Indian Oil Corporation Limited
Impact Assessment:
2 CSR Project at Bargarh Odisha

Vikash Multi-Speciality Hospital
COVID Hospital & COVID Care Centre

ACKNOWLEDGEMENT

We the team at Center for Healthcare Entrepreneurship (CfHE), IIT Hyderabad, extend our heartfelt gratitude to Indian Oil Corporation Limited for giving us the opportunity to conduct an Impact Assessment for two of their CSR projects at COVID Hospital & COVID Care Centre and Vikash Multi-Speciality Hospital, Bargarh, Odisha. We extend our deepest gratitude to Professor Renu John, Director at CfHE and Professor at IIT Hyderabad, whose guidance and support facilitated the successful execution of this project. Additionally, we extend our thanks to Murali Krishna Dasari, Chairman at Vikash Multispecialty Hospital and his dedicated team for their exceptional assistance during our field visit. Furthermore, we extend our gratitude to the team at District Headquarter Hospital Bargarh for their support in executing the field visit to the Government Hospital at Bargarh. Finally, we would like to extend our heartfelt appreciation to the IOCL team for streamlining the entire process. Without the collaborative efforts of these individuals and organizations, this assessment would not have been possible.

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INDIAN OIL CORPORATION LIMITED

Impact Assessment of IOCL CSR Projects:

Vikash Multi-Speciality Hospital, Bargarh

Report Submitted by:

Center for Healthcare Entrepreneurship (CfHE),

Indian Institute of Technology-Hyderabad

CONTENTS

1. EXECUTIVE SUMMARY

The impact assessment of the corporate social responsibility project initiated by Indian Oil Corporation Limited (IOCL) to provide essential medical equipment for establishing a 100-bedded intensive care unit (ICU) at Vikash Multi-Speciality Hospital in Bargarh, Odisha, has yielded significant positive outcomes. In the fiscal year 2021-2022, IOCL allocated 1129 lakhs towards the procurement of **ventilators, monitors and syringe pumps**, crucial for the treatment of covid-19 patients. The implementation of this project aimed to enhance the hospital's capacity to cater to the rising demand for critical care amidst the pandemic.

The impact assessment conducted post-implementation has affirmed the success of the project. CfHE team's personal visits to Vikash Hospital revealed the effective utilization of the provided equipment. High-resolution images captured during field trips depict the seamless integration of the medical devices into the hospital's infrastructure, ensuring optimal patient care.

The assessment included field visits to Vikash Hospital to observe the utilization of the equipment and interact with the patients. **Personal interviews** were conducted with both patients and healthcare professionals, including doctors and staff members, at Vikash Multi-Speciality Hospital. These interviews provided valuable insights into the impact of the CSR project on patient care and hospital operations. Furthermore, data was collected through a **comprehensive questionnaire method**, allowing for a systematic analysis of the project's outcomes. These additional points highlight the comprehensive approach taken in assessing the impact of IOCL's CSR project, incorporating both qualitative and quantitative data collection methods to ensure a thorough evaluation of outcomes. The findings obtained will be thoroughly covered in the detailed report, providing a extensive understanding of the project's effectiveness and impact on various stakeholders. The findings indicate that the impact of the CSR project has been overwhelmingly positive.

1. **Utilization of Equipment**: The ventilators, monitors and syringe pumps provided by IOCL are being effectively utilized at Vikash Multi-Speciality Hospital for the treatment of COVID-19 patients. The equipment is being operated by trained medical staff, ensuring optimal patient care, contributing to the comprehensive care provided at the hospital.

Equipment Name	No.	Utilization
Ventilators	70	Fully utilized in ICU
Monitor 7 Para with IBP Cables	50	Actively used in ICU and Casual Wards
Syringe Pump	200	Properly utilized in ICU and Casual Wards

Table: Equipment Utilization

2. **Patient Feedback**: During the field visits, patients expressed satisfaction with the quality of care received at the ICU equipped with IOCL-funded equipment. They appreciated the availability of advanced medical facilities and the dedicated efforts of the healthcare staff in providing timely and effective treatment.
3. **Images from the field visit**: High-resolution pictures captured during the field visits serve as visual evidence of the successful implementation of the CSR project. These

images showcase the functioning ICU, equipped with the medical equipment and highlight the positive impact on patient care.

4. **Positive Impact**: All stakeholders, including hospital staff, patients and community members, reported positive outcomes resulting from IOCL's CSR initiative. The establishment of the 100-bedded ICU has significantly contributed to enhancing the healthcare infrastructure in Bargarh, Odisha and the nearby districts, it has bolstered the region's capacity to respond to the COVID-19 pandemic and as well as improved patient care in present time.

Patients receiving treatment at the ICU expressed gratitude for the timely intervention facilitated by IOCL's support. Their feedback reflects the positive impact of the initiative on their treatment experience, highlighting the importance of access to advanced medical equipment in combating covid-19.

Furthermore, the project's success underscores IOCL's commitment to corporate social responsibility and public welfare. By investing in critical healthcare infrastructure, IOCL has significantly contributed to strengthening the resilience of the healthcare system in Bargarh and the nearby districts of Odisha.

2. INTRODUCTION

2.1 Indian Oil Corporation Limited (IOCL) has been transforming the lives of million through Corporate Social Responsibility (CSR) initiative in healthcare, aiming to uplift the well-being of communities, improve patient outcomes and driving progress towards a healthier future. Through various programs and partnerships, IOCL has been instrumental in providing accessible healthcare services to underserved populations across India. By establishing medical camps, mobile clinics and supporting healthcare infrastructure in rural areas, IOCL is bridging gaps in healthcare access and promoting preventive healthcare measures. Additionally, the corporation engages in health awareness campaigns, focusing on issues such as hygiene, sanitation and disease prevention, thereby contributing significantly to the overall improvement of public health in the regions it serves.

The COVID-19 pandemic has posed unprecedented challenges to healthcare systems worldwide, necessitating rapid responses and robust infrastructure to address the surge in patient admissions, particularly in critical care settings. In response to this urgent need, Indian Oil Corporation Limited (IOCL) embarked on a Corporate Social Responsibility (CSR) initiative aimed at bolstering healthcare facilities for COVID-19 patients.

2.2 Vikash Multi-Speciality Hospital: Vikash Multi-Specialty Hospital stands as a beacon of modern healthcare in western Odisha, with infrastructure spanning across 7 acres, equipped with cutting-edge medical technology and highly qualified staff, the hospital caters to a wide range of medical needs. Its commitment to providing top-quality healthcare at affordable rates underscores its mission to serve the community ethically and compassionately. With a range of super specialty and specialty services under one roof, including interventional cardiology, surgical oncology, and neurosurgery, Vikash Hospital ensures comprehensive care for patients. During the COVID-19 pandemic, Vikash Hospital emerged as a vital lifeline, supported by Indian Oil Corporation Limited (IOCL) and the Government of Odisha. With IOCL's financial support, the hospital expanded its ICU capacity to 100 beds, providing crucial ventilator support and monitoring. This initiative, coupled with the government's agreement to reimburse treatment costs, enabled Vikash Hospital to offer free care to COVID-19 patients from across the region, alleviating financial burdens and saving countless lives. Through its dedication and collaboration with key stakeholders, Vikash Hospital has exemplified resilience and solidarity in the face of adversity, emerging as a ray of hope amidst the pandemic's challenges.

2.3 Project Overview: In fiscal year 2021-2022, IOCL allocated 1129 lakhs towards establishing a 100-bedded Intensive Care Unit (ICU) at Vikash Multi-Speciality Hospital in Bargarh, Odisha. The project's primary objective was to provide essential medical equipment, including ventilators, monitors, and syringe pumps, to enhance the hospital's capacity to treat COVID-19 patients effectively.

2.4 Rationale for Assessment: With the successful implementation of the CSR project, it became imperative to conduct an impact assessment to evaluate the efficacy and outcomes of the intervention. This assessment aims to provide insights into the tangible benefits realized by patients, healthcare professionals and the community at large as a result of IOCL's philanthropic endeavour.

2.5 Scope of the Report: This executive summary provides a concise overview of the findings and key highlights of the impact assessment conducted on IOCL's CSR project. The detailed

report will delve deeper into the qualitative and quantitative data analysis, presenting a comprehensive understanding of the project's efficacy in addressing critical healthcare needs during the COVID-19 pandemic.

By comprehensively evaluating the impact of IOCL's CSR initiative, this assessment aims to inform future decision-making processes and inspire continued support for initiatives aimed at strengthening healthcare infrastructure and improving patient care services in communities.

3. OBJECTIVE

The major objectives of the study are as follows:

- To evaluate the impact on health of the people surrounding Bargarh, Odisha
- Assess the relevance and efficiency of the intervention in ensuring that the beneficiaries' challenges are addressed by the project and to review the implementation pathways - assessing process and activities.
- Understand the effectiveness of the intervention: How each activity has led to creating the desired outcomes.
- Understand the major success factors and challenges in the intervention.
- Find the areas of improvement across all the factors from program design to implementation.
- Provide an assessment framework to be able to capture impacts in a manner that is effective recommendation.

4. METHODOLOGY

We initiated the impact assessment study by identifying the key stakeholders for the project which are patients, doctors, staff, hospital administration and nearby communities. These stakeholders were ratified in consensus with the implementing partner. The study takes a 'mixed method' approach which includes both qualitative as well as quantitative data capture and analysis.

The quantitative tools provide values to key indicators related to access, awareness and quality. It also maps the outputs against the targets and outcomes perceived by the beneficiaries. On the other hand, the qualitative method and approaches provide a better understanding and help to build a storyline for the achievements and gaps in the program from the lens of immediate stakeholders involved in the program implementation, other than the beneficiaries. A qualitative study gives substantiated evidence for a better understanding of the processes involved in the program implementation. Thus, the 'mixed method' approach also helps in developing a framework for gap identification and course correction.

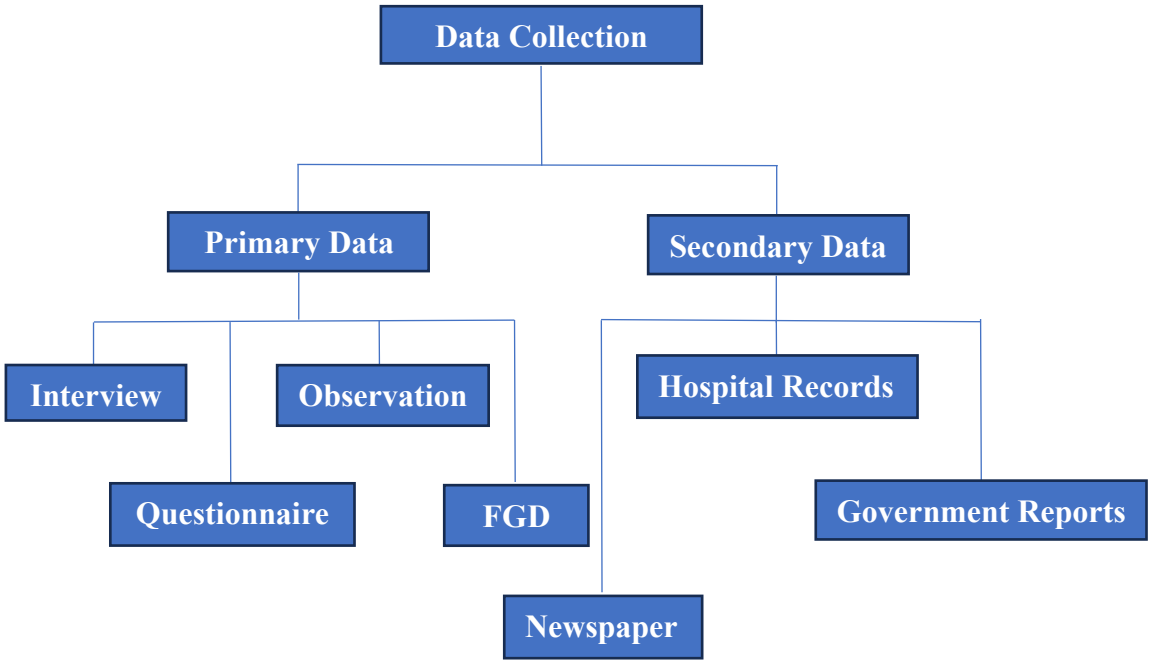


Fig: Data Collection Process

4.1 Primary Data Collection:

- Interviews: Direct one-on-one conversations were conducted with the staff members, including doctors, to gain firsthand insights into the impact of the equipment donation.
- Structured Questionnaire: A systematic questionnaire was employed to gather standardized responses from participants, ensuring a consistent and structured approach to data collection.
- Non-Participant Observation: Observations were made in various hospital settings without active participation, allowing for a nuanced understanding of activities and behaviors related to the donated equipment.

- Focused Group Discussion (FGD): Group discussions were facilitated to elicit collective insights, experiences, and opinions regarding the impact of the equipment donation.

4.2 Secondary Data Collection:

- Hospital Records: Relevant data from hospital records, including patient statistics and equipment usage, provided a historical perspective on the impact.
- Newspaper: Articles in newspapers were reviewed to gauge external perspectives, community reactions, and public sentiment related to the equipment donation.
- Government Reports: Official reports from government sources were consulted to supplement the assessment, providing additional insights into the broader healthcare sector and relevant policies.

4.3 Sampling Strategy

In quantitative data collection, we created representative and stratified samples to ensure accurate results. Sampling Plan for beneficiary surveys (Quantitative Data Collection): We stratified the sample by two parameters, namely:

i. Intervention geography
ii. Socio-economic strata of the stakeholders

The following table elaborates the sample size and distribution as per the strategy:

Stakeholder/ Beneficiary	Samples Size (Questionnaire)
Patients	180
Doctors & Staff	18

Key Informant Interview: Questionnaires were designed for each stakeholder interview. All relevant questions were asked to the respondents and were captured. This was done through purposive sampling.

Stakeholder Group	Number of Interviews conducted
Patients	18
Doctors & Staff	18

5. LOG FRAME

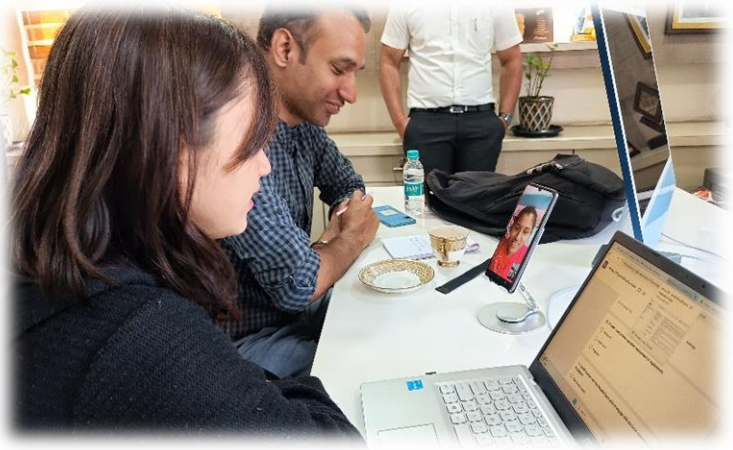
Project Summary	Indicators	Means of Verification	Assumptions
Decline in cure-to-death ratio during the Covid-19 period. Post-Covid, increased patient count across various medical conditions,	% increase in proper treatment Overall projection of decrease in mortality due to the new facilities Decrease in cost of treatment and diagnosis for patients	Monitoring and evaluation by hospital administration	Patient have access to quality ICU services.
Patients are benefitted from the devices.	No. of patients who received treatment on ventilators	Primary data from hospitals and surveys with patient	
Procurement of Ventilators, Syringe pumps and Monitors	Vendor selection bid Physical verification at the location	Procurement receipts	Proper usage of the devices will give access to the needy beneficiaries. Installation of devices will lead to proper usage of the devices
Ascertain the need for Ventilators, Syringe pumps and monitor	Number of stakeholders involved in the analysis	Need assessment report	Need assessment lead to purchase and installation of devices

Table: Log Frame

FIG: Swot Analysis

6. CASE STUDIES

6.1 Study 1: Overcoming Adversity: A Case Study of P. Surya Nandini's Journey Through Covid-19 During Pregnancy



Introduction: This case study delves into Nandini's journey through Covid-19, her critical condition, and the remarkable efforts of Vikash Multispecialty Hospital staff in ensuring the survival of both mother and baby.

Background: P. Surya Nandini, found herself amidst the throes of the Covid-19 y. As the virus wreaked havoc globally, Nandini began experiencing troubling symptoms, including difficulty breathing—a concern magnified by her delicate condition. Subsequent tests revealed a dire situation: not only was Nandini struggling to breathe, but her unborn child was also facing respiratory distress.

Critical Situation: The diagnosis plunged Nandini into a critical battle for survival. With her life and the life of her unborn child hanging in the balance, she was swiftly admitted to Vikash Multispecialty Hospital. The gravity of the situation demanded immediate intervention and Nandini was placed on a ventilator to support her compromised respiratory function. For 15 agonizing days, she teetered on the edge of life and death, her fate intertwined with that of her unborn child.

Extensive Care and Support: Throughout her harrowing ordeal, Nandini found solace in the unwavering support and expertise of the medical team at Vikash Multispecialty Hospital. Doctors, nurses and support staff rallied around her, providing round-the-clock care and monitoring her condition with meticulous attention. She states “The hospital's team and the quality healthcare played a pivotal role in Nandini's treatment, offering hope where there seemed to be none.”

Survival and Triumph: Against all odds, Nandini emerged victorious from her battle with Covid-19. With the dedicated efforts of the hospital staff and the indomitable strength of her own spirit, she defied the grim prognosis and reclaimed her health. Miraculously, her unborn child also weathered the storm, emerging from the crisis unscathed. Their survival stands as a testament to the transformative power of compassion and expert medical care.

Snippets of Interaction with Nandini: During our interactions with Nandini, she reflected on the profound impact of her journey through Covid-19. Grateful for the care she received at Vikash Multispecialty Hospital, she expressed profound gratitude to the medical team who became her lifeline during her darkest hours. Despite the challenges she faced, Nandini emerged from the experience with a newfound appreciation for life's fragility and the importance of cherishing every moment.

6.2 Study 2: The Remarkable Recovery of Nathuram Seth at Vikash Multi Specialty Hospital

Introduction: Nathuram Seth's was admitted to Vikash Multi Specialty Hospital in April 2022 after testing positive for Covid-19, Seth's battle against the virus was fraught with challenges. However, through the dedicated efforts of the hospital's medical team and healthcare facilities, Seth emerged victorious from the brink of death, embodying the triumph of hope over despair.

Background: In April 2022, Nathuram Seth found himself confronting the harsh realities of the Covid-19 pandemic as he was admitted to Vikash Multi Specialty Hospital. Diagnosed with Covid-19, Seth faced a daunting journey marked by uncertainty and adversity. With each passing day, his condition deteriorated, leading to a prolonged hospital stay that tested the limits of his physical endurance.

Critical Condition: Seth's battle against Covid-19 was characterized by numerous brushes with death. Spending a total of 60 days in the hospital, with a staggering 45 days confined to the Intensive Care Unit (ICU), Seth's condition remained precarious throughout his ordeal. On two separate occasions, Seth was on the brink of death, with medical professionals almost declaring him beyond saving. Yet, through sheer determination and the unwavering commitment of the medical team at Vikash Multi Specialty Hospital, Seth was resuscitated from the brink of oblivion, defying the odds with each passing day.

Extensive Care and Support: Central to Seth's remarkable recovery was the extensive medical care and treatment provided by Vikash Multi Specialty Hospital. Equipped with state-of-the-art facilities that were provided by IOCL and staffed by a team of skilled healthcare professionals, the hospital spared no effort in ensuring Seth received the highest standard of care. From round-the-clock monitoring to advanced medical interventions, every aspect of Seth's treatment was meticulously tailored to address his unique needs and challenges.

Total Satisfaction with Treatment: Despite the arduous nature of his journey, Nathuram Seth emerged from his battle with Covid-19 with a profound sense of gratitude and satisfaction. Reflecting on his experience at Vikash Multi Specialty Hospital, Seth expressed his utmost satisfaction with the quality of care he received. The compassionate approach of the medical staff, coupled with the hospital's cutting-edge facilities, played a pivotal role in Seth's recovery, instilling in him a deep sense of trust and confidence in the healthcare system.

Conclusion: Nathuram Seth's journey through Covid-19 serves as a testament to the indomitable human spirit and the transformative power of exceptional medical care. Through the dedicated efforts of the medical team at Vikash Multi Specialty Hospital, Seth emerged victorious from the clutches of death, embodying the triumph of hope over despair. His story stands as a beacon of inspiration, reminding us that even in the face of seemingly insurmountable challenges, resilience, perseverance, and unwavering determination can lead to triumph against all odds.

6.3 Study 3: Recovery of Gouranga Nayak from Critical COVID-19 at Vikash Multi Specialty Hospital.

Patient Background:
Name: Gouranga Nayak
Age: 47
Date of Admission: May 10, 2021
Admitting Diagnosis: Critical COVID-19

Introduction: Gouranga Nayak, was admitted to Vikash Hospital due to severe symptoms of COVID-19. He presented with shortness of breath, high fever, and extreme fatigue. His condition was critical, requiring immediate medical intervention.

Medical History: Prior to contracting COVID-19, Mr. Nayak had no significant medical history. He had been in good health and led an active lifestyle.

Presentation and Treatment: Upon admission, Mr. Nayak was immediately assessed by the medical team at Vikash Multi Specialty Hospital. He was found to be in respiratory distress and required supplemental oxygen to maintain adequate oxygen saturation levels. Diagnostic tests confirmed the presence of SARS-CoV-2 virus in his system.

The treatment plan initiated for Mr. Nayak included:

1. Oxygen therapy to support respiratory function.
2. Intravenous administration of antiviral medications.
3. Corticosteroid therapy to reduce inflammation in the lungs.
4. Close monitoring of vital signs and oxygen saturation levels.
5. Nutritional support to maintain adequate energy levels and immune function.

Progression of Treatment: In the initial days of hospitalization, Mr. Nayak's condition remained critical, and he required intensive care and constant monitoring. Despite the challenges, the medical team at Vikash Multi Specialty Hospital worked tirelessly to stabilize his condition and provide comprehensive medical care.

Gradually, Mr. Nayak responded positively to the treatment regimen. His oxygen saturation levels improved, and he showed signs of clinical improvement. As his condition stabilized, the medical team adjusted his treatment plan accordingly, ensuring a balance between supportive care and therapeutic interventions.

Recovery and Discharge: After several weeks of intensive medical care, Mr. Nayak's condition improved significantly. He regained his strength, and his symptoms gradually resolved. The medical team closely monitored his progress and conducted regular assessments to ensure a safe recovery.

On June 5, 2021, Mr. Nayak was discharged from Vikash Multi Specialty Hospital. He was deemed medically stable and no longer required hospitalization. Before discharge, the medical team provided him with post-discharge instructions, including medications to be taken at home, follow-up appointments, and recommendations for ongoing recovery and rehabilitation.

Patient Testimonial: Mr. Nayak expressed immense gratitude towards the medical staff at Vikash Multi Specialty Hospital for their exceptional care and dedication. He acknowledged the critical role they played in saving his life and helping him recover from COVID-19. He emphasized his satisfaction with the treatment received, praising the professionalism, compassion, and expertise of the entire healthcare team.

7. PATIENT RESPONSES

Table 1: Age Distribution

Majority of the respondents fall within the age group of 46-60 (55.6%), followed by 31-45 (33.3%), then 18-30 (11.1%). There are no respondents under 18.

Age Group	Count	Percentage
Under 18	0	0%
18-30	20	11.1%
31-45	60	33.3%
46-60	100	55.6%

Table 2: Gender Distribution

There are more female respondents (72.2%) compared to male respondents (27.8%).

Gender	Count	Percentage
Male	130	27.8%
Female	50	72.2%

Table 3: Quality of Care Received

Most respondents rated the quality of care received as "Excellent" (44.4%), followed by "Good" (55.6%).

Quality of Care	Count	Percentage
Excellent	100	44.4%
Good	80	55.6%

Table 4: Perceived Changes in Efficiency and Effectiveness of Healthcare Services after the CSR initiative.

A majority of respondents noted some improvement in the efficiency and effectiveness of healthcare services after the CSR initiative implemented, with 33.3% reporting significant improvement and 61.1% reporting somewhat improved services.

Perception	Count	Percentage
Yes, significantly improved	110	33.3%
Yes, somewhat improved	60	61.1%
No noticeable change	10	5.6%
Declined	0	0%

Table 6: Ventilator Usage by the COVID-19 Patients

A vast majority of respondents (94.4%) were not on a ventilator during their treatment.

Ventilator Usage	Count	Percentage
Yes	170	94.4%
No	10	5.6%

Table 7: Overall Treatment Satisfaction

The majority of respondents reported being either "Very satisfied" (38.9%) or "Satisfied" (61.1%) with the treatment received.

Satisfaction Level	Count	Percentage
Very satisfied	110	38.9%
Satisfied	70	61.1%

Table 8: Impact of Available Equipment on Diagnosis and Treatment has improved

Most respondents either "Agreed" (38.9%) or "Strongly agreed" (11.1%) that the availability of equipment positively influenced their diagnosis and treatment.

Agreement Level	Count	Percentage
Strongly agree	90	11.1%
Agree	70	38.9%
Neutral	20	50%
Disagree	0	0%

Table 9: Awareness of Community Engagement Programs

A significant portion of respondents (38.9%) reported being aware of community engagement programs organized by the hospital, and the majority found them helpful.

Awareness Level	Count	Percentage
Yes, and it was helpful	80	38.9%
Yes, but it was not helpful	30	16.7%
No, not aware	70	44.4%

Table 10: Referral to Outside Hospitals

Only one respondent out of eighteen reported being referred to an outside hospital.

Referral Status	Count	Percentage
0	170	94.4%
1 time	10	5.6%

Areas for Further Improvement

Few respondents identified specific areas for improvement, with suggestions including quality of care, efficiency of services, communication, and facilities. However, the majority (66.7%) felt that no further improvement was required.

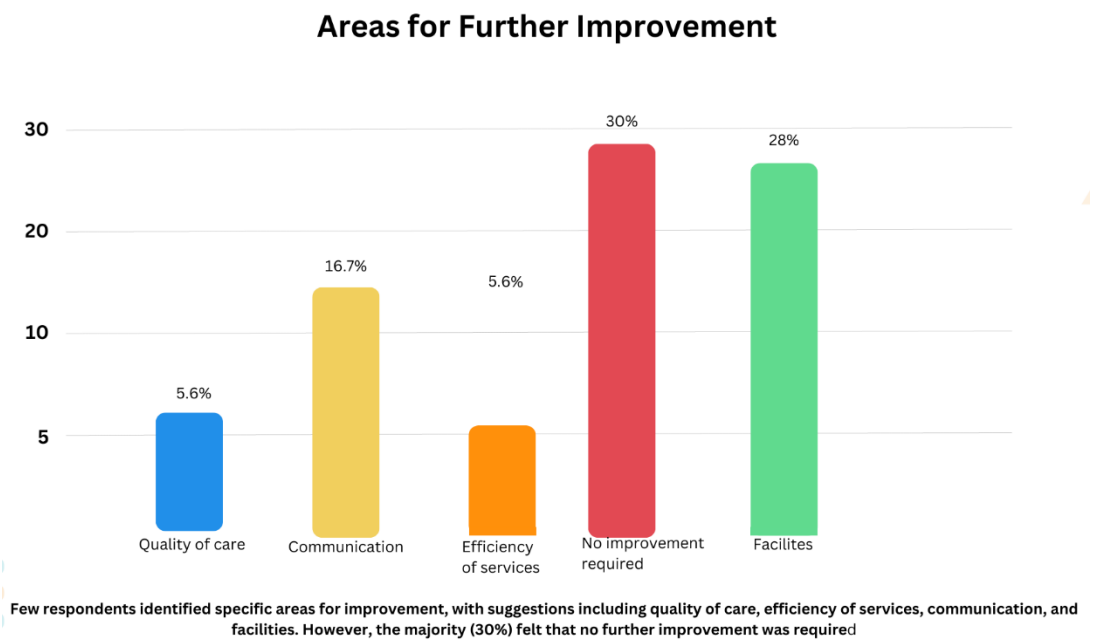


Fig: Areas of Improvement

Additional Comments:

The provided comments have been summarized and are not represented in tabular or graphical format. However, they provide qualitative insights into patient experiences and satisfaction levels

8. PATIENT OUTCOME

The data presented in this patient outcome report suggests a positive patient experience and high levels of satisfaction with the quality of care received at Vikash Hospital. The feedback provided by patients highlights the hospital's commitment to delivering exceptional healthcare services and underscores the importance of ongoing quality improvement initiatives to further enhance patient outcomes.

During Covid-The patient outcome analysis during the Covid-19 period from April 2021 to December 2021, a total number of 2188 of patients were treated in ICU. Noteworthy was the consistent rise in the discharge rate observed throughout the months. As we delved into the data, a compelling observation emerged regarding the cure-to-death ratio. In April, the ratio stood at 35.96%, indicating a relatively higher success rate in patient recovery. However, by August, a notable decline was witnessed, with the ratio decreasing significantly to 11.11%. The decline in the cure-to-death ratio could indeed be attributed to various factors, but the deployment of ventilators could be a major contributor to reducing mortality rates due to Covid-19. The use of ventilators played a crucial role in providing respiratory support to severely affected patients, helping them overcome respiratory distress and improving their chances of survival.

The increased capacity at Vikas Hospital not only served the healthcare requirements of Bargarh residents but also extended its support to patients from other districts such as Angul, Bhubaneswar, Boudh, Balangir, Kalahandi etc. constituting 22% of the total treated cases. Notably, there were instances where individuals from beyond the state of Odisha sought medical treatment at the hospital.

Post Covid-The role of ventilators extends beyond treating COVID-19 patients, as they have been crucial in addressing a wide range of non-COVID medical issues. Ventilators played a vital role in providing respiratory support for patients facing severe respiratory challenges, regardless of the underlying cause. During the pandemic, while they were instrumental in treating COVID-19-related respiratory distress, their utility extended to diverse medical conditions.

The data analysis reveals a clear and substantial increase in the number of patients post the COVID-19 pandemic. Specifically, the patient count rose from 1430 in 2021 to 5534 in 2022 and continued to climb to 8110 in 2023. This upward trend encompasses a diverse range of medical conditions, including but not limited to Trauma and Accidents, Neuromuscular Disorders, Cardiac Issues, Asthma, Severe Infections, Pneumonia, among others.

During the visit, a notable observation was the ICU's high occupancy, surpassing 90%, indicating the extensive use of ventilators to treat patients with various diseases. The staff exhibited commendable expertise, confidently handling the ventilators. All ventilators were in good condition and functioning optimally, emphasizing the hospital's commitment to maintaining top-notch equipment and ensuring the highest standards of patient care.

1. **Cure-to-Death Ratio:** Shows the decline in the cure-to-death ratio from April to December 2021, indicating the impact of various factors, including the deployment of ventilators, on patient outcomes.

2. **Distribution of Treated Patients by Location:** Highlights the percentage of patients treated from different districts, showcasing the hospital's reach beyond Bargarh and even outside Odisha.
3. **Increase in Number of Patients Post-COVID:** Illustrates the significant increase in the number of patients treated at the hospital post-COVID, indicating the enduring impact of the pandemic on healthcare demand.
4. **ICU Occupancy Rate During Visit:** Demonstrates the high occupancy rate in the ICU during the visit, reflecting the extensive use of ventilators to treat patients with various medical conditions.
5. **Condition of Ventilators During Visit:** Indicates the good condition and optimal functioning of ventilators, emphasizing the hospital's commitment to maintaining top-notch equipment and ensuring high standards of patient care.

In conclusion, IOCL's ventilator donation to Vikas Hospital during Covid-19 significantly improved patient outcomes, evident in the declining cure-to-death ratio. Beyond treating Bargarh residents, the ventilators extended healthcare support to diverse districts and garnered attention even outside Odisha. Post-Covid, the sustained increase in patients across medical conditions underscores the lasting impact of ventilators.

9. DOCTOR AND STAFF RESPONSES

The following data encapsulates the invaluable insights and perspectives garnered from the dedicated medical professionals and staff members at Vikash Hospital. Through meticulous data collection and comprehensive analysis of their responses, this report endeavors to shed light on the myriad ways in which the provided equipment and their expertise, dedication and innovative approaches have shaped the hospital's response to the crisis. The narratives shared by doctors and staff members offer profound insights into the evolving landscape of healthcare provision at Vikash Hospital. Their perspectives serve as a testament to the indomitable spirit of compassion, professionalism and collaboration that defines the ethos of Vikash Hospital's healthcare and the support provided by IOCL.

Designation: The wide array of designations include- Assistant Nursing Superintendent, Consultant (Pulmonary and Critical Care), Consultant (Emergency Medicine), GM Business Development, Medical Director, Nursing Incharge, Nursing Superintendents, Staff Nurse, Neonatologist, Manager IT, Nursing Incharge PICU.

Out of the **total 18 staff members** surveyed, the findings revealed that more than half of them reported daily utilization of the newly acquired medical equipment, while a significant portion indicated rare usage. The majority acknowledged enhanced precision in patient care due to the equipment, alongside faster diagnoses and smoother workflow. All respondents unanimously reported a marked improvement in the quality of care, with most staff moderately familiarized with the equipment, albeit with room for further improvement. Additionally, all staff noted a positive impact on the work environment and morale. Few referrals to higher centers were reported, and there was an increase in patient count post-deployment. Moreover, the staff reported high engagement with the local community through various initiatives, emphasizing the importance of community involvement in healthcare. Challenges such as social stigma and shortages of trained manpower were highlighted, along with suggestions for improvement, including increased awareness about infection control and the need for additional resources like ventilators and beds.

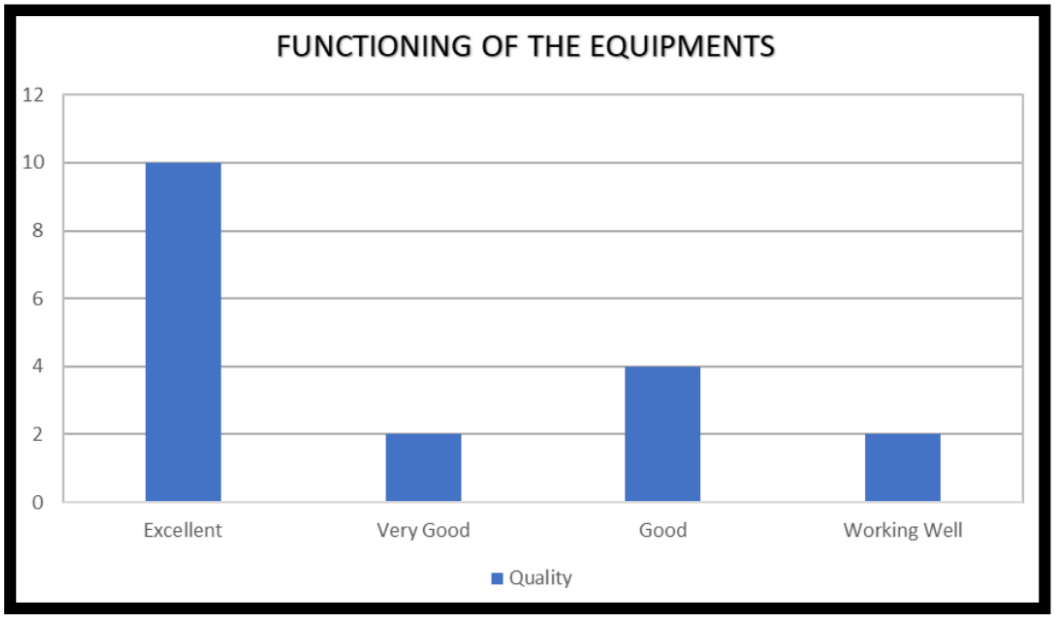
No.	Aspect	Percentage/Reported Data
1.	Frequency of Equipment Utilization	Daily: 55.6%, Rare: 44.4%
2.	Impact on Patient Care	Enhanced precision: 83.3%, Other improvements: Faster diagnosis, streamlined workflow
3.	Quality of Care	Marked improvement: 100%
4.	Staff Familiarity with Equipment	Moderately well: 88.9%, Very well: 11.1%
5.	Positive Impact on Work Environment and Morale	Positive impact: 100%

No.	Aspect	Percentage/Reported Data
6.	Functioning of Devices	Majority rated excellent or good
7.	Patient Referrals to Higher Centers	Minimal to rare referrals
8.	Patient Count	Increased patient count: 100%
9.	Community Engagement	High engagement with local community: 100%
10.	Measures for Community Awareness	Infection control, media, social media, free health camps, guidance and counseling, etc.
11.	Challenges Encountered	Social stigma, shortages of trained manpower, transport, and medicine supply
12.	Suggestions for Improvement	More awareness about infection control, regular support with supplies and resources, need for more ventilators and beds

Table: Staff Responses

Graphical Presentation

Graph 1: Functioning of the Devices provided by IOCL.



Total responses are 18. Therefore, based on the responses provided by both staff and patients regarding the functioning of the device, it appears that there is generally positive feedback. Here's the analysis:

Excellent: 10 responses indicated that the functioning of the device are excellent. This suggests that the device is performing exceptionally well and meeting or exceeding expectations. It indicates a high level of satisfaction among the users with the performance of the device.

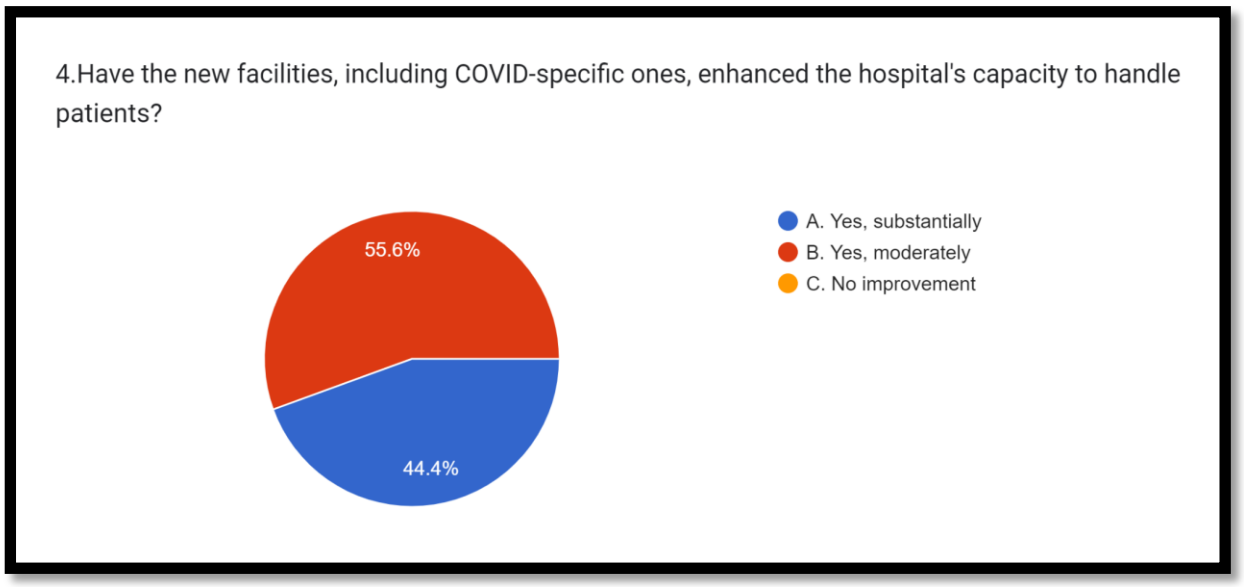
Good: 4 responses described the functioning of the device as good. While not as high praise as "excellent," describing it as good still indicates satisfaction with its performance.

Working well: 2 responses mentioned that the device is working well. This is a positive assessment, indicating that the device is functioning as expected and meeting the needs of the users.

Very good: 2 responses stated that the functioning of the devices are very good. This is another positive assessment, indicating satisfaction with its performance.

Overall, the data indicates that there is a high level of satisfaction among both staff and patients with the functioning of the device. The majority of responses rated it as excellent or good, with additional praise for specific components such as the ventilator and monitor being the best in the industry. This positive feedback suggests that the device is reliable, effective, and meeting the needs of its users.

Graph 2: Enhancement in Hospital Capacity after the CSR initiative



Based on the data provided by the 18 doctors and staff regarding whether the hospital's capacity to handle patients after Covid-19 have enhanced, the following analysis can be made:

- Number of doctors and staff who said "Yes, substantially": 10
- Number of doctors and staff who said "Yes, moderately": 8
- Number of doctors and staff who said "No improvement": 0

First, let's assess the proportion of doctors who perceive enhancement in capacity:

From this breakdown, we observe that the majority of doctors perceive enhancement in the hospital's capacity. The percentages show that 55.56% of the doctors perceive a substantial enhancement, while 44.44% perceive a moderate enhancement.

Since no doctors reported "No improvement," it indicates a unanimous agreement among the surveyed doctors that the new facilities, have led to some level of improvement in the hospital's capacity to handle patients with an ICU facility set up for 100 patients and is fully working currently.

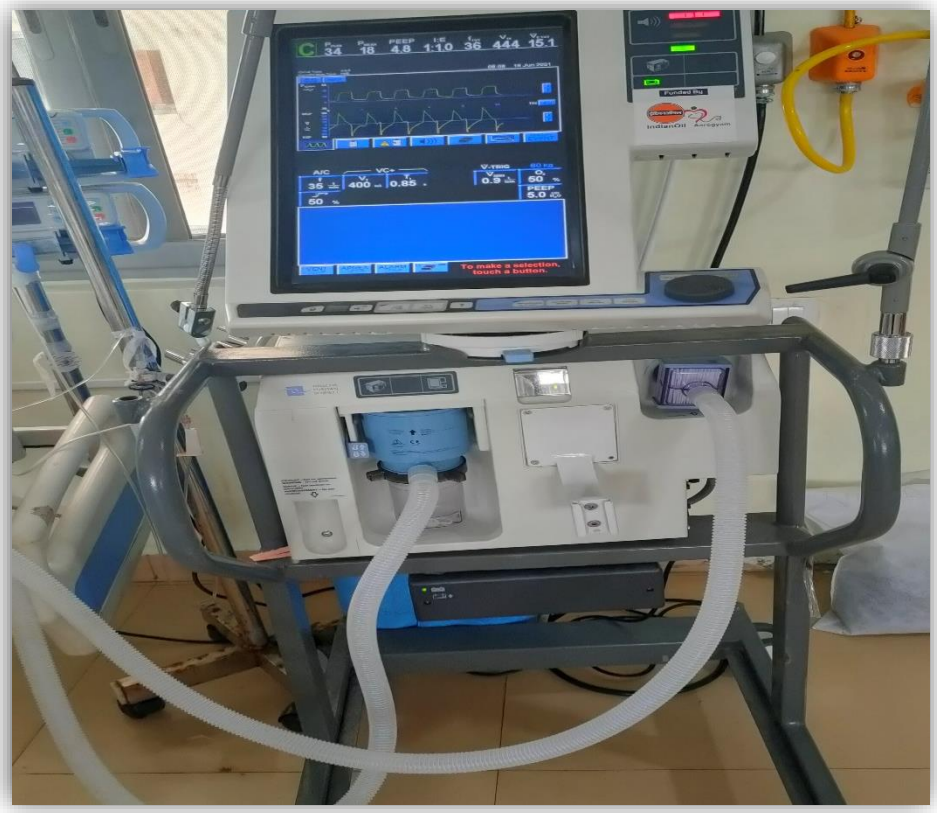
Overall, the data suggests that the new facilities have positively impacted the hospital's capacity, with a significant majority of doctors and staff perceiving either substantial enhancement.

10. EQUIPMENT UTILIZATION

The allocation of essential medical equipment to Vikash Hospital amidst the COVID-19 pandemic has yielded significant dividends, with these resources being meticulously and efficiently utilized to address the healthcare needs of the community. As attested by hospital authorities and corroborated by firsthand observations, the ventilators, monitors and syringe pumps provided to Vikash Hospital have seamlessly integrated into the hospital's operational framework, playing a pivotal role in patient care protocols.

The utilization of these critical devices transcends mere functionality; it epitomizes Vikash Hospital's unwavering commitment to ensuring optimal healthcare delivery even amid challenging circumstances. Despite the passage of time since their procurement, these equipments remain indispensable assets within the hospital's armamentarium, symbolizing a testament to the enduring impact of CSR-driven interventions.

Moreover, the tangible evidence of equipment utilization extends beyond mere assertions, as illustrated by compelling visual documentation capturing the equipment in active use within the hospital's premises. These images not only serve as a testament to the robust utilization of resources but also offer a glimpse into the seamless integration of technology into the fabric of patient care at Vikash Hospital. From bustling wards to meticulously organized treatment areas, these pictures vividly depict the pivotal role played by ventilators, monitors and syringe pumps in safeguarding the health and well-being of patients entrusted to the hospital's care.

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In essence, the utilization of medical equipment at Vikash Hospital stands as a beacon of efficiency and efficacy, underscoring the transformative impact of CSR initiatives in fortifying healthcare infrastructure and enhancing patient outcomes. As the hospital continues its noble mission of serving the community, these equipments remain steadfast allies, embodying the spirit of resilience and compassion that defines Vikash Hospital's ethos.

Here are some of the doctor and staff responses on the equipment utilization:

Utilization Level	Count
High	18
Moderate	0
Low	0

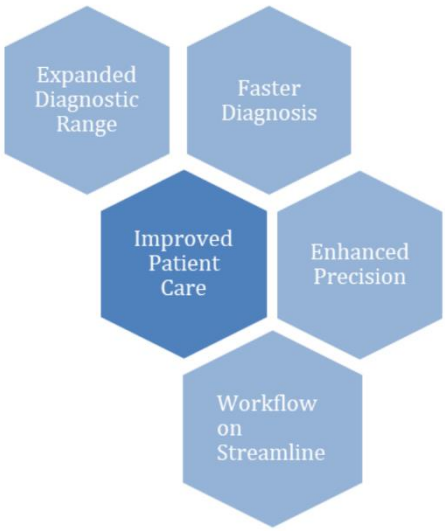
Table: Equipment Utilization

Based on the data provided, it appears that the equipment is being used extensively by the doctors and staff. The fact that all 18 respondents reported that the equipment was highly utilized suggests a consensus among them regarding the level of usage. Moreover, through in field data collection we could all the ventilators and monitors are in functioning mode currently.

This high level of utilization could indicate several things:

- **Efficient Workflow**: The equipments' are well-integrated into the workflow of the doctors and staff, allowing for smooth and efficient operation.
- **High Demand**: There is a high demand for the services provided by the ventilators and monitors, leading to its frequent use.
- **Effective Management of the equipment**: The equipment are effectively managed and maintained, ensuring that it is readily available for use in the ICUs, that is what have been observed and registered through data collection.

Overall, the data suggest that the equipment are an essential and heavily relied-upon tool in the operations of the doctors and staff. It would be advisable for the organization to continue monitoring and maintaining the equipment to ensure continued high levels of utilization and effectiveness**.**



Enhance the quality of patient care

The doctors and staff at Vikash Hospital have highlighted several ways in which equipment has improved patient care:

Faster Diagnosis: The medical equipment contributed to quicker diagnoses, allowing healthcare professionals to identify conditions and start treatment promptly. This led to better outcomes for patients by addressing health issues earlier, potentially preventing complications or worsening of conditions.

Enhanced Precision: Medical equipment offered increased precision in diagnostic procedures and treatments. This precision helped doctors pinpoint the exact nature of health issues, leading to more targeted interventions. Improved accuracy reduced the likelihood of errors and ensured that patients receive appropriate care tailored to their specific needs.

Expanded Diagnostic Range: The technological advancements in medical equipments provided more detailed insights into patient health. This expanded diagnostics capability enabled the healthcare providers to treat the abnormalities that may have been previously undetectable, allowing for earlier intervention and management.

Streamlined Workflow: The equipments contributed to more efficient and effective patient care. By automating tasks or integrating various functions into a single device healthcare professionals could save time and resources, allowing them to focus more on patient interaction and delivering quality care.

Overall, the improvements highlighted by the doctors at Vikash Hospital suggest that advancements in medical equipment have led to significant enhancements in patient care by facilitating faster, more accurate diagnoses, expanding diagnostic capabilities and optimizing healthcare workflows. These advancements ultimately contribute to better patient outcomes and experiences.

11. TRAINING

The training provided to hospital staff for the proper use of donated medical equipment appears to be effective, as observed by the staff's comfort in handling the devices. Authorities have affirmed the commitment to staff development through regular training sessions, indicating a proactive approach to upskilling. The recent hiring of new technical staff further reflects a dedication to maintaining a proficient workforce.

To assess staff proficiency in operating the equipment, periodic evaluations or assessments could be beneficial. These assessments could involve simulated scenarios or hands-on exercises to ensure that staff can apply their knowledge and skills effectively in real-life situations.

In conclusion, the combination of ongoing training, recruitment of new technical staff, and the evident comfort of existing staff members in using the equipment suggests a well-organized and effective training program at the hospital.

12. CHALLENGES

- Rapidly ramping up manpower with technical knowledge to handle a large number of cases.
- Assigning beds to critically ill patients while ensuring fairness and equal opportunities,
- Ensuring the segregation of non-COVID patients to prevent infection, while also safeguarding their treatment and any elective surgeries from being compromised by COVID treatments.
- Effectively handling the substantial volume of biomedical infectious waste generated daily.
- The comprehensive management of a medical setup, encompassing infrastructure, furniture, fittings, and particularly high-cost advanced medical equipment like ventilators, along with the maintenance of a sufficient stock of protective consumables.
- Ensuring a sufficient reserve of oxygen to prevent fatalities due to shortages, including providing oxygen support for ambulances on extended journeys and supplying oxygen to patients receiving home care when beds are unavailable.
- Managing and providing counselling to gatherings arriving to receive a deceased body, particularly in the case of a young person's demise. Communicating and coordinating with government authorities regarding the handover, cremation, and the management of mass gatherings.

13. RECOMMENDATIONS

- Implement a structured training program incorporating both theoretical and practical aspects to quickly upskill staff in rural areas and new hires with technical knowledge relevant to handling COVID-19 cases.
- Develop a transparent and objective system for bed allocation based on severity of illness, medical need and available resources, ensuring fairness and equal opportunities for all patients.
- Implement robust monitoring and evaluation mechanisms to track the utilization and impact of CSR funds allocated to healthcare hospitals. This will help ensure accountability and transparency in the use of funds, as well as provide valuable insights for future decision-making and resource allocation.
- Enhance biomedical waste management systems by investing in efficient disposal technologies, increasing staff training on waste handling protocols and implementing strict monitoring procedures.
- Implement a comprehensive asset management system to track and maintain medical infrastructure, furniture, fittings and high-cost equipment like ventilators, ensuring timely maintenance and repairs.
- Secure additional reserves of oxygen through procurement agreements with suppliers, invest in oxygen generation facilities and equip ambulances with oxygen support systems for extended journeys.
- Establish a dedicated counselling team to provide support to families receiving deceased bodies, coordinate closely with government authorities for handover and cremation processes and ensure effective communication and management of mass gatherings.

14. CONCLUSION

The comprehensive analysis of both patient outcomes and the responses from doctors and staff at Vikash Hospital paints a vivid picture of the institution's dedication to providing high-quality healthcare services, particularly amidst the challenges posed by the COVID-19 pandemic. The collaboration with IOCL through CSR initiatives has been instrumental in bolstering the hospital's capabilities, particularly evident in the deployment of essential medical equipment like ventilators, monitors, and syringe pumps.

Patient outcomes reflect a positive experience overall, with a majority expressing satisfaction with the quality of care received. The data underscores the impact of initiatives such as the ventilator donation, which contributed to a decline in the cure-to-death ratio during the COVID-19 period, signifying improved patient outcomes. The hospital's reach extended beyond Bargarh, catering to patients from various districts and even attracting individuals from outside Odisha, highlighting its growing reputation for excellence in healthcare delivery.

Furthermore, insights from doctors and staff reaffirm the significance of the provided equipment, with daily utilization reported by more than half of the surveyed staff. The equipment not only facilitated enhanced precision in patient care but also contributed to smoother workflow and faster diagnoses. Staff familiarity with the equipment, coupled with positive impacts on the work environment and morale, further accentuates the success of the CSR-driven interventions.

The visual documentation of equipment utilization serves as tangible evidence of the hospital's efficient integration of technology into patient care protocols, illustrating its commitment to leveraging resources for optimal healthcare delivery. Challenges such as social stigma and shortages of trained manpower were acknowledged, but suggestions for improvement, including increased awareness about infection control and the need for additional resources, reflect a proactive approach towards addressing ongoing healthcare challenges.

In conclusion, the partnership between Vikash Hospital and IOCL through CSR initiatives has yielded tangible benefits, fostering improved patient outcomes, enhanced healthcare delivery, and a strengthened commitment to community engagement. Moving forward, continued collaboration and strategic investments in healthcare infrastructure will be crucial in sustaining and furthering the positive impact on patient care and community well-being.

15. PHOTO GALLERY

C*f*HE team with the team of Vikash Multi-Speciality Hospital

Interaction with Patients

Interaction with Staff and Doctors

Images of Field Visit


Indian Oil Corporation Limited
DONATED
100 BEDED ICU FACILITIES WITH VENTILATORS
AT-VIKASH MULTI-SPECIALITY HOSPITAL
BARGARH, ODISHA
IN ASSOCIATION WITH
DVR & GRCR Memorial Trust
Bargarh, Odisha
Inaugurated By
Sri Dharmendra Pradhan
Sri Narendra Modi

16. ANNEXURE

IOCL Impact assessment

1. **1.Name**

   _____

2. Name

   _____

3. Designation

   _____

4. *Mark only one oval.*

   ◯ Option 1

5. **2.Designation**

   _____

6. **3.How has the CSR fund contributed to improving the overall infrastructure of the hospital?**

   Mark only one oval.

   ◯ A. Significantly
   ◯ B. Moderately
   ◯ C. Negligibly
   ◯ Other: _____

7. **4.Have the new facilities, including COVID-specific ones, enhanced the hospital's capacity to handle patients?**

Mark only one oval.

- A. Yes, substantially
- B. Yes, moderately
- C. No improvement

8. **5.Equipment Utilization:**

Mark only one oval.

- A. High utilization
- B. Moderate utilization
- C. Low utilization

9. **6.How frequently are the newly acquired medical equipment being utilized?**

Mark only one oval.

- A. Daily
- B. Weekly
- C. Rarely

10. **7.In what ways have these equipment improved patient care?**

Mark only one oval.

- A. Faster Diagnosis:
- B. Enhanced Precision:
- C. Expanded Diagnostic Range
- G. Streamlined Workflow

11. **10.Quality of Care:**

Mark only one oval.

- A. Marked improvement
- B. Slight improvement
- C. No improvement

12. **11. Have you observed any improvements in the quality of care provided to COVID patients after the implementation of the CSR-funded initiatives?**

Mark only one oval.

- Efficient Patient Monitoring Systems:
- Timely Availability of Critical Resources
- Implementation of Advanced Protocol
- Improved Infection Control Measures

13. **12.To what extent are the staff familiarized with the newly acquired equipment?**

Mark only one oval.

- Very Well
- Moderately Well
- Limited Familiarity
- Minimal Acquaintance

14. **13. Have the enhancements and additions affected the work environment and staff morale positively?**

Mark only one oval.

- Yes
- No
- Not Sure

15. **14.Functioning of device**

16. **15.Utilization of different equipment,**
no of patients used each equipment's every month.

17. **16.How many patients are referred to higher centers every month.**

18. **17. Patient count before and after deployment of equipment's.**

Mark only one oval.

- Increased
- Decreased
- Stagnant

19. **19. To what extent has the hospital been able to engage with the local community through these initiatives?**

Mark only one oval.

- High Engagement
- Moderate Engagement
- Limited Engagement
- Negligible Engagement

20. **20. What measures were implemented to increase community awareness about the improved facilities?**

21. **21. What challenges, if any, have you encountered during the implementation of these initiatives?**

22. **22.Are there any suggestions for further improvement or modifications?**

Patient Details

1. **Name**

_____

2. **Age**

Mark only one oval.

- ◯ Under 18
- ◯ 18-30
- ◯ 31-45
- ◯ 46-60

3. **Gender**

Mark only one oval.

- ◯ Male
- ◯ Female

4. **Quality of Care received**

Mark only one oval.

- ◯ Excellent
- ◯ Good
- ◯ Average
- ◯ Poor

5. **How would you rate the quality of care received at the hospital since the implementation of CSR-funded initiatives?**

Mark only one oval.

- ◯ Very satisfied
- ◯ Satisfied
- ◯ Neutral
- ◯ Dissatisfied

6. **Have you noticed any changes in the efficiency and effectiveness of healthcare services?**

Mark only one oval.

- ◯ Yes, significantly improved
- ◯ Yes, somewhat improved
- ◯ No noticeable change
- ◯ Declined

7. **During the course of your treatment were you in ventilator?**

Mark only one oval.

- ◯ Yes
- ◯ No

8. How satisfied are you with the treatment received.

Mark only one oval.

- ◯ Very satisfied
- ◯ Satisfied
- ◯ Neutral
- ◯ Dissatisfied

9. **Do you believe the availability of these equipment positively influenced your diagnosis and treatment?**

Mark only one oval.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree

10. **Were you made aware of any community engagement programs or health education sessions organized by the hospital?**

Mark only one oval.

- ◯ Yes, and it was helpful
- ◯ Yes, but it was not helpful
- ◯ No, not aware

11. How many times have you been referred to outside hospitals

_____

12. **Are there any specific aspects that you feel could be further improved?**

Check all that apply.

- ☐ Quality of care
- ☐ Efficiency of services
- ☐ Communication
- ☐ Facilities
- ☐ No improvement required

13. **Suggestions**

_____

INDIAN OIL CORPORATION LIMITED

Impact Assessment of IOCL CSR Project:

COVID Hospital & COVID Care Centre, Bargarh

Report Submitted by:

Center for Healthcare Entrepreneurship (CfHE),

Indian Institute of Technology-Hyderabad

CONTENTS

1. EXECUTIVE SUMMARY

The impact assessment report delves into the repercussions of the Covid-19 pandemic on the healthcare system, particularly in Bargarh District, Odisha, India and the subsequent intervention by the Indian Oil Corporation Limited (IOCL) to ameliorate the situation. With the pandemic posing multifaceted challenges ranging from resource scarcity to financial constraints, the healthcare infrastructure strained under the weight of surging cases and dwindling supplies. Recognizing the urgency, IOCL allocated Rs. 558.00 Lakh to procure essential medical equipment, augmenting dedicated Covid hospitals and Care Centers in Bargarh District, Odisha.

FIG: The Process of Problem Solving

The objectives of this assessment were multifold, aiming to evaluate the efficacy of the intervention, understand its impact on addressing beneficiaries' challenges, and identify areas for improvement. Employing a mixed-method approach, the study amalgamated qualitative insights from stakeholders, including patients, doctors and staff, with quantitative data analysis from surveys and hospital records.

Quantitative assessments revealed promising statistics, showcasing a decline in mortality rates and an increase in patient admissions post-implementation. Notably, the availability of critical medical equipment, such as ventilators, ECG machines and dialysis units, significantly bolstered the hospital's capacity to provide timely and efficient care, evident from enhanced diagnostic throughput and reduced waiting times.

The **qualitative narratives** echoed the quantitative findings, emphasizing the pivotal role of IOCL's intervention in fortifying the healthcare infrastructure and mitigating the impact of the pandemic's second wave. **Interviews, Questionnaires and Observation** sessions elucidated the transformative effects of donated equipment, underscoring improved patient outcomes and streamlined healthcare delivery.

Despite these strides, the assessment surfaced areas warranting attention, including the need for sustained resource allocation, capacity building, and community engagement initiatives. Moreover, the success of future interventions hinges on addressing these gaps while leveraging collaborative efforts for comprehensive healthcare resilience.

In conclusion, the impact assessment underscores the tangible benefits of IOCL's intervention in fortifying Bargarh District's healthcare landscape amidst the Covid-19 crisis. By facilitating

access to critical medical equipment and bolstering healthcare infrastructure, IOCL has not only alleviated immediate challenges but also laid a foundation for long-term resilience in the face of future crises.

2. BACKGROUND

The **Covid-19** pandemic brought in a wave of tough challenges for the healthcare system . We faced issues like not having enough space, running out of supplies, needing to change how they provide care, and losing money.

India, especially Odisha, felt the weight of the Covid-19 situation. The number of new cases was high, and the usual ways of dealing with disasters weren't enough. The Test Positivity Rate (TPR) was also a cause for concern, showing the urgent need for a stronger healthcare system to handle more cases and save lives in more affected districts like Bargarh.

A big problem was the shortage of Intensive Care Unit (ICU) beds, especially those with ventilators. This shortage highlighted the need to get more advanced medical equipment to deal with the expected increase in cases.

The impact of the pandemic wasn't just physical; it affected people emotionally and financially too. Essential medical tools like **ECG machines, X-ray machines, ultrasound devices, glucometers, dialysis machines, Ambu bags and oxygen plants** became crucial for effective treatment.

Adding to the challenge, many local people didn't have insurance that covered their medical costs. Even for those with insurance, it often didn't cover the costs of treating Covid-19. This gap in coverage led to more people losing their lives because they couldn't get the right care at a price they could afford.

To tackle these issues, **Indian Oil Corporation Limited (IOCL)** stepped up. They decided to contribute money **(Rs. 558.00 Lakh)** to get different kinds of medical equipment for dedicated **Covid hospitals and Covid Care Centers in Bargarh District**, Odisha.

The plan divides the money for medical equipment, other important devices, furniture, and computer stuff. With their installations and pipelines near Bargarh District, IOCL is making a significant effort to help the community during this tough time.

3. OBJECTIVE

The major objectives of the study are as follows:

- To analyze and determine the effectiveness of the medical equipments provided during COVID-19.
- Assess the relevance and efficiency of the intervention in ensuring that the beneficiaries' challenges are addressed by the project and to review the implementation pathways - assessing process and activities.
- Understand the effectiveness of the intervention: How each activity has led to creating the desired outcomes.
- Understand the major success factors and challenges in the intervention.
- Find the areas of improvement across all the factors from program design to implementation.

4. METHODOLOGY

We initiated the impact assessment study by identifying the key stakeholders for the project which are patients, doctors, staff, hospital administration and nearby communities. These stakeholders were ratified in consensus with the implementing partner. The study takes a 'mixed method' approach which includes both qualitative as well as quantitative data capture and analysis.

The **quantitative tools** provide values to key indicators related to access, awareness and quality. It also maps the outputs against the targets and outcomes perceived by the beneficiaries. On the other hand, the **qualitative method** and approaches provide a better understanding and help to build a storyline for the achievements and gaps in the program from the lens of immediate stakeholders involved in the program implementation, other than the beneficiaries. A qualitative study gives substantiated evidence for a better understanding of the processes involved in the program implementation. Thus, the 'mixed method' approach also helps in developing a framework for gap identification and course correction.

4.1 Primary Data Collection:

Interviews: Direct one-on-one conversations were conducted with 10 staff members, including doctors and patients, to gain firsthand insights into the impact of the equipment donation.

Structured Questionnaire: A systematic questionnaire was employed to gather standardized responses from participants, ensuring a consistent and structured approach to data collection.

Non-Participant Observation: Observations were made in various hospital settings without active participation, allowing for a nuanced understanding of activities and behaviors related to the donated equipment.

Focused Group Discussion (FGD): Group discussions were facilitated for collective insights, experiences, and opinions regarding the impact of the equipment donation.

4.2 Secondary Data Collection:

Hospital Records: Relevant data from hospital records, including patient statistics and equipment usage, provided a historical perspective on the impact.

Newspaper: Articles in newspapers were reviewed to gauge external perspectives, community reactions, and public sentiment related to the equipment donation.

Government Reports: Official reports from government sources were consulted to supplement the assessment, providing additional insights into the broader healthcare sector and relevant policies.

4.3 Sampling Strategy

In quantitative data collection, we created representative and stratified samples to ensure accurate results. Sampling Plan for beneficiary surveys (Quantitative Data Collection): We stratified the sample by two parameters, namely:

i. Intervention geography,
ii. Socio-economic strata of the stakeholders

The following table elaborates the sample size and distribution as per the strategy:

Stakeholder/ Beneficiary Interaction	Samples
Patients	180
Doctors	11

Table: Sample Size

5. LOG FRAME

Project Summary	Indicators	Means of Verification	Assumptions
Decline in cure-to-death ratio during the Covid-19 period. Post-Covid, increased patient count across various medical conditions,	% increase in proper treatment Overall projection of decrease in mortality due to the new facilities Decrease in cost of treatment and diagnosis for patients	Monitoring and evaluation by hospital administration	Patient have access to quality ICU, diagnostic facilities and convenience. Doctors had better resources for treatment, diagnostics and running smooth operations.
Patients are benefitted from the devices.	No. of patient who received treatment on ventilators and got diagnosed withX-ray machine, Ultrasound machine ,ECG, Dialysis machine, Patholab etc	Primary data from hospitals and surveys with patient	Proper usage of the devices will give access to the needy beneficiaries.
Procurement of Ventilators, Syringe pumps and Monitors,X-ray machine, Ultrasound machine ,ECG, Dialysis machine, Patholab etc	Vendor selection bid Physical verification at the location	Procurement receipts	Installation of devices will lead to proper usage of the devices
Ascertain the need for Ventilators,Syringe pumps and monitor X-ray machine, Ultrasound machine ,ECG, Dialysis machine, Patholab etc	Number of stakeholders involved in the analysis	Need assessment report	Need assessment lead to purchase and installation of devices

Table: Log Frame

6. UTILIZATION ASSESSMENT

6.1 COVID-19 1st wave

1. **Admissions and Mortality Rates:**

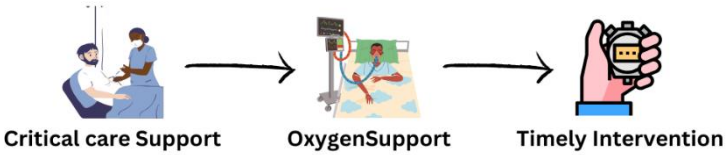
- Admissions: 1,157 patients admitted during the 1st wave of COVID-19.
- Mortality Rate: 46 patients lost their lives during this period.

Metrics	Statistics
Admissions	1,157 patients
Mortality Rate	46 patients

2. **Low Mortality Rate:** The low mortality rate of approximately 4% (46 out of 1,157) is notable and could be attributed to several factors, primarily the deployment of essential medical equipment, including 5 ventilators.

Metrics	Information
Mortality Rate (%)	4% (46 out of 1,157)
Contributing Factors	Deployment of essential medical equipment, including 5 ventilators

3. **Role of Ventilators:**



Critical Care Support: Ventilators play a crucial role in providing critical care support, especially for patients experiencing severe respiratory distress due to COVID-19.

Oxygenation Support: In severe cases, COVID-19 can lead to respiratory failure. Ventilators assist in maintaining oxygen levels in the body, preventing organ failure.

Timely Interventions: The availability of ventilators allows for timely interventions, reducing the risk of mortality by ensuring that patients receive adequate respiratory support when needed.

4. **Comprehensive Medical Equipment Deployment:**

- In addition to ventilators, the deployment of other essential medical equipment would have contributed to the effective management of COVID-19 cases.
- Monitors and Diagnostics: Equipment like pulse oximeters, ECG machines, and diagnostic tools help in continuous monitoring and early identification of complications.
- Treatment Planning: Access to X-ray machines, pathology setups, and other diagnostic tools aids in effective treatment planning and timely interventions.

5. **Healthcare Infrastructure Preparedness:**

- The hospital's preparedness to handle COVID-19 cases is evident through the deployment of critical care equipment.
- Capacity Building: The availability of 5 ventilators suggests that the hospital proactively expanded its critical care capacity to meet the demands of the pandemic.
- Resource Utilization: The comprehensive deployment of medical equipment indicates effective resource utilization for patient care.

6. **Importance of Timely and Adequate Medical Resources:**

- Timely deployment of medical resources, particularly ventilators, is critical during a pandemic.
- Adequate medical resources ensure that healthcare providers can meet the demands posed by a surge in COVID-19 cases.
- Effective resource allocation contributes to the overall resilience of the Scenario Analysis: Impact of Second Wave on Bargarh and IOCL Intervention.

7. **Equipment Utilization**

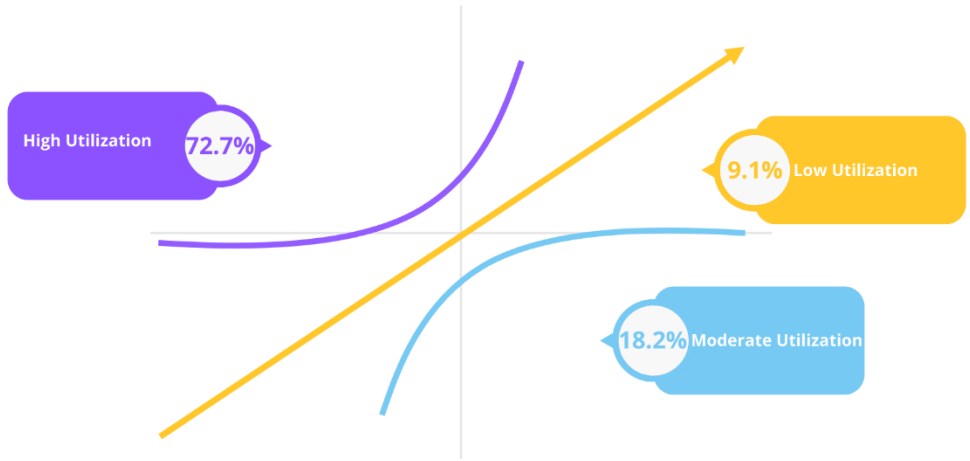


FIG: Equipment Utilization Percentage

6.2 COVID-19 2nd Wave

As the second wave of the COVID-19 pandemic swept across India in the spring of 2021, the nation faced an unprecedented crisis marked by alarming data points and overwhelming challenges. Since March 1, more than 2.05 lakh deaths have been reported, averaging over 2,000 deaths every day. India's cumulative death toll from Covid currently stands at 3,63,029 out of which second wave accounts for approximately 62% of all Covid infections recorded in India since the pandemic began. Since March 1, India has reported more than 1.8 crore new cases, adding to the total caseload of a little over 2.9 crore.

At its peak, the daily average of new reported cases during the second wave reached 392,000. However, the situation varies across states, with some still witnessing rising cases.

During the second wave, Bargarh district experienced a peak in COVID-19 cases, reaching 4,033 on May 10, 2021, contributing to a surge in hospital admissions, which surpassed 3,000 between March 21, 2021, and January 2022. Despite the challenges posed by the second wave, the district exhibited a commendable low mortality rate, standing at less than 1.3%. This figure underscores the efficacy of the patient care and support systems in place during this critical period. Notably, the intervention of the Indian Oil Corporation Limited (IOCL) has proven to be instrumental in managing the impact of the second wave. The data strongly suggests that IOCL's strategic involvement played a crucial role in the successful mitigation of the crisis, showcasing the significance of collaborative efforts in ensuring effective outcomes and minimizing the overall impact of the pandemic.

Here's the data presented in tabular form:

Metrics	Data
Total Deaths since March 1, 2021	More than 2.05 lakh deaths reported, averaging over 2,000 deaths daily
Cumulative Death Toll from COVID-19 in India	3,63,029 deaths, with the second wave accounting for approximately 62% of all Covid infections since the pandemic began
Total New Cases since March 1, 2021	More than 1.8 crore new cases reported, adding to a total caseload of over 2.9 crore
Peak Daily Average of New Cases during 2nd Wave	392,000
Bargarh District Peak Cases	Reached 4,033 on May 10, 2021
Hospital Admissions in Bargarh District	Surpassed 3,000 between March 21, 2021, and January 2022
Mortality Rate in Bargarh District	Less than 1.3%
Intervention by IOCL	**Impact**
Strategic Involvement	Crucial role in successful mitigation of the crisis

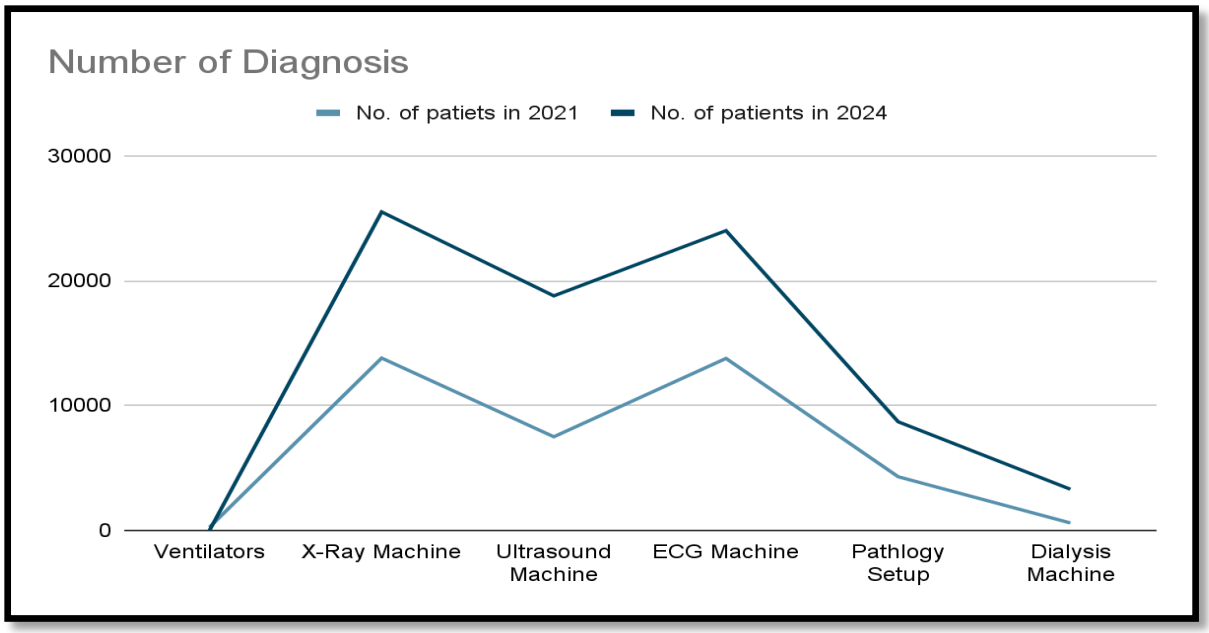
Intervention by IOCL	Impact
Collaborative Efforts	Significant in minimizing overall impact of the pandemic
Effective Outcomes	Evident from low mortality rate and successful crisis management

Table: This tables provide a structured overview of the impact of the second wave of COVID-19 and the intervention by Indian Oil Corporation Limited (IOCL).

6.3 Post COVID

Ultrasound Machine-The donated ultrasound machine has significantly improved the hospital's diagnostic efficiency, patient outcomes, and overall healthcare delivery. The ultrasound machine, testing 40-50 patients daily, has reduced waiting times, ensuring timely diagnosis and treatment planning.
ECG-The donated ECG machine has significantly increased diagnostic efficiency by enabling the hospital to perform 35-45 ECG tests daily. This has reduced waiting times for patients, allowing for prompt identification and management of cardiovascular issues.
X ray Machine & Processing Unit-The X-Ray Machine and Processing Unit have enabled the hospital to test between 60-70 patients per day.This increased throughput has reduced waiting times for diagnostic services, contributing to improved patient satisfaction.
Pathology Setup-The donation of a pathology setup to Bargarh District hospital has substantially improved diagnostic capabilities, allowing the hospital to conduct approximately 70 tasks daily. This has resulted in quicker turnaround times, enhanced accuracy, and increased testing capacity across various diagnostic tests. The modern equipment has optimized resource utilization, contributed to disease surveillance, and necessitated ongoing staff training for sustained impact.
Dialysis Machine -The dialysis machine has notably improved the hospital's capacity to provide renal care. With the machine operational, the hospital can now perform 10-15 dialysis sessions daily. The impact includes enhanced patient care, timely interventions, and an increased ability to manage renal conditions effectively.

The Graphical presentation of the same is given below:



The donated medical device includes an Ultrasound Machine, ECG (Electrocardiogram) machine, X-ray Machine with Processing Unit and a Pathology Setup, collectively enhanced the diagnostic capabilities of the hospital. Here's is a list of diseases and conditions that were diagnosed in the hospital:

Ultrasound Machine:	• Obstetrics and Gynecology: Pregnancy monitoring, fetal development, and detection of abnormalities. • Abdominal Imaging: Liver, gallbladder, kidney, and spleen conditions. • Cardiovascular Imaging: Heart structure and function, blood vessel abnormalities. • Musculoskeletal Imaging: Soft tissue and joint disorders.
ECG Machine:	• Cardiovascular Diseases: Detecting abnormalities in heart rhythm, ischemic heart disease, and cardiac arrhythmias. • Monitoring: Continuous monitoring of heart activity for various conditions.
X-ray Machine and Processing Unit:	• Chest X-rays: Diagnosis of respiratory conditions, pneumonia, and lung disorders. • Skeletal Imaging: Fractures, bone deformities, and joint disorders. • Abdominal X-rays: Detection of gastrointestinal issues and abnormalities. • Dental X-rays: Evaluation of dental and jaw conditions.
Pathology Setup:	• Hematology: Blood disorders, anemia, leukemia. • Microbiology: Identification of infectious diseases, bacterial, viral, and fungal infections.

Infrastructure and Technology	Description
UPS (Uninterruptible Power Supply)	Ensures continuous power supply to critical medical equipment, preventing disruptions
Bio Waste Setup	Enables proper disposal of biohazardous waste, maintaining a clean and safe healthcare environment
Hospital Management Software	Streamlines administrative processes, improves patient record management, enhances efficiency
Computer	Aids in data management and communication
Scanner	Facilitates digitization and storage of documents
Printer	Enables printing of important documents
CCTV Camera	Enhances security measures, ensuring a safer environment for patients and staff
TV and Mobile Phones	Improves patient experience and communication
	• Histopathology: Examination of tissues for cancer, inflammation, and other abnormalities

Table: Equiment and diagnosis support

Here's the equipment categorized into tabular form:

Equipment	Description
Nebulizer Machine	Facilitated efficient treatment for patients with respiratory conditions
Pulse Oximeter	Enhanced monitoring of patients' oxygen saturation levels, aiding timely interventions
Glucose Monitor	Increased the capacity for managing diabetic patients, enabling real-time monitoring
O2 Cylinder	Critical resource for emergency situations, ensuring stable oxygen supply for patients
Ambu Bag	Essential for manual ventilation during emergencies, providing lifesaving intervention
Video Laryngoscopy	Improves airway management, aiding difficult intubations more effectively
Thermometer	Enhances diagnostic capabilities, contributing to routine health assessments
Height Machine	Aids in accurate measurement of patient height
Weight Machine	Assists in accurate measurement of patient weight
Refrigerator	Used for storing medications and vaccines, ensuring integrity of temperature-sensitive supplies
Furniture	**Description**

Food Tables	Enhances patient comfort during meal times, contributing to improved overall experience
Dressing Trolley	Facilitates efficient and organized dressing procedures, streamlining workflow for medical staff
Stretchers and Wheelchairs	Improve patient mobility and transport within the hospital, ensuring timely access to services
Patient Care Equipment	**Description**
Stretchers	Increases capacity for patient transportation within the hospital, facilitating smooth transitions between departments
Wheelchairs	Enhances accessibility for patients with mobility challenges, ensuring comfortable movement within the hospital

7. TRAINING

The training provided to hospital staff for the proper use of donated medical equipment appears to be effective, as observed by the staff's comfort in handling the devices. Authorities have affirmed the commitment to staff development through regular training sessions, indicating a proactive approach to upskilling. The recent hiring of new technical staff further reflects a dedication to maintaining a proficient workforce.

To assess staff proficiency in operating the equipment, periodic evaluations or assessments could be beneficial. These assessments could involve simulated scenarios or hands-on exercises to ensure that staff can apply their knowledge and skills effectively in real-life situations.

In conclusion, the combination of ongoing training, recruitment of new technical staff, and the evident comfort of existing staff members in using the equipment suggests a well-organized and effective training program at the hospital.

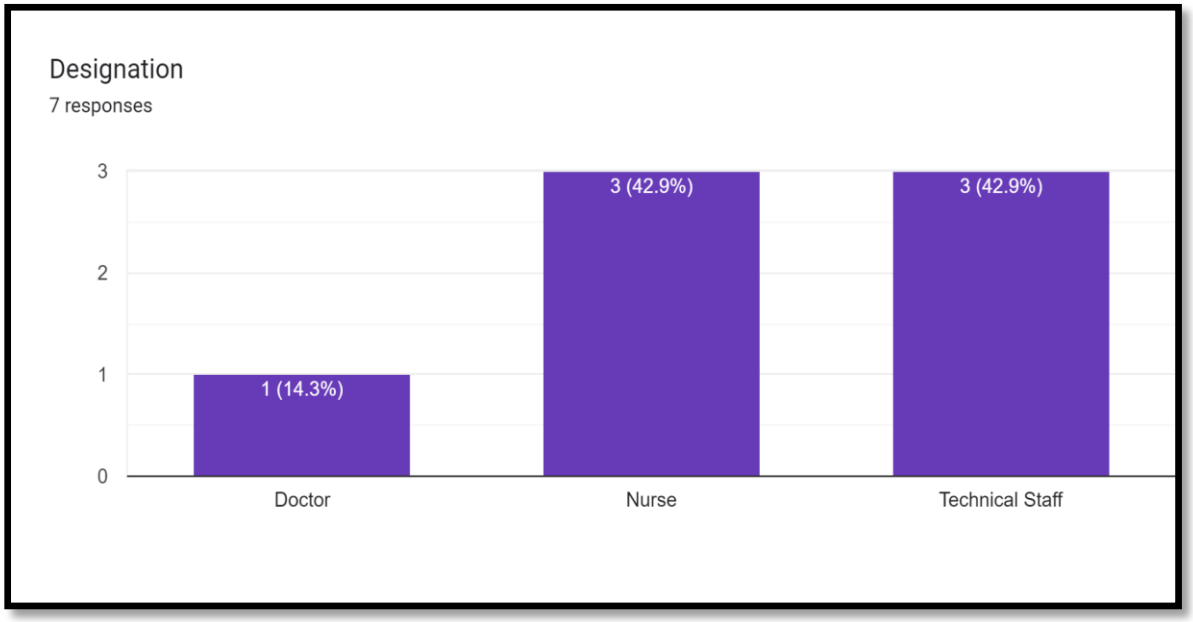
Impact on Patient Care

Bargarh has reported a total of 34,548 confirmed COVID-19 cases, constituting approximately 2.68% of the total reported cases in the region. Notably, the majority of cases, accounting for 34,193 individuals, have successfully recovered. The mortality rate remains relatively low, with less than 400 reported deaths.

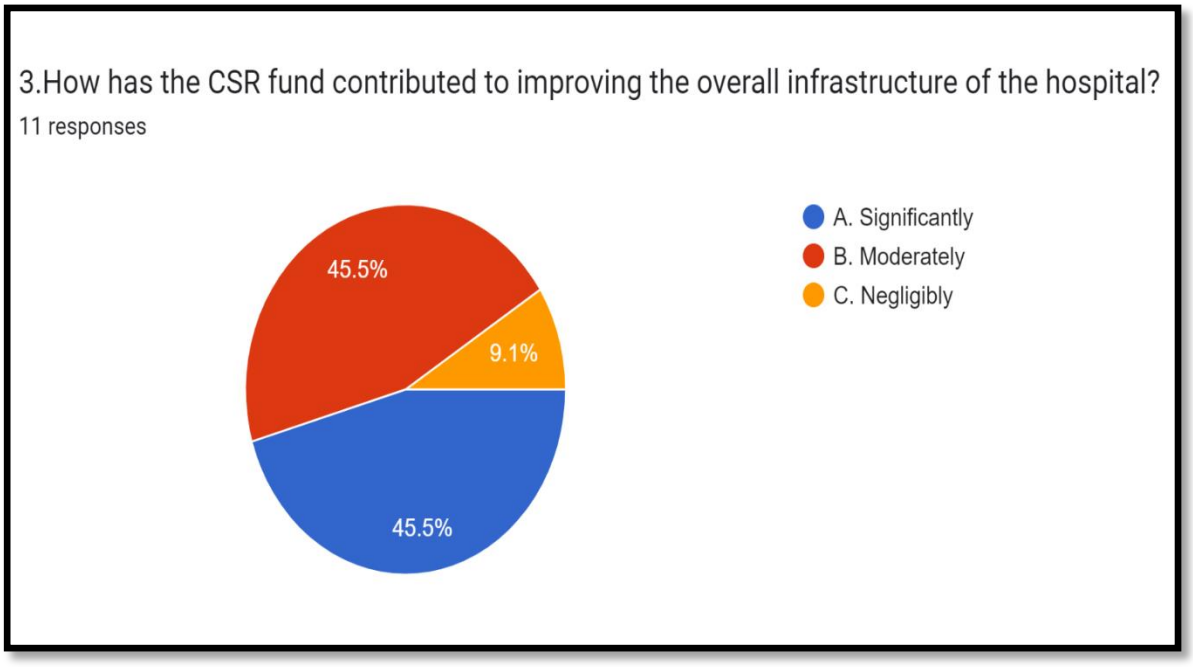
This higher survival rate is indicative of the meaningful outcomes resulting from the intervention of the Indian Oil Corporation Limited (IOCL). The strategic initiatives and interventions implemented by IOCL have evidently contributed to the recovery and well-being of the affected population.

8. STAFF FEEDBACK

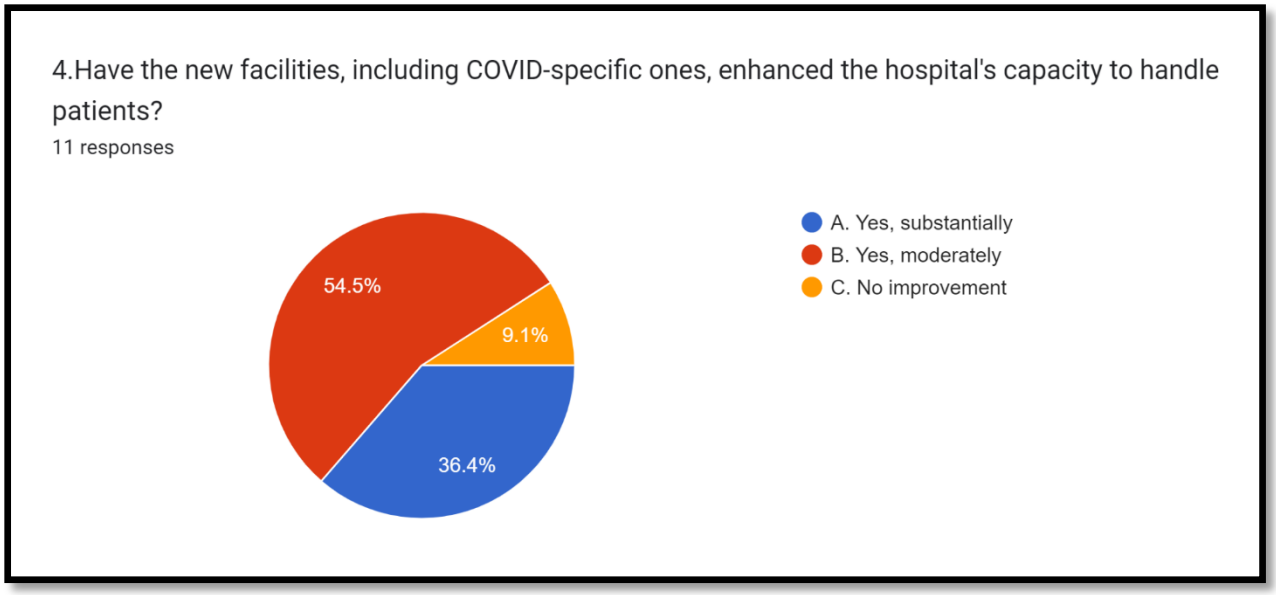
During the impact assessment, we had the opportunity to interact with 11 staff members, including doctors, nurses and technical staff. From the interviews, we were able to gather the following data, indicating a positive impact of the donation.



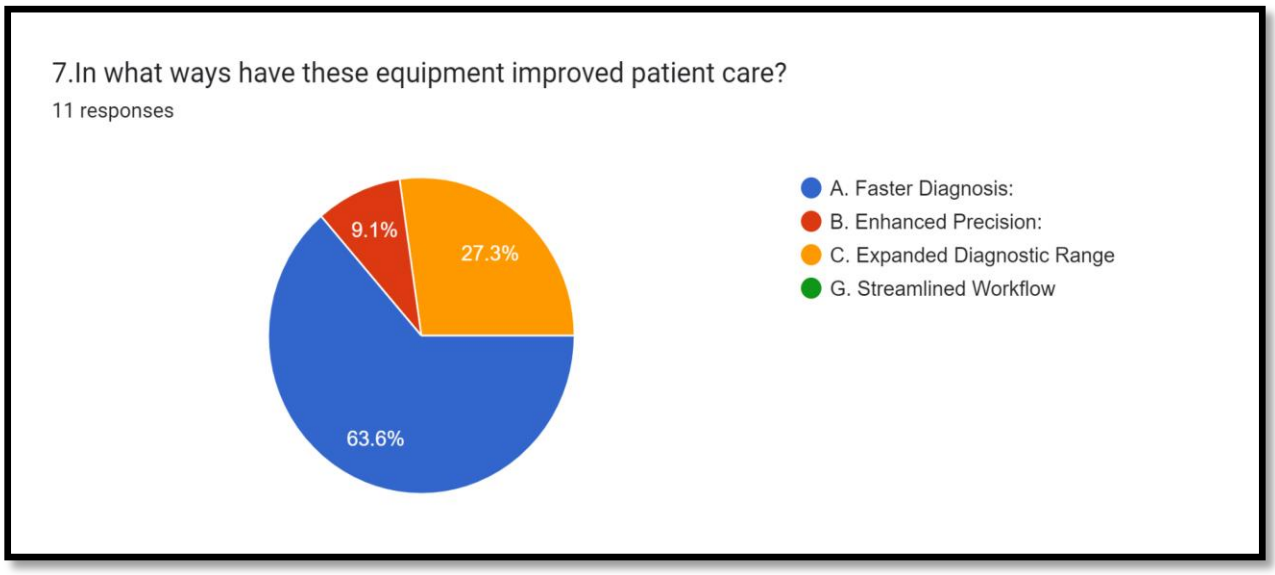
Graph: Designation of the staff



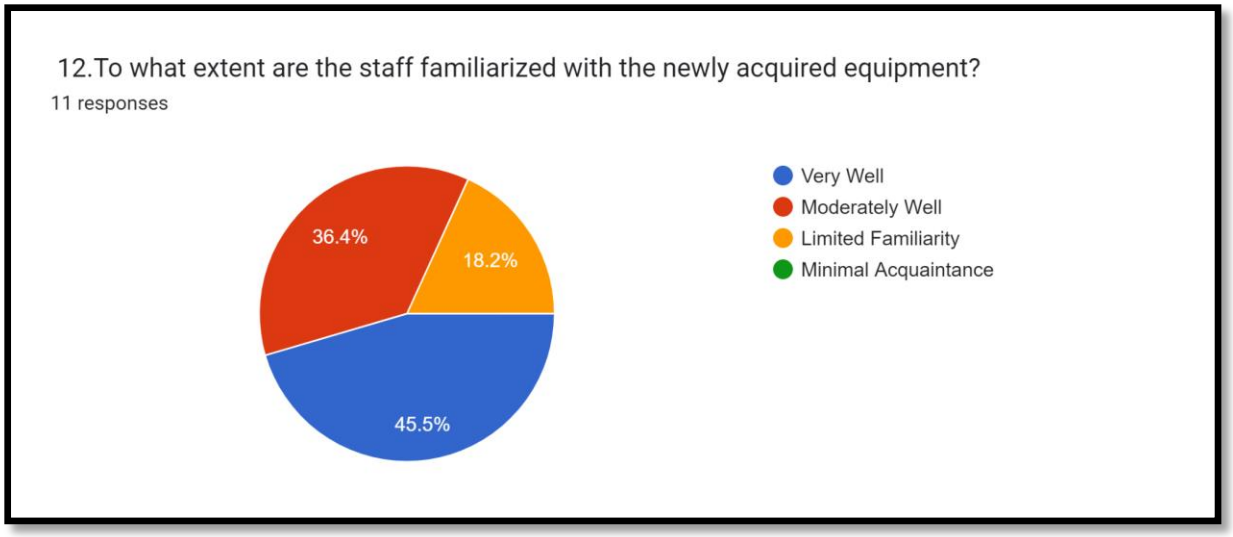
Graph: Infrastructure Development through CSR Fund



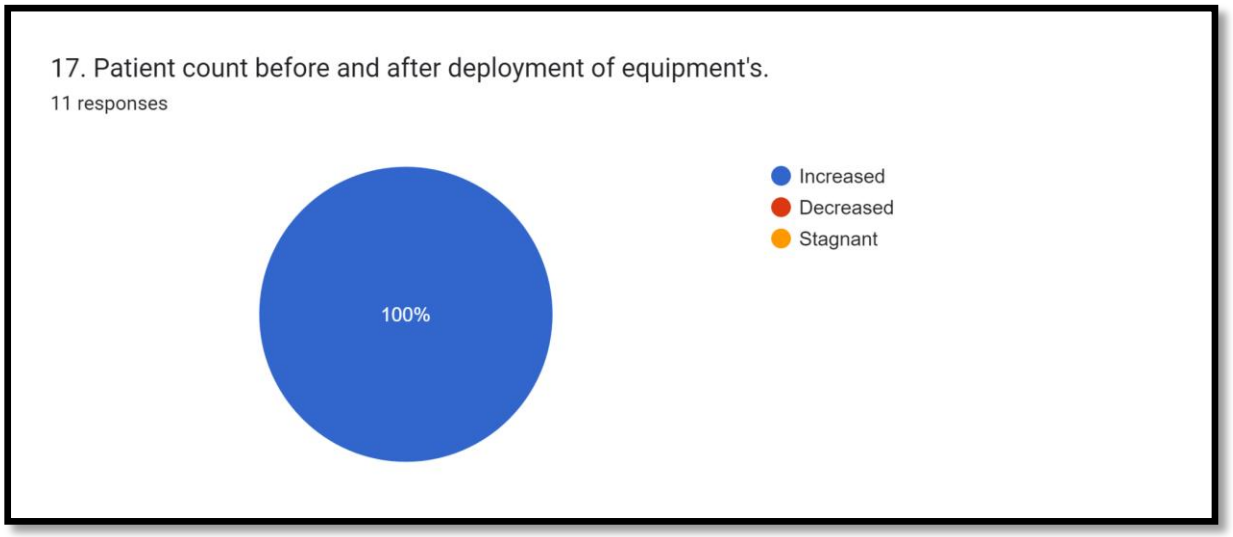
Graph: Enhancement in Hospital Capacity



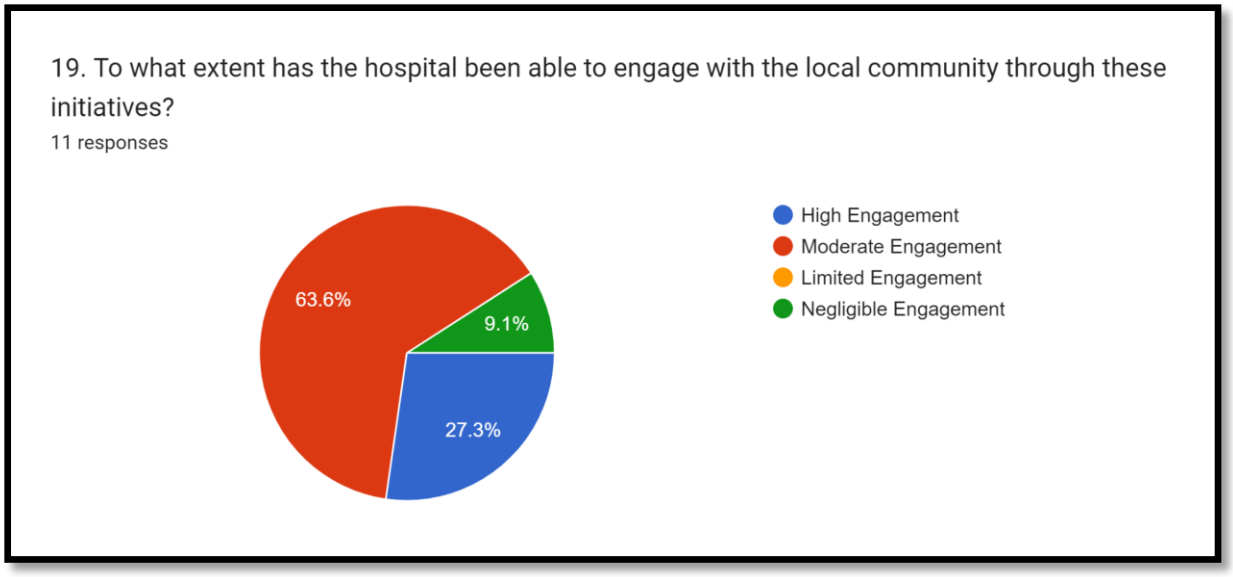
Graph: Patient Care Responses



Graph: Staff trained with the newly acquired equipments



Graph: Increase in Patient Count post Covid



Graph: Engagement and Upliftment in the Local Community

The data provided presents a comprehensive snapshot of various aspects of a hospital's operations and initiatives, particularly focusing on the impact of CSR (Corporate Social Responsibility) funding on infrastructure, patient care, staff familiarity with equipment, and community engagement.

Firstly, in terms of staffing, it's evident that the hospital primarily consists of doctors, nurses, and technical staff, with a balanced distribution among them. However, the designation breakdown shows a slightly different distribution, with doctors being more prevalent compared to nurses and technical staff.

The feedback regarding the CSR fund's contribution to infrastructure improvement suggests a significant impact, with an equal number of respondents indicating significant and moderate improvements, and only a minority reporting negligible changes. This positive trend extends to the hospital's capacity to handle patients, with a majority acknowledging substantial or moderate enhancements due to new facilities, including those specifically designated for COVID patients.

Equipment utilization appears to be high overall, with daily usage reported for the majority of the newly acquired medical equipment. This high utilization is expected to positively impact patient care, particularly in terms of faster diagnosis and expanded diagnostic capabilities, although there seems to be a need for more streamlined workflows.

The quality of care has seen marked improvement according to the majority of respondents, with a significant proportion attributing this improvement to initiatives funded by CSR. Specifically, enhancements in patient monitoring systems and the timely availability of critical resources have been noted.

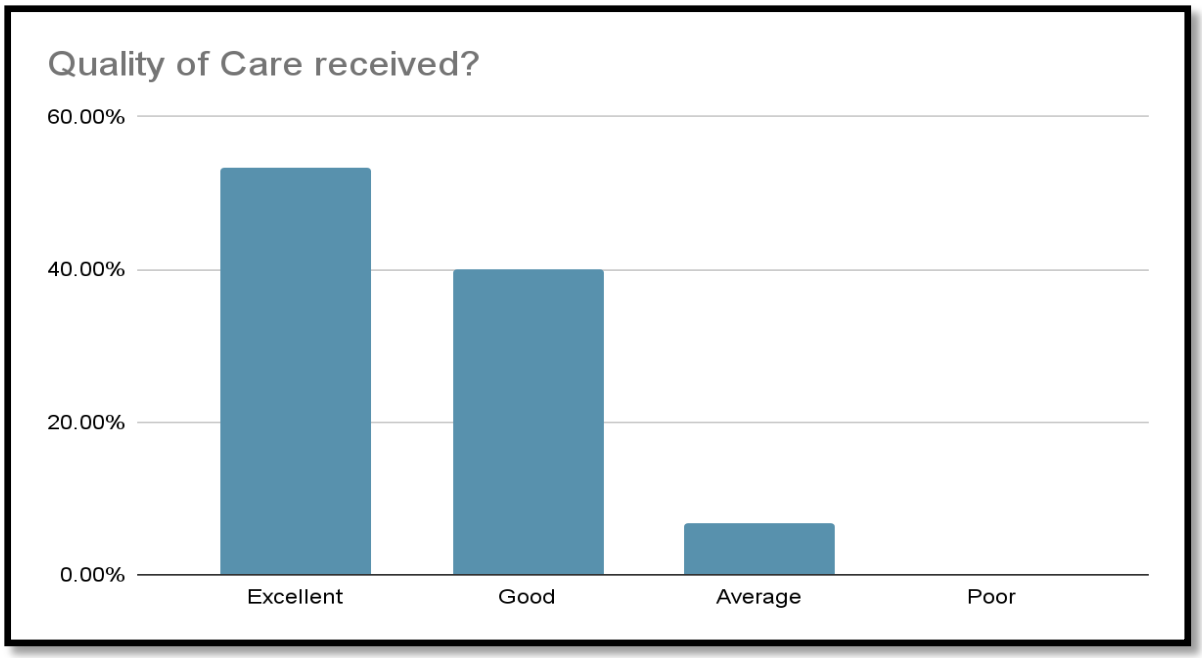
However, despite the positive outcomes, there are areas of concern highlighted in the data. While most staff members are moderately to very well familiarized with the new equipment, there is still a notable proportion with limited familiarity, which could potentially affect the efficiency of equipment utilization and patient care.

Additionally, while there is a consensus on the positive impact of the initiatives on patient care and infrastructure, there's uncertainty regarding their influence on the work environment and staff morale. This suggests a need for further assessment and possibly interventions to address any lingering concerns among the staff.

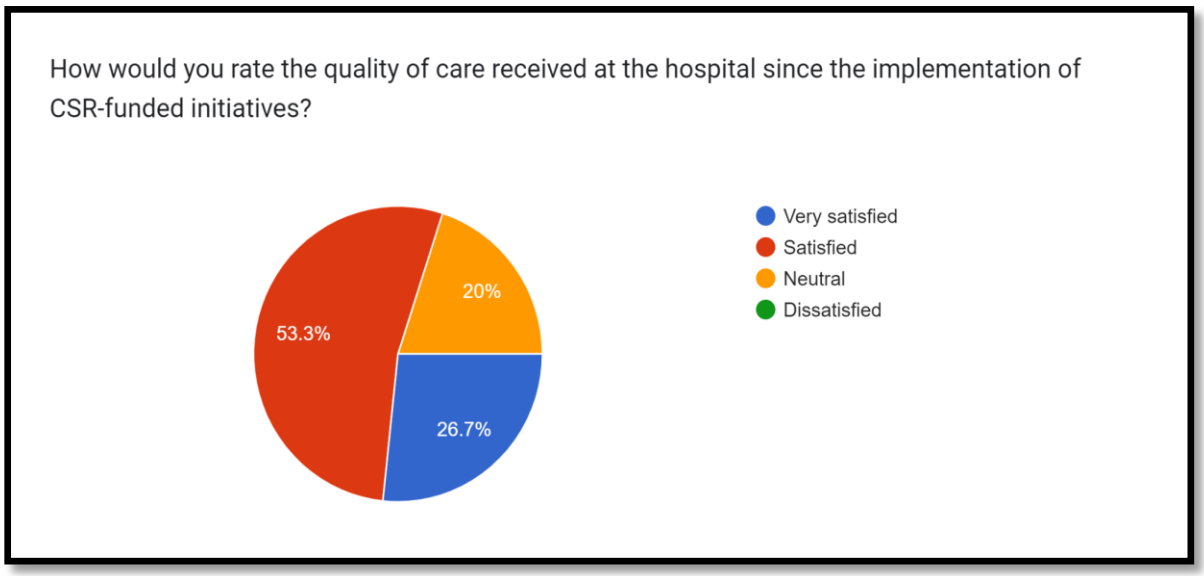
Overall, the hospital has demonstrated significant improvements across various aspects of its operations, thanks to the CSR-funded initiatives. However, ongoing evaluation and efforts to address any remaining challenges are essential to sustain and further enhance these positive outcomes.

9. PATIENT FEEDBACK

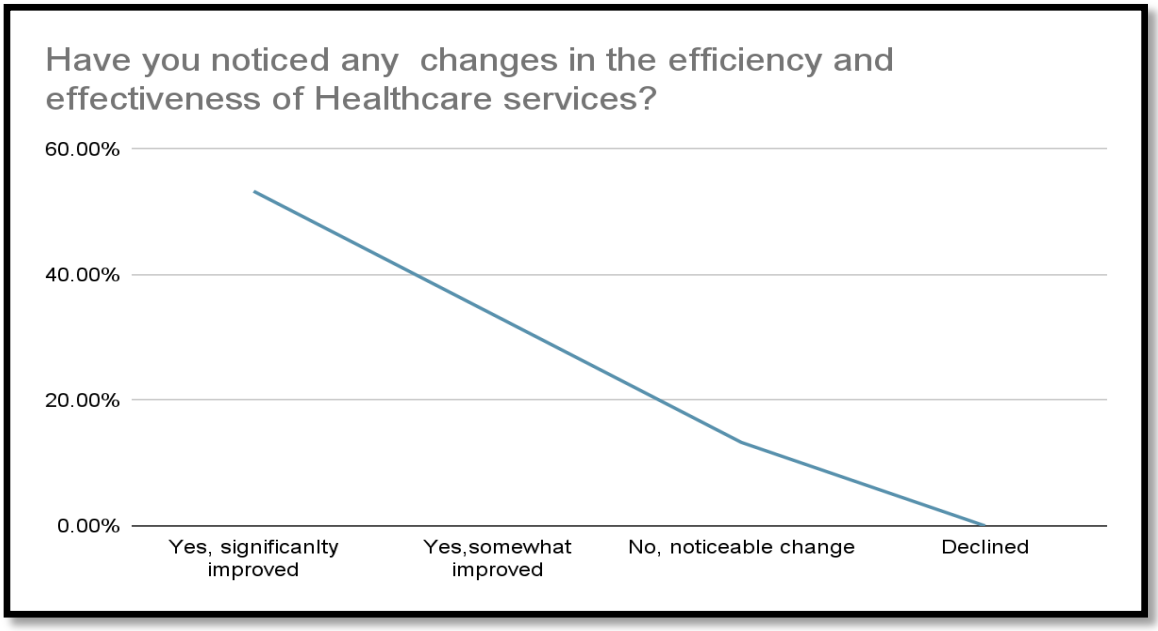
We are presenting a comprehensive analysis of patient responses gathered through surveys aimed at evaluating various aspects of healthcare services provided by a hospital. The responses have been meticulously compiled and presented in graphical form to facilitate a clear understanding of patient perspectives. Through these graphs, we delve into crucial factors such as patient demographics, quality of care received, satisfaction levels, perceptions of improvements, and suggestions for further enhancements. This analysis sheds light on the strengths and areas for improvement within the healthcare system, offering valuable insights for stakeholders aiming to optimize patient care experiences.



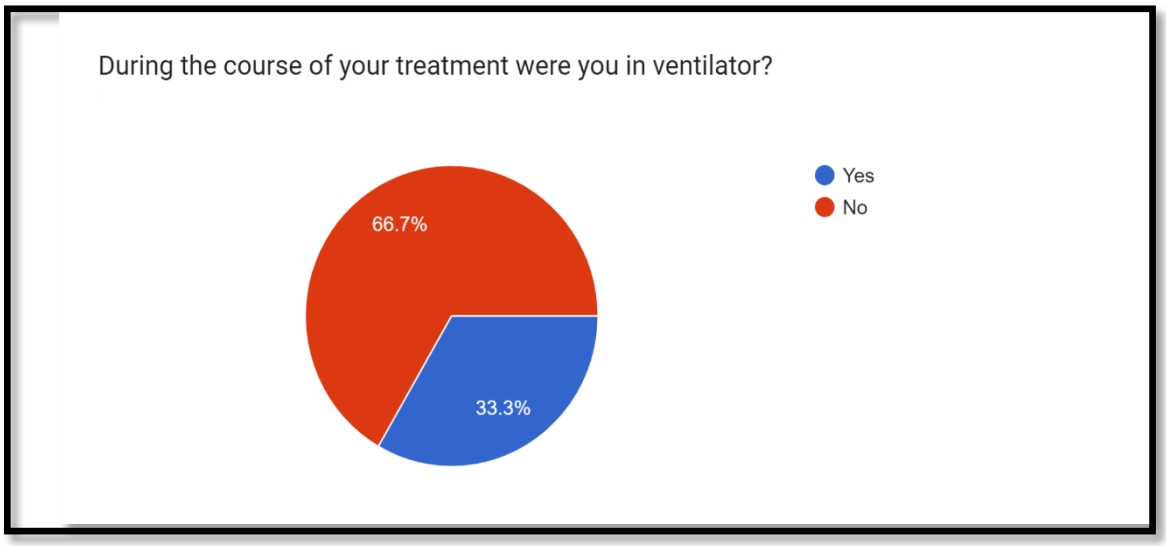
Graph: Quality of Care



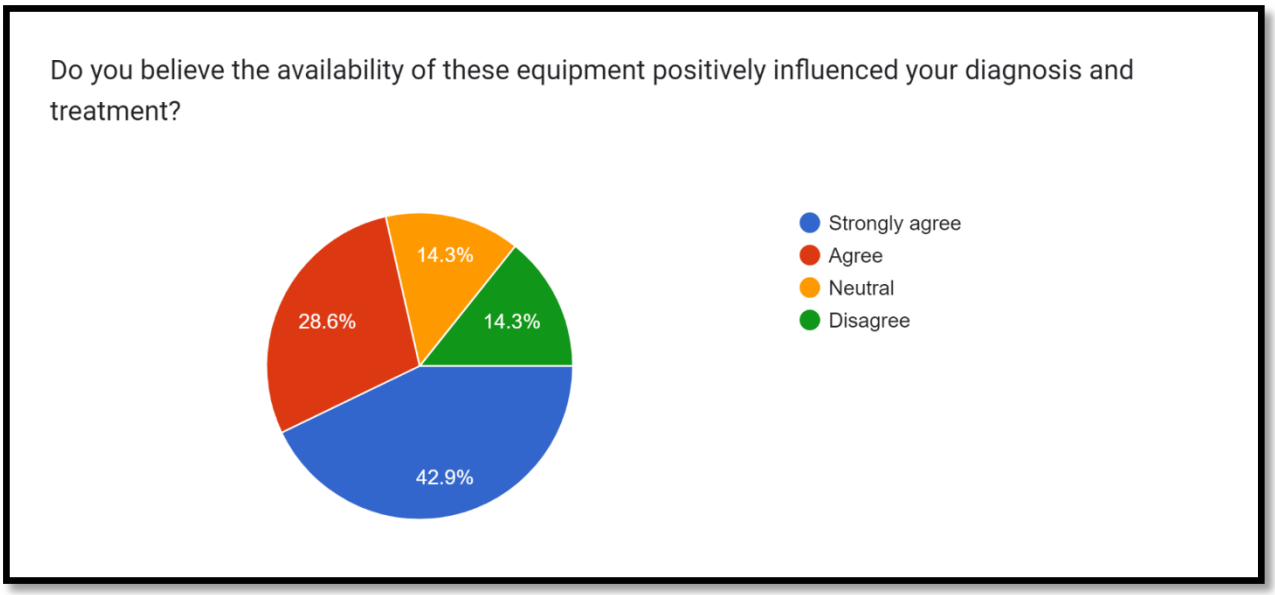
Graph: Improvement in Quality care after CSR Fund



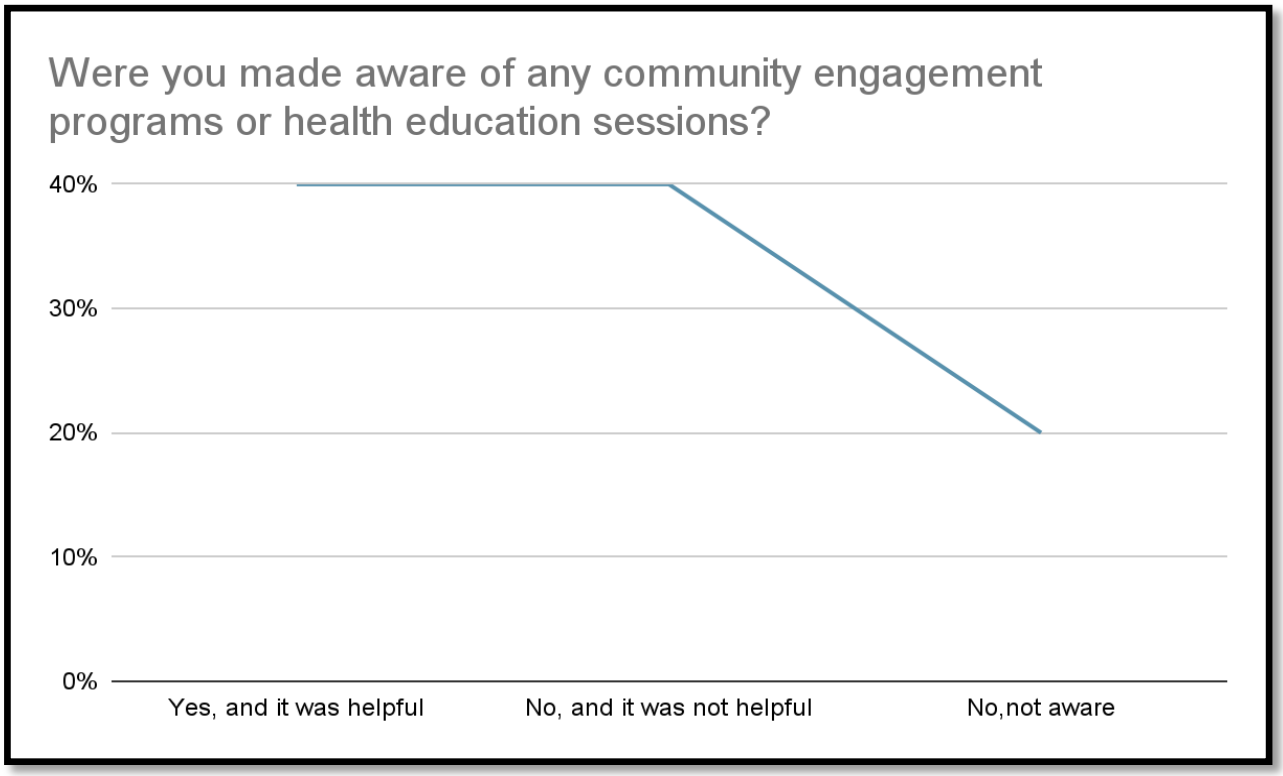
Graph: Efficiency and Effectiveness of Healthcare Services



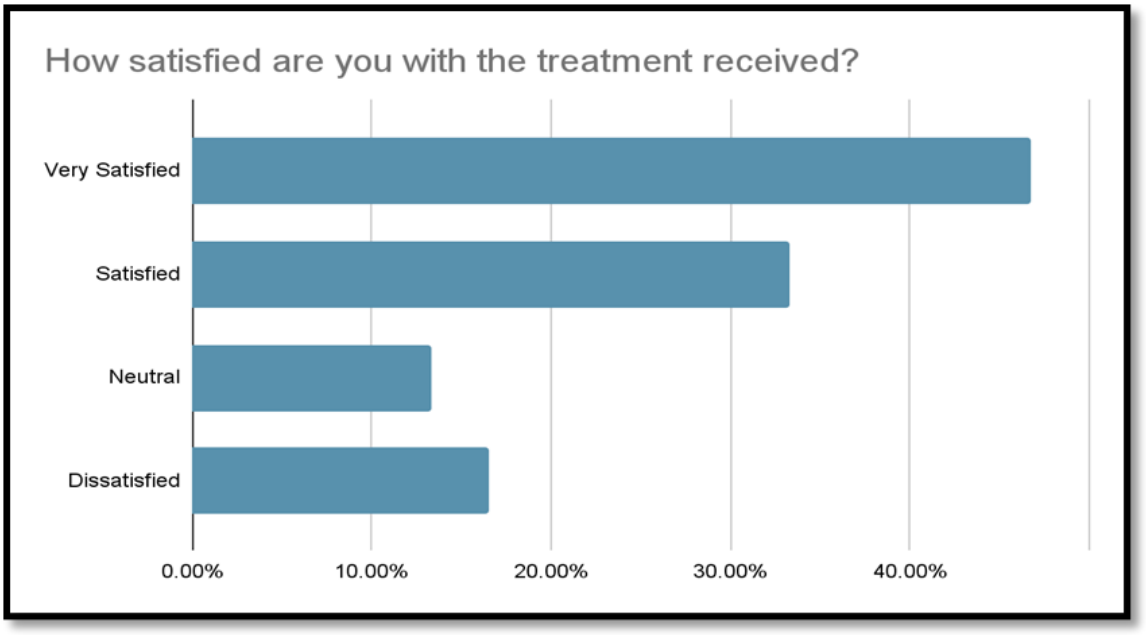
Graph: Ventilator Usage



Graph: Equipment Influence on Diagnosis



Graph: Awareness of Community Engagement Healthcare Sessions arranged by the Hospital



Graph: Satisfaction With the treatment received

Based on the survey responses collected, it's evident that the majority of respondents fall within the age range of 18-30, comprising 33.3% of the total, followed closely by those aged 31-45 and 46-60, each accounting for 33.3%. There is a notable absence of respondents under 18, suggesting that the survey may not have reached a younger demographic effectively. In terms of gender, the majority of respondents identify as female, making up 73.3% of the total, while males constitute 26.7%.

Regarding the quality of care received at the hospital, a significant proportion, 53.3%, rated it as excellent, with no respondents reporting poor care. This indicates a generally positive perception of the quality of healthcare provided. Moreover, since the implementation of CSR-funded initiatives, over half of the respondents (53.3%) reported being satisfied with the quality of care received, with 20% indicating they were very satisfied.

There's also a positive trend in perceived improvements in the efficiency and effectiveness of healthcare services, with 46.7% of respondents stating that they were very satisfied with the treatment received. Additionally, a substantial majority (66.7%) reported not being on a ventilator during their treatment, which could be indicative of the severity of cases treated or the hospital's emphasis on non-invasive treatments.

Concerning the influence of available equipment on diagnosis and treatment, the majority of respondents either strongly agreed (42.9%) or agreed (28.6%) that the availability of equipment positively impacted their healthcare experience.

However, there are areas for potential improvement highlighted by respondents. The most commonly mentioned aspects include efficiency of services (35.7%), facilities (35.7%), and quality of care (28.6%). This suggests that while the overall quality of care is perceived positively, there are opportunities for enhancing operational efficiency and facility resources.

In terms of community engagement and health education programs, 40% of respondents found them helpful, indicating a positive impact on health literacy and community outreach efforts.

Overall, the data suggests a generally positive perception of the hospital's services, with areas for improvement identified primarily in operational efficiency and facility resources. Further analysis could delve into specific suggestions provided by respondents and explore ways to address their concerns effectively.

10. CHALLENGES FACED

- Although the hospital has invested in training programs for staff, there might be challenges in ensuring sustained capacity building.
- The prolonged duration and increased workload during the second wave could have resulted in burnout and fatigue among healthcare professionals, affecting the overall quality of patient care.
- The hospital faces challenges in effectively maintaining and managing data, which can impact the accuracy of patient records, resource utilization tracking, and overall healthcare analytics.
- The presence of unutilized medical equipment, such as ventilators, monitors, and syringe pumps, after the post-COVID period may indicate challenges in resource optimization.
- The equipment was effectively utilized during the COVID-19 period. However, with the decrease in emergency demands post-pandemic, its usage has also reduced. Nevertheless, whenever there's an emergency situation in the hospital or neighbouring hospitals, the equipment is appropriately used.
- Lack of essential medicines during the COVID-19 period indicates a critical gap in the hospital's pharmaceutical supply chain.
- The inadequacy of physical infrastructure also hindered effective patient care, especially during times of covid.

11. RECOMMENDATIONS

- We can develop protocols for routine equipment maintenance, calibration, and utilization tracking to prevent potential underutilization.
- **Pharmaceutical Supply**: The deployment of medical devices for better health outcomes is quite essential but supply of medicine is also very critical therefore, we can explore opportunities for collaboration with pharmaceutical suppliers to establish a reliable supply chain for essential medicine.
- **Infrastructure Improvement**: Consider allocating funds for infrastructure upgrades, with a focus on expanding facilities and enhancing patient care areas. Ensure that the physical infrastructure is adaptable to handle surges in patient volume during crises, such as those experienced during the COVID-19 pandemic.
- **Community Engagement**: Community engagements and awareness campaigns can be regularly conducted to ensure the proper dissemination of information regarding the enhancement in facilities. This will restore the confidence of the community and also increase accountability.

12. CONCLUSION

The assessment clearly established the effectiveness of the COVID project supported by IOCL. The support has provided to COVID Hospital & Covid Care Center, Bargarh essential wings in providing the essential medical care services as compared to the Covid Hospitals in other districts, states and private sector hospitals.

With respect to efficiency and impact, the IOCL support has provided benefits to more than 4 lakh patients since the deployment of different equipments This proves that IOCL support has not only benefited the patients during COVID first and second wave but also during the regular months in ICUs and general departments post COVID at Bargarh District Hospital.

As an impact, the IOCL support could provide an opportunity to District Hospital, Bargarh in establishing the Credibility and Trust among the patients in terms of service provisioning such as ventilator support and monitors and syringe pumps availability along with Dialysis, X-ray, Ultrasound machine and Pathology lab facilities. Moreover, the hospital does not charge any fee for ventilators and minimal fees for the usage of other equipment due to which patients could save their money which is a big relief for the patients and their families. This could all happen just because of IOCL support.

13. PHOTO GALLERY

Some Equipment in use

Ward Visit/Observation

14. ANNEXURE

patient data of govt hospital

1. **Name**

2. **Age**

Mark only one oval.

- ◯ Under 18
- ◯ 18-30
- ◯ 31-45
- ◯ 46-60

3. **Gender**

Mark only one oval.

- ◯ Male
- ◯ Female

4. **Quality of Care received**

Mark only one oval.

- ◯ Excellent
- ◯ Good
- ◯ Average
- ◯ Poor

5. **How would you rate the quality of care received at the hospital since the implementation of CSR-funded initiatives?**

Mark only one oval.

- ◯ Very satisfied
- ◯ Satisfied
- ◯ Neutral
- ◯ Dissatisfied

6. **Have you noticed any changes in the efficiency and effectiveness of healthcare services?**

Mark only one oval.

- ◯ Yes, significantly improved
- ◯ Yes, somewhat improved
- ◯ No noticeable change
- ◯ Declined

7. **During the course of your treatment were you in ventilator?**

Mark only one oval.

- ◯ Yes
- ◯ No

8. How satisfied are you with the treatment received.

Mark only one oval.

- ◯ Very satisfied
- ◯ Satisfied
- ◯ Neutral
- ◯ Dissatisfied

9. **Do you believe the availability of these equipment positively influenced your diagnosis and treatment?**

Mark only one oval.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree

10. **Were you made aware of any community engagement programs or health education sessions organized by the hospital?**

Mark only one oval.

- ◯ Yes, and it was helpful
- ◯ Yes, but it was not helpful
- ◯ No, not aware

11. How many times have you been referred to outside hospitals

_____

12. **Are there any specific aspects that you feel could be further improved?**

Check all that apply.

- ☐ Quality of care
- ☐ Efficiency of services
- ☐ Communication
- ☐ Facilities
- ☐ No improvement required

13. **Suggestions**

_____

Government Hospital staff questionnaire

1. Name

_____

2. **2.Designation**

_____

3. **3.How has the CSR fund contributed to improving the overall infrastructure of the hospital?**

Mark only one oval.

- ◯ A. Significantly
- ◯ B. Moderately
- ◯ C. Negligibly
- ◯ Other: _____

4. **4.Have the new facilities, including COVID-specific ones, enhanced the hospital's capacity to handle patients?**

Mark only one oval.

- ◯ A. Yes, substantially
- ◯ B. Yes, moderately
- ◯ C. No improvement

5. **5.Equipment Utilization:**

Mark only one oval.

- A. High utilization
- B. Moderate utilization
- C. Low utilization

6. **6.How frequently are the newly acquired medical equipment being utilized?**

Mark only one oval.

- A. Daily
- B. Weekly
- C. Rarely

7. **7.In what ways have these equipment improved patient care?**

Mark only one oval.

- A. Faster Diagnosis:
- B. Enhanced Precision:
- C. Expanded Diagnostic Range
- G. Streamlined Workflow

8. **10.Quality of Care:**

Mark only one oval.

- A. Marked improvement
- B. Slight improvement
- C. No improvement

9. **11. Have you observed any improvements in the quality of care provided to COVID patients after the implementation of the CSR-funded initiatives?**

Mark only one oval.

- ◯ Efficient Patient Monitoring Systems:
- ◯ Timely Availability of Critical Resources
- ◯ Implementation of Advanced Protocol
- ◯ Improved Infection Control Measures

10. **12.To what extent are the staff familiarized with the newly acquired equipment?**

Mark only one oval.

- ◯ Very Well
- ◯ Moderately Well
- ◯ Limited Familiarity
- ◯ Minimal Acquaintance

11. **13. Have the enhancements and additions affected the work environment and staff morale positively?**

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Not Sure

12. **14.Functioning of device**

13. **15.Utilization of different equipment,
no of patients used each equipment's every month.**

14. **16.How many patients are referred to higher centers every month.**

15. **17. Patient count before and after deployment of equipment's.**

Mark only one oval.

- ◯ Increased
- ◯ Decreased
- ◯ Stagnant

16. **19. To what extent has the hospital been able to engage with the local community through these initiatives?**

Mark only one oval.

- ◯ High Engagement
- ◯ Moderate Engagement
- ◯ Limited Engagement
- ◯ Negligible Engagement

17. **20. What measures were implemented to increase community awareness about the improved facilities?**

18. **21. What challenges, if any, have you encountered during the implementation of these initiatives?**

19. **22.Are there any suggestions for further improvement or modifications?**