

# Quro Medical's AI capability is a lifesaver

Quro Medical's Hospital-at-Home (HaH) solution, which delivers hospital-level care to patients at home, has artificial intelligence (AI) capabilities built-in for enhanced patient care.



Source: Supplied. Joost Pielage, Quro Medical's chief technology officer.

The AI capabilities within the Quro HaH solution provide preliminary data that helps save lives, by assisting doctors and other medical personnel in identifying potential serious health situations before they escalate into emergencies or lead to fatal outcomes.

Joost Pielage, Quro Medical's chief technology officer, emphasises the careful consideration given to the inclusion of AI capabilities since the inception of Quro Medical's HaH offering.

"The proven positive outcomes of artificial intelligence and machine learning (ML) in many business environments led us to the conclusion that integrating it into our medical-technology product was essential," says Pielage.

Artificial intelligence comprises the use of algorithms in software programmes to allow computers and IT devices to perform multiple calculations and analyses in a short time.

This provides healthcare professionals with precursory information, aiding them in drawing specific conclusions about a patient's health, for which they then propose a response to address any identified health risks.

The AI in our Hospital at Home solution enables computers to recognise patterns in the data that is collected via Quro Medical's vital signs monitoring patch. It analyses this data in conjunction with existing patient data to identify possible risks specific to a patient's current and real-time health.

Taking into account a patient's medical history and diagnosed conditions, the real-time vital statistics data are compared and analysed to indicate the patient's current and possible future health status.

With our HaH solution, a patient's vital signs are monitored 24/7 by our technology, which can detect subtle changes over time that may go unnoticed by medical professionals, highlighting the crucial role AI technology plays.

For instance, the Quro Medical HaH solution records subtle changes in a patient's PQRS complex electrocardiogram (ECG) data - a combination of five of the graphical deflections on an ECG.

## Proactive health management

The AI technology analyses this data to predict either a deterioration or an improvement in the patient's health based on the vital statistics data received from the patch and medical devices.

While sudden ECG data changes necessitate immediate action, the benefit of foreseeing such instances ahead of time allows for proactive adjustments to the patient's treatment plan, potentially saving lives.



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Pielage cites a recent instance where the Quro Medical HaH solution, using AI technology, alerted the clinical team to a high risk of a heart attack. This early warning enabled the team to take the necessary precautions, ultimately saving a patient's life and reducing associated trauma.

Medicine has always advocated for prevention over cure, and early detection and diagnosis can minimise damage by facilitating quick action. AI technology is enabling just that in the medical industry and empowering medical professionals to make swift decisions for the betterment of patient health.

"The AI technology," adds Pielage, "is able to process increased volumes of vital and medical data in a fraction of the time it would take a human. The time-savings and diagnostic accuracy greatly contribute to the development of an effective treatment plan tailored to an individual patient, resulting in better health management and healing."

The Quro Medical HaH solution, built on Typescript and utilising AWS, easily integrates with various APIs and medical IT systems, ensuring rapid scalability. Pielage notes that the company decided not to reinvent the wheel and is using well-known and widely-used technologies to ensure continuity and capitalise on the availability of local skills.

## Clinical notes made easy

Quro Medical is actively developing the AI capability of its solution to streamline tedious and time-consuming clinical note taking and improve the team's efficiency.

"A patient's clinical data is already automatically captured on the system, making it readily available for generating clinical notes. The patient data simply needs to be optimised, correctly structured, and contextualised for the treating clinician," notes Pielage.

He explains that AI technologies play a pivotal role in standardising this process. “This approach significantly reduces the time spent compiling clinical notes, standardises the content, and ensures the inclusion of accurate data, which ultimately saves valuable resources and time that could be spent on another patient.”

AI proves to be a positive attribute for risk mitigation within the health industry. It serves as a beneficial component in predicting and preventing emergency-health incidents and potential diseases, offering forecasts of likely outcomes.

The integration of AI technology contributes to the standardisation of processes and procedures, making access to healthcare more affordable and accessible to a broader population, ultimately saving more lives.

AI technology is not just a tool for the future—it's a lifesaver today. Quro Medical's dedication to harnessing the power of its people and technology ensures better patient outcomes for all. As we move forward, the integration of AI will continue to play a pivotal role in shaping the future of healthcare in Africa and beyond.

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