

## San Gerardo Hospital Advancing care through innovation and technology

As part of the University of Milan-Bicocca, San Gerardo Hospital is strongly oriented toward innovation and technology. It's no surprise that when looking to advance patient care, the hospital saw information technology as a solution.



That solution was provided by a Dräger monitoring and IT system, based on the vision and direction of Professor Pesenti, Chief of the Perioperative Care Department and Intensive Care Units.

Located in Monza, Italy, near Milan, San Gerardo Hospital was founded in 1980, and is rooted in a tradition of patient care that reaches back eight centuries. Today, the hospital has 1,100 beds (plus 100 outpatient beds), admits 98,000 patients a year, and performs 18,000 surgeries.

San Gerardo Hospital has been a Dräger customer since 2003. "Regarding monitoring and IT systems and ventilators, I think that Dräger is one of the best in class for innovation and technology," says Dr. Giuseppe Foti, Anesthesia Specialist and Intensive Care Unit, and Head of Staff of General ICU at San Gerardo Hospital.

The goals of San Gerardo Hospital were to accelerate its charting process, simplify data collection, and improve data integration. The hospital also wanted to reduce time-intensive paperwork and be able to access and review archived patient data – both onsite and remotely.

### **Integrated solution focuses on critical care units**

Dräger implemented a variety of medical devices and solutions within the hospital's three Critical Care Units – Neuro, General and Cardio – which total 24 beds. The solution includes Infinity® patient monitors, Evita® ventilators, and the Innovian® Critical Care patient data

management system. Dräger also implemented a remote connection to Innovian so physicians would be able to connect from home via the Internet. Remote access products included Infinity Gateway with WinView/ WebViewer, WebAccess, and a locally developed solution called GatewayPlus, which is a system that acquires trends and waveforms in the care units and makes it possible to review, annotate, and export data.

Completing the solution was Innovian Critical Care, a Web-based patient data management solution that provides full electronic patient charting, flowsheets, scoring and printed reports. The system continually captures vital data from medical devices and information systems and integrates it into one easy-to-navigate interface for fast access. Innovian connects into the hospital's HIS system to provide information for patient records.





Giuseppe Foti, M.D.  
 Director of General Intensive Care Unit  
 San Gerardo Hospital, Monza, Italy

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With Dräger's solution, vital signs data is even captured during patient transport – whether the patient leaves the ICU to go to Radiology or the Cath Lab, for example, or simply changes beds in the ICU. That's because of the Pick and Go® capability of the Infinity monitors, which enables the same monitor to be undocked from the Infinity Docking Station and go on transport with the patient. When the patient returns or is moved to the new bed, the monitor is redocked and data collected on transport automatically refills into the Innovian database.

The Dräger solution supports the hospital's care team by giving them faster access to patient data. “Innovian gives us the ability to review trends and waveforms, and see the relationship between two or more clinical variables – for example IBP and ICP,” says Dr. Giuseppe Citerio, Director of Neuroanesthesia and Neuro Intensive Care Unit at San Gerardo Hospital. “It's also user friendly and quick to use.”

#### Scoring big on patient care

Scoring is a strong focus of San Gerardo Hospital, which uses SAPS II (Simplified Acute Physiology Score), a disease classification system designed to measure the severity of illness for patients admitted to ICUs, as well as the Nursing Activities Score (NAS), a tool for measuring the nursing workload in the ICU. The hospital is now able to configure its scoring system in Innovian.

Alberto Lucchini, Head of Nurses in General ICU under Dr. Foti, was instrumental in the configuration of the system, scoring and forms. “Using Innovian has very much changed the way all of the nurses in the ICU work,” explains Lucchini. “Clinical data coming from monitors is automatically collected into the electronic system, which makes everything easier. It allows us to see a comprehensive view of the patients' conditions. The flexibility of Innovian ensures that all nursing activities can be tracked, providing all data needed for research – even in our department, where it's common to not have much time for that.”



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 Director of Neuroanesthesia and Neuro Intensive Care Unit  
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Lucchini continues, “Before Innovian, much nursing time was dedicated to writing down monitoring data, laboratory data and a huge amount of nursing procedures. Now that is done automatically, which frees the nurses’ time and gives them more time to directly assist patients. If I look into the patient folder before Innovian, I can’t believe how much chaos there was in all those pages and sometimes the data was difficult to read.”

### **Remote access keeps physicians in touch with patients’ conditions**

While patient monitoring and patient data management systems are not new, being able to access them via the Internet is. As a Web-based solution, Innovian has satisfied one of the CCU physicians’ key requirements: to be able to use the system from home.



#### **THE CHALLENGE:**

Accelerate the charting process and improve data collection; improve data integration within hospital and with other devices; reduce operational time and time-intensive paperwork; allow easy access to archived patient data in a standard manner, both onsite and remotely.

#### **THE SOLUTION:**

Implement the Innovian patient data management system in conjunction with Dräger Evita ventilators and Infinity patient monitors running on the Infinity Network. Provide remote access using Infinity Gateway with WinView/WebView, WebAccess, and GatewayPlus.

#### **THE RESULTS:**

- Saves time spent on paperwork, freeing more time for working directly with patients
- Improves the correlation between pathophysiological knowledge and vital parameters during patient’s ICU stay, especially during periods of clinical instability; physicians can see how the patient responds, even in cases of therapy changes
- Facilitates discussions and briefings during clinical rounds for critical pathway decisions
- Provides quick and easy access to all current and archived patient data, even remotely



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Now, when a new patient comes in during the middle of the night, for example, the doctor can connect to the system from home and review the patient's vital signs in near-real-time and give consulting advice. Or if a physician wants to follow the condition of a critically ill patient from home or while traveling, that information is only a few clicks away. Prof. Roberto Fumagalli, Head of Anesthesia and Critical Care Units, stressed the importance of having a good working relationship between the Critical Care Units and the hospital's IT team: “One of the cornerstones for the successful implementation of the Innovian system has been the cooperation with the Hospital's IT Department.”

Technology is continually evolving, and San Gerardo Hospital is committed to advancing healthcare through innovation.

“The way to the future is to adopt new medical procedures, new critical pathways, and new technologies,” said Dr. Citerio. “I believe that Dräger will be able to support us in this.”

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