Saving the Tiniest Oklahomans

Infant mortality rates spurred OUHSC doctors and nurses into action with a program that brings education to health professionals in rural areas.

BY DEBRA KRITTENBRINK

photos by Terri Jennings

"They could hardly wait to tell me," says Linda Miller, instructor and senior coordinator of the Office of Perinatal Continuing Education (OPCE).

Miller, who is also a registered nurse, had paid a scheduled visit to a rural Oklahoma hospital, where she educates nurses and doctors to care for mothers and babies. "They were jumping up and down, they were so excited. They'd had a baby who was really sick; they provided resuscitation, and everything went like clockwork. Afterwards, they heard the father say, 'There were eight hands over my baby, and they were behaving as if they all came from the same head.' "

Therein lies what Dr. Warren M. Crosby, founder and program director of the OPCE, calls the "magic" of the program. "That's what we do. Help people learn how to work together in hospitals," he says.

Crosby founded the OPCE 20 years ago in an effort to reduce the infant mortality rate in rural Oklahoma. A respected educator and obstetrics and gynecology physician at the University of Oklahoma Health Sciences Center, he undertook his "volunteer" job as director of the OPCE because of the disparity in survival rates between an infant born in an urban hospital and one born in a rural hospital.

"Then infant mortality in urban areas was five or six per thousand; in some rural areas, it was as high as 17 to 25 per thousand," he explains. "Metro areas had all the [equipment and training] to take care of sick babies; it wasn't there for rural areas. Rural hospitals sent sick mothers to city hospitals, but if a healthy mom had a sick baby, often the baby was cared for by underprepared staff in poorly equipped nurseries. The situation was not because of ignorance or a lack of desire to do well, it was because small hospitals had so few sick babies each year, they couldn't afford the equipment and special training they needed."

A grant from the Robert Wood Johnson Foundation and assistance from the OUHSC gave Crosby an opportunity to change those numbers. With Dr. Roger Sheldon, a neonatologist and professor of pediatrics at the OUHSC, and registered nurses Judith Harris and Kathy Choate, Crosby began traveling the state to generate interest in perinatal care.

"More than half the women who delivered in rural Oklahoma 20 years ago had little or no prenatal care," he says. "People didn't know it was a good thing to have, to be able to find abnormalities that might be fixed. And services were less available to people without insurance."

Crosby and the Oklahoma State Department of Health were provided funds for training and recruiting a network of highly motivated nurse practitioners, many of whom moved to rural areas to share their knowledge of best practices. Next, they met with local advisory groups about prenatal care, often calling on the media to help them inform the public. These meetings led to further conversations with local hospital staff.

Although Crosby initially was concerned that staff would be hostile, he need not have worried. "I had no idea that for 15 years I'd taught obstetrics to everyone in the state who delivered babies. I'd call up the doctors, talk about old times, and doors would open."

Dialogue revealed the need for more perinatal education. "In most rural hospitals, the doctors and nurses care for *all* kinds of patients. There are also fewer babies born in rural hospitals, so the doctors and nurses obtain less experience taking care of mothers and babies," adds Miller. "The OPCE provides knowledge and from knowledge comes confidence. This knowledge and confidence enables them to do the right thing in situations that can sometimes be scary."

"More than half the women who delivered in rural Oklahoma 20 years ago had little or no prenatal care. People didn't know it was a good thing to have, to be able to find abnormalities that might be fixed."

Crosby first offered a series of ad hoc question-and-answer sessions, held for doctors and nurses statewide in their own hospitals. Participation was spotty, but the experience led him to the final solution. "We gotta do it in their hospital, on their time, by them," he resolved.

A perinatal continuing education program (PCEP) developed by the University of Virginia seemed to fit the bill. Initially implemented due to public interest in the death of President and Mrs. Kennedy's baby, it was a self-study program with a solid educational foundation and a demonstrated success rate. PCEP provided the springboard needed to provide up-to-date perinatal education to rural hospitals.

Today, the OPCE is funded by the Oklahoma State Legislature and supported by the University of Oklahoma departments of obstetrics and gynecology and pediatrics. Five self-directed study tracks, one authored by Crosby, allow the nurses, physicians and other health-care providers who take the courses to meld educational activities and work schedules. Two on-site coordinators serve as liaisons between the OPCE and their hospitals; Crosby, Sheldon and the OPCE staff work with regional physicians and nurse coordinators from Comanche County Memorial Hospital in Lawton, Norman Regional Hospital and St. Mary's Regional Medical Center in Enid. They visit rural hospitals to teach techniques such as resuscitation and fetal monitoring.

Thanks to legislative funding, Oklahoma is the only state in the country that offers continuing education to all its hospitals that deliver babies. Doctors, nurses and other health-care providers receive continuing education credits, and the only expense for the six-month course is the cost of the books.

OPCE coordinator and registered nurse Barbara O'Brien believes that the program is about relationships. *continued*

"Oklahoma is the only state in which the program is offered to all hospitals with perinatal services. Their participation is voluntary. The hospitals participate nevertheless because they see the OPCE as providing valuable and useful educational services and information. Coming from the OUHSC, with no regulatory authority, we're welcomed as purely educators. We know that care practices have changed—more babies are getting the right care at the right time. We have standardized care and standardized expectations."

To keep hospitals up-to-speed between visits, the PCEP sends out newsletter updates regarding clinical practice issues. "For example, there was recently a protocol change for mothers and babies with Group B Strep," O'Brien recalls. "Many women carry it and are not affected, but the disease can kill a newborn. It was monumental when the new guidelines were issued, and we got the word out to everyone ASAP."

Dr. Richard Carlson, a Norman pediatrician, has worked with the OPCE for over 10 years, covering the south central area of the state. He admires the nurses in the smaller hospitals who do "everything—labor, delivery, surgery—everything. They don't have a lot of intensive training in the area of sick newborns, but they are the ones who have to be set up and ready when the baby gets there."

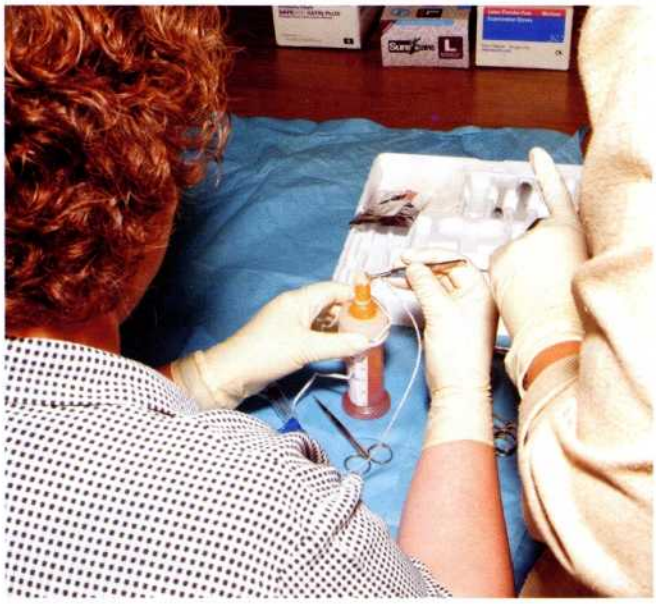
He specifically remembers a class he taught on how to intubate a baby. "I was here in Norman and got a call at 2 a.m.; I was half an hour away from the hospital. When I got there, the nurse had intubated the baby and saved its life. The child wouldn't be alive today if she hadn't gone through the program."

One facet of PCEP that Carlson says is particularly important is the hospital self-assessment, which requires the nurses to survey their equipment to be sure they have it at their hospital; they know where it is and how to use it. "I used to see hospitals that had old, outdated equipment, or lack of even the basic equipment for suctioning, keeping babies warm and resuscitation. Or maybe they didn't have the right size equipment for all infants. Now, we've helped them get the right equipment and know how to use it," he says.

TOP: Dr. Roger Sheldon, center, demonstrates the skill of umbilical artery catheterization for hospital coordinators attending a PCEP workshop at the OUHSC in Oklahoma City: from left, Renae Packer, Judy Drennen and Larcile White. BOTTOM: Following Dr. Sheldon's demonstration, hospital coordinators Gaye Rotramel, seated left, and Robin Graham practice umbilical artery catheterization skills with assistance from OPCE coordinators Linda Miller, standing left, and Barbara O'Brien.

Miller, too, has seen statewide improvement in maternal and fetal care. "At first, some of the participants didn't know how to use some of the tools; we don't see those things anymore. Each time a hospital participates, changes in practice occur. Then new employees are taught these new practices. Since hospitals

Dr. Warren Crosby, standing, OPCE founder and program director, discusses a fetal monitor tracing with a group of hospital coordinators who have come to OUHSC to refresh the perinatal skills that will elevate their ability to care for newborns and mothers in their home hospitals.



Hospital coordinator Renea Packer inserts an umbilical artery catheter into a model that includes a real umbilical cord.

participate in the program every three to four years, even those that have never taken PCEP will begin with higher test scores—they begin with a higher level of knowledge."

Sheldon concurs. "If you study the same material with doctors, nurses, respiratory therapists and EMTs, you have a much better understanding of what is expected on all sides. The nurses are more up-to-date and knowledgeable, and are taken seriously when they make suggestions. They're the ones who are on the front lines, and we have to make sure they have the authority to check sugars, start oxygen and identify the baby that needs special treatment."

Familiarity also helps. Two nurses from each of the smaller hospitals tour their regional hospital centers, where they observe firsthand that babies have better outcomes if problem pregnancies or sick babies are transferred to larger facilities. "If mom is sick or you expect a sick baby, transfer the mother before the birth," says O'Brien. "The uterus is the best transport incubator."

Sheldon insists that the time it takes to get a sick baby to a hospital equipped with a neonatal intensive care unit makes uniform on-site care critical. Prior to 1980, there was no medical helicopter transport system. Patients were transported by ambulance, where travel time could be more than three hours. Even today, with weather delays and only limited flight teams on call, there are still delays in getting babies to urban hospitals. Therefore, the delivering hospital's care and stabilization of the baby remains important.

"Without our efforts, some babies would never have made it. There's no question."

"Over the years I've stopped seeing babies cold, with low blood pressure, improperly screened and treated before the transport team got there," Sheldon says. "Now babies have good vital signs when the transport team arrives on the scene. They see an improvement in what has and hasn't been done for the babies. The quality of care is ever so much better than in the '80s. Without our efforts, some babies would never have made it. There's no question."

For Crosby, it all comes back to the magic. "Everyone has the same knowledge base and is striving to use it to the best of their ability. Everyone's on the same page. This is the culture for perinatal care in Oklahoma."

Norman-based Debra Krittenbrink, '78 bs ed, has her own public relations firm and is a freelance writer.