Position Paper

Strengthening Human Resources for Eye Health in SADC Countries

Regional Eye Health Advocacy Group

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Published by HelpAge International
East West and Central Africa Regional Office
P.O. Box 14888-00800
Nairobi, Kenya
Tel: +254 20 263 7853/4
Email: helpageewca@helpage.org
Website: www.helpage.org

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Table of Contents

Introduction

SADC can play a key role in addressing the critical need for quality eye health care by prioritizing eye health in its non-communicable disease and conditions strategic plan and to develop a regional strategic plan for eye health with particular emphasis on human resources for eye health. It can also advocate and catalyze country and regional actions to address human resources for eye health challenges, and, so doing, contribute towards universal eye health coverage. The goal of universal health coverage cannot be reached without the integration of eye health into the primary health care system and health systems strengthening. This includes enhancing the human resources policy environment, significant expansion of the numbers, and improvement in the distribution, competencies and motivation and workplace support of the health workforce.

The purpose of the strategic plan would be to provide a framework for governments, training institutions, civil society organizations and various other agencies to work together, individually and collaboratively, to address the eye health crisis in SADC countries, to ensure all people have access to a skilled, motivated and supported health work force which can provide quality eye care, within a robust health system. A number of recommendations, in line with the International Agency for the Prevention of Blindness (IAPB) Africa Human Resources for Eye Health (HReH) Strategic Plan for 2014-2018 [1]follow.

An eye health crisis in Sub-Saharan Africa

Sub-Saharan Africa carries a high burden of about 16.6 million people who are visually impaired and 4.8 million who are blind. Up to 80% of this vision loss is due to treatable or preventable causes.[2]Yet, Africa has only about 3% of the global health workforce, and less than 1% of the total number of ophthalmologists and 1% of global health resources with which health needs, includingeye health needs, are to be met.

The rapid emergence of non-communicable conditions is increasing irreversible blindness

Chronic eye conditions such as diabetic retinopathy (2.4% and 3.4% in East and Southern Africa respectively) and glaucoma (4.0% and 7.3% in East and Southern Africa respectively) are increasing as causes of irreversible blindness. Although the prevalence of blindness from these conditions is still low, these place an increased burden on eye health. The cost of intervention is high and treatment options complex.[1] These chronic conditions require both support for patient self-management, and continuing and integrated health care. Blanchet et al., 2014[3] suggested that the challenges posed by chronic debilitating disease may be met by establishing a Global Health Systems Fund, to respond to individual needs and that “systems thinking, innovative and flexible solutions, based on evidence from health systems research and analysis” would be required.

Providing treatment for, or preventing eye conditions is laden with challenges

Eye conditions that cause preventable or treatable blindness are often associated with a combination of factors such as poverty, lack of education and inadequate health-care services. For example, cataract causes less than 15% of blindness in high-income regions, but in Southern and East Africa it causes 31.2% and 36.7% of blindness respectively, thus remaining the leading cause of blindness[2]. Yet it is treatable by a cost-effective intervention of which the quality can be maintained through monitoring. This reflects challenges in access to cataract surgery**.**

[1]Interventions for control, include health promotion and prevention; for regulation, mechanisms for early detection, lifelong self-care and adherence to treatment; for management of complications, long-term follow-up and treatment.

[2] Other major causes of blindness in Southern and East Africa respectively are uncorrected refractive error (13.5% and 13.1%), macular degeneration (9.7% and 5.8%), and trachoma (0.69% and 8.1%). The largest cause of visual impairment in Sub-Saharan Africa is uncorrected refractive error (45%) followed by cataract (17.7%) and macular degeneration (2.8%).

Uncorrected refractive erroris the largest cause of visual impairmentis and presbyopia impairs the near vision of most people over the age of about 40 years.[4] In Tanzania, in 2014, spectacle coverage for refractive error and presbyopia was only 1.7% and 0.4%, respectively.[5] This highlights the continuing inadequacy of refractive services in Sub-Saharan Africa and the critical need for human resource and service delivery interventions for eye health.

In addition, eye care services are needed for about 15% [6] to 25%[7] of the community, who at one time may have eye conditions that may not necessarily cause blindness, but affect quality of life and functionality. For example, presbyopia and lens conditions, the leading causes of these eye conditions in older participants, and conjunctival infections and allergies in young people.

Geographical, socio-economic and gender disparities exist in eye health

The inadequacy of eye health services is exacerbated by the unequal distribution of resources, the viability of the primary health care systems, and the availability and accessibility to health care facilities, especially in rural areas. (Bozzani, 2014 #5379). These differences persist in the health needs, perception and desire to access available health facilities, and in overall health awareness among urban and rural populations. Eye care is no exception: in general, the most remote and poorest areas of low-income countries have least access to eye care and highest prevalence of visual impairment.

Disparities in the higher prevalence of visual impairment in women have worsened between 1990and 2010 in Sub-Saharan Africa. This is more marked in certain regions.[3] This illustrates the variation in the prevalence of disease that occurs between and within countries, due to differences that include economic development, delivery infrastructure and human resources.The goal of universal health coverage, to ensure that all people obtain the health services they need without suffering financial hardship when paying for them, is thus not being met for eye health.

Therefore, planning for eye health interventions needs to take both eye health needs and context into consideration.For example, targeted action is needed to reach women, rural and remote and vulnerable populations.[4] Further, eye health systems and strategies need to be robust and responsive to socio-economic and cultural realities and the population's demand for health services.A strong, efficient, well-run affordable health system is needed. It must meet priority health needs through people-centred, integrated care, with access to essential medicines and technologies and a sufficient, well-trained, motivated health workers, to provide the services to meet patients' needs based on the best available evidence.[4]

Health systems support is essential to achieve universal access

Reorient health systems

Health systems reorientation is required to respond to emerging health needs, be directly accountable to ordinary people, and respect and ensure the rights and dignity of all people who use health systems and provide health care.[8]Nishtar and Ralson, 2013 [9]

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[3]In 2010, the prevalence of blindness was lower in men 1.2% than in women (1.4%). A similar trend was evident for visual impairment, with a prevalence of 3.8% for men and 4.2% for women. The ratio of men to women who are visually impaired is, in East Africa 4.0%:4.5% , and is in Southern Africa 2.0%:2.3%.K. Naidoo and others, 'Prevalence and Causes of Vision Loss in Sub-Saharan Africa: 1990-2010', *Br J Ophthalmol,* 98 (2014).

[4]Integrative patient centred health care

- Seeks to treat the whole person, to assist the innate healing properties of each person, and to promote health and wellness as well as the prevention of disease (philosophy and/or values).
- Is an interdisciplinary, nonhierarchical, seamless continuum of decision-making, patient-centered care, and support (structure).
- Uses a collaborative team approach guided by consensus building, mutual respect, and a shared vision of health care to contribute to the plan of care (process).

noted that HRH in the context of non-communicable disease control, could be a lever for health system changes because they are "vital for mainstreaming changes in health systems and in the broader social system that affects the health of the population. Emerging agendas in the post-2015 landscape offer an opportunity to tap to the fullest the potential of human resources for health."

Building the capacity of the health system to meet national needs

Many health systems in Africa are fragile, fragmented and under-resourced. Access to eye care depends on the capacity of the health system to address major health challenges, coordinate donor support and effectively use scarce human and financial resources. Disease-specific interventions have tended to attract international aid. Aid has, however, not been effective in reducing health inequalities between socio-economic groups in lower income countries. Its failure to deliver benefits for all categories of the population has been ascribed to the limited capacities of health systems.[3] The 2014-2019 WHO eye health strategy thus recommends moving away from a disease-specific approach and to combine integration with health system strengthening to improve the performance and quality of eye care services as part of the broader national health systems and to increase eye health coverage.[10]

Strengthening the health system

The table below contains examples of strengthening health systems blocks[5] to enhance HRH performance, first during training and then in their workplace. Addressing each block is necessary and important.

Table 1: Health systems strengthening to produce competent and motivated health workers who provide quality care

	Strengthen health systems to support training institutions to produce HRH with appropriate competencies and capacity to provide eye health care	Strengthen health systems to ensure sufficient, appropriately distributed, supported and motivated HRH provide eye health care
Finance	Funding for faculty, health institutions, community placements during training, scholarships to students from rural areas or subsidize education for return of service in remote and rural areas.	Provide a coherent package for remuneration, financial and non financial incentives for all cadres of health workers, including eye health, but in particular for HRH in remote and rural areas.
Leadership and governance	Encourage and support accreditation, re-accreditation and evaluation of training institutions. Certification and recertification for HRH.	Governments, community, health workers / professional associations to improve regulatory processes, standards of practice and performance and productivity.
Service delivery	Adapt harmonised curricula to ensure graduates acquire competencies that are responsive to population needs and roles and responsibilities of HRH.	Coordinate roles and responsibilities of the health team and ensure an appropriate skillmix to provide quality, accessible care, which isresponsive to population needs.Provide outreach support.
Equipment and supplies	Provide sufficient resources for both didactic and practical components.	Develop a safe and supportive working environment For rural workers, improve living

[5]Although the health systems blocks are discussed separately, the interconnected, dynamic, complex and adaptive nature of health systems, the context and independent agents of which it consists, whose behaviour is based on physical, psychological and social rules, needs to be kept in mind.

		conditions.
Health information systems	Train sufficient numbers and appropriate skill mix depending on population health needs.Support IAPB as a one stop clearing house for information and e-learning.	Support distribution/deployment policies/ strategies. Use proven HRH tools to align supply and demand and determine staffing norms.
Human resources	Support and encourage continuing faculty development to effectively implement competency based training and assessment Recruit students with a rural background.	Support the development of professional networks, supportive supervision and programmes for continuous professional development, especially for rural health workers. Adopt public recognition measures.

Financing eye health services: a move towards funding for comprehensive eye health

Blindness, visual impairment and the overall lack of eye care services are often due to social, economic and developmental challenges. Blindness causes poverty and it is often the poorest people who go blind due to a lack of access to eye care. Socio-economic development and increasing access to water and sanitation, most likely contributed to the decrease in trachoma related blindness and vision impairment from 8.9% to 5.2% between 1990 and 2010.

Eye care in many parts of Africa is characterised by poor practitioner-to-patient ratios, mal-distributed HRH, inadequate facilities, a lack of educational programmes and poor state funding.Both public and private funding has been biased towards curative servicesand focussed on blindness and disease control. For example, in Ghana outpatient consultations and cataract surgery continued, whereas preventive services such as screening and community outreach, perceived to have the least observable effects, the most complex and the least compatible with the mandate and financing system of the hospital were most likely to cease after donor funding ended.[11] A paradigm shift is needed to ensure funding for comprehensive eye health is favoured.

An estimated additional $5.8 per person per year (2010 and 2020) is needed to control avoidable blindness, 48% of this figure being needed in low-income and middle-income countries.[12]Nonetheless, only three SADC countries, Madagascar, Malawi and Zambia have achieved the Abuja target of allocating 15% of public expenditure to health; Lesotho and Swaziland are within reach of the target. Yet, it is estimated that every dollar spent on improving eye care services provides a four-fold return on investment in lower income countries.[13] The IAPB Africa 2014-2018 HReH plan suggests that options of joint funding initiatives should be explored. [1]Financing can be through effective public–private partnerships, Ministries of Health budgetary allocation, national insurance or performance-based financing.[3]

Financing HRH

Countries and donors should ensure financing for HRH training, e.g. resources for training institutions, faculty[14]scholarships for students from rural areas or subsidized education for return of service in remote and rural areas. Financial and non-financial incentives for health workers in remote and rural areas, task shifting plans and remuneration packages to keep pace with any increase in numbers must also be appropriately costed and adequately financed.

Volunteers can make a valuable contribution on a short term or part time basis, but for essential health services to be sustainable, trained health workers, including community

health workers (CHWs), should receive adequate wages and/or other appropriate and commensurate incentives. [15] Then again, investment in health workforce is considered one of the best buys in public health. It may also have a broader socio- economic impact: improving synergies with education, creating career opportunities for women, facilitating decent employment in the formal sector, and fuelling economic growth.[16]

Leadership and governance

Governments, together with citizens and health workers, to lead health care

Citizens, and local and national governments, rather than external actors, should lead the drive to strengthen national health systems towards universal health coverage, in line with the needs and priorities of communities. Strategies for accessible eye health need to be planned and implemented together with citizens and need to take into account inter- and intra-country differences and ensure that comprehensive solutions are rooted in economic and political realities.[8]

Many crucial drivers of health system change lie outside of the traditional boundaries of the health system. To achieve universal access to health care, and specifically eye health care, engagement with wider development, health and HRH initiatives, globally, nationally and regionally by all stakeholders, including the workforce, is essential. The rights of the worker must be respected, and they must in turn embrace the right to health and contribute translating the vision of universal health coverage into improved health care on the ground.[16]Synergies thus need to be created to bring together communities and health workers on a common platform of work at local levels[3] and to facilitate the participation of civil society in policy dialogue and accountability mechanisms.[17]

Partnerships – a united and collaborative eye health sector

IAPB Africa concurs that partnership at all levels is central to their 2014-2018 HReH plan,]that success is invariably built around strong and sustainable partnerships between ministries, professional bodies, civil society and international funding partners. Also, working with WHO, generates the reach and recognition that civil society agencies cannot match. Securing the commitment of governments to strengthen eye health services at country level is now regarded as the single most important factor in determining future success. Working collaboratively in multi-country, multi-agency consortia can generate the rigour and the resources necessary to scale up the production of eye health workers.

Community participation

There is strong evidence of the importance of partnerships and the participation of the community that are applicable to the integration of eye care into primary health care. Community participation has contributed to health improvements at the local level, particularly in poor communities and much can be learnt from community directed interventions for onchocerciasis. There are, however, essential differences between this system developed around the annual provision of medication compared to the ongoing need for preventive, promotive, and referral services. Furthermore, challenges exist regarding remuneration and integrating community participation into health programmes. Recommendations arising from a review[18] are to:

- conduct in-depth analyses of the perceptions of community members regarding the use of CHWs;
- replace the bio-medical paradigm as the main planning tool for programmes, to eliminate the view of community participation as an intervention;
- use frameworks that do not limit investigation into what works, why and how in community participation in health programmes.
- move beyond health centresinto “health spaces, which extend the reach of comprehensive care into schools, workplaces, recreational areas, and the homes of those who live with a chronic condition.” [19]

Service delivery[6]

Segmented services

In the majority of Sub-Saharan countries, various stakeholders, often acting in isolation, provide eye care services. This indicates insufficient government capacity to monitor existing health regulations.[3]Such segmented systems that risk providing inferior services to the poor are unacceptable. Social mobilization and inter-sectoral action are critical for re-orienting eye health systems to be more effective and people-centred, in addition to coordinating multiple health and social programmes, types of service providers and traditions of eye health care within health systems.[8]

A focus on facility-based curative care

About 70% of health costs in low income countries are spent on 30% of the population, mainly on hospital and specialist care. Eye health too,has for a large part been focussed on curative care at the secondary and tertiary levels of the public health system. This poses limitations to access to care. Delays in presentation, such as eye injuries are often due to lack of finances and or ignorance at the community level that interventions are available. This can be compounded by the poor knowledge within the health care sector of appropriate management and the availability of specialist eye care services i.e. weak referral systems.[20]

Sight-threatening conditions such as cataract, refractive error, diabetic retinopathy and glaucoma mainly have a gradual onset. People may thus not experience or notice symptoms. Alternatively they may use traditional medicine, self-medicate or develop coping strategies. A person with these conditions thus may benefit from earlier identification, counselling and referral.

Eye health integrated into primary health care

Countries with well-functioning primary health care (e.g. Thailand, Brazil, Cuba and Oman) have better health outcomes at low costs and, working in conjunction with first-referral care facilities, can manage about 90% of their health demands.The IAPB Africa 2014-2018 HReH plan [1]has as an objective “Quality eye health services more widely available”. There is, however, much debate on how to facilitate equitable access to quality eye health services. In 1984, WHO recommended a primary health care approach to address access to eye care: appropriate management of eye conditions at primary care level, with cascading levels of referral for more complex conditions.[21] Community development and collaboration to promote eye health are also stressed. This integrated approach was endorsed in 2000, [22] 2006, 2009 [23] 2010,[2], and I 2013.[24] There is nevertheless little published evidence of successful models of primary eye care.[25]

Vertical eye health systems moving to a comprehensive and integrated approach

Eye health interventions, for example for cataract and refractive error are often delivered vertically, in isolation from other health services. This is possible because interventions are generally once off, or short-term for most infectious conditions (excluding trachoma and onchocerciasis) and can thus be delivered in the form of mobile or outreach services to improve access. These may, however, undermine local services and may not always reach more vulnerable populations. In addition, the scalability of these vertical programmes may be limited if these are at odds with national health policy, and their sustainability challenged due to their resource-intensive nature.

[6]In 2003 the Fifty-sixth World Health Assembly resolution WHA56.26, elimination of avoidable blindness, urged member states to: encourage partnerships between the public sector, nongovernmental organizations, the private sector, civil society and communities in programmes and activities for prevention of blindness at all levels; promote and provide improved access to health services both with regard to prevention as well as treatment for ocular conditions; advance the integration of prevention of avoidable blindness and visual impairment in primary health care and in existing health plans and programmes at regional and national levels.

Horizontal systems of primary level public health activities such as vitamin A distribution, measles immunisation, ivermect in distribution, facial and environmental hygiene, can and do make significant contributions to the eye health of the population. These can provide a platform for enhancement of other eye health activities at the primary level based on a public health approach. Horizontal and vertical approaches can be combined to create diagonal services for example augment the services at primary and community level with specialist outreach visits to more remote communities, but there is little evidence for this.

Eye health is still not adequately integrated into the health systems and policies of lower income countries.Innovative and flexible solutions and advocacy for eye health are thus needed to attain the inclusion of comprehensive eye health at both service delivery and policy levels[7]i.e. a shift in focus towards how to deliver eye health interventions as part of the routine health services.[3]Evidence of how most effectively to integrate eye health into primary health care is currently weak, particularly when applying a health systems framework. A realignment of eye health in the primary health care agenda will require context specific planning and a holistic approach, with careful attention to each of the health system components and to the public health system as a whole and an incremental approach to initiating or integrating eye health interventions into the primary health care system. [26]

Health information systems

The IAPB Africa 2014-2018 HReH plan proposes to research into the eye health workforce. One of the components necessary for this is health information systems that are sufficiently robust to provide information with which to track national eye health workforce targets. For example mid-level health workers (MLHWs) are largely absent in information systems and databases because there is a lack of visibility of MLHW cadres in public policy, hampering advocacy and planning for these cadres.

In addition, countries should support building research capacity and undertake or update a human resource analysis that will provide information on the demography of current HReH in both the public and non-state sectors; the need for services; the gaps in service provision; the extent to which task shifting is already taking place; and the existing human resource quality assurance mechanisms.[27]Also, countries should document the most efficient skill-mix in terms of system and health workers performance, and in terms of its impact on health indicators to ensure there is sufficient information to facilitate optimal planning, management and support for the workforce.[28]

Policy makers and planners require information about costs of various scenarios of HReH reforms, factors that influence scaling-up of eye health programmes in different contexts; and about HReH performance and determinants to address shortcomings and build on strengths: to support HReH to attain and maintain appropriate eye health competencies and remain motivated. This requires information from documentation and evaluation of existing projects, as well as pilot projects of systematic approaches to interventions and application of best practices in eye health. Multi-national research may provide guidance about how to scale up eye health interventions that are integrated into primary health systems.[26]

Infrastructure, supplies and equipment

To provide effective health care a safe and supportive working environment is needed, this includes outreach support and decent living conditions for rural workers. Member

[7]As recommended in the previous (2009–2013) WHO strategy for eye heath, World Health Organization, 'Wha62.1. Action Plan for the Prevention of Avoidable Blindness and Visual Impairment 2009-2013', (Geneva: World Health Organization, 2010)., The current (2014-2019) WHO eye health strategy World Health Organization, 'Wha66/11. Universal Eye Health: A Global Action Plan 2014–2019', (Geneva: World Health Organization, 2013).also recommends the move away from a disease-specific approach, and that integration needs to be combined with health system strengthening.

states are urged to make available within health systems essential medicines and medical supplies needed for eye care.[8]The IAPB Africa 2014-2018HReH plan[1]suggests equipment should be provided as part of the unit cost of training to assist the newly qualified health worker to immediately implement their training.

Human resources: support coordinated health teams to provide eye care

There is considerable variation in eye care needs, services and numbers and cadres of eye care personnel available across Sub-Saharan Africa, and even within regions within countries.

Specialist eye care providers

A summary of HReH in SADC countries, based on the information in the IAPB Africa 2014-2018 HReH plan can be found in Appendix 1. Of the SADC countries, only South Africa and Mauritius have achieved the suggested VISION 2020 targets for ophthalmologists, South Africa for optometrists and Mauritius and Namibia for ophthalmic nurses and clinical officers. Apart from countries which have already achieved Vision 2020 targets, Palmer et al, 2014 [29] concludes that very few additional countries are expected to achieve these by year 2020 or after without further intervention[9].

Practitioner to population ratio is lower, and is inequitable, when analyzed according to practitioner location. Ratios for all cadres are higher in capital cities and exceed suggested VISION 2020 target ratios. This is at the expense of rural service users. Ophthalmologists and optometrists are more likely to work in capital cities (67.2% and 66.3%, respectively) also mid-level refractionists,[10] all other cadres are found more frequently in smaller cities or rural areas. The misdistribution of these cadres, who are also more likely to work mainly in the private sector, suggests that market dynamics have a role. Palmer et al., 2014 summarizes the factors contributing to geographic and sectoral imbalances in HRH as:

- poor public sector working conditions particularly in rural areas (e.g. low salaries, lack of dedicated positions, poor maintenance of facilities, inadequate provision of appropriate equipment and supervision)
- health systems factors (e.g. the structure and dynamics of the labour market and the role of the private sector as an employer)
- a lack of innovation in national HRH policies regarding retention and task-shifting (e.g. through development of attractive career pathways, purposive recruitment of students from rural areas or shifting certain responsibilities to trained lower cadres)

In addition there are likely to be gaps in the capacity, motivation and performance to provide quality eye care.Traditional models of HRH education, deployment, and remuneration need to be revisited and performance assessed. To increase the number, distribution, competencies and motivation of eye care personnel, evidence is needed to advocate for inclusion of eye care personnel in government plans for strengthening their health workforce. [30]

Generalist health care providers who provide eye care

In addition to specialist HReH, nurses, doctors and non- physician clinicians can as part of their tasks at primary health care facilities, provide basic eye care, first aid and referral services as examples of integrating primary eye care into primary health care.In Africa, nurse training however tends to be largely didactic and supervision infrequent. This may account for the findings of a few studies in Africa that these cadres have limited eye care skills and knowledge and health systems support.[25, 31-33]The results of

[8]theFifty-sixth World Health Assembly resolution WHA56.26, elimination of avoidable blindness,
[9]In Sub-Saharan Africa practitioner per million population ratios were in 2011, for ophthalmologists 3.1, optometrists and refractionists 3.6 and ophthalmic nurses/clinical officers 5.8.
[10]Location-specific practitioner per population ratios are particularly skewed for ophthalmologists (mean 10.8 inside versus 0.7 outside capitals), optometrists (10.6 versus 0.9) and mid-level refractionists (8.4 versus 1.8)

enhanced supervision to improve their eye care skills has had rather disappointing outcomes.[34, 35] Recommendations have been made that eye care training needs revision to become more practicum-based and governance (accountability and rule of law) of health staff to improve. In addition, supervision guidelines need to be enhanced to be skills-based, supervision skills need to be enhanced [35]

A recent project of clinical mentoring and enhanced supervision of nurses in Rwanda reported promising outcomes in rural and limited-resource settings: enhanced self-reported knowledge, perceptions and confidence, orientation of less experienced staff, increased staff satisfaction and retention, and improved quality of care. In addition to their clinical technical skills, interpersonal skills in active listening, humility, and non-judgmental feedback created mentor-mentee relationships that contributed to effectiveness of this project. Factors identified by nurses were 1) interactive, collaborative capacity-building, 2) active listening and relationships, 3) supporting not policing, 4) systems improvement, and 5) real-time feedback. Staff turnover, stock-outs, and other facility/systems gaps were barriers to implementation.[36-38]

Also, a range of CHWs can play a major role in both community mobilization and in providing preventive, promotive and some rehabilitative and curative eye health care for example, traditional practitioners, community leaders and CHWs and other community members can play an important role in finding patients suffering from trachoma, cataracts and other eye diseases. Adequate health systems support that provides an enabling environment including effective referral systems must be in place if services are to be decentralised using a task shifting approach.[39] HRH training should include effectively use of referral systems, along with appropriate eye health competencies.[26]There is, however, little evidence about the competencies be included in the training and how training and supervision are best provided, to ensure effective eye health services.

A human resources for health crisis

Health workers are the core of health systems: without health workers there is no healthcare. [16]Achieving universal eye health coverage will be impossible without addressing the eye health workforce crisis.[11]In addition to a lack of HRH, productivity is often low, competencies not always appropriate and distribution uneven. Bozzani et al, 2014[40] concluded that “Shortage and mal-distribution of human resources, lack of routine monitoring and inadequate financing mechanisms are the root causes of underperformance in the Zambian eye health system, which hinder the ability to achieve the VISION 2020 goals. We recommend that all VISION 2020 process indicators are evaluated simultaneously as these are not individually useful for monitoring progress.”

Workforce planning and implementation strengthen HReH as a part of national HRH strategies

Engaging with wider health and HRH initiatives

HRH development is in part a political process requiring the will and the capacity to coordinate efforts on the part of different sectors and constituencies in society and different levels of government. Historically the eye health sector operated largely in parallel to the public health sector, both in planning and implementation of various aspects of eye care, including HReH. The IAPB Africa 2014-2018 HReH plan notes the critical role that governments play in creating an enabling environment has been recognized, along with the need to undertake integrated workforce planning, if a sustainable workforce who are competent and motivated is to be to developed and maintained.[12]

[11] Yet 57 countries are considered to have an HRH crisis, 36 of them in Africa.

[12]Recently the vital role of HRH in the attainment of health-related goals was reaffirmed by the United Nations General Assembly. They identified the need for “an adequate, skilled, well-trained and motivated workforce” United Nations, 'Resolution a/Res.63/33. Global Health and Foreign Policy', ed. by New York Sixty-third General Assembly of the United Nations, 16 September 2008 to 14 September 2009 (New York: United Nations, 2013).

HReH should thus be included as part of wider government HRH strategies and service provision so that they can provide eye care as part of the broader health system. Further, the IAPB Africa 2014-2018 HReH plan reiterates the Fifty-sixth World Health Assembly resolution WHA56.26, elimination of avoidable blindness, that urges member states to develop and strengthen eye-care services and integrate them in the existing health-care system at all levels, including the training and re-training of health workers in visual health.

Evidence-based planning

The IAPB Africa 2014-2018 HReH plan notes that the HRH crisis extends beyond the numerical shortfall. HRH development is partly a technical process and requires expertise in human resource planning, education and management. Proven HRH tools and practices should be used to align supply and demand, determine staffing norms and other HRH requirements. Innovative skill mix/task shifting approaches[13],broadening the recruitment pool and flexible career opportunities should be considered to help increase coverage of services in a relatively short time.Adopting task shifting as a public health initiative, can contribute to health system strengthening and to meeting health needs, if appropriately planned, costed and adequately financed so that the services are sustainable.

Countries, in collaboration with relevant stakeholders, including citizens, should consider implementing and/or extending and strengthening a task shifting approach to improve access to health services within a nationally endorsed framework to ensure harmonization and provide stability for the services.Countries should consider the different types of task shifting practice and elect to adopt, adapt, or to extend, those models best suited to the specific country situation (taking into account health workforce demography, disease burden, and analysis of existing gaps in service delivery).

Countries should create a comprehensive and nationally endorsed regulatory framework: assess and then consider using existing regulatory approaches (laws and proclamations, rules and regulations, policies and guidelines) where possible, or undertake revisions as necessary, to enable cadres of HRH to practise according to an extended scope of practice and to allow the creation of new cadres within the workforce, where necessary, adopting a fast-track strategy to produce essential revisions to their regulatory approaches.

Countries should adopt coherent strategies for professional recognition of roles and responsibilities, career progression, and remuneration for both new and existing and cadres.To avoid role confusion, unnecessary role overlap and to ensure safe care, identify the appropriate skill mix of health team members, which should include eye health. The team can, for example, include CHWs and specialist mid-level health workers (MLHWs) such as ophthalmic clinical officers/nurses.

Working environment and conditions to createan enabling environment

Multiple factors influence the qualityof the performance of health workers, defined in terms of effectiveness and efficiency. Some are related to the duration and scope of pre-service education or training and whether the institutional and regulatory mechanisms ensure that curricula reflect good practice and current evidence so that graduates attain the competencies and practical skills and experience appropriate to their practice. Others relate to the context in which they work, including the quality of infrastructure, equipment and consumables, continuing education and training, regulation,

[13]"Task shifting involves extending the scope of practice of existing cadres of health workers to allow for the rational redistribution of tasks among the health workforce in order to make better use of the health workforce and ease bottlenecks in the service delivery system."World Health Organization, 'Task Shifting: Rational Redistribution of Tasks among Health Workforce Teams : Global Recommendations and Guidelines.', (Geneva: World Health Organization, 2008).

management, supervision, performance incentives and the perceptions of communities and individuals towards them. Linked to the location of practice are the attributes of intrinsic motivation, respectful care and inter-professional and team-based collaboration.[16] Policy makers and planners need to understand the broader contribution to health systems strengthening. These include: defining roles and competencies, recruitment, training, continuing education, supervision and evaluation.To ensure newly trained staff can implement their training effectively, they need to be absorbed by the labour market, have access to effective referral systems and standard equipment should be available.

Performance management

The limited evidence that is available indicates that services rendered by MLHWs are as effective as routine care. If appropriately deployed, MLHWs can contribute to a more efficient human resources skills mix, which can mitigate the effects of HRH shortages and contribute towards UHC.However,there is some evidence to indicate that HRH performance in general is far from optimal in most countries. In addition, policy, governance and management challenges may limit the potential of these cadres.[28]

Therefore, existing HRH quality improvement mechanisms to support the task shifting approach should be adapted or new mechanisms created that encompass both workplace challenges and the performance of health providers. These should include processes and activities that define, monitor and improve the quality of services provided by all cadres of HRH, against clearly defined roles, competency levels and standards. Also training programmes and setting goals play key roles in improving the quality of care provided.

In addition to increasing HRH numbers, deployment and retention policies need to be in place,and labour market conditions and HRH performance and motivation to maintain and improve quality of care need to be considered. For example non-monetary recognition relating to career development aspirations and working environment, such as mentoring, performance reviews with feedback and development plans; opportunities for continuing professional development, career structures that offer the potential for promotion to posts with additional responsibilities and rewards, professional licensing; verbal and other nonmonetary incentives.

Countries should consider measures such as financial and/or non-financial incentives, performance-based incentives or other methods, which are proven to be effective and are commensurate with available resources and sustainable as means by which to retain and enhance the performance of health workers with new or increased responsibilities.[15]

Peer support groups can be an important source of social and professional support.[42]Supportive supervision and clinical mentoring should be regularly provided to all HRH, especially to those to whom tasks are being shifted. It should be provided by individuals both technically competent and who have appropriate supervisory and interpersonal skills (active listening, humility, and non-judgmental feedback) and a deeper understanding of the health worker and their environment. Supervision and mentoring should promote professional ethos as a means of problem-solving, systems improvementand developing shared performance goals through interactive, collaborative capacity-building, and real-time feedback.

Appropriate training is needed to develop, maintain and improve essential eye health competencies of HRH

Strengthening eye health training institutions, by sustaining and expanding existing levels of support is one of the objectives of the IAPB Africa 2014-2018 HReH plan. The activities they propose includeare a one stop clearing house for information and e-learning, agreement on methodology for situation analysis of training institutions, exploring options of joint funding initiatives and working together to support capacity building initiatives.

Supporting excellence in initial and on-going training

A key action is to strengthen the initial training and continuing professional development by adopting a systematic approach to harmonized, standardized and competency- based training that is needs-driven and accredited so that all health workers are equipped with the appropriate competencies to undertake the tasks they are to perform. Training programmes and continuing educational support for health workers should be tied to certification, registration and career progression mechanisms that are standardized and nationally endorsed. For continuing professional development, partnering with the health system and other stakeholdersfor intra and Interdisciplinary workshops and continued medical education.

Ensuring quality requirements in training are met

Encourage and support the continuing development of the teaching faculty and teaching excellenceand support continuous quality improvement in education, research and service delivery. Establish mandated mechanisms for accreditation and periodic evaluation of institutional performance, policy options and actions.Adopting a standardised approach to assessing the training can provide a benchmark against which the impact of future investments can be measured.

Training extends from social responsibility to social accountability

The social obligations of a profession can be considered along a continuum that ranges from social responsiveness through social responsibility to social accountability of training.[14]

Ensure training is relevant to HRH roles and responsibilities

Transformative scaling up of health professionals' education and training is defined as the sustainable expansion and reform of health professionals' education and training to *increase the **quantity, quality** and **relevance** of health professionals, and in so doing strengthen the country health systems and improve population health outcomes.*[44]
To provide responsive and quality care it is necessary to adapt to the evolving roles of HRH and provide training across the health care spectrum and to foster outcome-based education. Fundamental to this is for WHO and IAPB, together with governments, training institutions and professional bodies, to agree on roles and responsibilities for different cadres in the eye health team, and use these to develop and validate competency frameworks.

Countries can adapt the competencies and use these in curricula review/development to support competency based training and assessment. In addition, if agreement can be reached on a methodology for situation analysis of HReH training content and institutions, training needs can be determined and it can be used to monitor and evaluate their quality. Countries should define the roles and the associated competency levels required both for existing cadres that are extending their scope of practice, and for those

[14]**Social responsiveness** is the engagement in a course of actions responding to social needs e.g. with quality and responsive curricula. **Social responsibility** of an educational institution implies awareness of duties regarding society, including creating responsive and responsible governance of the medical school. **Social accountability** adds a documented justification for the scope of undertaken actions and a verification that anticipated outcomes and results have been attained. It is also '…the obligation to direct their education, research, and service activities towards addressing the priority health concerns of the community, the region, or nation they have a mandate to serve. The priority health concerns are to be identified jointly by governments, health care organisations, health professionals and the public' World Health Organization, 'Defining and Measuring the Social Accountability of Medical Schools.', ed. by Division of Development of Human Resources for Health (Geneva: WHO, 1995). It includes defining the role of society and balancing global principles with context specificity.

cadres that are being newly created under the task shifting approach. These standards can provide the basis for establishing recruitment, training and evaluation criteria.[15]

Developing competency frameworks for the five different levels of the eye health workforceis one of the objectives of the IAPB Africa 2014-2018 HReH plan. This includes that scopes of practice are agreed with professional bodies and Ministries of Health and the government assumes greater responsibility for eye health services. The activities to achieve this are listed as developing key competency frameworks with curriculum review where necessary, WHO, professional bodies and member agencies promote new scopes of practice and implementing new scopes of practice.

Appendix 1: Human Resources for Eye Health in SADC Countries

	population	Ophthal-mologists	V2020 target 4 per million	cataract surgeons	V2020 target 10 per million	mid-level personnel	V2020 target 20 per million	Optom-etrists	included in MLP V2020 target
South Africa	50 460 000	3 24	***6***		0	66	1	3 300	***65***
Mauritius	1 307 000	8	***6***		0	92	***70***	0	0
Namibia	2 324 000	2	1		0	56	***24***	0	0
Lesotho	2 194 000	4	2		0	32	15	8	4
Zimbabwe	12 754 000	21	2	4	0	51	4	30	2
Zambia	13 475 000	21	2	15	1	77	6	19	1
DRC	67 758 000	79	1	36	1	617	9	21	0
Madagascar	21 315 000	24	1	42	2	67	3	0	0
Mozambique	23 930 000	25	1		0	134	6	1	0
Angola	19 618 000	17	1		0	41	2	15	1
Swaziland	1 203 000	1	1		0	5	4	3	2
Tanzania	46 218 000	35	1	68	1	326	7	280	6
Malawi	15 381 000	7	0,5	12	1	77	5	14	1
Botswana	27 031 000	9	0,3			100	4	39	1

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