PHILIPS

Mother & Child Care

IntelliSpace Perinatal

I want to tell you all the things I haven't told you before

Who/where
The Medical Center Leeuwarden (MCL) is one of the largest non-university teaching hospitals in the Netherlands. This modern, quality-driven hospital consistently receives high patient satisfaction ratings. The hospital's Gynecology and Obstetrics Department delivers about 1,850 babies a year.

Challenge
When the hospital integrated a new Epic EMR, they looked for a perinatal information system, which could work with it.

Solution
The MCL chose the IntelliSpace Perinatal information system from their long-time patient monitoring partner Philips. It is used to monitor obstetrics patients throughout the hospital because of its interoperability, adaptability and coverage of the obstetrical care continuum.

Results
With a new, state-of-the-art EMR, clinical staff at the MCL Gynecology and Obstetrics Department say the EPIC/IntelliSpace Perinatal connection has enhanced patient care and staff confidence. It has fostered communication across the hospital, and is easy to maintain and operate.

The synchronized system for obstetrical care

IntelliSpace Perinatal and Epic electronic medical record work in sync to streamline OB information flows

The Medical Center Leeuwarden (MCL) made the strategic decision in 2013 to replace its outdated electronic medical record with the Epic EMR. When the hospital implemented a new EMR system, they chose to add a perinatal information system which could interface with the EMR. This connection has enhanced the quality of care for patients in labor across the hospital by reducing the potential for errors from working in different patient files at the same time.

Arie Zomers, MCL Manager Gynecology and Obstetrics Department (l) discusses the day's schedule with Obstetrics Nurse Simone Terpstra (r)

Medical Center Leeuwarden

Medical Center Leeuwarden, the largest hospital in the northern province of Fryslân, is one of the largest non-university teaching hospitals in the Netherlands. It has more than 3,100 employees and 204 medical specialists. This modern hospital takes pride in its continuous drive to improve and to adopt the latest technologies and equipment. The Gynecology and Obstetrics Department is a dynamic and challenging area of the hospital, which delivers about 1,850 babies a year.

Delivering the next generation of care

The IntelliSpace Perinatal system displays data, including cardiotocograms (CTGs) of the fetal heart rate and uterine contractions of the mother that is collected from Philips Avalon fetal and maternal monitors. Data is displayed on a workstation that can be placed where needed to provide centralized and bedside alarming for fetal and maternal conditions. Users can create customized electronic chalkboards that display the status of all patients in labor at a central desk location in different care units.

A complex project

Creating a connection between Epic and IntelliSpace Perinatal was complex because it required supporting the flow of information across many locations of the hospital.

"Our staff felt quite anxious about making this change because our department has a high risk factor. We are dealing with babies, families and mothers, and the impact of an error can be huge. It's like an emergency department in that respect," said Arie Zomers, MCL Manager Gynecology and Obstetrics Department.

Enhancing OB patient care

Patient safety is the priority for all staff members on the maternity ward, especially when things become stressful. "Our work can be very chaotic with lots of surprises, so it's important for us to have a perinatal monitoring system that we can blindly trust. We have to know that we are putting the right data from the right patient in the right file," said Lida Flapper, MCL Clinical Manager of IntelliSpace Perinatal.

To provide a current and unified record for each patient, Epic and IntelliSpace Perinatal use context synchronization, which keeps the patient or user focus in sync between the two systems. When a user selects a patient in the Epic system, IntelliSpace Perinatal automatically also selects the same patient. Both applications can be accessed via the same workstation.

In the department's previous perinatal system, staff might sometimes work in two different patient files at the same time, meaning they could inadvertently enter data from patient A into the folder of patient B. "Now, because Epic and IntelliSpace Perinatal synchronize with each other live, we can click on a patient's CTG in Epic, and IntelliSpace Perinatal follows so we know we are always working in the right file. IntelliSpace Perinatal also reduces our keystrokes when entering data. It only takes a few seconds for changes to be updated to either system, so we know we are always seeing the latest information," said Flapper.

In the Gynecology and Obstetrics Department, IntelliSpace is used to monitor the status of the mother and baby during the

labor process, where CTGs can be taken 3 or 4 times a day on a patient. During labor, the CTG on the IntelliSpace Perinatal screen always has to be visible near the patient. Flapper says, "Thanks to the flexibility of the IntelliSpace Perinatal system, Philips was able to adapt the default settings for us so that the CTG would always remain visible on the screen to meet our clinical requirements."

"We have to know that we are putting the right data from the right patient in the right file."

Lida Flapper, MCL Clinical Manager IntelliSpace Perinatal

Fostering communication across the hospital

IntelliSpace Perinatal allows staff members to monitor the status of all patients in labor at the hospital: in display screens in the maternity ward, IC, outpatient clinic and surgical recovery room. Flapper said she recently saw a child with a bad CTG on her IntelliSpace Perinatal screen in another room and could bring that to the attention of her colleagues in the outpatient clinic.

"IntelliSpace Perinatal is beneficial not only for the mother and child, but it also supports us as medical staff by alerting us to potentially dangerous situations. In our case, it fosters better communication between staff on the maternity ward and different hospital locations," says Flapper.

The department's obstetricians can log into the system from home and view everything in the application. This allows them to consult with a physician's assistant who is on the ward. Flapper says, "This capability is extremely important for our process. A mother in labor is going through an extremely fragile process, and we want to do everything we can to make it go smoothly and to intervene immediately if the patient has an issue."

Facts and figures

MCL Gynecology and Obstetrics Department
- 1,550 babies delivered in 2016 on the maternity ward and 300 babies delivered in outpatient clinics
- More than 100 staff, including obstetrics nurses, gynecologists and administrative staff
- 20 rooms on the maternity ward, 7 labor rooms, 1 triage room
- 3 outpatient clinics, including one off-site

An IntelliSpace Perinatal workstation displays the current CTG for each patient in the delivery rooms so nurses can check the patient's condition at a glance
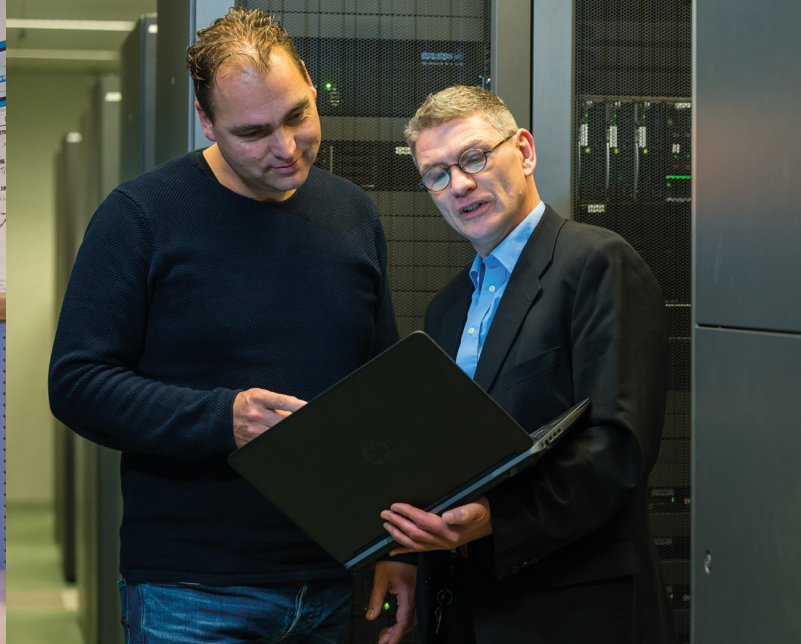
Staff in several locations can easily monitor the status and alarm indications for all patients in labor at the hospital via IntelliSpace Perinatal's large display screens

Maurits Flapper, ICT Technical Manager (l) and Thony van der Veen, MCL Technical Application Manager (r) manage and maintain the IntelliSpace Perinatal system

Resolving issues quickly

With more than 40 people managing 250+ clinical applications across the hospital, the MCL Technical Application Department has a broad base of comparison when it comes to maintaining and managing the IntelliSpace Perinatal system. Thony van der Veen, MCL Technical Application Manager says, "IntelliSpace Perinatal is a stable product. Very little goes wrong. But if there is an issue, we received dedicated training and tools from Philips that help us quickly figure out where it's going wrong. We can then usually resolve the issue ourselves."

The IntelliSpace Perinatal system console, for example, allows the technical application specialists to monitor the IntelliSpace Perinatal service for the hospital's entire configuration. They can see if a client has logged in, what they did during the session and when they logged out to help them find out what went wrong.

Six months after the IntelliSpace Perinatal system was implemented, Philips provided a tailor-made training course for several resources from the MCL Technical and Clinical Application Specialists to address more complex questions and train them to become certified IntelliSpace Perinatal engineers. "That's important for us, because if we have an issue we have a two-hour window to resolve it. If we can't fix something in 15 minutes, we are on the phone to the supplier because we can't afford to waste any time. Having said this, we experience very few problems with the system."

Flexible planning

IntelliSpace Perinatal is designed to simplify maintenance and updates for IT departments. "If there is an update for an application, we can plan it in. That is important, because when we are doing an update, we switch to the emergency protocol and the nurses have to go back to pen and paper. Fortunately, we can do a lot remotely and we can first test an upgrade offline so we know exactly how long it will take and what issues we might have. That allows us to limit our downtime as much as possible," said Van der Veen.

Excellent teamwork

Many parties worked intensively to implement the connection between the IntelliSpace Perintal system and Epic: the MCL applications, ICT and medical technology specialists, Philips distributor – GrafiMedics, Philips IT specialists and the Epic engineers. Colleagues from the MCL Medical Technical Department were involved from the start in the project and played a significant role in successfully implementing Philips hardware in the hospital infrastructure. Van der Veen says, "Philips understands how the care process works in obstetrics departments, with the mother and child. That is an advantage. We received a lot of support from Philips and had a real lifeline with them when we were making the switch and that continues today. I trust Philips. They have sound expertise, and they are not hesitant to share their expertise with us."

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