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Florida Perinatal Quality Collaborative

Partnering to Improve Health Care Quality for Mothers and Babies

Welcome from the Principal Investigator of the Florida Perinatal Quality Collaborative!

John S. Curran, MD

Thank you to all those perinatal practitioners and proponents who attended our Inaugural Florida Perinatal Quality Collaborative (FPQC) Conference, "Quality Improvement is a Team Sport." You helped make the Conference a tremendous success with approximately 150 attendees from all over the state of Florida. Attendees not only had the chance to learn the latest information in perinatal health from our expert speakers, but they also shared truly original ideas for the FPQC moving forward in the infant and maternal break-out sessions. I also would like to thank and recognize William Sappenfield, MD, MPH – Professor and Chair, Department of Community and Family Health and Director, The Lawton and Rhea Chiles Center for Healthy Mothers and Babies at USF College of Public Health – as well as my staff and our supporters, the Florida Chapter of the March of Dimes and the Florida Hospital Association, for their terrific efforts in pulling the Conference together. Finally, I want to acknowledge the time spent and the efforts made by our expert speakers who came from all over the country as well as some of the participants from our Big 5 Pilot Project hospitals. We couldn't have developed such a superb platform for communicating certain groundbreaking, vital practices taking place throughout the nation in perinatal care without the participation of all involved.

As you will see in more detail within this newsletter, the FPQC Inaugural Conference highlighted timely, important information including the newest advances in perinatal procedures and protocols and the latest research on fetal brain development during the last few weeks of pregnancy. Dr. Eric Knox presented on how a culture of safety with interdisciplinary teamwork and standardized protocols will improve overall patient safety outcomes. Dr. Stanley N. Graven presented on a variety of significant fetal brain developments during the last six weeks of gestation to full term pregnancy (39 - 40 weeks) and the potential complications for an infant if delivered earlier without having been medically necessary. Also inside are the most recent update on our ongoing neonatal catheter associated blood stream infections (NCABSI) project and an overview of some of the innovative recommendations from attendees of our Conference's infant and maternal break-out sessions. Finally, this issue includes a physician spotlight on one of our most prestigious and dedicated FPQC obstetrics champions, Dr. Robert W. Yelverton, and a save-the-date announcement for our upcoming governance and neonatal-focused meetings in late September of 2012.

Inside This Issue:

If you have any questions or wish to participate in our projects, please contact us by email at fpqc@health.usf.edu, by phone at 813-974-8888 or email me at jcurran@health.usf.edu. Enjoy our newsletter!

Sincerely,

John S. Curran, MD

Overview: "The Power of Quality/Safety Collaboratives" Presentation by Eric Knox, MD

We all hear about the "culture of safety". What this means in the real world of labor and delivery is that each person on the unit is responsible for any mother or baby. It is acting as an interdisciplinary team to protect every patient even if the patient is not "yours", or the responsibility is not "yours." Each OB, CNM, RN, tech, unit clerk, etc. can bring any problem with any patient forward to the care team creating a culture of safety.

Part of the culture of safety is for everyone to use the same language/terminology when speaking about an issue. For example: Interdisciplinary, electronic fetal monitoring (EFM) education allows team members to communicate effectively, especially over the phone. If everyone agrees to use the same terms when describing an EFM tracing, then this will enable all the team to "see" the same visual image when speaking about a patient - thus improving communication and the quality of care.

Standardized operations improve patient safety. Studies show that more variation in clinical care for any particular problem results in more errors, and possibly more harm to patients. For example, standardized oxytocin administration protocols result in fewer incidences of uterine hyperstimulation and a lower cesarean section rate. Avoiding iatrogenic tachysystole keeps the fetus safer during labor.

For women with epidurals, passive fetal descent in the second stage of labor will not lengthen the time to delivery. Urging a patient to push who has an epidural should be delayed until the compulsion to push occurs. Resting and stopping pushing to allow the fetus to recover, and pushing with an open glottis will improve fetal oxygenation and improve fetal outcomes.

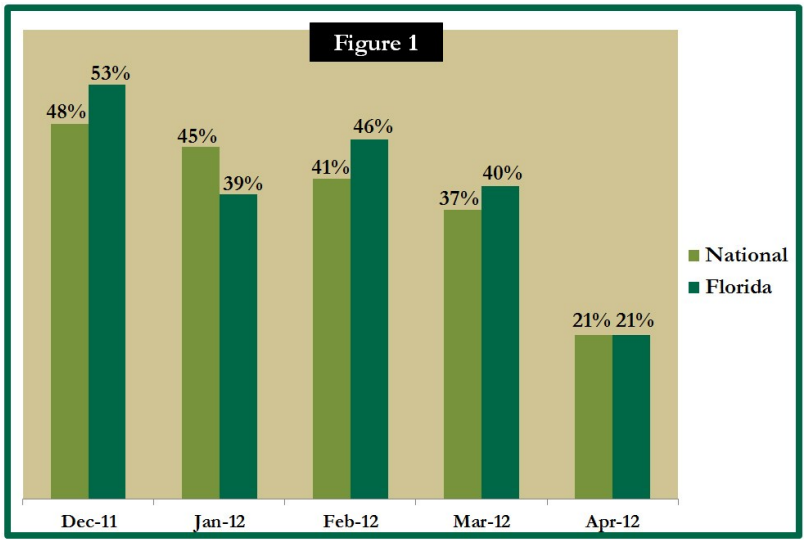
Summary: Encouraging a culture of safety and applying standardized procedures and protocols represents the best opportunities to make a significant difference in the overall quality of care and outcomes for mothers and babies.

Overview written by Karen Harris, MD, MPH, FACOG

Neonatal Catheter Associated Blood Stream Infections (NCABSI) Update

As of April 15th, the Neonatal Catheter Associated Blood Stream Infections (NCABSI) collaborative – comprised

of NICU centers in Florida, New Jersey, Massachusetts, North Carolina, Colorado, South Carolina, Wisconsin and Hawaii – has collected data on over 7,300 lines with a total of nearly 56,000 line days. Florida has contributed data on over 1,800 lines and over 14,000 line days (both approximately 25% of the overall collaborative total). Our compliance with the insertion bundle is 90% for all lines and 98% for lines placed in the NICU. Compliance with the maintenance bundle is 95%.



One of the key indicators demonstrating a practice change in participating Florida centers has been a drop by nearly half in the percentage of babies that have lines in place past the time when they have reached oral intake of >120 ml/kg/day **(Fig. 1)**. This rapid progress with user feedback is considered an early achievement of a desirable outcome for this researching collaborative. We are moving to decreased duration of indwelling lines with an aggressive initiative for removal when the infant is able to tolerate full feedings which should result in decreased NCABSI rates per 1000 line days. To learn more, please contact Dr. Douglas E. Hardy, at dehardy@att.net.

Recommendations from Conference Break-Out Sessions: Moving Forward

Two of the most anticipated segments of our Inaugural Conference were the infant and maternal break-out sessions. Attendees selected the session most relevant to their specialties to engage in discussions with FPQC leaders, our expert speakers and each other about how the Conference was specifically helping each of them, what some of the biggest challenges have been in implementing quality improvement initiatives like the <39 weeks program and what the FPQC should work towards addressing in the future for improving the health of Florida's mothers and babies.

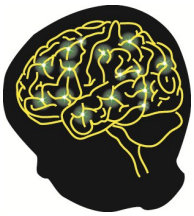
Suggestions from the infant break-out session stressed the need for more data-based systems, more standardized protocols and more interdisciplinary teamwork, such as neonatologists attending OB/GYN meetings. Attendees believed such changes would create quantitative evidence to convince practitioners resistant to changes, channels for clear communication and – ultimately – quality improvement processes. Innovative, long-term recommendations from the attendees were also proposed for future FPQC projects such as focusing on increasing natural breastfeeding, developing approved levels for oxygen saturation limits, implementing standardized protocols for a temperature range in operating rooms for operative deliveries and addressing the issue of underreporting antenatal steroid use. Attendees agreed that immediate next steps should be a neonatal-focused meeting in the Fall of 2012 and consideration of more representation from other specialists/ancillary staff, such as respiratory therapists, anesthesiologists, lactation consultants, parents/families and others depending on the specific project.

The maternal break-out session began with attendees discussing some of the challenges they have faced in implementing the <39 weeks project. Despite the development of five perinatal care core measures recommended by JCAHO and the protocols set by ACOG, certain upper level hospital administrators and physicians continue to be resistant to changes and the risks related to medical liability. To tackle these attitudinal challenges, the attendees stressed the need for convincing evidence-based reports, standardized benchmarks and non-judgmental, transparent processes. Immediate recommendations to develop such systems included attracting passionate physician/administrator/nurse champions, adding mothers and families to the process and providing QI mentors. Some longer-term, thought-provoking ideas included initiating interdisciplinary training mandated and paid for by the hospitals, pressuring hospitals to adopt standards by publishing their information to the public, fostering openness rather than competitiveness among hospitals for best practices and including lawyers on quality review teams to reduce liabilities concerns.

The key emphasis in both break-out sessions was collaboration and the need to build bridges across disciplines. Attendees in both sessions believed that the inclusion of any practitioner working with pregnant women and their newborns – from obstetricians to nurses, neonatologists to pediatricians, anesthesiologists to doulas and more – would improve everyone's knowledge, communication and teamwork for better patient safety outcomes.

Overview: "The Critical Importance of the Last Weeks of Gestation to Early Brain Development" by Stanley N. Graven, MD

Parents who are considering early inductions or C-sections before full term deliveries (39 - 40 weeks) should learn about the essential fetal brain developments that take place during the last few weeks of pregnancy and should avoid such deliveries for any reason other than medically indicated for the health and welfare of the mother or infant when delay of delivery may not be avoidable. Despite anecdotal stories from parents who claim their infants born 6 to 8 weeks early graduated from high school and college without difficulties, such results are not predictable and must be considered exceptional. Developmental science does know, however, that the last 6 weeks of gestation are very important for fetal brain growth and maturation. The growth and maturation of the fetal brain prior to full term requires neurochemical and neuroendocrine factors from the fetus, placenta and the mother. When the fetus is born prematurely (<39 weeks) and separated from the mother and placenta, brain growth decelerates significantly.



The size of the brain and amount of white matter (brain cell connections) in the preterm infant at 42 weeks of corrected gestational age will always be smaller than that of a full term infant at 42 weeks. The difference in size at 42 weeks is directly related to the degree of prematurity. For instance, an infant born at 35 weeks has a brain that weighs only two-thirds of what it would weigh if the infant were born at 39 to 40 weeks. The preterm infant's brain remains smaller than that of the full term infant for its life time. There is no catch-up growth.

Because a preterm infant – including a late preterm infant – has a smaller brain for life, the prefrontal cortex of the brain also remains smaller than that of an infant born at full term. Growing up with this smaller prefrontal cortex may be associated with individual challenges in planning complex cognitive behavior, personality expression, decision making and moderating social behavior (such as suppressing urges that could lead to socially unacceptable consequences).

The last 6 weeks of gestation are also important because this is the time in gestation when the brain's lateralization of its hemispheres and developing the connections between them (the corpus callosum) occurs. Decreased and/or delayed lateralization of the hemispheres may affect language comprehension, eye-motor coordination, object recognition, reasoning, memory and other vital brain functions.

Another complication in fetal brain development caused by preterm and late preterm births is stunted visual development in the melanopsin system. The melanopsin system was designed to develop in the dark (in utero). With an underdeveloped melanopsin system, the infant may have difficulties with pupillary constriction, integration of photic and non-photic stimuli, regulation of eye movement, gaze control, tracking of objects, depth perception, sleep regulation and additional visual issues.

Infants born at 35 - 38 weeks are often sent home soon after birth since they may weigh 4 - 6 lbs. and appear quite mature with good suck while breast or bottle feeding. Parents need to be instructed on the need for low light levels, no direct light in the eyes and avoiding exposure to intense noise. These babies benefit from touch and close contact with mother and father (voice and smell); but, vision and hearing need protection until clearly past 40 weeks from gestation. It is essential to provide for extended periods of sleep, especially REM sleep.

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Physician Spotlight

Robert W. Yelverton, MD

<u>One of the FPQC's Leading Obstetrics Champions and a Key Member of Our Leadership Team:</u>

A truly experienced authority in the latest innovations and quality improvements in perinatal care!

Dr. Yelverton, a native Mississippian, graduated from the University of Mississippi, School of Medicine, in 1967 and completed his Internship and Residency at that facility. In 1971, he relocated to Tampa, Florida serving two years as the Chief of Department Obstetrics and Gynecology at the United States Air Force Regional Hospital, MacDill Air Force Base.

Dr. Yelverton began private practice of obstetrics and gynecology in 1973 and became Charter President, CEO in 1998. He is now recently retired as Chief Medical Officer of Women's Care Florida, LLC, a group comprised of over 130 obstetrics/gynecology physicians in West Central Florida. Dr. Yelverton also is Clinical Associate Professor of Obstetrics and Gynecology at the University of South Florida's Morsani College of Medicine.

Dr. Yelverton served on the Medical Staff at St. Joseph's and St. Joseph's Women's Hospitals for thirty-three years; and in 2005, he was awarded St. Joseph's Hospital's "Distinguished Physician of the Year Award". During his tenure on the Medical Staff at St. Joseph's Women's Hospital, he served as Chairman of the Quality Committee, Chief of Department Obstetrics & Gynecology, President of the Medical Staff and a member of the Board of Directors at St. Joseph's Hospital. He currently serves on the St. Joseph's Hospital Foundation Board.

Locally, Dr. Yelverton has also served as President of the Tampa OB/GYN Society, Florida OB/GYN Society and Hillsborough County Medical Association. Currently he serves as the Chairman of the Medical Advisory Committee for the Florida Birth-Related Neurological Injury Association Compensation Association (NICA) Board of Directors and as a committee member of the Florida Pregnancy Associated Maternal Mortality Review Committee. He is a member of the Hillsborough County Healthy Start Board of Directors and chairs their Fetal Infant Mortality Review Committee (FIMR).

Nationally, Dr. Yelverton has served on the faculty of many American College of Obstetrics and Gynecology (ACOG) sponsored seminars on quality management, medical staff leadership and practice management. He has also served on the ACOG Task Force and Committee on Quality Assurance, A Voluntary Review of Quality Care Team Leader and the Committee on Practice Standards. Later, he chaired the ACOG Committee on Primary Care and served as the Vice Chairman of the ACOG Task Force on Changing Practice in the 21st Century. Dr. Yelverton recently served as Chairman of the ACOG Ambulatory Care Committee. Other ACOG responsibilities currently include serving as Treasurer and Legislative Chairman of the Florida Section. He will take over the distinguished position of Chairman, District XII (Florida) of ACOG in 2013.

Some of Dr. Yelverton's prestigious, organizational affiliations are displayed below:

THE UNIVERSITY OF MISSISSIPPI MEDICAL CENTER

Women's Care Florida

St. Joseph's Hospital BayCare Health System

St. Joseph's Women's Hospital BayCare Health System

NICA SUPPORTIVE SERVICES FOR FAMILIES & PHYSICIANS

HEALTHY START COALITION Hillsborough County

ACOG THE AMERICAN CONGRESS OF OBSTETRICIANS AND GYNECOLOGISTS

Save the Date: FPQC Governance and Neonatal-Focused Meetings in September 2012

Please save the dates for the FPQC's two, one-day meetings in Tampa during late September 2012. **On Thursday, September 27th:** The FPQC will hold its organizational meeting relative to structural governance, participation of members and a clearer definition of each subcommittee's responsibilities. **On Friday, September 28th:** The FPQC will bring together Florida neonatologists who are interested in our organization, our current initiative and our plans for next steps to improve Florida's infant health outcomes.

The first meeting on the 27th should be attended by any perinatal practitioner or proponent who is interested in serving

on our maternal health or infant health subcommittees. These attendees will help develop bylaws, operating procedures and an agenda for the coming years. The maternal subcommittee will be responsible for the continuation and expansion of the non-medically indicated deliveries <39 weeks project, developing mechanisms to monitor maternal health statewide and exploring and pinpointing the most crucial, future quality improvement initiatives. The infant subcommittee will coordinate the development of a statewide VON report for use in monitoring neonatal quality care, creating other mechanisms for monitoring infant health care quality and exploring future quality improvement initiatives.

The second meeting on the 28th will be entirely neonatal-focused. Attendees will receive the latest updates on our current initiative to decrease neonatal catheter associated blood stream infections (NCASBI). In addition, the attendees will address some of the most pressing Florida neonatal issues first identified in September, 2011 by 19 Florida hospitals with NICUs participating in the Vermont Oxford Network. New issues the FPQC would like to investigate and eventually undertake as data-driven, quality improvement projects consist of reducing length of stay, reducing severe retinopathy of prematurity, increasing exclusive breast milk feeding and reducing chronic lung disease. Attendees will also be encouraged to make other innovative recommendations for future initiatives that would improve neonates' health.

Both meetings will be held at USF Health's new, state-of-the-art medical simulation center – the Center for Advanced Medical Learning and Simulation (CAMLS) – where perinatal practitioners can learn to work as teams in applying the latest procedures and protocols to improve patient safety outcomes. During both meetings, the Perinatal Simulation Director and her staff will provide tours of the center and demonstrate the benefits of the site for accredited N.R.P. training and other special trainings by contracts with hospitals.

If you are interested in one or both of our meetings, please mark your calendars now! And, more information will be available soon. To learn more about CAMLS, please visit: www.camls-us.org/.

Overview: "The Critical Importance of the Last Weeks of Gestation to Early Brain Development" by Stanley N. Graven, MD

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Many late preterm births are preventable and currently represent over 65% of all preterm births. Unless delivery be-

fore full term is medically indicated for the health and welfare of the mother or infant, the parents should wait until the infant is ready on its own for birth. Since there is no brain catch-up growth once an infant is born, that individual may face unnecessary challenges in life if scheduled (for reasons such as convenience) to be born before the brain has fully developed. Though the last few weeks of pregnancy may be difficult and uncomfortable for a healthy woman, the benefits for the infant outweigh any inconvenience. Every infant should have a great chance at a great life and published data strongly support delivery at 39 weeks or more of gestation when medically feasible.

Florida Perinatal Quality Collaborative at
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To apply to become a member of the FPQC directly online, please visit us at www.usf.edu/ua/perinatal.

The mission of the Florida Perinatal Quality Collaborative (FPQC) at The Chiles Center is to improve Florida's maternal and infant health outcomes through assuring quality perinatal care for all of Florida's women and infants. We seek to collaborate with all Florida perinatal health care stakeholders using data-driven, value-added quality improvement processes in projects aimed at enhancing maternal and infant health.

Goals

- Engage perinatal health care stakeholders in the design, implementation and evaluation of a data-driven process for value-added, cost-effective perinatal health quality improvement efforts.
- Build and sustain consensus, awareness and support across the state regarding the value and benefits of participation in the FPQC.

Supported in part by:

march of dimes florida chapter

Florida Hospital Association
Mission to Care. Vision to Lead.

Promoting Better Outcomes for our Mothers and Babies
Through Improved Health, Advanced Care and At Lower Costs!

To learn more about the FPQC, please visit us on the web at http://health.usf.edu/publichealth/chilescenter/fpqc or on Facebook at https://www.facebook.com/FPQCatUSF.

The Lawton and Rhea Chiles Center for Healthy Mothers and Babies

Phone: 813-974-8888

To learn more about the The Chiles Center, please visit us on the web at http://health.usf.edu/publichealth/chilescenter/.

The mission of The Chiles Center is to promote and protect the health of pregnant women, their infants and young children through research, education and service. The Center is dedicated to determining the most effective strategies for reducing illness, disability and death among mothers, their infants and young children. We bring together experts in public health, health care, program design and evaluation and maternal and child health from Florida universities as well as national and international programs to address the many needs of mothers and their children and families. Today, through the committed work of its faculty and staff as well as community supporters, The Chiles Center has become the first choice in the nation for maternal and child health research, education and service for scholars, practitioners, policy-makers, advocates, families and students.