Social Return on Investment (SROI) Study

of Blindness Prevention Program in Nepal

Conducted by Deloitte

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Cure Blindness PROJECT™

Deloitte.

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Tilganga INSTITUTE OF OPHTHALMOLOGY

Maharshi Santudevi Pradhan Institute of Ophthalmic Sciences
Bharatpur Eye Hospital
Estd.: 1987
Bharatpur, Chitwan

List of abbreviations/acronyms

Abbreviation/Acronyms	Full Forms
BEH	Bharatpur Eye Hospital
CBP	Cure Blindness Project
CHW	Community Health Workers
CMO	Chief Medical Officer
CSR	Corporate Social Responsibility
ECC	Eye Care Center
FCHV	Female Community Health Volunteers
FGD	Focused Group Discussion
IPEC	Integrated people-centered eye care
KII	Key Informant Interview
SDG	Sustainable Development Goal
SROI	Social Return on Investment
MOIC	Medical Office In-Charge
MoU	Memorandum of Understanding
NGO	Non-Governmental Organization
NPV	Net Present Value
FY	Fiscal Year
OECD	Organization for Economic Cooperation and Development
DAC	Development Assistance Committee
TIO	Tilganga Institute of Ophthalmology
UNDP	United Nations Development Program
WHO	World Health Organization

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Executive Summary

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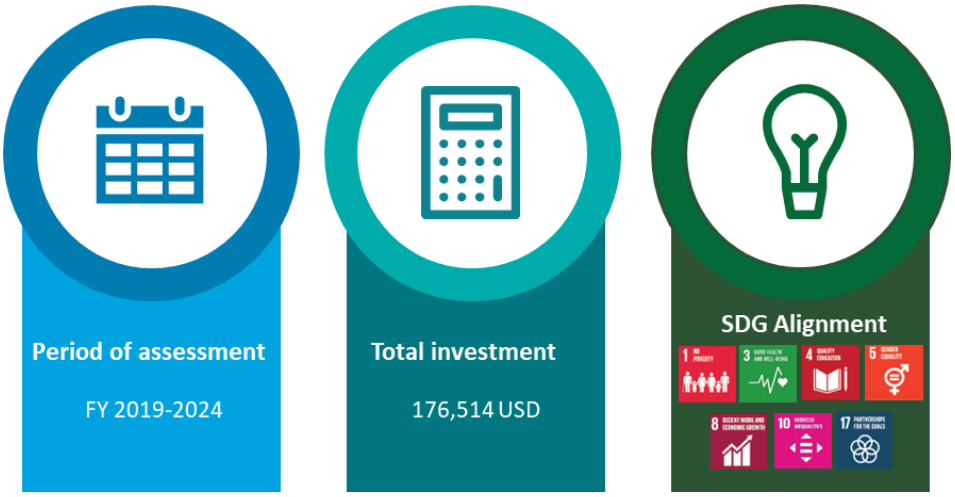
Cure Blindness is a global non-profit initiative founded in 1995 with the mission of eradicating preventable blindness. The program primarily focuses on underserved regions in Asia and Africa, offering innovative and affordable solutions to treat blindness caused by cataracts, corneal conditions, and other treatable eye diseases. Over its years of operation, the initiative has restored vision to over one million people through medical interventions, capacity- building, training, and community outreach. In Nepal, the program collaborates with prominent institutions like Bharatpur Eye Hospital and Tilganga Institute of Ophthalmology to enhance access to and improve the quality of eye care, especially in rural areas.

Despite notable advancements in Nepal's eye care system, driven by initiatives like VISION 2020 and partnerships with international organisations, several challenges persist. These include geographic disparities, a shortage of trained professionals, limited affordability and accessibility of care, and lack of focus on primary eye health. Rural and remote areas often struggle to access quality eye care, and public awareness about eye health remains low. Additionally, the prioritisation of resources in urban centres has led to overcrowded facilities, leaving the rural population lesser attended.

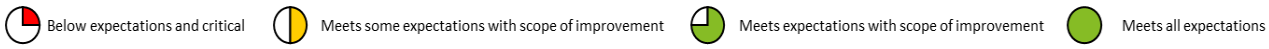
The program seeks to address these issues in Nepal by printing scalable models of eye care that emphasise training, community outreach, and locally- based solutions. The program focuses on increasing access to cataract surgeries, corneal transplants, and preventive care, with special attention to vulnerable groups such as women, the elderly, and people with disabilities. Through its partnerships with Bharatpur Eye Hospital and Tilganga Institute of Ophthalmology, *Cure Blindness* works to strengthen Nepal's healthcare infrastructure, raise awareness about eye health, and create sustainable, locally managed solutions. Through its partnerships with Bharatpur Eye Hospital and Tilganga Institute of Ophthalmology, Cure Blindness works to strengthen Nepal's healthcare infrastructure, raise awareness about eye health, and create sustainable, locally managed solutions.

By adopting a comprehensive approach that addresses healthcare delivery, public education and community engagement, the program is dedicated to eliminating preventable blindness. It aims to ensure that high quality eye care is available to all citizens regardless of their location or socio-economic status by effectively tackling challenges related to access, affordability and training.



Summary of impact findings

A comprehensive account of Deloitte's observations and results from the impact assessment of the Blindness Prevention Program in Nepal with the OECD DAC framework parameters is as follows.



Parameter	Observation	Score
Relevance	• Surveys have revealed cataract as the leading cause of bilateral blindness (62%), followed by posterior segment disease (16.5%), glaucoma (6%) and corneal scar other than trachoma (5%) amongst others. The incidence of ocular injuries in Nepal, particularly in rural areas is alarmingly high with an annual incidence of 1,788 ocular injuries per 100,000 people, with 44% attributed to corneal abrasions, according to a population-based study conducted in Bharatpur District, Kathmandu Valley. These injuries often lead to corneal ulcers, a major cause of blindness in low- and middle-income countries, emphasizing the urgent need for targeted interventions • Most Nepal's tertiary eye care centres are in urban areas, with rural populations traveling an average of 25 km (90 minutes) for treatment. Dhading and Solukhumbu, characterized by rugged terrain and sparse health infrastructure, exemplify these access barriers, necessitating community-level eye care services for timely diagnosis and treatment • Over 38% of agricultural workers reported work-related eye injuries, with 68.3% not using protective eyewear. Given Dhading and Solukhumbu's rural economies reliance on agriculture, interventions to reduce trauma-related blindness significantly enhance community well-being and productivity • Community health workers have in the past, led to a 25% increase in early detection and treatment of eye-related injuries in rural regions through capacity-building programs, demonstrating their potential to significantly improve community-level management of corneal abrasions and prevent progression to blindness.[1] Bharatpur, with its established eye care infrastructure, act as a hub to train them, fostering better outreach and early interventions in surrounding districts like Dhading and Solukhumbu	
Coherence	• Nepal's National Eye Health Strategy 2023 emphasizes on integrating eye care into essential health services and fostering public–private partnerships • By addressing a critical gap in corneal ulcer prevention, the project complements existing government-led initiatives and supports Vision 2020 and health insurance schemes that include recommendations to embed preventive eye care within general health systems and eye care treatments, ensuring strategic alignment with national and global health priorities • The project leverages existing networks established by organizations like the Tilganga Institute of Ophthalmology and Nepal Netra Jyoti Sangh. Its focus on training CHWs and community-based interventions complements the roles of these institutions, ensuring integration and avoiding duplication of efforts • By focusing on early first aid for corneal abrasions and capacity building through CHWs, the project complements existing health services and expands reach to remote regions	
Effectiveness	• A total of 26,495 patients were seen under this project, including 14,440 patients with corneal abrasions treated at the village level and 1,295 patients with other eye ailments	

[1] https://cehjournal.org/articles/316

	referred to local vision centers • In regions like Dhading, Solukhumbu and Bharatpur empowering community health workers has proven effective in increasing early detection and referrals. These interventions align with the local need for decentralized and accessible eye care services • Training programs for CHWs have increased their knowledge and capacity to diagnose and manage corneal injuries. Additionally, they are strengthened their capabilities to screen for multiple eye ailments and refer the advanced cases to primary care centers. The awareness created through them as a part of the Blindness Prevention Program has created a shift in healthcare seeking behaviour and improved accessibility. A study indicates 92% improvement in CHWs' knowledge and higher follow-up rates for treated patients, contributing to more effective primary eye care delivery • The local eye care and door-to-door screenings further led to heightened community knowledge about comprehensive eye care services and provided an accessible source of care for corneal health within the community itself. This resulted in improved health-seeking behaviour, with more individuals adopting preventive measures and seeking treatment for eye injuries promptly	
Efficiency	• Collaborations with multiple stakeholders, including local health posts, Tilganga Institute of Ophthalmology (TIO), Nepal Netra Jyoti Sangh (NNJS), Bharatpur Eye Hospital (BEH) facilitate shared resources, reducing program costs while enhancing outreach and service quality • Leveraging the existing network of CHWs (known as FCHVs in Nepal) and local health posts, the project minimized infrastructure development costs and optimizing service delivery ensuring effective outreach while avoiding duplication of efforts and utilizing already established community health infrastructure • Training existing pool of CHWs who are already engaged in community health projects led to effective screening, early detection and management of corneal abrasions. reducing the burden on tertiary care centers, potentially minimizing the costs associated with advanced treatments. It had a similar impact on other eye ailments by creating more streamlined pathways for timely referrals • The initiative further addressed critical service delivery gaps by extending services to remote, hard-to-reach areas such as mountainous and hilly districts where corneal injuries are prevalent but eye care service are hard to access, ensuring better accessibility to primary eye care at lower costs	
Impact	• The program bridged significant barriers to eye care for underserved rural communities, with one-third of respondents previously unaware of or unable to access services. Among those with prior access, 62% faced challenges such as geographic isolation, financial constraints, and lack of timely medical attention. These barriers were mitigated, enabling marginalized populations to receive timely and affordable treatment • The program significantly enhanced geographical access to eye care in remote locations like Solukhumbu and Dhading. Monthly footfall data underscores this improvement, with Dhading averaging 78 patients and Solukhumbu 56 patients. This utilization highlights the success of bringing services closer to geographically isolated communities that previously struggled with long travel distances and economic limitations • With 91% of patients reporting effective management of their eye conditions and 85% incurring no treatment costs, the program successfully addressed critical eye health issues while ensuring affordability. The high satisfaction rates highlight the efficacy of the intervention in meeting patient needs • Enhanced economic resilience among beneficiaries by reducing the time and financial	

	burdens associated with accessing eye care services. Of the 330 surveyed, 67% saved 2-10 hours on travel, enabling 220 individuals to miss minimal workdays (0-1), particularly benefiting daily wage laborers and marginal farmers in peak seasons who depend on consistent income. Additionally, travel cost savings ranging from $1.6 to over $16 were reported by 264 beneficiaries, directly alleviating financial constraints and ensuring equitable access to healthcare for underserved communities in hilly terrains • Training provided to the CHWs equipped 95% of them with new technical and soft skills, enabling them to assist eye patients effectively. • The CHWs played a pivotal role in fostering community engagement, with 64% observing proactive behaviour among community members in seeking timely eye care. Weekly follow-ups with 91% of beneficiaries reflect the program's ability to encourage sustained participation and behavioural change. Their active engagement, especially with female beneficiaries, fostered greater community participation • SROI for the program is valued at 5.02. This means for every $1 invested, an outcome of $5.02 was created	
Sustainability	• The program design with integration into the local health system, ensures its long-term sustainability by embedding eye care services within existing community health infrastructure, enabling a smooth transition to Bharatpur Eye Hospital (BEH) for independent continuation of the initiative • The trained community health workers are crucial assets in a. screening for all eye ailments at community level b. detecting and managing corneal abrasions, c. referring patients with suspected other eye ailments and d. enhancing local capacities to provide a continuity of services beyond the program's duration, thereby fostering sustainability. The larger impact through them is as result of the awareness generation that gradually leads to behavioural changes wrt. health seeking behaviour • The alignment of the program with national health policies, its contribution to SDGs ensures ongoing governmental support and paves way for advocating the integration of eye care into broader public health objectives, securing future funding and policy commitment for sustainable eye care services	

Introduction and Context Setting

1. Introduction and Context Setting

1.1 About the organization

Cure Blindness Project

Founded in 1995, Cure Blindness is a global non-profit dedicated to eliminating preventable blindness. With a focus on underserved regions in Asia and Africa, the organization implements innovative, cost-effective solutions to combat blindness caused by cataract, corneal blindness, and other treatable conditions. Cure Blindness has developed scalable models of care by combining training, capacity building, and outreach programs to strengthen local healthcare systems. Over the years, the organization has collaborated with hospitals, governments, and community groups to restore sight to over 1 million individuals. Its commitment to improving lives through sustainable healthcare aligns seamlessly with the goals of this initiative in Nepal.

Bharatpur Eye Hospital

Located in Bharatpur, Chitwan, Bharatpur Eye Hospital is a prominent institution in Nepal's eye care ecosystem. Established in 1989, the hospital is dedicated to providing comprehensive and affordable ophthalmic services to the people of Nepal, particularly those residing in rural and underserved areas. With state-of-the-art facilities and a highly trained team of ophthalmologists, optometrists, and support staff, the hospital is equipped to cater to a wide spectrum of eye conditions, ranging from general to specialised services such as cataract, glaucoma, diabetic retinopathy and corneal transplants amongst others. Bharatpur Eye Hospital also plays a pivotal role in training community health workers and conducting outreach programs to expand eye care access to remote regions. As the implementing partner for the Bharatpur region, the hospital oversees program delivery, monitors community interventions, and ensures adherence to quality standards.

Tilganga Institute of Ophthalmology

Established in 1994, the Tilganga Institute of Ophthalmology (TIO is a world-renowned centre for eye care, training, and research. Based in Kathmandu, Nepal, TIO operates under the Nepal Eye Program and is a leader in tackling preventable blindness through innovative and sustainable models. It specializes in eye care services such as cataract surgeries, corneal transplants, and low-cost intraocular lens production, enabling high-quality care to be affordable for vulnerable populations. Tilganga is recognized globally for its public health initiatives, including eye camps and community outreach programs that have restored sight to millions. For this initiative, TIO oversees operations in Dhading and Solukhumbu, providing technical expertise, managing local training programs, and ensuring efficient referral pathways for advanced care.

1.2 Problem statement

Overview of the Eye Health care Ecosystem in Nepal

Nepal's eye healthcare ecosystem has evolved significantly over the decades, transforming into a comprehensive system involving public, private, and non-state actors. The country is recognized as one of the first in South Asia to implement the VISION 2020: The Right to Sight initiative in 1999, in collaboration with the World Health Organization (WHO and the International Agency for the Prevention of Blindness (IAPB. This initiative marked a shift towards disease-focused strategies to combat preventable blindness.

The Tilganga Institute of Ophthalmology (TIO and Nepal Netra Jyoti Sangh (NNJS have played pivotal roles in establishing a network of eye hospitals, outreach clinics, and community-based programs. The inclusion of eye health in Nepal's National

Health Policy 2019 and the development of the National Eye Health Strategy 2023 have provided a policy framework to integrate eye care within Universal Health Coverage (UHC. Furthermore, the government has partnered with private and non-state actors to expand services across all three tiers of governance—federal, provincial, and local.

Recent assessments, such as the WHO Eye Care Situation Analysis Tool (ECSAT II and the 2022 Rapid Assessment of Avoidable Blindness (RAAB) survey, underscore Nepal's commitment to strengthening its eye care ecosystem and meeting global goals like the IAPB sectoral strategy 2030 In Sight.

Prevalence of Blindness in Nepal

Nepal has made significant strides in reducing the prevalence of blindness, with rates decreasing from 0.84% in 1981 to 0.28% in 2022, according to the nationwide RAAB survey.[2] This represents a remarkable 60% reduction in overall blindness since 1981. However, challenges persist, with cataracts remaining the leading cause of blindness, contributing to nearly 60% of cases.[3]

The 2022 RAAB survey revealed a 15-percentage-point increase in Effective Cataract Surgical Coverage (eCSC compared to 2010, with the current baseline at 35.4% (visual acuity cutoff: 6/12. Nepal has set an ambitious target to increase this figure to 65.4% by 2030. These efforts align with the WHO's focus on integrating people-centred eye care (IPEC within national health systems to reduce visual impairments globally.

Government Schemes Pertaining to Eye Health

Nepal has implemented several government-led programs to address eye health:

- Vision 2020 Program: Launched in 1999 to reduce preventable blindness, with a midterm review in 2010 recommending the integration of eye care into general health services.
- National Eye Health Strategy 2023: Emphasizes integrating eye health into essential health services, expanding public–private partnerships, and ensuring quality assurance.
- Health Insurance System: Includes nine types of eye treatments, including cataract surgeries, under the national health insurance program to enhance accessibility and affordability.
- Primary Eye Care Integration: Efforts are underway to incorporate eye health into the Integrated Health Management System (IHMS-DHSI II) and include eye care in school health programs.

Challenges in the Eye Care Ecosystem

Nepal's eye care ecosystem is shaped by a combination of political priorities, economic constraints, social dynamics, technological limitations, environmental factors, and legal frameworks. While significant progress has been made in addressing blindness and vision impairments, systemic gaps and regional disparities persist, particularly in districts like Dhading, Bharatpur, and Solukhumbu. These challenges hinder the effectiveness and inclusivity of eye health services, emphasizing the need for targeted interventions. The following PESTEL analysis contextualizes these issues, focusing on district-specific barriers and opportunities for improvement.

Political – *The program contributes by highlighting evidence-based interventions for preventable blindness, offering insights that can guide future policymaking and scaling up of interventions.*

[2] https://elibrary.nhrc.gov.np/handle/20.500.14356/2414

[3] https://pmc.ncbi.nlm.nih.gov/articles/PMC2536402/#:~:text=Ancillary%20studies%20were%20conducted%20to,80%25%20of%20all%20avoidable%20blindness.

- Fragmented policy implementation: Eye care services in Nepal, while included in national health frameworks, suffer from limited integration with other public health programs. For example, eye care is often disconnected from maternal health or non-communicable disease management, despite strong evidence linking vision impairment to conditions like diabetes. This lack of integration hampers the effectiveness of health initiatives.
- Decentralization gaps: Although national health policies emphasize decentralization, the implementation is inconsistent at the district level, particularly in rural areas such as Solukhumbu. This results in service gaps and underperformance in districts that need it most.

Economic – *The program contributes by providing affordable and sustainable eye care at the community level, using local champions to extend outreach and increase access to services even after the program exits.*

- Affordability challenges: Although the government covers some cataract surgeries through national insurance, indirect costs like travel, accommodation, and loss of income remain high, particularly for people in remote regions. Many rural residents are unaware of these schemes, leading to missed opportunities for timely care.
- Limited funding: Funding for eye care services is often inadequate, and public health budgets remain insufficient to meet the needs of underserved populations, particularly in rural districts.
- Resource inequalities: There is a stark difference in eye care infrastructure between urban and rural regions. Large cities have well-equipped hospitals, but remote districts like Solukhumbu lack even basic eye care facilities, relying on limited outreach programs that are often sporadic and insufficient.

Social – *The program enhances community awareness about eye health and reduces traditional misconceptions, fostering a shift towards evidence-based eye care.*

- Low awareness and preventive care: Rural populations often lack knowledge about preventable eye diseases and the importance of regular eye check-ups. This leads to late-stage diagnoses when conditions are more difficult to treat.
- Cultural barriers: Traditional gender roles, especially in rural areas like Solukhumbu, restrict women's ability to access healthcare services. Social norms may prevent women from seeking care independently, further delaying treatment.
- Stigma around blindness: In many rural areas, blindness is stigmatized, often linked to disability or divine punishment, which discourages families from seeking care until vision loss becomes severe.

Technological – *The program strengthens referral linkages and ensures that data on eye care ailments is captured, enhancing monitoring and treatment continuity.*

- Skill gaps in healthcare workforce: A shortage of trained ophthalmologists and eye care professionals in rural Nepal leads to delayed diagnoses and inadequate care. For example, primary healthcare centers often lack specialists in ophthalmology, meaning that patients in rural areas are not able to access timely and effective treatments.
- Technological limitations: Though mobile health initiatives and digital data collection tools are present, they have limited reach due to poor connectivity and lack of training among community health workers. This limits the potential for preventive eye care, especially in rural areas where access to technology is constrained.

Environmental – *The program adapts to Nepal's geographical and seasonal challenges, improving access to eye care for rural populations through localized interventions.*

- Geographical and logistical challenges: Nepal's mountainous terrain makes it difficult to transport medical supplies and personnel to remote areas. Seasonal factors like landslides and flooding exacerbate this challenge, making it harder for rural communities to access necessary services.
- Agricultural risks: Rural areas, especially in Dhading and Solukhumbu, face significant risks from eye injuries due to agricultural work. These areas require tailored interventions that reduce injury risk and increase preventive care access for workers.

Legal – *Through the involvement of community health workers, the program enhances access to quality care, while increasing awareness of legal rights to health.*

- Weak enforcement of workplace safety regulations: Occupations such as agriculture and construction expose workers to high risks of eye injuries, yet legal frameworks around workplace safety, including eye protection, remain weak and poorly enforced.
- Challenges with insurance coverage: Legal ambiguities in insurance claims for eye treatments, especially in rural areas, prevent many from enrolling in the national health insurance program, limiting access to affordable eye care services.

This analysis underscores the systemic challenges and opportunities in Nepal's eye care ecosystem, highlighting the need for a multi-sectoral approach to address barriers and ensure equitable access to eye health services.

1.3 Objectives and rationale of the project

Impact of Occupational Hazards on Eye Health in Nepal

Occupational eye injuries are a significant cause of ocular trauma in Nepal, particularly among agricultural Chowkidars (watchmen). A survey published in the *Nepalese Journal of Ophthalmology* reported that 38.3% of workers experienced a work-related eye injury, while over two-thirds (68.3%) of those surveyed did not wear safety eyewear during their work.[4]

Trauma is the second leading cause of unilateral blindness and the eighth leading cause of bilateral blindness in the country. Agricultural activities, the most frequent setting for eye trauma, often involve exposure to vegetative matter, which accounts for nearly 40% of injuries in rural, peri-urban, and urban areas.[5] Corneal abrasions, often caused by these traumas, can lead to corneal ulcers, a common cause of blindness in low- and middle-income countries. Delays in receiving timely care or receiving treatment outside specialized eye clinics are common, exacerbating the risk of permanent eye damage. These injuries not only result in medical costs and loss of income due to missed workdays but can also substantially reduce an individual's quality of life. Treatment for ocular trauma often involves surgery, long term care and rehabilitation if not tended to on time, which may be expensive. Most patients in developing countries avoid treatment due to financial strains caused by medical bills and potential loss of income.

In severe cases of ocular trauma, workers may be unable to work for extended periods of time and tertiary healthcare may not be in proximity to rural regions. This can impact both the individual and the overall productivity of the agricultural sector. Lack of treatment can result in permanent damage to the cornea, retina or optic nerve, causing significant emotional and psychological stress. Routine eye examinations can help detect early signs of damage and provide preventative care to mitigate long term impacts. Early intervention, proper safety measures and appropriate medical care are essential in minimizing the impact of such injuries.

Gaps in preventive eye care programs for blindness

A recent population-based prospective study conducted in Bharatpur District, located in the Kathmandu Valley, Nepal, revealed that the annual incidence of ocular injury is 1,788 per 100,000 people, with 789 of these injuries being attributed to corneal abrasions. This means that approximately 1.8% of the residents of Bharatpur experience some form of ocular injury each year.[6] These findings have led to the development of a nationwide corneal ulcer prevention program in Nepal. However, most tertiary eye care centres are located at an average distance of 25 km in the city with an average traveling time of 90 minutes.

Since the first national blindness prevalence survey conducted in 1981, there has been significant growth in eye care services

[4] https://pubmed.ncbi.nlm.nih.gov/31056576/
[5] https://pmc.ncbi.nlm.nih.gov/articles/PMC4790164/
[6] https://pmc.ncbi.nlm.nih.gov/articles/PMC1772092/

across Nepal, resulting in a considerable decline in the prevalence of blindness. However, Nepal's healthcare schemes for eye health exhibit significant gaps that hinder their effectiveness in reaching underserved populations, particularly in rural regions like Dhading, Bharatpur, and Solukhumbu. One of the most critical issues is the geographical disparity in service delivery. Eye care services remain heavily concentrated in urban areas, while rural and remote communities, where the majority of Nepal's population resides, often lack access to timely diagnosis and treatment. For instance, tertiary eye care centers in Bharatpur and Kathmandu are at considerable distances from Solukhumbu and Dhading, making accessibility a persistent challenge for residents in these areas.

A lack of integration of eye care into primary healthcare is another major gap. Although national strategies such as Vision 2020 and the National Eye Health Strategy 2023 highlight the importance of integrating eye care into general health services, this integration remains inadequate at the local level. This results in missed opportunities for early diagnosis and prevention of eye diseases, especially for conditions like cataracts and corneal ulcers, which can be effectively managed with timely intervention. Additionally, public awareness about eye health and the availability of affordable care remains low. Many rural populations are either unaware of the national health insurance program or find it challenging to navigate its administrative processes. This gap disproportionately affects low-income and marginalized groups, including women and the elderly, who often face socio-cultural and logistical barriers in accessing care. Furthermore, the shortage of trained personnel, such as ophthalmologists and optometrists, in rural areas exacerbates the issue, leaving many primary healthcare centers ill-equipped to handle even basic eye care needs.

The program addresses these gaps through a multi-faceted approach. First, it decentralizes service delivery by empowering CHWs (FCHVs in Nepal to provide basic eye care services in underserved areas. These trained volunteers not only facilitate early diagnosis but also ensure prompt referrals to tertiary care centers, bridging the gap between rural communities and urban facilities. The program also integrates eye care into existing primary healthcare and school health programs, aligning with the objectives of the National Eye Health Strategy 2023 and ensuring sustainability. Moreover, the program prioritizes community engagement through awareness campaigns tailored to local contexts, educating people about the importance of regular eye check-ups and the benefits of enrolling in health insurance schemes. This helps increase the uptake of available services, particularly among vulnerable groups. To address the shortage of trained personnel, the program provides capacity-building initiatives for healthcare workers, enabling them to manage common eye conditions effectively at the primary level. By addressing these systemic gaps, the program enhances equity, accessibility, and inclusivity in Nepal's eye care ecosystem, ensuring that even the most remote and marginalized populations have access to quality eye health services.

Training and Capacity Building – Strengthening the eye care ecosystem

The engagement and capacity building of local health workers and community health workers are critical components in addressing the eye care gap, particularly in underserved and rural areas. The community health workers act as the first point of contact in remote communities, ensuring that patients receive timely intervention and are linked to specialized care. Training programs tailored to equip these workers with essential skills in eye care have demonstrated remarkable success in improving service delivery.

Studies have shown that training community health workers not only enhances their technical knowledge but also empowers them to actively address eye health challenges in their communities. A study in the Community Eye Health Journal reported that CHWs' involvement in community-based screenings and education campaigns contributed to a 25% increase in early detection rates for cataracts, reducing the progression of preventable blindness.[7] Similarly, research in the Indian Journal of Ophthalmology revealed that training programs for community health workers led to a 45% improvement in their understanding of eye health issues, which translated into higher follow-up rates for patients, better compliance with post-

[7] https://cehjournal.org/articles/316

surgical care, and a broader reach of community-based interventions.[8]

Capacity building also plays a significant role in enhancing preventive care. By training them to screen for early symptoms of cataract, corneal abrasions, glaucoma and diabetic retinopathy amongst other eye ailments, the program can mitigate the long-term effects of untreated eye conditions. This preventive approach reduces the overall burden on tertiary care centers and minimizes the progression of blindness. Furthermore, training CHWs contributes to sustained community engagement. These workers are often trusted members of their communities, making them effective in spreading awareness about eye health and debunking myths that might deter individuals from seeking care. A report by the World Health Organization (WHO emphasized that CHWs who are well-trained in health communication were able to reach marginalized populations, such as women and elderly individuals, who typically face greater barriers to accessing eye care services.[9]

The Blindness Prevention Program actively contributes to training and capacity-building efforts by equipping community health workers (CHWs with essential skills to conduct screenings, raise awareness, and facilitate timely referrals. In collaboration with Bharatpur Eye Hospital and Tilganga Institute of Ophthalmology, the program organizes structured training sessions, including the use of digital diagnostic tools, to enhance the accuracy of early detection and improve follow-up rates. By equipping frontline workers with the knowledge and tools to address eye health challenges proactively, the program ensures sustainable progress toward reducing preventable blindness and improving the quality of life for underserved populations.

Alignment of Sustainability Development Goals

The **project aligns with SDG 1 (No Poverty)** by addressing a critical public health issue of preventable blindness for the rural population for whom healthcare is inaccessible and unaffordable. It caters to individuals who, due to lack of a stable income and poor and living conditions, prioritise livelihoods over health. Additionally, untimely detection and treatment of eye ailments leads to loss of vision, making the individual a dependent for life. This also often causes a loss of livelihood, leading to a loss of source of income, especially in cases where the individual was the primary wage earner. Hence, Cure Blindness, through its community interventions in collaboration with CHWs, contributes to early detection and prevention of blindness, also reducing disease burden on the healthcare system. Furthermore, it ensures provision of free or subsidised treatment, in the vicinity of the beneficiary, leading to increased affordability and accessibility.

The **project strongly aligns with SDG 3 (Good Health and Well-being)** by addressing preventable blindness through early detection, timely treatment, and awareness campaigns. This initiative not only improves individuals' quality of life but also enhances productivity and socio-economic well-being in underserved areas like Bharatpur, Dhading, and Solukhumbu. Field observations revealed that CHWs play a pivotal role in raising awareness and ensuring accessibility. Patients also expressed satisfaction with the clarity of treatment plans explained to them, which fostered trust and adherence to medical advice. In Bharatpur, patients shared that proximity to the base hospital facilitated timely referrals, while in more remote areas like Solukhumbu, limited transport options occasionally delayed care. Despite these challenges, CHWs proactively coordinated

[8] https://chwcentral.org/wp-content/uploads/A_study_to_assess_the_knowledge_and_skills_of.8.pdf
[9] https://www.who.int/docs/default-source/documents/publications/world-vision-report-accessible.pdf

with supervisors to replenish medical supplies and ensure service continuity, demonstrating their commitment to the program's success. By focusing on affordable and accessible eye care, particularly in rural regions, the program directly supports SDG 3.8, which emphasizes universal health coverage and essential health services. Additionally, it mitigates occupational risks for vulnerable populations, like farmers, who are more prone to eye injuries. These efforts collectively contribute to building healthier, more productive communities.

Beyond health, **the project advances SDG 4 (Quality Education** by indirectly supporting educational opportunities for children and youth in affected communities. Vision impairment can significantly hinder academic performance and school attendance, especially in rural areas where access to eye care is limited, often resulting in enhanced dropout rates. By preventing and treating blindness, the program helps reduce educational disruptions, enabling students to engage in learning and achieve their academic potential. This contribution aligns with SDG 4.5, which emphasizes the elimination of disparities in education and ensuring equal access for vulnerable populations, including those with disabilities.

The **project advocates SDG 5 (Gender Equality** by fostering gender equality and empowering women through economic and social opportunities in healthcare. By employing CHWs in underserved areas, the program not only strengthens healthcare systems but also equips women with sustainable livelihoods. Field observations revealed that community health workers play an essential role in screening and referring female patients, ensuring that a significant percentage of women in these communities receive timely eye care. This dual-focus approach—providing equitable eye care and creating meaningful employment for women—reduces healthcare barriers and empowers women to become community leaders. CHWs reported feeling more confident and valued within their communities due to their critical role in health service delivery. Additionally, by restoring vision, the program enables women to re-engage in education, work, and social life, thereby addressing the disproportionate burden of blindness and vision impairment faced by women. By combining healthcare delivery with employment opportunities for women, the initiative not only advances gender equality but also builds resilient, inclusive healthcare systems in remote regions.

The **project strongly aligns with SDG 8 (Decent Work and Economic Growth** by addressing preventable blindness in rural populations, where healthcare is often inaccessible and unaffordable. These communities prioritize livelihoods over health due to unstable income and challenging living conditions. Untimely detection and treatment of eye ailments often lead to loss of vision, forcing individuals—particularly primary wage earners—into dependency and resulting in a loss of livelihood and income. Cure Blindness addresses this issue through timely community interventions that enable early detection and treatment of eye ailments. Patients benefit significantly from these localized services, as treatment is provided close to their homes, saving valuable time that would otherwise have been spent traveling to distant healthcare facilities. This minimizes disruptions to their work schedules, prevents loss of income, and ensures workdays are not missed. By safeguarding their ability to work, the initiative contributes to the economic stability of individuals and households, while reducing the disease burden on the healthcare system. Through its impact, the program empowers communities by sustaining livelihoods and fostering economic resilience, thereby contributing to the larger vision of economic growth for the country.

The initiative also furthers SDG 10 (Reduced Inequalities by prioritizing marginalized populations in rural and underserved areas, where access to specialized eye care is disproportionately low. Vulnerable groups, including economically disadvantaged households and agricultural workers, often face exclusion from quality healthcare due to financial and geographical barriers. By integrating affordable treatment options, training CHWs, and creating referral pathways, the program significantly reduces health disparities and promotes equal opportunities for all. Additionally, the program has led to greater recognition and acceptance of CHWs within communities. As trusted intermediaries, community health workers have built strong connections with local populations through their consistent efforts in raising awareness, facilitating timely referrals, and providing accessible care. Their role has been pivotal in bridging the gap between underserved communities and essential eye care services, further advancing SDG 10.3, which advocates for ensuring equal access to healthcare and

services regardless of socio-economic status. Through this dual impact of reducing inequalities and empowering CHWs, the initiative fosters a more inclusive and equitable healthcare ecosystem.

Finally, **the project contributes to SDG 17 (Partnerships for the Goals** by fostering multi-stakeholder collaboration. The intervention's success relies on partnerships between Cure Blindness, Bharatpur Eye Hospital, Tilganga Institute of Ophthalmology, local municipalities, and CHWs. This collaborative model exemplifies SDG 17.16, which encourages global partnerships to support sustainable development initiatives. The inclusion of local government support and engagement with community stakeholders strengthens the sustainability and scalability of the program, ensuring long-term impact.

By addressing health, education, inequality, and partnerships, the initiative demonstrates a holistic approach to advancing multiple Sustainable Development Goals while improving community well-being and resilience in Nepal.

1.4 Scope of Work

The scope of this impact assessment study for Cure Blindness Project's Blindness Prevention Program is executed in alignment with the key objectives of evaluating the program's relevance, effectiveness, efficiency, impact, and sustainability. The study focuses on the following key areas:

Evaluation Framework and Methodology: A comprehensive evaluation framework and methodology tailored to assess the relevance, effectiveness, efficiency, impact, and sustainability of the Blindness Prevention Program.

Data Collection Tools: Customized data collection tools (such as surveys, interview guides, and focus group discussion guidelines designed to capture both quantitative and qualitative data. These tools are aligned with the objectives of the study and tailored to assess program outputs, outcomes, and impact from the perspective of different stakeholders (CHWs, patients, local health officials, and partner eye hospitals.

- Survey and interview questionnaires for CHWs, patients, health officials
- Focus group discussion (FGD) guidelines for community members, and other relevant stakeholders.

Stakeholder Engagement Plan: A stakeholder engagement plan was developed to outline the approach for involving all relevant stakeholders in the evaluation process which included the identification of key informants such as local government health officials, Bharatpur eye hospital, community leaders, CHWs, and program beneficiaries. The sample plan defines methods for gathering their feedback through interviews, surveys, focus group discussions, and other participatory techniques.

Impact Assessment and Social Return on Investment (SROI) Analysis Report: A thorough impact assessment report, which will include an analysis of the program's effectiveness, efficiency, and long-term sustainability, examining how well the program aligns with/complements the National Program for Control of Blindness & Visual Impairment (NPCBVI) and regional priorities, the outcomes achieved, the impact on stakeholders, and the potential for scaling and replication.
A comprehensive SROI analysis that quantifies, in monetary terms, the socio-economic value generated by the program for its beneficiaries. The report will assess the program's cost efficiency and the return on investment, including a detailed breakdown of unit costs, budget utilization, and social impact for stakeholders such as eye hospitals and community members.

White Paper on Key Findings and Recommendations
Summarizing the key findings from the impact assessment and SROI analysis, along with recommendations for program improvement and expansion to ensure a comprehensive evaluation of the Blindness Prevention Program, providing the necessary insights and recommendations to guide the future of the program and its potential for expansion in the region, particularly across South Asia.

Approach and Methodology

2. Approach and Methodology

2.1 Engagement approach

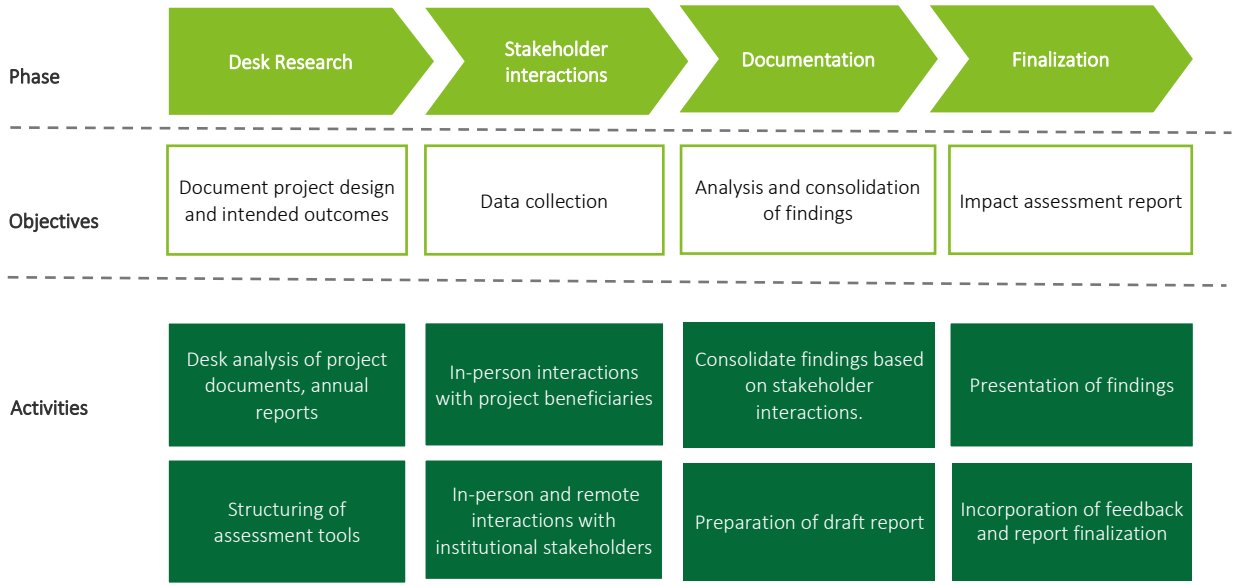
The approach to this project has been designed in line with the objectives and scope of the engagement. Deloitte has adopted a consultative approach for the impact assessment. The assessment design employed a mixed-methods approach, with emphasis on collecting primary data through surveys, on-site visits, and engaging key stakeholders. The research questions were framed along the Development Assistance Committee (OECD, 1991 principles. The data collection tools sought to collect information from project documents, stakeholders and beneficiaries around key indicators adapted from the Social Return on Investment (SROI framework. The assessment involved an analysis of qualitative and quantitative data using primary and secondary data sources. The findings have been triangulated based on interactions with key stakeholders, supplemented by extensive research, and complemented by domain knowledge and field expertise.

The SROI framework was deployed to determine the project-specific inputs, processes, outputs, and outcomes/impact customized as per the project execution model and in consultation with implementing partners and available documentation.

Data for the assessment was collected to answer the following research questions:

- Are the initiatives either relevant to the community's needs/aspirations or aligned with the developmental priorities of the region?
- What were the intended or planned outcomes of the initiatives? Are the program's results in line with the anticipated outcomes?
- How have the initiatives impacted beneficiaries and other relevant stakeholders?
- How efficiently are resources being utilized, and how can cost efficiencies be improved using Social Return on Investment (SROI) analysis?
- How do the beneficiaries and other stakeholders perceive the initiatives undertaken?
- Are the activities ensuring long term solutions to the eye health issues of the region? What elements have been built into the project design that will ensure sustainability of results

The impact assessment of the Blindness Prevention Program was executed in a phased manner. The four main phases are outlined below.



2.2 Stakeholder mapping

The impact study identified the various stakeholders – Meso, Exo, and Macro. The mesosystem consists of interactions between a person's microsystems. The exosystem affects a person indirectly, without their direct involvement. The macrosystem includes all other systems and the societal culture surrounding a person.

	Key stakeholders	Type of stakeholder	Reason for inclusion
	**Beneficiary/Patient/Caregiver**	Primary/Meso	Intervention implemented to address eye-care ailments/issues of beneficiaries at a grassroot level in villages of Nepal
	**Community health workers (FCHVs in Nepal)**	Primary/Meso	Community health workers are single handedly responsible for outreach activities, stakeholder engagement, and capacity building
	**Vision Centre staff**	Primary/Meso	Centres responsible for healthcare delivery and collaboration with TIO (Technician, Eye-centre supervisor)
	**Program staff from TIO and Cure Blindness**	Secondary/Exo	Program staff has undertaken end-to-end program implementation (Program Coordinator, District Program Manager, Program Director)
	**Government partners**	Tertiary/Macro	Government partners coordinate with CHWs and provide support in spreading intervention information at a community-level

2.3 Sample plan and Data tools

The field-level research component included a ten-day visit to 35 beneficiary village development committee (VDCs chosen across the 3 districts of Nepal. This visit entailed interactions with the project staff, hospital administrative, government health post staff and the direct and indirect participants of the program. This section elucidates the sampling approach and the sampling techniques employed to contribute to the robustness and validity of study outcomes. The team conducted a total of **683 patient and community health worker interactions.** This included 555 patient interactions (330 surveys, 225 FGDs and 128 CHW interactions (97 surveys, and 31 FGDs. In addition to this the team also interacted with 25 other stakeholders including field team and institutional stakeholders.

Project Location	Sample Covered	Type of Sampling
Bharatpur	**446** stakeholders • 195 patient/caregiver surveys • 194 patient FGDs • 43 CHW surveys • 4 Field supervisors • 1 Program Officer • 9 institutional stakeholders	Purposive Sampling
Dhading	**180** stakeholders • 102 patients/caregiver surveys • 21 patient FGDs • 28 CHW surveys • 23 CHW FGDs • 1 Field Supervisor • 1 Master Trainer • 4 institutional stakeholders	
Solukumbhu	**82** stakeholders • 33 patients/caregiver surveys • 10 patient FGDs • 26 CHW surveys • 8 CHW FGDs • 1 Field supervisor • 4 institutional stakeholders	

Study Tools

This section examines the essential tools used in the study. These tools encompass various instruments and methodologies utilized to collect, measure, and analyse data relevant to the research objectives.

Stakeholder	Key Points covered	Study tools deployed
Patients and Caregivers	• Treatment being attained • Timespan of the treatment • Financial Support being acquired (referrals/government schemes) • Experience and feedback on the process, waiting time, procedures, and conduct of the CHWs, medical staff, post-discharge processes/ support • Accessibility and affordability of eye care in the community • Cost of treatment before and after intervention	• In-person sample surveys • Key Informant Interviews • Focus Group Discussions
Community health workers (CHWs)	• Patient footfall and response • Challenges faced while • Delivering services • Training provided to CHWs at the hospital • Data maintenance and challenges in reporting • Best Practices used	• Key Informant Interviews • Focus Group Discussions
Doctors	• Increase/ decrease in patient footfall • Need for nursing staff/training/ upskilling • Treatment abandonment rate and reasons • Availability/ enhancement of services • Scalability of services • Best Practices	• Key Informant Interviews
Administration	• Facilities available • Further Requirements • Plans in scalability • Mitigation plans for the supply chain • Human resource requirement and retention • Patient feedback mechanism • Financial support to patients • Record maintenance and Data digitization • Challenges faced in execution period • Coordination with Program staff and CHWs	• Key Informant Interviews • Focus Group Discussions

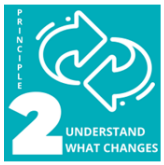
2.4 Analysis and Framework

SROI Framework

Both primary and secondary project related data were reviewed to gain a holistic understanding of the implementation model and outcomes. Globally accepted SROI principles in the figure below to understand how it operates:

Principle 1: Involve stakeholders

Inform what gets measured and how this is measured and valued in an account of social value by involving stakeholders.
Stakeholders are those people or organisations that experience change as a result of the activity, and they will be best placed to describe the change.



Principle 2: Understand what changes

Articulate how change is created and evaluate this through evidence gathered, recognising positive and negative changes as well as those that are intended and unintended.
Value is created for or by different stakeholders as a result of different types of change; changes that the stakeholders intend and do not intend, as well as changes that are positive and negative.

Principle 3: Value the things that matter

Making decisions about allocating resources between different options needs to recognise the values of stakeholders.
Value refers to the relative importance of different outcomes. It is informed by stakeholders' preferences.

Principle 4: Only include what is material

Determine what information and evidence must be included in the accounts to give a true and fair picture, such that stakeholders can draw reasonable conclusions about impact. One of the most important decisions to make is which outcomes to include and exclude from an account.

Principle 5: Do not overclaim

Only claim the value that activities are responsible for creating. This principle requires reference to baselines, trends and benchmarks to help assess the extent to which a change is caused by the activity, as opposed to other factors.

Principle 6: Be Transparent

Demonstrate the basis on which the analysis may be considered accurate and honest and show that it will be reported to and discussed with stakeholders.
This principle requires that each decision is explained and documented in relation to stakeholders, outcomes, indicators and benchmarks; the sources and methods of information collection; the different scenarios considered.

Principle 7: Verify the Result

Ensure appropriate independent assurance
Any account of value involves judgment and some subjectivity. Therefore, an appropriate independent assurance is required to help stakeholders assess whether the decisions made by those responsible for the account were reasonable.

Principle 8: Be Responsive

Pursue optimum Social Value based on decision making that is timely and supported by appropriate accounting and reporting. This principle requires organisations to implement a management approach based on three types of decisions: strategic.

Desk-based research

In addition to the stakeholder interactions through Key informant interviews, Focus Group Discussions, with the Cure Blindness management and with project staff of Bharatpur Eye Hospital (BEH) and Tilganga Institute of Ophthalmology (TIO), the following project-related documents were reviewed:

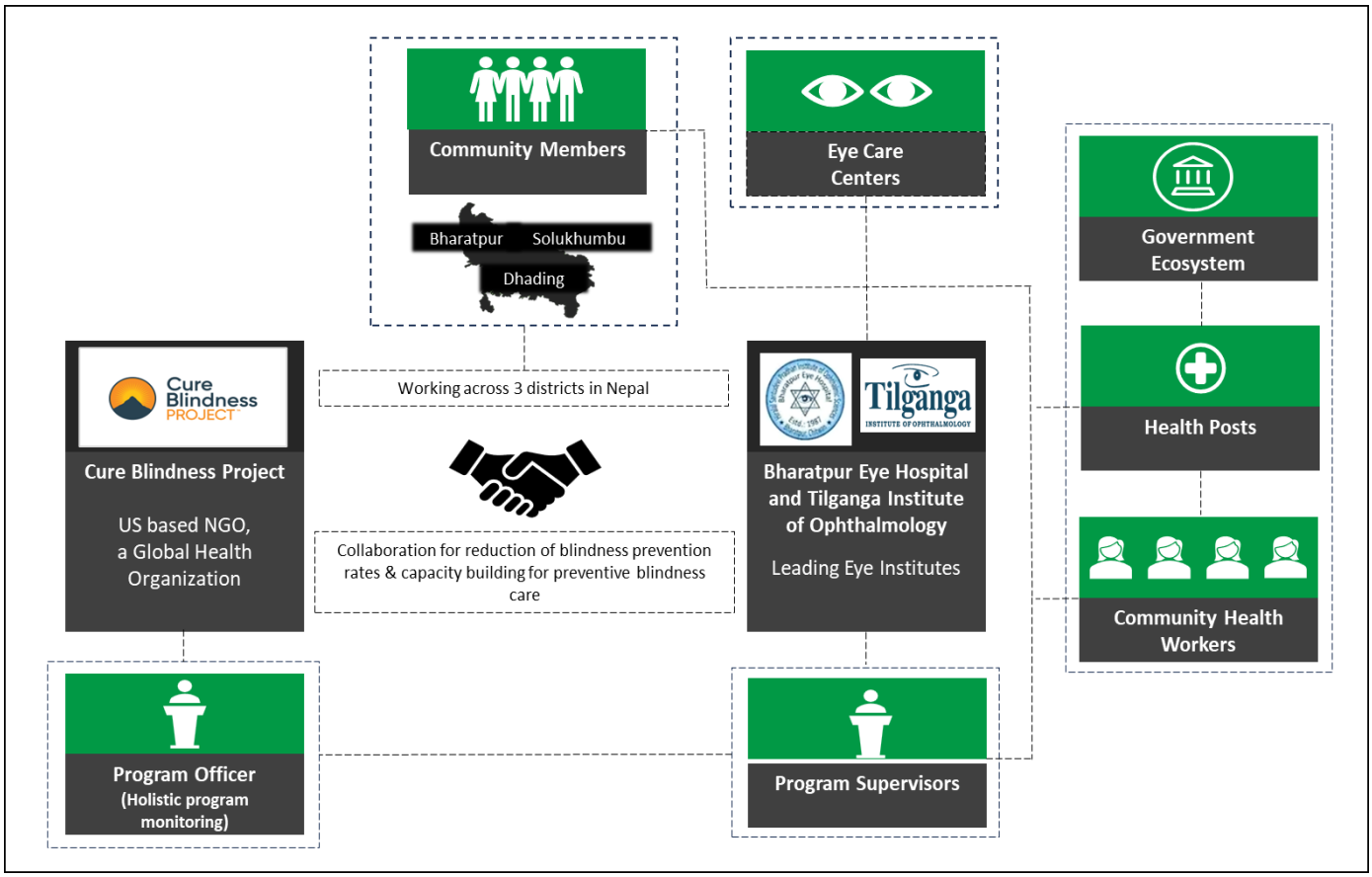
- Memorandum of Understanding for the project year 2018-24 of Cure Blindness with BEH and TIO
- Detailed location-based Project Plans and Quarterly Progress reports
- Documentation including portal reports such as patient records, eye-care centers & CHW records, refresher training records
- CHW logbooks, referral registers and Patient files
- Sample records of patient reimbursements for treatment
- OPD/IPD registers
- Grant utilization reports

Program Implementation Model

3. Program Implementation Model

Cure Blindness, in collaboration with Bharatpur Eye Hospital and Tilganga Institute of Ophthalmology, designed a comprehensive eye care intervention to address the growing burden of preventable blindness in Bharatpur (Chitwan, Dhading, and Solukhumbu districts. The program aims to strengthen Nepal's eye care ecosystem by enhancing local capacity in raising awareness and early detection of eye diseases, streamlining patient referrals, and ensuring timely diagnosis and treatment of corneal injuries. Central to this initiative is the integration of CHWs and health posts, who collectively form the backbone of community-based eye care delivery.

High Level Stakeholders and Partners



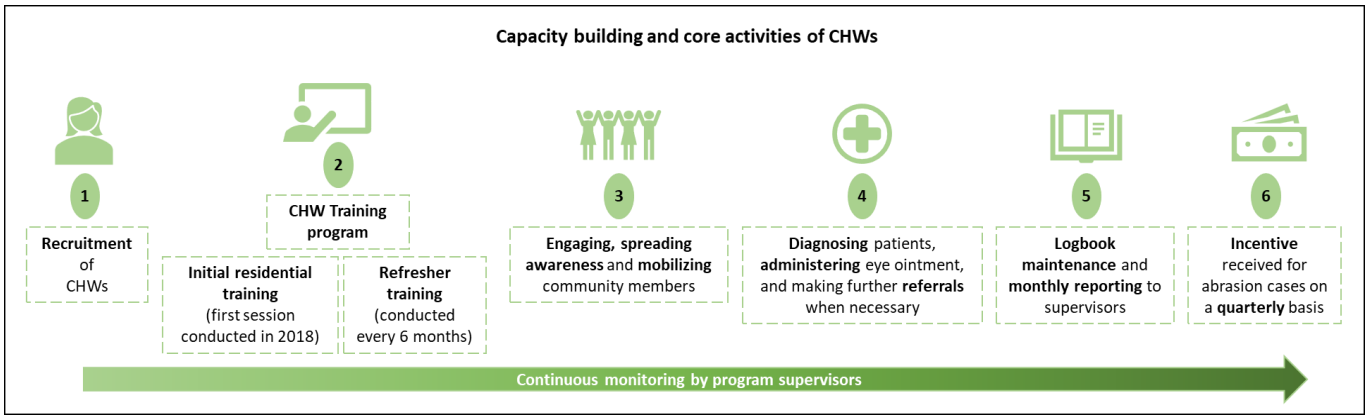
Bharatpur Eye Hospital acts as the implementing partner for the Bharatpur region, while Tilganga Institute manages operations in Dhading and Solukhumbu. Both institutions are entrusted with key responsibilities, including the recruitment of program officers and supervisors, coordination of field-level operations, and the organization of training sessions for CHWs and health post in-charges. These training sessions are vital to the program's success and are held every six months to equip participants with updated skills and knowledge.

The health posts in the target areas play an instrumental role in the program. Health post in-charges are actively involved in the biannual training sessions alongside . This collaboration ensures that both community-level volunteers and facility-based staff are aligned in their understanding of corneal injury management, referral and follow-up pathways, and awareness

generation activities. Health post in-charges serve as a critical link between the community and higher levels of care, providing guidance to CHWs and facilitating patient referrals when necessary.

Community health workers

CHWs, known as FCHVs in Nepal, are trusted members of their communities and are the primary agents of change in this intervention. They undergo structured initial and refresher training, for which they receive 8.6 USD (NPR 1,200) per session. These trainings, conducted every six months, equip CHWs with essential skills such as screening for all eye ailments, identifying corneal abrasions, administering initial treatments, and referring severe cases to vision centers or base hospitals. CHWs are also trained in community engagement, enabling them to raise awareness about preventive eye care and encourage timely treatment of eye injuries.

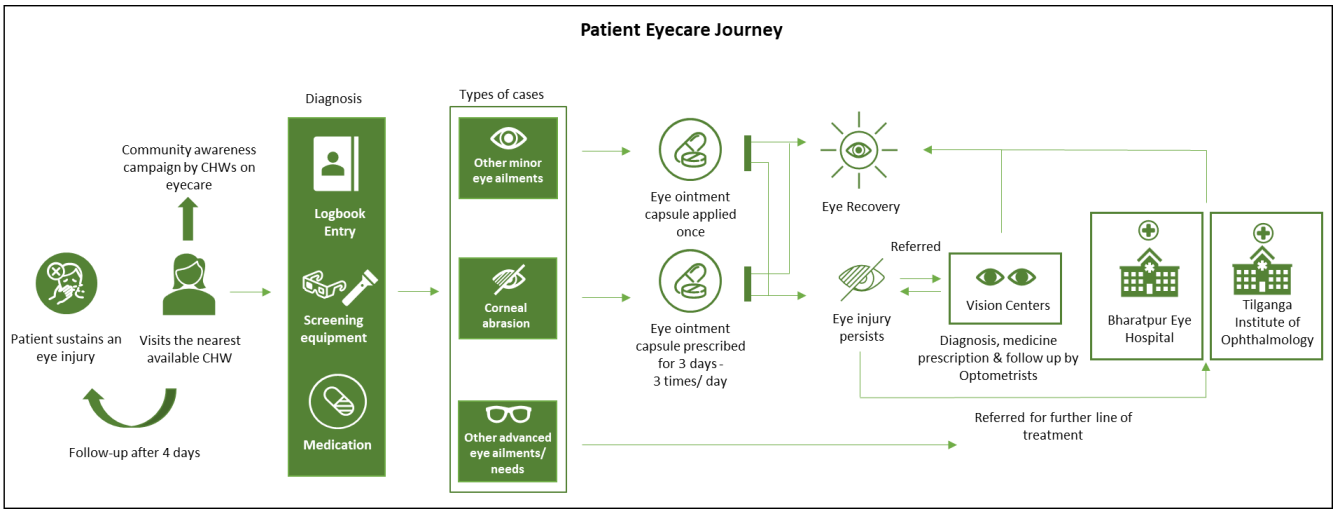


In their day-to-day work, CHWs use diagnostic kits that include binocular loupe, safety glasses, fluorescein sodium ophthalmic strips, a blue light torch with batteries and chloramphenicol Aplicaps or eye ointment. They play a critical role in identifying and addressing a range of eye conditions. CHWs are trained to diagnose and treat cases of corneal abrasions through a structured three-day treatment regimen, with a reassessment to ensure recovery. For more severe or comprehensive eye diseases, such as cataracts or infections suspected on screening, CHWs promptly refer patients to secondary or tertiary care units, such as vision centers or hospitals, for specialized treatment or procedures. All patient interactions, including diagnoses and referrals, are meticulously documented in logbooks to ensure proper tracking of patient journeys and follow-ups. This streamlined process not only enables timely care for patients but also strengthens the overall eye care ecosystem.

They are incentivised for their efforts to sustain their motivation and engagement. CHWs receive 0.4 USD (NPR 55) for every abrasion case diagnosed and treated, with payments disbursed on an annual basis. Additionally, The CHWs also receive a modest amount of financial support from local municipalities, recognizing their pivotal role in community health. This multi-source funding ensures that CHWs remain financially supported and committed to their responsibilities.

Patient eyecare journey

The patient journey begins at the community level, where CHWs assess eye injuries and focus primarily on diagnosing and treating abrasion cases. These cases are managed with a three-day treatment regimen and followed up after four days to ensure recovery. For cases involving advanced illnesses or other comprehensive eye diseases, Community health workers refer patients directly to vision centers staffed with optometrists. At the vision centers, patients undergo screenings, receive diagnoses, and are prescribed medications, as necessary. If the condition persists or requires specialized care, patients are further referred to Bharatpur Eye Hospital or Tilganga Institute for tertiary-level treatment. Referral records are meticulously maintained to track patient progress, and consultation fees at vision centers are waived for referred patients to ensure affordability and accessibility.



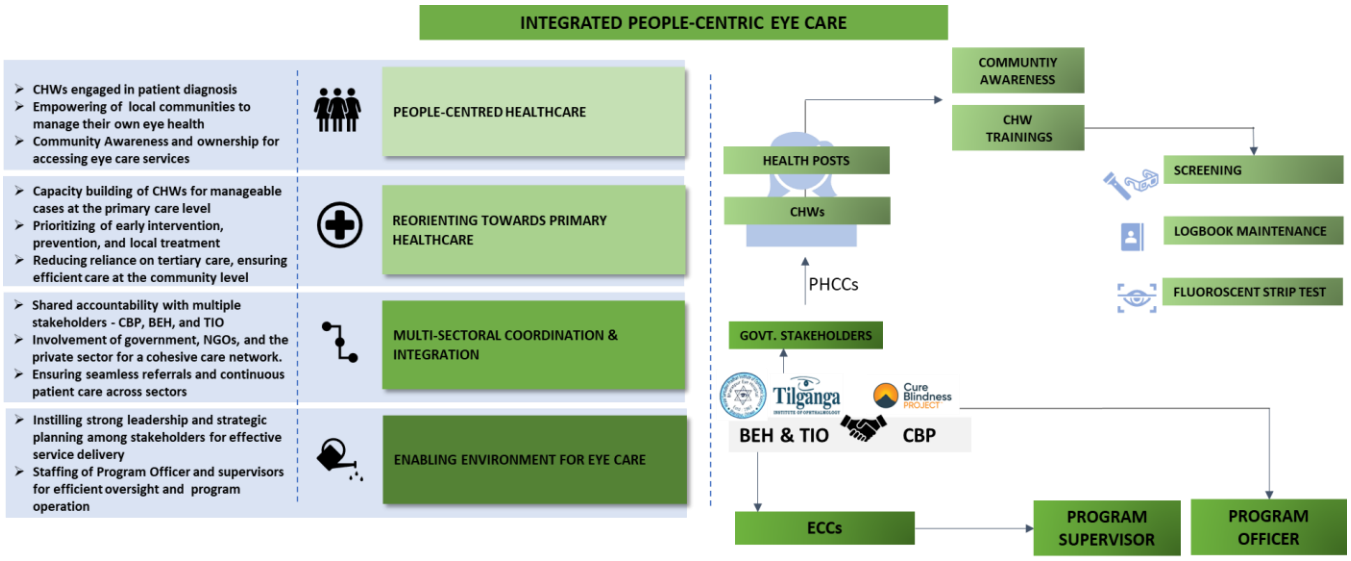
The implementation model is carefully monitored and supervised by program officers and supervisors appointed by Cure Blindness. Supervisors conduct regular field visits to ensure adherence to protocols, provide guidance to CHWs, and address any challenges encountered in service delivery. The program is overseen by a Program Manager appointed by Cure Blindness, who is responsible for operational coordination, stakeholder engagement, and overall program monitoring.

Financially, Cure Blindness assumes responsibility for covering the costs of program implementation, including staff salaries, training expenses, and the provision of supplies such as diagnostic kits and eye ointments. This centralized funding model, combined with intrinsic motivation of the CHW, creates a framework for sustaining the program.

By integrating community-level interventions with institutional support from health posts and vision centers, the program reduces delays in treatment, prevents minor eye injuries from escalating into severe conditions, and ensures access to quality care. This collaborative approach between Cure Blindness, partner hospitals, local municipalities, and the dedicated efforts of CHWs and health post in-charges exemplifies a sustainable model for addressing preventable blindness in Nepal.

3.1 Integrated People-centric Eye Care (IPEC) model

Integrated People-Centered Eye Care (IPEC) is a comprehensive framework developed by the World Health Organization that underscores the necessity of delivering eye care in a manner that is coordinated, patient-centered, and integrated across all levels of the healthcare system. The program implementation model has wonderfully complemented the framework, which was aligned to the global initiative, Vision 2020: The Right to Sight.



The framework is underpinned by 4 key strategies:

- **People-centered Health Care:**

This guides on active involvement of individuals and communities in managing their health, particularly in eye care, to improve outcomes and ensure services remain effective and sustainable. Community-based eye care approaches foster the adoption of eye care services and enhance awareness of eye health within communities. In this respect, this program integrates CHWs who are trained to diagnose, treat minor eye conditions, educate, and refer patients as needed. By involving CHWs in the ecosystem of eye care, services are made more accessible and catered to the ground reality.

- **Reorienting the Model of Care Towards Primary Health Care:**

The health infrastructure for primary eye care is often inadequate, resulting in limited access to essential services and poor eye health outcomes in many communities. Hence, the aim is to strategize for the eye care services to be universally accessible, comprehensive, and primarily delivered at the primary care level, emphasizing a local, preventive model. Deriving from this, the preventive model of the program focuses on early detection, management of common conditions, and reducing reliance on tertiary care for a more efficient and equitable system. The program places eye care services at the primary health care level by training CHWs and community health staff to identify and treat basic conditions. This model prioritizes access to treatment locally, with referrals to specialized care institutions as and when needed.

- **Enhancing Eye Care Through Multi-Sector Coordination and Integration:**

This strategy promotes multi-sector collaboration, extending beyond healthcare to include education, social welfare, and the private sector, aiming to create a cohesive and sustainable eye care system. The multi-stakeholder partnership approach between Cure Blindness, BEH, TIO, government stakeholders and community members exemplifies this integration. Involvement from government structures, NGOs, and the private sector (such as land contributions for ECCs) strengthens the eye care network. This integrated model ensures seamless patient referrals across sectors, improving accessibility and continuity of care.

- **Fostering an Enabling Environment for Eye Care:**

This approach underscores the importance of fostering a supportive environment through robust governance and effective resource allocation to ensure long-term success in advancing global eye health outcomes. Additionally, it calls for the integration of eye care into national health strategies, the inclusion of eye care workforce planning within overall health workforce development, the adoption of a competency-based care model, and the incorporation of comprehensive eye care data into health information systems to efficiently assess needs, optimize service delivery, and track progress.

BEH, and TIO takes the lead in implementing the program, managing training and logistical support, while CureBlindness oversees financial management, program coordination, and resource distribution. The Program Officer and supervisors are pivotal in driving capacity building and ensuring operational efficiency. This collaborative framework strengthens the health workforce, ensuring its members are well-trained, equipped, and motivated to deliver high-quality care.

3.2 Eye Care Competency Framework (ECCF

The WHO Vision and Eye Care Programme developed the Eye Care Competency Framework (ECCF as a vital tool for workforce planning and development, with a focus on aligning competencies. The overarching goal of the ECCF is to enhance health, social, and economic outcomes by ensuring the universal availability, accessibility, acceptability, coverage, and quality of the eye care workforce. As a comprehensive framework, the ECCF can be applied across diverse contexts for eye care workers and should be adapted to reflect the specific needs of different practice areas and levels of expertise. The Eye Care Competency Framework (ECCF is organized into six domains, each encompassing specific competencies and activities for eye care workers.

The alignment of the Eye Care Competency Framework (ECCF) with the Corneal Blindness Prevention Program is evident across multiple phases of the program. The ECCF emphasizes **Practice** through the interaction between eye care workers and the community, particularly during the training, awareness generation, and treatment phases, where competencies in patient assessment, clinical decision-making, and communication are essential. The **Professionalism** domain aligns with the program's focus on ethical, effective, and high-quality care, ensuring that all activities, from training to treatment, adhere to standards of care and inclusivity. In the **Learning and Development** domain, the continuous training and capacity building of Community Health Workers and supervisors reflect the commitment to professional growth and reflective practice. **Management and Leadership** competencies are evident in the program's collaborative approach, where CBP, BEH and TIO work together to manage resources, oversee implementation, and ensure the smooth operation of the program. **Community and Advocacy** aligns with the program's emphasis on engaging local communities, government health officials, and community leaders to raise awareness and advocate for access to corneal blindness prevention services. Lastly, the **Evidence** domain is incorporated in the ongoing monitoring and evaluation phases, where data is collected and used to assess the effectiveness of the program, ensuring that evidence informs future interventions. Through these aligned domains, the ECCF supports the holistic and integrated approach of the Blindness Prevention Program, enhancing its impact and sustainability.

Program Coverage

4. Program coverage

4.1 Overview

Cure Blindness, in collaboration with Bharatpur Eye Hospital (BEH and Tilganga Institute of Ophthalmology (TIO has been addressing comprehensive eye diseases and strengthening preventive blindness care. They have been working in the three districts of Nepal—Solukhumbu, Dhading, and Bharatpur—across two provinces, Province No. 1 and Province No. 3.

They focused on training of 262 female CHWs, along with 6 field supervisors and 1 program officer, equipping them with the necessary skills to manage corneal abrasions cases and provide early interventions in their village.

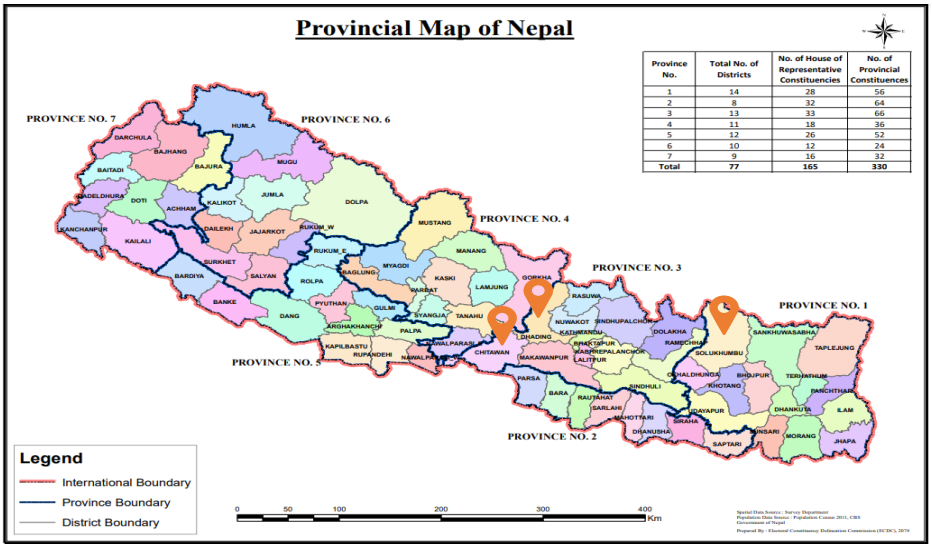
Training for CHWs is provided once through a one-day residential training, followed by a half-day refresher training every 6 months, to keep them updated on eye care management. It also helps address issues they face related to the program. A total of 27 refresher training sessions have been conducted in both provinces of Nepal. Eight eye care centers were opened across 3 districts with a total of 26,495 patients screenings. Of these, 14,440 patients had abrasions, and the remaining 12,055 had other eye ailments. Out of the total 26,495 patients screened, 1,295 were referred to the eye care centers for advanced care.

The below graphic summaries the overall outreach through the Blindness Prevention Program from the period 2019 to April 2024.

- **262** CHWs were trained under this program
- **26,495** patients seen in all three districts with **10,832** male and **15,663** female patients
- **14,440** corneal abrasion and **1,295** patients with other eye ailments treated at the village level, with **1,295** patients referred to eye care centers
- **8** vision centers, **6** in Bharatpur, **1** in Dhading, and **1** in Solukhumbu
- **27** half-day refresher training sessions conducted
- **6** Program supervisors, including **1** Program officer

4.2 Demographic details

Cure Blindness was operational in two provinces of Nepal, Province no. 1 (Koshi Province and Province no. 3 (Bagamati Province.



Source: Election commission, Nepal. Available from: https://election.gov.np/uploads

Solukhumbu district, located in Koshi Province (Province No. 1) of Nepal, borders Tibet (China) to the north, Bhojpur and Sankhuwasabha to the east, Dolakha and Ramechhap to the west, and Okhaldhunga and Khotang to the south. Covering 3,312 square kilometers, it has a rural population of 104,851, with a population density of 32 per square kilometer, as per the 2021 census. The male-female ratio is similar with (52,747) males and (52,104) females.[10] Agriculture and fisheries are the main occupations, supplemented by manual labour-based businesses and retail. Proximity to Kathmandu also supports commercial vegetable farming in some areas. The lower regions are predominantly inhabited by the indigenous Rai and Chhetri communities, while the higher regions are home to Sherpas.[11]

Dhading is a district in Bagmati Province of Nepal, located in the central part of the country. It is bordered by the districts of Kathmandu, Nuwakot, and Rasuwa to the east, Gorkha to the west, Makwanpur and Chitwan to the south, and China to the north. Covering 1,925 square kilometers, it has a rural population of 322,751, with a population density of 168 per square kilometer. The district has a higher female population (165,544) compared to males (157,207). Agriculture is the main occupation, with over 70% of the population engaged in farming. Other key sources of income include livestock sales, foreign employment, sand production, and manual labor-based businesses. Due to its proximity to Kathmandu, some areas also rely on commercial vegetable farming.[12]

Bharatpur, located in central-southern Nepal, is the district headquarters of Chitwan and the fifth largest city in Nepal. Its strategic location, 146 km from Kathmandu and 126 km from Pokhara, enhances its regional significance. Covering 433 square kilometers, Bharatpur has a rural population of 369,268 and a population density of 853 per square kilometer. With a higher female population (190,370), agriculture is the main occupation, with over 40% of residents involved in farming. Key income sources also include retail, transportation, and construction.[13]

[10] https://censusnepal.cbs.gov.np/results
[11] https://daosolukhumbu.moha.gov.np/
[12] https://daodhading.moha.gov.np/
[13] https://bharatpurmun.gov.np/en

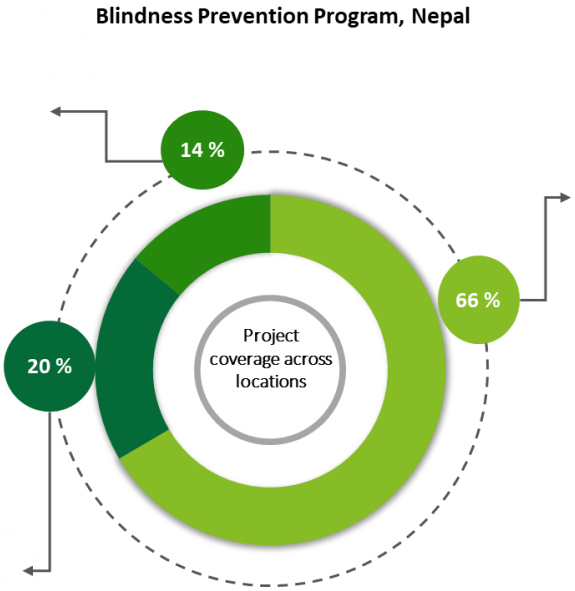
4.3 Outreach (Year-wise and location-wise)

Solukhumbu

- 3,706 patients screened in the Solukumbhu
- 81 CHWs in are trained under this program
- 1 program supervisor
- 1 Eye care center for advance care
- 7 CHW refresher training sessions conducted

Dhading

- 5,374 patients screened in the Dhading district
- 64 CHWs trained under this program
- 1 program supervisor
- 1 Eye care center at Dhading
- 7 CHW refresher training sessions conducted

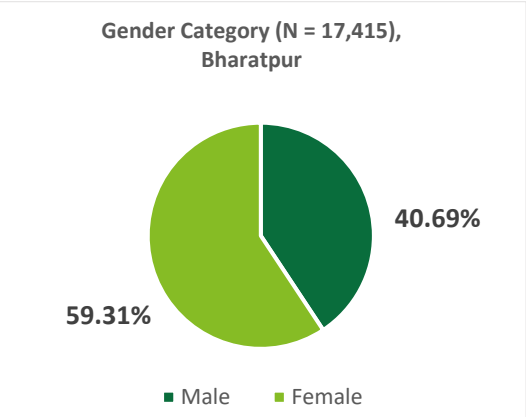


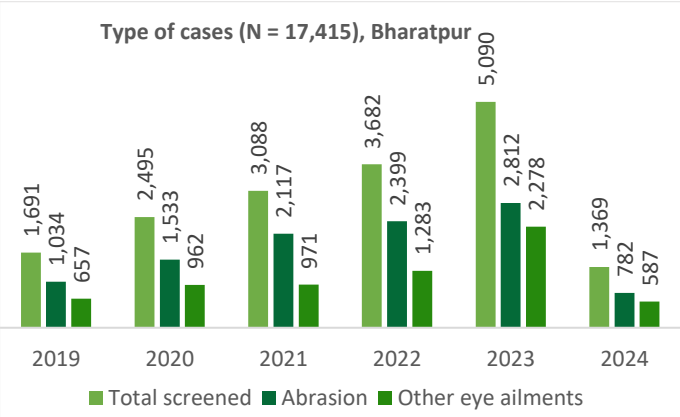
Bharatpur

- 17,415 patients screened in the Bharatpur
- 117 CHWs trained for primary eye care treatment
- 4 Program supervisors and 1 Program officer
- 6 Eye care centers
- 13 CHW refresher training sessions conducted

4.3.1 Bharatpur

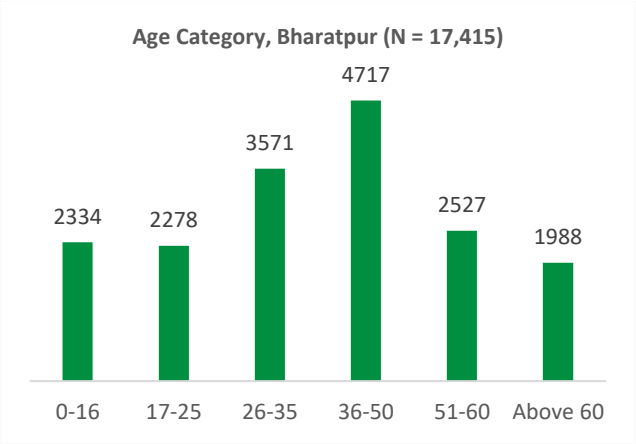
- The pilot project for blindness prevention started in Bharatpur. From 2019 to April 2024, a total of 17,415 patients were screened in Bharatpur, with 10,677 abrasion cases and 6,738 cases of other eye ailments. Out of these 17,415 patients, 931 were referred to eye care centers for secondary treatment. There are 117 CHWs trained and working under this program in Bharatpur. CHWs received refresher training every 6 months and total of 13 refresher trainings were conducted by Cure Blindness in partnership with BEH to support capacity building and provide updated knowledge in preventive eye care.





- From 2019 to April 2024, a total of 7,087 male patients (40.69%) and 10,328 female patients (59.31%) received eye care in Bharatpur

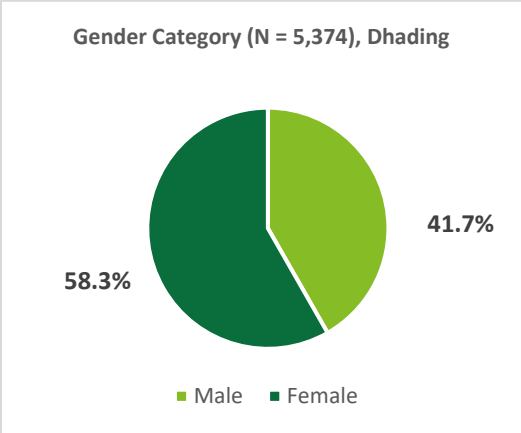
- In Bharatpur, 1,691 patients screened in 2019, rising to 2,495 patients in 2020. By 2021, 3,088 patients were screened, and in 2022, the number reached 3,682 patients. The highest number of patients screened for eye problems were in 2023, with 5,091 patients and in 2024 the total patients screened count was 1,269. From 2019 to 2024, the average number of abrasion cases was 1,780, while the average number of cases for other eye ailments was 1,123

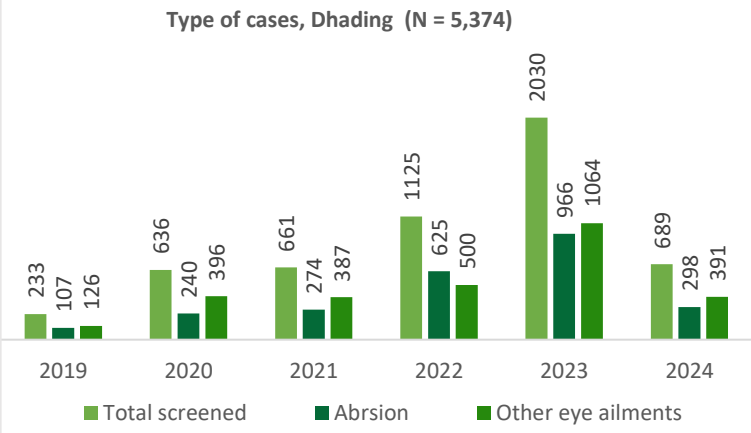


- From 2019 to April 2024, in Bharatpur, the highest number of patients seeking eye care belonged to the 36-50 age group, with 4,717 patients (27.1%), followed by the 26-35 age group with 3,571 patients (20.5%). The 51-60 age group treated 2,527 patients (14.5%), while the 17-25 age group accounted for 2,278 patients (13.1%). The 0-16 age group had 2,334 patients (13.4%), and those above 60 years numbered 1,988 patients (11.4%). This distribution indicates a strong demand for eye care, particularly among working-age individuals

4.3.2 Dhading

From 2019 to April 2024, a total of 5,374 patients were screened in Dhading district, including 2,510 abrasion patients and 2,864 other eye ailments patients. Out of these 5,374 patients, 259 were referred to local CHC in Dhading established by TIO for secondary care. A total of 64 CHWs were trained for corneal blindness prevention in the district, receiving initial training for 2 days and a total of 7 half day refresher trainings, one every 6 months.

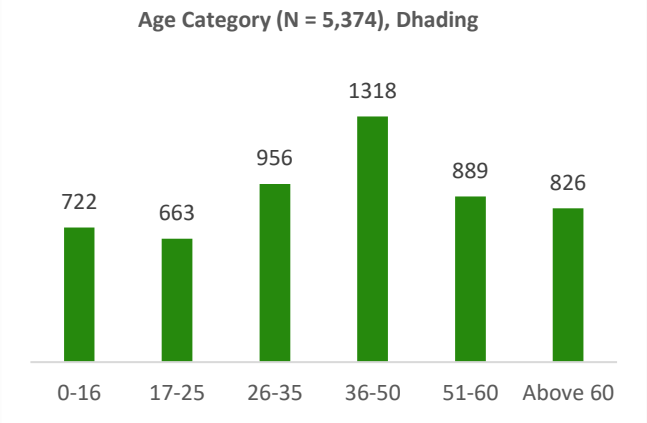




- A total of 5,374 patients screened in Dhading from 2019 to April 2024. Among them, 2,243 were male patients (42.7%), 3,131 were female patients (58.3%).

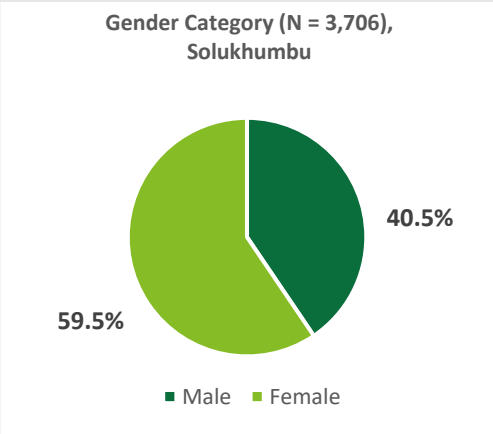
- In Dhading, 233 patients were screened care in 2019, increasing to 636 patients in 2020. By 2021, the number of patients screened rose to 661, and in 2022, it reached 1,125 patients. The highest number of patients were screened in 2023, with 2,031 patients. Finally, in 2024 689 patients received eye care through this program. For the period 2019 to April 2024, the average number of abrasion patients was 418, while the average number of patients with other eye ailments was 477.

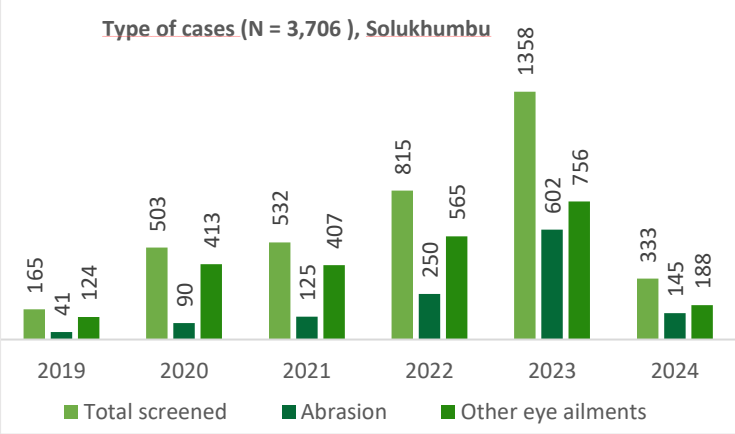
- From 2019 to April 2024, in Dhading, the highest number of patients seeking eye care belonged to the 36-50 age group, with 1,318 patients (24.5%), followed by the 26-35 age group with 956 patients (17.8%). The 51-60 age group treated 889 patients (16.5%), while the 0-16 age group accounted for 722 patients (13.4%). The 17-25 age group had 663 patients (12.3%), and those above 60 years numbered 826 patients (15.4%). This distribution highlights a notable demand for eye care across various age groups, with a particular emphasis on adults in the working-age range.



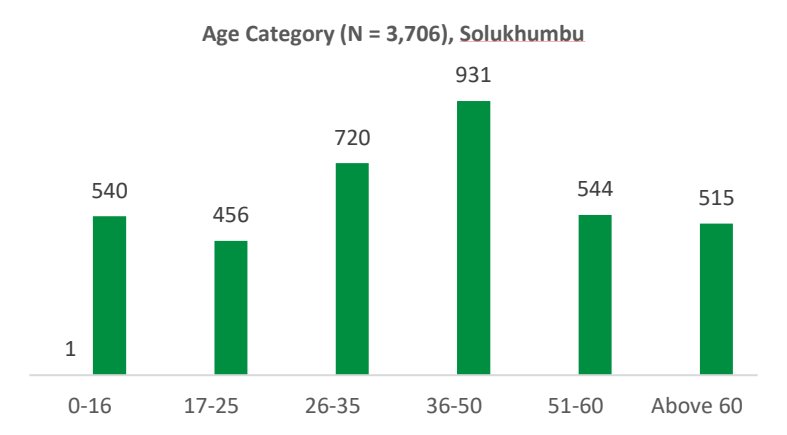
4.3.3 Solukhumbu

From 2019 to April 2024, a total of 3,706 patients were screened by CHWs in Solukhumbu district, including 1,253 abrasion patients and 2,453 patients with other eye ailments. Out of these 3,706 patients, 105 were referred for secondary care to the local CHC established by the TIO. A total of 81 CHWs were trained under this program in Solukhumbu, having received 2 days of initial training, followed by 7 half-day refresher trainings every 6 months.





- In Solukhumbu, 1,502 male patients (40.5%) and 2,204 female patients (59.5%) were screened from 2019 to April 2024. This gender distribution indicates a higher proportion of female patients seeking eye care, highlighting awareness among women in the community.
- In Solukhumbu, a total of 165 patients were screened in 2019, increasing to 503 patients in 2020. By 2021, the number of patients screened rose to 532, and in 2022, it reached 815 patients. The highest number of patients was screened in 2023, with 1,358 patients. Furthermore, 333 patients received care in 2024. Notably, other eye ailment cases consistently exceeded abrasion cases throughout the years. From 2019 to 2024, the average number of abrasion patients treated was 209, while the average number of patients with other eye ailments receiving eye care was 409.



- From 2019 to April 2024, in Solukhumbu, the 36-50 age group had the highest number of patients seeking eye care, with 931 patients (25.1%). This was followed by the 26-35 age group, which accounted for 720 patients (19.4%). The 17-25 age group treated 456 patients (12.3%), while 540 patients (14.6%) were from the 0-16 age group. The 51-60 age group had 544 patients (14.7%), and 515 patients (13.9%) were from the age group above 60

Impact Findings

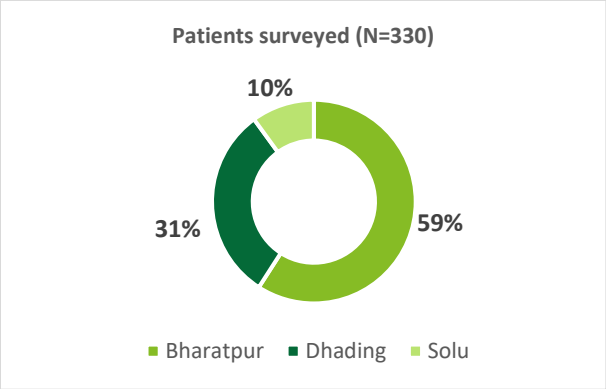
5 Impact findings

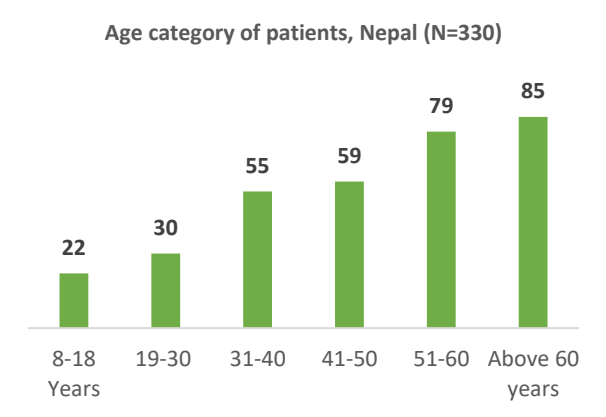
5.1 Beneficiary overview

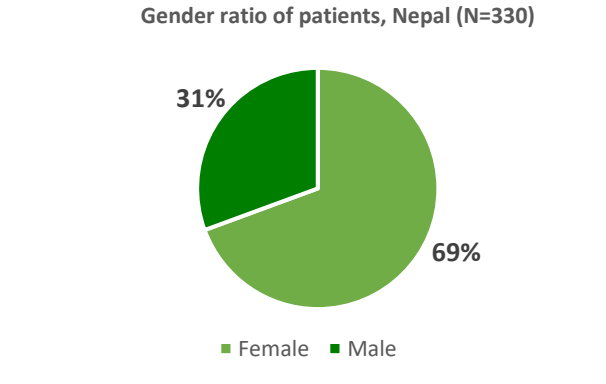
The Deloitte team conducted field visits across three project-impacted districts in Nepal, gathering insights through focus group discussions (FGDs), interviews, and on-site observations. In total, the team engaged with 708 stakeholders, including 555 patients, 128 CHWs and 25 other stakeholders. Amongst patients, 330 were interacted with via surveys and 225 via FGDs. For CHWs, 97 were surveyed and 31 were a part of FGDs from sample villages in the 3 districts. Below are the demographic details and analyses of the beneficiaries (patients) and community health workers (CHWs) supported by the program.

5.1.1 Beneficiary (patients) demographic details

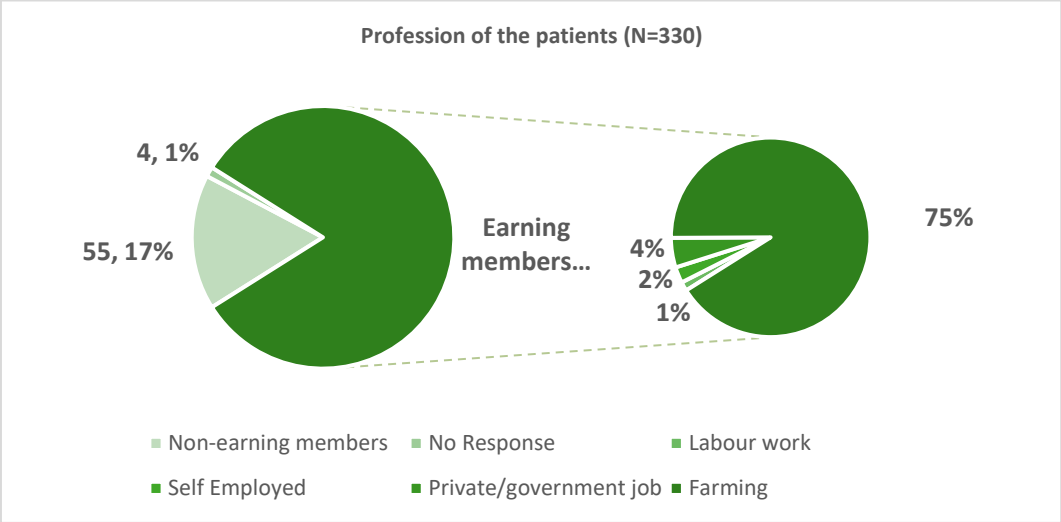
- The patient's survey conducted across three districts in Nepal, involved a total of 330 patients. 195 patients were surveyed in Bharatpur district, 102 in Dhading, and 33 in Solukhumbu.
- Apart from the surveys, 225 patients took part in Focus Group Discussions (FGDs) that were conducted to capture their experiential and narrative perspectives; 194 participants in Bharatpur, 21 in Dhading, and 10 in Solukhumbu.
- Among these patients, some were treated for corneal abrasion, while others with other eye ailments received care through CHWs at the community level. Additionally, some patients were referred to the local vision centers for advanced treatment as those cases were with complications.
- The age distribution of patients showed considerable variation with 22 patients aged 18 years and below, 30 patients were in the 19-30 age group, 55 in the 31-40 group, 59 in the 41-50 range, 79 in the 51-60 range, and 85 patients were above 60 years. Approximately 68% of the surveyed patients were aged between 31-60 years, 26% of them were above 60, and the rest 7% were below 19 years.
- A total of 229 females (69%) and 101 males (31%) participated in the survey, highlighting the significant involvement of women. This was a key metric for the study, as the program's implementation was primarily driven by Female Community Health Volunteers.



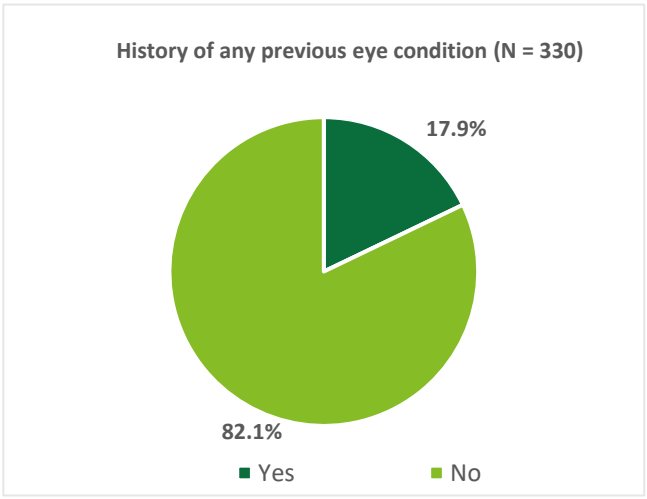


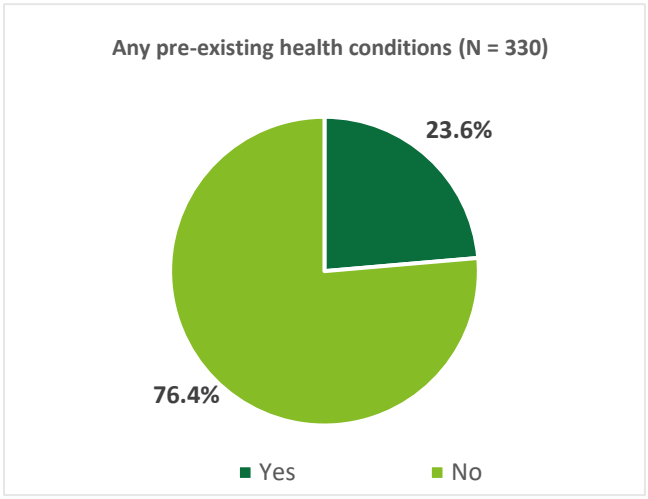


- Among the 330 surveyed patients, 271 (82%) were earning members of their families, while 55 (17%) were non-earning members. Four patients (1%) did not respond to the question



- The proportion of earning vs non-earning members in all the three locations was similar
- Of the 271 earning members, 91% were engaged in farming and agriculture, 5% were employed in private or government jobs, 3% were self-employed, and 1% were involved in labour work.
- A majority (82.1%) of surveyed patients reported having no prior history of eye conditions, suggesting that the intervention was their first significant engagement with eye care services. Among the 17.9% who did report a history of eye issues, the most commonly cited conditions included eye pain, conjunctivitis, cataracts, injuries, itching, and dust allergies.

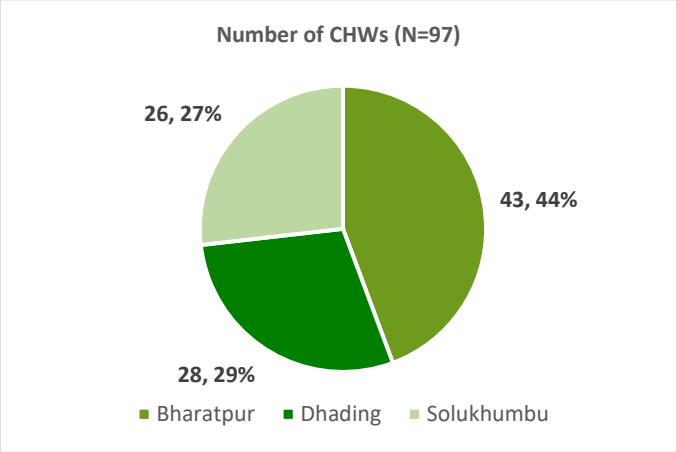


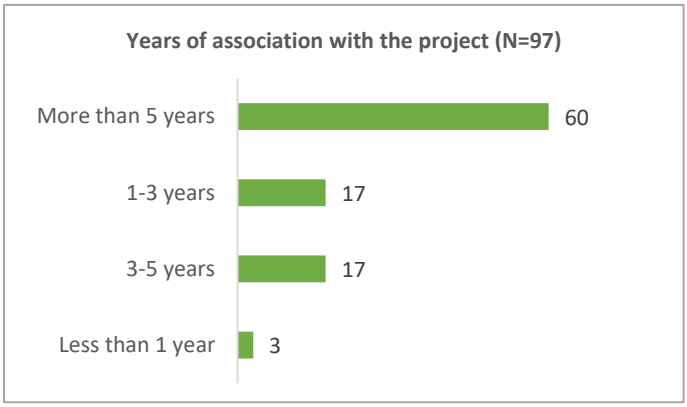


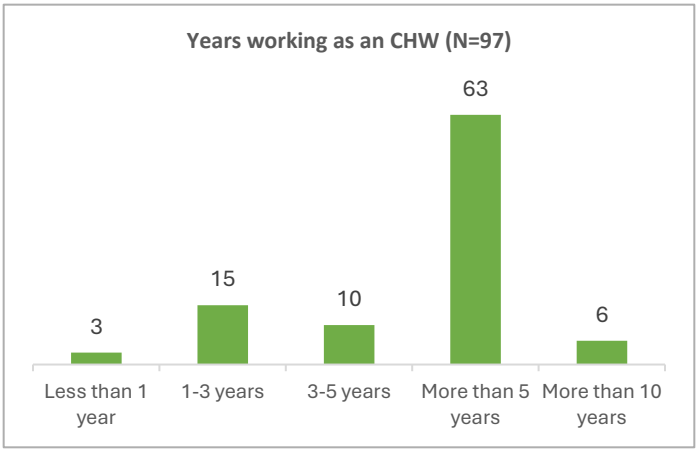
- Nearly one in four patients (23.6%) reported having pre-existing health conditions, with the most common ailments including high and low blood pressure, thyroid issues, diabetes, asthma, and gastric problems. These findings highlight the multifaceted health challenges faced by the community and emphasize the need for a holistic approach to patient care, considering comorbidities that may impact the management and outcomes of eye health interventions.

5.1.2 Community health worker overview

- Community health workers, employed by the Ministry of Health and Population (MoHP), Nepal, as part of the country's health programs. CHWs play a crucial role in providing health-related support and services to rural communities across Nepal. They are involved in a wide range of health initiatives, including maternal and child health, family planning, immunization, and awareness programs on infectious diseases.[14]
- The primary role of the CHWs in this program was to conduct monthly outreach activities, including door-to-door campaigns and group awareness sessions, to prevent blindness through primary eye care in their respective villages.
- A total of 97 CHWs were surveyed, with 31 CHWs also participating in Focus Group Discussions (FGDs). Out of 97 CHWs surveyed, 43 CHWs were based in Bharatpur, 28 were from Dhading, and 26 from Solukhumbu district
- 62% of CHWs had been part of the program since its inception in 2018, 34% joined in 2019 or later, and 3% were newly inducted in the past year
- 6% of surveyed CHWs had over 10 years of experience working as a health-worker in their villages, while 65% have between 5-10 years
- Several had been serving their communities for 15-30 years, demonstrating a strong connect and trust within the local population
- The CHWs surveyed as part of the program showed a diverse educational background and age distribution

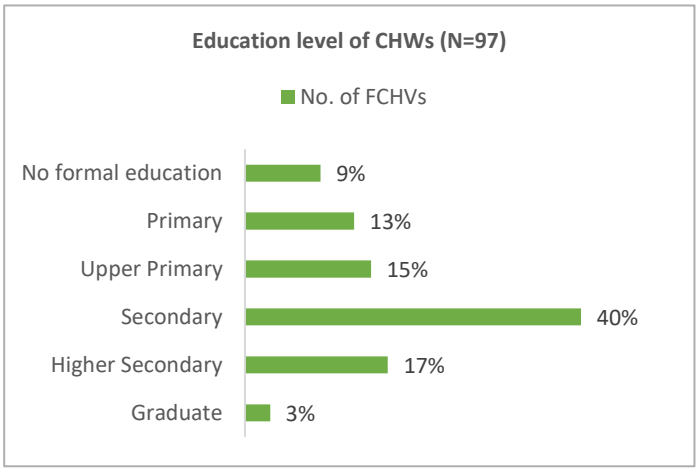


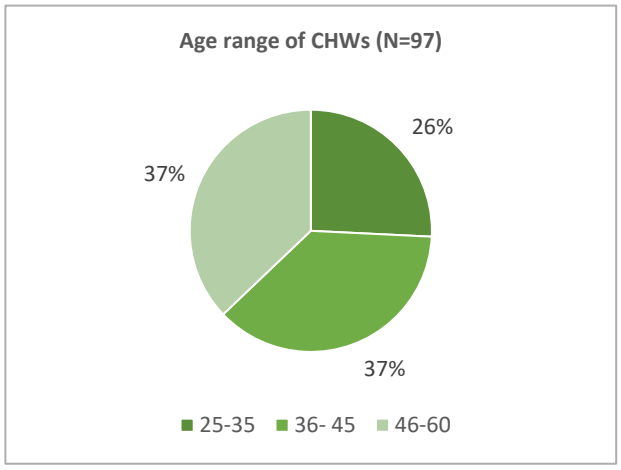




[7] https://www.mohp.gov.np/np
https://www.who.int/nepal/

- Approximately 40% of the CHWs had gone through a formal school education of below 10th grade and 17% of them had studied till 12th grade. Around 3% had completed education up to graduation, 15% have completed 8th grade, 13% have completed 5th grade, while 9% has not received any formal education





- The average age of CHWs active under the program was found to be 42 years, with 37% of CHWs in the 36-45 age range and another 37% in the 46-60 age group, indicating that a large proportion of the volunteers were experienced and in their mid to late careers. Meanwhile, 26% of CHWs were under the age of 35. In line with the Government of Nepal's policy, CHWs who are 60 years or older are required to be replaced with new volunteers.[15]

"I feel happy when I help treat the people and it feels nice to see them better after taking the medicine."

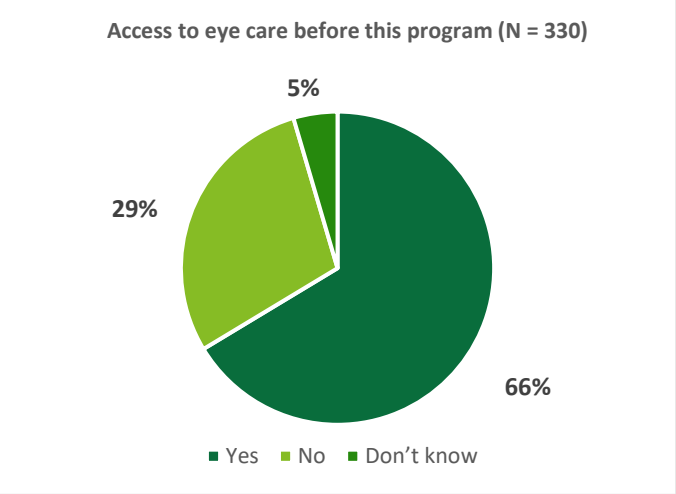
- **Community Health Worker (FCHV) Bharatpur on her experience in the community**

[15] https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-024-02177-5

5.1.3 Access to eye-care

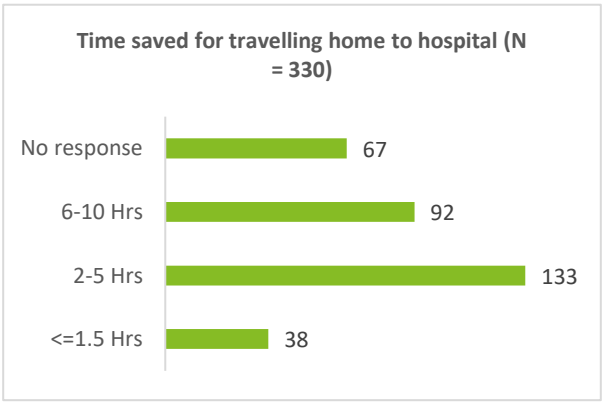
Availability and Inclusivity

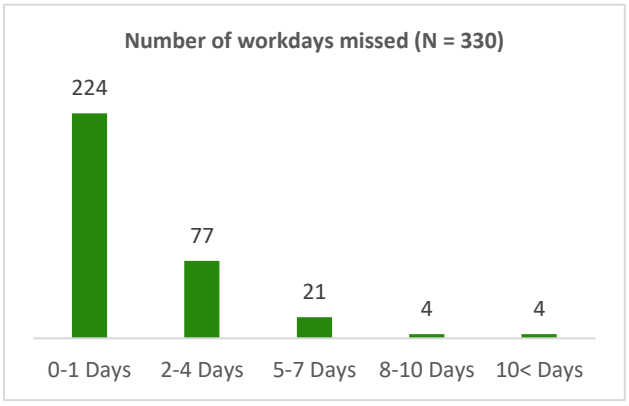
- The program has significantly improved the availability of and access to eye care services for underserved communities in rural Nepal, addressing critical gaps in the existing healthcare ecosystem. One-third of respondents were either unaware of or lacked access to any form of eye care services before the intervention program. This highlights a substantial unmet need within these communities, where limited infrastructure and outreach have traditionally impeded access to essential healthcare



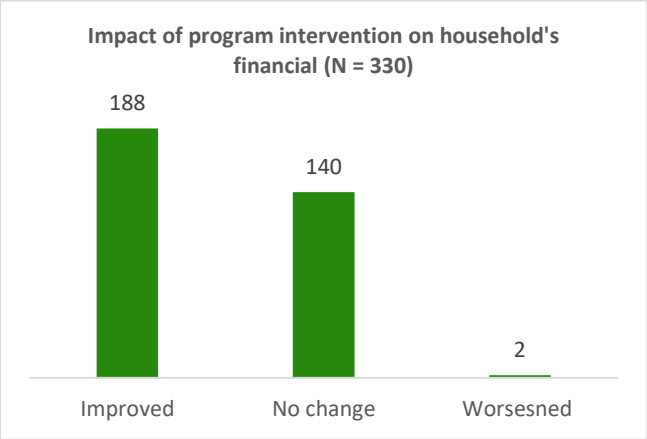
- Among those who previously had access to eye care services, 62% faced challenges including geographical inaccessibility, financial constraints, and the lack of timely medical attention, which often resulted in delays in seeking treatment, as well as long travel distances to urban centers such as Kathmandu, high costs, and the absence of specialized local facilities. This scenario was echoed in Solukhumbu, where geographic isolation and economic limitations compounded the struggle for timely treatment. Traditional healing practices, including the use of breast milk for eye infections and reliance on spiritual healers (Dhamis and Jhankris), were prevalent in these areas, often leading to worsened conditions

- The intervention has had a significant impact on various demographic groups, particularly among individuals whose livelihoods depend on informal sector such as farming and agriculture, labor work. Many daily wage laborers, whose income depends on hourly labor, greatly benefited from the intervention. It saved them time that would otherwise have been spent traveling long distances to hospitals, resulting in fewer missed workdays, and enabling them to maintain their income while accessing necessary healthcare services





- Among the 330 beneficiaries, 133 saved 2-5 hours on traveling time, 92 saved 6-10 hours, and 38 saved approximately 1.5 hours. As a result, 220 beneficiaries missed 0-1 workday, while only 77 missed 2-4 workdays and 21 missed 5-7 workdays. This time saved allowed individuals, particularly daily wage laborers, to reduce missed workdays and maintain their income while accessing essential healthcare services

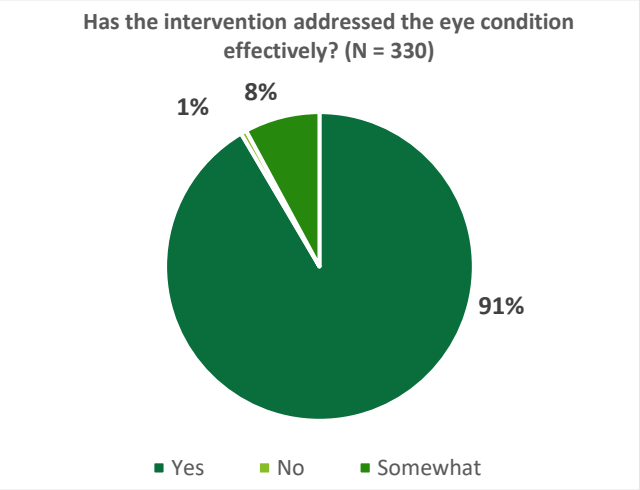


- Additionally, 178 beneficiaries saved approximately NPR 1,000 ($8) on travel costs, 45 saved a maximum of NPR 200 ($1.6), 32 saved a maximum of NPR 2,000 ($16), and 9 beneficiaries saved more than NPR 2,000 ($16)
- The intervention has positively impacted the beneficiaries' household financial situation as well, with 188 beneficiaries rating the effect as "improved." This suggests that the savings in travel time and costs, along with fewer missed workdays, have contributed to better financial stability for these households

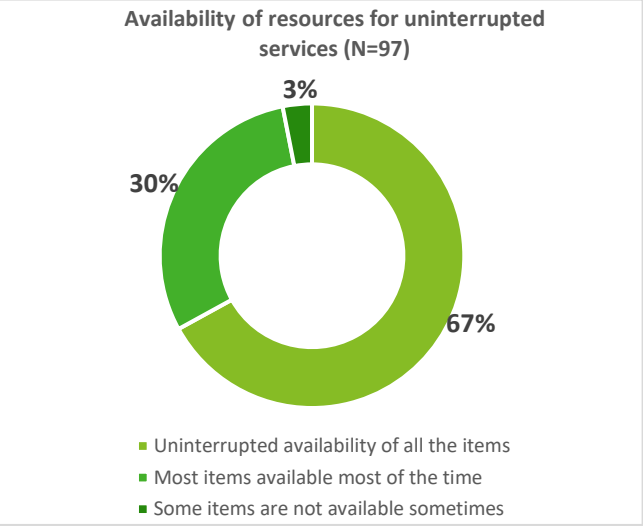
"We used to use breast milk to treat eye injuries but now we can go to the health care center for treatment."
- Patient on Traditional Healers

"Some mechanisms and a point of contact who can provide clear instructions for Tilganga Hospital would be better, as villagers often find it difficult to navigate the big hospital. For example, if one vehicle from the ECC, like an ambulance, could transport them, it would address this issue effectively."
- Supendra Tamehari
(Sr. Opthalmic Assistant, Dhading)

- The intervention has demonstrated remarkable success in addressing eye health issues, with 91% of patients affirming that their eye conditions were effectively managed through the program. This overwhelming positive feedback reflects the program's ability to provide targeted and timely solutions, significantly improving patient outcomes. The high satisfaction rate also highlights the efficacy of the training provided to CHWs and the availability of resources, ensuring patients receive quality care that meets their needs



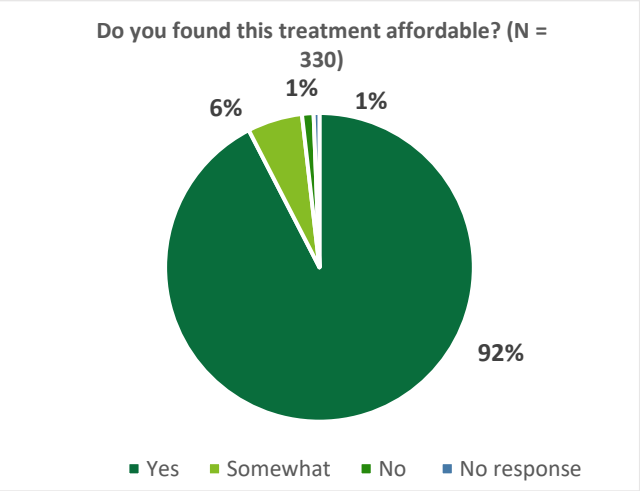
- A key success of the intervention program was the consistent communication between CHWs and patients. 100% surveyed patients reported that their treatment plans and referral chains were clearly explained to them by CHWs. This clarity helped build trust and ensured that patients understood the importance of adhering to prescribed treatments. By simplifying complex medical information and addressing patient concerns, the CHWs played an instrumental role in enhancing the effectiveness of the intervention and fostering informed decision-making within the community.

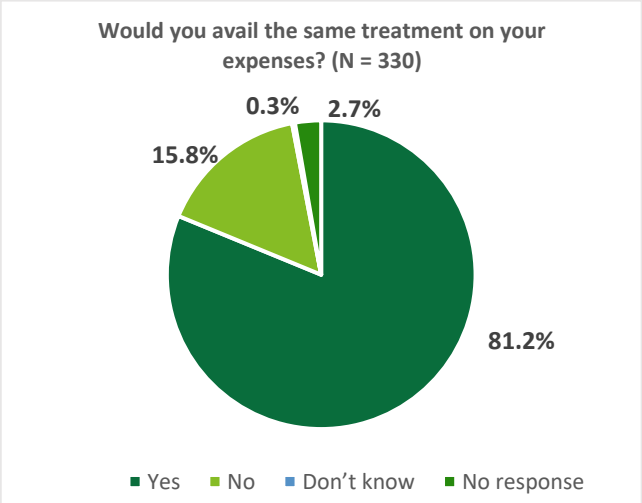


- The smooth delivery of the intervention program was closely tied to the uninterrupted stock and availability of essential medicines, ensuring CHWs could provide consistent care. A majority of CHWs (65%) reported uninterrupted availability of medicines, while 29% noted that most items were available most of the time. Only 3% mentioned occasional shortages of some items. Field observations supported this finding, highlighting that community health workers were well-equipped with essential resources such as kits, logbooks, and medicines to ensure the smooth implementation of services on the ground
- CHWs shared that they maintain consistent communication with their field supervisors, particularly for inventory management. They proactively notify supervisors when medicine stocks are running low to prevent shortages. While this system generally works efficiently, occasional delays in replenishment have been reported due to challenges such as poor road accessibility or the remoteness of certain areas. Despite these hurdles, the coordinated efforts between CHWs and supervisors have largely ensured resource availability, contributing to the program's effectiveness in delivering eye care services.

Affordability

- The intervention's affordability emerged as a significant factor contributing to its success in addressing preventable blindness within the community. The program ensured that the majority of patients received free-of-cost treatment, making high-quality eye care accessible to economically disadvantaged populations.
- Among the 330 patients surveyed, 282 individuals (85%) did not incur any costs for their eye treatment, demonstrating the program's commitment to eliminating financial barriers to essential healthcare. Furthermore, 92% patients reported finding the intervention affordable, highlighting the initiative's ability to provide care that aligns with the economic realities of underserved communities.
- When asked whether they would have sought similar treatment independently if the intervention were not free of cost, many respondents expressed uncertainty. This response underscores the financial constraints that often deter vulnerable populations from availing necessary medical services. The program's cost-free model not only improved accessibility but also alleviated the economic burden typically associated with specialized eye care.
- By ensuring affordability, the initiative significantly enhanced its reach and impact, enabling individuals from marginalized backgrounds to access timely and high-quality treatment. This approach aligns with the broader goal of reducing health inequities and fostering well-being among vulnerable groups.





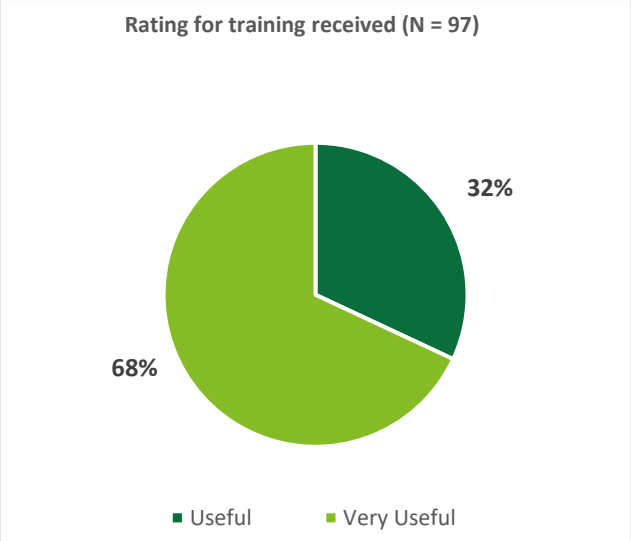
"The female healthcare volunteer gives us medicines and it helps because she lives so nearby. We trust them because they have helped us a lot."

-Patient experience with CHW

5.1.4 Eye care through a community health worker lens

Capacity building through trainings

- The program implementation team and CHWs reported that participants received a comprehensive 2-day residential training. The training module offers topics on how to handle end-to-end patient management, primary eyecare treatment, and administrative management for this intervention. Additionally, they confirmed participation in half-day refresher training every 6 months since 2018.
- When asked to rate the overall initial and refresher training experience, 68% CHWs found it to be “very useful”, 32% of them responded as “useful”
- According to the data, 92% of surveyed CHWs reported that the training they received was sufficient for effectively implementing the program on the ground, and they stated that the sessions helped them acquire new skills and broaden their knowledge. The remaining 5% expressed the need for additional training sessions to be incorporated into the program.
- 95% of surveyed CHWs reported that the training equipped them to assist patients with eye-related injuries and helped them acquire new skills, including both technical skills such as eye care screening and patient management, as well as soft skills like communication.
- As reported by the program supervisors, after completion of training, CHWs were provided with an eye care-kit comprising of a blue torch light, loops, a carry bag, along with procedure manual booklet, poster, pamphlet and covid booklet during covid times. The same was observed during the field visits

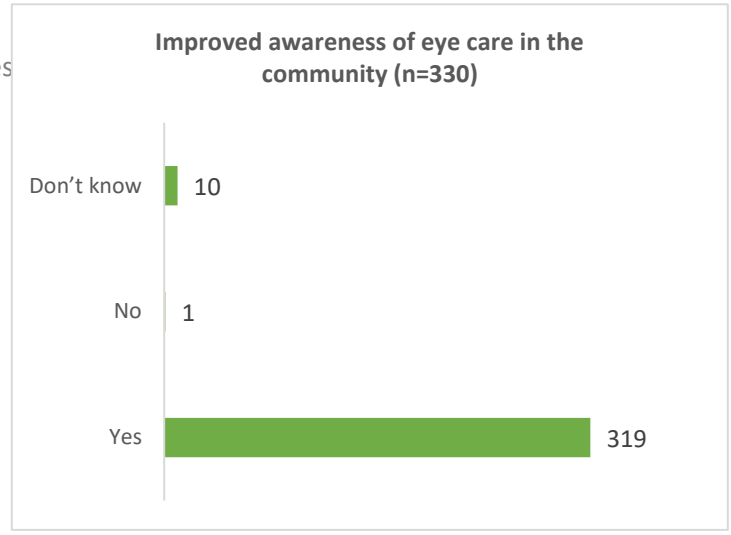


“We successfully performed a corneal transplantation on an 11-year-old boy with corneal opacity with the project support. Seeing him regain his vision and a brighter future is truly inspiring." – Dr. Pushpa”

- Dr. Pushpa Giri (Bharatpur Eye Hospital)

Strengthening community awareness on eye health care

- One of the recurring efforts for the smooth program implementation is awareness about the program and preaching the importance of early eye care intervention to the beneficiaries.

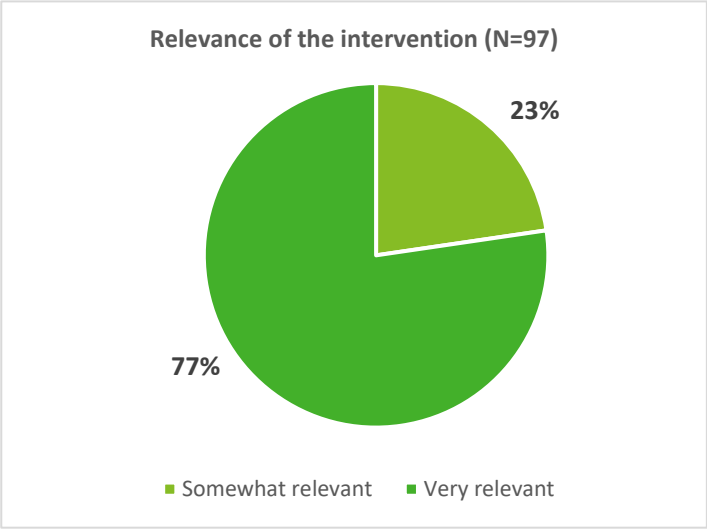


- When patients were asked whether the intervention contributed to improved community awareness about eye health, 97% of respondents (319 out of 330) agreed that the intervention had a positive impact. The response indicates the program has successfully raised awareness about eye health and the importance of timely interventions. This overwhelming agreement underscores the success of the program in educating the community about the importance of eye care and timely treatment. By fostering awareness, the initiative has likely contributed to improved preventive behaviors and increased trust in modern healthcare practices, laying the foundation for better long-term eye health outcomes.
- As per the survey responses, 73 of CHWs reported conducting outreach activities "monthly" or less frequently, 18 stated they reached out "weekly" or more often, and 6 mentioned they conducted outreach "fortnightly". Despite the varying frequencies, CHWs demonstrated innovative approaches to raising awareness in their communities.
- For instance, in one of the FGD, both patients and CHWs highlighted the role of a "Chowkidar," who roams the village at night and informs community members of the available services and CHWs. This creative strategy ensured that even those who may not attend formal outreach sessions received crucial information, reflecting their adaptability and commitment towards their community's well-being

"The Chowkidar's announcements at night were very helpful. It's how I first learned about the eye care services and medicines available through the CHWs. Without these announcements, I might not have known where to seek help in time."

- Patient on the importance of community awareness toward eye health

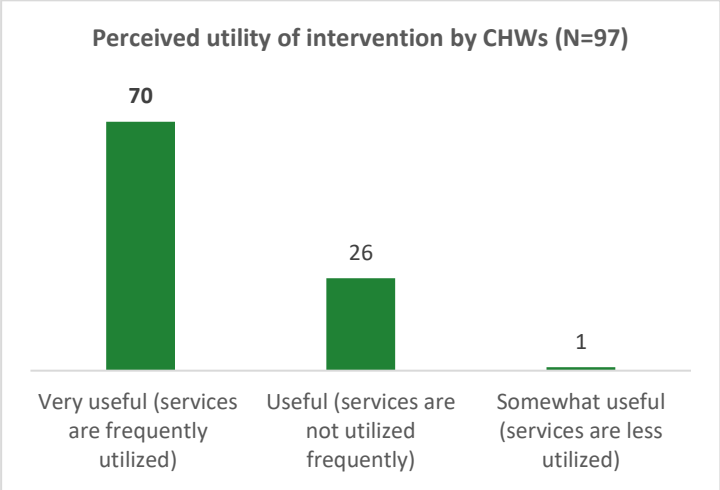
- Referring to the patient survey, 92% patients heard about the program through community health workers while other patients got to know about program through word of mouth, community meetings and Government or organization outreach activities.
- Taking into consideration the level of awareness in the community before the intervention and prior ways used to mitigate the eye related problems, 77% of surveyed CHWs found the intervention to be “very relevant”, whereas the rest 23% found it “Somewhat relevant”. This data also suggests that the intervention was well accepted by the community.



- As reported by the CHWs, during the start of the program establishing trust among the community members was important and challenging at the same time. They started sensitizing people by screening their own family members at home and invited other community members to make them familiar with the process. CHWs asserted that this strategy worked, and the community started trusting them

5.1.5 Enhanced Trust in the eye care ecosystem

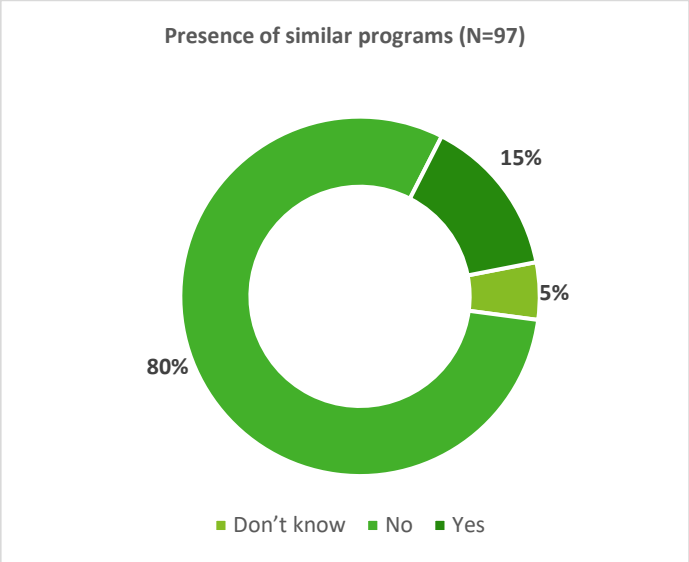
- On average, each CHW treats 4-5 patients per month with an average of 4.75, with a highest of 15 and a lowest of 1. The average number of patients treated varies by region: Bharatpur averages 6-7 patients, Dhading averages 4-5, and Solukhumbu averages 2-3 patients per month
- When asked about their perception of how patients view the intervention, 70 CHWs rated the program as "Very useful," attributing this to the frequent utilization of services by patients. The remaining CHWs described the services as "Useful" or "Somewhat useful," indicating that the intervention is widely regarded as beneficial within the community. This reflects the program's effectiveness in meeting patient needs and fostering a positive reputation among CHWs on the ground

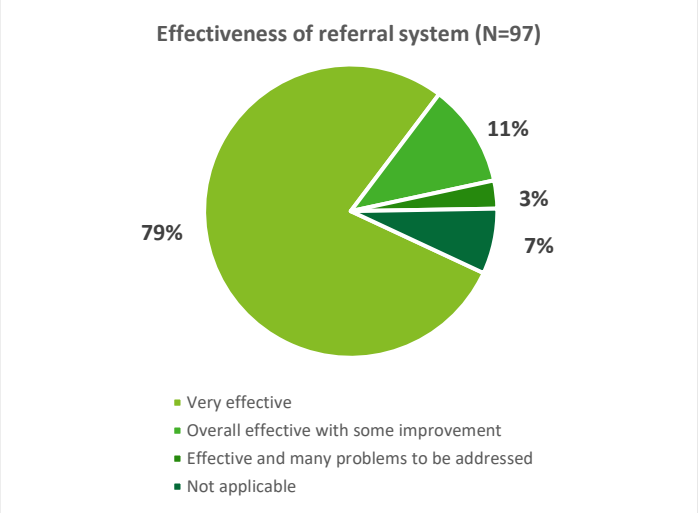


- The intervention has significantly bolstered the reputation of the eye care ecosystem, with all 97 CHW respondents unanimously agreeing that their facility's reputation and the level of trust among patients have improved. This resounding consensus underscores the effectiveness of the program in building confidence and reliability in community-based eye care services. By consistently delivering timely and quality care, the intervention has enhanced the credibility of the facilities, positioning them as trusted sources for eye health solutions within their communities

5.1.6 Linkages for improved service

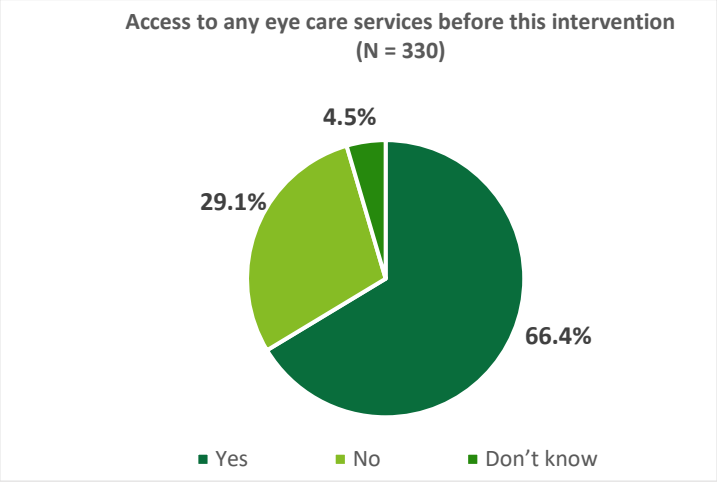
- However, 80% of CHWs mentioned that there are no similar programs available in the target locations.
- 80% of CHWs mentioned that there are no similar programs available in the program locations.
- However, 15% of CHWs, some stated that the program complements other initiatives, focusing on different eye related issues, and supplements other initiatives offering a different or complete set of benefits, such as VISION 2020: The Right to Sight, like national eye health strategy, and others, while 2 respondents noted that it overlaps with other initiatives. However, 80% of CHWs mentioned that there are no similar programs available in the target locations.
- As reported by the program team and CHWs the community health workers refer the complicated abrasion cases and other eye complexities (examples- cataract, refraction, keratitis, etc.) directly to the eye care center for advance care. Upon diagnosis the patients were referred to the base hospital (Tilganga Institute of Ophthalmology (TIO) or Bharatpur Eye Hospital (BEH) for further treatment
- Almost 79% of community health workers found the referral programs to be “Very Effective”, whereas 14% of them found it effective but with scope for improvement.
- On average, each CHW refers two patients per month to secondary and tertiary care facilities, with regional variations: Bharatpur reports around 2 referrals per month, benefiting from better facility access and transportation, while Dhading averages 1.5 referrals, and Solukhumbu averages 1 referral per month



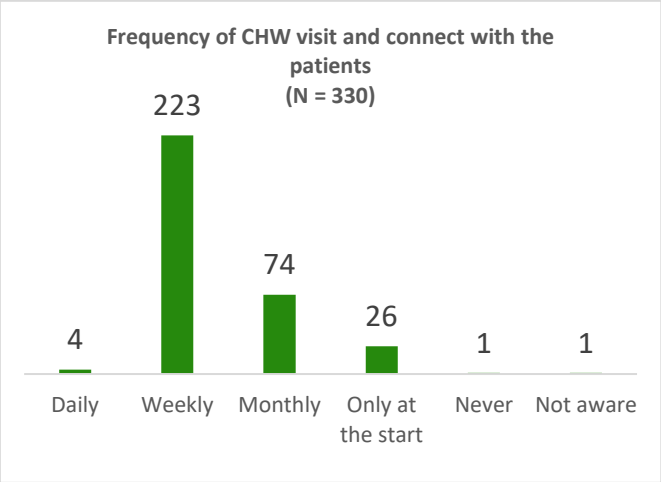


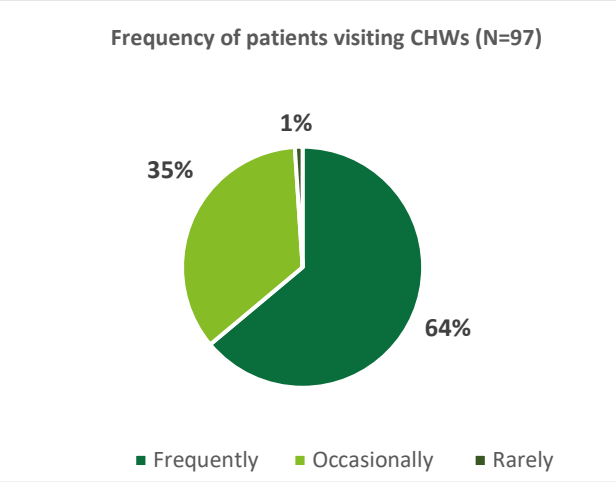
- 59 sample beneficiaries out of 330 who were referred through CHWs took part in the survey. These were caused due to varying reasons such as chemical exposure, during manual labour such as cutting of wood, or during rice harvest, or eye scratches
- Regarding the referral process, 5 respondents described it as "difficult", 25 respondents felt the process was "neutral". Meanwhile, 64 and 24 respondents found the process to be "easy", and "very easy", highlighting ease of the referral process

5.1.7 Behavioural shift and social transformation

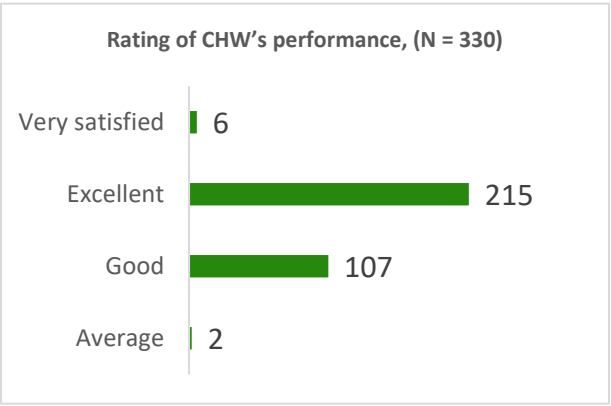


- Around 29% and 5% of the patients surveyed had either not used any formal eye-care services before this intervention or were unaware. The remaining 66% of beneficiaries had sought treatment from private or government institutions, or even traditional healers. Patients also mentioned that in more severe cases, they opted to visit private clinics or TIO or BEH for treatment.
- 223 beneficiaries have reached out by CHWs "weekly", and 74 "monthly" and 4, "daily", comprising 91% of the beneficiaries with consistent follow-ups demonstrating a sustained commitment to eye care. Field observations echoed the same sentiments with some patients stating that as the CHWs lived in the community itself, it is very convenient for patients to follow up with them, sometimes also reaching out to the CHW 2-3 times throughout the same day. Of the beneficiaries who followed up "weekly", 157 were female, and 70 were male, indicating a more substantial active participation from women in the program





- CHWs reported feeling highly respected within the community, as members frequently seek their assistance for eye care and treatment. They also observed an increase in follow-up visits, reflecting growing trust in their expertise. This suggests that 99% of patients were satisfied with the care provided, further emphasizing their positive impact and the community's confidence in their abilities. 100% surveyed CHWs mentioned that their relationship with the community members have strengthened as the program evolved over the years, helping the overall outreach of the program

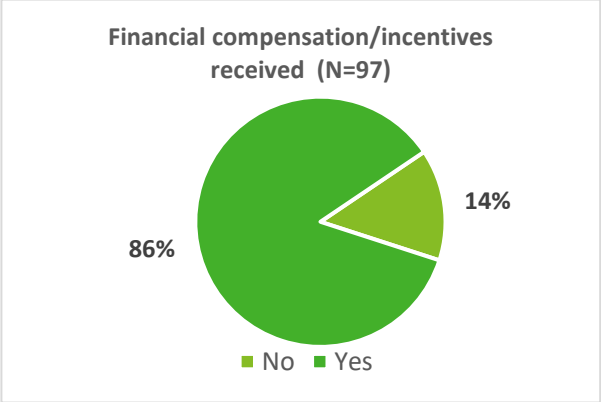


- Majority of surveyed community health workers reported a significant shift in community behavior toward seeking timely eye care. With 64% indicating that community members now proactively seek their assistance 'frequently', while 35% observed that these interactions occur 'occasionally', suggesting a positive change in the community's awareness and willingness to address eye health issues.

5.2 Factors impacting sustainability of the program

Incentives for community health workers (CHWs)

- 86% of CHWs reported they receive renumeration for treating abrasion cases, while 14% stated they were unaware of the renumeration they receive. The renumeration structure includes NPR 55 per abrasion case handled, and reimbursement for travel costs incurred during refresher training, determined based on their place of residence



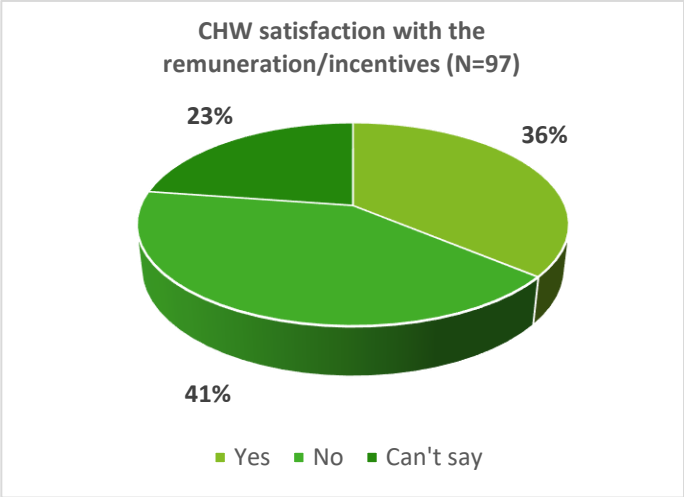
"Convincing traditional healers to work together was a big achievement. They would preach but also prescribe Aplicaps."
- Mr. Bimal, Master Trainer

5.3 Challenges

Awareness around renumeration

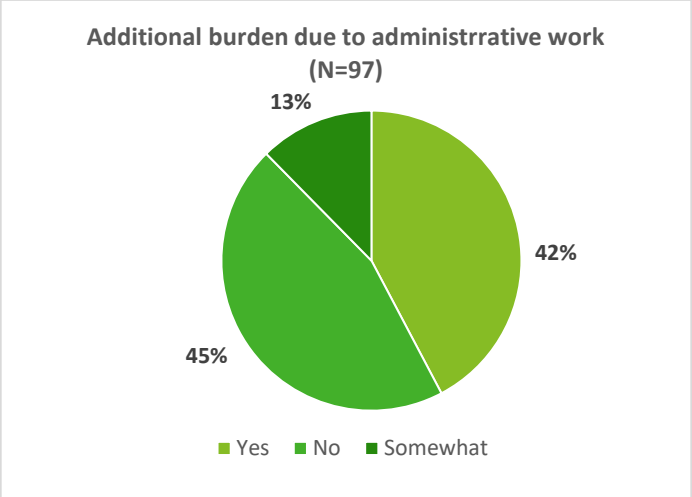
- The survey conducted with CHWs reveals diverse perspectives on the program's renumeration and incentive structure. While 36% of CHWs reported satisfaction, indicating that certain aspects of the incentives align with their expectations, 41% expressed dissatisfaction, often pointing to delays in receiving incentives and the inadequacy of the amount to cover unforeseen expenses. For instance, CHWs mentioned incurring mobile phone expenses while following up with patients—costs not accounted for under the program. Another 23% were uncertain, possibly reflecting ambivalence or a lack of clarity about the structure. On the contrary, many CHWs acknowledged their role as volunteers and social workers, recognizing that the program's financial support is not intended to fully compensate for their time or effort, rather assist in sustaining their engagement. This balance between social commitment and financial support highlights the need for re-strategising the incentive model with an awareness component to ensure greater buy-in for the incentive model E.g. peer awareness amongst community health workers

- The mixed perspectives amongst CHWs suggests that there is scope to further streamline the current renumeration system with their buy-in to ensure future sustainability. Key factors contributing to this sentiment include perceived inadequacy of monetary incentives relative to the workload and responsibilities and inconsistencies, and delays in receiving benefits. Many CHWs highlighted that the existing renumeration does not adequately compensate for their efforts, particularly given the time-intensive nature of their roles. They emphasized the need for higher per-case incentives, allowances for phone expenses, and introduction of bonuses to better align with their workload and operational challenges.
- This feedback underscores the need for a revised incentive structure to boost morale and enhance the long-term sustainability of the program. The team could also consider increasing the frequency of incentive disbursement to keep the CHWs more informed and motivated about the rewards received



Change in administrative burden for CHWs

- Around 42% of CHWs reported that the intervention added significant administrative burdens, including tasks such as 24/7 availability, extensive documentation, data collation, reporting, and program-specific coordination. This often required them to leave personal work unattended and posed challenges, particularly for those with limited literacy.



Geographical and Transportation Barriers to Healthcare Access

- The geographical remoteness of Dhading and Solu compared to Bharatpur significantly affects access to eye care services. In Bharatpur, the proximity to the base hospital ensures quicker access to treatment, while in Dhading and Solukhumbu, the lack of transportation options and fixed bus schedules creates barriers
- In Solukhumbu, where private vehicle relatively uncommon, the travel time to healthcare facilities can take up to 6-7 hours, which can discourage timely treatment. Moreover, public transportation is limited and the fixed bus timings at 8am in the morning and 5-6pm in evening often forces patients to miss an entire day's work to travel to the hospital, further dissuading treatment. These logistical challenges highlight the need for more accessible transportation options and better infrastructure to ensure equitable access to healthcare across all regions

Measuring SROI

6 Measuring SROI

Social Return on Investment (SROI is a framework used to measure and evaluate the broader social, environmental, and economic value created by an organization, project, or initiative. It goes beyond traditional financial metrics to capture the impact on communities and stakeholders. The SROI process involves identifying the outcomes that matter most to stakeholders, assigning a monetary value to these outcomes, and comparing the value of these benefits to the investment made. This provides a ratio that illustrates the value generated for every unit of currency spent.

Conducting a Social Return on Investment (SROI analysis for the program is critical to understanding and articulating the value it delivers to individuals, communities, and society. This approach is particularly relevant for healthcare-related initiatives, where the outcomes extend beyond financial savings to include profound social and quality-of-life improvements.

6.1 Key Reasons to Conduct SROI

- Demonstrating Tangible Impact: Corneal abrasions, if untreated, can lead to significant discomfort, vision impairment, or even blindness. SROI quantifies how timely interventions, such as access to treatment or awareness campaigns, translate into enhanced quality of life, improved productivity, and reduced healthcare costs.
- Highlighting Broader Benefits: Beyond direct medical benefits, the project may lead to outcomes like increased employment opportunities (as individuals regain the ability to work), improved mental health, and strengthened social inclusion. SROI helps capture these indirect yet critical impacts.
- Optimizing Resource Allocation: By identifying which activities yield the highest social value, SROI guides project leaders in refining interventions and allocating resources effectively to maximize impact.
- Building Stakeholder Confidence For funders, partners, and beneficiaries, SROI offers transparency by showing how investments translate into measurable value. This can strengthen trust, secure funding, and foster long-term collaboration.
- Advancing Advocacy and Awareness: SROI provides compelling evidence to advocate for continued or expanded support. The results can also raise public and policy awareness of the significance of corneal abrasion issues and the need for preventive and curative measures.
- Encouraging Sustainability: Demonstrating strong returns on investment can justify the continuation or scaling of the project, ensuring its sustainability and long-term impact.

By conducting an SROI analysis, the program not only proves its effectiveness but also reinforces its commitment to creating meaningful, measurable change in the lives of those it serves.

6.2 Framework development

- The SROI analysis contained five stages based on the guidelines and principles developed by Social Value UK.[16]: (1) identifying stakeholders and value drivers, (2) calculating inputs and outputs, (3) calculating crude social returns on investment, (4) incorporating counterfactuals – deadweight, attribution, displacement, and drop-off, (5) calculating the net present value (NPV) and SROI.
- A developed and executed mixed-methods study was constructed for an evaluative SROI analysis with a 6-year time horizon (FY2019-2024) on the economic benefits of a CHW corneal Injury-related intervention. This study was conducted

[16] Standards and Guidance - Social Value UK

according to the Consolidated Health Economic Evaluation Reporting Standards (CHEERS statement.[17]

6.3 Estimation

- Value drivers are defined as sources of value creation or destruction. Net Present Value (NPV) is the current discounted value of future cash flows after subtracting investments.
- A Discounted Cash Flow (DCF) model was used to calculate the NPV of the monetary benefits and costs over a 6-year time horizon to measure the impact of morbidity avoidance and productivity loss appropriately. Thus, even though several value drivers would generate impact beyond the evaluation horizon, this impact was truncated after a 6-year projection to avoid overestimating the impact.
- The discount rate to estimate the NPV was 6.5% based on Nepal's reported inflation rate. A sensitivity analysis tested the effect of a discount rate ranging from 0 to 10% on NPV and SROI.[18]

6.3.1 Impact created

- The total impact was $1,162,097. A large portion of the value $1,162,097 was among treated individuals, driven by the avoidance of complications due to prompt first response by the CHWs to the almost 17,236 cases of all 3 sites over 6 years.
- The prompt response led to lower complications; thus, nearly 40% of cases incurred lower direct (treatment) and indirect costs (avoided loss of income, personal travel and time, and the cost and time of an accompanying caregiver) by avoiding complications.

6.3.2 Costs incurred

- The total cost of the program includes both direct and indirect expenses. The total cost consists of the programmatic investment (including the training), the costs incurred by the CHWs, renumeration paid to program staff, medical supply costs, and the ancillary costs (small amounts paid as fees, travel costs, and time). However, for the purpose of this analysis, the costs related to program staff renumeration, medical supplies, and miscellaneous expenses in Bharatpur are also factored into the total cost calculation.
- Loss of wage to seek CHW help, and rest period is also considered. The average duration for which any patient had to miss their work is 1.84 days (as per data from the field). Further, average daily wage in Nepal has been taken as $3.34.[19]
- We did not find evidence of any other significant cost data from the field.

6.3.3. Counterfactuals

a. Dead weight

- There is little evidence of an effective intervention to corneal injury/ocular injury in a large-scale public health intervention run by the government or community-level health program by other non-government organizations. Absence of a given corneal injury prevention program was observed, most people would have relied on government facilities ineffectively or would have gone to the private sector.
- Our data suggests that nearly 74% of people reported having gone to these care options without our intervention; the remaining might have foregone the care. However, the data further suggests that the impact would have been grossly missing in either of these care options because there is a significant delay in seeking effective care in government

[17] Husereau D, Drummond M, Petrou S, Carswell C, Moher D, Greenberg D et al. Consolidated health economic evaluation reporting standards (CHEERS)-explanation and elaboration: A report of the ISPOR health economic evaluation publication guidelines good reporting practices task force. Value Heal [Internet]. 2013;16(2):1–6. DOI: 10.1016/j.jval.2013.02.010.

[18] 0.Inflation_Report_2079_80_FINAL.pdf

[19] https://www.lawimperial.com/nepal-government-increases-minimum-wage-for-workers/

hospitals, and the cost is highly prohibitive in the private sector. So, the upper side estimate of people who would have received care without our intervention would not be more than 23.68%. We take this as the dead weight.

b. Displacement

- No evidence of displacement. This is mainly because the intervention provided significant new resources available to the community that were not available previously.
- The most critical impact of the utilization was capacity building of the CHWs and the community members because that is where there was no effort or resources invested. The intervention was novel in the pure sense. Hence, we found no displacement.

c. Attribution

- Based on reported data and reference to secondary data, more than 94% of outcomes can be attributed to the intervention alone
- The remaining 6% comes from chance alone (e.g., self-healing with or without complications or other chance interventions)

d. Drop-off

- Two scenarios were built to calculate the drop-off, seeing that the availability of fluorescent strips and antibiotics will be the primary constraint to continuing the care by CHWs
- So, in the absence of the intervention, continuing with the availability of the supplies is complex, and we believe there is a significant drop-off. However, no drop-off was reported in the project horizon period of six years, 2019-April 2024

6.3.4 SROI calculation

- Net Impact is calculated after adjusting the total abrasion cases for the deadweight (23.68%) and attribution (6%)
- Out of these, nearly 40% of cases would have become complicated in the absence of the community health workers CHWs (because, of hilly terrain and poor connectivity, early access was a problem with more than 70% respondents in the primary data, so we picked up the reference value of 40% from the research studies). That is a total of ~4,966 cases.[20] [21] Due to the intervention roughly 65% of these 4,966 cases will avoid reaching a stage where a corneal surgery is required[22]. The 65% of 4,996 adjusted for each year of the intervention is 3,226.
- Only half of these would have qualified for a corneal transplant. The official figures are 65%, mainly for the high-income urban population. The direct cost of corneal transplant surgery is significantly low in a government-funded healthcare program. The total cost per surgery is nearly $96 in a charitable hospital, which is primarily direct and there are indirect costs as well (for example one day vehicle cost is $37 as reported from the primary data). In the private sector, the corneal transplant direct and indirect costs are anywhere between $435 (average cost being $396) societal cost (direct cost + indirect cost).[23] Assuming that 50% of 3,226 cases will undergo surgery in the private sector and the remaining 50% in the public sector. The total direct and indirect cost of corneal transplant surgeries alone would have been -

3,266 * $360 = $1,162,097 (adjusted for each year)

After applying inflation-adjusted discount rate (6.5%) = $960,651

[20] https://nepjol.info/index.php/JMCJMS/article/view/60555
[21] https://www.sciencedirect.com/science/article/pii/S2214109X21005969
[22] Demography, Clinical Features and Outcome of Bacterial Keratitis Presenting in Tertiary Eye Care in Nepal (Leena Bajracharya, Asta Ram bade, Reeta Gurung)
[23] https://www.thelancet.com/pdfs/journals/lansea/PIIS2772-3682(22)00048-8.pdf#page=6.75

- From primary data, the cost avoided to treat and travel in case of an eye ailment considering 76.36% and 52.42% occurrence rate respectively from the primary data and average cost of treatment as $32.52 and average cost of travel as $4.6. Post discounting at 6.55 over the period of the project the total cost avoided stands at $388,291.

- Further considering the opportunity cost saved due to time saved in treatment and recovery considering 3 days of wage loss for the person accompanying the patient and 6 days of wage loss for the patient. Further, from the primary data it was observed that 82% of patients were earning members and for the person accompanying the patient we have considered only earning members. The opportunity cost post discount rate adjustment at 6.5% stands at $70,673.

- After applying discount rate on investment, Net Discounted Cost is $176,514. Hence, the net value of SROI is -

Net Impact Value = $960,651 + $388,291 + $70,673 - $176,514 - $106,052 = $678,085

SROI Ratio

($960,651 + $388,291 + $70,673)/ ($176,514 + $106,052) = 5.02

- The scenario denotes a ratio of 1:5 by calculating the NPV of benefits to the NPV of the investment.
- Further, every $1 invested has brought a return of $ 5.02 for 6 years.
- The SROI values taken consider only the direct and indirect costs avoided due to the prompt treatment and avoidance of complications, the cost avoided to access the treatment in case intervention was absent and opportunity cost of the wage earning for the patient and the person accompanying.
- Non-financial impacts were not converted, such as the value of awareness generation, productivity gains, school days gains, etc., because the effect goes well beyond six years, and Social Value UK principles advise not to consider these gains. Nonetheless, the SROI values showcases a favourable outcome.

The Annexure contains a detailed estimation sheet.

6.4 Limitations of the study

- Monetisation of the two non-financial benefits: 1) capacity building of the CHWs – skill building and 2) Increased awareness level of the community could not be included due to no tangible equivalent financial proxy.
- Additional benefits of eye health interventions such as health system savings and household savings, forgone employment of the caregivers and the patient, or benefits to social participation and continued opportunities to education for children for those who receive eye health interventions may experience could not be a part of the study

7 Case studies

7.1 Rudraprasad Sharma – Senior Assistant Healthcare Worker

Rudraprasad Sharma at Health check post

Rudraprasad Sharma is a Senior Assistant Healthcare Worker with over 36 years of experience in the healthcare service field. He works under the United Mission Nepal government project, where he has developed proficiency in general medicine and plays a pivotal role in serving the local community. His career in healthcare began more than three decades ago. Rudraprasad is known to continually build his expertise through hands-on experience and ongoing training.

Alongside this long-standing association with the program, he focuses on softer elements of care through a social worker's temperament. Furthermore, he has been actively involved in community mobilization efforts alongside government community healthcare workers, including overseeing the operations of one of the Health Posts at Kumroj in Bharatpur.

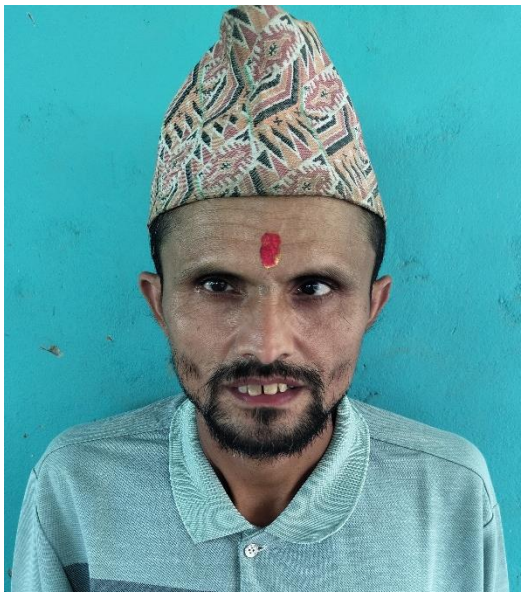
Throughout his career, he has focused on general medicine, contributing significantly to the health and well-being of the people in the area. He plays the role of a key stakeholder in the Blindness Prevention program as his responsibilities involve not only treating patients but also offering guidance to the local community on preventive care and healthy practices for ocular injuries amongst others.

The collaboration between CBP's Blindness Prevention Program and Mr. Rudraprasad has been crucial in bringing healthcare services to rural populations, especially for those who otherwise have limited access. Due to the long-standing unfamiliarity mindset or mistrust in visiting healthcare centers, usually associated with low awareness, community members preferred traditional methods. Rudraprasad's efforts through consistent outreach, education and by building strong relationships with the residents helped in overcoming this hesitation. His support to the CHWs and the program staff has enabled rapid outreach enhancement in the region. His efforts alongside awareness created by trained CHWs led to greater confidence in the centers, resulting in an increase in patient footfall including referrals.

Owing to his years of experience, Rudraprasad has taken on a mentorship role, helping CBP to train local community health workers, and to support the work of the health care center staff. This strong stakeholder collaboration has empowered local healthcare workers to better serve the community and manage the increasing number of issues, especially those related to eye care, which remains a prevalent concern. It has paved the way to an exemplary model of eye care that is more likely to sustain for a long period of time. The improvements in healthcare delivery such as more accessible services, preventive care practices, and a stronger network of local community mobilization, have resulted in improved health outcomes for local residents.

7.2 Prem Bahadur Shreshta – A corneal abrasion patient

Prem Bahadur Shrestha, a hardworking farmer, resides in Bharatpur, Chitwan. Since childhood, he faced immense difficulties due to his weak eyesight. With only 40% vision in his left eye and 5% in his right, Prem struggled to manage his daily farming activities. To add to this vision struggles amongst others, a blade of grass pierced his eye while working on his farm. This led to a painful cut in his eye, further impairing his low vision.



Prem Bahadur Shreshta, a corneal abrasion patient, Bharatpur

Despite his cheerful personality and unwavering determination, Prem knew he needed help. Fortunately, he encountered a CHW during one of their community outreach meetings and was aware that she was the point of contact in case of any eye-related ailments. On visiting the community health worker, a key part of the Blindness Prevention Program, she performed preliminary screening and accurately identified the injury as a case of corneal abrasion. She immediately administered medication to alleviate his pain and prevent further complications.

Furthermore, owing to her screening capabilities as a result of comprehensive CBP trainings, she acknowledged the need for specialized care for his existing vision issues and referred him to the Bharatpur Eye Hospital. At the hospital, Prem underwent treatment, addressing both the injury and his chronic vision problems.

The Blindness Prevention Program not only helped Prem receive timely treatment for corneal abrasion, but also aided in improving his overall eyesight, enabling him to resume his farming activities with confidence. Prem also received vital education on preventative eye care and protective measures to avoid future injuries while working in the fields.
By removing barriers to timely and affordable eye care, the program restored not only his vision but also his ability to sustain his livelihood, given the seasonality and income generation associated with farming. Today, Prem actively advocates for eye health within his community, sharing his experience and encouraging others to seek early intervention.

“I am deeply grateful to the CBP team and the community health workers for their support,” Prem reflects. “They did not just treat my injury—they gave me my life back.”

Prem’s story underscores the critical role of community health interventions in improving access to eye care for vulnerable communities for whom accessibility and affordability are a major challenge. It testifies how timely screening, treatment, and referrals can transform lives, restoring hope and productivity for individuals like Prem.

7.3 Bhawana Rai – Field Supervisor at TIO

Bhawana Rai has been working as a field supervisor with Tilganga Institute of Ophthalmology since 2019. She has completed her Bachelor's in Social Work followed by a course in Community Medicine. Bhawana has been actively overlooking the field outreach in Solukhumbu region. She also spoke highly of her extrememly supportive husband, who left his job as a teacher to support with household chores, enabling Bhawana to continue her job responsibilities.

Her work includes operationalizing activities on ground including regular field visits, checking medical supplies availablity with each CHW, and providing them handholding support from time to time. Given that most of the CHWs in Solukhumbu are not highly educated, Bhawana also supports them in maintenance of logbooks. Further, she has been supporting the vision centre by working on the counter to provide medicine.

Her association with the program since inception enables her to recall her journey and growth alongside the evolution of the Blindness Prevention program. She witnessed the trasnformation of a small scale program model into a comprehensive eye care initiative. Through the years and association with the program, Bhawana feels that she has become more self-confident. She associates this level of empowerment with the women-led outreach and awareness created in the community as a part of the program, especially via the medium of CHWs.

Bhawana feels that the geography of the region is one of the major limiting factors for the community to access quality eye care. It also distances them from any awareness outreach around seeking timely treatment to prevent blindness. In the past, there were instances where she was unable to reach certain locations and provide medical supplies timely due to accessibility issues during monsoon. The program and its evolving model enabled her to mitigate some of these challenges. She is thankful for the impact it contributed and continues to contribute to, on improving the quality of life of people of Solukhumbu.

Bhawana Rai, Field Supervisor (fourth from left)

Recommendations and Way Forward

8 Recommendations and Way Forward

Aspect/s	Scope/Observations Identified	Recommendations
Data integration/digitization	• While referral process works efficiently, the data maintenance of the patient journey at each level needs further improvement • Furthermore, there is scope for improvement in the integrated record keeping for tracking the patient's journey from primary to tertiary care setup	• To create data capturing system (preferably digital) that records patient journey including the dropouts from the referral chain
High dependency on field supervisors	• The smooth implementation of the program continues to remain strongly dependent on the field supervisors, and timely distribution of eyecare kit essentials • In Solukhumbu region, a single field supervisor has to cover a large area of difficult terrain to ensure regular data collection and efficient distribution of eyecare kit essentials	• There is scope to add an additional field supervisor in the Solukhumbu region since there is potential for increased coverage and geographical expansion
CHW awareness and community outreach	• Lack of awareness of monetary compensation among community health workers • Alignment of expectations around frequency of capacity building sessions- community health workers expressed the need for more frequent trainings • Renumeration per abrasion case perceived to be low by CHWs	• Awareness programs among the community to be continued to ensure increased footfall of patients • Scope for clearer demarcation and SOPs of disease-wise referrals through CHWs, to understand the comprehensive outcomes of the Blindness Prevention Program ie. Blindness prevention • CBP team to align consider re-strategising the community health worker incentive model, for increased chances of sustainable implementation Eg. Peer community health worker awareness programs few led by motivated community health workers themselves, biannual incentivisation
Sustainability and scalability	• While Nepal has multiple programs that cater to eyecare through- introduction of eye health into essential health services, establishing insurance systems and integration of primary eye care- a focused program on first level response at ground level needs further enhancement	• Cure Blindness has built a data repository over the years in conjunction with data from other stakeholders such as Tilganga Institute of Ophthalmology. This repository could be leveraged to influence policy circles at a national level

Evidence based investing	• SROI study conducted can be utilized to inform and showcase the impact interested investors	• The current program can be used as a model to replicate by other organisations • The white paper that is to be published based on the impact assessment and SROI findings could be leveraged to showcase this impact • Similar studies can be conducted by the Cure Blindness team to inform and showcase the impact to interested investors as a part of strategy to scale

9 Annexure

9.1 Estimation sheet

Particulars	Denoted value	Rationale	Data source
NPR to USD conversion rate	$0.008	Average conversion rate for 6 years	https://www.nrb.org.np/contents/uploads/2022/07/Exchange-rates.xlsx
Costs of corneal surgeries avoided in private sector	$360	Nepal has a better eye bank system due to religious support for organ donation from cadavers. Pasupathi temple has a large eye bank. So, corneal graft availability is better than India. Assumed that surgeries conducted are 50% in private and 50% in public	https://www.thelancet.com/pdfs/journals/lansea/PIIS2772-3682(22)00048-8.pdf#page=6.75
Daily wage earned in Nepal	$3.34	Wage earned per day	https://www.lawimperial.com/nepal-government-increases-minimum-wage-for-workers/
Discount rate	6.5%	Average inflation rate for 6 years	A Global Database of Inflation
Workdays missed	1.84	Average derived for an abrasion case who is an earning member in a household	Primary

9.2 Pictures from the field

FGD with patients around traditional eyecare practices, Dhading

Patient survey being conducted at Solukhumbu

Deloitte team surveying patients in Dhading

CHW FGD interaction in Dhading

Deloitte team conducting patient survey in Dhading

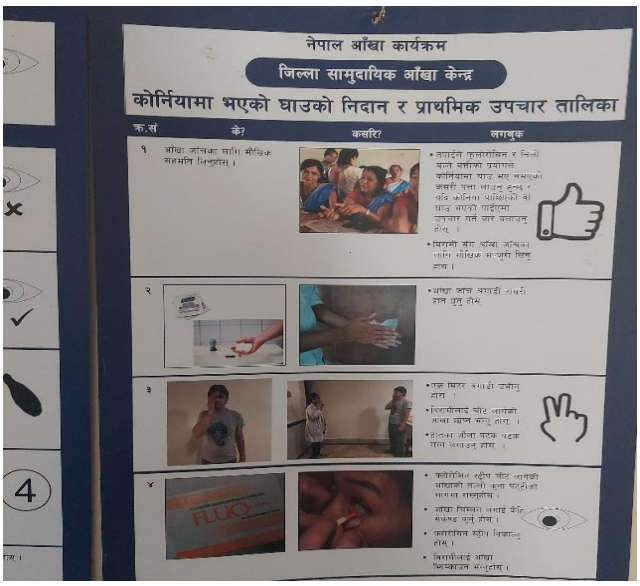
Deloitte team verifying logbook and referral book in Dhading

Deloitte team conducting CHW survey in Dhading

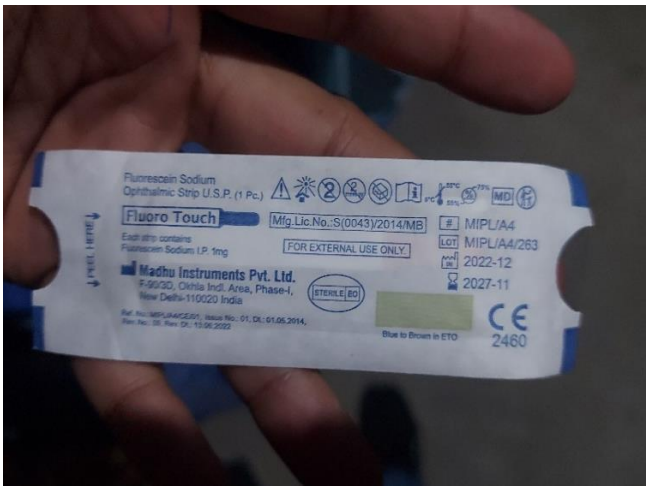
Deloitte team conducting CHW survey in Bharatpur

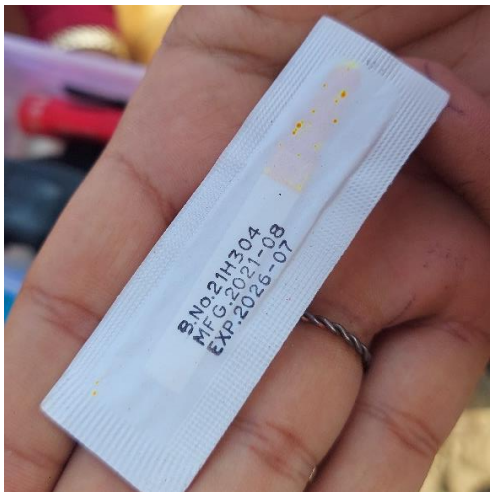
Deloitte team with CHWs and field supervisors in Bharatpur

Deloitte team conducting patient interaction in Solukhumbu



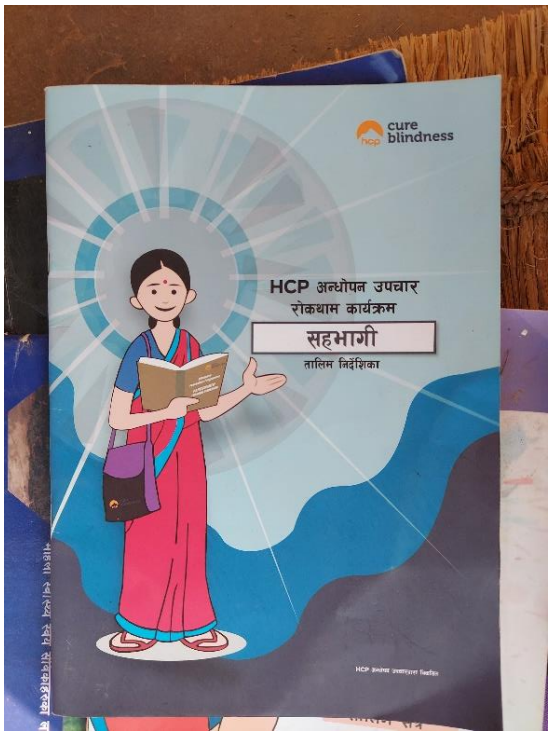
Flex displaying screening process followed by a CHW





Chloramphenicol ointments and fluorescein sodium strips distributed to the CHWs under the program

Eyecare kits distributed to the CHWs under the Blindness Prevention Program



Training material distributed among CHWs

CHW refresher training at Dhading of CBP in partnership with TIO

Deloitte team with the Bharatpur Eye Hospital Management, Bharatpur

Deloitte.

"Earlier, many people in our village ignored eye problems because they did not understand how quickly a small issue could become serious. After receiving the training on comprehensive eye care, I started visiting households in my village to share what I learned and encourage families to seek eye care on time.

Our community lives far from health facilities and transportation is difficult, but being able to guide people at the community level, prevent avoidable blindness, and help them protect their eyesight **makes me feel truly proud of the role I play.**"

Lal Maya Somai
Community Health Volunteer
Nepal

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