

Blindness Prevention Program in INDIA

Partnership between the Kalinga Eye Hospital and Research Center (KEHRC) of NYSASDRI, India & DCI, USA

Introduction:

Despite having entered the 21st century and witnessing a vast array of scientific and technological accomplishments that were previously unimaginable, visual impairment continues to plague global development. Every five seconds a person goes blind and every minute a child goes blind, leaving seven million people newly blind each year. If national and international efforts to avert blindness are not intensified, the number of people with severe visual disability will double by the year 2020. There are currently 180 million visually impaired people and 45 million blind people in the world. The developing world bears the greatest burden of blindness, as 90% of blind individuals live in developing countries. In total, 80% of the world's blindness is avoidable. Because of the country's size, the eye care sector in India faces several major challenges including lack of access for rural populations, unequal distribution of services, gross underutilization of available services, and insufficient facilities. Pediatric eye care, which requires specialized training and equipment, is particularly lacking in rural Orissa. It is hard to believe but of the 45 million blind people in the world, 12 million live in India, and of the 180 million visually impaired people in the world, 52 million live in India!

Problem Statement:

This project will address the problems of cataracts, refractive error and other ocular disorders in the pediatric population of the service area of the Kalinga Eye Hospital and Research Center (KEHRC). The Dhenkanal, Jajpur, Kendrapara and Angul districts will be the focus of our efforts, and nearby districts will benefit indirectly. These areas are primarily inhabited by tribal groups including the Kolha, Santala, Lohar, Munda and Sabar, as well as scheduled castes including Hadi, Pana and Dhoba. More than 80% of the population in these districts resides below the poverty line. The area suffers from unreliable communication, inadequate infrastructure, and a poor health service delivery mechanism. For most people, eye care is completely inaccessible.

Visual impairment also affects education, as the vast majority of visually impaired children in developing countries do not receive an education. Without sufficient infrastructure and health care to ensure that handicapped children are accommodated in school, visually impaired students fall academically behind their peers. Blindness among adults in a family may also result in decreased school attendance and performance, as many blind adults depend on school-age children and other family members for their everyday tasks, preventing the child from attending school full time.

The prevalence of refractive error, defined by visual acuity less than 6/9, is the major cause of blindness amongst the pediatric age group. Refractive error in children, if untreated, almost always leads to poor academic performance and frequently results in students dropping out of the education system. Refractive error in children can easily be corrected by providing a pair of spectacles. Approximately 75% of children who either

have significant refractive errors or are blind live in rural areas where no eye care is available. Cataracts are responsible for 63% of all blindness, which can be avoided with simple surgical intervention. Research studies reveal that major barriers to cataract surgery in India are: 1) poverty and cost of surgery, 2) lack of transportation, 3) perceived lack of need for treatment, 4) lack of awareness regarding eye health and available resources, 5) difficulty in accessing care, 6) cultural and social barriers, and 7) limited surgical capacity, especially for pediatric eye care. The KEHRC is the only hospital in the entire state of Orissa performs that performs more than 5,000 surgeries in a year and is now the only centre in Orissa with a fully equipped pediatric eye care unit with a trained pediatric ophthalmologist.

Impact of Eye Care on Nation Development:

Primary Education

Approximately 90% of visually impaired children in low-income countries are deprived of an education. Lack of infrastructure, affordable health care, production of accessible and suitable school materials and qualified teachers prevent visually impaired children from attending school.

Reduce Child Mortality

Approximately 500,000 children become blind each year, and children are 60% more likely to die within one year of becoming blind than children who can see. Many of the conditions associated with childhood blindness are also causes of child mortality, including premature birth, measles, congenital rubella syndrome, vitamin A deficiency, and meningitis.

Combat Diseases

People living with a disability are more vulnerable to risk factors that lead to infectious diseases and have limited access to treatment. Major ‘neglected diseases,’ which include blinding conditions such as trachoma and onchocerciasis (river blindness), are endemic in rural and impoverished urban areas of low-income countries and can impair education and worker productivity.

Organization Summary:

Situated in Dhenkanal, Orissa, KEHRC has provided eye care services to the citizens of Orissa since its opening in 2002, and has supplied both affordable and subsidized treatment to eradicate avoidable blindness from the districts of Dhenkanal, Angul, Jajpur, Sambalpur, Deogarh, Kendrapara, Bhadrak, Jagatsinghpur & Keonjhar. KEHRC is registered under the Clinical Registration Act and is also a distinguished member of Vision 2020, a global initiative undertaken by WHO-IABP to eradicate avoidable blindness.

The eye hospital is a unit of the National Youth Service Action and Social Development Research Institute (NYSASDRI). NYSASDRI has been undertaking various development activities related to health, education, environment, sanitation, agriculture, food security and livelihood support for approximately 3.2 million tribal people and rural citizens of Orissa since 1982. These development initiatives are supported by the Central

Government of India, the State Government of Orissa, various multilateral and bilateral organizations and several international NGOs.

Infrastructure:

Considering the problem factors, KEHRC has introduced the Centre for Advancement of Rural Eye care (CARE), through which KEHRC extends its services to the underserved areas of Orissa to provide ophthalmic care to the poor. At the same time, KEHRC believes strongly in the importance of training and educating the community on eye care so that treatment can be done at the primary level of the diseases, helping to reduce avoidable blindness.

KEHRC owns the high quality equipment required to perform comprehensive ophthalmic examinations, including the following instruments: vision drum, auto-refractometer, chair unit, slit lamp with applanation tonometer, direct ophthalmoscope, indirect ophthalmoscope, Synoptophore, 90D lens, and 20 D lenses. The center is also equipped adequately to perform cataract surgery. The following equipment is available: A-scan, manual keratometer, handheld auto-keratometer, operating microscope, phacoemulsification unit, Boyle's apparatus, Pulse Oxymeter and a flash autoclave. The hospital has a dedicated and trained team of staff and a full-time pediatric ophthalmologist, clearly indicating that the eye hospital has a good image in the community and people are willing to actively support the social cause. The hospital has trained its ophthalmologist & the required paramedical & management staffs on paediatric eye care from Aravind Eye hospital, Madurai.

Project Plan: In 2010 DCI will provide the following support to KEHRC & NYSASDRI

- 50 pediatric surgeries for poor children
- 1000 refraction/spectacles
- 500 adult surgery from the poor families
- Volunteering in India: Give American citizens (students) firsthand experience about community empowerment/social development work & eye care program in India and third world countries.



Before Surgery



After Surgery