Tejas Eye Hospital: An Eye on Future Growth and Service

"It is all about our work and care for people," said Dr. Uday Gajiwala, the cofounder of Tejas Eye Hospital under the auspices of Divyajyoti Trust, Surat India. It was October 2020 morning, and with the generators in his hospital neighborhood humming in the distance, Gajiwala spoke with the founding trustees of the Divyajyoti trust. The three were discussing strategies of expansion for the Tejas Eye Hospital and thereby meeting the needs of a greater number of people. This was also the right time to set an eye for the future growth of Tejas eye hospital considering the fact that it had existed for a decade and served people with care and compassion. Tejas eye hospital aimed to increase the number of patients it served, maintain the highest quality standards in eye care and grow its impact by contributing to the infrastructural pyramidal model of the National Programme for Control of Blindness (NPCB) by contributing to all the steps of the pyramid. This demanded working at all levels of operating vision centres, service centres, training centre and achieving the status of centre of excellence.

In the discussion, Gajiwala focused on the need to expand and highlighted how inadequate the existing infrastructure was, to serve the number of patients Tejas eye hospital was receiving every day. The hospital was finding it difficult to accommodate 50,000 plus OPD visits in a year. Another 75,000 patients were covered through outreach activities and camps.

It was not only the worry of space that Gajiwala and his fellow trustees were concerned about, the requirements for human resources, training and capacity building of staff, professionalizing the delivery even further and planning for succession were also cause of concern for all. After ten years of leading Tejas and over thirty years in the eye care sector, Gajiwala knew that achieving all of these was not going to be easy plus, how to continue being a mission-focused eye hospital and raising resources for becoming a Centre Of Excellence? Where does the answer lie? Asked one of the trustees. Is it in identifying more donors, cross-subsidizing through premium care offered to those who can afford it or through impact investing?

Eye Care in India: An overview

India experienced a disproportionate share of blindness and visual impairment compared with the rest of the world. India is a home to a third of the world's blind population. The Cataract

Surgical Rates (CSR) showed signs of improvement. However, the prevention of blindness required much to be done. The lack of a comprehensive eye care approach and a weak Primary Eye Care (PEC) characterized the problems in the country. Towards the achievement of Universal Eye Health Coverage (UEHC), several organizations were engaged in setting up Vision Centres (VCs) as it formed a part of a larger eye care network, especially in remote rural areas of the country. The National Programme for the Control of Blindness had an objective of strengthening the existing and developing additional human resource and infrastructure facilities to provide high-quality eye care in all districts of the country. It is believed that many people could have been prevented from going blind if they had received timely treatment. In India, the NPCB estimates cataract (62.9%) and refractive error (19.70%) as the leading causes of blindness. Early identification of potentially blinding conditions was difficult due to lack of access to eye care by a major chunk of the population, especially in low-income groups and those living in smaller towns and villages. The NPCB recommended an infrastructure pyramidal model (see Exhibit 1) for the nation and indicated the need for the country at four levels.

Most importantly, at the lowest level in the institutional architecture is a vision centre (VC), staffed by a vision technician. A VC is catering to a population of 50,000. The VCs are responsible for primary eye care, refraction and prescription of glasses, screening, and referral services. The total requirement of VCs in the country is 20,000, with 1 for 50,000 population. Above the VCs in the model are Service Centres (SC), one for 500,000 people. 2000 SCs are required to cater to the country's needs. The tasks performed by SCs included cataract surgery, other common eye surgeries, facilities for refraction, and referral services. Above the SCs are the Training Centres addressing the requirements of tertiary eye care, including retinal surgery, corneal transplantation, glaucoma surgery, etc. India needs 200 TC with a provision of one TC for a population of one to five million. At the top of the pyramidal institutional architecture, 20 Centres of Excellence are required to meet the highest standards in research, laying standards for quality, continued medical education and strategy development. Most of the eye care services in the developing countries organized their infrastructure on similar lines, with services at the primary and secondary levels under-resourced. This meant that many patients had no access to proper eye care services and depended heavily on the limited support received from patchy outreach programmes.

Genesis and progress of Tejas Eye Hospital

Tejas Eye Hospital was inaugurated on May 22, 2011 in the rural tribal area of Mandvi taluka of Surat district in the western state of Gujarat in India. The hospital was established under the aegis of the Divyajyoti Trust, a philanthropic organization started in 2010 by Bharatbhai Shah and Dr. Uday Gajiwala. Both Bharatbhai and Dr. Uday were inspired by the teachings of Mahatma Gandhi and Swami Vivekananda and considered service to humanity as their primary objective while setting up Divyajyoti Trust. They received support from several like-minded people in setting up the activities of the trust, which led to the setting up of Tejas Eye Hospital. Dr. Uday's expertise in eye care by virtue of his work in the eye programme of a leading Not-for-profit in Gujarat for over 20 years and the socio-economic profile of the region made it easy for the trustees to decide on the nature of the activity that they could perform to help the rural tribal community of the district. Dr. Uday was a seasoned hand in eye care, he had worked extensively in the rural areas and reached out to a large patient base through eye camps, outpatient departments and specialized surgeries.

Dr. Uday explained the importance of his background in setting up Tejas Eye Hospital

"SEWA Rural is the organization that I was working earlier, I was performing surgeries, looking at patients with little access to eye care in rural areas gave me the conviction of the need for eye care in rural and more specifically in tribal-dominated areas for people who have little or no access to eye care leading to blindness."

This view, coupled with the principles and messages of visionaries like Mahatma Gandhi and Swami Vivekananda of going to villages and serving the poor people, laid a strong foundation for Tejas Eye Hospital. The Tejas Eye Hospital model of care was emphasized in its mission "Provide quality comprehensive eye care services accessible and affordable to all including free services to poor in the rural tribal area around Mandvi". The ambitious and audacious vision of Tejas Eye Hospital, "No one remains needlessly blind for want of eye care services." kept it on track.

Location and need

The Mandvi town is located in the Surat District of Gujarat. It is about 60 km east of Surat. The town is not connected by any railway line. Mandvi has a substantial tribal population. A significant number of the tribal population works in marginal income-generating activities such as agriculture laborers. The tribal area of Surat district starts from Mandvi and further east, the percentage of tribal population is around 75-80%. Tejas Hospital cares for a population of 2.5 million in approximately 2000 villages around Mandvi.

This population is also vulnerable to eye injury caused by working in the field. The inability to receive eye care often turned into problems leading to vision loss and blindness. It is also true that the workers risked traumatic injuries from plants, tools and equipment besides heavy exposure to agricultural chemicals, wind, dust, allergens and UV light. Such exposure elevated the risk. Dr. Uday explained the importance of attending to such injuries on time,

"Eye injuries are widespread in case of farmworkers, corneal abrasion, subconjunctival hemorrhages and Corneal / Conjunctival tear are common. These injuries get further aggravated because of a lack of care or traditional eye medicines. Often workers continue working in the field even after several days of injury and do not seek any medical advice largely due to lack of finance."

The low literacy level in the community and sparsely located medical facilities further added to the problems of the community already surviving on a low income.

Growth and progress through years

Gajiwala said "Having a tertiary eye hospital in a small town like Mandvi is the major achievement. In last couple of years, we have started more than one dozen major research projects".

For a not-for-profit setup like Tejas Eye Hospital, barometers for growth and progress (see Exhibit 2 for timeline) were understandably its reach to people and the ability to serve more and more needy populations from Mandvi and surrounding towns. Its international standard services & care for the poor has resulted in patients from Maharashtra, Rajasthan, M. P. and other states coming to avail of its services. From 40 beds in 2011 to 100 beds in 2023, Tejas eye hospital has come a long way in serving the people. Since its inception, more than 10, 00,000 patients have availed of OPD services. It has performed over 115000 surgeries and completed 1500+ plus corneal transplants (for performance since inception, see Exhibit 3). The hospital not only engaged in eye care through operations and OPD but also trained over 175 ophthalmologists and over 240 paramedics, thereby contributing to the field and preparing the workforce for the sector. The hospital catered to the need of over 100000 patients through OPD in the previous year and performed 13000+ surgeries. Of these 13000 surgeries, 70% were performed for free. With an objective to remain comprehensive, the Divyajyoti Trust focused on the areas of prevention, promotion, cure and rehabilitation. A full-fledged Training centre is located in Mandvi in the hospital. The training centre provided training to paramedical workers viz. vision technician, ophthalmic nursing and optical fitting

training etc. and to Ophthalmologists viz. phaco training, SICS training, Comprehensive Ophthalmology training, medical retina short term fellowship, glaucoma observership etc. It is also running an optometry college. Tejas eye hospital has three satellite centres and eight vision centres. The rehabilitation is focused through CBR and a hostel for blind students near the hospital. For details on the activities and other setups, see Exhibit 4. For financial position see Exhibit 5.

The patients coming to seek medical remedies and surgeries at Tejas eye hospital are under resourced to the extent that they had difficulty arranging food. To ease the burden of arranging for meals and other expenses, the hospital has made provisions for facilities such as a kitchen, medical store, optical store and laboratory. The kitchen provides free meals to patients admitted in the hospital and their relatives. It also provides food to the blind children in the hostel. The meals are subsidized for all the hospital staff and OPD patients and relatives. Similarly, the medical and optical store at the hospital sales medicines and spectacles at a highly subsidized rate. The in-house pathology laboratory meets the needs of all pathological investigations. The cost of tests is nearly half of what the patients are charged outside by private laboratories.

The trust is involved in both epidemiological and clinical research. Few small innovations have been implemented to make the whole activity more patients friendly.

- Spectacles fitting unit is created to provide tailor-made glasses to 90% patients in two hours which will save lot of time and resources for the patients.
- Using 6/12 as visual acuity cut off in school screening where the National programme uses 6/9 as a cut off to prevent prescription of insignificant refractive errors based on previous work – similarly, giving a choice of selection to students for spectacle frames from a range of 32 different frames. Going back to the children to check if they are using the spectacles or not are some minor innovations implemented in school screening activity.
- Sending report of the Retinopathy of Prematurity screening immediately and giving a print out on the spot is another small innovation – nobody in the country is doing it. This saves time and resources for the parents in coming back after a day or two to collect the report.

The team has been able to publish more than half a dozen articles in international peer reviewed journals and another half a dozen articles are in pipeline. Publication of a couple of manuals, chapters in a couple of other manuals adds flavor to the whole work.

Working in a small town, the trust provides technical support to a few hospitals around them. Networking with major NGOs, INGOs and Govt. is a strength of the trust. Trust provides consultancy services by doing clinical audits of the other NGO hospitals in different parts of the country.

Staff

Every staff in the hospital is committed to service. The doctors take the lead in seeing patients, performing surgeries, conducting research, developing capacities and guiding the trainees. The doctors found a great mentor in Dr. Uday and considered him an authority in the field. They found him encouraging and understanding and his administration top class. The paramedical staff and the ones engaged in the outreach and admin worked with Dr. Uday for a long time and considered service their profession. All the staff were from the nearby locations and drew satisfaction in their work. Most of the administrative task was performed by Dr. Uday himself. He received support from his wife in administration. Functions such as recruitment of doctors and larger hospital management were on his shoulders with limited capacities elsewhere. See exhibit 6

Gajiwala said that following points made Tejas Eye Hospital, unique:

1. Tertiary eye hospital in a small town.

2. Complete comprehensive package of eye care under one roof.

3. Seventy (70) % free.

4. Training centre for all cadres of eye care.

5. Research activities in a small remote place.

6. Rehabilitation of incurably blinds. Done by very few eye care organisations.

7. Hostel for incurably blind children.

8. Staff development ensured. Eight peons have been promoted to different categories. Eight field workers from the Rehabilitation project are absorbed as regular employees. One

Ophthalmic assistant was promoted to Supervisor and one to camp organizer. One field worker was promoted to Supervisor.

9. Eco-friendly activities. The hospital has received the platinum rating under Indian Green Building Council (The highest rating in green movement) for its renewable energy programme.

10. Use of telemedicine extensively.

Future growth and challenges

While the growth trajectory of Tejas Eye Hospital was appreciable and Dr. Uday took great pride in service, he also noted:

"We see several constraints in operating from this place. The number of patients has grown manifold while the space has remained the same. We have dedicated staff, but to serve more people, we need to expand."

Other doctors and staff echoed Dr. Uday's concern with the pursuit of serving more people, one of the staff added:

"Space is a significant limitation now for us. You can see the full waiting area, we have limited space in the ward as well, especially during the winter months, we fall short of place there. Similarly, the kitchen and dining area cannot accommodate huge rush in peak hours"

One of the doctors also added,

"We will perhaps need more operation theatres. With more and more patients we see every year, we must ramp up our infrastructure. Probably here, it would not be easy. We need to expand outside."

Dr. Uday also recognized the need to have more classrooms and staff quarters for the hospital to cater to ever growing demand. With the recognition of the growing need to expand and serve more and more people, the trustees knew that a new campus project had to be undertaken soon. They could overcome the first huddle of getting land as a donor donated 4 acres of land near the existing hospital. This land on the highway is about 4 km from the current facility of Tejas eye hospital. Dr. Uday and Bharatbhai were confident about achieving what they had set. The plan was to have a new facility construction of 200,000 sft with a total project cost of about 400 million. This new campus was envisioned to leapfrog

the hospital's progress and reach the target as it planned to perform over 20,000 surgeries, attend 300 plus OPD patients and train over 150 students on campus.

The idea was to have a state of the art technology and a world class campus for the people in need. Dr. Uday, at this moment, had multiple questions to attend to and multiple options. The high cost of operating from the new campus with the added staff and technology can be offset by starting a premium care section where those who could pay would be charged as per the market rate or marginally less than that and those in need will be treated for free. The premium care section can provide facilities such as express appointments, entertainment units in the lobby and individual well-kept rooms for admissions and after surgeries. He also had the option to seek more donations and go for tapping the philanthropists in the area and outside. Also, to become a COE, Tejas eye hospital needed to conduct more research and produce the outcomes of the same and report in medical journals. Some of the research could be funded internally from the resources generated through either premium pricing or donations. Dr. Uday knew that helping Tejas eye hospital navigate the coming decade would be a job that would require all of his energy and probably more generous support from well-wishers of Tejas and Divyajyoti Trust.

The trust is focusing on the quality alone as they are sure that the trust of tribals in Tejas Eye Hospital run by Divyajyoti trust will bring large quantity of them to avail services of the trust. For that purpose, since September 2020 a faculty from IRMA is training the core team. They plan for better ambience at the new campus and the team will be trained to deal with the patients better. They will put a complete EMR in place and make the activity paperless once they shift to the new campus.

The journey of the last few years:

Prof. Ravi Chandran of IIM Ahmedabad wrote a report in 2016 on the achievements of the trust and mentioned a few suggestions that were diligently followed. A list of suggestions made by him along with the action taken are listed in Exhibit 7. Prof. Ravi Chandran had suggested that we should expand using hub and spoke model and the same was done – there are eight vision centres and three satellite centres.

Exhibit 1 – NPCB Pyramidal structure of eye care delivery for the country

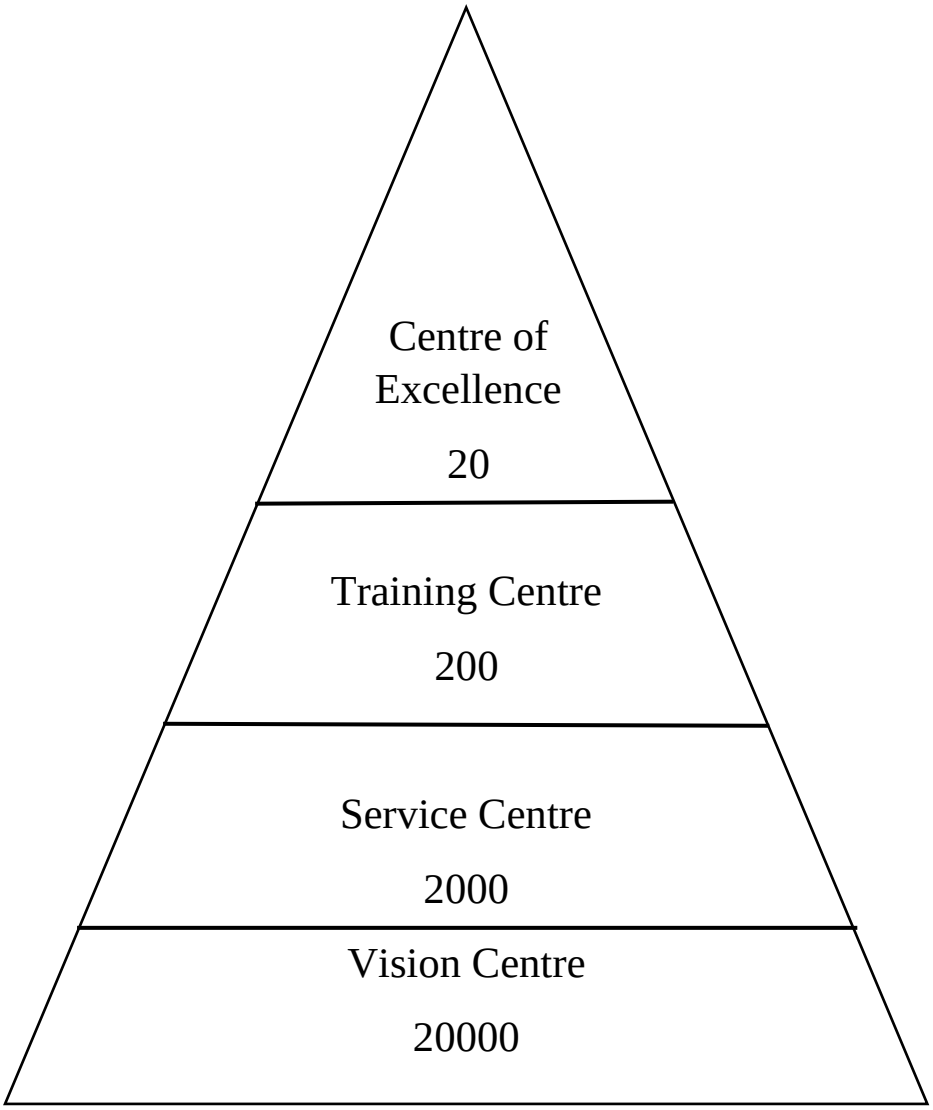

Exhibit 2: Tejas Eye Hospital timeline and progress

Year	Progress
2011	• 40 Beds • 3600 Operations • 2 Diagnostic Camps
2012	• CBR added • 2 Satellite centres under PPP mode
2013	• Hostel For Blind Students
2015	• Training Centre • 100 Beds • 8400 Operations • 3 Diagnostic Camps
2016	• 2 Vision Centres • 10000+ Operations • Amalsadi land received as donation
2017	• 3rd Satellite Centre • 3 more Vision Centres • 12000+ Operations • Optometry college
2018	• 3 more vision centres • 12500+ Operations • Tele medicine facility added
2020	• Research activities
2021	• Amalsadi campus construction started • Completed 100000 eye operations
2023	• 1000000 Out patient visits completed

Exhibit 3: Performance since inception[1]

Parameters	Reach
OPD patients	>1000000
Eye surgeries	>115000
Corneal transplants	>1500
Ophthalmologists trained	>175
Paramedics trained	>240
Blind individuals rehabilitated	>450

[1] From 2011 to March 2023

Exhibit 4: Activities of the Divyajoti Trust

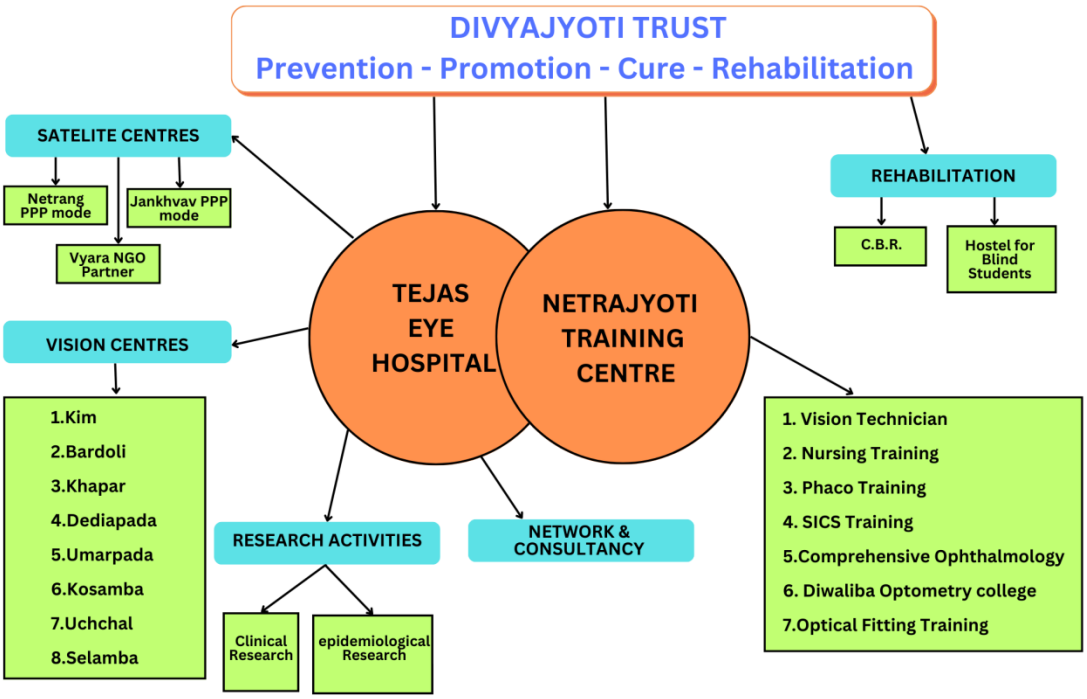

Exhibit 5: Financial position of Tejas eye hospital

Income and Expenditure Statement of Divyajyoti trust 2022-23					
Income	**INR**	**%**	**Expenditure**	**INR**	**%**
Institutional Donation	8941949	13.64	Hospital	41358708	63.08
Individual Donation	5581796	8.51	Camp	5060006	7.72
Consultancy	561833	0.86	Training & Research	3586595	5.47
DBCS	8362300	12.76	CBR & Blind Hostel	1464034	2.23
VFI Rem.	3062000	4.67	Staff Welfare	484761	0.74
RSBY (PMJAY)	1029960	1.57	Kitchan	2371904	3.62
OPD & Indoor	32095678	48.96	Outreach Centre	5653563	8.62
Training & Research	2257324	3.44	Depriciation	5581142	8.51
Medicine & Optical Shop surplus	501360	0.76			
Shortfall	3166513	4.83			
Total	**65560713**	**100.00**		**65560713**	**100.00**

Exhibit 6: List of Doctors and Staff

Cadre	No. of staff
Ophthalmologists	11
Medical officer	1
Administrative staff including supervisors	44
Optometrists	7
Ophthalmic Assistants	21
Ophthalmic nurses	20
Peon, Aayas, OT boys etc	20
Drivers	6
Field workers	9

Exhibit 7: Status of work done against suggestions made by Prof. N Ravichandran of IIM Ahmedabad

Suggestion	Implementation
Scaling up activities	Amalsadi construction work in progress. 10% increase in the volume of activities but it is limited by the space crunch.
Expand in a hub and spoke model	Set up 3 satellite centres and 8 vision centres
Reasonable literacy to tribal community	Trained more than 200 vision technicians, more than 90% are gainfully employed
Adding more eye care activities	Doing school eye screening on a regular basis, truck drivers' eye checkup, New born eye screening door to door eye screening with the help of 12 field workers each catering to one taluka (block)
Adding some health care activities	Doing blood sugar and blood pressure checks of the patients at all the outpatient clinics and in diagnostic eye camps.

Extracted from draft case prepared by Prof. Saswat Biswas & Prof. Satyendra Pande in January 22