Impact Practice
by CSRBOX

ADITYA BIRLA
EMIL

Impact Assessment Report

Providing Various Medical Instruments for the Treatment of Poor Patients

Certificate

This is to certify that the Impact Assessment report titled: **'Providing Various Medical Instruments for the Treatment of Poor Patients'** is an original study conducted by CSRBOX and is submitted to Essel Mining & Industries Limited, a part of Aditya Birla Group.

The Impact Assessment Study has been conducted as per the requirements of the Companies Act, 2013 and the Companies (Corporate Social Responsibility Policy) Rules, 2014, as amended, and is compliant with the requirements of the law.

This study presents findings by CSRBOX, derived from reviewing secondary sources and conducting primary-level interactions. CSRBOX developed and implemented the impact assessment framework in alignment with the project's objectives and indicators.

Digital Signature

Bhomik Shah

Founder and CEO, CSRBOX

Disclaimer

- The Impact Assessment Study has been conducted by the requirements laid out in the Companies Act, 2013 and the Companies (Corporate Social Responsibility Policy) Rules, 2014, as amended, ensuring compliance with the applicable legal requirements.
- This report shall be disclosed to those authorized in its entirety only without removing the disclaimers. CSRBOX has not performed an audit and does not express an opinion or any other form of assurance. Further, comments in our report are not intended, nor should they be interpreted as legal advice or opinion.
- This report contains an analysis by CSRBOX considering the publications available from secondary sources and inputs gathered through interactions with the leadership team of Essel Mining & Industries Ltd, Aditya Birla Sankara Nethralaya project beneficiaries, and various knowledge partners. While the information obtained from the public domain has not been verified for authenticity, CSRBOX has taken due care to obtain information from sources generally considered to be reliable.
- In preparing this report, CSRBOX has used and relied on data, material gathered through the internet, research reports, and discussions with personnel within CSRBOX as well as personnel in related industries.

With Specific to Impact Assessment of Providing Various Medical Instruments for treatment of Poor Patients Program under Essel Mining & Industries Ltd. (FY2022-23):

- CSRBOX has neither conducted an audit or due diligence nor validated the financial statements and projections provided by Essel Mining & Industries Ltd.
- Wherever information was not available in the public domain, suitable assumptions were made to extrapolate values for the same.
- CSRBOX must emphasize that realizing the advantages/enhancements resulting from the recommendations set out within this report (based on secondary sources), is dependent on ongoing validity of the underlying assumptions. The assumptions will need to be reviewed and revised to reflect such changes in business trends, regulatory requirements, or the direction of the business as further clarity emerges. CSRBOX accepts no responsibility for the realization of the projected benefits.
- The premise of an impact assessment is 'the objectives' of the project along with output and outcome indicators pre-set by the program design and implementation team. CSRBOX's impact assessment framework was designed and executed in alignment with those objectives and indicators.

Contents

Table of Figures

Table of Images

Abbreviations

Sr. No.	Abbreviation	Full Form
1.	EMIL	Essel Mining and Industries Limited
2.	CSR	Corporate Social Responsibility
3.	OCT-A	Optical Coherence Tomography Angiography
4.	FFA	Fluorescence fundus Angiography
5.	COP	Computerized Optical Photography
6.	NHP	National Health Policy
7.	NPCB&VI	National Programme for Control of Blindness and Visual Impairment

Executive Summary

Background

Essel Mining & Industries Ltd. (EMIL) is a part of Aditya Birla group and actively engages with local communities to enhance societal well-being. As a responsible corporate organisation, EMIL undertakes a wide range of enriching activities and collaborates with community organisations to build a more equitable society. They provide resources to community stakeholders through awareness campaigns, capacity-building initiatives, tools, and infrastructural support. Connecting with marginalised communities is central to EMIL's core values. They embrace the principle of trusteeship, prioritising the well-being of underserved populations over business interests. Their CSR activities are dedicated to improving the quality of life in rural communities and aim to positively impact their lives.

Project Details

The Providing Various Medical Instruments for the Treatment of Poor Patients programme was funded by Essel Mining and Industries Ltd in 2023 in which high-end equipment includes the installation of Cirrus 6000 Angioplex and Clarus 700 Ultra-wide Field Fundus Camera in Aditya Birla Sankara Nethralaya, Kolkata. The project goal was to provide access to facilitate the provision of advanced medical instruments and technology, enabling effective diagnosis and treatment of retinal disorders.

Alignment with SDG Goals

Alignment with BRSR Principles

ESG Principle	Alignment with the Project
5	Businesses should respect and promote human rights.
8	Businesses should promote inclusive growth and equitable development.

Alignment with National Priorities

- National Health Policy 2017
- Ayushman Bharat Scheme
- National Programme for Control of Blindness and Visual Impairment (NPCB&VI)

Alignment with CSR Policy

Section 135 (i)	Eradicating hunger, poverty and malnutrition, 2 [promoting health care including preventive health] and sanitation 3 [Including contribution to the Swatch Bharat Kosh set up by the Central Government for the promotion of sanitation] and making available safe drinking water;

Impact Highlights

During the impact assessment, the study team developed an evaluation matrix based on appropriate parameters. The impact of this project was evaluated based on OECD DAC Framework components: Relevance, Coherence, Effectiveness, Efficiency, Impact, and Sustainability.

Relevance

- **76% patients availing services belong to West Bengal.**
- Diagnostic services availed by **58% Male and 42% Females**.
- **58% patients** faced issue of **lack of availability.**
- **66% somewhat dependent** on others for daily activities.

Coherence

- **Alignment with National Health Policy 2017.**
- **Alignment with National Programme for Control for Blindness and Visual Impairment.**
- **Alignment with Ayushman Bharat Scheme.**

Effectiveness

- **100 % patients reporting very comfortable** with the diagnostic process.
- **58% patients received the treatment free of cost.**
- **50 % patients** aware about the installation of the diagnostic equipment at the hospital.

Efficiency

- **59%** patients travel the distance up to 50 km
- Procedure explanation to **67% of patients by doctors and 17% by nurse**
- **84% patients reported completing the test in 5-10 mins which previously tool 15-30 minutes**
- **67% of patients** rated the diagnostic services as highly satisfied with the diagnostic services

Impact

- **4500+ Diagnostic tests** conducted in year 2023-24
- **Catering Patients over 6+ States and 70 + cities** in India
- **92%patients report improved diagnostic services** post installation of devices
- **67 % patients reporting Rating 5 and 33% patients reporting rating 4 for diagnostic services**

Chapter 1

Project Background and Overview

Chapter 1: Programme Overview and CSR Initiatives of Essel Mining & Industries Limited

1.1 CSR Initiatives of Essel Mining & Industries Limited

Essel Mining & Industries Limited (EMIL), a distinguished member of the Aditya Birla Group, is a prominent figure in the industrial realm, celebrated for its steadfast dedication to excellence and sustainability. Benefiting from a rich heritage of over five decades marked by innovative ventures and ethical business practices, EMIL boasts a diverse portfolio spanning mining, infrastructure development, and related sectors. With an unwavering commitment to innovation and efficiency, EMIL maintains rigorous environmental standards and prioritises corporate social responsibility.

EMIL is dedicated to enhancing social and economic progress in communities, especially those from vulnerable backgrounds. Driven by a vision to generate lasting value for all stakeholders, EMIL is deeply committed to promoting economic prosperity, societal advancement, and environmental welfare throughout its operations. The company's commitment to corporate social responsibility is evident through initiatives spanning five key thematic areas, strategically implemented across its operational regions

EMIL is dedicated to enhancing social and economic progress in communities, especially those from vulnerable backgrounds. The company's commitment to corporate social responsibility is evident through initiatives spanning five key thematic areas, strategically implemented across its operational regions.[1]-

Healthcare

To render quality healthcare facilities to people living in the villages and elsewhere through a range of initiatives, including hospitals, primary healthcare centres, mother and childcare projects, and immunisation programmes.

Education

To spark the desire for learning and knowledge at every stage.

Sustainable Livelihood

To provide livelihood in a locally appropriate and environmentally sustainable manner.

Infrastructure Development

To set up essential services that form the foundation of sustainable development

Social Change

To advocate and support Gender equality, espousing basic moral values, run awareness program on antisocial issues.

[1] https://www.esselmining.com/wp-content/uploads/2022/09/csr-policy.pdf

1.2 Programme Overview

Essel Mining & Industries Limited (EMIL) has embarked on a significant Corporate Social Responsibility (CSR) titled **Providing Various Medical Instruments for the Treatment of Poor Patients**. This programme, in collaboration with **Aditya Birla Sankara Nethralaya**, Kolkata, West Bengal (Unit of Medical Research Foundation, Chennai), focuses on improving eye care services for underserved communities. As part of the initiative, two advanced diagnostic devices – the Cirrus 6000 Angioplex and the **Clarus 700 Ultrawide Field Fundus Camera** – have been provided to enhance the hospital's capacity to diagnose and treat retinal and vascular conditions effectively.

These advanced technologies enable accurate and timely diagnosis of critical eye conditions, reduce patient waiting times, and improve accessibility for marginalised populations. EMIL's partnership with Aditya Birla Sankara Nethralaya demonstrates its commitment to addressing healthcare disparities by ensuring that economically disadvantaged individuals have access to quality eye care services. This initiative not only improves patient outcomes by reducing preventable blindness but also strengthens the hospital's reputation as a centre of excellence in eye care, fostering trust and satisfaction among beneficiaries.

The Providing Various Medical Instruments for the Treatment of Poor Patients for the year 2022-23 programme was implemented keeping in mind the following broad objectives:

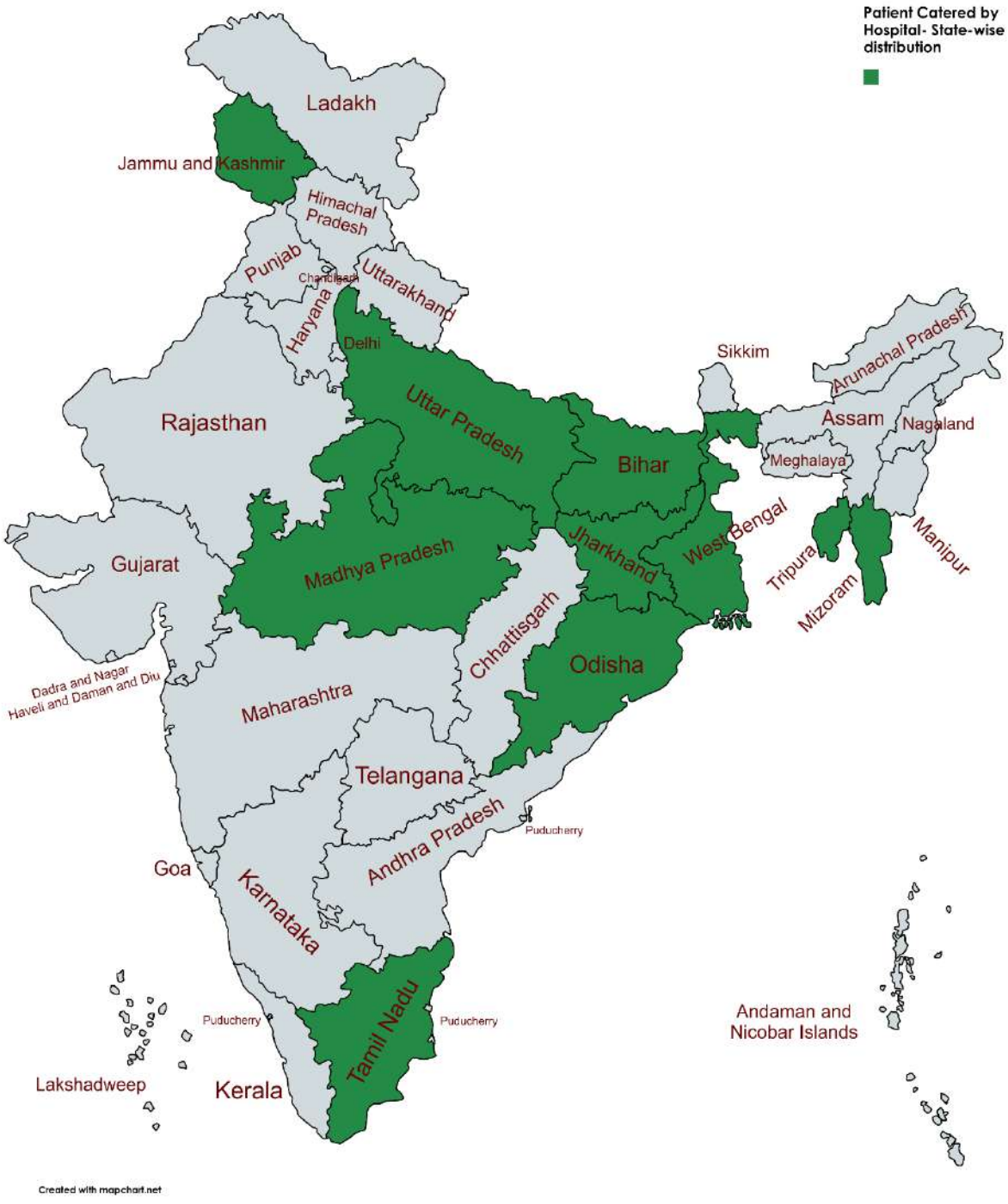
1. Facilitate early detection of eye diseases through advanced equipment
2. Provide underserved communities access to high-quality diagnostic services
3. Train hospital staff to efficiently use, maintain, and troubleshoot advanced medical devices
4. Reduce patient waiting times and minimise diagnostic errors
5. Reduce preventable blindness and improve beneficiaries' quality of life
6. Offer timely, reliable, and advanced care to build confidence in the hospital's services

1.3 Programme Activities

Installation and Integration of Advanced Diagnostic Equipment	• Installation of cutting-edge technologies like Cirrus 6000 Angioplex and Cirrus 700 Ultrawide Field Fundus Camera. • Ensuring seamless integration of these devices into the hospital's existing diagnostic and treatment
Capacity Building and Training	• Conducting hands-on training sessions for hospital staff to efficiently operate the new equipment. • Enhancing staff proficiency in troubleshooting and maintaining the devices.
Maintenance and Upkeep	• Establishing regular preventive maintenance schedules to minimise downtime. • Ensuring timely updates and support to maximise equipment utility.
Delivering Social Impact	• Preventing avoidable blindness and enhancing treatment outcomes. • Improving the overall quality of life and socioeconomic independence for beneficiaries.
Improving Patient Access	• Providing underserved patients with access to advanced diagnostic services. • Reducing travel and wait times for economically disadvantaged individuals.

Patient Distribution: Aditya Birla Sankara Nethralaya Service Reach

The Below map indicates the regional distribution of patients catered after installation of in year 2023-24.



Chapter 2

Design & Approach of the Impact Assessment

Chapter 2: Design and Approach for Impact Assessment

2.1 Objectives of the study:

The Essel Mining & Industries Limited-CSR team formed a strategic partnership with Aditya Birla Sankara Nethralaya to implement the "Providing Various Medical Instruments for the Treatment of Poor Patients" initiative across West Bengal. Recognising the importance of evaluating the impact of their investment, the EMIL-CSR team has commissioned a comprehensive impact assessment study for this project.

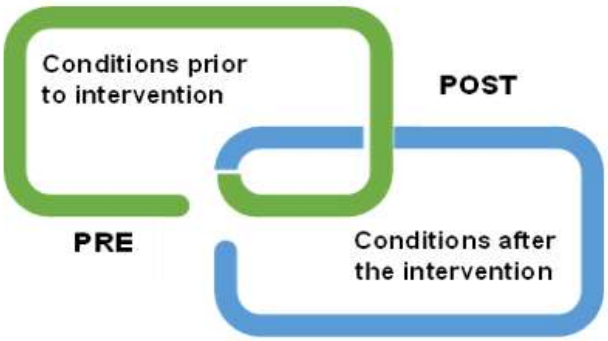
The objectives of the impact assessment study are as follows:

- To evaluate the impact of advanced diagnostic equipment on eye care outcomes for underserved patients
- To assess improvements in early diagnosis and treatment of retinal and vascular conditions
- To gather qualitative and quantitative feedback from stakeholders on equipment usage and performance
- To identify challenges during installation and operation to optimise future interventions.
- To document success stories and provide actionable recommendations for sustainability and scalability

2.2 Evaluation & Framework Indicators

Evaluation Approach

The study's objectives and primary areas of investigation directed the development of the evaluation, with a central focus on learning. In this segment, CSRBOX outlines its strategy for crafting and implementing a rigorous, adaptable, and outcome-driven evaluation framework/design.



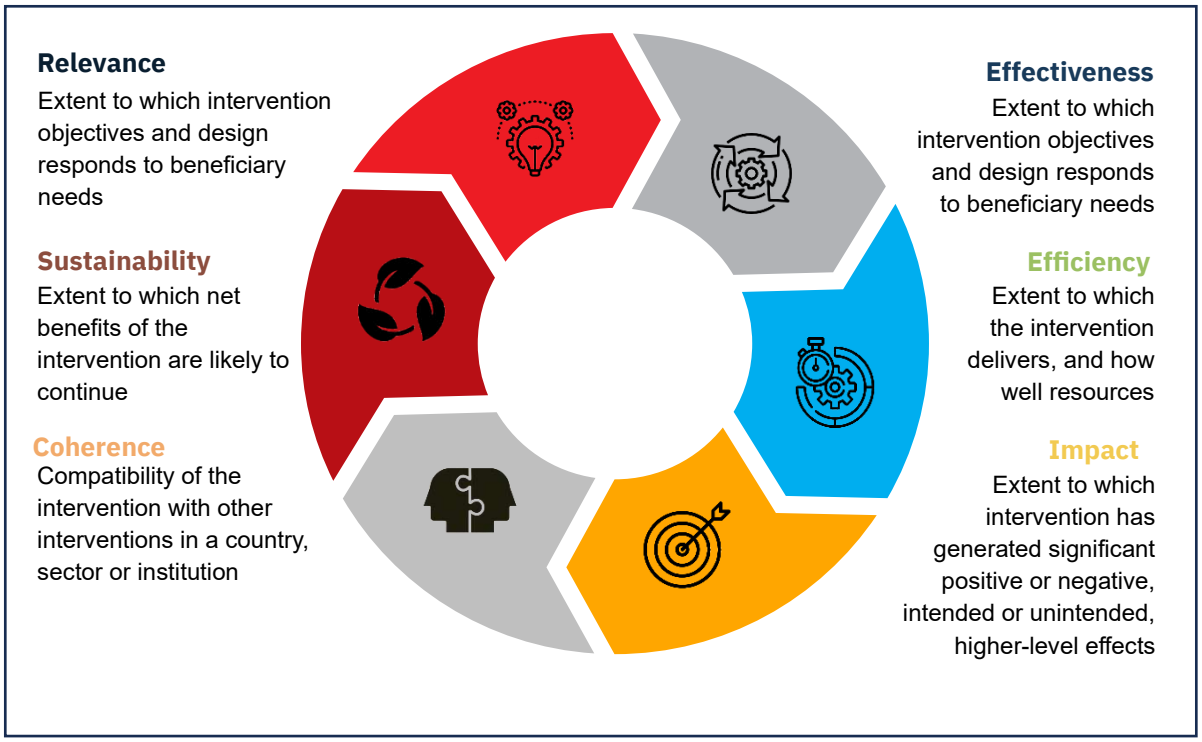
To measure the impact of the project, a pre-post-project evaluation approach was adopted for the study. This approach

relied on the respondents' recollection ability. With this approach, beneficiaries were queried about their conditions before and after the project intervention. The disparity aided in comprehending the project's contribution to enhancing the intended beneficiary condition.

This approach, at best, could comment on the contribution of the project to improving living standards, though it might not be able to attribute the entire change to the project. Other external factors might also have played a role in bringing positive changes along with the project. Hence, contribution was assessed, but attribution might not have been entirely assigned to the project.

Framework

Given the study's objectives to determine the project's effectiveness, efficiency, impact created and sustainability, the evaluation has used the **OECD-DAC Framework**. Using the criteria of the OECD-DAC framework, the evaluation has assessed EMIL's contribution to the results while keeping in mind the multiplicity of factors that may be affecting the overall outcome. The social impact assessment hinges on the following pillars:

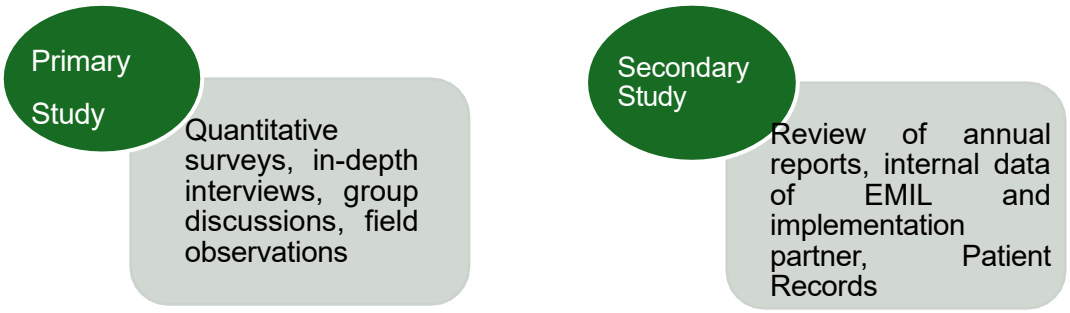


The impact assessment has aligned itself with the impact parameters as per the criteria mentioned in the Terms of Reference. The following parameters are prioritised to satisfy the criteria of the Impact Assessment – **Relevance, Coherence, Effectiveness, Efficiency, Impact, and Sustainability.**

Framework Pillars	Information Indicators
Relevance	• Assessed the socioeconomic status of the beneficiaries. • Evaluated access to advanced medical services for patients in rural areas. • Analysed the affordability of services due to lower costs.
Coherence	• Assessed alignment with the National Programme for Control of Blindness and Vision Impairment.
Effectiveness	• Patients reported receiving accurate diagnoses through the new diagnostic procedures. • Test reports were received by patients promptly. • Increased comfort and reduced diagnostic errors due to improved equipment. • Reduced administrative load related to diagnostic procedures. • Improved confidence in using the new diagnostic equipment. • Time taken for diagnostic tests decreased compared to previous equipment. • Increased number of patients tested by each optometrist per day. • Improved quality and clarity of diagnostic images.
Efficiency	• Reduced distance travelled by patients for diagnostic tests. • Decreased average waiting time for diagnostic tests. • Reduced time spent per patient on diagnostic procedures. • Improved satisfaction with diagnostic services. • Increased number of procedures successfully conducted using the new equipment. • Reduced downtime and maintenance issues impacting workflow. • Reliable and efficient diagnostic equipment
Impact	• Notable improvement in eye health following diagnosis and treatment.
Sustainability	• Adherence to preventive maintenance schedules for the new equipment. • Fewer maintenance issues were reported compared to scheduled preventive visits.

2.3 Sampling

A two-pronged approach to data collection and review was been chosen for the assessment. The secondary data was obtained through a literature review, while the primary data was collected from qualitative and quantitative data collection methods. This methodology enabled us to gather valuable insights related to the impact from a holistic, 360-degree perspective that includes all pertinent stakeholders necessary for the study.



The figure above illustrates the study approach used in data collection and review. The secondary study includes a review of annual reports, internal data, monitoring reports, government data & reports, and other studies and research by renowned organisations available in the public domain to draw insights into the situation of the area. The primary study comprised qualitative and quantitative approaches to data collection and analysis. The qualitative aspects included In-depth Interviews (IDIs), Key Informant Interview and observation from the study area.

2.3.1 Quantitative Sampling

The sampling has been carried out on the beneficiary level. The sample was calculated in a statistically significant way. Any impact reflected by the sample can then be safely assumed to be a reflection of the entire population.

State	Location	Stakeholders	Sample Proposed	Sample Achieved	Mode of Data Collection
West Bengal	Kolkata	Patients	10	12	On-field data collection

2.3.2 Qualitative Sampling

Apart from the quantitative data collection methods, qualitative data was also collected. The list of the secondary stakeholders has been mentioned below: -

Sl. No.	Stakeholder	Type of Interaction	Mode of Data Collection	No. of Interactions
1	Medical Instrument technical support / Trainers	In-Depth Interviews	Virtual	1
2	Nurses	In-Depth Interviews		2
3	Ophthalmologists	In-Depth Interviews		3
4	Optometrist	In-Depth Interviews		4
5	Technician	In-Depth Interviews		2

6	Biomedical Engineer	In-Depth Interviews		1
7	IT support staff	In-Depth Interviews		1
8	Medical Superintendent	Key Informant Interview		1
9	Implementation Partner (Medical Research Foundation)	Key Informant Interview		1
10	CSR Team	Key Informant Interview		1
	Total			**17**

Patient records from April 2023 to March 2024 were also analysed, capturing data on the types and frequency of tests conducted, patient demographics, and diagnosis trends post-installation of new equipment, including advanced diagnostic systems like the Cirrus 6000 Angioplex and Clarus Ultra-Widefield Fundus Camera.

2.4 Challenges Encountered While Conducting the Study

The data collection tools relied on beneficiaries' ability to recall their experiences with the new diagnostic equipment. However, the challenge was that only patients who had received treatment with the previous diagnostic devices were able to compare the changes brought by the new equipment. The number of such patients was relatively small, limiting the scope of meaningful comparisons and impacting the depth of data collected.

2.5 Ethical Practices for Consideration

- **Ethical Considerations in Data Collection**: During the data collection for this project, the team adhered to ethical standards by ensuring that informed consent was obtained from all participants before gathering their feedback. Respondents were thoroughly briefed on the purpose of the study, the expected outcomes, and the manner in which their responses would be accurately recorded.
- **Sensitivity in Handling Personal Information**: As the data collection process involved gathering sensitive patient information, the team took special care to handle all data with respect and discretion. A sensitisation session was held for all team members to ensure they followed the proper procedures when interacting with respondents and collecting information.
- **Assurance of Confidentiality**: Respondents were assured that their personal information would remain confidential, and all data collected would only be used for the purpose of the impact assessment study, ensuring privacy and trust throughout the process.

2.6 Theory of Change

<table>
<tr><th>Activities</th><th>*Outputs</th><th>Outcomes</th><th>Impact</th></tr>
<tr><td>Installation of Cirrus 6000 Angioplex</td><td>• 116 patients diagnosed per month since installation.
• 1384 patients accurately diagnosed with retinal and vascular conditions.
• 236 hours saved in the diagnostics
• 1384 patients had improved vision after intervention.</td><td rowspan="2">• Improved accessibility of the patients to advanced diagnostic services.
• Reduced cases of preventable blindness.
• Increased patient turnover rate due to faster diagnostics.
• Enhanced treatment outcomes and reduced cases of preventable blindness.
• Growth in the hospital's reputation as a centre of excellence for eye care.</td><td rowspan="3">Significant reduction in preventable blindness among economically disadvantaged individuals.

Improved quality of life and socioeconomic independence for beneficiaries.</td></tr>
<tr><td>Installation of Clarus 700 Ultrawide field Fundus camera</td><td>• 2285 Patients diagnosed using Ultrawide field fundus camera per month since installation
• 604 hours saved in the diagnostics
• 2285 patients accurately diagnosed</td></tr>
<tr><td>Training and Capacity Building</td><td>• 2 optometrists and 2 Ophthalmologists trained to operate the equipment.
• 1-day training conducted
• 3 optometrists successfully utilising the equipment
• All staff satisfied with the training</td><td>• Improved proficiency in operating the equipment.
• Reduction in errors during diagnostic procedures.
• Enhanced staff ability to perform basic troubleshooting and increase efficiency.</td></tr>
</table>

Maintenance and updates to the device	● 2 preventive maintenances yearly.	● Increased frequency of maintenance visits completed on schedule. ● Improved device uptime and reduced operational disruptions.	

*- **Note:** The data marked with an (*) has been sourced from the hospital records provided for the fiscal year 2023-24.

Chapter 3

Impact Findings

Chapter 3: Impact Findings

Aditya Birla Shankara Nethralaya was provided by EMIL with the Cirrus 6000 Angioplex and Clarus 700 Ultra-Widefield Fundus Camera to enhance its ability to diagnose and treat eye conditions, especially those related to the retina. These advanced machines are part of the hospital's effort to offer the best care to its patients by using the latest technology in eye health.

Cirrus 6000 Angioplex

During qualitative interviews with ophthalmologists, experts highlighted the advanced capabilities of the Cirrus 6000 Angioplex in enhancing retinal diagnostics. They emphasised that this cutting-edge machine utilises Optical Coherence Tomography (OCT) to capture high-resolution images of the retina and its blood vessels. The Angioplex feature was particularly noted for its ability to visualise tiny retinal blood vessels, aiding in the diagnosis and monitoring of conditions such as diabetic retinopathy, macular degeneration, and retinal vein occlusion.

Ophthalmologists further explained that OCT-A (Optical Coherence Tomography Angiography) plays a crucial role in non-invasive imaging by mapping blood flow in the retina. Unlike traditional OCT, which provides structural images, OCT-A detects blood cell movement within vessels, enabling the identification of blockages, leaks, or abnormal blood vessel growth. This detailed imaging significantly improves early detection and management of retinal conditions, reducing the need for invasive procedures and enhancing patient outcomes. The machine’s rapid imaging capabilities were also highlighted as a key advantage, minimising patient discomfort while ensuring clear and accurate diagnostic results.

Features of Cirrus 6000 Angioplex:

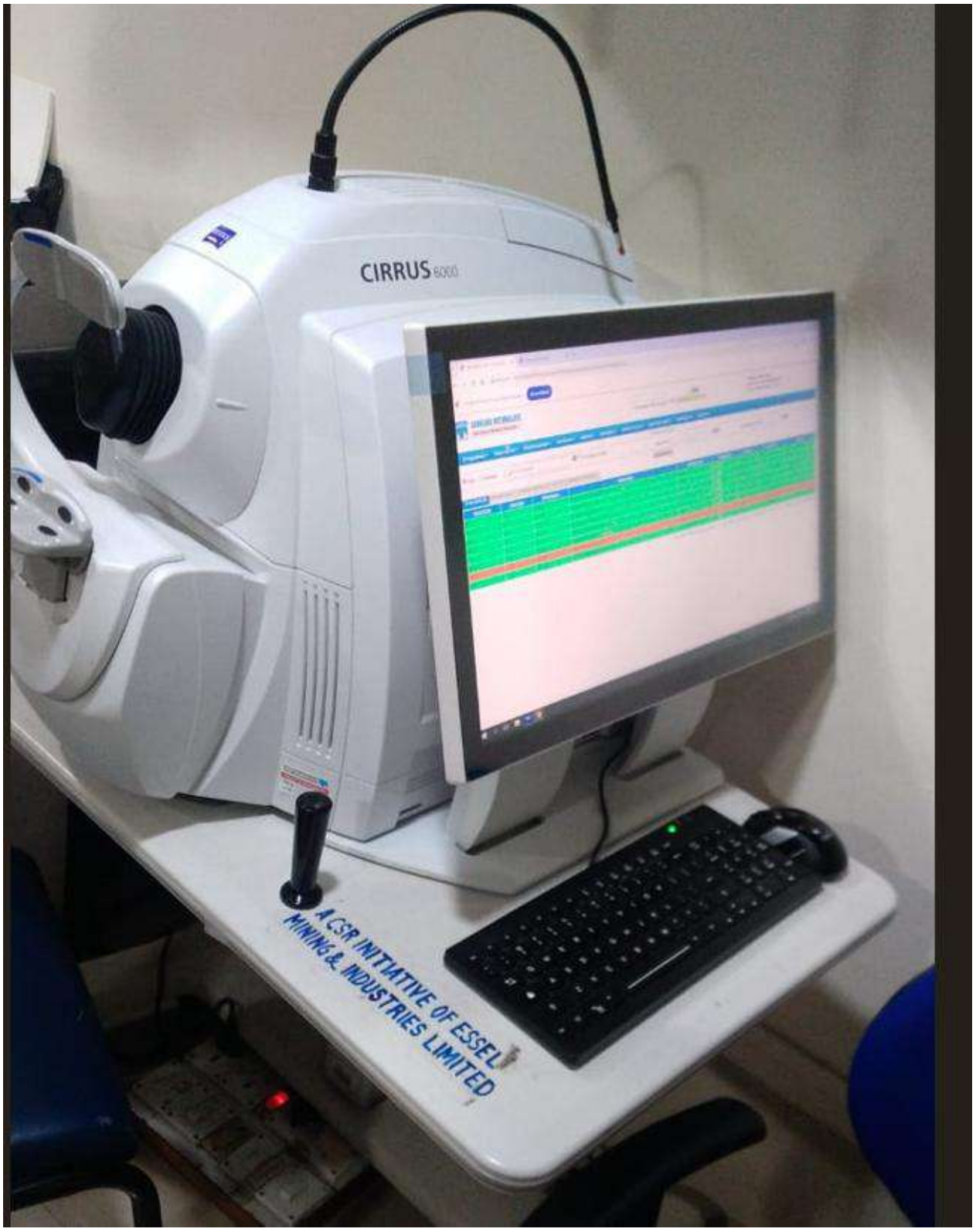


Image 1.Cirrus 6000 Angioplex

Clarus 700 Ultra-Widefield Fundus Camera

During qualitative interviews with ophthalmologists, experts highlighted the significant benefits of the **Clarus Ultra-Widefield Fundus Camera** in enhancing retinal diagnostics. This advanced imaging system captures high-resolution, ultra-wide images of the retina in a single scan, allowing doctors to examine peripheral areas that are often difficult to assess with standard imaging equipment. By providing a more comprehensive view, the Clarus camera aids in the early detection and monitoring of conditions such as diabetic retinopathy, macular degeneration, and glaucoma. Experts emphasised that the improved imaging quality helps in better decision-making for treatment plans and tracking disease progression more effectively.

Ophthalmologists also discussed the role of **fluorescence fundus Angiography (FFA)** in diagnosing retinal vascular conditions. This imaging technique provides a detailed, broader degree widefield view of the retina, allowing for a thorough analysis of vascular abnormalities such as leakage, blockages, and retinal damage caused by conditions like diabetic retinopathy and macular edema. By injecting fluorescein dye into the bloodstream, the camera captures high-resolution images of retinal blood vessels using specialised filters, enabling early and accurate diagnosis of vision-threatening conditions.

Additionally, experts highlighted the importance of the **COP test (Contact Ophthalmic Photography) as a critical diagnostic tool for assessing overall eye health**. This test captures high-resolution images of the retina and other ocular structures, playing a key role in detecting and monitoring conditions such as diabetic retinopathy, macular degeneration, and glaucoma. The ability to obtain detailed images through these advanced imaging techniques significantly enhances diagnostic accuracy**, improves treatment decisions, and ultimately leads to better patient outcomes.**

Features of Cirrus 700 Ultrawide Field Fundus Camera:

Image 2.Clarus 700 Ultrawide field fundus Camera

The following report section indicates key findings and insights drawn from the impact assessment study based on field interactions and the **OECD DAC** standard parameters outlined in the study framework. Insights were drawn by adopting a 360-degree approach to data collection by gathering data from the quantitative and qualitative methods by engaging with different programme stakeholders.

3.1 Relevance

The following section the relevance and necessity of the intervention, detailing socio-demographic indicators and other factors that highlight the need for support: The examination of these factors helps in understanding the impact of the project**.**

76% patients availing services belong to West Bengal.

Diagnostic services availed by **58% Male and 42% Females**.

58% patients faced issue of **lack of availability to the facility and equipment** in accessing Ophthalmic services preintervention.

17% patients completely dependent and **67% somewhat dependent** on others for daily activities

3.1.1 Beneficiary Profile

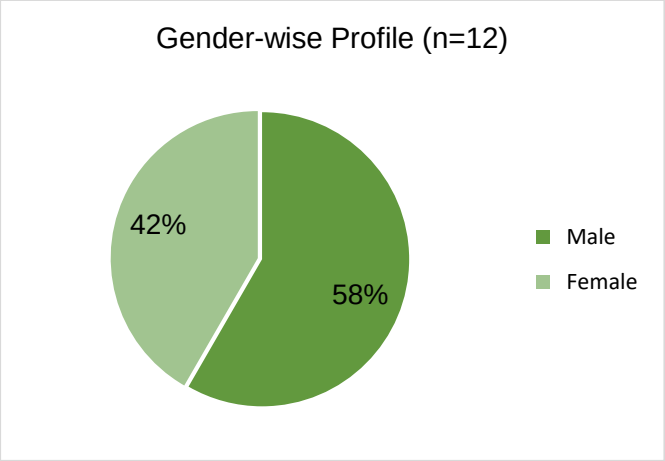


Figure 1.Gender Profile of Beneficiaries

The **gender distribution** of patients accessing eye care services at the facility showed that **58% are male** and **42% are female**, indicating a higher proportion of male patients seeking treatment. This disparity may suggest differences in healthcare-seeking behaviour, where men might prioritise or have better access to medical care compared to women. Societal factors, financial constraints, or awareness gaps could also contribute to fewer women seeking timely eye complaints.

3.1.2 State-wise Patient Distribution

The state-wise patient distribution at Sankara Nethralaya, based on field survey responses, reveals a significant concentration of patients from West Bengal, accounting for 58% of total visits, as indicated in **Fig 2**. This high percentage highlights the hospital's strong presence and reputation in the state.

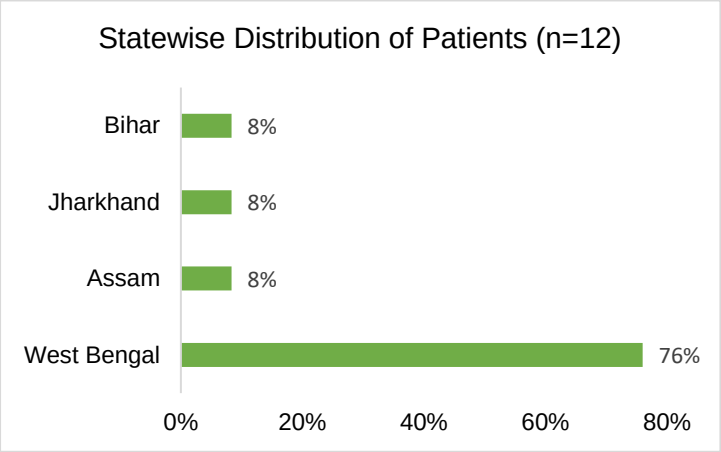


Figure 2.State-wise Patient distribution

The field survey provided direct insights from patients, helping to understand regional healthcare access patterns and preferences. These findings could be leveraged for targeted outreach

initiatives and potential partnerships to further enhance accessibility and patient care in West Bengal while, **Assam**, **Jharkhand**, and **Bihar** each contribute **8% of the patient visits**, indicating potential gaps in awareness, accessibility, or healthcare infrastructure in these regions.

3.1.3 Region-wise Patient Distribution

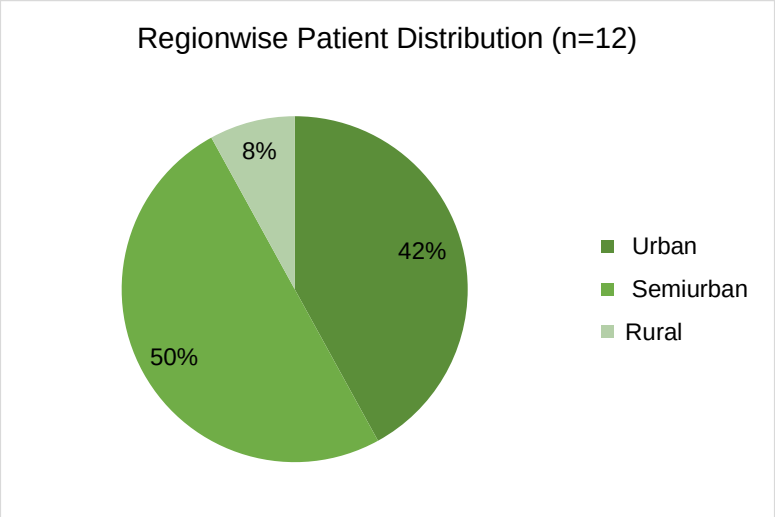


Figure 3.Region-wise patient distribution

The patient distribution data based on geographical location reveals notable disparities in access to treatment at Sankara Nethralaya. A significant **50% of the patients come from semiurban areas**, making them the largest group, followed by **42% from urban areas.** This suggests that the centre is well-accessible to individuals living in urban and semi-urban regions, where healthcare infrastructure is generally stronger.

Only **8% of patients are from rural areas**, highlighting a significant disparity in healthcare access. Challenges such as transportation difficulties, lack of awareness, financial constraints, and limited access to specialised care contribute to this low representation. To bridge this gap, Aditya Birla Sankara Nethralaya has implemented outreach programmes, including health camps, mobile health services, and partnerships with local healthcare providers.
Additionally, increasing awareness and reducing logistical barriers in rural and semi-urban regions can promote more equitable access to eye care services across diverse geographical areas.

3.1.4 Patient Distribution Based on Symptoms

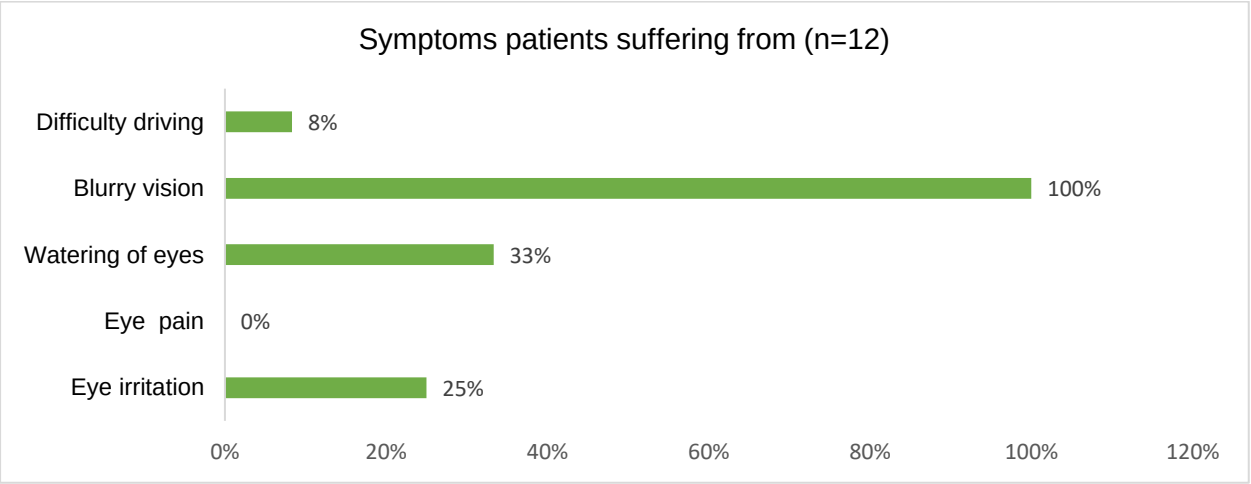


Figure 4. Patient Distribution based on Symptoms

Aditya Birla Sankara Nethralaya provides a wide variety of specialised ophthalmic services, catering to diverse vision-related conditions and ensuring comprehensive eye care. The majority of patients reported **blurry vision (100%)** as the most common symptom, followed by **watering (33%) and irritation (25%). Minimal reports of driving difficulty (8%) suggest a focus on core vision problems**. Early intervention, awareness campaigns, and routine check-ups can enhance detection and treatment, addressing causes like refractive errors and cataracts effectively.

3.1.5 Duration of Symptoms

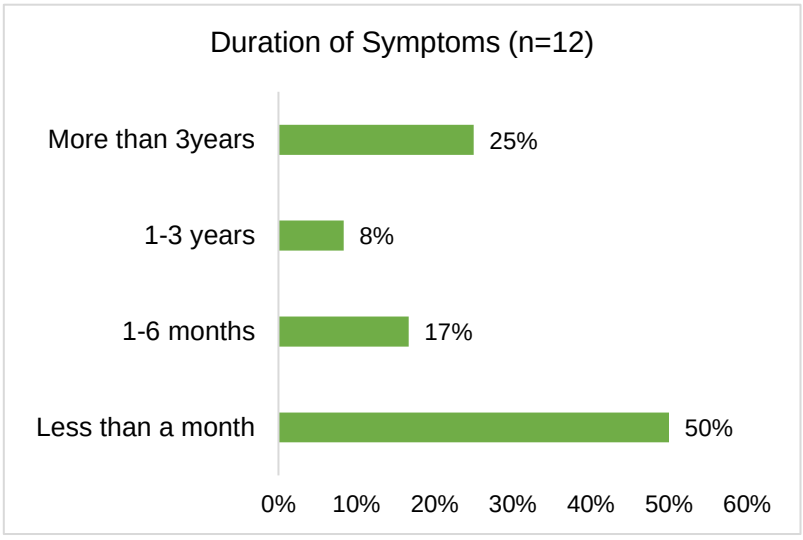


Figure 5.Duration of Symptoms

Access to timely eye care is essential in preventing vision impairment and ensuring better patient outcomes. Many individuals delay seeking medical attention for eye problems due to a lack of awareness, accessibility challenges, or financial constraints. Early diagnosis plays a crucial role in managing conditions like cataracts, glaucoma, and retinal disorders before they lead to irreversible damage.

At Sankara Nethralaya, patient data reveals a varied timeline in symptom progression and healthcare-seeking behaviour. **50% per cent of patients experienced symptoms for less**

than a month, indicating that a significant portion sought treatment soon after noticing vision issues. However, **25% had symptoms for more than three years,** suggesting delays in seeking medical attention. Additionally, **17% experienced symptoms for 1-6 months, and 8% for 1-3 years,** reflecting different patterns in seeking eye care **(Fig 5)**.
This underscores the need for stronger awareness initiatives emphasising the importance of early diagnosis and regular eye check-ups to prevent worsening conditions. Strengthening outreach efforts, particularly for those with long-standing symptoms, could help reduce delays in seeking treatment and improve overall patient outcomes.

3.1.6 Challenges in Accessing Ophthalmic Services – Before Intervention

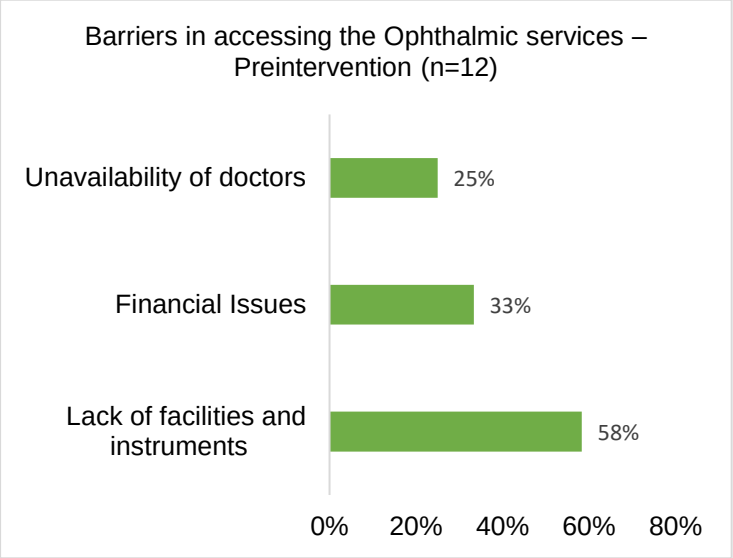


Figure 6.Barriers to accessing eyecare services

Patients usually face various significant challenges in accessing ophthalmic care services. The majority of the patients faced a **lack of facilities** and instruments **(58%)** at the regional level as indicated in **Fig 6**. The absence of necessary diagnostic tools and medical equipment prevents healthcare providers from accurately diagnosing or effectively treating patients' eye conditions. This results in delayed or misdiagnosed conditions, leading to worsened symptoms or irreversible damage over time.

Financial constraints (33%) were a significant barrier, causing many patients to delay or forgo treatment, leading to worsening eye conditions and higher long-term healthcare costs. Additionally, **the unavailability of doctors (25%)** at local healthcare facilities resulted in delayed diagnosis and treatment, forcing patients to seek care at higher-capacity centres. Addressing these issues through affordable treatment options, improved staffing, and telemedicine initiatives can enhance accessibility and ensure timely eye care for all.

3.1.7 Challenges Experienced Due to Eye Conditions

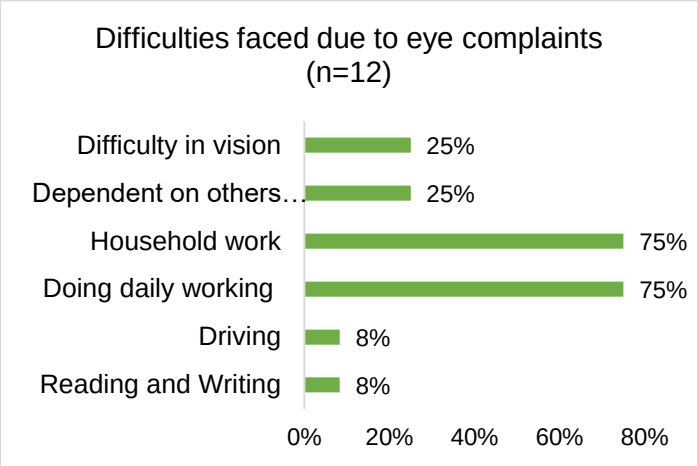


Figure 7.Difficulties faced due to eye complaints

Vision impairment can significantly affect a person's ability to lead an independent life, especially when it interferes with daily tasks. The most striking impact is seen in **75% of patients**, who struggled with performing essential work and household tasks due to their eye complaints indicated in **Fig 7**. This limitation makes activities like cleaning, cooking, and managing household chores challenging, ultimately reducing their quality of life and independence.

A quarter of **patients (25%)** relied on others for daily activities, highlighting severe vision impairment and the need for timely treatment. Another **25% faced general vision difficulties, impacting work and household tasks, while 8% struggled with specific activities like reading, writing, and driving**. These findings emphasise the importance of early intervention to restore independence and improve quality of life.

3.1.8 Impact of Eye Complaints on Patients

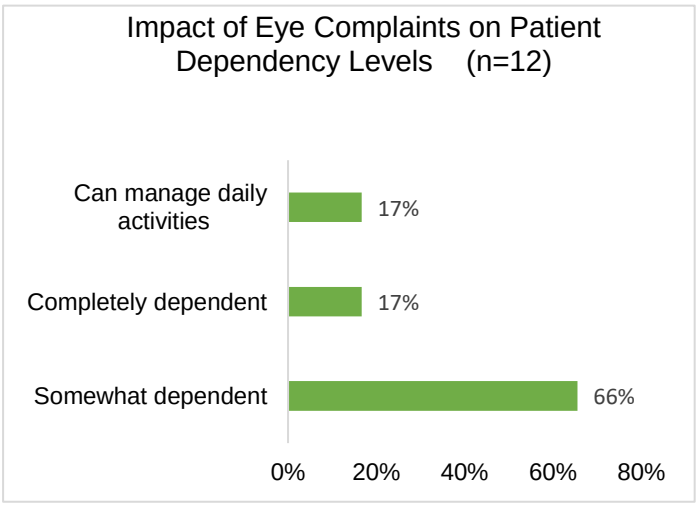


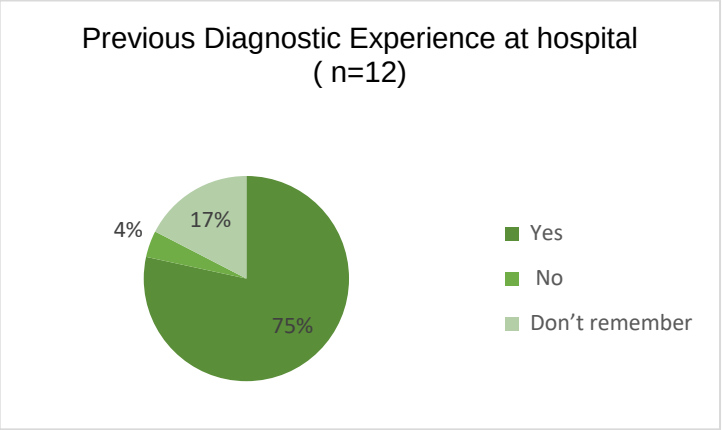
Figure 8.Impact of Eye Complaints of Patients Dependency

Vision impairments can greatly impact a person's ability to maintain independence and carry out daily tasks. The level of dependency on others for these activities is closely linked to the severity of the eye conditions. **Fig 8** shows that **66% of patients were somewhat dependent**, indicating that while their vision issues were not entirely disabling, they still had difficulty with tasks like reading, cooking, or driving. These patients could manage some activities with limited assistance.

While **17% were completely dependent**, the remaining **17% maintained independence**, likely due to mild impairments or effective adaptation with corrective measures like glasses or low-vision aids.

This connection between dependency and severity emphasises the need for timely treatment, as addressing vision problems can help reduce dependency and improve overall quality of life.

3.1.9 Diagnostic History at the Hospital

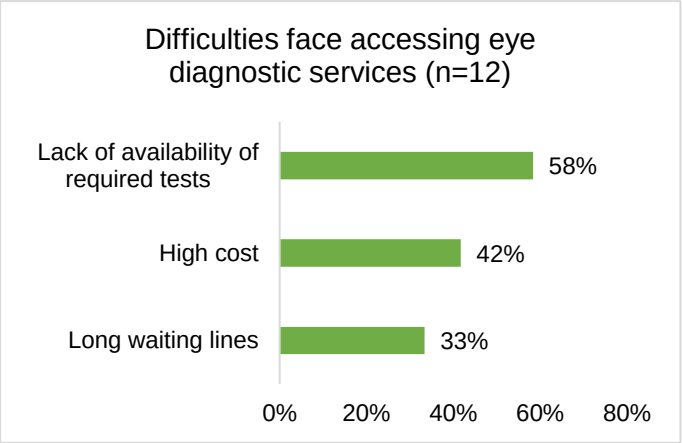


Access to prior healthcare plays a crucial role in addressing eye issues at the earliest stages. The previous diagnostic experience at Aditya Birla Sankara Nethralaya shows that **75% of patients** had sought medical attention for their eye problems before, indicating ongoing concerns or earlier visits for treatment. However, **4% of patients had no prior diagnostic experience**, suggesting they were visiting for the first time, potentially due to recent symptoms or limited access to healthcare facilities.

Figure 9.Previous Diagnostic Experience

Additionally, **17% of patients** did not remember their previous diagnostic experience, which may be attributed to factors such as memory issues, lack of clear communication with past healthcare providers, or missing documentation from prior visits.

3.1.10 Preintervention Diagnostic Challenges



Timely access to eye care is essential for effective treatment, yet many patients face significant barriers to receiving the care they need. Before intervention at the hospital, **58% of patients encountered difficulties due to the unavailability of necessary tests,** leading to delays in both diagnosis and treatment, which further complicated their conditions.

Figure 10.Difficulties faced in Accessing Eye Care services

Financial constraints also played a significant role, as **42% of patients reported high costs as a barrier, preventing them from affording essential tests or treatments, and forcing them to either delay or forgo care**. Additionally, **33% of patients experienced long waiting times for services, which further delayed their access to treatment and worsened their conditions.**

These challenges highlight the need for improvements in healthcare infrastructure, including better availability of diagnostic tests, reduced waiting times, and more affordable treatment options, to ensure that patients can receive timely and effective care.

3.1.11 Effect of Lack of Diagnostic Facilities

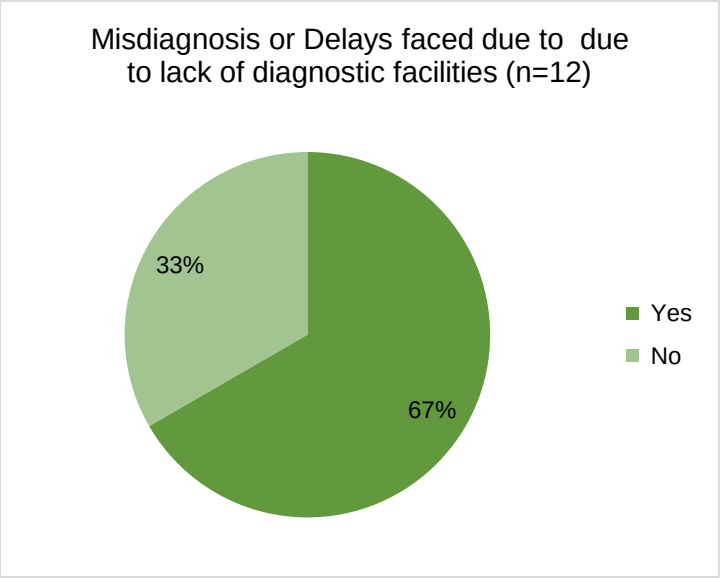


Figure 11. Effect of Lack of Diagnostic Facilities

A **significant 67% of patients reported experiencing unnecessary misdiagnosis and delays due to a lack of facilities**, pointing to limitations in equipment and resources within the healthcare system. These challenges likely contributed to diagnostic errors and delayed treatments, which could negatively impact patient outcomes. While, **33% of patients did not encounter such issues, suggesting that while some received proper care, the majority still faced difficulties**.

Strengthening the diagnostic infrastructure, ensuring the availability of advanced equipment, and optimising workflow efficiency can help minimise these problems, ultimately improving patient care and fostering greater trust in the healthcare system.

3.1.12 Duration of Previous Diagnostic Services

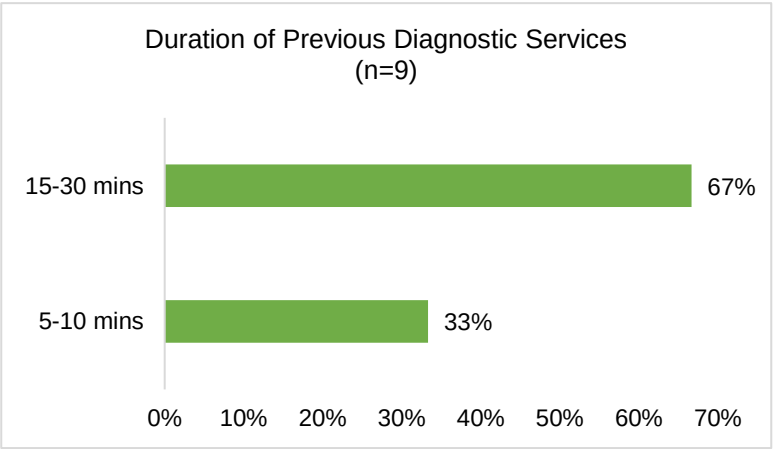


Figure 12.Duration of Previous Diagnostic Services

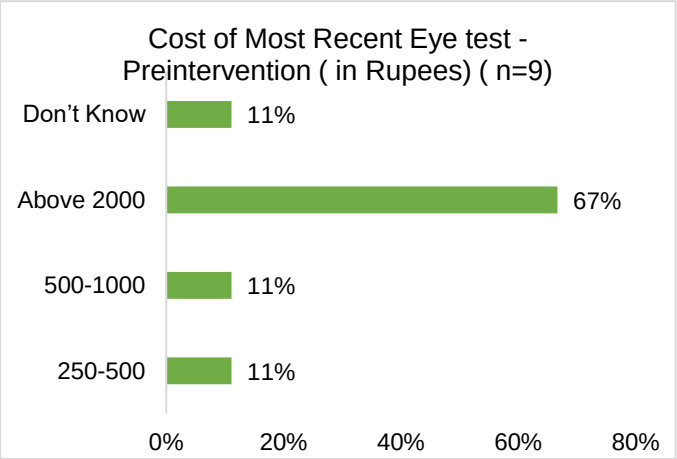
The data on **time taken for procedures with previous diagnostic services** shows that **67% of patients** underwent procedures lasting **15-30 minutes**, while **33%** completed theirs within **5-10 minutes**. For many patients, the **longer duration** could be attributed not only to factors such as multiple tests, manual processing, or inefficiencies in service delivery but also to the **discomfort associated with certain diagnostic procedures**.

Patients who experience discomfort during the procedure require additional time for preparation, adjustments, or breaks during the process, further extending the overall duration. This highlights the need to enhance diagnostic

procedures by improving efficiency, minimising patient discomfort, and streamlining workflows to ensure a smoother, more patient-friendly experience without compromising accuracy.

Qualitative interactions with hospital staff revealed that many patients faced delays in completing diagnostic tests on the same day, requiring them to schedule later appointments prior to the installation of the equipment. This led to delayed diagnoses and treatment, increased financial burden due to multiple visits, and heightened stress. Patients from remote areas often missed follow-ups, worsening health outcomes.

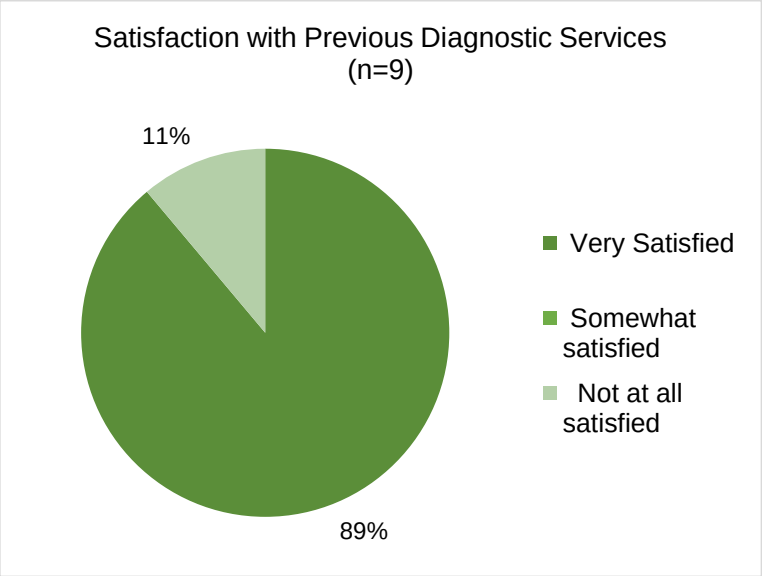
3.1.13 Cost of Most Recent Eye Test -Preintervention



The majority of patients, **67%**, paid **above ₹2000**, indicating that eye tests were largely expensive for most individuals. In contrast, only **11%** of patients reported paying between **₹250-500**, and another **11%** paid between **₹500-1000**, suggesting that lower-cost options were available but were not as common. Additionally, **11% of patients** were unsure about the cost, which could indicate a lack of transparency or reliance on external financial support.

Figure 13.Cost of Most Recent Eye test - Preintervention

3.1.14 Satisfaction with Previous Diagnostic Services



Patient satisfaction is a key indicator of the quality of healthcare services provided. A **significant 89% of patients reported being very satisfied with the diagnostic services in Fig 14**, indicating that most had a positive experience. However, **11% expressed complete dissatisfaction,** citing issues such as high costs, long wait times, discomfort during procedures, or inadequate equipment. Interestingly, no patients were somewhat satisfied, highlighting a distinct divide between those who had a fully positive experience and those who were dissatisfied**.**

Figure 14.Satisfaction with Previous Diagnostic Services

3.2 Coherence

The Coherence section of the report checks the alignment of the programme with other interventions in the country, i.e., with similar programmes which were being run by other institutions.

3.2.1 Alignment with SDG Goals

SDG Goal	SDG Target	Alignment
	**Ensure Healthy lives and promote well-being for all at all ages.** **3.4 By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being** **3.8 Achieve universal health coverage,** including financial risk protection**,** access to quality essential healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all.	Completely
	The hospital's **efforts to engage both male and female patients** in the diagnostic process contribute to **reducing gender disparities in healthcare.**	Partially
	The hospital's efforts to make **advanced diagnostic services** more accessible, particularly through **affordable pricing** and outreach to **underserved populations**, directly support **SDG 10**, which focuses on **reducing inequality** within and among countries. By providing **high-quality eye care**, the hospital helps bridge the gap between urban and rural populations, ensuring that individuals in remote areas also have access to cutting-edge diagnostic tools.	Completely

3.2.2 Alignment with BRSR Principles

ESG Principle	Alignment with the Project
5	Businesses should respect and promote human rights.
8	Businesses should promote inclusive growth and equitable development.

3.2.3 Alignment with National Priorities

Scheme Name	Alignment with the Project
National Health Policy (NHP) 2017	The **NHP 2017** emphasises the importance of access to quality healthcare services, particularly in addressing non-communicable diseases (NCDs) and promoting universal health coverage (UHC). The integration of these technologies directly supports the NHP's goal of reducing the burden of NCDs and promoting early detection and treatment.
National Programme for Control of Blindness and Visual Impairment (NPCB&VI)	This programme aims to **reduce the prevalence of blindness** and improve eye health services across the country. The **introduction of advanced diagnostic technologies** aligns with the goals of NPCB&VI by enhancing early detection of retinal diseases, which can lead to **preventable blindness**.
Ayushman Bharat Scheme	The **Ayushman Bharat Scheme**, which aims to provide **affordable healthcare to all**, is also aligned with the introduction of these **advanced diagnostic services**.

3.2.4 Alignment with CSR Policy

Activity	Description	Alignment with the Project
(i)	Eradicating hunger, poverty and malnutrition, 2 [promoting health care including preventive health] and sanitation 3 [Including contribution to the Swatch Bharat Kosh set up by the Central Government for the promotion of sanitation] and making available safe drinking water;	Completely

3.3Effectiveness

The programme's effectiveness measures the extent to which objectives have been achieved and identifies the supporting processes and systems that influence the achievement of these objectives. The assessment team's observations relating to programme effectiveness are stated below.

100 % patients reporting very comfortable with the diagnostic process

58% patients spent above Rs 500 for one time travel to the hospital

50 % patients aware about the installation of the diagnostic equipment at the hospital.

3.3.1 Familiarity with New Equipment Installation

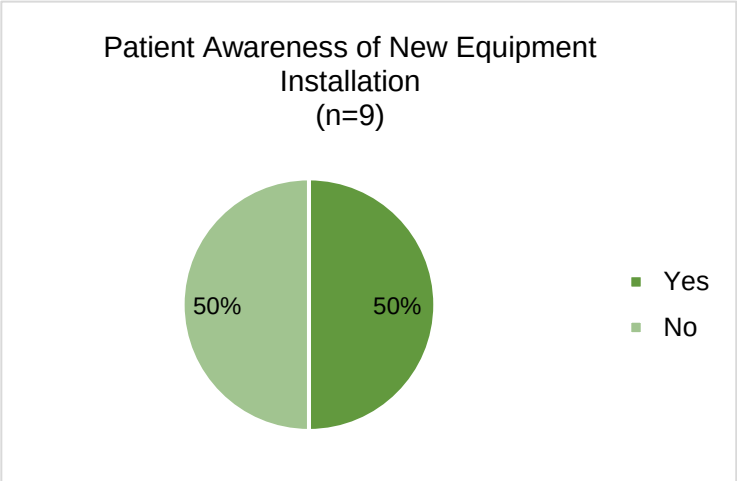


Figure 15.Patient Awareness of New Equipment Installation

Awareness among patients regarding the installation of new equipment shows an even split, with **50% of patients** aware of the new equipment and **50% unaware indicated in Fig 15**. This indicates that while half of the patients have been informed about advancements in diagnostic tools, the other half remains uninformed, potentially missing out on improved services or better diagnostic accuracy.

This highlights the need for better communication strategies, such as patient education initiatives, informational displays, or direct engagement by healthcare providers, to ensure that all patients are aware of new technological improvements that could enhance their treatment experience.

3.3.2 Cost of One Time Travel to Avail Services

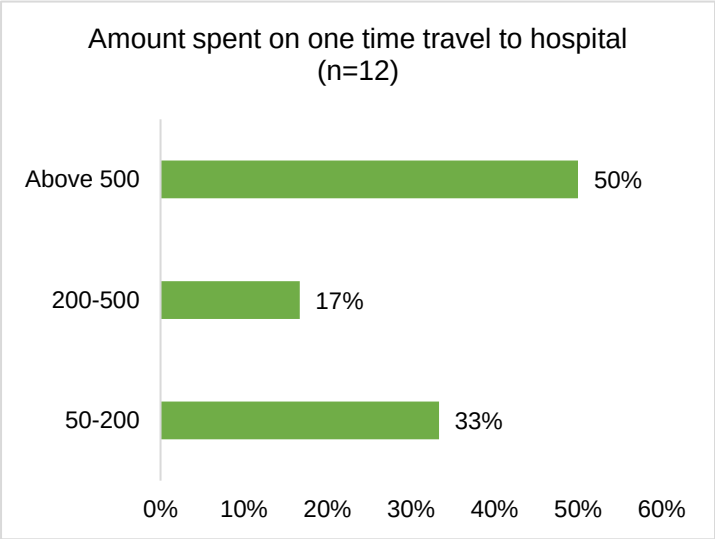


Figure 16.Cost of one-time travel to avail the services

Accessing specialised eye care often comes with significant financial challenges, particularly in terms of travel costs. As shown in **Fig 16**, 50% of patients spent over **₹500 for a one-time visit to the hospital**, highlighting the financial burden **many face in seeking essential care. 33% spent between ₹50-200, and 17% spent between ₹200-500,** suggesting that some patients had relatively more affordable travel expenses. These figures underscore the importance of improving healthcare accessibility, particularly in remote areas, to reduce travel costs and financial strain on patients, ensuring that eye care is within reach for all.

3.3.3 Experience and Comfort During Procedures

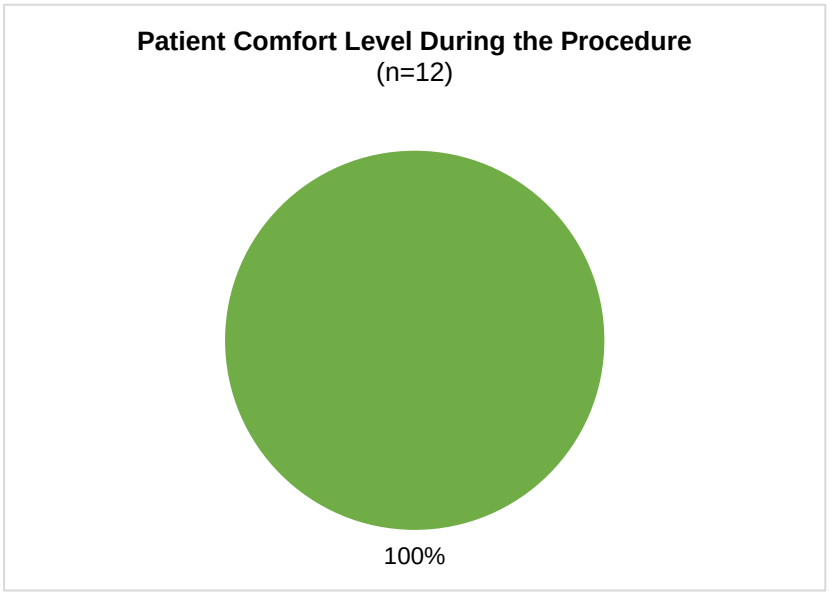


Figure 17.Patient comfort level During the Procedure

The **Cirrus 6000 Angioplex** and **Clarus 700** have played a crucial role in ensuring **100% of patients reported feeling very comfortable** during their diagnostic procedures denoted in **Fig 17.** This enhanced comfort level is primarily attributed to advancements in imaging technology that minimise patient discomfort while maintaining high diagnostic accuracy. One of the key features contributing to patient comfort is the **use of LED light in the ultra-widefield fundus camera** of the **Clarus 700**.

Unlike traditional fundus cameras that use intense flash illumination, which can cause discomfort and strain, the **LED-based lighting system** significantly reduces the intensity of bright light exposure. This results in a more **gentle and tolerable imaging experience** for patients, particularly those with light sensitivity. By **lowering the brightness level without compromising image clarity**, the **Clarus 700** enhances patient experience while providing high-resolution retinal imaging essential for diagnosing and monitoring retinal diseases.

Additionally, the **Cirrus 6000 Angioplex** contributes to improved patient comfort through its **non-invasive OCT-A (Optical Coherence Tomography Angiography) procedure**. Unlike **traditional fluorescein angiography (FFA), which requires an injectable dye**, OCT-A captures detailed images of retinal and choroidal blood vessels without the use of contrast agents. This eliminates potential side effects such as **allergic reactions, nausea, or discomfort** associated with dye injections, making the procedure significantly more patient-friendly. The ability to **perform high-resolution vascular imaging without injections** is particularly beneficial for patients with underlying health conditions or those who may be anxious about invasive procedures.

By integrating these **patient-centric technological advancements**, the **Cirrus 6000 Angioplex** and **Clarus 700** have not only improved diagnostic accuracy but have also created a **more comfortable, stress-free experience** for patients undergoing eye examinations. This innovation underscores the hospital's commitment to **enhancing both the quality of care and patient satisfaction** while ensuring that critical eye conditions are detected and managed effectively.

Patients used to struggle with the harsh brightness during the procedure, which made it quite uncomfortable. The new machine has made a huge difference—it's much gentler on the eyes and more patient-friendly.

Optometrist, Aditya Birla Sankara Nethralaya

3.4 Efficiency

This section assesses the extent to which the intervention delivered results in an economical and timely manner.

59% patients travel the distance up to 50 km and **majority patients** reported Adhar Card submission for accessing free eye services

Procedure explanation to **67% of patients by doctors and 17% by nurse**

84% patients reported completing the test in 5-10 mins which previously tool 15-30 minutes

67% of patients rated the diagnostic services as highly satisfied with the diagnostic services

3.4.1 Access to Eye Care Services

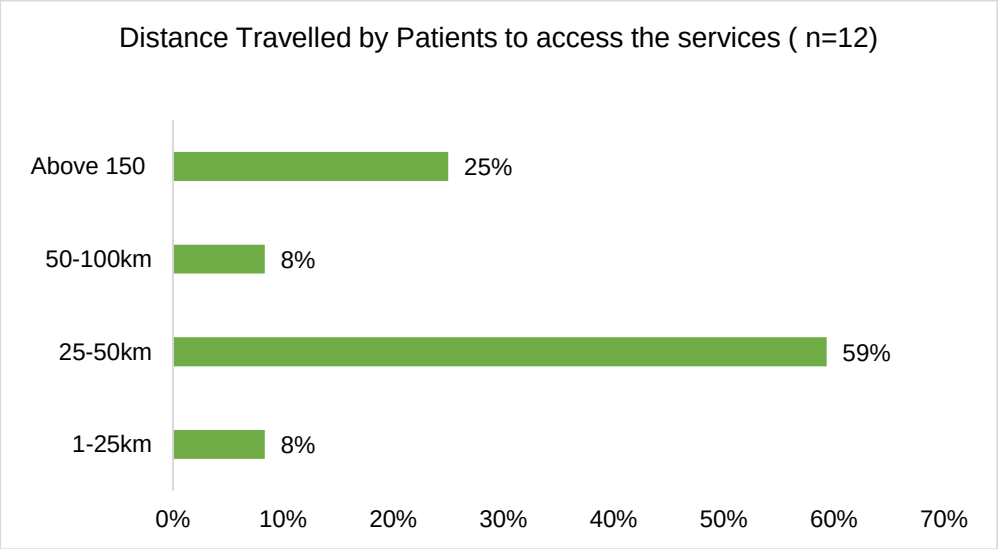
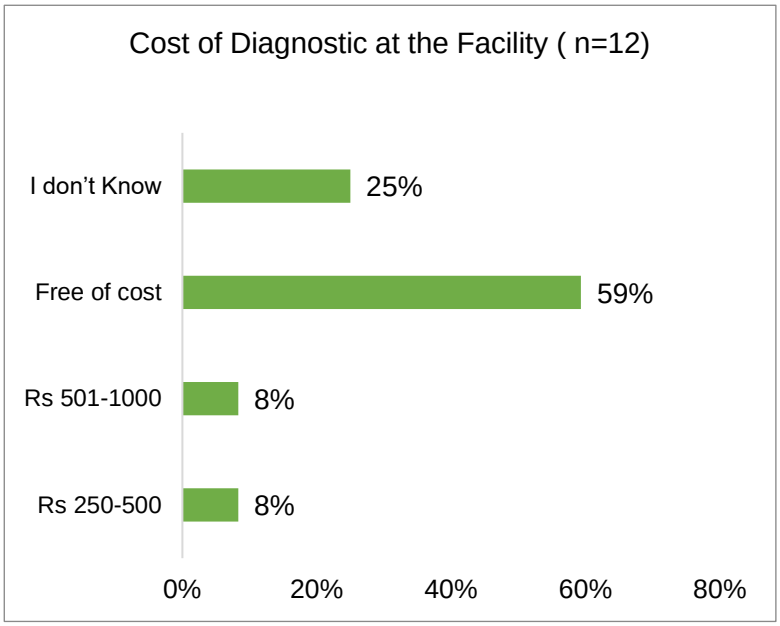


Figure 18.Distance Travelled by Patients to Access the Eyecare Services

Access to specialised eye care often requires patients to travel significant distances, reflecting the demand and reputation of healthcare facilities. In the case of Aditya Birla Sankara Nethralaya, **59% of patients travelled between 25-50 km**, suggesting that a large portion of patients come from areas relatively close to the hospital. However**, 25% travelled over 150 km, indicating that Sankara Nethralaya's reputation extends beyond its immediate region, attracting patients from distant areas.** Additionally, **8% of patients travelled 1-25 km, while another 8% travelled between 50-100 km, showcasing a wide range of distances based on patient accessibility**.

This distribution highlights the growing recognition of Sankara Nethralaya as a leading name in eye care, with patients travelling from neighbouring states and beyond due to its high-quality services. The hospital's expanding reach and influence are a testament to its reputation and the accessibility of its specialised care.

3.4.2 Cost of Diagnostic test at the Facility



The **cost of diagnostic services** plays a crucial role in accessibility, and the data indicates that **59% of patients** received their tests **free of cost**, reflecting the hospital's commitment to affordability. A smaller proportion, **8%**, paid **Rs. 250-500**, while another **8%** paid **Rs. 501-1000**, suggesting a **tiered pricing structure** based on financial status or test requirements. Notably, **25% of patients** were **unsure of the cost**, highlighting the need for **greater transparency in pricing information**. Overall, the hospital ensures **accessible diagnostics**, with most patients benefiting from **subsidized care** while maintaining options for paid services.

Figure 19 Cost of Diagnostic Test at the Facility

3.4.3 Documentation for Underprivileged Patients

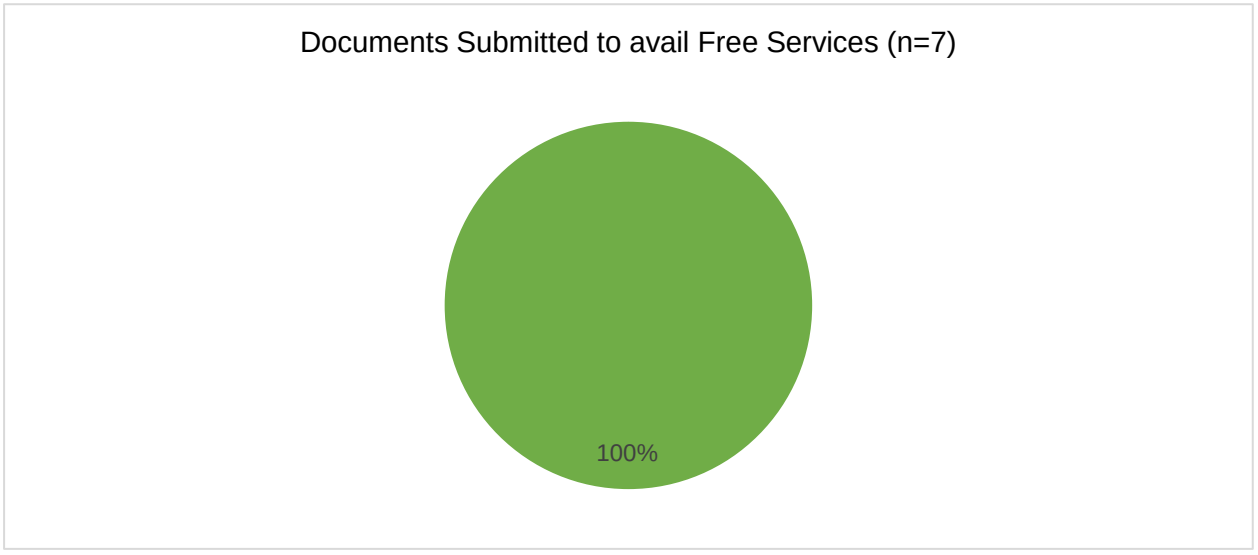


Figure 20.Documentation Submitted to Access Eye care Service

Among the **documents submitted** for diagnostic services shows that **100% of patients** provided an **Aadhaar card**, while **no patients** submitted a **PAN card, income proof, or any other documents**. Additionally, **no patients** reported not submitting any documents, indicating that Aadhaar card submission was a universal requirement for availing services.

This suggests that the **Aadhaar card** serves as the primary identification and verification document at the facility, streamlining the registration and service access process.

3.4.4 Explanation of Procedure Steps to Patients

Patient communication regarding procedures **was primarily led by doctors, with** 67% of patients receiving explanations directly from them. This underscores the **central role of doctors** in providing critical, detailed information, and fostering **trust and confidence** among patients. Additionally, **17% of patients** were informed by **nurses**, highlighting their active role in **patient education** and reinforcing the information provided by doctors. A **collaborative approach** was observed in **8% of cases**, where both **doctors and nurses** explained the procedure, ensuring comprehensive patient understanding.

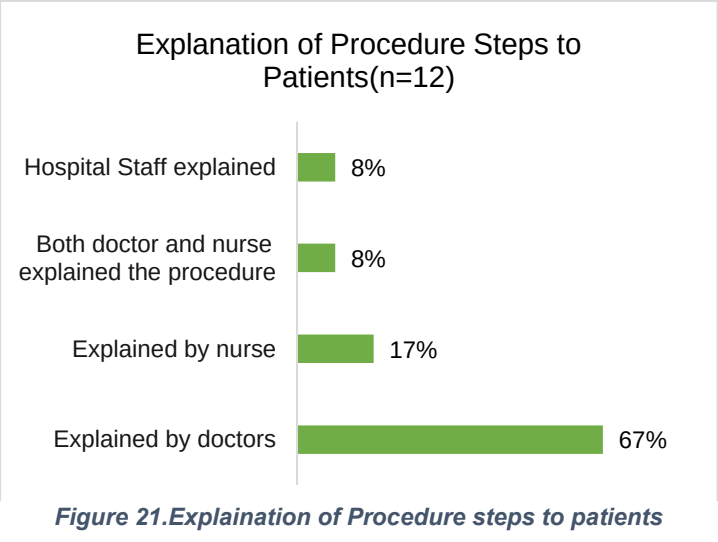


Figure 21.Explaination of Procedure steps to patients

Another **8% of patients** received explanations from **hospital staff**, likely related to **logistical aspects** of the procedure. Notably, **no patients** reported that the procedure was **not explained**, reflecting the hospital's **strong commitment to clear communication**. This **patient-centred approach** plays a vital role in **reducing anxiety, enhancing satisfaction, and improving the overall healthcare experience**.

3.4.5 Patient Feedback on Diagnostic Services

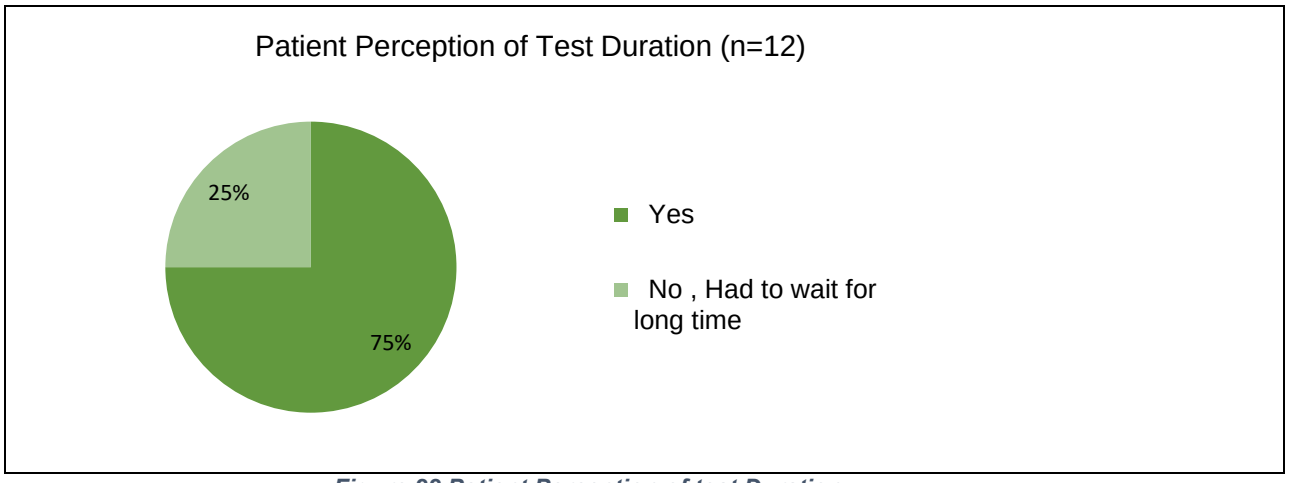


Figure 22.Patient Perception of test Duration

The efficiency of the diagnostic process plays a crucial role in patient satisfaction. A significant **75% of patients found the time required for the test to be reasonable, indicating overall satisfaction with the efficiency of the process. However, 25% of patients reported experiencing long wait times, highlighting delays faced by a minority**. To improve the overall patient experience, addressing these delays through optimised workflows, better scheduling, or increased capacity could reduce wait times and enhance satisfaction for all patients.

3.4.6 Duration of Diagnostic Tests: Patient Experience

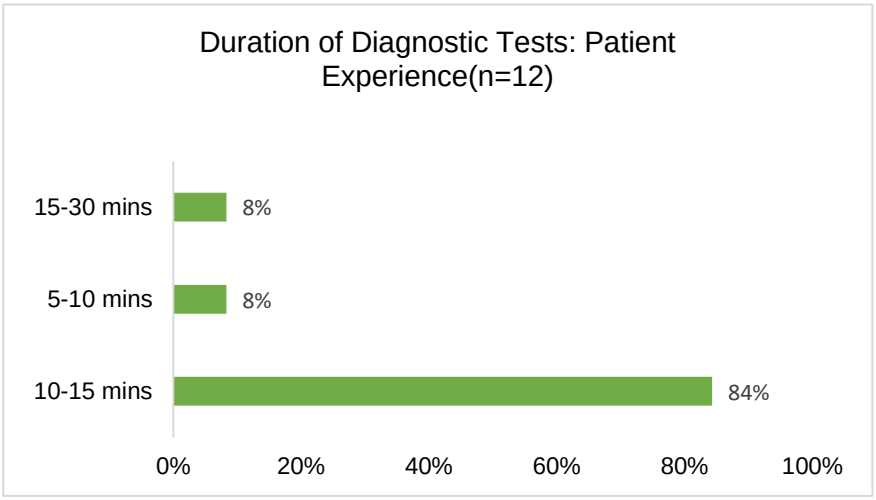


Figure 23.Duration of Diagnostic Tests: Patient Experience

The data on **time required for tests** provides an important comparison between the **previous testing methods** and the current **new diagnostic equipment** used at the facility.

Previously, diagnostic tests may have taken longer due to the limitations of older equipment or manual processes. Now, with the introduction of advanced diagnostic tools, **84% of patients** reported that their tests were completed within **10-15 minutes**, suggesting a significant improvement in efficiency. This shorter duration can be attributed to the **advanced capabilities of the new equipment**, which likely offers faster and more accurate results, reducing the need

for repeat tests or extended waiting periods.

Additionally, **8% of patients** had tests completed in **5-10 minutes**, reflecting that some procedures are now quicker, possibly due to the precision and automation provided by the new diagnostic technology. In the past, simpler tests might have still required more time for manual procedures, but the enhanced speed of new equipment has streamlined this process.

However, **8% of patients** still experienced tests taking **15-30 minutes**, indicating that some procedures, despite the new equipment, may still be complex or require additional time for thorough analysis. This could also suggest that while the new equipment speeds up many aspects of testing, certain tests may still involve detailed assessments that take longer to complete, regardless of the technological advancements.

In comparison to previous methods, where longer waiting times and extended test durations may have been common due to older, slower equipment, the new diagnostic tools have notably improved the overall efficiency of the testing process. These advancements have allowed for faster diagnoses, reducing patient waiting times and enhancing the overall experience.Overall, the introduction of **new diagnostic equipment** has resulted in **significantly faster test durations**, improving patient satisfaction and operational efficiency. However, further efforts to optimise the use of these tools, especially for more complex procedures, can help reduce the time required for all types of tests and further enhance service delivery.

"Previously, patients often complained about long waiting times for procedures, which not only disrupted the workflow but also affected their medication schedules and meal times. However, since the time required for the tests has significantly decreased, there has been a noticeable improvement in patient satisfaction."

Nurse, Aditya Birla Sankara Nethralaya

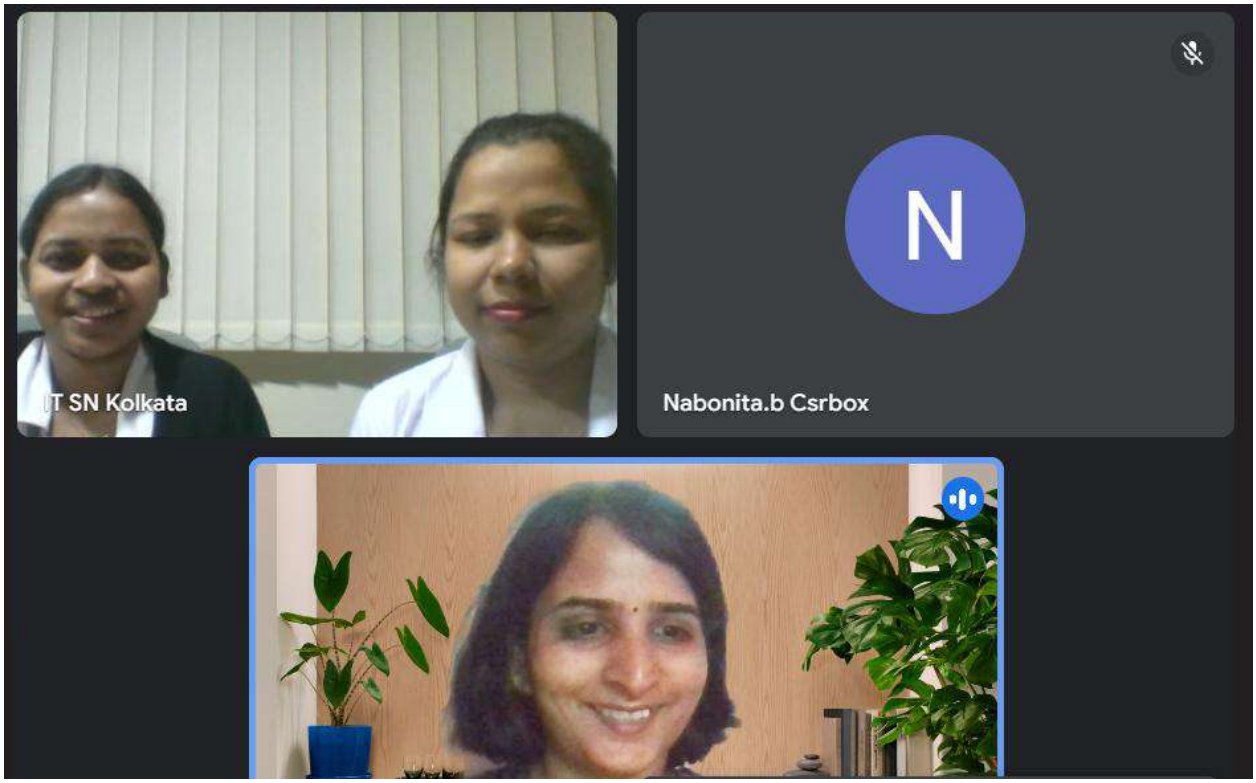


Image 3.Interview with Nurses at Aditya Birla Sankara Nethralaya

3.4.7 Patient Satisfaction with Diagnostic Services

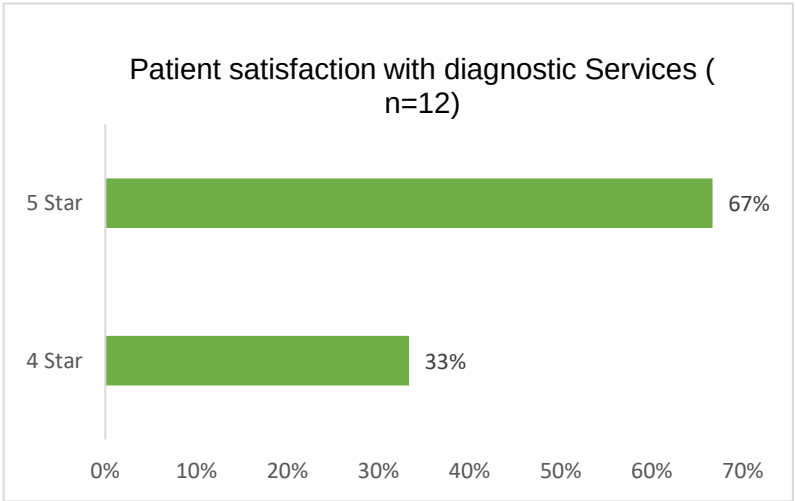


Figure 24.Satisfaction with Diagnostic Services

Patient satisfaction levels indicate that **67%** of patients rated the diagnostic services a 5 star, reflecting high satisfaction, while **33%** rated it a **4** star,suggesting that while most patients were satisfied, there are minor areas for improvement. Notably, there were no ratings below 4 stars, highlighting an overall positive experience with no significant complaints. The facility is effectively

meeting patient expectations, though refining certain aspects, such as wait times or communication, could help achieve perfect satisfaction for all patients.

3.4.8 Annual Efficiency Analysis of Diagnostic Procedures

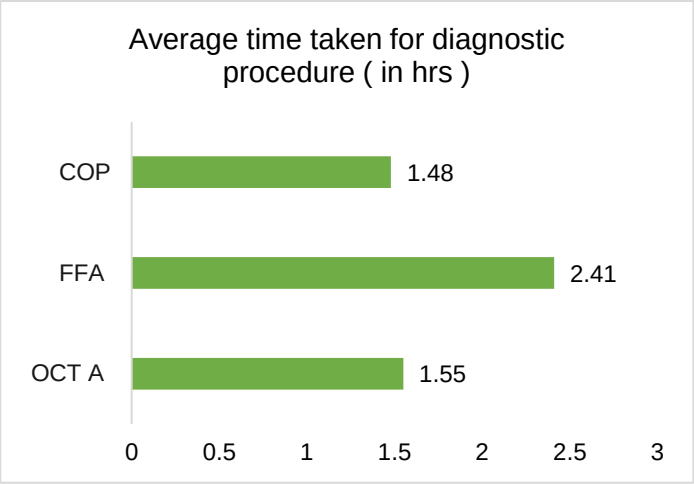


Figure 25.Annual Efficiency Analysis of Diagnostic Procedure

The efficiency of diagnostic procedures has significantly improved with the introduction of the Cirrus 6000 Angioplex and Clarus 700. Based on hospital data collected for the year 2023-24 since installation, the average time from registration to procedure completion has been reduced, enhancing workflow efficiency and improving patient experience. **The OCT-A test takes an average of 1 hour 55 minutes, the COP test is completed in 1 hour 48 minutes, and the FFA test requires an average of 2 hours 41 minutes.**

The key advantages of these advanced imaging systems include faster test completion, improved diagnostic accuracy, and reduced patient waiting times, addressing previous concerns about delays affecting workflow, medication schedules, and dietary routines. The optimised process allows for better patient flow management, enabling healthcare providers to attend to more patients without compromising quality. With high imaging precision and real-time results, these instruments also support quicker treatment decisions, leading to an overall increase in patient satisfaction and operational efficiency.

3.5 Impact

To attain a comprehensive assessment of the programme's impact, we delve into its profound and potentially transformative effects on the social ecosystem. This section meticulously examines the indirect, secondary, and prospective impact arising from the project.

4500+ Diagnostic tests conducted in year 2023-24

Catering Patients over 6+ States and 70 + cities in India

92%patients report improved diagnostic services post installation of devices

58 % patients reporting Rating 5 and 33% patients reporting rating 4 for diagnostic services

In the **2023-24 period**, the hospital introduced state-of-the-art diagnostic equipment, including the **Cirrus 6000 Angioplex** and **Clarus 700**, significantly enhancing the quality of eye care provided. The **Cirrus 6000 Angioplex**, a cutting-edge Optical Coherence Tomography Angiography (OCT-A) system, and the **Clarus 700**, a high-resolution fundus camera, were pivotal in improving diagnostic accuracy and efficiency. As a result, three key diagnostic tests were performed, benefiting a substantial number of patients.

The **OCT-A test** was conducted for **1,384 patients**, providing detailed, non-invasive imaging of the retinal vasculature, aiding in the diagnosis and management of conditions such as **diabetic retinopathy** and **age-related macular degeneration**. The **Clarus 700** facilitated **1308 patients** with **COP (Contact Ophthalmic Photography) who under 2617 COP tests**, delivering high-resolution images essential for monitoring eye health. Additionally, **977 patients** underwent **FFA (Fundus Fluorescein Angiography)**, enabling the assessment of retinal vascular abnormalities.

This section evaluates the **impact** of these advanced diagnostic tools, exploring how the introduction of the **Cirrus 6000 Angioplex** and **Clarus 700** has improved diagnostic services, enhanced patient care, and contributed to more accurate treatment outcomes for a wide range of eye conditions. The number of tests conducted through these equipment underscores the hospital's expanded role in delivering high-quality eye care through the latest advancements in diagnostic equipment.

The data presented in this section was sourced directly from the hospital's database, which includes patient records, diagnostic results, and feedback from various departments. The hospital's database provides detailed, up-to-date information on patient visits, and diagnosis tests conducted, enabling a thorough analysis of the impact of diagnostic services and interventions. This data has been used to assess key metrics such as patient satisfaction, diagnostic accuracy, and the timeliness of care provided.

3.5.1 Monthly Trends in OCT-A Tests (2023-24)

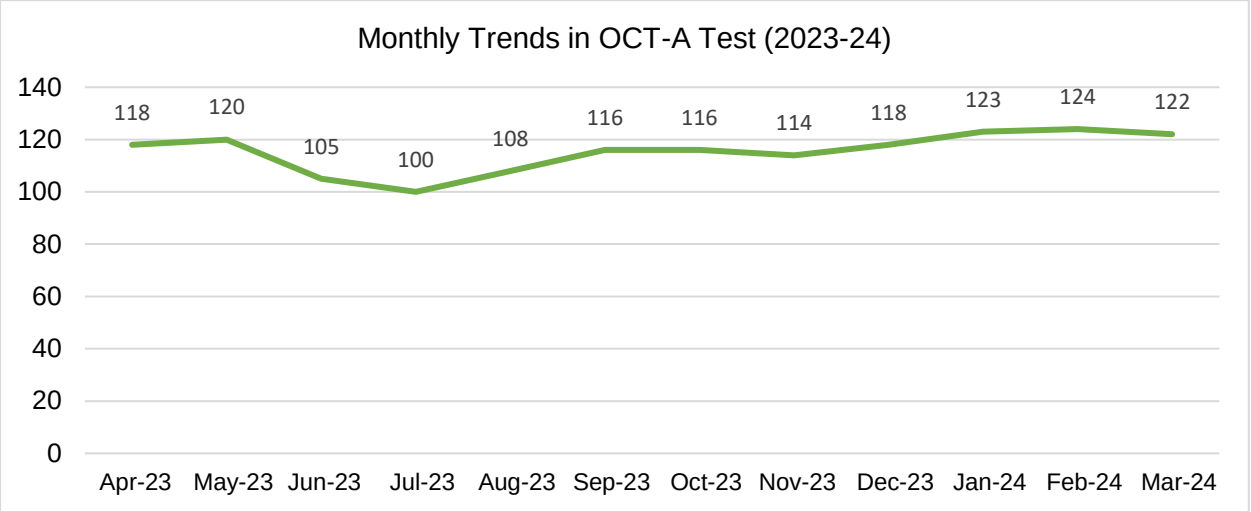


Figure 26.Monthly Trends in OCT-A tests.

The data on **OCT-A tests** shows a relatively steady patient flow throughout the year, with **116 beneficiaries** on average per month. The highest number of beneficiaries occurred in **February 2024** (124), and the lowest was in **July 2023** (100). The **highest number of diagnostic tests conducted** were in **February 2024 (124)**, while the **lowest was in July 2023 (100)**. This could suggest a **seasonal variation**, with fewer patients seeking the test during the summer or holiday periods. Most months saw a consistent range between **100 and 124 beneficiaries**, suggesting a **reliable utilisation** of the **OCT-A test** across the year.

Image 4.Imaging with Ultrawide Field Fundus Camera

3.5.2 Monthly Trends in COP Tests (2023-24)

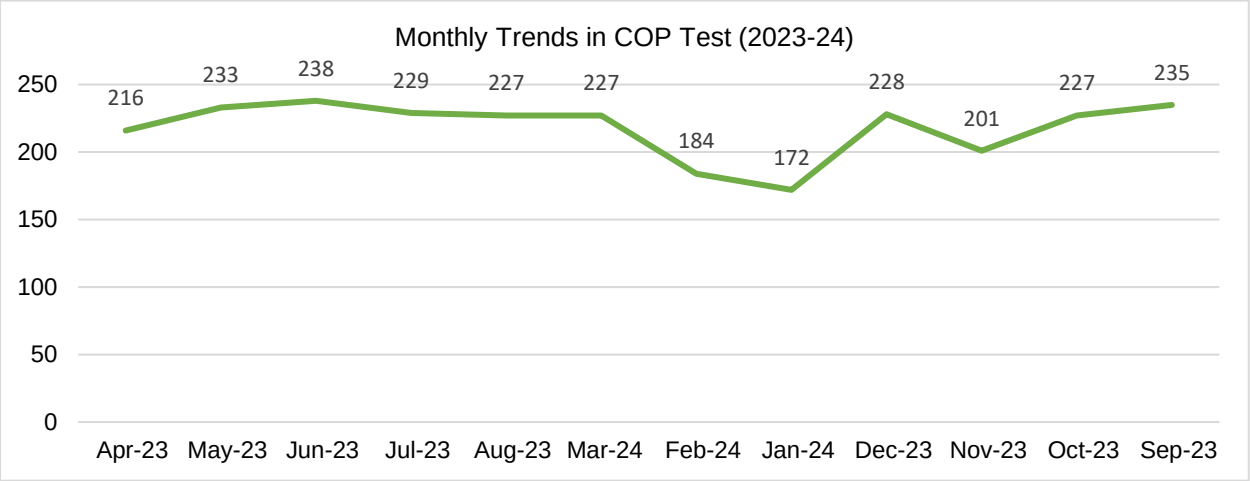


Figure 27.Monthly Trends in COP tests

The monthly data for COP tests from **April 2023 to March 2024** shows consistent numbers with minor fluctuations. **June 2023 had the highest number of tests (238), while January 2024 had the lowest (172).** The **average number of tests was approximately 229**, with most months seeing between 200 and 235. The Clarus 700 system has played a key role in providing reliable diagnostics, contributing to steady service utilisation throughout the year.

3.5.3 Monthly Trends in FFA Tests (2023-24)

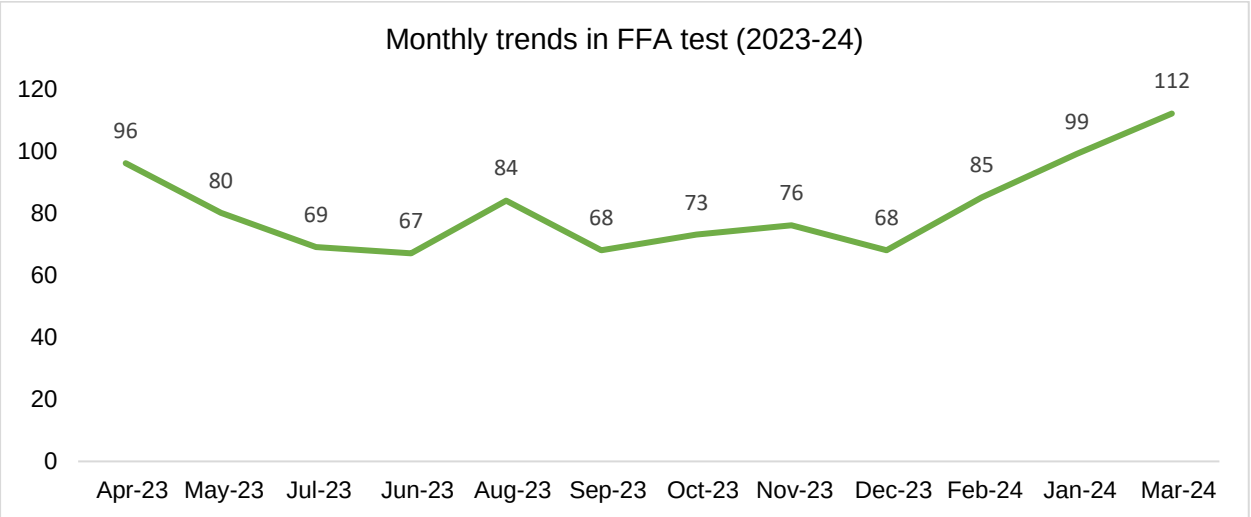


Figure 28.Monthly Trends in FFA tests.

The monthly data for FFA (Fundus Fluorescein Angiography) tests conducted throughout **2023-24** shows variation in the number of beneficiaries each month with an average of **84 FFA tests**

conducted each month. The highest number of FFA test were conducted in **March 2024 (112)**, while the lowest was in June 2023 (67). The number of tests ranged from 67 to 112, showing moderate fluctuations across the months. There was an increase in the number of patients receiving **FFA tests in January (99) and March (112)**, indicating a peak in the latter months of the year.

3.5.4 State-wise Distribution of the Beneficiaries

The state-wise distribution data for the COP, FFA, and OCT-A tests reveals valuable insights into both the local and regional patient base of the hospital**. For the COP test, 56%** of patients were from **West Bengal**, and **44% came from other states**, indicating a significant proportion of patients travel from outside the state, making the hospital a key regional referral centre.

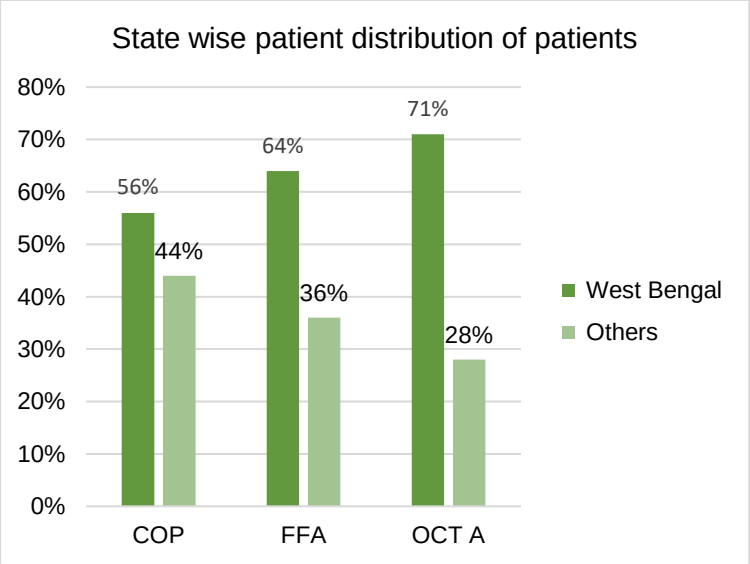


Figure 29.Statewise distribution of Beneficiaries

Similarly, for the **FFA test, 64% of patients were from West Bengal, and 36% were from other regions**, reinforcing the hospital's strong local presence while still attracting patients from surrounding areas. **The OCT-A test saw 71% of patients from West Bengal and 28% from outside the state**, highlighting the hospital's dominant local patient base for this high-end diagnostic service but also its expanding regional reach. The patient distribution extended from various states like Jharkhand, Bihar, Assam, Odisha etc.

This data reflects the hospital's role as a major provider of specialised eye care not only within West Bengal but also across neighbouring regions, with a notable proportion of patients travelling for advanced diagnostic tests. The consistent out-of-state patient flow across all three tests demonstrates the hospital's growing recognition as a centre of excellence in advanced diagnostic imaging. Additionally, the strong local presence in West Bengal suggests that the hospital is well-established in the state, attracting a high volume of patients seeking quality eye care services.

3.5.5 Gender-wise accessibility for the services

The gender bifurcation for the OCT-A, COP, and FFA tests shows a consistent trend where male patients account for a higher proportion of the total beneficiaries compared to **female patients**. In all three tests, **males represent 64-66%, while females account for 34-36%.**

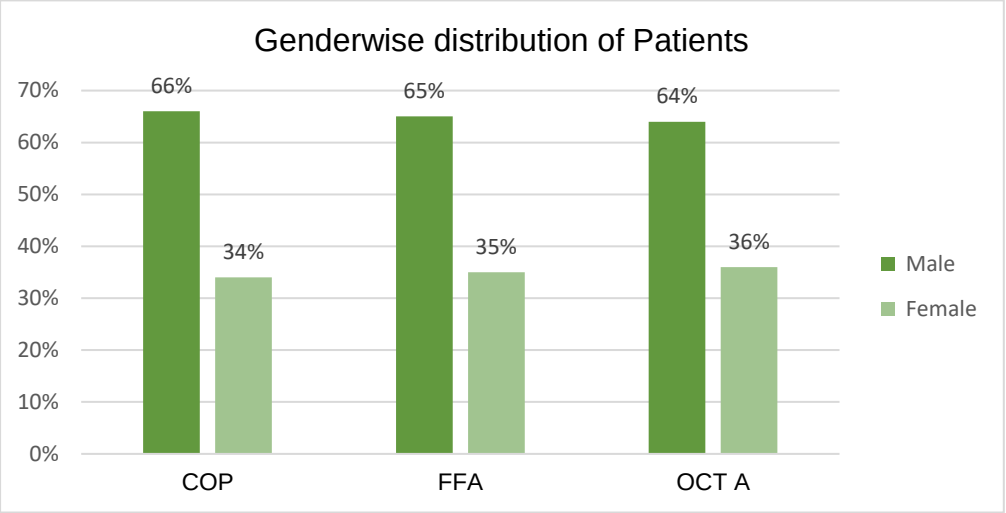


Figure 30 Gender-wise Accessibility of Services

The gender bifurcation for the OCT-A, COP, and FFA tests shows a consistent trend where male patients account for a higher proportion of the total beneficiaries compared to **female patients**. In all three tests, **males represent 64-66%, while females account for 34-36%.** This suggests a potential gender disparity in accessing advanced diagnostic eye care services, which may be due to socioeconomic, cultural, or awareness-related barriers that limit women's access to these services. To address this imbalance, the hospital could focus on targeted awareness campaigns, community-based initiatives, and financial assistance programmes to improve access for women.

3.5.6 Enhanced Diagnostic Experience and Contributing Factors

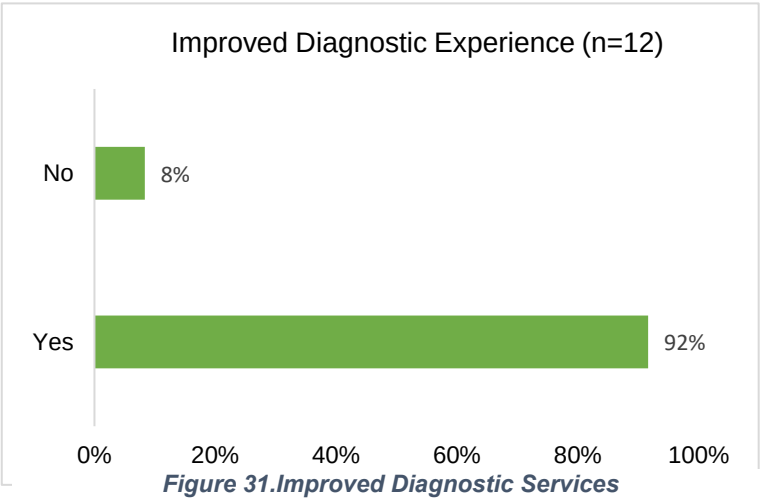
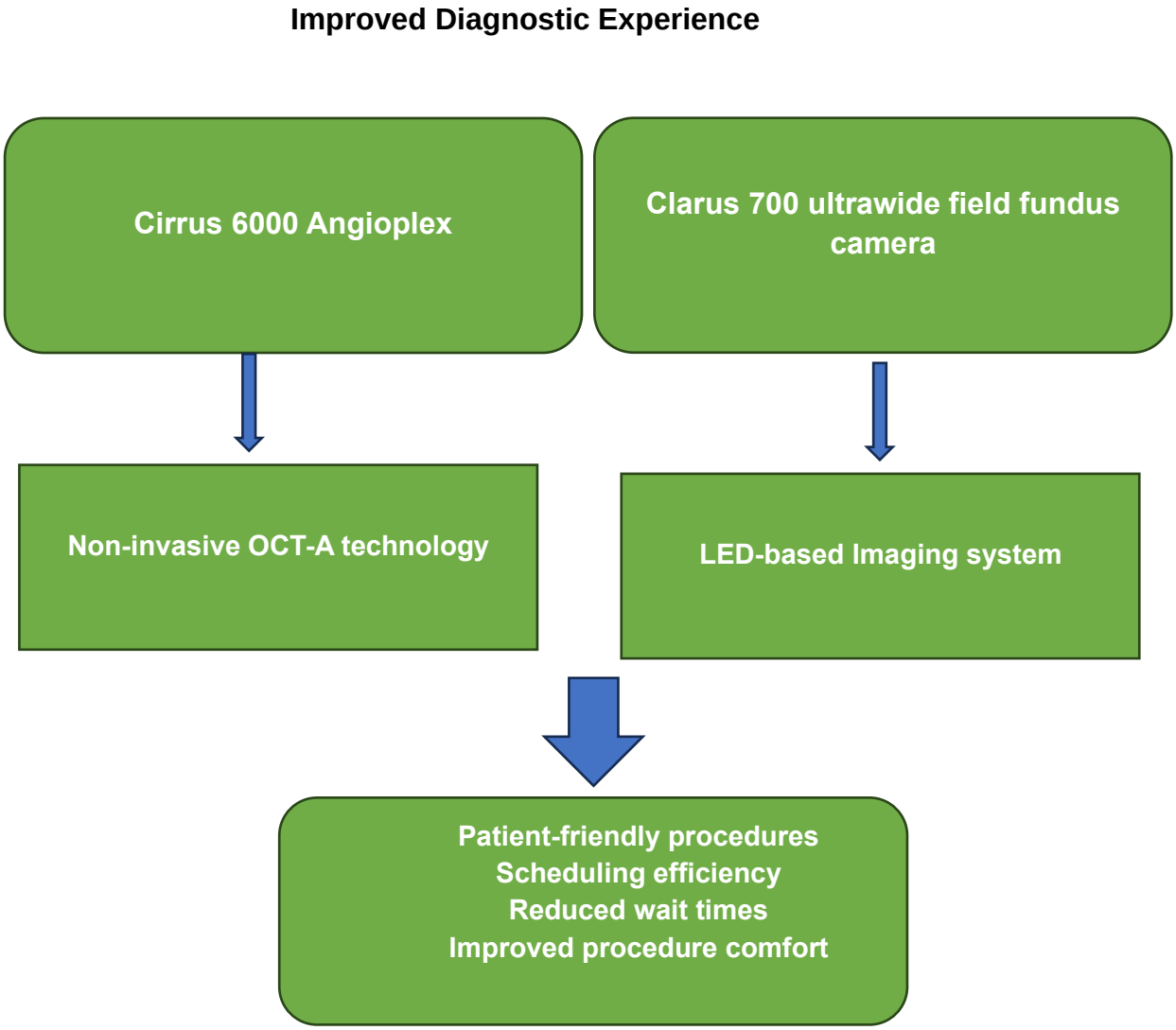


Figure 31.Improved Diagnostic Services

Advancements in diagnostic technology and healthcare practices have significantly contributed to enhancing patient experiences. A remarkable **92% of patients reported an improved diagnostic experience**, thanks to the integration of cutting-edge equipment, skilled professionals, and efficient processes. The introduction of advanced diagnostic tools, such as the Cirrus 6000 Angioplex and Clarus 700, has played a crucial role in improving both patient comfort and diagnostic accuracy.



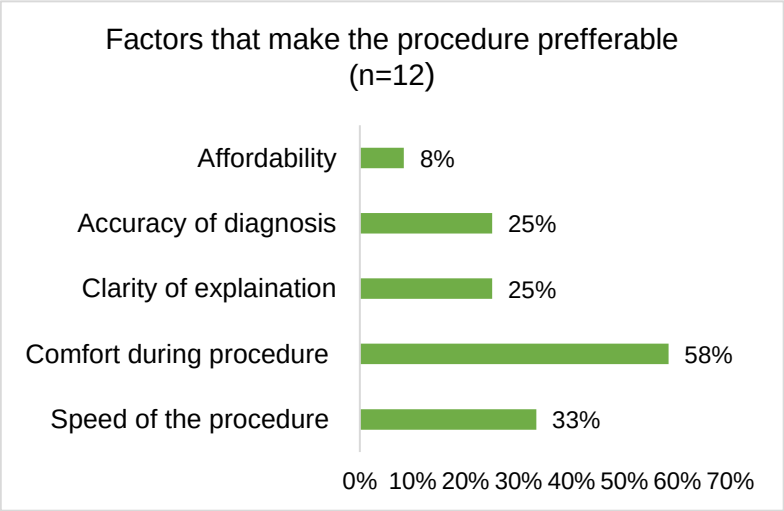


Figure 32. Factors that make Procedure Preferable

Patient satisfaction with the procedure was primarily driven by **comfort during the procedure (58%)**, indicating that a stress-free and smooth experience was the most valued factor. **Speed of the procedure (33%)** also played a significant role, highlighting the importance of efficiency and minimal wait times. Additionally, **clarity of explanation (25%)** and **accuracy of diagnosis (25%)** contributed to positive experiences, emphasising the need for clear communication and reliable results.

While **affordability (8%)** was a less frequently mentioned factor, it suggests that patients prioritised the quality and efficiency of care over cost. These insights reinforce the importance of maintaining high standards in procedural comfort and efficiency while further improving communication and affordability to enhance overall patient satisfaction.

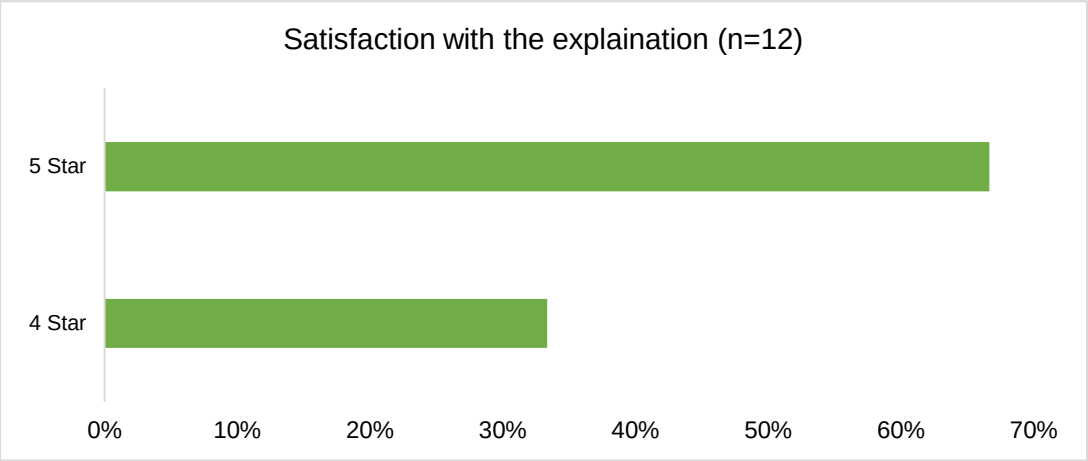


Figure 33.Rating for Diagnostic Procedure at the Hospital

Patient satisfaction with the diagnostic procedure at the hospital was overwhelmingly positive, with **58% of patients** giving a **5-star rating**, indicating a high level of satisfaction. Additionally, **33% of patients** rated the procedure a **4-star rating,** suggesting that while they were largely satisfied, there may be minor areas for improvement. This reflects a strong patient experience, with the hospital successfully delivering efficient and effective diagnostic procedures. To further enhance satisfaction, addressing the factors that led to a **4-star rating**, such as wait times or affordability, could help achieve even higher levels of excellence.

3.5.7 Patient Feedback on Diagnostic Services

Availability of the services and trust in the hospital were the primary reasons patients preferred the hospital, with **50% of patients** selecting it because it was the **only hospital available in the area**, highlighting the lack of alternative healthcare facilities. Another **50%** chose the hospital due to **trust**, reflecting its strong reputation and credibility. Additionally, **33% of patients** appreciated the **good services provided by hospital staff and doctors**, while another **33%** found it **more affordable compared to other hospitals** in the region. These findings reinforce the hospital's **importance.**

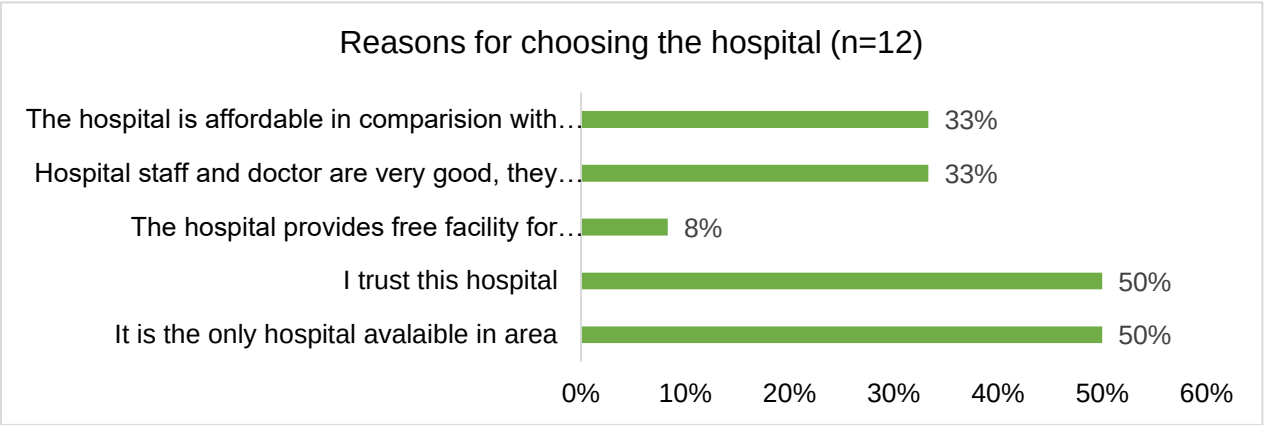


Figure 34.Reasons for Choosing the Hospital

The hospital's diagnostic services received positive feedback, with **92% of patients praising the staff's expertise in using diagnostic instruments, ensuring accuracy and efficiency**. Additionally, 67% of patients found the equipment modern and well-maintained, and **67% confirmed its diagnostic accuracy. Clear instructions were provided to 83% of patients, contributing to 75% finding their test results easy to understand.**

However, **25% of patients faced long wait times, indicating a need for improved scheduling, despite 83% feeling tests were scheduled promptly**. While **58% found the facilities easily accessible, 33% felt the availability of necessary instruments was only adequate**. The hospital's ability to resolve instrument-related issues quickly (75%) highlights its commitment to smooth operations. Overall, 67% of patients were satisfied, suggesting the hospital excels in diagnostic services but can improve accessibility, equipment availability, and wait times for a better patient experience.

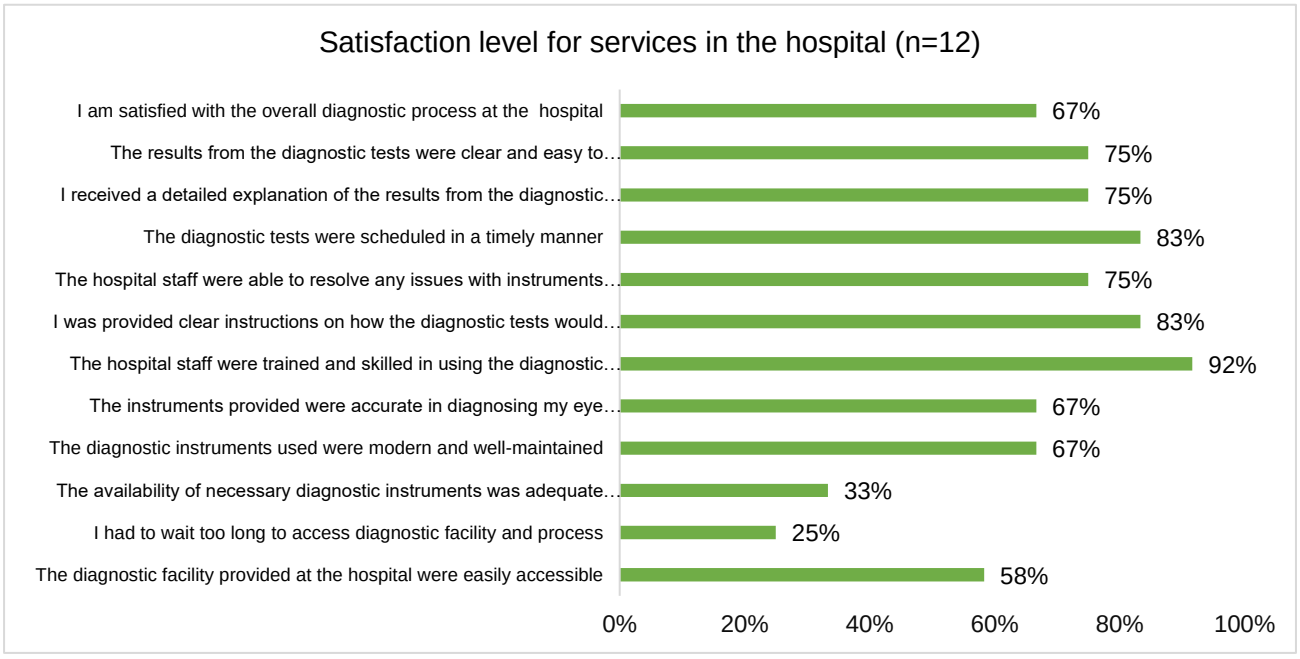


Figure 35. Satisafaction level of services in the hospital

3.6 Sustainability

This section addresses the extent to which the benefits of the intervention are likely to be sustained and continue over time.

67% patients reported detailed explanation required for the procedure

Clinical and Technical training provided to staff for utilising the equipment.

Maintenance visits conducted twice a year to ensure seamless functioning of equipment

3.6.1 Suggestions for Improvement

The installation of the new diagnostic equipment has significantly enhanced the overall diagnostic experience, contributing to improved accuracy and faster results. This upgrade has not only streamlined the diagnostic process but also bolstered patient confidence and satisfaction. The efficient functioning of the equipment, supported by a structured maintenance plan, has led to smoother operations and minimal disruptions.

However, feedback gathered from patients highlighted areas for further improvement. **67% of patients indicated that the procedure should be explained in more detail**, emphasising the need for clearer communication. Additionally, **42% expressed concerns about waiting times**, suggesting that better scheduling and resource management could help reduce delays. Addressing these areas can further enhance the diagnostic experience, ensuring even higher levels of patient satisfaction.

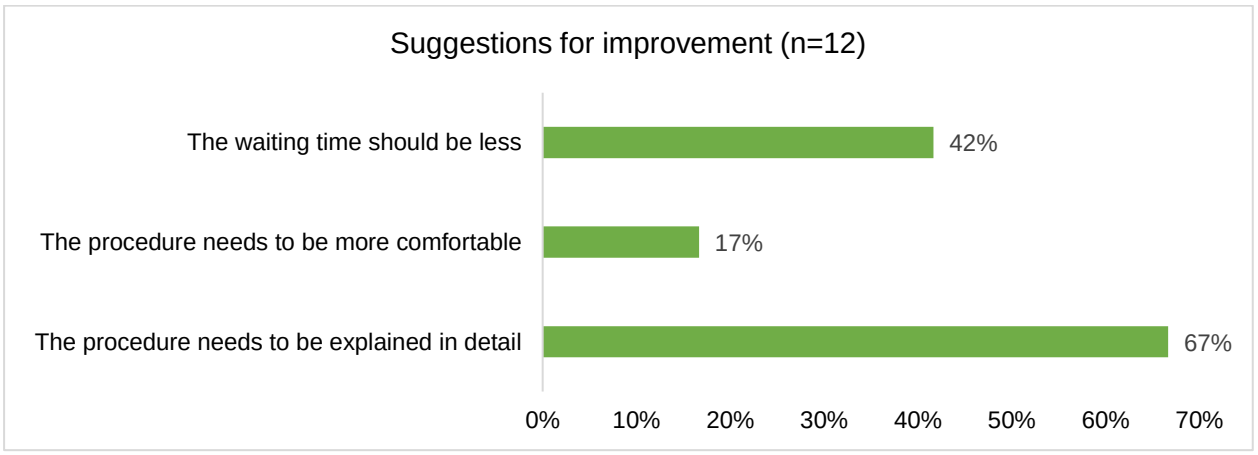


Figure 36.Suggestions for Improvement

3.6.2 Equipment Installation, Maintenance, and Preventive Measures

Installation Process	• **Planned Installation** – Meticulously organised to avoid disruptions. • **Minimal Disruptions** – Ensured smooth hospital operations and patient flow. • **Seamless Coordination** – Effective collaboration between the Zeiss team and hospital administration. • **Efficient Setup** – Quick and hassle-free installation process
Maintenance & Integration	• **Preventive Maintenance Plan** – Structured plan to maintain equipment performance. • **Regular Checkups** – Scheduled routine maintenance to ensure optimal functioning. • **No Hardware Failures** – Equipment remained operational without major issues. • **Minor Integration Challenges** – Initial phase had small challenges, which were resolved. • **Collaboration with Biomedical Team** – Close teamwork with the hospital's Biomedical team ensured smooth operations.
Training & Feedback	• **Training Sessions** • **Hands-On Experience** • **Feedback Collection** • **Continuous Improvement**
Ongoing Support	• **Virtual Support** • **Prompt Issue Resolution** • **Smooth Functioning** • **Minimal Disruption to Patient Care**
Impact	• **Well-Structured Approach** • **Improved Hospital Efficiency** • **Optimised Equipment Utilisation** • **Enhanced Patient Experience** • **Smooth Transition** • **Increased Staff Confidence** • **Better Clinical Outcomes**

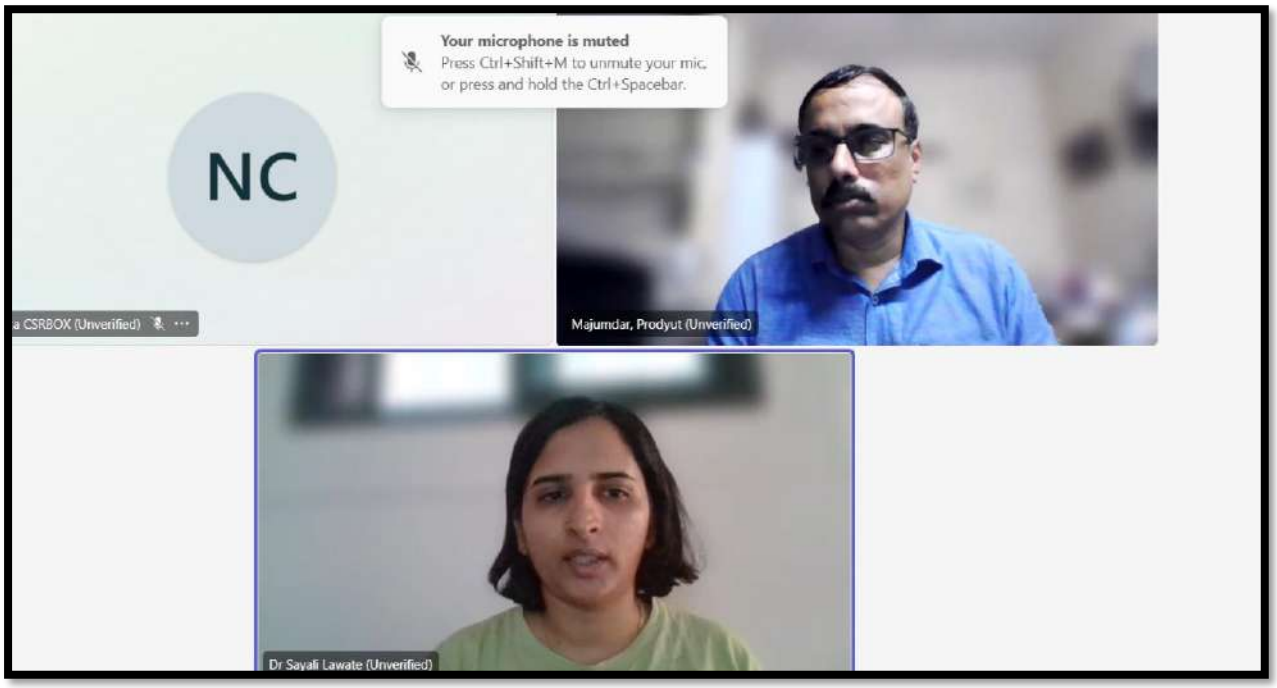


Image 5.Interview with Equipment Manufacturing Team

Chapter 4

Brand Equity

Chapter 4: Brand Equity

4.1 Impact of Intervention on Brand Awareness: Aditya Birla Group _ EMIL

Prior to the intervention, only **25% of respondents** were aware of the Aditya Birla Group - EMIL brand, while **75% were not**. Notably, **100% of those who were aware learned about the brand through word of mouth**, emphasising the power of personal recommendations in shaping brand visibility.

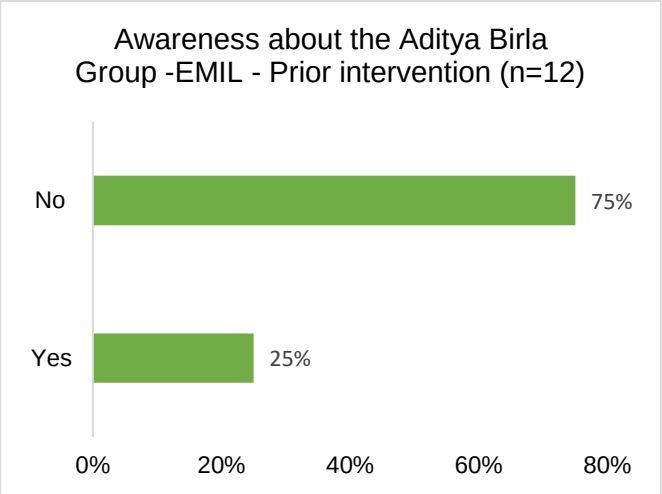


Figure 38.Awareness about Aditya Birla Group - EMIL Prior Intervention

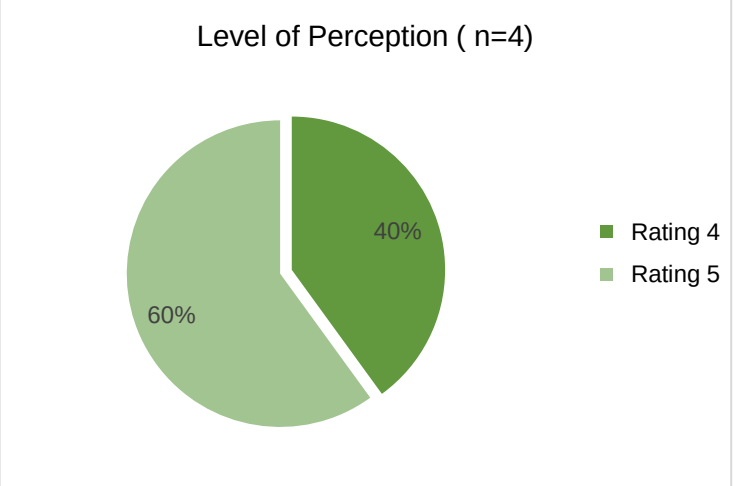


Figure 37.Level of Perception Regarding Aditya Birla Group- EMIL

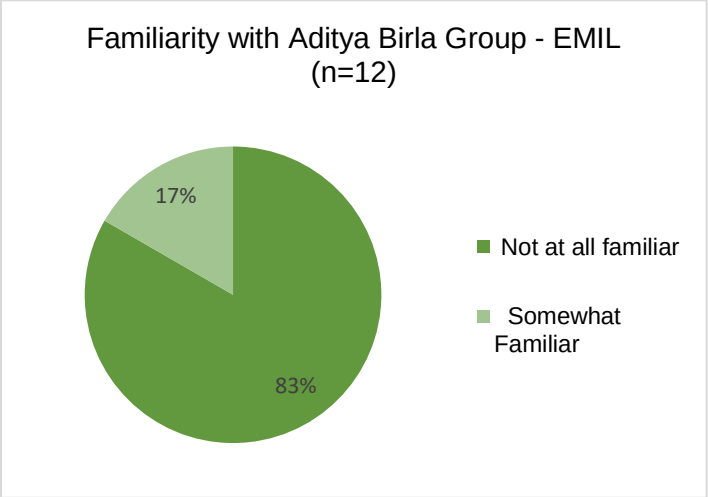


Figure 39.Familiarity with Adity Birla Group - EMIL

In terms of brand perception, **40% of respondents rated it 4**, while **60% rated it 5**, indicating a **high level of satisfaction and positive perception**. This reflects the brand's strong credibility and acceptance among those who are aware of it.

These insights highlight the importance of **expanding communication channels** and leveraging structured marketing efforts to **increase brand awareness and strengthen perception** further.

Chapter 5

Recommendations for the Programme

Chapter 5: Recommendations

The installation of advanced diagnostic equipment, such as the Cirrus 6000 Angioplex and Clarus 700, at Aditya Birla Shankara Nethralaya, has significantly enhanced the hospital's ability to provide high-quality eye care. These state-of-the-art tools have enabled the hospital to perform critical diagnostic tests, benefiting a large number of patients and improving diagnostic accuracy. The integration of these technologies has not only raised the standard of care but also reinforced the hospital's commitment to delivering cutting-edge services. As a result, patients now have access to more precise diagnostics, contributing to better treatment outcomes and improved overall satisfaction.

Current Scenario

From both the field visit and database analysis, it is evident that a higher proportion of male patients are accessing diagnostic services compared to females. This trend suggests that while diagnostic services are being utilised, there is a need to increase awareness and encourage more female patients to take advantage of these services.

Additionally, although the advanced diagnostic equipment is providing high-quality care, we observed the space constraints within the facility of the used instruments.

Recommendations

1. **Targeted Awareness Campaigns:** To address the gender disparity in accessing diagnostic services, we recommend launching targeted awareness campaigns aimed specifically at women. These campaigns should emphasise the importance of early eye health screenings, particularly for conditions like diabetic retinopathy and glaucoma, and encourage women to utilise the hospital's advanced diagnostic services.
2. **Optimising Equipment Layout:** To improve workflow and the overall patient experience, it is recommended to rearrange the layout of diagnostic equipment, such as the Cirrus 6000 Angioplex and Clarus 700, to optimise space. Ensuring that the most frequently used instruments are easily accessible will help alleviate space constraints, improve safety, and streamline diagnostic processes, ultimately enhancing the efficiency of service delivery.

Chapter 6

Impact Stories

Chapter 6: Impact Stories

1. **Doctors Perspective -Revolutionising Retinal Diagnosis: Faster, Clearer, and More Precise Imaging**

The Clarus 700 and Cirrus 6000 Angioplex have completely changed how we diagnose and treat retinal conditions. Advanced imaging technology gives us a much wider and clearer view of the eye, allowing us to detect problems that were previously difficult to see, especially in the corners of the retina. Unlike older models, these machines provide sharper images and faster results, making the diagnostic process quicker and more accurate. Most importantly, patients no longer have to wait for days to start treatment—they can complete their tests and begin treatment on the same day. This has greatly improved patient comfort, reduced anxiety, and led to better overall treatment outcomes.

– Dr Rupak Roy, Ophthalmologist

2. **Enhancing Patient Care with Advanced Imaging Technology**

“The previous equipment was still functional, but the technology was outdated. With the installation of new high-tech instruments, imaging quality has improved significantly, reducing patient discomfort and enhancing diagnostic accuracy. Ophthalmologists and surgeons were actively involved in the installation process, ensuring seamless integration. The efficiency of the procedure room has increased, leading to higher patient satisfaction and earlier diagnosis of conditions. Patient feedback has been overwhelmingly positive, and the addition of advanced equipment has strengthened the hospital’s reputation for excellence in eye care."

- *Col. Dr. Tapas Saha Roy, Medical Superintendent, Aditya Birla Sankara Nethralaya.*

Image 6. OPD Setup at Aditya Birla Sankara Nethralaya

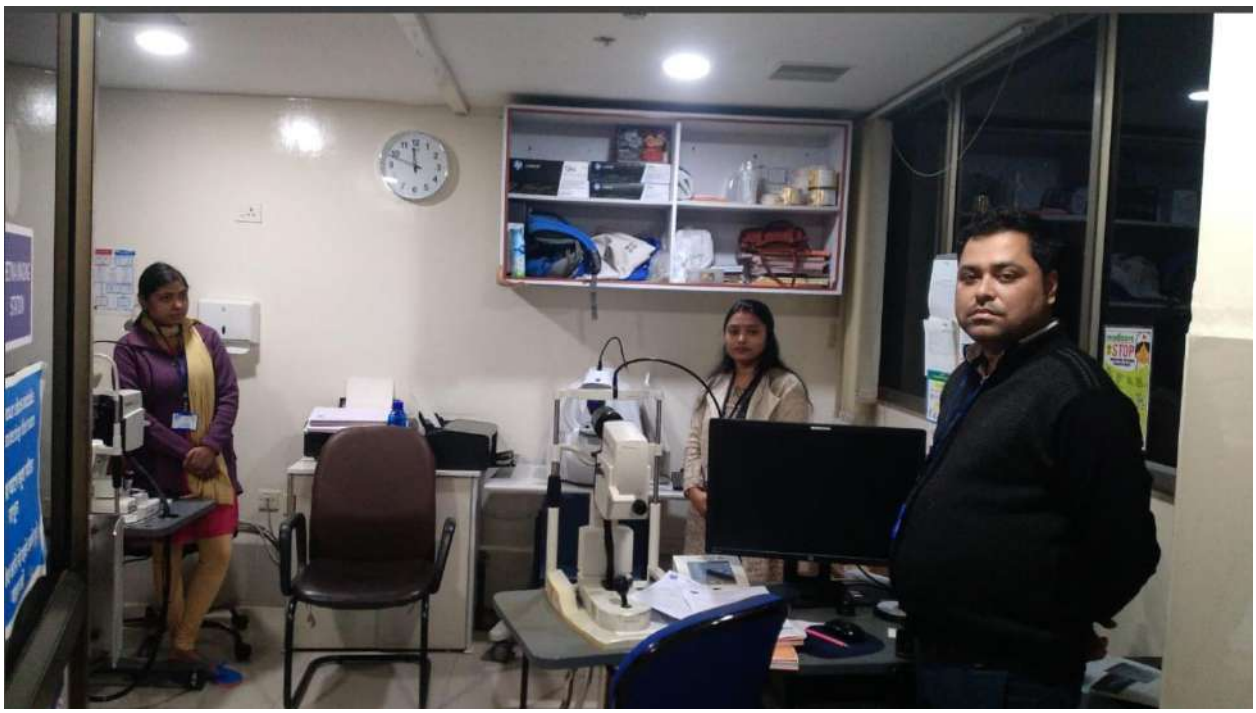


Image 7 Diagnostic Imaging Room at Sankara Nethralaya

CSRBOX®
Doing Good in a **Better** Way

CSRBOX & NGOBOX
Swati Trinity, Applewood Township,
A-404, Shela, Sarkhej-Okaf,
Gujarat 380058