

# Safe delivery



PROVIDED BY BANNER GOOD SAMARITAN MEDICAL CENTER

**Ronda Slickman, right, a registered nurse at Banner Good Samaritan Medical Center, plans to deliver her baby at the hospital, which is using a new electronic medical records system to prevent obstetric errors. Patient care assistant Melissa Gonzalez explains how the system tracks care provided to expectant mothers.**

## Program helps protect pregnant patients

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**A**n Israeli gynecologist has inked a deal with Banner Health to install his electronic medical records system, designed to prevent errors and improve patient safety in hospital delivery rooms.

Banner executives expect to save millions of dollars with the new database technology.

Dr. Eyal Ephrat, chief executive of E&C Medical Intelligence, said his system has been used in more than 160,000 U.S. births and already has prevented critical clinical errors in what is traditionally the highest liability risk in health care.

Called the Intelligent Patient Record for Obstetrics, or IPROB, the new technology functions

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as a complete obstetrics chart for physicians and nurses. It offers prompts and reminders based on more than 6,500 best practices in obstetrics that have been accumulated over the years, Ephrat told *The Business Journal* from Israel.

His company, which he founded in New Jersey six years ago, provides quarterly reports that highlight incidents when hospital staff members were in the process of making a mistake and the system responded to those alerts.

One of the worst outcomes in obstetrics occurs when the fetus becomes brain damaged from a lack of blood supply and oxygen during delivery, he said.

"That warrants an immediate reaction, an appropriate treatment," Ephrat said.

"If there is no appropriate treatment, the brain can become damaged. The most critical and most liability-prone event in OB is brain damage."

Another outcome associated with high obstetric malpractice liability happens when the newborn's arm suffers nerve damage, resulting in Erb's palsy or brachial palsy.

This occurs when the nerves around the shoulder are damaged during a difficult delivery as the infant's head and neck are pulled toward the side while the shoulders pass through the birth canal.

"What our system is doing is making sure the staff members react appropriately and immediately to make sure there's no negligence, and that the response of staff members is given in the right time appropriately," Ephrat said.



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**Dr. Eyal Ephrat**  
E&C Medical Intelligence

He said there are seven milestones during the labor and delivery process that must be evaluated carefully to ensure a smooth delivery process.

For example, evaluation of fetal weight is mandatory when the patient enters labor, especially if the mother has diabetes, he said.

Dr. John Hensing, senior vice president of care management and quality for Banner Health, said he is about three-quarters of the way finished installing the database system in all of Banner's hospitals nationwide. It already is in all of Banner's Arizona facilities.

He said Ephrat's IPROB is part of a larger effort to improve patient safety.

"Banner has been pursuing a whole variety of major strategies to address patient safety and make patient care much more reliable and safe," Hensing said.

Ephrat said he got the idea for the software program by combining his obstetric background with his experience in electronic warfare.

He served in the Israeli military before becoming a doctor. He was responsible for electronic warfare involving the U.S.-built Apache helicopter.

"The Apache helicopter pilot has one screen in front of him," Ephrat said. "During any mission, the system arranges for the pilot to see what the pilot needs to see at this very moment. If he is in a specific attack mission, he is not overwhelmed with a lot of information."

"That's the same in high-acuity medicine," he said. "That's the technology we use."

As a result, the screen shows doctors and nurses only the information they need at any given moment for the patient, he said.

Eleven years ago, when he worked at a hospital, doctors would have a regular morning meeting to go over the mistakes that were made the previous night, Ephrat said.

"Those errors occurred because people were tired and not paying attention," he said.

He estimates it costs hospitals \$110 to \$130 per birth to use his system, but it pays for itself.

"The reductions that they get on the malpractice premiums are larger than what they are paying for IPROB," he said.

He believes mothers-to-be would be willing to pay for the extra precaution out of their own pockets.

"As a consumer, I want to get the best medicine and the best tools available to me to make sure I am getting the best and not being exposed to any human errors," he said.

While Banner is the only health system in Arizona installing this equipment, other hospitals across the state are working toward higher levels of patient safety.

The Arizona Hospital and Healthcare Association sponsored a patient safety forum April 26-27.

"Do No Harm — A Standard of Care" featured hospital executives discussing ways the health care industry could learn from the aviation industry.

"Decades ago, the aviation industry implemented crew resource management as a way to reduce errors," said Barb Averyt, the hospital association's patient safety project director.

"Today, hospitals are using lessons learned from aviation to improve patient safety," she said.