Infant Transport Aided by Generous Grant

In this feature, Neonatal Intensive Care interviews clinicians and healthcare providers about the actual application of specific products and therapies. This interview is with Dr Barbara Warner, a professor of pediatrics and neonatologist at St. Louis Children's Hospital.

History of St. Louis Children's Hospital

At St. Louis Children's Hospital, life-changing medicine happens every day. With its long-standing mission to "do what's right for kids," St. Louis Children's Hospital (SLCH) offers children and families comprehensive services in every pediatric medical and surgical specialty.

The hospital's clinical and community outreach programs touch nearly 95,000 patients each year. In fact, St. Louis Children's Hospital has cared for patients from all 50 states and nearly 80 countries.

Founded in 1879 by eight pioneering women, the hospital opened in a small, rented house with 15 beds. Today, the hospital has grown to a 280-bed, nationally renowned pediatric leader with a commitment to serving the greater community. St. Louis Children's Hospital is an academic medical center, which means our medical staff are faculty members of the top-ranked Washington University Medical School. In addition to world-class patient care, these physicians participate in research and teaching and have received top national honors in their fields. The hospital is also a member of BJC HealthCare, one of the largest nonprofit health care organizations in the United States.

In early 2018, St. Louis Children's Hospital will open a new bed tower that will expand its newborn intensive care unit as part of a 10-year campus renewal project. As part of the expansion, the women and infants program, in partnership with Barnes-Jewish Hospital, will provide families with a higher level of care — a high-risk baby delivered at Barnes-Jewish Hospital can be safely transported to the Children's Hospital NICU in minutes and moms will remain close.

Neonatal Intensive Care: Does your hospital/NICU have any accolades you could share with us?
Dr Barbara Warner: The Newborn Intensive Care Unit (NICU) at St. Louis Children's Hospital recently reached its highest ever census of 100 babies. Our medical providers, nursing and ancillary staff take pride in caring for the sickest and most vulnerable babies in the region. The NICU at SLCH is the only one in the region to offer specialized Neonatal Neurology services and is nationally recognized as a leading provider of cooling therapy for babies with hypoxic-ischemic encephalopathy. The NICU is also a unique provider of Perinatal Behavioral Health for mothers and families of NICU patients, a service provided in a small minority of hospitals nationally.

NIC: How has the equipment purchased with the help of Brave Beginnings grant impacted your NICU/Hospital? Was the Brave Beginnings grant able to ease any financial burdens pertaining to the purchasing of equipment? Explain how.
BW: The Voyager Infant Transport system is used to transport neonates from the labor and delivery suits at the neighboring Barnes-Jewish Hospital (BJH) and from outlying hospitals. Our ability to support community hospitals from where we transport about 50% of our patients is supported by generous funding provided by entities such as the Brave Beginnings Grant. Given the rapid advances in the field of neonatal intensive care, providing state-of-the-art medical care to the most vulnerable of populations requires investment of large amounts of capital for equipment. The cost of purchasing such equipment is prohibitive at times and the NICU and SLCH has to rely on funding from foundations and donors to remain at the cutting edge of patient care.

NIC: What does your NICU hospital do to stay current with research and best neonate practices?
BW: St. Louis Children's Hospital's Newborn Intensive Care Unit ranks highly by all external measures. This is partly because our hospital has been the research partner and pediatric teaching

Dr. Warner and her colleagues work tirelessly, discovering new advancements to treat the littlest patients at St. Louis Children's Hospital.

If you would like to participate in this feature, as a company or healthcare provider, please contact Steve Goldstein at s.gold4@verizon.net.

hospital for Washington University School of Medicine for more than 100 years. Washington University is a leader in NIH funding precisely because it pushes the leading edge of medicine and care ever outward, and our NICU has been the setting for groundbreaking research in Newborn Medicine.

One third of the Human Genome Project was accomplished on our campus and this has also led to numerous research projects in the NICU. We were also the first NICU to deploy a robust, Bedmaster-based, real-time monitoring and data capture system in our NICU, complete with an analytics program that allows our physicians to spot trends leading to potentially catastrophic events far in advance. More than 250 hospitals around the world have adopted these technologies and are now following our progress. We also initiated a research project with Children's Hospital of Philadelphia, Boston Children's and Cincinnati Children's, among others, that reduced unnecessary alarms in the NICU by 30%.

Our NICU has been an incubator for good ideas! For example, the Cool Kids Study was accomplished, in part, on our campus. Our physicians have pioneered many treatments and cures, from the first use of injected insulin in a pediatric setting to identification of a maternal/child genetic link for leukemia in the first three months of life.

NICU nurse, LaToya Daughrity.

The campus at Washington University is ripe with opportunities for CEUs, many in newborn medicine. Clinicians come from around the world to take advantage of the brain trust at Washington University School of Medicine. We also have the Goldfarb School of Nursing on campus, making this a well-rounded medical campus. Our nurses are also excellent teachers and mentors, which is one of the reasons why the hospital continues to achieve Magnet re-designation.

Finally, our culture insists that we remain current. We are inclusive, and we partner with multiple children's hospitals in the sharing of best practices. This will be increasingly important as we add beds to our Women and Infants program, so that mothers with high-risk pregnancies can give birth on campus and their newborns can get some of the world's best medicine close by in our NICU. Increasingly, our Genomics Labs will play a role in driving the care that will improve outcomes for the newborns we treat.


F. Sessions Cole, MD, the Park J. White, MD, Professor and vice chair of the Department of Pediatrics at Washington University School of Medicine is recognized as a driving force behind the success of St. Louis Children's Hospital and its Newborn Intensive Care Unit (NICU).

NIC: Is there a NICU success story that stands out in your mind that you could tell us about?
BW: Yes, we have many success stories, but I will share the story of Tristan, who was born at 22 weeks, weighing only a pound and three ounces. He has had a remarkable journey and after eight months in our NICU, he recently went home. He has been so sick at many points along the way and he clearly has had a will to survive.

Like so many premature babies, just breathing was a huge challenge for Tristan. Even though we had made a lot of advances in terms of being able to improve lung development, it's still not like a full term set of lungs. These babies must be on ventilators and struggle for every breath.

By the time Tristan got to go home, he weighed nine pounds and was holding up his head.

Tristan had a lot of company while he was in the NICU. During one recent week, St. Louis Children's Hospital had the most babies our NICU has ever had at one time. About half of the 100 babies were born premature. Having many babies in the NICU is not necessarily a bad thing: the limit of viability, which is the age a preemie is most like to survive, has dropped by about a month in the past few decades. That means our NICU teams can care for even smaller and younger babies than ever before—but the outcome varies greatly for families.

The biggest issue parents have when they come into the NICU this early and this ill is number one, will my baby survive? And if my baby survives, what will their life look like in the long term? And those are very difficult things to predict. While there have been remarkable medical advances, there are still extraordinary challenges for premature babies and their families.

What happens in the home environment can make a huge difference. Those babies are at an important developmental part of their lives so that early intervention, having services set up for them, even if we're not sure if they will have problems. We know those babies that have appropriate stimulation at home, appropriate services at home, go on and overcome many, not all, but many challenges they would have faced from a neurological standpoint.