

TERMS OF REFERENCE

Project title: Eye health workforce development in Africa: A Scoping Study

Date: December 2021

Background

The Fred Hollows Foundation

The Fred Hollows Foundation (The Foundation) is a secular non-profit public health organization based in Australia, founded in 1992 by eminent eye surgeon Professor Fred Hollows. The Foundation focuses on strengthening eye health systems and the treatment and prevention of avoidable blindness caused by Cataract, Trachoma, Diabetic Retinopathy, and Refractive Error. The Foundation operates in more than 20 countries across Australia, The Pacific, South and Southeast Asia, and Africa.

The Fred Hollows Foundation's work in Africa

The Foundation has worked in Africa to develop comprehensive eye health service delivery in collaboration with local governments. Our work focuses on training of health care cadres, screening for visual impairment and eye diseases, provision of treatment and provision of equipment and infrastructure in countries such as Ethiopia, Kenya, Uganda, Tanzania, Burundi, Rwanda, Eritrea and Cameroon. The Foundation has worked in a variety of health care settings across Africa and in partnerships with local governments, local colleges of ophthalmology, other INGOs and at regional level with The International Agency for the Prevention of Blindness (IAPB).

Human Resources for Eye Health in Africa

The Foundation has invested significant efforts and resources into addressing the chronic eye care human resource gaps evident in the African countries where we work.

Our previous engagement focused on the Eastern Central and Southern Africa (ECSA) region working in partnership with The International Agency for the Prevention of Blindness (IAPB) and the College of Ophthalmology of Eastern Central and Southern Africa (COECSA). Through these partnerships significant progress was made in:

- **Advocacy focussing on integration of human resources for eye health in the broader human resources for health plans** at country level. This was in response to the need for greater investment in eye health workforce planning structures and availability of data for eye health workforce planning. Under this initiative three of The Foundation's programming countries (Eritrea, Kenya, and Ethiopia) were successful in having HReH requirements integrated within the broader HRH plans.
- **Standardisation of eye health workforce training:** In recognition of the need to standardize eye health workforce training across the region, The Foundation contributed to the development of core competencies for the eye health workforce in the WHO African Region. The core competencies are a step towards the harmonization of tasks and roles of human resources for eye health within a global framework and in line with global standards. The core competencies were launched and approved by WHO as a reference document for workforce planning, reviewing, and developing curricula for eye health professionals, as well as management, and regulation.
- **Funding and curriculum development support to training institutions:** including **pre-service Training** for ophthalmologists, ophthalmic nurses and sub-specialisations, as well as **in-service training** including, continuous medical education, continuous

professional development, refreshers, etc. The Foundation has also supported delivery of eye health training for health workers at the primary and community levels, such as integrated eye-care worker (IECW) training in Ethiopia.

- **Promoting evidence-based standards and guidelines of practice in eye health:** With the support of The Foundation, COECSA implemented various initiatives in the ECSA region to promote continuous professional development (CPD) for eye health workers. These included strengthening faculty/trainers' teaching skills in nine member countries through training the trainers (TTT) in ophthalmology, supporting national ophthalmic societies (Kenya, Ethiopia and Rwanda) to hold annual CPD sessions, hosting the COECSA congress, documentation and sharing of best practice in eye health including the setup of an [online research repository](#).
- **Development and dissemination of standards of practice** on retinopathy of prematurity, retinoblastoma, and diabetic retinopathy guidelines through the support to COECSA.

Despite some significant achievements, sustainable impact at scale in HReH has proven difficult:

- **Low eye health worker numbers and imbalanced composition of the eye health workforce:** Mirroring shortages in the overall health workforce in many countries in sub-Saharan Africa, the eye health workforce in the region falls well below the WHO and IAPB human resource development quotas for all cadres and is not growing at the rate required to meet the service demands of populations. Similarly, the proportions of various eye health cadres (surgeons, ophthalmic nurses, ophthalmic clinical officers, allied eye health workers) are often imbalanced – such as there being more surgeons available without adequate numbers of allied eye health workers to support effective eye health teams.
- **Unequal distribution of workers:** Eye health workers, particularly ophthalmologists, are disproportionately concentrated in capital cities and major urban areas. Incentivising deployment and retention of eye health worker in rural and underserved areas, particularly long term, remains a complex and challenging issue given, greater opportunities to work in urban centres (such as better infrastructure in facilities, professional development opportunities and quality of life factors). Further work to improve equitable distribution of eye health workers and enhance retention of staff in rural facilities has been identified as a priority under several of the Foundation's new country strategies in Africa including Rwanda.
- **Adoption and implementation of core competencies, scopes of practice and competency-based training:** Significant work has gone into upskilling the existing workforce including the development of competency-based training and clarifying the scopes of practices of cadres. However, there has been a mixed track record in regards to countries actually adopting and implementing these. At lower levels of the health system and among primary and community healthcare workers, competing disease priorities and required skills mean that in practice, a large proportion of workers have below basic competency levels.¹
- **Effective integration of eye health into HRH planning:** Increasing investment in the eye health workforce and effective integration of eye health workforce into overall human resources for health strategies within countries are crucial to mainstream HReH within overall workforce planning and priorities. While The Foundation has achieved some success in having HReH requirements integrated within the broader HRH plans and priorities, this is not consistent across all countries where we work and hasn't always translated into increased resources and prioritisation of HREH.
- **Low productivity:** A 2014 study by Palmer et al found the average productivity (cataract surgeries per surgeon per year) was quite low, only about 178 per surgeon per year.² In some facilities ophthalmologists and cataract surgeons have been noted as perform less than 200, and often less than 100 surgeries per surgeon per year. Inadequate access to essential equipment and a lack of necessary ophthalmic items have been noted as a significant barrier to increased productivity.
- **Limited progress in achieving sustained improvements in the quality of training:** studies have shown only fair levels of satisfaction with eye health training and poor-moderate levels of confidence among graduates in undertaking certain eye health procedures. Trainees have cited challenges such as a lack of adequate consumables and instruments and inadequate

¹ Kalua, Khumbo & Gichangi, Michael & Barasa, Ernest & Eliah, Edson & Lewallen, Susan & Courtright, Paul. (2014). "Skills of general health workers in primary eye care in Kenya, Malawi and Tanzania." *Human resources for health*. 12. S2. 10.1186/1478-4491-12-S1-S2.

² Palmer J, Chinanayi F, Gilbert A, Pillay D, Fox S, Jaggernath J, Naidoo K, Graham R, Patel D, Blanchet K. "Mapping human resources for eye health in 21 countries of sub-Saharan Africa: current progress towards VISION 2020". *Hum Resour Health*. 2014;12:44.

supervisions from trainers, and limited hands-on training in earlier years of study.³ Among lower and mid-level cadres, a lack of agreement and consistency in defining scope-of-practice for these workers has meant that training, supervision and support is not adequately tailored to their needs, and has inadequate emphasis on technical eye-related skills that front-line workers will actually be expected to perform.⁴

- Variability in the scope of practice for mid-level ophthalmic personnel (MLOPs) and their limited and inconsistent recognition as part of the workforce in different countries
- **Limited career progression opportunities:** particularly for MLOPs, contributes to staff attrition and challenges recruiting adequate numbers of personnel.

To have sustained impact in HReH, The Foundation has determined that it needs to revise its approach. Noting the longer time periods required to recruit, train and deploy workforce, and the time taken to build global partnerships, strengthen training institutions and change policy, The Foundation's HReH work in Africa going forward needs to be informed by an appropriately budgeted, longer-term (i.e. 10 year) strategy aimed at achieving long term, sustainable impact. The proposed scoping study will form a significant basis for the development of this longer-term strategy, one that is based on sound information and analysis. Beyond the longer-term strategy, the scoping study will inform development of projects, formation of collaborations and steer the advocacy efforts along with others in the sector.

³ Dean W, Gichuhi S, Buchan J *et al.* Survey of ophthalmologists-in-training in Eastern, Central and Southern Africa: A regional focus on ophthalmic surgical education [version 1; peer review: 2 approved]. *Wellcome Open Res* 2019, **4**:187

⁴ Courtright, Paul & Seneadza, A & Mathenge, Wanjiku & Eliah, Edson & Lewallen, Susan. (2010). Primary eye care in sub-Saharan Africa: do we have the evidence needed to scale up training and service delivery?. *Annals of tropical medicine and parasitology*. 104. 361-7. 10.1179/136485910X12743554760225.e



The Proposed Study

Purpose

This terms of reference sets out parameter for a scoping study (including needs assessments, evidence review and synthesis) to guide the strategic direction of The Foundation's work to sustainably strengthen eye health workforce in the countries where we work in African over the next 10 years.

This study is intended to provide evidence-informed recommendations on the scope and strategic focus of the Foundation's future human resources for eye health (HReH) work in Africa. In particular, this will focus on areas of greatest need, The Foundation's particular value-add, opportunities for partnership and collaboration, and priority actions to enhance the sustainability and impact of The Foundation's investments.

Setting

This project will focus on human resources for eye health in African Great Lakes region of eastern Africa (in particular Tanzania, Kenya, Uganda, Rwanda, Burundi) and the Horn of Africa (in particular Eritrea, Ethiopia). The information gathered will inform an analysis of the strengths, weaknesses, opportunities and threats (SWOT) in human resources for eye health, and the development of a 10-year strategy to inform The Foundation's HReH investments in these regions.

Research Questions

Current capacities, strengths and weaknesses

1. What is the current coverage of HReH in each of the target countries (including the number per million population and distribution of ophthalmologists, ophthalmic nurses, allied eye health workers, ophthalmic clinical officers, cataract surgeons, TT surgeons, optometrists, refractionists, ophthalmic assistants, opticians)?
2. What training programs (pre-deployment, CPD) are in operation in each of the target countries, how are they regulated, and what are their annual outputs?
3. What are the policies, strategies and frameworks in place relevant to HReH in each of the target countries?
4. What has been publicly reported and what do key eye health stakeholders in the target countries perceive to be the key challenges and opportunities in relation to HReH development in their country and in the region?
5. Who are the key stakeholders involved in the HReH development in each of the target countries, what is their influence and scope of activities?

Opportunities to enhance HReH in Sub-Saharan Africa

6. What health workforce development activities with relevance to eye health are planned and/or currently being delivered, where and by whom?
7. To what extent are current training curricula in target countries appropriate for facilitating [person-centred care](#) and WHO's [Integrated People-Centred Eye Care \(IPEC\)](#) framework?
8. What health workforce development strategies have been successful in the African context (and elsewhere, as relevant), where, and why?
9. What emerging innovations (including, but not limited to technology solutions) might amplify and/or accelerate workforce development and/or address workforce gaps?

Approach

Data Collection Activity	Overview	Research Question Addressed
Rapid literature review/s	Systematic search and analysis of published literature, and select grey literature (e.g., evaluation reports from FHF and other organizations) <i>A detailed review protocol will be developed and approved prior to implementation, outlining the scope of the rapid review, type of source documents, search terms and approach, and data extraction and analysis approach. A data extraction tool will also be developed and approved.</i>	All
Stakeholder analysis	Systematic search and mapping of organizations and institutions (government, NGO, education, and training) with a role in human resource for health planning and development in target countries.	RQ4
Training program analysis	Systematic review of all current eye health training programs in target countries and the institutions providing these, including: Pre-service Training: for ophthalmologists, Optometrists, ophthalmic nurses, sub-specialisations and other allied eye health workers.	RQ2

	In-service training: including, continuous medical education, continuous professional development, refreshers, etc.	
Policy, plans and strategy analyses	Systematic search and analysis of strategies, policies and plans relating to health workforce development, and eye health (including those of national and sub-national governments, FHF, and any other key actors engaged in the delivery of HReH programs) and the use of telehealth and technology in healthcare. This should include the mapping of key organisations / actors contributing to efforts to develop HReH, and the capture of any information available about planned and current investment and efficacy of implementation. <i>A detailed review protocol will be developed and approved prior to implementation, outlining the scope of the review, type of source documents, search terms and approach, and data extraction and analysis approach. A data extraction tool will also be developed and approved.</i>	RQ2, RQ3, RQ4, RQ5
Key informant interviews and/or survey	Semi-structured interviews (and/or survey) with a representative sample of key stakeholders (government, training institutions, NGO, FHF staff) across target countries to gather perspectives and information relating to: 1) key HReH strengths and gaps; 2) planned and current HReH development activities; 3) successful strategies and the factors contributing to their effective implementation. <i>A detailed protocol for KII / survey will be developed and approved prior to implementation, outlining the key stakeholder groups, the sampling approach, the recruitment approach, and the objectives and scope of interviews. Interview schedule, surveys and consent forms will also be developed and approved.</i>	RQ1, RQ2, RQ3, RQ4, RQ5, RQ8

Deliverables

Deliverable	Overview	Timing
1. Rapid literature review and policy/strategy/plan analysis protocol and tools	Detailed review protocols developed and approved prior to implementation, outlining the scope of the reviews, type of source documents, search terms and approach, and data extraction and analysis approach. A data extraction tool will also be developed and approved.	End of month 1
2. Key information interview/survey protocol and tools	A detailed protocol for KII/survey will be developed and approved prior to implementation, outlining the key stakeholder groups, the sampling approach, the recruitment approach, and the objectives and scope of interviews/survey. Interview schedules, survey and consent forms will also be developed and approved.	End of month 1
3. Ethics approval for KIIs/surveys	Ethics waivers or approvals in target countries to conduct KIIs/surveys	End of month 4 (assume 3 months required for ethical approval)
4. Two manuscripts submitted for publication	1) focused on RQ1-4 ; 2) focused on RQ6 and 8	End of month 7
5. Scoping study report	Summarising the study methods, results, conclusions, and recommendations	End of month 7
6. Powerpoint slides prepared and presented to FHF staff	Results across all 9 RQ, with a series of recommendations for FHF partnerships and programs. This should be paired with facilitated discussion with the consultant and FHF staff about the implications of the results for FHF future workforce development activities in Africa.	End of month 7

Appendix 1: Proposal template (to be completed by consultant)

Project Summary				
Project Name				
Country				
Proposed Start date	End date:		Duration:	
Lead researcher /consultant – name, affiliation, and contact details. Role within the evaluation / research study.				
Other members of the proposed research team (if relevant). Note role within the evaluation / research study				
	<i>Add sections here relating to key methodological details required from the consultants at this time, but that were unable to be specified in the ToR. Use appropriate headings to guide the responses of the consultant. This might include sample size calculations or data analysis plans, consultation approaches, or details of survey tools.</i>			
Detailed budget	<i>The summary budget can be provided in a table format if preferred. The budget should indicate the funding costs for i) direct labour or personnel costs (such as salary and labour on-costs) and ii) direct operational costs (such as consumables, equipment, travel and other), any other costs to be incurred.</i>			
Referees				
Insurance details				

Appendix 2: Initial list of documents for evidence review

1. IAPB Policy Paper 2014: Addressing the eye health workforce crisis in sub-Saharan Africa: business as usual is not an option
2. Inequities in the Global Health Workforce: The Greatest Impediment to Health in Sub-Saharan Africa Stella C. E. Anyangwe, and Chipayeni Mtonga, 2007
3. External Evaluation Report, International Agency for the Prevention of Blindness, Human Resources for Eye Health Strategy, 2016.
4. Africa Eye health training Institutions Database, International Agency for the Prevention of Blindness
5. Dean, W.H., Buchan, J.C., Gichuhi, S. *et al.* Ophthalmology training in sub-Saharan Africa: a scoping review. *Eye* **35**, 1066–1083 (2021). <https://doi.org/10.1038/s41433-020-01335-7>, available at <https://www.nature.com/articles/s41433-020-01335-7>
6. IAPB Africa Human Resources for Eye Health Strategic Plan 2014-2023
7. Mapping human resources for eye health in 21 countries of sub-Saharan Africa: current progress towards VISION 2020 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4237800/>
8. Mapping Human Resources for Eye Health in Sub-Saharan Africa: Progress towards VISION 2020 Country Fact Sheets
9. WHO Afro. Road map for scaling up the human resources for health for improved health service delivery in the African region 2012 –2025
10. Core competencies for the eye health workforce in the WHO African Region, WHO Regional Office for Africa 2019.
11. The Fred Hollows Country Program Strategies (Eritrea, Ethiopia, Kenya, Rwanda)
12. Report: Situational Analyses of Eye Health Professional Training Programmes in Four Countries: Kenya, Ethiopia, Rwanda and Eritrea 2012-2013
13. The Fred Hollows Foundation Project Implementation plan (PIP): [*Strengthening Human Resources for Eye Health Project 2018-21*](#)
14. End Term evaluation report of the Kenya Capacity Strengthening of Training Institutions Project/ Enabling Environment Project – 2013-2020
15. Situational analysis report: Burundi September 2021
16. National Eye Care Plans/Strategies from target countries (FHF to provide)