalmologists for a fellowship program. The fellowship includes training in providing comprehensive eye care at the Centre of Excellence (CoE) or tertiary centre (TC) for a year following which they are posted for a year in one of the SCs for a year. At the end of the year, they are offered a specialty fellowship of their choice. This package of fellowship ensures that at the end of three years, they have good comprehensive ophthalmology skills, become competent in one specialty as well as learn how to independently run an eye hospital. Hence, overall the demand for this fellowship is quite high, thus taking care of the requirement of ophthalmologists in remote rural areas.

Similarly, recruitment of eye care managers is through advertisement in local media. Other staff members are recruited from the region where the SC or VC is proposed. All the recruitment is planned a year before start up of the SC or VC.

**Training:**

Besides the training of ophthalmology fellows at the CoE or TC before being posted at the SC, there is ongoing mentoring from the faculty from CoE or TC while they are posted at the SC. Apart from that, they also attend all the academic sessions the CoE via web streaming facility. Eye care managers also undergo an year’s training before they are posted in the SC. Similarly, the other cadre of staff are selected from the local region, trained for an appropriate period at the CoE or TC and posted back to the SC or VC. All these cadres have a structured training program as shown in the table below. Most of the training is based on the competency needed for performing a task rather than providing a generalized training. For example, a VT is trained for a year to perform refraction, recognize potentially blinding and non-blinding eye condition, dispense glasses and refer appropriately. Training in these competencies ensures that the given task is completed effectively as well as efficiently. Some of the training programs are also being accredited. For example, the ophthalmology training is also accredited to the National Board of Examinations (NBE). The VT course as well as ophthalmic assistant training program was also accredited by the International Joint Commission of Allied Health Personnel in Ophthalmology (IJCAHPO).

**Table 1: Training programs**

|  |  |
| --- | --- |
| **Approximate number of trainees at a given point of time** |  |
| Ophthalmology | 125 |
| Optometry | 250 |
| Vision technicians | 60 |
| Ophthalmic Nursing | 45 |
| ICARE | 25 |
| Eye Banking | 15 |
|  |  |
| **Training Programs** |  |
| **Ophthalmology** |  |
| **Program (Eligibility - MS, DNB, MD)** | **Other Hands on Training Programs (Eligibility - Practicing ophthalmologist with basic entry competancies)** |
| **Sub-specialty Fellowships (Cornea & Anterior Segments, Retina & Vitreous, Glaucoma, Pediatric Ophthalmology, Oculoplsty & Ocular Oncology** | Retinopathy of Prematurity |
| *Long Term Fellowships (National-24 months; International 15 months)* | Cataract Training |
| *Short Term Fellowships(3 months)* | ZEISS Training Program |
| *Observerships* | Training in Advanced Diagnostics |
| **Comprehensive Ophthalmology (Eligibility - DO, MS, DNB, MD)** | **DNB (Selected by National Board of examinations via all India examination)** |
| *Long Term Fellowships (National-36 months)* | *Primary Residency - 3 years* |
|  | *Secondary Residency- 2years* |
| **Optometry** |  |
| *BS in Optometry (Eligibility - 10+2 with science background)* | *Fellowship in Ocularistry (24 Months)(Eligibility - qualified optometrist)* |
| *Internship in Optometry(Eligibility - students enrolled in Optomert graduation program)* | *Residency in Contact LensTraining (Eligibility - qualified optometrist)* |
| *Fellowship in Low Vision (3 Months)(Eligibility - qualified optometrist)* |  |
| **Inhouse programs with International accrediatation & Certification** |  |
| *Vision Technicians(Eligibilty - 10+2 with hospital sponsorship)* | **Ophthalmic Nurses - 2 years course (Eligibility - 10th standard)** |
|  |  |
| **Support Staff Training - Biomedical staff, OT Technicians, Patient Care Counsellors)** |  |
| **Community Eye Health training programs (Eligibility - Any graduate)** | Certificate Course in program Management & Evaluation (2 weeks) |
| Masters in community eye Healty (1 year) | Community Eye Care & Community Based Rehabilitation (6 weeks) (Eligibility - any eye care service provider) |
| Diploma in community Eye Health(6 months) |  |
| Diploma in Eye Health Management(1 year) |  |
| **Eye Banking (Eligibility - 10+2 with experience in eye banking)** |  |
| Eye Bank Technicians (3 months) | Eye Donation Counselors (10 days) |
| **Rehabilitation (Eligibility - Masters or any graduation)** |  |
| Short Term Fellowship in Early Intervention (3 month) - additional requirement of qualification in child development |  |
| Short Term Fellowship in Education Rehabilitation (3 month) | Short Term Fellowship in Low Vision Rehabilitation for special Educators (3 month) |

**Career development and retention:**

There is a clear career pathway for each cadre of staff. Some of the ophthalmology fellows do join as faculty at the level of junior ophthalmologist and subsequently, have systems of annual promotion as well as accelerated promotions. They are also entitled annually, for a fixed number of days, to national as well as international meetings. They are also provided dedicated time for research activities. All the benefits to the faculty are as per mention in the policy document. Similarly, the eye care manager starts as junior administrator and can go up to the level of Associate Director / Executive Director. Some of the VTs have gone on to complete their PhDs as well as post-doctoral fellowships. Similar career pathway exists for other cadres of staff too. There is also provision for continuing professional development for most cadres of staff, especially the technical staff. All this along with attractive salaries and perks, fair appraisal systems, ensures retention for most of these cadres.

In conclusion, retention of health workforce at rural centres is challenging and there is no single full proof solution for their retention. It is a complex process which needs to be tailored as per the local context. We strongly feel that a comprehensive approach of appropriate selection, good training and a career advancement plan, clear job description with targets, provision of adequate support system in terms of infrastructure, equipment and supplies, supervision and communication, good salary and timely promotions would be a key to success.

1. ***Case Study from Latin America: Allied Ophthalmic Personnel in Latin America***

**Introduction**

Allied Ophthalmic Personnel are essential to successful eye hospitals in Latin America.

To achieve high volume, high quality and financially sustainable services the ophthalmologist needs a team of well trained staff who are proficient in essential tasks.

An efficient patient centered service is a process that involves multiple tasks performed by well trained staff who prepare patients for examination by the ophthalmologist. The process begins at the time the patient is identified in the community and arrives at the hospital, to the time staff register the patient, complete visual acuity screening, refraction, diagnostic exams, take patient history and update medical records. A clear unidirectional flow of patients through a well-defined process is essential to achieve high volume and quality services. Similarly, efficient patient flow must also be observed in the operating room.

**Recruitment and Training**

In the Latin America region there are few institutions that train Allied Ophthalmic Personnel and thus eye hospitals must hire and train their own staff.

For instance,

* An entry level staff is trained to perform visual acuity, or function as a patient mover, or a sales person for the optical department.
* A nurse is trained to clean instruments, prepare instrument trays, and sterilize using job aids and instruction and feedback by senior staff.
* A technician with appropriate experience is trained to perform diagnostic tests and tasks by the ophthalmologist.
* A counselor, an essential function of a sustainable clinic, is trained to counsel patients and their family on important decision regarding their treatment and surgery.
* The hospital manager is trained to understand the basic functions of the eye hospital and clinical care practices, in addition to the administrative functions of managing staff and the finances.

Although the ophthalmologist leads the team, everyone plays an essential function and works together. To retain staff and reduce the cost of rehiring, staff must know what their payment and benefits will be as well as what opportunities are available for training and promotion. In many cases, staff are given the opportunity for promotion if they demonstrate competency in their current position and willingness to be trained. In this manner, filling staff positions begins by promoting and training existing staff. When they know what to expect they can see the advantages to themselves, their team members and patients and are more likely to stay with the organization.

**Training modules**

Hiring, training and promoting staff from within the hospital is effective, but is not a solution if we expect greater expansion of eye care services. The Visualiza Eye Hospital located in Guatemala, is developing a new strategy for training Allied Ophthalmic Personnel at their newly established “Universidad del Éxito Visualiza” (University of Success).

The clinical and management skills program is based on the experience of mentoring eye hospitals to achieve greater efficiency, improved quality, and financial sustainability that is successfully demonstrated at dozens of eye hospitals in the region. The objective of the program is to develop a set of core skills that are determined essential for high quality services. The AOP clinic skills areas are Ophthalmic Assistants, Ophthalmic Theatre Nurses, Patient Counselors, and Managers. Additional cross training addresses interdisciplinary skills such as coaching, teamwork, change management and other abilities.

Short-term training modules offer the advantage to tailor training for the specific needs of the eye hospital identified by assessing their capacity for service delivery. Short module training has a number of advantages. Training can be as short as one to four weeks limiting disruption of services at their home hospital. Training modules can be tailored to the need of the hospital and is offered in an environment that practices the skills. A hospital can send one or several staff for a specific course or they can send a team for several courses. Training is a combination of lecture material, observation at the hospital and discussion. Joint interdisciplinary training give students the opportunity to share their experience.

Allied Ophthalmic Personnel are important to develop efficient and high quality self-sustaining eye hospitals. The experience of mentoring eye hospitals in the Latin American region has led to the identification of common gaps in the essential clinical and management in skills necessary help a hospital thrive and grow. The short term and affordable module training offers the ability to tailor training for hospitals in an environment that practices the skills in real time.

The clinical and management skills training program addresses the hospitals need for continuous training, strengthens teamwork, staff skill and satisfaction. By developing a team of persons who understand their job and work together results in greater job satisfaction, retention and positive patient outcomes.

1. ***Case Study from East Africa: Effective Practice of the Eye Care Team: The example of COESCA in East Africa***

**Purpose**

The WHO Global Action Plan 2014-2019 emphasizes the mapping of human resources by cadre as well as the development of a sustainable workforce for the provision of comprehensive eye health services. (1) This includes ***planning*** of human resources, ***training, career development, retention strategies*** and ***documentation and dissemination*** of best practices. In view of this, we will examine the case of the College of Ophthalmology of East, Central and Southern Africa (COECSA) as an example of effective practice in eye care team development in Africa.

**Origins of the Eastern Africa College of Ophthalmology**

In 1996 a workshop was held to review human resource development for eye health in Eastern and Southern Africa. This led in 1997 to a WHO Mission to visit 3 training universities in Kenya, Tanzania and Uganda. The mission recorded only 68 ophthalmologists in the 3 countries and at least half were based in the capital cities. (6) In the universities staffing levels were low, staff not adequately equipped with sub-specialty training, infrastructure and equipment were inadequate, there was no coordination between institutions and little interest in ophthalmology among medical students.

The lack of access to eye care due the shortage of ophthalmologists was to some extent mitigated by the widespread use in the sub-region of the mid-level cadre known as Ophthalmic Clinical Officers (OCOs). Over time, training programmes for this cadre were initiated in the sub-region. OCOs are trained to treat a range of basic eye conditions and may with additional training also provide optometry services and cataract surgery. They remain the backbone of eye care in rural areas. Nevertheless they are limited in what they can do and there are significant issues of supervision, duration and quality of training, curricula and career pathways.

The 1997 Mission recommended that a common curriculum be devised and implemented and that this should be ‘*a first step for the development of a unified training programme leading ultimately to an East African College of Ophthalmologists’*². Efforts to establish a College required a sustained commitment of regional leadership leading in 2005 to the registration of EACO in Kenya. In 2008 a substantial grant of €3 million to EACO was obtained from the European Union and supporting NGOs with funds for infrastructural development and equipment, support for curriculum development, research and capacity building and scholarships to increase uptake.

**The College of Ophthalmology of Eastern, Central and Southern Africa (COECSA)**

Expansion from the original EACO to include a further 5 countries and a merger in 2012 with the Ophthalmic Society of Eastern Africa (OSEA) to create COECSA required a change in governance structure. COECSA is no longer dominated by the post-graduate training universities but now includes representatives from the other 5 countries, representatives of hospitals providing high volume services, those providing outreach and rotation placements for trainee ophthalmologists and mid-level personnel, as well as individual practitioners and the private sector. The implementation of the plan has been facilitated by 2 further grants from MEACO and the RCO. The latter grant aims to build human resource capacity in the COECSA countries to oversee, standardise and accredit the training of ophthalmologists, to develop continuing professional development for ophthalmologists and OCOs across the region, a mentoring programme for newly-qualified ophthalmologists and a harmonised training curricula for ophthalmologists and OCOs across all institutions.

By the time of the merger in 2012, both COECSA was more aware of other developments in Africa to address the health workforce crisis and, in particular, the publication of the WHO AFRO Road Map for HRH (7). Over the next 4 years COECSA responded effectively to all 6 Strategic Areas in the Road Map. This short study will however focus on the COECSA response to planning, training, career development, retention and the documentation of best practice.

**Planning**

Rather than sharing the EU grant equally, it was agreed that priority should be given to the neediest institutions. This required the putting aside of narrow institutional and financial interests. COECSA is now about to embark on its 3rd Strategic Development Plan but this time planning for the entire sub-region (Kenya, Ethiopia, Uganda, Tanzania, Malawi, Zambia, Rwanda and Burundi) and also for each constituent country.

**Training**

A key outcome of the EU grant was a significant increase in enrollment into ophthalmic training programmes. COECSA’s Strategic Plan 2013-15 described some of the measures needed to raise the profile of ophthalmology such as a shift from the notion of eye care to one of eye health, raising the profile of eye health and improving the evidence base and improving communications

**Career Development**

COECSA has adopted an approach which emphasises the development of centres of excellence and sub-specialty training. Other steps include improving post-training support and CPD for ophthalmic personnel, encouraging exchanges and introducing sub-specialty training.

**Retention**

While COECSA is not responsible for government and university employment policies and practices, with its expanded sub-regional mandate it is better placed to exert influence. For instance COECSA has participated in HRH strategic planning discussions with government representatives in the region and with the East African Community.

**3.5 Documentation**

COECSA has now convened 4 Annual Congresses in member countries. Each Congress surpasses the previous one in terms of both participation and the number and quality of papers presented

**4. Conclusions**

COECSA has come a long way in a remarkably short period of time and the reasons are not hard to identify. They include visionary and committed leadership, effective governance through the executive Committee: a clarity around mission and mandate; expanding the geographical reach of COECSA while becoming ever more inclusive; stimulating research into a range of eye health agendas, while strengthening partnership and dialogue not only with traditional eye heath partners but also with new, horizontal linkages into wider health and development arenas.

Today, only 10 years since the establishment of EACO/COECSA, there are an estimated 190 ophthalmologists in the sub-region with an additional 233 in the expanded COECSA territory. Several schools are now regularly over-subscribed and COECSA itself is a leading agency in current moves to develop a harmonised curriculum for ophthalmology across sub-Saharan Africa. Yet, despite this impressive progress several challenges remain. Little has changed in terms of urban-rural distribution, cataract surgical rates remain worryingly low and the region as a whole in still unlikely to meet minimum Vision 2020 workforce targets.

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