India Fact Sheet
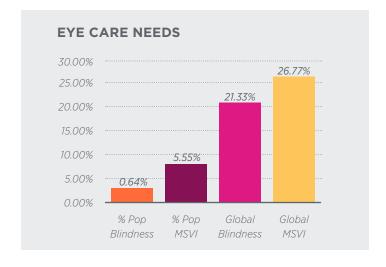
seva.org
TRANSFORMING LIVES
BY RESTORING SIGHT

Country Overview

» Shares borders with six countries: China, Bangladesh, Burma, Nepal, Bhutan and Pakistan

» India spans 1.9 million square miles

» Population: 1.4 billion, worlds most populous nation as of 2023

» 2021-22 Human Development Index Ranking: 132 of 191 countries[1]
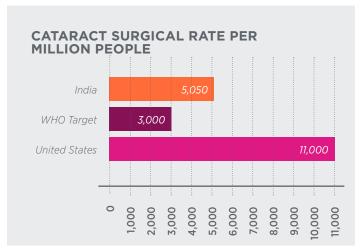
Scope of Eye Care Needs[2]

» 0.64% of India's population is blind, as compared to 0.19% in the United States.

» 5.55% of the population have moderate severe visual impairment or MSVI, as compared to 2.02% in the United States.

» IAPB estimates 270 million people with Vision loss in India; Of these, 9.2 million people were blind, one of the highest in the world.

Nationwide Eye Care Response

» India's Cataract Surgical Rate (CSR) was 5,050 in 2014, as compared to the US CSR of 11,000

» 13 ophthalmologists per million people in 2018 (22,000 total)

» 39.1 optometrists per million people in 2020 (54,000 total)

» 29 allied ophthalmic personnel per million people in 2019 (40,000 total)

EYE CARE NEEDS

Category	Value
% Pop Blindness	0.64%
% Pop MSVI	5.55%
Global Blindness	21.33%
Global MSVI	26.77%

CATARACT SURGICAL RATE PER MILLION PEOPLE

Category	Value
India	5,050
WHO Target	3,000
United States	11,000

1 *2021-22 UNDP Human Development Report: https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf*

2 *Unless otherwise noted, all country sight statistics from IAPB Vision Atlas: http://atlas.iapb.org/global-action-plan/gap-indicators/*

Context

India has an extraordinarily diverse terrain, from the Himalayan peaks to the Indian Ocean coastline. With a population of over 1.4 billion, it's the world's largest democracy and the world's most populous nation. While wealth has been rising in India, not everyone has shared in this growth.

The country continues to tackle huge social, economic and environmental challenges while poverty remains an issue, reflected in the fact that 73% of the adult population has wealth below 10,000 USD,[1] whereas average wealth per adult in North America is $446,638 USD.[2] Property and other real assets make up 86% of estimated household wealth in India, which is typical for developing countries. Property and other real assets make up 86% of estimated household wealth in India, which is typical for developing countries. The human development index's most recent measurement for India's Gross national income (GNI) per capita (constant 2017 PPP$) in 2019 was $6,681. Compared to the US's GNI of $63,826 from that same year, this is quite a significant disparity.

India became an independent state in 1947, after gaining its sovereignty from the United Kingdom, though the country's history reaches back 5 millennia. Home to some of the world's most ancient surviving civilizations, the Indian subcontinent is both vast and diverse in terms of its people, language and cultural traditions. According to the 2011 census (which is the most recent for the country), 79.8% of the population of India practices Hinduism and 14.2% observe Islam, while the remaining 6% adheres to other religions (Christianity, Sikhism, Buddhism, Jainism and various indigenous ethnically-bound faiths). Christianity is the 3rd largest religion in India.[3]

In 2020 in India, there were an estimated 270 million people with vision loss. Nearly 0.64% of India's total population, or over 9 million people, is blind. By assessing India's **Burden of Blindness**, we are able to reveal just how severely blindness or moderate to severe visual impairment (MSVI) imposes a challenge to this population.

Seva's Approach in India

Seva started working in India in 1978 and has been consistently invested in the development of eye care service strategies, research, and resource institutions in the last four decades. At present, Seva works with more than 60 hospital partners across 18 Indian states and union territories.

In the last five years (2018 to 2023), Seva's partners in the country have provided services to 14,271,204 patients, completed 2,137,963 surgeries, and screened more than 500,000 children. The services provided by Seva partners in India have been growing rapidly on a yearly basis with a huge jump in post-COVID time. The blindness and visual impairment cost India a total of $54.4 billion at purchasing power parity exchange rates every year. That cost is only likely to grow as India's population ages and becomes wealthier. Poor eye health imposes a recurring cost to the Indian economy equivalent to 0.6% of GDP, resulting in a substantial constraint on the country's growth aspirations. Most of this loss is due to reductions in economic productivity (add 4 superscript).

Seva's approach to addressing eye health needs in India prioritizes three key strategies: **Access** to universal eye care, building **Capacity** of personnel and infrastructure as well as **Evidence**-based interventions and advocacy. These primary strategies are otherwise referred to as ACE, thoughtfully incorporated into all Seva partnership programs from delivery to post-care assessment. The recently completed or ongoing interventions that are directly linked to Seva's drivers and confirm Seva's commitment and agile programs, have resulted in the exploration and development of multiple interventions.[4]

---

1   *The Credit Suisse Research Institute, Global wealth report 2020, www.credit-suisse.com/about-us/en.html Pg 44*

2   *The Credit Suisse Research Institute, Global wealth report 2020, www.credit-suisse.com/about-us/en.html Pg 8*

3   *2021-22 UNDP Human Development Report: https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf*

4   *The Economic and Social Cost of Visual Impairment and Blindness in India: https://www.seva.org/site/DocServer/Seva_Cost_of_Visual_Impairment_in_India.pdf*

INDIA FACT SHEET

ACCESS TO UNIVERSAL EYE CARE:

1) Eye Care to most marginalized leprosy patients in eastern India: Provided eye care services to most marginalized leprosy-affected persons and their family members in 38 leprosy clusters spread over 9 districts of western Odisha at their doorsteps including screening of more than 2,100 patients along with 350 plus cataract surgeries and almost 200 glasses prescriptions by June 2023. This initiative included physical visits to leprosy colonies, awareness generation for eye and health conditions, identification of barriers, and assurance of quality eye care services to every patient in need.

2) Retinopathy of prematurity (ROP) initiative in the state of Madhya Pradesh: Seva has started an initiative to address the Retinopathy of prematurity (ROP) in the state of Madhya Pradesh in 2021-22. This condition affects the retinal vessels of premature infants and can lead to severe vision impairment if not identified and treated at the right time. Blindness in infancy can lead to many disability-adjusted life years lost and is considered a developmental emergency. Seva, in partnership with Sadguru Netra Chikitsalaya (SNC), Chitrakoot and Sewa Sadan, Bhopal have started a dedicated facility to provide care to newborns in seven districts of Madhya Pradesh and select districts of Uttar Pradesh. The initiative is aimed to build the capacity of clinical staff for treatment and sustained care, providing ROP screening in 12 neonatal intensive care units (NICU) at public and private hospitals with the aim to screen more than 20,000 babies in three years. In the last year, almost 1,200 babies were screened at NICU and 37 were provided with lessor surgeries successfully with this initiative in the districts of Bhanda and Prayagraj in Uttar Pradesh along with Satna and Bhopal in Madhya Pradesh.

3) Eliminating blindness in urban slums of Uttar Pradesh: With a focus on eliminating avoidable blindness in urban slums of Moradabad district of western Uttar Pradesh in India, Seva launched an initiative in partnership with CL Gupta Eye Institute to provide eye care to marginalized migrants/ artisans working in the burgeoning metal crafts industrial units. The eye screening was provided on the spot at a workplace for artisans by a well-trained optometrist and a team of hospital staff along with vision assessment, refraction and dispensing of spectacles, diagnosis, and treatment of common eye conditions. The patients who needed further intervention were referred to the base hospital. More than 66,000 people were provided eye care screening under this initiative along with 1,200 spectacles distributed, 498 surgeries performed, and additional eye conditions addressed by June 2023.

4) Financial Sustainability Initiative: This long engagement has been completed for two partner hospitals including Shroff's Charity Eye Hospital (SCEH) and PBMA's HV Desai Eye Hospital, Pune and has led to an increase in hospital revenue by optimizing the input cost, tapping the subsidized interventions, and reducing the input cost by improving the uptake of services from 2021 to 2023. The four hospital units that participated in the year-long consulting process led by Seva in collaboration with operation, program, and finance hospital teams, have seen revenue uptake between 21% to 46% by improving the existing process without any additional investment. The surplus funds generated by the initiative have led to capacity expansion and service improvements.

5) Home-based eye health care for the elderly and children in Telangana: Seva has partnered with L V Prasad Eye Institute, India to focus on reaching out with Innovative Services for Eyecare (RISE) in Balanagar and Kondurg in Rangareddy District of Telangana State. In the year 2022-23, the eye care services were opened to 6,651 households with a direct screening of 27,057 people at their doorstep. The follow-up and referrals were provided at nearby Vision Centers and secondary hospitals to ensure spectacle provision and cataract surgeries for identified patients. The initiative has ensured that 92% of patients identified for surgeries were getting it with the aim of solidifying avoidable blindness-free catchment areas. This has helped increase referrals and train the staff to improve the quality of screenings.

6) Mobile Vision Centers in the hills of Uttarakhand: Seva has been working in Uttarakhand State since 2014 through its Global Sight Initiative partners. The difficult terrain along with the connectivity challenges led patients to travel more than a day to reach the hospital for primary eye conditions. Most patients are old/dependent and need a companion to visit the hospital. The hilly terrains have larger operational areas and extremely lower population densities, which creates a challenge to establish a conventional primary eye care facility and sustain it.

To address the challenge, Seva partner Shree Baba Haidakhan Hospital, Ranikhet mentored by Dr. Shroff 's Charity Eye Hospital, New Delhi explored the possibility of a "Mobile Vision Center" where all primary care services would be provided at a select location one day every week in collaboration with community-based partners in the area. A team of an optometrist, a technician, and a driver travel 3 to 5 hours each side to a fixed location every week with specially designed portable ophthalmic equipment where community partners create awareness for eye care services in advance and invite patients. Through this innovative model, the first Mobile Vision Center setup with a mini-van already provided eye care services to more than 6,000 patients by June 2023. Given the high efficiency of the model, another Mobile Vision Center has been added to cover an additional five locations in 2022. With this initiative, more than 10,000 patients have been provided eye care services, 800 plus sight-saving surgeries have been delivered and 1,900 patients have received spectacles in almost two and half years of operation.

In addition, Seva continues to be innovative in enabling eye care access to all in need. Many other ongoing programs include the **Silver Smith Screening Program at Salem District** by Aravind Eye Hospital, the establishment of an **IT enabled education and training center for blind children** in West Bengal for more than 100 students benefiting annually through this facility, and **teleconsultation services at 36 Vision centers** in central India, which ensure everyone in need of eye care is being reached out with quality services.

Eye health for children and the most marginalized section of society:

Seva has committed to ensuring pediatric eye care is key to a child's physical development, success in school, and overall well-being. The eye health program for children by Seva and partners include health promotion and prevention activities, activities to increase awareness about eye health among children, screening detection, and treatment of common eye conditions (URE, infections, squint, etc.) in these children. Seva partners with pediatric initiatives that have screened more than 500,000 children in the last five years in India.

Sibling screening program in Tamil Nadu: The sibling screening for children with heritable disorder visiting one tertiary eye care center, two secondary eye care centers, and seventeen vision centers was started in partnership with Aravind Eye Hospital, Tirunelveli. The aim is early detection and diagnosis, provision of spectacles, low vision aids, and surgical intervention at subsidized or free of cost for children in need by strengthening of Pediatric ophthalmology department in tertiary eye care centers. In the first two years, the intervention has screened more than 7,000 siblings along with providing spectacles and surgeries to children identified with need.

Children's eye health screening program in Uttar Pradesh: To ensure comprehensive and doorstep eye health services to children, Seva has started a children's eye care screening program in collaboration with Shroff's Charity Eye Hospital at Vrindavan, Saharanpur & Meerut locations. Almost 42,523 children were screened, 921 children provided spectacles, and 109 surgeries were conducted up until June 2023. The special focus was on improving the referral cases with ocular pathologies identified in primary screening in collaboration with community influencers (Gram Pradhan, Aaaganwadis, and School teachers) at door-to-door and family household screening activities. The activities included sensitization to the

local people through Nukkad natak and by providing IEC materials in local languages.

Eye health for most marginalized children in Maharashtra: This initiative focuses on school children and those who are out of school in the catchment area. In one year, almost 43,366 children were screened from 194 schools and in nearby areas via door-to-door screening. More than 1,000 children received spectacles and were provided surgeries.

Capacity Building and Employment Generation:

The capacity building of the service providers along with improving systems, processes, and management capacity has been a long-term goal for Seva. Seva deploys multiple innovative approaches and process improvement initiatives directly and in partnership with leading stakeholders in India to improve the care provisions and patient experience at the partner hospitals.

In the last year alone, Seva has conducted 13 customized training workshops and courses on clinical **Quality, Patient Safety, People-centeredness, Management Development, and Training of the trainer** for more than 28 hospital teams and 264 participants across India either as in-person or as a blended learning program. All workshops and courses are supported by Seva's unique **E-learning platform** which has more than 70 skill-based modules for the eye care workforce as per the World Health Organization's "Eye Care Competency Framework'.

Seva engages with Global Sight Initiative partners in India through the continued long-term engagement process through 6 mentor institutions including Aravind Eye Care System, Dr. Shroff's Charity Eye Hospital, PBMA HV Desai Eye Hospital, L V Prasad Eye Institute, Sadguru Netra Chikitsalaya, and Vivekananda Mission Ashram Netra Niramay Niketan along with the additional collaborative training and capacity-building initiative given below. Seva, with our partners, provides training for local doctors in ophthalmology residences and short-term clinical advancement, allied ophthalmic personnel, as well as teachers for school screenings. Attending professional conferences and meetings allows our partners to share program findings with a broader community of specialists.

Training and capacity building of eye hospital under GSI: Direct Training and capacity building of more than 200 clinical and management staff from partner hospitals from the states of Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Uttar Pradesh, and West Bengal through Seva's GSI framework in the last year.

Observe Understand and Change initiatives for Patient safety and clinical quality: To improve patient safety and quality of clinical care, we trained 9 hospital teams including 31 ophthalmologists, operational theater staff, and quality managers from Maharashtra, West Bengal, Gujarat, Odisha, and Jharkhand to improve the design and standardization of Standard operating procedures (SOP) in all critical processes of the hospital and build incident reporting culture by extending the mentoring and training at a reputed private hospital in Bangalore followed by continues virtual training and quality development.

Management Fellowship for Eye Care Professional: A one-year full-time fellowship in eye care management was completed in collaboration with Sadguru Netra Chikitsalaya (SNC), Madhya Pradesh to bridge the critical skill gap in managerial excellence in management professionals at eye hospitals. The batch of 8 fellows graduated on World Sight Day in October 2022 and a second batch of 7 fellows started another year-long journey at the same time. This course provides practical and hands-on learning in Project Management, Patient Care Management, Clinical Ophthalmology, IT and Communication skills, Outreach activities, and Stakeholder management. SNC is the second institutional hospital to collaborate with Seva to launch the fellowship in eye care management after Dr. Shroff's Charity Eye Hospital in Delhi.

Management Development Program (MDP): A unique eye care manager development program designed and delivered by Seva. The MDP focuses on Communication, Quality, Planning, Implementation and analytical thinking skills. It was initiated at 2 network hospitals from Maharashtra and Delhi for 53 leaders, mid-level managers, and clinicians. The key focus was on improving skills in people and process management.

Eyexcel Training of the Trainers: Two Eyexcel workshops were conducted for 21 hospital teams across India in collaboration with Lions Aravind Institute of Community Ophthalmology (LAICO), Madurai, and SNC Chitrakoot. 78 clinicians, training personnel, and admins completed 5 days of in-person practice and honed their training and development skills using such new methods as Flipped Classroom, e-learning, Gamified learning, and more. In addition, three network hospital teams from Maharashtra, Delhi, and Madhya Pradesh completed an Advanced Eyexcel Workshop, that included 48 Clinicians, optometrists, and managers who practiced advanced skills in presentation, modern learning technologies, and measuring training impact at work.

Deploying Innovative Technology for Eyecare

Seva's commitment to the development, design, and deployment of innovative products and processes has resulted in the exploration and development of technical interventions such as:

1) Artificial intelligence-assisted Retinopathy of Prematurity (ROP) screenings on multiple low-cost camera systems

2) Development of a cloud-based, mobile application for remote monitoring of clinical quality and referral from VCs to hospitals

3) Development of a smartphone-based system to diagnose corneal disease, prescribe treatment, and help prevent it in some patients through Seva partners in India.

Modern technology for patient care is vital in supporting up-to-date practices implemented locally. By purchasing clinical equipment for partner hospitals as well as supporting the implementation of teleophthalmology within VCs and base hospitals, Seva and our partners ensure an increase in the availability of quality services for all of India. With the establishment of teleophthalmology services, Seva-supported VCs can get a second opinion from doctors based at referral tertiary eye hospitals. Teleophthalmology will improve the quality of care and improve referrals by limiting unnecessary travel and crowding at the clinics providing specialized services — only patients who require surgery or specialized care will need to go to the hospital.

Seva in partnership with Dr. Shroff's Charity Eye Hospital, New Delhi has **developed an application to manage the Vision centers and eye health screening programs at the community level**. This allows the field workers to capture last-mile information, geographic details, and eye conditions as well as accommodate all age groups in the screening protocols. The application is integrated with a VC and hospitals for easy referral and service tracking to ensure that eye care services are provided to everyone. A dynamic dashboard allows data management, indicators-wise patient information at the unit level, and a management module that enables dynamic command and control. More than 70 VCs and 300 plus community volunteers are using this application along with more than a million patients getting served through the application through various initiatives by June 2023 at SCEH.

Our focus is on building smart solutions and building partners' capacity in Evidence-based decision-making with the support of a data dashboard, Hospital management systems, and training. Seva has supported more than 7 partner hospitals from Uttar Pradesh, Telangana, Gujarat, Odisha, West Bengal, and Madhya Pradesh in India to adopt the **Electronic Medical Record System** to improve quality and patient care along with adopting efficient systems and processes for patient records and management of the hospital system.

SPOTLIGHT ON PRIMARY EYE CARE AND VISION CENTERS

Seva and donors' investments have resulted in the establishment of more than 168 Vision Centers in India up until June 2023 to ensure eye care reaches an additional 10 million population in remote and vulnerable areas. This strengthens Seva's commitment to establishing Primary Eye Care Vision Centers as one of its core drivers. Collectively, these Vision centers have provided eye care services to more than 500,000 people, provided 100,000 glasses, enabled 50,000 plus eye surgeries, and have referred more than 65,000 patients to the base hospitals for other eye conditions in the first three years of services or less.

These 168 Vision centers are operating across 101 districts of 14 States including Andhra Pradesh, Bihar, Gujarat, Jammu and Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal.

The recent study published by the Seva Foundation at Lancet Regional Health – South Asia reveals that vision centers are a cost-effective strategy for identifying and encouraging individuals to undertake corrective eye services, with vision centers likely to be most cost-effective at a greater scale. This is based on India's largest six eye healthcare providers collectively operating 355 vision centers which saw 1,373,925 people in the financial year 2019-20.

During the 2000s and 2010s, India failed to meet targets to establish 4000 and 5000 vision centers in the country's 10th and 11th Five-year plans respectively. While data are scarce, it is likely that India has approximately only 10% of the required 26,400 vision centers to serve the entire population. Even at these low coverage levels, NGOs, including the providers in this study, deliver the majority of eye health services in the country, and Investment in eye health continues to be very cost-effective in India.

IMPACT (FY 2022-2023)*

4,138,544 People receiving services	**697,855** Cataract surgeries performed
126,920 Children screened	**5,892** Children receiving surgery
19,798 Children receiving glasses	**13** New VCs funded through Seva
2,006,556 People who now have access to care	**233,816** People receiving services at VCs
158 Administrators trained	**33** Doctors trained

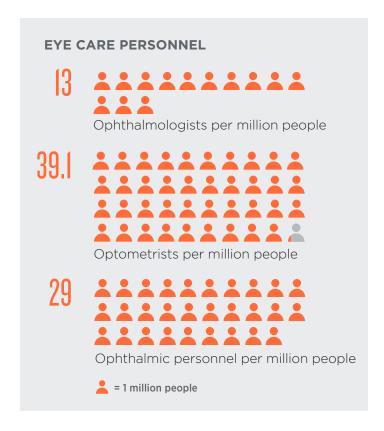|		
277 AOPS trained	**44** Hospital teams participated in Seva Led Trainings	**370** People participated in Seva Led Trainings

13

Seva Led Trainings including 6 Eyexcels, 3 Management Development Programs, and 4 Quality Workshops

* *Numbers based on reports received.*

EYE CARE PERSONNEL

13

Ophthalmologists per million people

39.1

Optometrists per million people

29

Ophthalmic personnel per million people
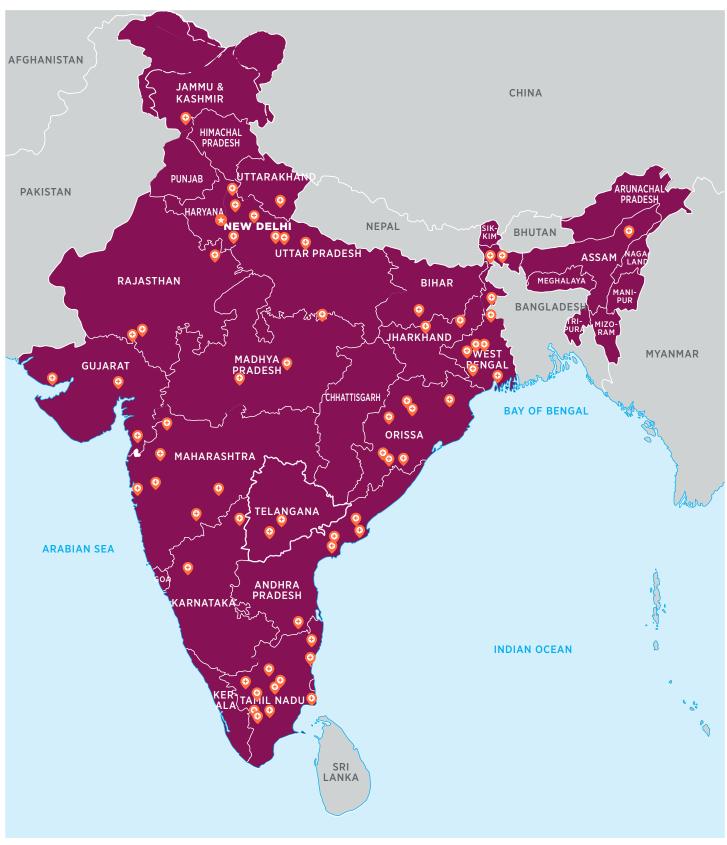
= 1 million people

Resources

Seva in India

The Economic and Social Costs of Visual Impairment and Blindness in India

Costs and cost-effectiveness of major eye health interventions in India

Primary eye care in India - The vision center model

Eyecare: the best buy in healthcare - A study led by Seva Foundation making the case for investment in eye health published in the 'Bulletin of the World Health Organization'

INDIA FACT SHEET

Seva Partner Hospital in India