EDITORIAL

Future Challenges In Eye Health

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Global Blindness and Vision Impairment in 2020

An analysis of trends in Global Blindness and Vision Impairment published by the Vision Loss Expert Group in 2020 estimates 43.3 million people to be blind and 295 million people with moderate and severe vision impairment, a significant increase in previous estimates.[1] The main cause of global blindness is cataract (39%; 17 of 43 million). For moderate and severe visual impairment, uncorrected refractive error is the leading cause (54%; 158 of 295 million). Cataract and uncorrected refractive errors are both treatable conditions, which together account for over 75% of all cases of individuals worldwide having less than 6/18 vision in the better eye; therefore they remain the global priorities for reducing avoidable visual loss.

Future Challenges and Opportunities

As we consider the next 10 years, there are both challenges and opportunities at international and national levels.

The first challenge is the increasing and aging population worldwide. Between 2020 and 2030 the global population is estimated to increase by 8% from 7.8 billion to 8.4 billion people. However the population aged over 60 years, in which most of eye diseases occur is estimated to increase by 35% from 1 billion to 1.35 billion. This will produce an increase in demand for eye care services particularly age related eye diseases like age related macular degeneration, cataract and glaucoma.

The second challenge is to make eye care services more equitable. Data on coverage for cataract surgery and refractive error services indicate that there is often a wide disparity in access to care depending on socio-economic status, residency, education and gender. There is a need for eye care providers to target services to rural, low income communities and particularly women living in these situations.

The third challenge is the lack of eye trained personnel. In many countries there are insufficient ophthalmologists, optometrists and allied eye care personnel. In order to free ophthalmologists to spend their valuable time on eye surgery and more complex cases it is important to develop eye care teams with task sharing and task shifting so that optometrists and allied ophthalmic personnel work together with ophthalmologists in a team to deliver eye care to a given population. Linked to the need for eye trained personnel, the challenge is to integrate primary eye care into primary health care services.

The fourth challenge is the changing trends in the causes of blindness and vision impairment. As infectious and nutrition related eye diseases like trachoma and vitamin A deficiency are reduced and brought under control, the relative importance of diseases like glaucoma and diabetic retinopathy increases. This trend is seen even more in countries where services for cataract and refractive error are improving. The management of glaucoma and diabetic retinopathy is more difficult and requires more resources and expertise. This will place an increased demand on eye care providers.

A major opportunity to address the challenges above of increasing need and demand in the context of limited human and financial resources is technology. Smartphones can be used to enable community workers and eye care providers to deliver eye care to rural communities. Primary and secondary eye care providers can obtain the expertise of specialists in tertiary centres through whatsApp and tele-ophthalmology. Algorithms based on artificial intelligence can allow populations to be screened quickly and inexpensively for conditions like diabetic retinopathy reducing the need for time consuming retinal examinations by eye specialists. These are just a few examples of what is already taking place and many more opportunities do exist. As we look to the future we need to understand the challenges we face and be ready to embrace new technologies and ideas while prioritising those in greatest need who have the most treatable conditions.

Pakistan, being the 7th most populous country in the world with an estimated population of 200 million and prevalence of blindness of 0.9%, is not different in the challenges and opportunities presented globally.[2]

Pakistan has had the fortune of having strong national leadership, government ownership and strong international partnership in developing, implementing, and resourcing its eye care programme. This has helped in taking the services down to the district and in some provinces to the sub-district level and therefore increasing the uptake of services especially by women. Pakistan has also been able to produce and focus on developing eye care teams so that the services are well

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COI: The authors have disclosed no conflict of interest.

Staffed meeting the needs of the people in the communities. One of the greatest achievements has been the integration of primary eye health in primary health care delivered through the Lady Health Workers programme.

However, despite these major achievements there remain challenges at national level in Pakistan.

The first major challenge for Pakistan is that the referral pathway is still inefficient, and many patients are lost between detection and treatment facilities. Thus, there is need to focus on the "lost patients" during detection and treatment.

The second major challenge is the inadequate provision of refractive and optical services at the community level leaving people to travel large distances even for reading spectacles.

The third largest challenge is the growing prevalence of diabetic retinopathy with many people with uncontrolled diabetes or unaware of their condition and therefore becoming blind at a young and productive age, thus having a major economic impact.

However there remain many areas of opportunity.

PEEK, a smart phone-based application has been launched in Pakistan with very good success and has demonstrated beyond doubt that some of the challenges above can be addressed and overcome. More so in strengthening health systems and increasing the reach to the most marginalized communities.

Domestic financing has greatly helped in replicating good models of service delivery in all districts and now PEEK technology needs to be adopted so that all districts in Pakistan can benefit from it.

More "Rapid Assessment of Avoidable Blindness" surveys need to be done and this will provide planners with the effective cataract surgical coverage and the effective refractive error coverage. These two indications will help plan more equitable eye health services as well as contributing to sustainable development goals.

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