The Ohio State University Greif Neonatal Survival Program

From the program’s inception in 2013, to now, June 2015, as we celebrate the one-year anniversary of the opening of the Newborn Care Unit at St. Therese Hospital in Hinche, Haiti, we have remained focused on our goals—teaching local health care workers how to save the lives of newborns and continuing the dissemination of that training across Haiti and beyond.

The past year has been one of great accomplishment. Babies, who previously may have been born too prematurely or too weak to survive, now have access to the type of care that has parents celebrating a birth instead of mourning a loss. But our excitement is tempered by the knowledge that much of the developing world still can’t offer that lifesaving expertise.

This year we are working hard to change that. In addition to the 6-week intensive introduction to neonatal nursing training course that we developed and piloted in 2014, we have added a 6-month government-approved neonatal nursing expertise course and are training nurses from all over Haiti. Collaborating with Partners in Health, Clinical Nurse Educators, Monica Terez and Emily Shindeldecker, are teaching a cohort of twenty-seven nurses who upon completion of the course will spread this lifesaving training to all corners of the country.

It is exciting, challenging, and it is working and being acknowledged. It was noted in the Harvard Public Health Review, “There are multiple examples of successful partnership at the U.S. institution and local government level. At the university level, the Ohio State University (OSU)…partnered with rural teaching hospitals in Haiti to strengthen training programs, quality of care, and research for Haitian nurses and physicians in maternal child health… OSU has supported the revamping of a neonatology space, delivered extensive classroom and bedside training to Haitian nurses, and contributed to a significant improvement in the quality of neonatal care.”

We have taken the OSU Greif Neonatal Survival Program to Kenya and Ethiopia and have concrete expansion plans in place for Malawi, Tanzania, and Rwanda. The groundwork has been laid and teaching has begun. We are grateful to all the people who through their labor, in-kind gifts, knowledge-sharing and donations make this work possible. We are especially appreciative of the Greif Charitable Trust for their continued commitment to this initiative. Not only do they believe that the world can be a better place for mothers and babies, they insist on it.

Diane Gorgas, MD
Executive Director

Daniel Sedmak, MD
Director Emeritus

Mission

Through the coordinated work of a multidisciplinary team, we will improve the lives of mothers and infants in low-income countries. This will be accomplished through the creation of self-sustaining and scalable education programs for in-country health care workers.

Haiti Year 2

On May 30, 2015, we celebrated the first year of operation of the Specialized Newborn Care Unit (SNCU) at L’Hôpital Sainte-Thérèse de Hinche. There are now nine full-time OSU-trained nurses staffing the unit. News of the work and successes in the newborn care unit has spread throughout the region as evidenced by the story of a pregnant woman at a hospital in Port-Au-Prince. She was told that her baby’s chance of survival was slim to none and there was nothing they could do at the largest hospital in this capital city of 3+ million. Having heard of a place in Hinche “that saved babies when no one else could,” she made the three-hour trip to the St. Therese SNCU, where she delivered her baby and, although premature, he survived.

The goal of this program has always been to build capacity through training and mentorship. All involved know that a trained workforce pays dividends far into the future. We want to ensure that even after the OSU Greif in-country mentorship and collaboration ends, the care will continue. Seeing the difference that this new level of care makes in just this one small unit for newborns is inspiring. The work of the OSU Greif Newborn Survival Program has impacted over 300 families directly. And, as the father of one of the SNCU patients said to the nurses, when you save the baby you don’t save one life—you save a whole family. Now that is truly a But for Ohio State... moment.

Expanded Nurse Training

A major initiative this year was the expansion of the 6-week neonatal nursing course to a six-month certification program. In addition to the Helping Babies Breathe® and Neonatal Resuscitation Program®, OSU and PIH developed and are co-leading a six-month neonatal nursing certification course approved by the Haitian Ministry of Health. The course consists of didactic teaching, side-by-side clinical mentoring, and instruction on how to serve as a mentor, which the nurses will take back to their home institutions. After the selection process was completed, twenty-seven participants representing seven cities in Haiti began the program in January and will graduate in August. Not only does the course expand the depth of knowledge on newborn care but it spreads that knowledge far and wide, (see map) thus truly increasing healthcare capacity in the country.

Training and Mentoring

Neonatology Physician Training

Although training a sustainable workforce in nursing care has been our focus and remains a logical starting point for integrating our educational efforts within a hospital, we appreciate the importance of physician training. This last year has marked substantial progress in expanding this area of training. Through collaboration with Nationwide Children’s Hospital neonatologists, Leif Nelin, MD, chief of Neonatology, J. Wells Logan, MD, and Amy Brown, MD, we have developed a physician training curriculum and are instituting a distance learning program, including telemedicine rounds within the NICU at Hospital University Mirbalais in Haiti. This work is taking place in collaboration with Partners in Health and is a critical component of improving neonatal care in Haiti.

Approximately one of every 10 babies born at Saint Therese is admitted to the SNCU
Specialized Newborn Care Unit
One-Year Anniversary

May 30, 2015 was a special day for the OSU Greif Neonatal Survival Program. It was the day that doctors, nurses, administrators, and parents of former patients, celebrated the one-year anniversary of the Specialized Newborn Care Unit in L'Hôpital Sainte-Thérèse de Hinche and its’ success in educating and equipping neonatal nurses to save lives. The unit, made possible through the Greif Charitable Trust gift, offers the type of high-quality care that is scarce in so many developing countries and certainly in Haiti.

A little over a year ago, the Specialized Newborn Care Unit had yet to admit its first baby, fast forward one year and treatment has been provided to more than 250 patients with that number increasing every day. OSU-trained nurses attended over 750 deliveries this past year bringing their expertise to the delivery room and utilizing their training beyond the SNCU. In what now feels like such a short period of time, infants who prior to the opening of the SNCU would likely have died, are now surviving and thriving.

During the celebration of the unit, Dr. Prince, Chief Medical Officer of St. Therese, gratefully acknowledged the impact that the unit has had on health outcomes. The neonatal nurse team is keenly aware of the difference that the training and education have made both in the treatment they provide and in the way they view their roles as professionals. Apart from the clinical improvements, the impact on families cannot be overstated. Time and time again they thank the nurses and OSU Greif for making this level of care available. They know all too well how fragile the line is between access to high-quality medical care and death. As one mother stated, “I delivered three babies previous to this one. Each baby died because they were born premature and I was told nothing could be done to save them. Now look! This was my fourth pregnancy and I stand before you today holding my baby in my arms because of your amazing work!”

In one year’s time the OSU Greif Neonatal Survival Program has saved hundreds of lives (see page 6) and has proven that side-by-side clinical mentoring combined with classroom learning delivered over months, not days, is a powerful and effective way of increasing newborn outcomes and yet it is only the beginning. Increasing neonatal nursing capacity, enlarging the newborn care unit and expanding training throughout the healthcare continuum will all help meet the needs of these tiniest patients.

The First Minute of Life

The baby is born silent and blue. The infant’s life is in the hands of the nurse present at the birth. She/he now has one minute to make crucial decisions that will determine if this baby lives or dies. If the nurse caring for this infant has received training through the OSU Greif Neonatal Survival Program, the newborn’s likelihood of survival increases dramatically. After the one-minute mark, the newborn’s condition can rapidly deteriorate, risking developmental complications or death.

The decisions made within that one-minute period are the result of months of educating, training, and mentoring so that the provider can respond accurately, confidently, and systematically.

Lives are being saved every day due to OSU’s commitment to excellence in education, both at home and around the world. We feel privileged to be a part of that.

Decisions that need to be made within the first minute of life include:

- Assessment of the respiratory status
- Assessment of the cardiovascular status
- Responsiveness to tactile stimulation
- Determination of the need for oral suctioning
- Initiation of bag and mask ventilation in the absence of spontaneous respirations
This year, the OSU Greif Neonatal Survival Program expanded to Kenya. It is reported that only 15-20 nurses receive specialty training in newborn care annually in the entire country of Kenya with a population of 45 million. Trends in maternal preferences are showing increased likelihood of in-hospital delivery, and also increased incidence of transport of an ill neonate to the hospital even if the infant is delivered at home. This represents an excellent opportunity to impact neonatal mortality and morbidity, provided skilled neonatal nursing care is available in the hospital setting.

We have identified two areas in which to begin offering the neonatal training program. Specifically, in Bomet and Narok counties, the lack of knowledge and skills in relation to newborn care and resuscitation has resulted in quality indicator rankings far below the national average. Narok County Hospital and Longisia County Hospital each have an estimated delivery rate of 3,000-4,500 infants per year. Support from the Director of Medical Services and the Chief Officers of Public Health of both Bomet and Narok counties has been pledged to the project and they are enthusiastic supporters of initiating the training program for their nurses and doctors.

The program, created by The Office of Global Health at The Ohio State University, is designed to build in-country capacity at sites which already offer some level of newborn care. Key components of the course include standardized training curricula as developed by Helping Babies Breathe® and the Neonatal Resuscitation Program®, but it is far more expansive. The course itself is a blended didactic and small-group interactive discussion course along with experiential portions in the clinical setting, including active preceptorships. The curriculum for our neonatal nurse training program proposal was submitted to the National Nursing Council of Kenya in November 2014 and received approval to begin at the earliest opportunity. This year we offered Helping Babies Breathe® training to over 65 nurses, doctors and clinical officers in Kishon and Baraka Clinics. We envision this being a first step towards expanding the program into other geographic areas of need within Kenya.

In-country partnerships with established organizations are a hallmark of the OSU Greif program strategy and in Kenya we are partnering with Free the Children. Free the Children is well-entrenched and respected both within the local community of Narok and Bomet counties and across Kenya. They have been outstanding partners, making connections to government and district level leaders, providing accommodation and transportation to the OSU team and serving as cultural and technical advisors. The speed with which we have been able to move in Kenya is directly attributable to the relationship with Free the Children and affirms our decision to partner with this outstanding in-country organization.
Ethiopia

“Newborns constitute 43 percent of under-five deaths in Ethiopia, close to the world average of 44 percent and represent a larger proportion of under-five deaths now than they did in 1990. Neonatal survival statistics show that Ethiopia continues to struggle in this area. Thus, despite progress in child survival, the single most important remaining cause of death among children less than five years of age is newborn deaths—deaths within the first 28 days of life. Importantly, 40 percent of those maternal and newborn deaths happen on the day of birth. Armed with that knowledge the OSU Greif Newborn Survival Program focuses much of its clinical mentoring and didactic teaching around interventions in the first 24 hours of life. Study after study affirms that with training and basic resuscitation equipment, a majority of these newborn deaths can be averted and that these babies can grow up to be neurologically intact, contributing members of society.

Using the model developed, tested, and fine-tuned in Haiti, the OSU Greif initiative has already begun training nurses and residents on islet use, pulse oximetry and neonatal resuscitation. Training will take place in Addis Ababa, Gondar University Hospital, and Hawassa Hospital. Initial training done over a short period allows for relationship-building and provides an assessment opportunity for both the OSU team and the hospital leadership. Working in alignment with the Ethiopian Ministry of Health and the OSU One Health multidisciplinary initiative, we can offer the most effective and efficient path for more extensive training programs.

The neonatal intensive care unit at Tikur Anbessa is the largest in the country with 45-50 beds. On a previous visit, the team noted that there were only two nurses on duty to care for up to 50 babies! Recognizing that equipment to provide continuous pulse oximetry monitoring for each infant would be invaluable in this setting, OSU reached out to the Masimo Corporation who generously donated monitors and sensors. On the next trip the team took monitors and prepared a training module around the use of the equipment. Eighty health care professionals were trained at three sites. Over 80 nurses, physicians, residents, and midwives participated in the Helping Babies Breathe® program taught by HBB-certified instructors Diane Gorgas, MD, and Monica Terez, RN, C, BSN, and over 75 nurses and residents were trained on using islettes and treating hypothermia.

The Ministry of Health has committed to hiring a cadre of 200 nurses, who are currently being brought into the system. The OSU Greif Neonatal Survival Program will offer our six-week neonatal nurse training program in Addis Ababa once the nurses are in place. Training is anticipated to take place in winter 2016.

The Ohio State University
Greif Neonatal Survival Program
2015 Annual Report

Next Steps
As we set goals for 2015-2016, we have plans in place for exploratory and educational trips to Rwanda, Malawi, and Tanzania. Planning for India and Southeast Asia educational programs is underway. We are truly living our dream, having created a vertical education and training ladder for all levels of care in neonatal medicine, from nurses, to physicians, to community healthcare workers, to families. The fruits of this scalable, portable, and educationally exceptional training program are impacting the lives of babies worldwide, and making a tangible difference in the care of sick newborns.

Our Partners
An incredible amount has been accomplished in the first two years of the OSU Greif Neonatal Survival program, but we have our eyes set firmly on the future. This initiative would not have been possible without the support of our partners; Greif Charitable Trust, Masimo Corporation, Ganim Medical Inc., Free the Children, the OSU One Health Initiative, and The Ohio State University. These organizations have generously contributed support for our work through donations of time, personnel, equipment, resources, or gifts-in-kind. The continued collaboration with Partners in Health, both in Haiti and now segueing into East Africa has produced outstanding educational and training results for both organizations.

Partnership Opportunities
To support the life-saving and capacity building work of the OSU Greif Neonatal Survival Program please contact Pamela Potter in the Office of Global Health at 614-292-3684 or Pamela.Potter@osumc.edu.

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