

Category : Early Adoption of Technology

Name: Enhanced Patient Safety through contactless remote patient monitoring

Ms. Sheeja Joseph,
Nursing Superintendent,
Apollo Speciality Hospital, Jayanagar, Bangalore

Initiative Details



Summary of the initiative	
Name of initiative and launch date	"Enhanced Patient Safety through contactless remote patient monitoring solution" Date: 20.01.2023
YouTube link supporting your initiative/ project, if any	https://www.youtube.com/watch?v=miOTygfCLDQ
Name the unit/ centre where the initiative/ project was initiated and implemented (For group level application)	Apollo Specialty Hospitals, Jayanagar, Bangalore
Steps taken to enhance patient satisfaction rate and aspects studied to measure patient satisfaction rate	Recognizing Early Warning Signs and prompt action by the Nurses were highly appreciated by the patient family Increasing the patient safety net Frequent rounds and quality time spent by the Nurses Reduce the adverse events/ Code Blues almost to Zero
Name two peer benchmarks	This is a recent initiative for monitoring, hence no such published benchmarks available

Introduction



- Apollo Specialty Hospital, Jayanagar is the hospital in the country to adopt this Applied Science to enhance the safety net in the hospital for all the In-patients, there by saving more lives in the hospital with better Clinical Outcome and improved patient satisfaction.
- We at Apollo, are proud to have implemented an AI-based early warning system for continuous clinical monitoring and enhanced patient safety. This innovative solution has not only improved patient outcomes but has also resulted in reducing the Financial burden to the Family by minimizing their hospital stay, because of continuous monitoring, picking up the subtle changes at an early stage leading to timely interventions.
- By recognizing, the importance of contactless remote patient monitoring and leveraging monitoring technology, in turn analysed by AI application, Apollo Specialty Hospital, Jayanagar, has been positioned as Smart Hospital owing to the forefront of clinically effective improvement. Our commitment to innovation and patient safety sets us apart, and as a leader we set the benchmark for the country.
- The unique factors include Real Time continuous monitoring, Data Collection, AI powered alerts, Customizable monitoring plans, User friendly interface, Productive Nursing Time, Reduced Financial Burden, Cost Efficacy and Evidence based outcomes.

Initiative and Its Implementation

- In today's rapidly evolving healthcare landscape, continuous clinical monitoring and enhanced patient safety have become crucial priorities. We had an increase in number of Code Blues on the floor with an average of 2 per month as early warning signs were not able to be identified on real time basis. In light of these challenges, the development of AI-based early warning systems has emerged as a breakthrough in Apollo Hospital, Jayanagar.
- We recognized the importance of continuous clinical monitoring and have embraced advanced technology to enhance patient safety. As part of our commitment to innovation, we have implemented a contactless remote patient monitoring solution that leverages AI technology.
- The primary goal of implementing this AI-based early warning system at Apollo Specialty Hospital, Jayanagar, is to improve patient safety and clinical effectiveness. By leveraging advanced technology, we can remotely monitor our patients' vital signs, such as heart rate, respiratory rate, and sleep patterns, in real-time. This allows for early detection of any deviations from the norm and facilitates timely intervention to prevent adverse events. The contactless nature of the remote patient monitoring solution reduces the risk of cross-infection and promotes a safer healthcare environment for both our patients and healthcare providers.
- The implementation of the AI-based early warning system at Apollo Specialty Hospital, Jayanagar, involves deploying contactless remote patient monitoring devices throughout our facility. These devices use advanced sensors to collect data on vital signs and transmit it securely to a centralized monitoring system. The system employs sophisticated algorithms to analyse the data and generate real-time alerts for our healthcare providers at Apollo Specialty Hospital, Jayanagar. These alerts are based on predefined thresholds and can indicate potential deterioration in a patient's condition. Our healthcare professionals can then intervene promptly, even before symptoms become apparent, to prevent adverse events or complications.
- The main challenges we faced was adapting the technology because of initial technical glitches and connectivity issues. Even the Nurses used to take the shield of technology glitches and not ready to adapt it.
- We overcame the challenges by upgrading the networking systems across the hospital, driving this initiative from the Leadership level and made Nurses as the champions. In the initial phase of 10 days, we identified IT SPOC who can act as a buddy with the nurses. We set expectations . After one code blue happened in Feb 2023 we have empowered nurses and also made them accountable. Every events were discussed in the Mortality Committee and also made the Nursing Leadership and the staffs involved for collective ownership. With the Leadership support, IT support and Accountability taken by the nurses, we have made this project a success.
- The total cost involved in adapting this technology was Rs. 20 Lakhs
- The time frame to set up the initiative was around 1 month

Impact and Outcome



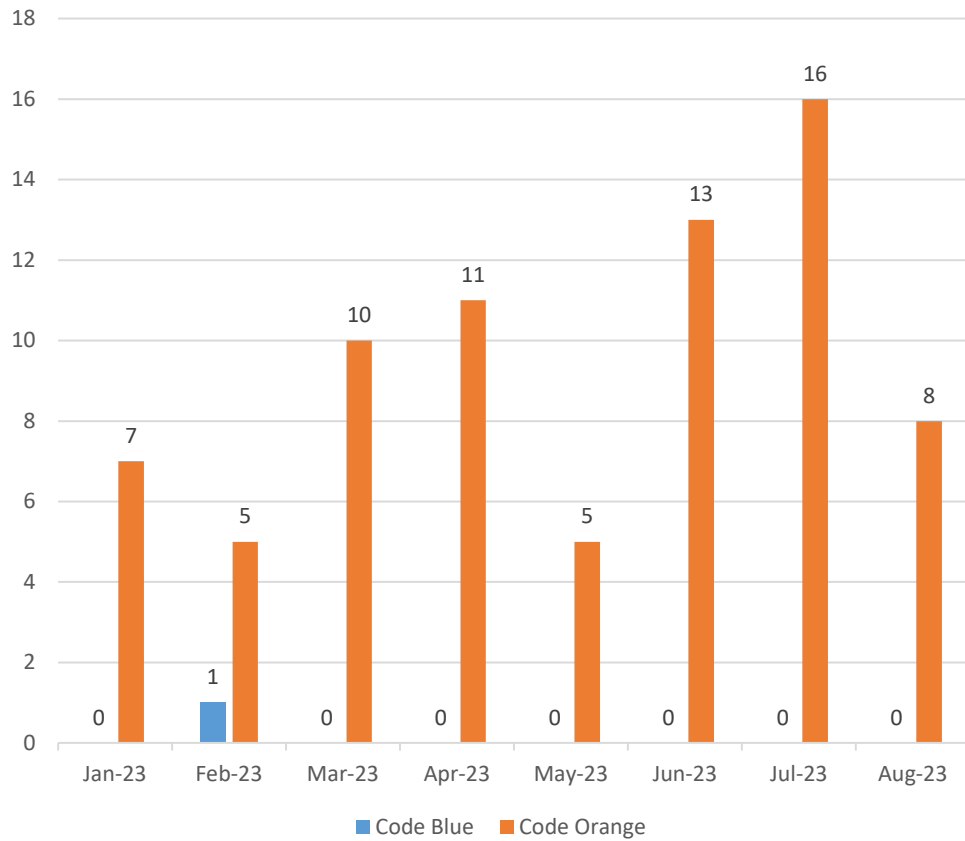
At Apollo Specialty Hospital, Jayanagar, the adoption of 100% contactless remote patient monitoring solutions powered by AI has yielded significant improvements in clinical effectiveness and patient safety. By continuously monitoring vital signs, our healthcare providers have been able to detect early warning signs of deteriorating health conditions and intervene proactively. This has resulted in Zero Code Blues for the past 5 months, improved patient outcomes, Average ALOS is reduced from 3.79 to 3.49 days and increased patient satisfaction. Furthermore, the contactless nature of the monitoring system has minimized the risk of healthcare-associated infections, including COVID-19, by reducing direct contact between our patients and healthcare providers at Apollo Specialty Hospital, Jayanagar.

The remote patient monitoring solution has also streamlined the workflow for our healthcare professionals at Apollo Specialty Hospital, Jayanagar. With real-time alerts and automated data analysis, our healthcare providers can prioritize their attention and allocate resources efficiently. Additionally, the AI-based system can identify patterns and trends in the collected data, enabling our healthcare providers at Apollo Specialty Hospital, Jayanagar, to make informed decisions regarding personalized patient care plans and treatment strategies.

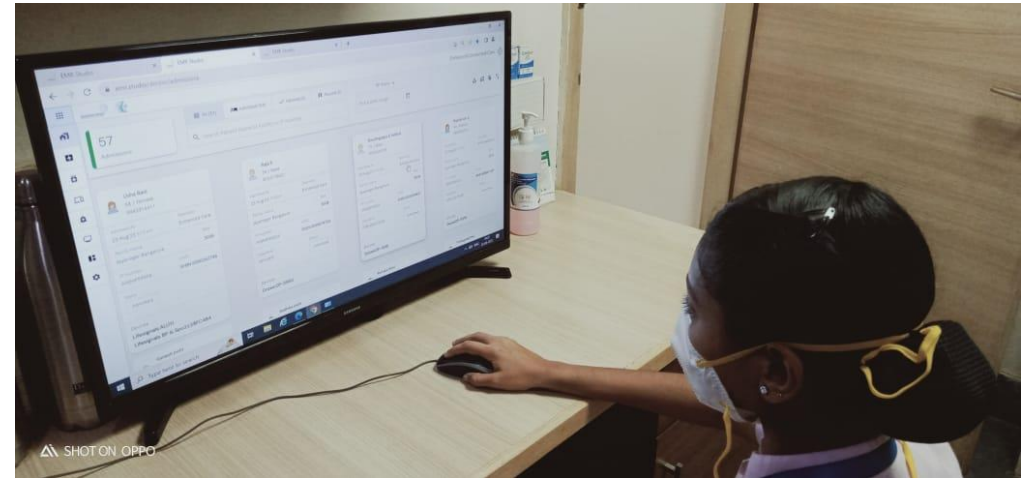
Additional information

ZERO CODE BLUES IN THE LAST 6 MONTHS

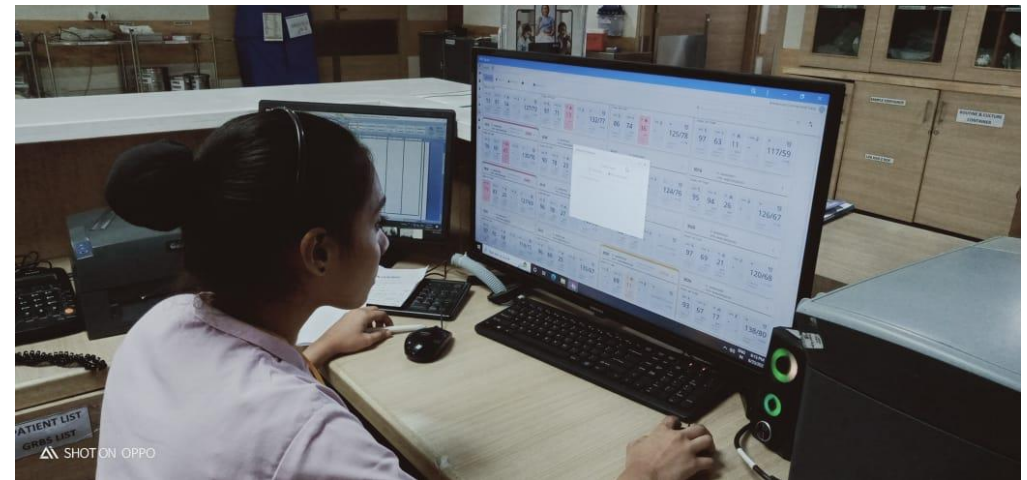
Code Blue and Code Orange Analysis



▶ COMMAND CENTER



▶ WARD CENTRAL MONITORING AREA

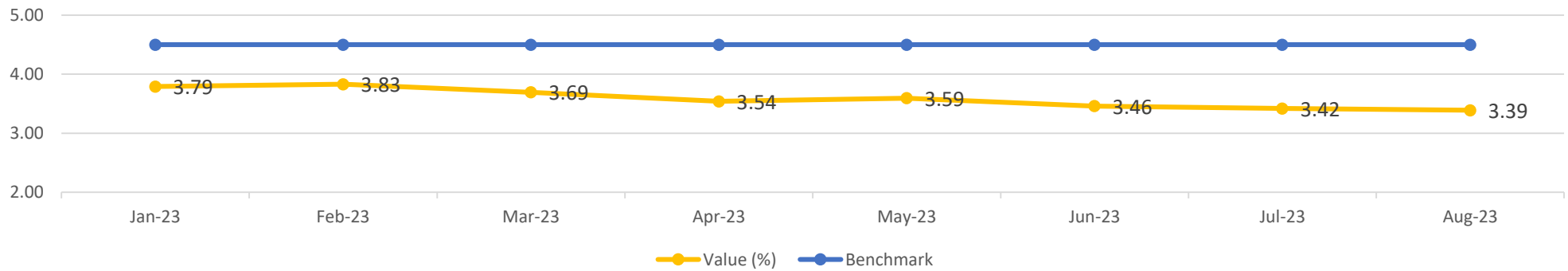


Additional information



You can choose to insert any additional pictures/graphs/tables or any other additional information

Hospital - ALOS



Net Promoter Score (%)

