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In health care, the quality and training of eye care personnel determine the health outcomes for individual patients and the community. We can improve the quality of human resources for eye health by understanding the different roles within the eye team, selecting the right people to train for each role, training them well, and continuing their training as needed.

Understand the different roles

In the eye care team, each role is defined by a job description, which lists the set of competencies (tasks and processes) which the person must be able to perform with a specified degree of expertise. For example, a vision technician in India must be competent to perform torchlight examination, retinoscopy, subjective refraction, fundus photography, tonometry, and other specified skills.

Training

Training must be based on the required job description. For each competency, there must be an equivalent ‘learning outcome’ or ‘learning objective’ (these terms are often used interchangeably). For example, the competency ‘Competent to perform torchlight examination’ becomes: ‘By the end of this course, graduates will be able to competently perform a torchlight examination’.

Training programmes must ensure that candidates receive the following:
- All the theoretical knowledge they need to perform the procedure, including safety procedures and contraindications
- Practical supervised instruction and opportunities to practice the procedure

Selection

When selecting candidates to train, consider what will be expected of them in their role once they qualify. What criteria should they be able to meet (e.g. language, past learning achievements, location, gender)? Would their attitude (e.g. compassion, patience and the ability to work as part of a team) suit the role? This is sometimes referred to as their value fit.

The criteria for selection must be clearly explained before inviting candidates to apply. Selection must be non-biased and designed to find the best candidate. It can be done based on candidates’ curriculum vitae, simple written or practical exercises to identify existing knowledge and skills (e.g. testing visual acuity), and observation of the candidate to assess their attitude.

Investment in training is needed if the required competencies (knowledge and skills) are not available.

Selecting and training candidates to suit their role

Training the eye team can improve individual and community eye health – provided the right people are trained, and in the right way.
Suitable opportunities to demonstrate each procedure in a patient-centred manner.

Training tips
- Draw on candidates’ existing capabilities and knowledge
- Give them opportunities to practice and learn from mistakes in a safe learning environment (e.g. by practicing in a wet lab)
- Assess candidates’ progress at regular intervals by checking their knowledge and skills against the standards expected of them (Figure 1). Give relevant and accurate feedback that will help them improve (formative assessment)
- Practical assessments and examinations at the end of the course or module is designed to objectively determine if the candidate has mastered the taught competencies (summative assessment).

Teaching methods for active learning
How students learn is as important as what they learn. Training should include exposure to real-world or clinical situations. This can be done through observation, using practice labs (e.g. surgical wet labs), or by performing the procedure under supervision.

Hospitals that perform their own training should strive or by performing the procedure under supervision.

Today’s technology allows for flexible training options such as online courses, videos and webinars to integrate training within patient care.

In the flipped classroom model of teaching, trainees are required to engage with the content online before coming to class, and the classroom sessions are typically used to clarify and test their understanding.

In mixed-mode or blended learning, trainees complete part of the course online, over a set period (while away from the training centre) and then come to the centre to complete their training. This makes better use of trainers’ time and learners actively take charge of their learning.

Ongoing training
Quality is a moving target, and procedures and equipment change as time goes on. Constant retraining is essential to maintain quality. Here are some examples of what to look for when re-assessing training needs.

- Patient safety incidents
- Patient complaints
- New technology
- Changes made to standard protocols and procedures
- Staff performance records (e.g., a surgical outcomes audit may highlight needs for retraining)

We can sustain and improve the quality of human resources for eye care by recruiting the right people and training them to be competent.

From the field
My journey: from clinician to educator

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Just before my final year of residency training, the entire faculty from the University went on an industrial strike that would last a whole year. We were on our own as residents and yet I credit this year as the most productive in my training. Our seniors took on the role of educators and mentors, teaching me more surgical and administrative skills than I had learnt in my previous years. They were my role models. They made me realise that, as clinicians, we have a moral obligation to be educators. I have continued to cherish and invest in this role throughout my career.

In later years, as Head of Department of Ophthalmology in Rwanda, I realised that, as clinicians, we teach but have no training as educators. Being a great ophthalmologist does not make one a great ophthalmology educator!

I purposefully set about to improve my skills as an educator through online courses for educators, learning about curriculum development and how to evaluate different ophthalmology curricula for our local needs. At conferences I registered for education courses, and was lucky to benefit from a 'Training the Trainers' programme through a link between my College of Blending my clinical and education skills and knowledge has enabled me to design a curriculum that was benchmarked against international standards. I was able to design the Primary Eye Care curriculum for use by nurses in the WHO Africa region. In my quest to mentor a new generation, we have now launched the first ophthalmology residency programme in Rwanda using an innovative model that is untried in our region. I am glad that I have adequate skills to confidently navigate the world of competencies, mind maps, assessment tools such as Socrative or Kahoot, milestones and portfolios.
Developing training programmes for eye teams

With the increased need for eye care services worldwide, educators must approach curriculum design and teaching in a systematic way with a clear goal in mind: education of the whole eye care team, with specific competencies, to work together effectively to provide high quality patient care.

Developing or adapting training programmes for the different personnel in the eye team follows the cycle shown in Figure 1. The first task is to perform a needs assessment (i.e., which key competencies must the eye team be able to perform in order to ensure high quality care for patients?) and a job analysis (i.e., which roles are best suited to take responsibility for the required tasks?). Shifting tasks appropriately can improve productivity.

Competencies. The various tasks required by each team member can be broken down into specific ‘competencies’ (i.e., a specific task, performed in a defined way and to a specific standard). Developing training for each competency is based on:

1. Knowledge: What must they know?
2. Skills: What must they be able to do?
3. Attitudes: What motivates them to learn and perform?

The answers form the ‘intended learning outcomes’ determines what and how they should be taught and assessed (the curriculum) and then organised within manageable building blocks (as courses or modules).

The final component is evaluation of the training programme to check whether it has enabled eye care personnel to attain the relevant competencies. Internationally established standards of practice and assessment, such as IJCAHPO’s core progressive and specialty certifications and ICO’s core curriculums, facilitate a standardised approach to guide training programmes.

As the need for eye care changes and develops over time in a particular population, the cycle is used to revise and review the curriculum and competencies.

Figure 1 Developing appropriate and relevant training programmes.

Useful resources for training

- International core curriculum for refractive error www.icoph.org/resources/268/International-Core-Curriculum-for-Refractive-Error.html
- International core curriculum for ophthalmic assistants www.icoph.org/resources/31/International-Core-Curriculum-For-Ophthalmic-Assistants.html
- Useful apps for classroom teaching Padlet, Kahoot, Socrative

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Figure 1 Miller’s pyramid: assessing competency and performance

Useful apps for classroom teaching

- Padlet
- Kahoot
- Socrative

Professional authenticity

Cognition

Behaviour

Performance integrated into practice
e.g. through direct observation, workplace based assessment

Demonstration of learning
e.g. via simulations, OSCEs

Interpretation/application
e.g. through case presentations, essays, extended matching type MCQs

Fact gathering
e.g. traditional true/false MCQs

Evaluation

Needs assessment & job analysis

Competencies

Curriculum

Courses

Cognition

Professional authenticity

Does

Knows how

Shows

Knows

Novice

Expert

Attitudes

Skills

Knowledge

Figure 1 Miller’s pyramid: assessing competency and performance

Useful applications for classroom teaching

- Padlet
- Kahoot
- Socrative