GOAL 3
FOUNDATION

Mangochi Hospital (Malawi)

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400+ Beds

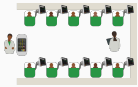
Catchment Area: +1 Million

Secondary Referral
District Hospital

Mangochi District Hospital is at the south of Lake Malawi a 2.5 hour drive from Blantyre and 4.5 hour drive from the capital Lilongwe. Mangochi is one of 28 districts within Malawi. The district is made up of 5 sub areas where there a number of health centres. As a secondary referral hospital, patients are sent to Mangochi if treatment is needed beyond what can be provided at the community level. There are 26 other district hospitals (one district does not have one). These are the government run hospitals. Besides these hospitals there are also a number of privately run hospitals in Malawi which aim to support the health system. These are often faith-based hospitals with the largest being the Christian Health Association of Malawi (CHAM) which consists of 195 health facilities and 11 training colleges across Malawi.

GOAL 3 in Mangochi

18 IMPALA Monitors



3 Wards

50 Health Workers Trained

Project Start: August 2024

Current Status: Active

Our very first hospital through the GOAL 3 Foundation was implemented in August 2024. As the first hospital funded through the GOAL 3 foundation, Mangochi District Hospital will always have a special place in our hearts. 18 IMPALA's were implemented in total in Mangochi along with 2 IMPALA servers and 2 tablets. IMPALAs are located as follows in the hospital:

- 12 in the pediatric ward
- 2 in the malnourishment ward
- 2 in the under-5 clinic
- 1 in the nursery room
- 1 in the admission room

Picture from training in Mangochi in 2024

Picture from training in Mangochi in 2024

Update August 2025

Interview with nurse Chikondi

Q: Can you share your overall experience working with the IMPALA Monitoring System?
A: My experience with the IMPALA system has been very positive. It has significantly reduced our workload and helped us detect deterioration in patients' vital signs much earlier. This has played a major role in reducing mortality rates in our pediatric ward.

Q: What were the main challenges in your workflow before introducing IMPALA?
A:

- We used to manually check and record vital signs at intervals, which was time-consuming and prone to human error.
- Clinical deterioration was often detected too late, leading to poor health outcomes.
- The workload was especially high during night shifts, leading to fatigue among staff.
- Documentation was inconsistent due to time pressure and understaffing—we're currently running a QI project to address this.

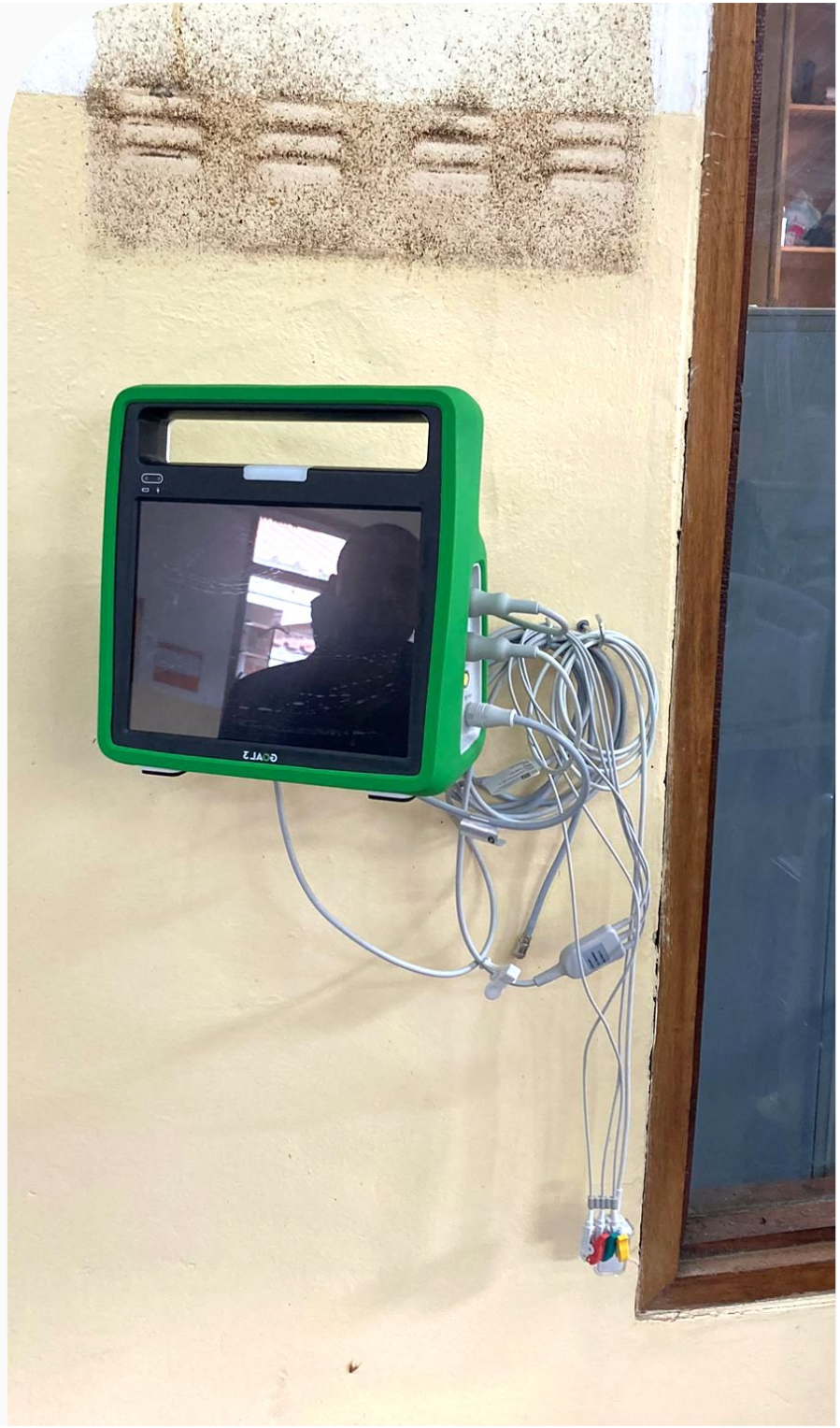
Update August 2025

Q: What improvements have you seen since implementing the IMPALA system?
A:

- We can now detect patient deterioration much earlier thanks to real-time monitoring.
- The system has reduced our manual workload, allowing staff to focus on critical care tasks.
- The availability of accurate and continuous data supports better decision-making.

Q: How has the IMPALA system changed the way you deliver care and make decisions?
A:

- Real-time alerts help us act quickly when a patient's vital signs go outside the normal range.
- Continuous data allows for evidence-based decisions.
- We're better able to triage and prioritize patients, ensuring critical cases are addressed first.



Picture from IMPALA in Mangochi in 2024

Picture from training in Mangochi in 2024

Update August 2025

Q: What are the most helpful features of the IMPALA Monitoring System?

A:

- Real-time tracking of heart rate, respiratory rate, oxygen saturation, and temperature.
- Automatic audible and visual alerts for abnormal readings.
- A central dashboard showing all patients' vitals at a glance.
- A user-friendly interface that even staff with minimal digital skills can use.
- Battery-powered operation, which is vital in areas with unreliable electricity.

Q: What impact has the IMPALA system had on patient outcomes?

A:

- We're detecting critical conditions earlier, allowing faster intervention.
- There's a noticeable reduction in preventable deaths and complications.
- Overall care quality has improved—patients receive timely and appropriate treatment.
- Patient safety has increased thanks to reduced human error.
- Hospital stays are shorter, helping us manage bed space more effectively.

Update August 2025

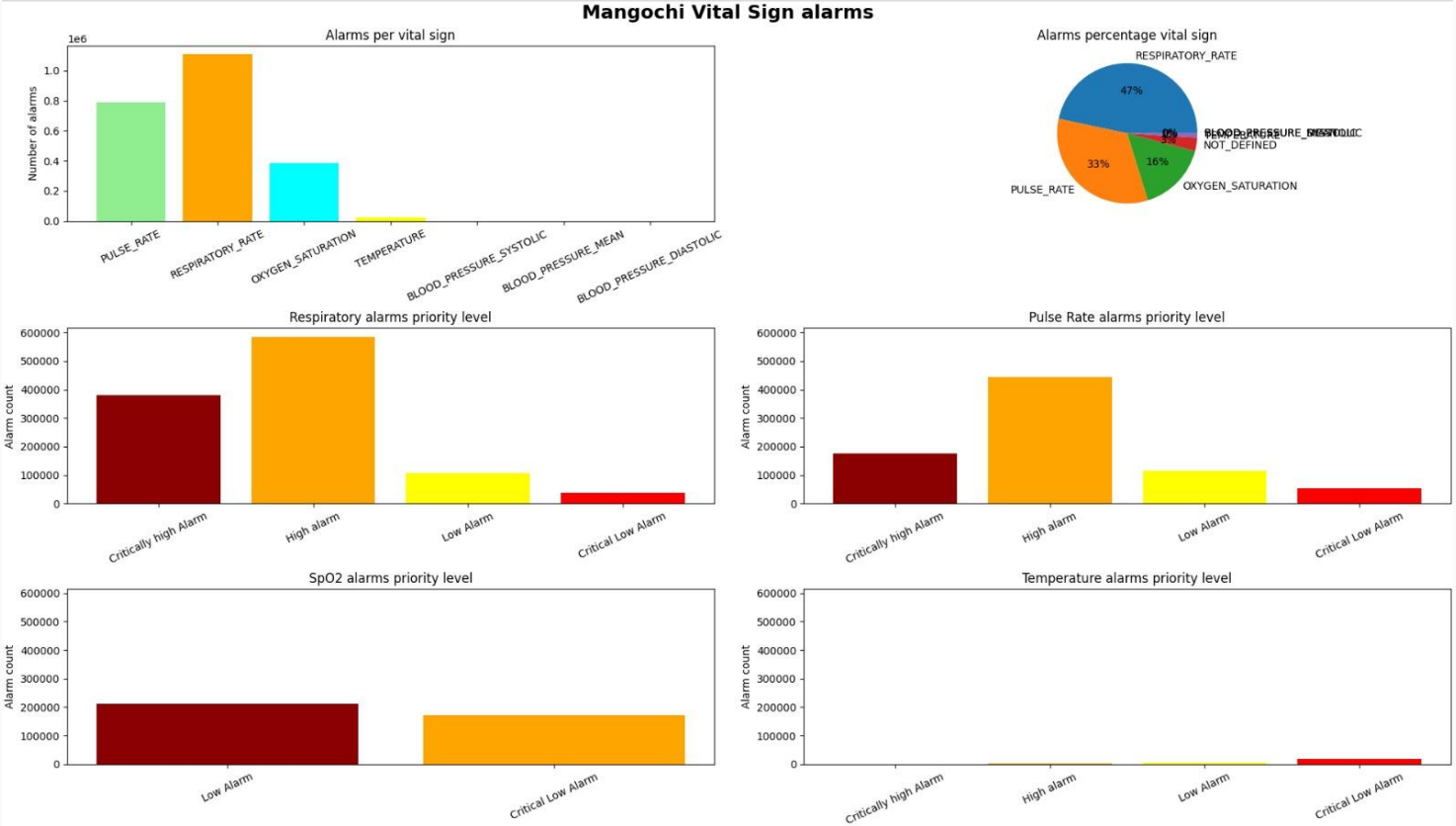
Q: What advice would you give to other hospitals considering IMPALA?
A:

- Early detection saves lives—IMPALA enables that.
- It reduces staff workload, freeing up time for direct patient care.
- It improves consistency and quality of monitoring, even in busy or understaffed settings.

Q: Can you share a specific case where IMPALA made a real difference?
A:
Yes. A young child came to our pediatric ward in critical condition due to febrile seizures. We stabilized the child with anticonvulsants and connected them to the IMPALA monitor. Soon after, the system alerted us that the child's oxygen levels had dropped—even though the seizures had stopped. This allowed us to start oxygen therapy immediately.

Even with reduced night staffing, the monitor continued to track the child's vitals throughout the night and provided confidence and reassurance to the team. Thanks to IMPALA, the child was safely monitored and discharged a few days later in good condition.

Update August 2025



Data from the monitors in Mangochi has also been gathered. Above you can see different graphs representing how often an alarm goes off, what type of alarm it is, and which vital signs most often trigger alarms. From the data you can see that pulse rate, respiratory rate and oxygen saturation are the most common vital signs to trigger alarms. In the below 4 graphs it breaks it down by the alarm and what type of alarm was active. For example you can see that for respiratory rate, there have been nearly 40,000 alarm counts of critically high alarms since we began monitoring. While not every alarm means that a child is in immediate danger, this still corresponds to hundreds/thousands of children who have received better care as a result of healthcare workers being notified of their respiratory distress, and being able to respond quickly and effectively. The monitors in Mangochi are making a life-saving difference.

Update August 2025

Update from GOAL 3's Product Manager Bart Bierling

We recently visited Mangochi's Pediatric Ward, where the team expressed great satisfaction with the IMPALA systems. They shared that the systems helped them stay organised and focused during the busiest month they have ever experienced — caring for 600 children, compared to their usual 300–500.

One particularly interesting initiative from their side is a study they are conducting to showcase improvements in vital sign tracking. Using their paper charts as a control, they are measuring whether the quality of monitoring in the ward has improved.

Before IMPALA was implemented, vital sign charts were completed for only around 10% of patients. After implementation, this increased to roughly 50%. This remarkable improvement clearly demonstrates that the IMPALA system has significantly enhanced the recording of vital signs in the ward. This will be presented by the team in a conference in Senegal.

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