Staying connected

New technology helps parents keep in touch with their babies in the neonatal intensive care unit

On any given day, the neonatal intensive care unit (NICU) at University of Minnesota Masonic Children’s Hospital treats as many as 50 babies, all of whom were born preterm or have other serious health issues. It can take weeks, or even months, for these babies to become healthy enough to go home—which means parents often must return to work or go home to be with their other children, leaving their babies in the hospital.

But thanks to gifts from Cornerstone Parking Group Inc. and the Transportation Club of Minneapolis and St. Paul, parenting and family members now can stay connected with their babies by using a new software technology and iPads for two-way communication 24 hours a day.

For the past eight years, Jason Albrecht, manager of patient/family interactive services at the hospital, has been working with parents, bedside care staff, and technology professionals to develop ways to keep parents and their infants connected. Until recently, firewall systems allowed a video connection between parents and their babies only while they were both on campus or at another Fairview hospital or clinic.

The new software system allows parents and their babies to stay connected from any location, at any time of day. In addition, doctors can display X-rays, ultrasounds, and other charts on the screen so parents can stay involved with their child’s medical care.

Parents download the software onto any device, such as an iPad or laptop, while the iPad hovers over the baby in the NICU and serves as the camera.

“Families who have used it say they can’t imagine not having it,” Albrecht says.

Ashleigh Moelter, a NICU family support specialist who’s had a child of her own in the NICU, has worked with families to discover how they would benefit from this technology.

“Knowing that you will be able to log in, check on your baby, and say goodnight before you go to bed is very comforting,” Moelter says. “Families feel involved in their child’s care and know what’s going on with him or her at all times.”

Philanthropy was essential for launching this meaningful program for NICU families, Albrecht says. “We could not have started the project without the funding from donors,” he says. “Without them, we would still just be thinking about the project.”

—Kali Dingman

Watch a video about this program at give.umn.edu/legacy.

All in your head

A University professor takes the lead in neurolaw, an emerging field at the intersection of law and brain science

At the start of Dzhokhar Tsarnaev’s March trial, defense lawyers readily admitted that their client planted the bombs that killed three people and injured scores more at the April 2013 Boston Marathon. But they did not enter a guilty plea.

Instead, the team portrayed Tsarnaev as an impressionable teen who was manipulated by his older brother. Their strategy may spare Tsarnaev the death penalty by asking the jury to consider not what the young man did, but why he did it. Or rather, “What was going on inside his brain?” says Francis Shen, an associate professor of law at the University of Minnesota.

Shen, a McKnight Land-Grant professor who joined the U in 2012, runs the Shen Neurolaw Lab and studies the intersection of law and brain science—or “neurolaw,” as the emerging field is better known.

The field explores how advances in neuroscience affect legal standards and rulings. Recent developments in neuroscientific techniques have already enabled researchers to better see inside the human brain. Future research may make it possible to do things like tell when someone claiming to be in pain is faking, improve assessment of brain death, and better diagnose and treat concussions.

It may also help make clearer why and how people do what they do. “The more we learn about how the brain works, the better law can be,” says Shen, who serves as executive director of education and outreach for the MacArthur Foundation Research Network on Law and Neuroscience. “Fast forward and I believe we are going to think about addiction differently, as well as depression, post-traumatic stress, and other brain disorders, and that will have legal implications.”

For example, how might the introduction of neuroscientific information affect jurors? Might they make a different decision if they thought of post-traumatic stress disorder as a physical injury to the brain?

Shen covers topics like this in Law and Neuroscience (Aspen Publishers, 2014), the first textbook on neurolaw, which he co-authored with two Vanderbilt University professors. Shen uses the textbook in the Law and Neuroscience course he teaches at the U.

“My hope is that in 20 years, neuroscience in law will make more sense to people, and we can begin to rely less on draconian forms of incarceration, like solitary confinement, and offer better treatment for people with brain disorders,” he says. “Understanding how to treat criminal brains would serve everyone better.”

—Meleah Maynard