



Ensuring Safety and
Precision in Maternity Care

advanced Labor Room
Information System
with Ai Assistant



Overview

In the fast-paced and critical environment of maternity care, the need for precise, reliable and continuous monitoring is paramount.

Our Advanced Labor Room Information System is designed to meet these need by integrating state-of-the-art monitoring technologies with real-time data analytics and comprehensive surveillance capabilities.

Objective



The primary objective of our Advanced Labor Room Monitoring System is to enhance patient safety and improve the outcomes of childbirth.

Additionally, the system aims to streamline workflow efficiency, allowing healthcare providers to focus more on patient care rather than manual documentation task. Our system is designed not only to support medical team in their day-to-day operations but also to provide clinicians with robust data-driven insights for better decision-making and resource allocation.

Ultimately, our goal is to support healthcare facilities in offering the safest, most compassionate, and effective maternity care possible.

Advantages

Minimizing Labor Risk

mCare provide a continuous live CTG data charting and analysis with notification and alarm.

Easily Prioritize Patient Treatment

Bird's eye view of multiple patients' vital information from a single dashboard, thus make it easier to prioritize patient that need more attention.

Multiple CTG Vendor Support

nexoLink - NexoPrima integration IoT solution already tested with most CTG vendors / products.

Auto Archive / Historical Data

CTG and Patient data will be stored in a central server and can be easily access at any time.

Remote Monitoring

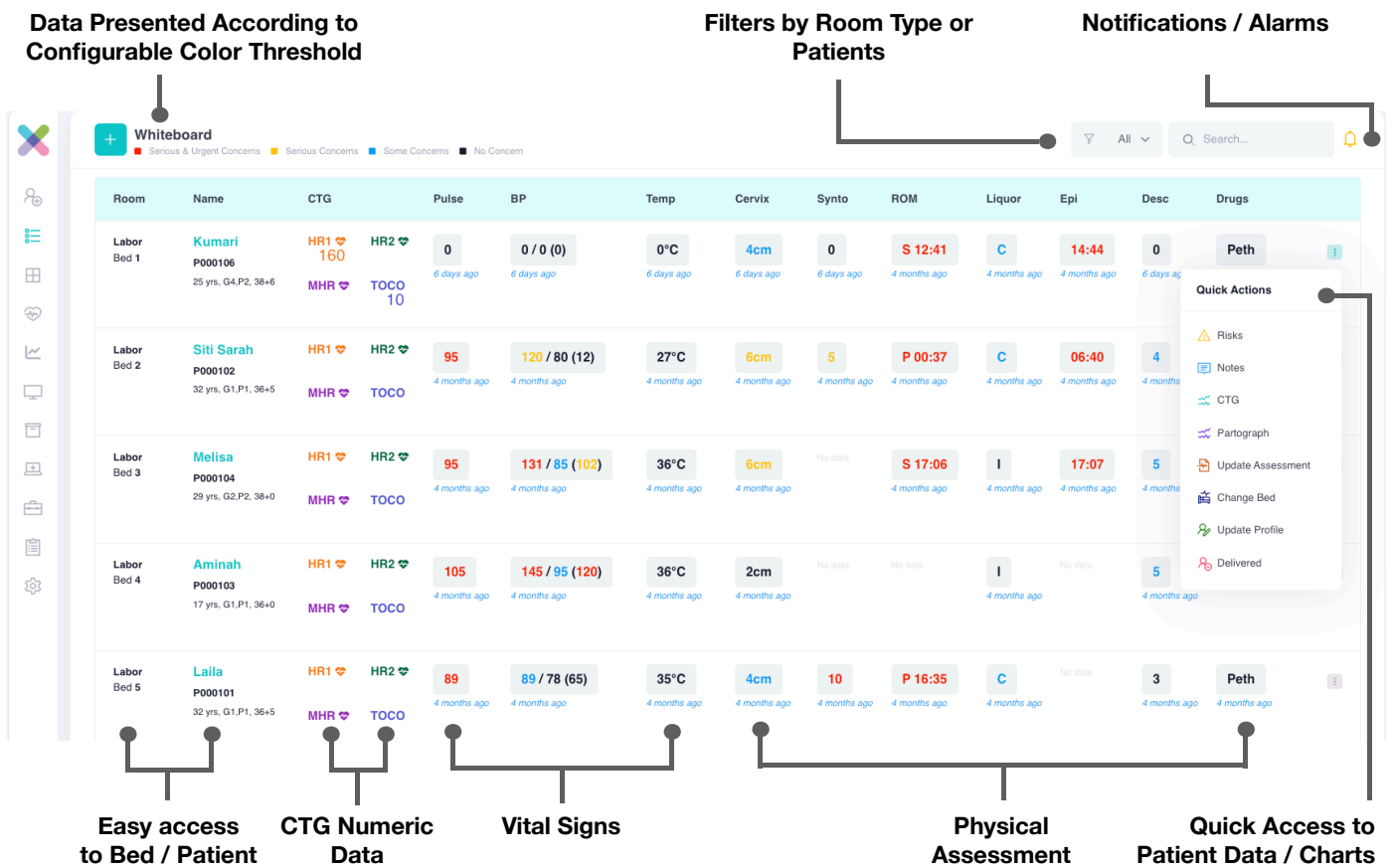
mCare is a web based solution and a Mobile App.* version will ease monitoring anywhere in the hospital network or remotely*.

Assist Clinicians with Analytics

Real-time analytics and classification of CTG FHR data/chart such as acceleration, deceleration, contractions, baseline and variability of the FHR data based on FIGO rules.

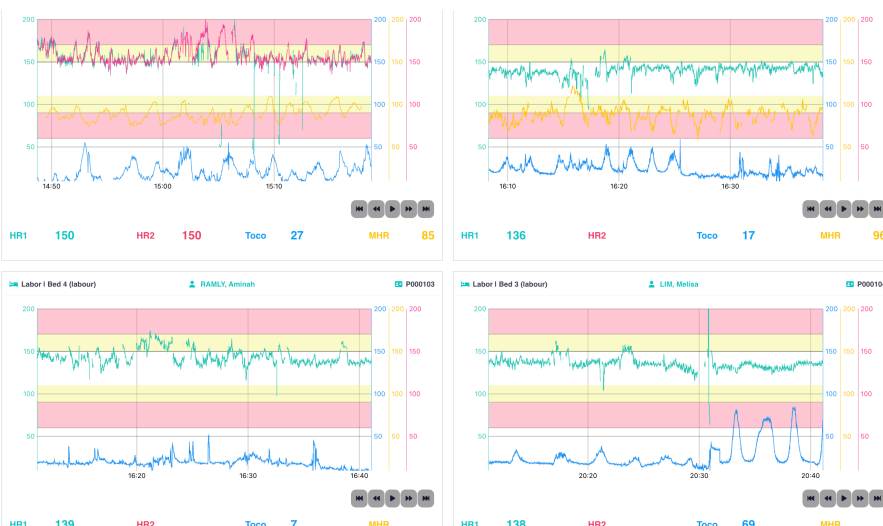


Bird's Eye View



Whiteboard

A bird's-eye view of multiple patients' vital information from a single dashboard makes it easier to prioritize patients who need more attention.



CTG Dashboard

Monitoring of multiple patients' CTG charts on a single dashboard.

CTG Insights

Realtime Classification / Analytic Of FHR CTG Data

Green Triangles - Acceleration / Blue Triangle - Deceleration / Grey Triangles - Contraction

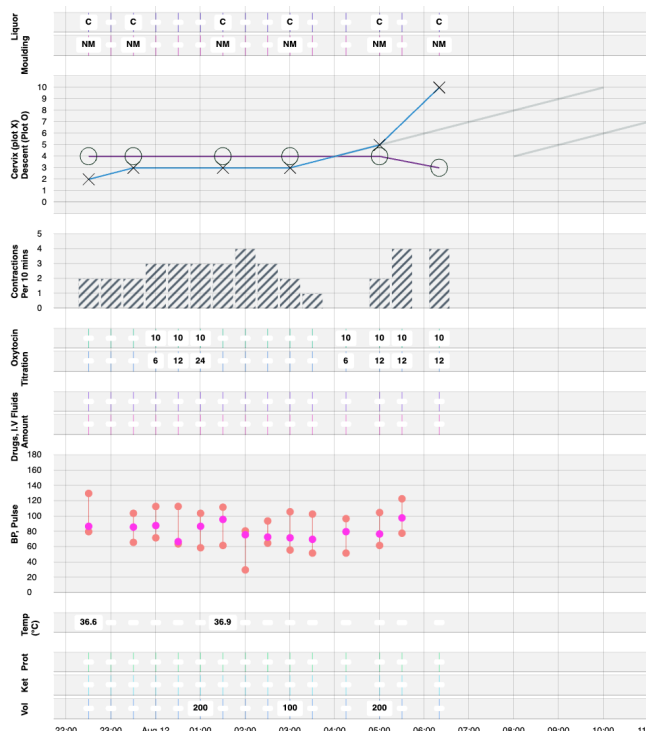


Rewind / Forward Previous
Recorded CTG Data

Summary of the
Classification / Analytic

CTG Analytics

Live data from the CTG machine will be continuously analyzed and classified in real-time within the patient's CTG view/monitoring.



Auto Charting

Physical assessments inputted into the system will be automatically charted accordingly.

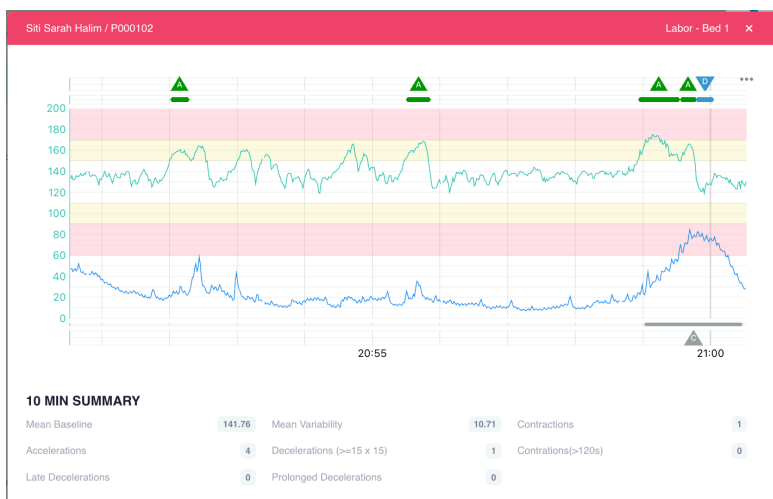
Realtime Analytics



Realtime analysis and Notification of CTG FHR data enables continuous monitoring of fetal well-being.




A robust notification system promptly alerts healthcare providers to abnormal patterns, facilitating immediate interventions and potentially preventing adverse outcomes. This technology empowers clinicians to make informed decisions based on up-to-the-minute fetal status.



Quick View of CTG Data

Short cut link from the notification for quick view and insight of the reported notification.

Ai Assistant

**Initial Admission**
10/04/25 10:00am (6 days ago)

Moderate Confidence


Maternal Status: Concerning

The prognosis for labor progression is cautiously optimistic, but vigilant monitoring is required due to the history of preterm birth and presence of proteinuria.


↓ [AI Prognosis Reasoning](#)


Prognosis Reasoning


- Maternal Age and Obstetric History:**
 - The mother is 26 years old, which is within the optimal reproductive age range, generally associated with lower risks during pregnancy and labor.
 - She is Gravida 2, Parity 3, indicating prior pregnancies and deliveries. This suggests that her body has previously accommodated childbirth, which may facilitate labor progression.
- Gestational Age:**
 - At 38 weeks, the fetus is considered full-term, which is ideal for delivery. Full-term gestation reduces risks associated with prematurity.
- Pre-existing Conditions:**
 - Previous Preterm Birth:** A history of preterm birth raises concerns about potential complications such as cervical insufficiency or recurrent preterm labor. However, since the current pregnancy has reached term, this risk is mitigated but not entirely eliminated.
 - Proteinuria:** The presence of protein in urine can indicate preeclampsia, a condition that requires close monitoring as it may lead to maternal and fetal complications. While mild proteinuria might not immediately threaten labor progression, its presence necessitates vigilance for signs of worsening hypertension or other symptoms of preeclampsia.
- Confidence Level:**
 - The confidence level is set to **Moderate Confidence** based on FIGO classifications. This is because while the mother's age, parity, and full-term pregnancy are favorable factors, the combination of previous preterm birth and proteinuria introduces uncertainty regarding potential complications.


 Initial Admission 10/04/25 10:00am

Interact with mCare AI Assistant about this prognosis...

 Attach


 Include FHR Analytic





 **Admission / Initial Prognosis**


Initial Admission
10/04/25 10:00am


The prognosis for labor progression is cautiously optimistic, but vigilant monitoring is required due to the history of preterm birth and presence of proteinuria.

 Regenerate







 2


 **Latest Prognosis**


New Assessment Update
14/04/25 06:35pm


The labor is progressing steadily but with some concerning factors that need close monitoring over the next hour. The likelihood of a vaginal delivery is still favorable, but maternal and fetal well-being must be reassessed frequently due to abnormal lie, proteinuria, and moderate-to-strong contractions.


 Regenerate








 1

 **Historical Prognosis**

New Assessment Update
13/04/25 04:08pm


The prognosis for the next hour indicates



AI insights are meant to assist, not replace professional medical judgment. All recommendations should be reviewed and validated by qualified healthcare providers before making any clinical decisions.

AI Assistant & Automated Prognosis System

NexoPrima's mCare includes an advanced AI Assistant that transforms labor monitoring through continuous, automated prognostic assessments throughout the patient journey. This intelligent system leverages multiple data streams to provide clinicians with timely insights and decision support.

 mCare

Ai Assistant

Comprehensive Data Integration

The AI Assistant processes data at three critical stages:

- **Initial Assessment:** At admission, the system analyzes maternal age, gravida, parity, gestational age, and identified risk factors to establish a baseline prognosis
- **Ongoing Physical Assessments:** The system incorporates new clinical data (cervical dilation, fetal descent, vital signs, membrane status, etc.) as they're entered by healthcare providers
- **Continuous FHR Analytics:** Automatically processes cardiotocography data, tracking baseline measurements, accelerations, decelerations, contractions, and variability patterns

Automated Hourly Prognosis

Every hour, the AI Assistant processes all available data to generate updated prognostic assessments. These regular updates ensure clinicians have access to the most current risk evaluation and labor progression analysis without requiring manual intervention. The system flags significant changes in patient status and provides trend analysis to support clinical decision-making.

Interactive Clinical Support

Healthcare providers can directly engage with the AI Assistant through an integrated **chat interface**, allowing them to:

- Request detailed explanations of specific prognostic indicators
- Ask questions about recommended interventions
- Explore potential scenarios based on different clinical pathways
- Receive evidence-based guidance tailored to the specific patient case

This intelligent system serves as a valuable adjunct to clinical expertise, providing an additional layer of vigilance and analytical support throughout the labor process, from admission through delivery.

Archive



Archive System of Patient Assessments & CTG Data

A comprehensive CTG data archive system plays a vital role in enhancing patient care by securely storing and organizing recorded CTG data.

This enables healthcare providers to quickly access and review critical patient information, supporting timely and accurate diagnosis and treatment decisions. The system's playback functionality allows for in-depth analysis of CTG charts, helping clinicians identify trends, patterns, and potential complications. This capability ultimately contributes to better maternal and fetal outcomes.

A well-structured CTG data archive allows clinicians to conduct in-depth reviews of recorded data, enabling comprehensive analysis of fetal well-being patterns.

By studying trends over time, healthcare providers can identify potential risk factors, optimize care plans, and contribute to evidence-based practices. This retrospective analysis also supports research and quality improvement initiatives, ultimately enhancing patient outcomes.

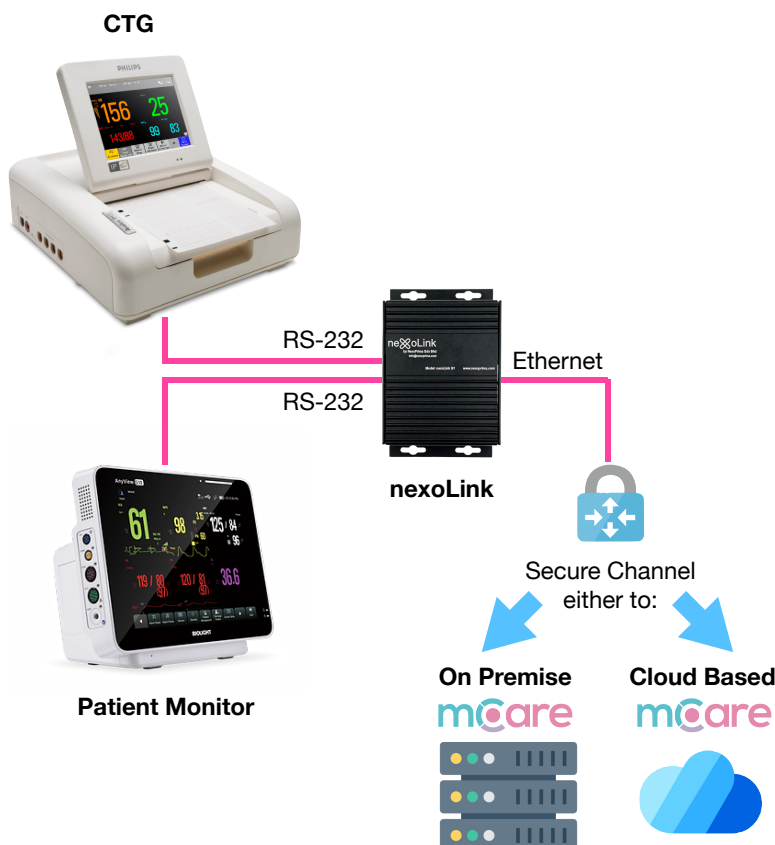
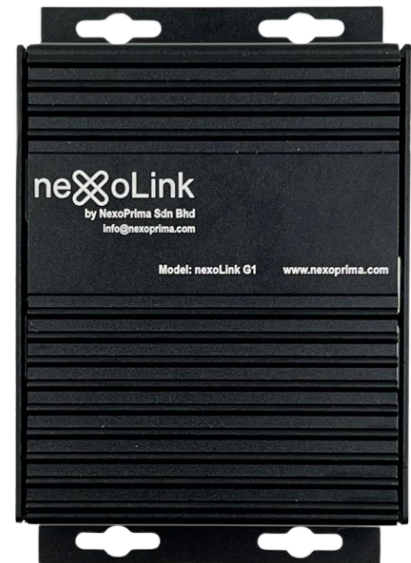
nexoLink

IoT - Integration Device

NexoLink is a custom IoT device, by Nexoprma. It can connect up-to 4 medical devices simultaneously, such as CTG, patient monitor, ventilator and Infusion pump*.

NexoPrima's nexoLink features robust offline functionality through its integrated web firmware, enabling uninterrupted CTG chart viewing even during network outages. The device locally stores all monitoring data during disconnection periods, then automatically synchronizes the backlogged information once connectivity resumes.

This ensures continuous patient monitoring and complete data integrity, making it ideal for healthcare environments where consistent access to critical maternal and fetal information is essential, regardless of network status.



Ethernet

Giga x 1
10/100M x 1



Wireless Connection

2.4GHz IEEE 802.11
5.0GHz b/g/n/ac



USB

USB 2.0 x 2



Isolated RS232 / Serial

RJ45 5 Pins RS232 x 1
RJ45 3 Pins RS232 x 2



Power In

DC10 - 30V



Display Output

HDMI Full Size x 1



Buttons

Reset button
User programmable button





advanced Labor Room Information System

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<https://mcare.live>