

Driving clinical efficiency

Perioperative-focused anesthesia solution interfaced with hospital EMR



Flevoziekenhuis is a medium-sized hospital located in Almere, Netherlands with anesthetists, nurses, and doctors responsible for 50 patients per day within its OR.

Centricity High Acuity Anesthesia (CHA A) from GE HealthCare has optimised the patient pathway and the way patient data is handled in the department.

Data input is automatically gathered from devices in eight ORs, seven holding and 13 recovery beds. The department is now fully paperless, replacing over 1,100 paper files and **saving over a day of staff time a week.**

With access to a consistent and complete care record that seamlessly integrates with the Hospital Information System (HIS), **decision-making is improved, human error reduced and care levels enhanced.**

Challenges

- Originally working with isolated anesthesia information management systems (AIMS) with limited value added
- Patient records still required daily scanning and printing
- Patient and anesthesia records previously incomplete due to omission or time constraints
- Difficulties in gaining accurate time stamps, limiting visibility of procedure status

Actions and results

- **Data continuity**
Implementation of CHA A fully interfaced with the HIS in six weeks; live since November 2015
- **Paperless OR**
Enabling a fully digital OR, with mobile PCs granting access to CHA A from any location and removing 1,100 pieces of paper per week, resulting in cost and efficiency benefits
- **Operational efficiency**
Clinical time optimised by at least 10 hours per week plus time stamps automatically captured and data entry simplified, enabling time to focus on patient care
- **Patient first**
Access to complete data and standardise it throughout the department, helping to optimise clinical planning and boosting efficiency
- **Data completeness**
A consistent, accurate and complete perioperative care record, can help maximising safety, plus limiting cancelled surgeries and/or reduced reimbursement

Improved planning, seamless data collection and complete digitalised documentation empowers informed clinical decisions and patient care.

More than one day of clinical time per week has been saved by CHA A automation, which has helped reduce delays in procedures due to incomplete information.



“ With Centricity High Acuity Anesthesia (CHA A), we can work more efficiently as a department. All patient records are digitalised, meaning that nurses and anesthetists have access to patient data in real-time, whenever they need it. The benefits have been endless – it’s saving staff enormous amounts of time, reducing the number of errors made and removing the constant burden of paper flying between the OR and other departments.”

Wilco van Wijk
Anesthesia & Recovery Nurse Manager
Flevoziekenhuis, Almere



Improved management of information during surgical preparation in the OR and in recovery is key to effective patient care.

Prior to the project, Flevoziekenhuis was aware that it needed to update its ageing anesthesia management system and bolster its existing HIS system with a solution that would include **sufficient clinical depth to meet the intricate requirements of anesthesia and OR management.**

In a bid to serve its patient community more rapidly, and having had positive experience of working with previous GE HealthCare solutions including ventilation and monitoring devices, it chose to implement Centricity High Acuity Anesthesia from GE HealthCare.

The implementation was a natural next step in Flevoziekenhuis’ digitalisation strategy. It has allowed patient data to be automatically captured in the system, accessed in real-time, and entirely eliminated the need for paper. It has removed the cost associated with manual record-keeping, storage, and paper scanning ensuring that clinicians feel better informed to make decisions that improve patient care. All of the patient’s history and medical details are now within easy reach of clinical staff.

The installation took place in under six weeks and involved dedicated user training and ongoing support from GE HealthCare to rapidly resolve any issues and finetune the configuration. This ensured a smooth transition to a new way of working.

Since becoming a paperless department, **over a day of staff time has been saved a week** and reallocated to patient care, plus it has replaced thousands of pieces of paper.

Digitalisation of services sets new standards for care provision

The OR team at Flevoziekenhuis has helped to lead the way in the hospital's bid to digitalise its key patient services. Prior to the implementation of Centricity High Acuity Anesthesia (CHA A) from GE HealthCare, the hospital had only five ORs with anesthesia records held in multiple, disparate systems. Data was then printed from individual systems as paper spreadsheets and passed to nurses and recovery professionals.

Hans Mester, Anesthesia Nurse at Flevoziekenhuis, explains, "Our systems used to work in isolation and manual input was required from clinical staff on printed spreadsheets. Not only was this a time-consuming way of working, it also subjected us to human error risks such as loss of data or incorrect information entry. When working with GE HealthCare, the installation went very smoothly and we were immediately impressed by the user interface. It retained the simplicity of our previous system, yet made anesthesia information easier to input and manage, integrating with other systems and helping to reduce the risk of error. Those same benefits apply to the CHA A system we use in our eight ORs, peripheral locations."



Optimising the planning and scheduling of procedures in the ORs

"With time stamps included as part of CHA A and pushed to our HIS, it has helped to streamline the time involved in preparing patients. We can see what time patients arrive in holding/recovery, and can see how long an operation is going to take. This saves documentation time, improves planning and scheduling, but also means we can keep families better informed as to the status of any given patient. Since using the solution, we have been rated as one of the best hospitals for patient turnover times in the region," states Wilco van Wijk, Anesthesia Manager and Nurse at Flevoziekenhuis.

"Nurses now have access to all the patient data they need before the patient even arrives. This improves standards of care and means things like medicines can be prepared in advance. We have used time stamps on other systems but found they were often inaccurate. If procedure start and end times aren't captured correctly, this can mean delays or in a worst-case scenario, sending a patient home. With CHA A, the time stamps are accurate, and seamlessly integrate with our HIS, meaning that staff are better informed and patients receive more timely care," continues Wilco van Wijk.

Enhancing decision-making and workflow for improved outcomes

Following the implementation of Centricity High Acuity Anesthesia, anesthetists and nurses have benefitted from streamlined access to patient data; automatically collected by the system and available in real-time. With the recent addition of computers on trolleys, staff have been able to access this data wherever and whenever they need it, removing the need for large paper files to hold medical records.

"With the system in place, we are confident we have access to the data we need," states Carla Günther, Application Specialist and Recovery Nurse at Flevoziekenhuis. "Not only is information standardised but it is also complete, facilitating clinical decisions. The system is easy to learn and easy to use. We've even personalised CHA A and made certain fields compulsory, meaning fewer delays to operations due to incomplete patient data."

"When I am on sedation duty, I always use CHA A to check the patient's history first. I might verify, for example, whether they have health problems or have had an operation recently. I can then access the operation records and see if there were any complications or other issues; this could be anything from blood pressure levels to the number of painkillers administered. This helps me make an informed patient decision about sedation," adds Kevin Smit, Anesthesia Nurse at the hospital.

"Centricity High Acuity Anesthesia isn't just any system, it's our system. We've personalised it in a way that meets our unique requirements – helping to save time, cost, and ultimately lives."

Carla Günther,
Application Specialist & Recovery Nurse
Flevoziekenhuis, Almere North Midlands NHS Trust

Driving cost savings and increasing operational efficiency and accuracy

"We've eliminated all traces of paper and the need for storage and scanning, which was both costly and time consuming," states Carla Günther, Application Specialist and Recovery Nurse at Flevoziekenhuis. "For example, nurses would regularly walk three minutes with a patient to the recovery room, only to find the doctor still preparing papers, necessitating a return visit. Each patient also required a file with a minimum of eight pieces of papers during their visit. With over 50 new patients arriving in the OR every day, that equates to 28 hours of staff time freed up a week and up to 2,000 fewer pieces of paper since we've made CHA A available to staff via mobile computers."

"With CHA A, the anesthesia records are already in the system via the real-time PDF interface with the HIS, saving time and reducing delays to patient discharge due to missing or incomplete documentation. Time previously spent on administration, is now being spent on providing care for the next patient," concludes Carla Günther.

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Centricity High Acuity Anaesthesia is an interactive clinical information system designed to support for anesthesia and post-anesthesia patient care.

Centricity High Acuity Anaesthesia can receive and display data secondarily from medical devices or other information systems. However, due to the physical restrictions in the interface to these devices, Centricity High Acuity Anaesthesia should never be used for the direct monitoring of physiological processes and parameters, or as a definitive diagnostic tool for clinical or disease states.

Always refer to the complete User's manual before use and carefully read all instructions to ensure the good use of your medical device.

The statements by GE HealthCare's customers described here are based on results that were achieved in the customer's unique setting. Pictures and data are provided by the customer with permission.

The case study was done after the implementation in 2015. GE HealthCare is not responsible for maintaining the accuracy of the anesthesia information management system at the site.

Not all products or features are available in all markets. Full product technical specification is available upon request. Contact a GE HealthCare Representative for more information.

Data subject to change.

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