

Conway Regional Health System adopted TotGuard to prevent abductions.

By Bob Violino

Tags: Health Care, Security and Access Control

Jan 22, 2017—Keeping infants and children safe is a top priority for [Conway Regional Health System](#), which serves the growing communities of North Central Arkansas. Centered on a 154-bed acute-care medical center, the health system provides patients with a variety of services, including for women.

The obstetrical unit contains 16 labor, delivery, recovery and postpartum suites, in which new mothers and well newborns are cared for from admission until discharge, as well as eight postpartum, mother-baby rooms for overflow. A six-bed newborn intensive care nursery (NICU) provides care for sick or premature newborns. In 2015, the Conway Regional staff and area physicians delivered 1,804 babies.



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Between 1983 and 2016, 133 infants were abducted from U.S. health-care facilities, according to the [National Center for Missing & Exploited Children](#).

To prevent such abductions, Conway Regional was using [Stanley Healthcare's](#) RFID-based Halo Infant Security solution. But several years ago, the vendor notified the hospital that it would no longer support the system. In addition, the hospital experienced operational problems with the Halo system and an increasing number of false tamper alarms.

It was time to look for a new solution. "Safety and security of our patients were of primary concern, as always," says Eric Kindsfater, Conway Regional's director of safety, security and communications. "Our original system was out-of-date and parts were becoming very difficult to obtain. When parts were located, the price point was very significant."

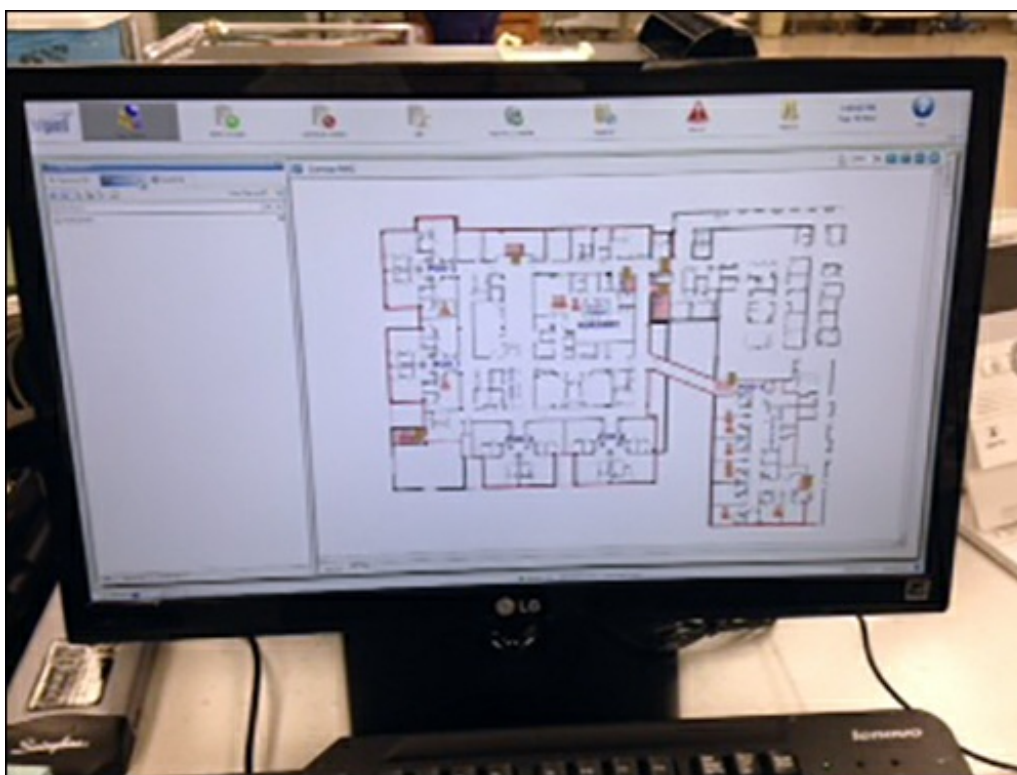
Administrators set out to find a replacement system. "The main goals were to identify an RFID system that would be compatible with the organization's existing resources; be easy for staff to initiate, use and respond to; and provide the maximum level of security and abduction deterrence for infants," says Mary Salazar, Conway Regional's director of women's and infants' services.

Since October 2015, infants born in the hospital have been protected by Guard RFID Solutions' TotGuard Infant Security System. The real-time location solution monitors the whereabouts of infants and young children within the facility.

Seeking a Solution

Conway Regional's managers wanted to deploy a new system much sooner than it did, but the necessary budget was not available. Nevertheless, managers moved ahead with researching a replacement solution. The first step was to gather feedback from the security and communication management firm that the organization contracts for those services. The aim was to identify which systems on the market were the most compatible with the other security and communication technologies Conway Regional had in place.

The decision-making process involved leaders from the maintenance, security, and women's and infants' departments. They evaluated offerings from three vendors that provide infant security systems, Kindsfater says, including [Guard RFID Solutions](#). A systems integrator provided specifications and other system considerations during the evaluation phase, he adds.



An infant's location and movement are identified on a large map in the middle of the system screen.

Conway Regional selected the TotGuard system because it was recommended by its internal security and communication systems provider, was easy for staff members to use, and would have potentially lower maintenance costs than the previous infant security system. In addition, the technology would be less likely to produce false alarms. Finally, Conway Regional was familiar with Guard RFID, having deployed several products from the company throughout the years.

The next step was to identify available funds to cover the cost of implementing the new infant security system. The request for funding and approval, Salazar says, had to funnel through Conway Regional's executive leadership team and board of directors.

The implementation began in September 2015 and was completed within roughly a month, including system testing. Staff training was conducted throughout the installation of the new system, Salazar reports. Several weeks prior to the solution going live, department leadership identified the education needs of the staff and initiated a program to train all labor and delivery, nursery and pediatric unit staff members on the new technology.

"All staff who routinely participate in the care of newborns and pediatric patients would need to be trained on how to use the new tag devices," Salazar says, "and admit and manage patients in the computer workstation and TotGuard system." A TotGuard clinical representative visited the facility to provide the staff training and to help the team with the system's initiation. Roughly

125 employees were trained on the new solution.

How the System Works

TotGuard offers a choice of four small and lightweight active tags for infants: Umbilical, Tamper Sensing, Cut-Band and NICU. The Pediatric Protection tag is for children. All the tags are ergonomically designed to ensure the highest level of comfort for babies and children, according to Guard RFID. They are also designed to reduce nuisance alarms, with immunity to interference from smartphones and other electronic devices.

The hospital has roughly 30 Tamper Sensing tags for infants deployed in its obstetrics and nursery areas, and 10 Pediatric Protection tags in its pediatric unit. A nurse applies a tag to a newborn's lower leg using a stretchable leg band with a Velcro strip shortly after birth, and the tag is immediately activated by heat from the baby's body.



A Tamper Sensing tag is applied to a newborn's lower leg using a stretchable leg band with a Velcro strip shortly after birth.

The Pediatric Protection Tag is used for older babies and children. The security tag is cradled and encapsulated inside a soft plastic band that is worn on a child's arm or leg, depending on his or her size. "This band is used with the pediatric population due to the increased risk of choking as a result of a child putting a security tag in their mouth," Salazar explains. "Use of the Pediatric tag and band minimizes this risk to the child. Otherwise, the Pediatric tag functions in the same manner as our other infant tags." Once the band is applied, she adds, the warmth of the child's skin activates the security tag.

At any given time, Salazar notes, there might be between six and 24 tags in use, with an average of 14 tags. "Our typical user is

newborn to one week of age," she states, "but for our pediatric population, this age range can be one week to 12 years of age."

Once a tag is activated, the infant's name and tag number are automatically entered into Guard RFID's software application via an Auto Admit feature. When a nurse applies a security tag and the band to a patient, the warmth and connection of the patient's skin activates the tag, which then transmits a signal to the system workstation. "On the screen, there is a small box in the corner labeled 'Auto Admit.' The staff member will click on this box and locate the tag that they have activated," Salazar says. "They are then able to enter the infant's name and identifying information in the system that will be associated with the security tag."

The process takes less than a minute, Salazar says, and allows a worker to easily apply a security tag on an infant during normal newborn care without having to immediately sit down at the computer and register the tag to activate it. "How the tags are applied and how they are activated is very different from our previous security system," she adds, "with less equipment needed to apply a tag as well as a quick and easy admit feature."

An infant's name and tag number appear on the left side of the system's screen, and his or her location and movement are identified on a large map in the middle of the screen.

More than 50 Guard RFID readers were installed in ceilings. Coverage includes all 24 patient rooms in obstetrics, as well as inside the nursery, NICU and the pediatric unit, in all associated corridors and around each elevator and stairwell in the units. The network is implemented using wired Ethernet.

If a tag is tampered with—for example, if it is removed without being deactivated—an alarm is sounded to alert personnel on the unit to assess the infant and tag and address the problem as needed. If a tagged child is within close proximity to an exit, an alarm will sound, notifying staffers so they can respond immediately. When this occurs, the system will also lock the exit mechanism, whether it's a door to a stairway or an elevator, thereby limiting further movement of the infant or tag in question until a staff member can follow up.



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—MARY SALAZAR

"The ease of use and utilization of the tags and the computer system software itself is probably the [biggest difference] between the old and new systems," Salazar says, "and the most important piece for our clinical areas utilizing this system."

When it's time for infants or children to be discharged from the facility, the band and tag are removed. The infant bands and tags have a reusable feature with proper cleaning that helps Conway Regional save on the cost of system maintenance. "The bands have been very sturdy and continue to work after several washings," Salazar states. The Pediatric tags are reusable, but the band that goes around each tag is not.

Conway Regional has no immediate plans to expand its use of the RFID system for asset tracking or other applications, Salazar says. "But it is very good to know that if we ever need and want to add additional devices and services," she notes, "these devices and services are available."

The adoption rate of infant security systems has leveled off in recent years, as a large percentage of hospitals with birthing units have already implemented such solutions within the past two decades, says Mendy Meyer, Guard RFID Solutions' clinical specialist and customer advocate. "As older systems begin to reach their end of life, and new technologies and capabilities emerge," Meyer says, "the need to replace these has been increasing."

At Conway Regional Health System, there is no easy way to identify financial return on investment for the infant security system, Salazar says, but the overall benefits are clear. "A strong infant security system is vital to the functioning and continued operation of any unit caring for infant and pediatric patients," she states. "I see this system as having an immediate return on investment to our organization and to the safety and security of our patients and families. One deterred, prevented or identified abduction attempt erases any financial cost imaginable."