

Eye Care Services in Nepal Within the Context of Non-communicable Diseases: The Past and the Future

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Introduction

The alarming rise in non-communicable diseases (NCDs) imposes a serious public health problem globally. This is the time to act together to combat morbidity, mortality, and disability caused by NCDs like cardiovascular diseases, cancers, diabetes mellitus, chronic obstructive pulmonary diseases, eye and visual impairment, hearing problems, dental problems, mental health, and substance abuse, and of course road traffic accidents. Most of these NCDs are preventable, treatable, and curable through public health measures at various levels of interventions. The financial implications of these NCDs including ocular problems are huge and can dent the gross domestic product (GDP) of most countries. The lower-middle-income countries (LMICs) are expected to suffer more and are certain to affect the disability-adjusted quality of life years (DALYs) [1].

In a world built on the ability to see, and vision, the most dominant of all our senses (80%) is critical at every moment of our lives. According to the World Health Organization (WHO), World Report on Vision (October 2019), globally 2.2 billion people have some kind of visual impairment or blindness, and 1 billion of them could have been addressed or prevented. With more people living longer, increasing life expectancy, and a growing burden of diabetes mellitus, and other NCDs everyone is expected to have some kind of visual impairment throughout the life course. Visual impairment and blindness are one of the most important causes of disability, in addition to forming a core NCD problem worldwide, but more pronounced in LMICs like Nepal [2]. A person who wears

glasses or contact lenses to compensate for their visual impairment still possesses visual impairment. It is a well-known fact at present that approximately 80-90% of people who have some kind of visual impairment or blindness reside in lower-middle-income countries (LMICs), of which 90% of causes of visual impairment and or blindness are preventable, treatable, and curable [2-4].

Nepal, a lower middle-income country has been tackling the burden of visual impairment and blindness, and disability for the last four decades through various public health interventions, projects, public-private partnerships. It is safe to state that eye care in Nepal is a vertically driven program run primarily by non-governmental organizations (NGOs). Nepal's vertically run NGO-driven eye care has been a successful model for the world to see, as it runs almost as a standalone program without much support from the government-run primary health care. In addition, the success story of Fred Hollows Foundation (FHF) Laboratory, Nepal, and Tilganga Eye Institute led by the team of Prof. Dr. Sanduk Ruit in particular have painted a rosy picture of late in eye care with notifiable appreciation across the globe. With the double burden of diseases on the rise, the World Health Organization's resolutions on eye care, the United Nations resolution on eye care, and Sustainable Development Goals (SDGs) in sight by 2030 eye care in Nepal is expected to face challenges in upcoming days.

Nepal blindness survey (1981) [5] - The cornerstone of eye care development

The revolutionary change in eye care in Nepal started with the landmark survey the Nepal Blindness Survey (NBS) [5] in the year

1981, a survey which was carried out by prominent researchers from various countries, and Nepalese Ophthalmologists and medical doctors. This survey still stands tall globally and has been regarded as one of its kind. The findings of the survey opened the doors for eye care services in Nepal, with numerous international non-governmental organizations (NGOs) funding, and supporting eye health care in Nepal.

The past four decades - success story

Following the landmark NBS in 1981, with a concerted combined effort over the last four decades, Nepal has seen significant progress in the field of eye care. NGO-driven eye care in Nepal started as a vertical standalone project that resulted in infrastructure development, and capacity development which led to a reduction in the prevalence of blindness from 0.84% in 1981 to 0.35% in 2010. The estimated number of people with blindness decreased from 118,000 in 1981 to 93,000 in 2012 despite the growth in population. The number of Ophthalmologists increased from seven in the 1980s to more than 400 in 2023. The eye care infrastructure, including community eye centers, eye departments, and eye hospitals, increased from five in 1981 to more than 100 in 2010.

The National Trachoma Program (NTP) was initiated and set up by the Ministry of Health and Population (MoHP) which also engaged other stakeholders in the year 2002. The World Health Organization (WHO) declared Nepal as a trachoma free Member State in the year 2018. Public-private institutions and private institutions actively engaged in capacity development of various cadres in Ophthalmology [6,7].

Nepal adopted and implemented VISION 2020: The Right to Sight. Nepal's government launched the National Vitamin A Program in 1993 to improve the Vitamin A status of children aged 6-59 months and reduce child mortality. This program has been recognized as a global success story from Nepal in terms of public health importance, and interventions with the consistent coverage of over 85% which resulted in both reduction in childhood mortality rate as well as nutritional blindness, the latter according to the NBS was 0.9% [8].

Nepal is also a signatory to the World Health Organization's global eye health action plan 2014-2019. The country's National

Health Policy 2019 has provided for the development and expansion of eye care services through public-private partnerships in all three levels of government: federal, provincial, and local; the integration of primary eye care with primary health care; and the coordination of eye care programs by a dedicated eye unit at the federal ministry of health [6]. Provincial governments have started the 'one school, one nurse' program to provide basic health care, including eye care to school-going children [6,7].

Nepal's public health insurance scheme was launched in 2016-2017 and now covers 75 out of 77 districts. The scheme has resulted in more people visiting eye hospitals since then for surgical treatment, correction of refractive errors, or other medical treatment. These services are readily available in public and private hospitals, and medical institutions recognized by the Health Insurance Board of Nepal [9].

The persisting and new challenges

Despite the combined concerted actions over the last four decades in eye care the incidence of blindness and vision impairment still is a public health problem in Nepal. The reasons are obvious as the population of Nepal has almost reached 30 million, life expectancy has gone up, the prevalence of uncorrected refractive error has gone up, the double burden of diseases (both communicable, and non-communicable diseases) on the rise in particular the NCDs, and of course almost a standalone care for the patients with lack of integration in primary health care [1-7,10].

During the Coronavirus Disease 2019, even the NGO-run eye care programs were struggling financially, and needed attention was not given to universal health access, the Coronavirus Disease 2019 (COVID-19) made things even worse, making many of these NGO-run eye care financially weaker [7,9,10]. National health insurance scheme on the other hand has not been lapped up by the Nepali citizens yet as the enrolment is low, and the dropout is high meaning the eye care benefit package provided by the government has not been utilized properly. This has resulted in people paying out of their pockets for even cataract surgeries [11].

Primary eye care centers/community eye centers, usually are run by NGOs and are fixed facilities where an allied eye health professional provides services such as basic eye care, and referral help. Most of these centers are located in district headquarters,

which tend to be remote from villages in this hilly country. Consequently, more than 40% of the population is without basic eye services. Inevitably, people have to pay out of pocket, even for primary eye care [6,7].

About three and half years ago, NGOs partnered with municipal authorities to establish rural and urban eye clinics beyond district headquarters. In this model, the NGOs provide the equipment and technical support, only [6].

Way forward for eye care services in Nepal

The World Report on Vision published on 8 October 2019 by the World Health Organization (WHO), has outlined all the strategies for eye care services to be implemented in the Member States across the globe, and Integrated People-Centered Eye Care (IPEC) is the way forward.⁴ The report has been launched in many Member States including Nepal. Nepal has launched this important WHO document and disseminated it to the partners, and stakeholders in eye care including the NCD division of the Ministry of Health and Population (MoHP).

In addition, the United Nations has adopted a resolution on eye care "Vision for Everyone: accelerating action to achieve the Sustainable Development Goals" recently to achieve the targets set by the SDGs it should support.

The World Health Assembly (WHA 74) endorsed the global targets for effective coverage of refractive errors and cataract surgery to be achieved by 2030 [12]. These targets are a 40 percent increase in coverage of refractive errors and a 30 percent increase in coverage of cataract surgery. These targets will play a key role in increasing global eye care coverage in the future while delivering quality services. Interventions that address the needs associated with uncorrected refractive error and unoperated cataracts are among the most cost-effective and feasible health interventions available. Key challenges in meeting the growing demand for these interventions include the ability to provide services for underserved populations and ensure quality service delivery and reach the unreached residing in rural communities [12].

Need of the hour is to put our combined and proactive efforts of all stakeholders to fully integrate eye care within national health services including at the primary health care level and to ensure

that the eye care needs of more people are addressed through prevention, early detection, treatment, and rehabilitation, to help achieve the targets set by WHA 74. In addition, collective efforts to monitor progress toward the targets will also be required [12].

Nepal does have a very strong existing primary health care in all the 77 districts and local Palikas, primary health care is mostly provided by local health care workers who are not trained in eye health care, the government of Nepal, and in particular the MoHP is advised to have an apex body for eye care in line with National Blindness Prevention Program directly under the umbrella of the Ministry of Health and Population, Non-communicable disease cluster to make sure the primary health care workers are trained enough to provide eye care services at all levels which will facilitate integrating eye care into primary health care in line with Universal Health Coverage, besides supporting to meet SDGs target 3.8.

Nepal does have eye care provision at the secondary level, district and zonal hospitals. The services are available in a phased manner, and the provision of eye care services is minimal. Ministry of Health and Population is recommended to upgrade these government hospital facilities with all sub-specialty of Ophthalmology to provide tertiary level eye care in a phase-wise manner as a pilot later to expand it to the community level and Palikas level. Eye care should be also included in the WHO Package of essential interventions for NCD (PEN) and WHO PEN+, and a proper referral pathway should be established to refer eye patients for eye care at all levels of health care. A primary eye care training manual could be absolutely vital to replicate the success story of Rwanda, Ghana, and Kenya [13] in integrating eye care into primary health care in Nepal too. In addition, the current residency training program in Ophthalmology (Nepal) should be a point of focus. The residents are expected to gain enough academic as well as clinical exposure across Nepal under all the universities. A constant monitoring, and evaluation of residency program will only enhance quality Ophthalmologists being trained in the country for the future.

The recently launched book on National Eye Health Action Plan (2022 - 2030) on eye care services by the MoHP, NCD division, is expected to integrate the NGO-driven vertical eye care program into primary health care across Nepal and is also expected to be inclusive not to leave anyone behind. Approximately one third Ophthalmologists are private practitioners the MoHP should also

be mindful of this fact for mobilization of resources to its maximum capacity in advancing forward to achieve the targets by 2030.

Conflict of Interest

None.

Source of Funding

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Bibliography

1. Azarpazhooh MR., *et al.* "COVID-19 Pandemic and Burden of Non-Communicable Diseases: An Ecological Study on Data of 185 Countries". *Journal of Stroke and Cerebrovascular Diseases* 29.9 (2020): 105089.
2. Bastola P. "Global Trend in Visual Impairment and Blindness, Changing Pattern, Challenges and Facts". *Acta Scientifica Ophthalmology* 3.1 (2019): 01-02.
3. Bastola P and Dahal P. "Ocular Morbidity among Patients Visiting the Department of Ophthalmology during the Coronavirus Disease 2021 Pandemic at a Tertiary Care Hospital: A Descriptive Cross-sectional Study". *Journal of Nepal Medical Association (JNMA)* 59.244 (2019): 1219-1224.
4. GBD 2019 Blindness and Vision Impairment Collaborators; Vision Loss Expert Group of the Global Burden of Disease Study. "Causes of blindness and vision impairment in 2020 and trends over 30 years, and prevalence of avoidable blindness in relation to VISION 2020: the Right to Sight: an analysis for the Global Burden of Disease Study". *Lancet Global Health* 9.2 (2021): e144-e160.
5. Brilliant LB., *et al.* "Epidemiology of blindness in Nepal". *Bulletin of the World Health Organization* 63.2 (1985): 375-386.
6. Gurung R and Oli RU. "Primary eye care in Nepal: current situation and recommendations for integration". *Community Eye Health* 34.113 (2021): s13-s14.
7. Sapkota YD. "Epidemiology of blindness in Nepal: 2012". Kathmandu: Nepal Netra Jyoti Sangh; (2013).
8. Fiedler JL. "The Nepal National Vitamin A Program: prototype to emulate or donor enclave?" *Health Policy Plan* 15.2 (2000): 145-156.
9. Department of Health Services, Annual report 2018-2019. Kathmandu: Government of Nepal; (2018).
10. Health Insurance Board. Kathmandu: Government of Nepal (2017).
11. Ranabhat CL., *et al.* "Status and determinants of enrollment and dropout of health insurance in Nepal: an explorative study". *Cost Effectiveness and Resource Allocation* 18.40 (2020): 1-13.
12. Global eye care targets endorsed by Member States at the 74th World Health Assembly. Geneva: The World Health Organization (2021).
13. "Primary Eye Care Training Manual 2019". Geneva: The World Health Organization (2019).