

World Report on Vision

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The World Report on Vision, released in October 2019 by the World Health Organization (WHO) together with the International Agency to Prevent Blindness (IAPB) is a comprehensive assessment of the current and projected global burden of all eye diseases and conditions, building on previous global action plans that have been coordinated by WHO.¹ The World Report on Vision (“Report”) seeks to generate greater awareness, increased political will and investment to strengthen eye care globally.² To this end, the Report proposes recommendations for action. These recommendations are designed to be achievable by any country subject to its resources and capabilities. The WHO promotes an encompassing assessment of vision, and affirms that a person’s full participation in society is predicated on the ability to see. Vision impairment and eye conditions are defined broadly to include any interference with visual function. Even mild impairment can impact everyday functioning, and has a range of effects on overall physical wellbeing, mental health, the ability to acquire education and employment, family life, and aging. Further, there are some eye conditions that do not result in vision loss but still require treatment, such as dry eye or conjunctivitis, and thus are classified as impairment.³ Worldwide, the number of people with vision impairment is 2.2 billion; of these 1 billion cases are deemed preventable. The definition of “preventable” in the context of this report includes vision conditions that are “yet to be addressed”⁴ with lead examples given of eyeglasses provision and trachoma control measures. Further, the WHO advocates for global estimates of vision impairment to include people whose vision correction has already been addressed with glasses or contacts, rather than just those with uncorrected vision, since the person will require ongoing vision care.⁵ Planning for implementation must take place on a country level, however there are varied opportunities for non-governmental organizations, including US eye banks, to participate in these achievable global developments.

MODELS FOR EYE HEALTH SERVICES DELIVERY

The core concept for eye care delivery proposed in this report is Integrated Person Centered Eye Care (IPCEC).

Person centered care is a variation of patient centered care, which is part of the delivery model known as the Patient Centered Medical Home (PCMH).⁶ As a model of health care delivery, the PCMH is integral to the strengthening of primary care, which is widely accepted as an essential component of health care delivery. The PCMH encompasses diverse health goals related to prevention and primary care. For example, primary care provides early detection of disease through screening, leading to more timely treatments, ensuring better outcomes and prevention of complications. Primary care focuses on the accessibility of health care, on people and populations being able to access services.

In turn, primary care is a necessary component of the longstanding WHO goal of Universal Health Coverage (UHC).⁷ Chapter 5 of the Report details how effective health coverage must include primary health care, which must include eye care. UHC has been defined by WHO as a model system where all persons have access to health care of sufficient quality to be effective, regardless of the person’s financial situation.⁸ The IPCEC model, described fully in Chapter 6, covers all aspects of eye health services delivery and is an indispensable component of UHC. Eye care coverage is both a distinct goal and also a necessary means to assist in implementation of UHC, which is also directly relevant to the Sustainable Development Goals, specifically, SDG 3, “Good Health and Well Being” and other targets within the SDGs.⁹

Recently, WHO issued the Global Action Plan (GAP) for Disability, another component of existing WHO program goals of achieving optimal global health.¹⁰ It can be seen as part of a comprehensive progression towards inclusive and universal health care, encompassing all areas that impact quality of life. Concepts from the Disability GAP are echoed in and overlap with the Vision Report. Disability, it is said, will eventually be experienced by every person. The scope of disability includes people whose lives are indirectly touched by the ramifications of disability, such as families and caregivers of persons with disability. The loss of vision has a similar ripple effect. Rehabilitation, a concept that figures largely in the Disability report, is a required facet of care for those with severe vision loss and

blindness in order to achieve optimal functioning for that person. Rehabilitative services are seen as lacking for all types of disability including vision loss. The World Report on Vision and the Disability GAP not only overlap in scope, they share a goal of increased and strengthening of services to meet a large degree of unmet need.

MAGNITUDE OF VISION LOSS AND FUTURE NEED

The aging global population and changing lifestyles, together with the resultant increase in eye conditions, are leading to forecasted increases in vision impairment. The leading example of “lifestyle” changes is the increasing diabetic burden leading to higher incidence of diabetic retinopathy. Without action, the WHO warns that these increases will impact already strained systems...Barriers to seeking care, which result in uneven access to services, exacerbate the effect on already unevenly distributed areas of need. Services are often located in urban areas where rural populations are in need. Data to identify people in need is not consistent across communities, regions, and conditions. For certain eye conditions such as cataract and uncorrected refractive error (URE), there are data to provide good estimates of need. Corneal causes of vision impairment are less well documented, as are global estimates of how many people are waiting for corneal transplants. Workforce availability can also be inconsistent. Even with the numbers of practicing ophthalmologists increasing, the current projections are insufficient to meet the demand, particularly in middle to low income countries. This is true for ophthalmic assistants and other eye care professionals, as well.¹¹

Addressing the unmet need requires strengthening of the primary care model, and the IPCEC concept. In particular for populations experiencing inequities in access to care, the goal is to ensure the care is available and accessible, to bring down the levels of unmet need, and ensure that continuing needs receive ongoing attention...In regions and countries where the need is greater, those who suffer from untreated corneal blindness may experience even more disproportionate access. Ocular injury that results in corneal scarring is cited in the report as a common cause of blindness in lower income countries.¹² Populations with higher prevalence of corneal blindness tend to be economically disadvantaged, located in rural areas, and lack access to services or cannot afford to pay. Further, additional corneal services require additional training and specialization even if there are sufficient ophthalmologists and associated eye care personnel. Effective treatment for corneal scarring requires tertiary services, early detection, and post-surgery follow-up.

STRATEGIES: PREVENTION, PROMOTION, TREATMENT

In Chapter 3 of the Report, the major categories of eye conditions are presented together with indicated method(s) of intervention: Promotive, Preventive, or Treatment. Cost effectiveness is consistently highlighted as a key concept for interventions, and it has been established that corneal transplants are the proven and cost effective treatment for the restoration of sight.¹³ Corneal disease can either be inherited or acquired. Inherited corneal conditions cannot be prevented, only treated. Thus, eye banks have been primarily focused on treatment. The section for ocular injury specifically calls out the ongoing lack of donor corneal tissue. However, the utilization of donor ocular tissue also covers a diverse array of conditions and treatments, involving not only corneal tissue but all parts of the eye. Successful recovery of different types of ocular tissue requires experienced eye bank personnel well versed in diverse recovery protocols which also depend on the specific tissue and indication for use.

Treatment is also the ongoing intervention for other corneal conditions such as keratoconus, which is not a preventable condition; however, the patient has more options if the disease is detected early. Treatment alternatives to transplantation are also currently available such as corneal cross linking which effectively halts the progression of the disease. For US eye banks, who are strategically situated to monitor and participate in new therapies, expanding treatment options represent expanded opportunity for partnership with health care providers.

Preventive measures in eye health are generally either designed to highlight the risk factors that can be addressed to prevent the problem from developing, or secondly, measures that are taken to prevent vision loss that may occur secondary to other conditions.

As part of the prevention concept, Health Promotion is highlighted as a successful measure that can improve eye health, by providing information that enables people to have control over their health outcomes...A leading public health example is the prevention of trachoma through the WHO SAFE strategy — Surgery, Antibiotics, clean Faces, and Environment, is cited as a global success story.¹⁴ Targeted health promotion to improve awareness of trauma prevention strategies, including wearing of protective eye wear in high risk activities and industries (e.g. certain sports, agricultural activities) can be effective. WHO also describes health promotions for vision such as poster campaigns to encourage people with diabetes to seek vision screening. In general, however, health promotions centered on eye care have not received the same level of attention and financial

investment, and these promotions can be supported by US eye banks with campaigns for corneal treatments and overall eye health, in particular communities that could benefit the most, and which currently do not have access to the information.

NEW STRATEGY: PECI

In order to facilitate the inclusion of eye health into UHC, the Report proposes a planned standard package of eye care services (PECI).¹⁵ The PECI is predicated on identified priority eye conditions, with glaucoma cited as a prime example. The process for establishing the PECI for glaucoma would require that “working groups, comprising clinical and academic experts in the field, will then identify evidence-based interventions for glaucoma by drawing on a range of sources including high-quality clinical practice guidelines and systematic reviews.”¹⁶ This would be followed by workgroups from each WHO region finalizing a set of three required steps for the development of glaucoma-specific interventions. Finally, the workgroups would agree on the service delivery platform(s): primary, secondary, or tertiary; and define the needed resources prior to submitting the PECI for peer review. Corneal opacities appear ninth on the list of ten Priority Eye Diseases, which suggests that nonspecific CO already is included as a condition requiring a PECI.¹⁷ Further, CO is identified in Chapter 3 of this report as one of the leading eye conditions that do cause vision impairment. Thus, in order to address the problem, corneal transplant capability must be available as part of a PECI as part of the overall eye health system, which in turn comprises a vital component of UHC.

FUTURE CHALLENGES

Through its global eye health initiatives, the WHO has consistently called for evidence and data, especially for population based survey data, and for addressing the gaps in global data on eye conditions...Although cataract and RE have received considerable attention due to the staggering numbers involved, there is a need for a more robust evidence base for both of these conditions. WHO also describes the strengths and limitations of existing survey instruments and identifies continued need for improvements in these data collection methods.

Another key challenge presented is the concept of integration, in particular the integration of eye care into country level health planning. Currently, eye health services are often left out of financial projections and services planning. Effective integration of services requires public-pri-

vate coordination, eye health workforce development (still a pressing issue in many countries), and developed eye health information systems.¹⁸ As part of comprehensive eye care services, there is a continued need for advocacy to ensure that corneal conditions and treatments are included in the planning of these services.

RECOMMENDATIONS FOR ACTION

The five recommended actions, according to WHO, can be implemented by any country, regardless of the status of a country’s health system and eye health services. To varying degrees, US eye banks can play a role in all of the recommended actions.

1) *Make eye care an integral part of universal health coverage.*

One of the primary methods for US eye banks to become involved with this global goal is through research and promotion. For example, data is needed on underserved populations, and regions where donor tissue is not readily available. Eye banks have worked with country planners to establish sustainable systems to meet the need, and these efforts are deserving of recognition. The cost effectiveness of traditional and developing therapies can also be highlighted as well as the outcomes and quality of services. Eye banks are uniquely qualified both to prepare human ocular tissue for a variety of uses, and to lead the mission to connect eye banks with universal health care.

2) *Implement IPCEC in health systems.*

The IPCEC has been identified by WHO as an integral part of the solution to current challenges of providing eye care services in the areas of greatest need...IPCEC is viewed both as a preferred model of eye care delivery, and as a needed mechanism to accomplish the larger goals. Eye banks must be active participants in the planning stages, as well as the ongoing reinforcement of health education messaging/ relating to eye care services. Further, the adaptation and development of the IPCEC model will incorporate existing and new services. An increase in cataract surgeries, for example, result in an increase of complications such as PBK, which will require trained cornea surgeons to address.

3) *Promote high quality research.*

There is no substitute for human eye tissue that is in demand for research into all blinding eye conditions. Global vision organizations, and domestic groups working abroad, have even greater challenges in the procurement of tissue for research purposes, as other countries may not permit recovery of tissue for research purposes, or are not yet ready to implement such programs due to a lack of capac-

ity in their eye banking systems. US eye banks have also partnered with surgeons and academic medical centers to contribute to the body of peer reviewed scientific literature.

4) *Monitor trends and evaluate progress.*

The evaluation of implementation and progress of the IPCEC model will be reliant on data collection. For the most part these efforts will be conducted at the country level although eye banks will be well advised to remain informed of these trends. Eye banks have been instrumental in assuring that the needs of patients with corneal causes of blindness and vision loss are included in existing health insurance coverage and reimbursement mechanisms. This advocacy must continue especially where information on corneal conditions is not clearly represented.

5) *Raise awareness and engage and empower people and communities.*

Empowering people and communities can take many forms. Eye banks in the US have traditionally been active contributors to targeted public health campaigns that are aimed at promotion of eye care services, with key messaging points geared towards underserved communities and regions. Eye banks can also play a role in raising awareness of the importance of screening and early detection for corneal conditions and thus maximize treatment options...

CONCLUSION

The World Report on Vision represents a comprehensive new direction in the characterization of global vision loss as well as the coordinated approach needed to combat the situation. This newest approach to focus attention on public eye health, brings together traditional stakeholders in the field of ophthalmology, as well as new potential partners. These partnerships will be essential to continue

the work that has been done, and innovate new ways to strengthen vision services worldwide.

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