

Short Communication

Eyesight to insight: evidence from urban eye health programme

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ABSTRACT

India, with a population exceeding 1.486 billion, faces substantial challenges in urban eye health, particularly in densely populated states like Uttar Pradesh. This study delves into real-world impact of urban eye health programme, implemented in Kanpur and Prayagraj, Uttar Pradesh, aiming to identify success factors and examine the tangible effects of interventions through comprehensive endline study. Utilizing a hub-and-spoke model, the programme established base hospitals as hubs and vision centres as spokes, creating a network for affordable and accessible eye care. The project significantly improved accessibility, with over 85% in Kanpur and 97% in Prayagraj reporting easy access to vision centres. A shift in community behaviour was observed, with a preference for vision centres for eye examinations increasing from 5.6-64.6% in Kanpur and 10.6-57.1% in Prayagraj. The programme empowered women to prioritize their eye health, reaching 53% of women for eye screening. Community perception shifted positively, with over 82% in Prayagraj recognizing the programme's pivotal role. In Kanpur, 87.5% of women actively take charge of their eye health decisions, while 99.1% do so in Prayagraj. This empowerment underscores programme commitment to providing equal access to eye care and demonstrates a strong focus on inclusivity and gender equality.

Keywords: Urban eye health, Women empowerment, Gender equality, Affordable eye care

INTRODUCTION

India's population stands at a staggering 1.486 billion solidifying its position as the world's most populous nation.^{1,2} Among states, Uttar Pradesh (UP) distinguishes itself as the most densely populated state in India, with over 235.6 million residents.³ India's population is rapidly urbanising, with around 36% residing in urban areas.⁴ This urban shift brings significant challenges to eye health. National urban health mission (NUHM) is actively tackling these challenges through a programme bolstering urban public health services. Sightsavers India's urban eye health strategy aligns seamlessly with NUHM's objectives. We collaborate closely with the ministry of health to ensure equitable access to high-quality eye care, particularly for underprivileged urban residents, especially those in marginalised slums. To

improve accessibility, affordability, and availability of eye care services, Sightsavers India implemented the Amrita Drishti urban eye health programme in Kanpur and Prayagraj cities, with the support of standard chartered bank's 'seeing is believing' programme for the period of three years from 2020 to 2023.⁵

This article highlights achievements in addressing acknowledged challenges and obstacles, establishing accessible, cost-effective and enduring high-standard eye care services and ensuring everyone receives the essential treatment and assistance for their eye health needs.

Objectives

The objective is to assess real-world impact, identify success factors, and thoroughly scrutinize and illuminate

the tangible effects of implemented interventions on both the field and community perspectives, employing a comprehensive endline study.

AMRITA DRISHTI URBAN EYE HEALTH PROGRAM INTERVENTIONS

Through 'Amrita Drishti urban eye health programme, we intended to not only address immediate eye health needs of urban slum populations but also laid foundation for sustainable eye care solutions that prioritise accessibility and affordability for all. This initiative presented significant step towards future where preventable blindness becomes rarity in these communities.⁶

HUB AND SPOKE MODEL

The programme adopted a hub-and-spoke model, strategically setting up base hospitals (secondary/tertiary hospitals) as Hubs and complementing them with vision centres as spokes. By interconnecting these hubs and spokes, a seamless network was created for delivering affordable and accessible comprehensive eye care services. This initiative has proven pivotal to reducing the burdens placed on patients who previously had to endure long journeys to metropolitan areas for specialized eye care. By providing easier access to eye care facilities, the programme ensured early detection of vision problems and the timely initiation of treatments, ultimately preventing vision deterioration and blindness.

Ten static vision centres were established with all necessary equipment to offer high-quality primary eye care services. Additionally, regular outreach eye screening camps were organized to reach even the most remote communities. The patients who required advanced examination and treatment were referred from vision centres/camps to base or district government hospitals.

EMPOWERING THROUGH AWARENESS

To raise awareness and educate the residents of the slums about importance of regular and timely eye care, various activities were conducted. These included one-on-one awareness campaigns during field visits, health talks, miking, and murals. Anganwadi workers (AWW), accredited social health activist (U-ASHA workers), and mahila arogya samiti (MAS Members) of urban areas were also sensitised on eye health to empower them and form a robust referral network for long-term viability of eye care facilities.

DOOR TO DOOR SCREENING DURING COVID PANDEMIC

Throughout the implementation period of three years, there were three waves of COVID. The first and second waves of the pandemic had a significant impact on project activities. Implementation plans then had to be adapted because of the COVID-19 pandemic, considering the

public health restrictions imposed by the government and the need to develop ways to deliver the project safely in the changed circumstances. During this challenging period, the committed teams undertook door-to-door screenings to engage with the community, raise awareness about eye care and did vision testing at doorsteps, all while adhering to government directives. Suspected individuals were referred to vision centres for comprehensive examinations and appropriate treatment.



Figure 1: An outreach camp.

INTERVENTION TO TRANSFORMATION

To assess the transformation of community behaviour and the effectiveness a baseline and an endline survey was conducted before and after the project in Kanpur and Prayag raj-the findings of the endline survey show project success in these urban locations.

In the baseline survey, quantitative data was gathered from a sample of 420 slum dwellers and qualitative data from 26 stakeholders. However, 485 beneficiaries were interviewed in endline for quantitative and 46 stakeholders for qualitative survey.

The introduction of vision centres (VCs) in the communities of the beneficiaries has brought about a remarkable change in the field of eye care. These VCs have emerged as a vital gateway to accessible eye care services, bridging the gap between those in need and the care they require. This shift aims to facilitate early identification and intervention while promoting a proactive approach to managing eye health. The following graph shows VCs' pivotal role in reshaping eye care providers' preferences.

The remarkable progress was observed in the availability and accessibility of primary eye care services to the beneficiaries over three years. The results unveiled a promising transformation in how eye care services are

provided, underscoring a dedicated effort to enhance the eye health of the slum communities in Kanpur and Prayagraj. Over 85% of residents in Kanpur and 97% in Prayagraj reported that Amrita Drishti vision centres were easily accessible as they were conveniently situated within a mere 3-kilometre radius.

During the baseline, out of total only 5.60% respondent in Kanpur and 10.6% in Prayagraj opted vision centre for eye examination. While in endline, the preference for eye examination was shifted towards vision centres. Out of total respondent, 64.6% in Kanpur and 57.1% in Prayagraj preferred vision centres for their eye examination.

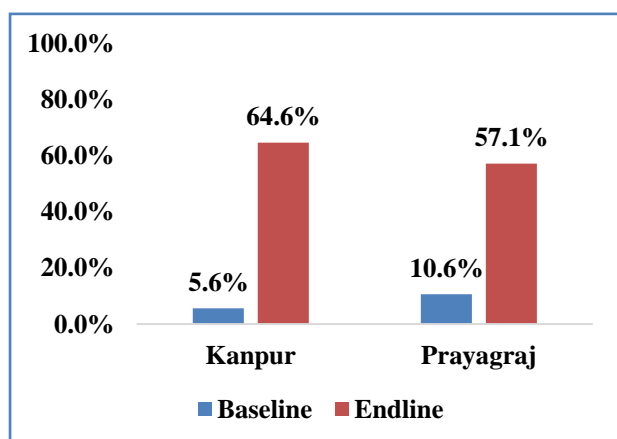


Figure 2: Number of people opting vision centres for eye examinations.

Furthermore, the initiative brought a 10-15% increase in acceptance to cataract services. This upsurge can also be attributed to the programme's commitment to providing affordable care at hub hospitals. It signifies the financial relief for beneficiaries' direct cost such as surgery (subsidized and free) and indirect cost such as transportation, spectacle cost, accommodation, and the programme's dedication to addressing the full spectrum of eye health needs.

The programme's commitment to enhancing eye health is evident in the remarkable results achieved. The programme has made significant progress in community outreach, with 74.7% of beneficiaries in Kanpur and 91% in Prayagraj aware of the eye health programme being implemented under the Amrita Drishti programme.

Apart from individual changes, the programme has triggered a broader shift in community perception. It has initiated a change in how the community perceives eye care. There has been a notable shift in people's perception of the importance of regular eye check-ups, even if their vision appears satisfactory. During the endline, 85% of males and 72% of females responded in affirmative, stating that regular eye check-ups are necessary, even if their vision is good. This represents a significant increase of awareness levels from the baseline, where only 32% of

males and 38% of females had agreed to the importance of regular eye check-ups despite having good vision.

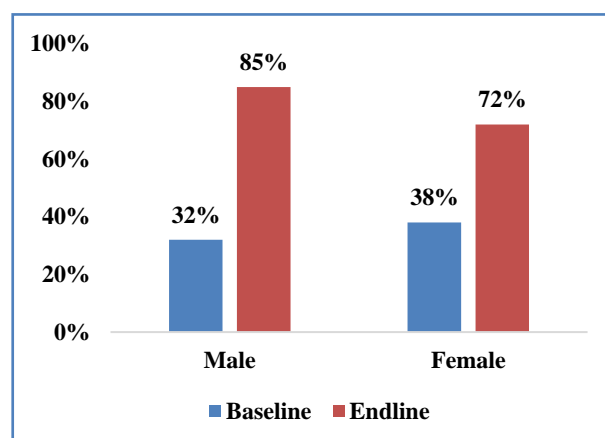


Figure 3: Awareness of regular eye check-ups (in percentage).

Furthermore, the programme is seen as a reliable and trustworthy source of eye care today, with 52.9% of beneficiaries in Kanpur and an impressive 82.0% in Prayagraj, recognising its pivotal role in meeting their eye care needs. This significant transformation in the community's belief system reflects a substantial increase in awareness compared to the project onset.

The project has also successfully motivated women to prioritise their eye health. A significant impact has been made by awareness campaigns and the involvement of women community leaders, beneficiaries, and frontline health workers, enabling 53% of women (out of a total project screening of 119,483 people) to be reached for participation in eye screening. These interventions have also empowered women, often the family's primary caregivers, to actively make decisions regarding their own and their family's eye care and overall health. In Kanpur, 87.5% of women actively take charge of their eye health decisions, while 99.1% do so in Prayagraj. The commitment to providing equal access to eye care is underscored by this empowerment, demonstrating a strong focus on inclusivity and gender equality.

Nevertheless, there remain certain areas that demand further attention and concerted efforts. Among 485 people interviewed, 387 respondents were prescribed glasses at the VCs. Remarkably, 368 purchased the glasses. This represents a 10% increase in purchase of prescribed spectacles compared to the baseline data.

It's noteworthy that the primary reason for abstaining from purchasing the prescribed glasses was the perception that the need was not critical, closely followed by financial constraints.

An intriguing revelation emerged from the survey, indicating that 32.6% of respondents who did purchase spectacles were not using them regularly. The prevailing

belief among this group was that glasses were only necessary during work-related activities. Moreover, 23% cited a lack of clarity or belief in the necessity of consistent use, while 19% attributed irregular usage to difficulties in adjusting to the glasses.

Addressing these challenges in the practice of wearing spectacles requires sustained efforts through regular behaviour change interventions. Bringing about a positive shift in people's habits concerning the use of eyeglasses is crucial for promoting eye health and ensuring that prescribed eyewear is utilized effectively.



Figure 4: A brigade of female beneficiaries.

PROGRAMME SUCCESS

The urban eye health programme of Sightsavers India in Kanpur and Prayagraj has achieved remarkable success, screening 119483 individuals for various eye ailments. Within this extensive outreach, the initial goal was not only met but also exceeded.

Out of this, 100860 individuals underwent refraction to determine their prescription needs, with 31229 receiving spectacles for improved visual clarity and quality of life.

One of the most critical achievements of the programme was to encourage 3850 individuals identified with cataracts to undergo cataract surgery at the base hospital, ensuring they could regain their vision and lead more fulfilling lives. Diabetic retinopathy is increasingly becoming a prominent concern in eye care.

To curb its incidence, a comprehensive diabetic retinopathy screening service was initiated through the programme for diabetic patients. Through this initiative, 2413 diabetic individuals were screened for diabetic retinopathy and referred to a secondary/tertiary hospital for further examination and treatment, if required.

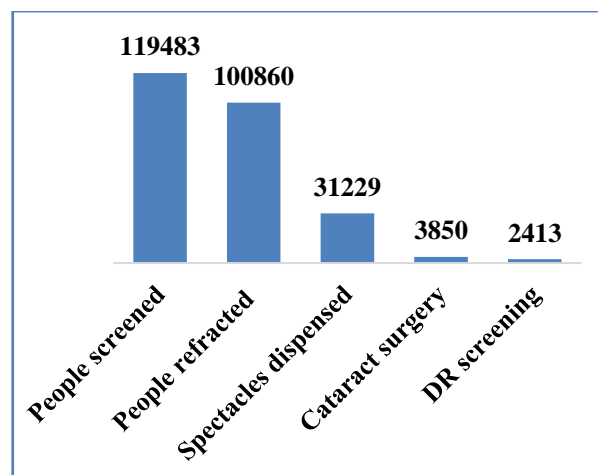


Figure 5: Accomplishment in meeting key performance indicators.

Rajpati, an 82-year-old widow, lives in Prayagraj, Uttar Pradesh. She has experienced both physical and emotional pain. She lost her son a few years ago, and as she aged, her eyesight gradually became blurry, making her a burden to her daughter-in-law. She was asked to leave her home one day. She was left homeless until her nephew found her and took her home. The blurry vision was significantly impacting her daily activities. Because of the expensive eye treatment, her nephew was ignoring the issue. An ASHA worker, during the community visit, met Rajpati. It came to her notice that Rajpati had difficulty in seeing. She informed the family about their neighbourhood's affordable eye care facility and referred the patient to the vision centre.

Rajpati went to the centre with her nephew. She was examined by the optometrist and diagnosed with a mature cataract in her right eye and no visual prognosis due to some advanced eye disorder in her left eye. She was counselled for cataract surgery and was informed about the free surgery facility. Rajpati was referred to the base hospital, where she had operated on her right eye. She was discharged from the hospital after two days without any post-operative complications. She visited the vision centre for post-operative follow-ups and received a free spectacle. Rajpati expressed happiness at regaining vision in her eyes and praised the staff. She was observed performing household work during a community health worker follow-up visit.

CONCLUSION

In conclusion, the Uttar Pradesh urban eye health programme has brought about a profound transformation in the lives of its recipients. It has not only raised awareness and enhanced accessibility but has also empowered individuals to make informed decisions and fostered a positive community perception regarding eye care. As advancement occurs, it remains crucial to sustain programme commitments to initiatives that prioritise community well-being, thus reinforcing the notion that

collaborative efforts can indeed achieve meaningful and positive change.

Recommendations

The concluding survey highlighted the success of program interventions in raising awareness and delivering affordable and accessible eye care services. Nevertheless, it pinpointed specific areas that require further attention in upcoming programs:

Foremost among these is the requirement to improve the accessibility of VCs, particularly in regions across both districts where slums have expanded beyond the current reach of these primary facilities. Addressing this gap will be pivotal in extending the benefits of eye care services to marginalized communities, ensuring that the reach of VCs aligns with the evolving demographics of these districts.

It is imperative to establish an incentive mechanism that motivates and sustains the engagement of frontline health workers in the project over the long term. These frontline workers play a pivotal role in the community, shouldering diverse responsibilities within a broad health portfolio. Recognizing the substantial demands placed on them, implementing an incentive structure becomes important to ensure their continued dedication to the project. This not only acknowledges the invaluable contributions of these health workers but also fosters a lasting commitment that aligns with the comprehensive eye health initiatives they undertake at the community level.

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Conflict of interest: None declared

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