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Florida Perinatal Quality Collaborative

AT THE LAWTON AND RHEA CHILES CENTER FOR HEALTHY MOTHERS AND BABIES

Partnering to Improve Health Care Quality for Mothers and Babies

GOLDEN HOUR PART I: DELIVERY ROOM MANAGEMENT

Happy New Year! We are very happy with the progress our project has made over the last several months and look forward to our continued collaboration. 2014 is going to be a great year for the FPQC!

Some quick updates:

- Currently 7 pilot hospitals are involved in this project. There are 2 sites with pending enrollment.
- Thank you for your patience as we develop our process to create data reports. Nicole Falk Smith and Linda Detman have been working very hard to manage the Qualtrics database. This procedure will become smoother and more timely as our process becomes refined. December reports will be available early next week. Maya will be contacting individual sites to discuss these reports via a conference call next week.
- The FPQC is pleased to offer IHI quality improvement training to participating pilot hospital sites. If you are interested, please complete the attached application and email to fpqc@health.usf.edu.
- The FPQC project mini-site is being developed. We are working on obtaining password protection before providing sites with access.
- Please use the listserv (goldenhourprojectpart1@health.usf.edu) to communicate questions, concerns, suggestions, and to share innovative ideas. If you would like to be added to the listserv, please contact mbalakri@health.usf.edu.

Please feel free to contact Maya Balakrishnan at mbalakri@health.usf.edu with any questions, concerns, or suggestions. Together we can make a difference in the quality of care our babies receive!

The FPQC Leadership Team

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THIRD ANNUAL FPQC CONFERENCE

SAVE THE DATE

April 3 - 4, 2014

Wyndham Tampa Westshore Hotel

For more information on speakers and topics, please contact fpqc@health.usf.edu.

INSTITUTE FOR HEALTHCARE IMPROVEMENT

Free, on demand webinar on "Using Run and Control Charts to Understand Variation"

Featuring: Robert Lloyd, PhD, Executive Director of Performance Improvement, IHI

SIGN UP TODAY!

To learn more or enroll, please click **here**.

January 2014 Project Goals

Project changes based on your feedback:

- *Evaluating for data entry errors:*
  - *Reviewing data before submission*: A back button function has been added to the database. If you have all your data at the time of entry, you can use the "Back Button" if you believe you may have made an entry error. Once the "submit" button is clicked, data will be saved and sent to the FPQC. If a data entry error is realized at this point, contact fpqc@health.usf.edu so an administrator can edit this patient's entry. Please review the *updated* Online Tool Tips attachment and the *updated* **PROSPECTIVE** database link https://usfhealth.az1.qualtrics.com/SE/?SID=SV_0q7JoIm8NfbCkF7.

  - *Data report email will include an Excel spreadsheet of raw data* for review when interpreting the report.

- *Evaluating "time to completion of stabilization"*: Many sites had questions regarding this optional item and how it is being reported. This is defined as the time when initial care measures for infant have been accomplished including *all* of the following: IV access obtained, IV fluids initiated, radiographic studies obtained. We currently ask for times of 2 of the items. Starting **2/1/**14, we will change this question to "time radiographic studies obtained" and use all three times to determine "time to completion of stabilization". This will be reflected in the *updated* prospective database link and *updated* data collection sheet. (see attachment)

- *Easy identification of goals*: Each graph and chart is labeled with a goal.

- *Easy identification of ± 1 SD and ± 2 SD*: Each chart is labeled with these levels to help sites evaluate special cause and common cause variation.

- *Data entry limits were adjusted.* This project focuses on delivery room management for all babies admitted to your NICU with a gestational age ≤30 6/7 wks ***OR*** anticipated birth weight ≤1500 g. For data entry purposes the gestational age limits are extended to include 23 $^{0/7}$ wks to 40 $^{0/7}$ wks and birth weight limits are extended to include 400 g to 4000 g. For this study, include infants with a gestational age between 31 $^{0/7}$ and 40 $^{0/7}$ **only if** the infant has a birth weight ≤1500 g. And, include infants with a birth weight >1500 g and ≤4000 g **only if** the infant is ≤30 $^{6/7}$ gestational age. These changes will allow for inclusion of infants who meet our criteria. For example, a 30 $^{1/7}$ wk infant weighing 2100 g or a 33 $^{2/7}$ wk infant weighing 1000 g.

Review your site's baseline performance by reviewing your data report with the core team as well as other team members.

- Our goal is to have report sheets available to sites within 14 days of data submission.

- Maya will meet individually with sites to discuss their data reports. Data can be submitted monthly by the 15th of the month to receive a report by the 30th of the same month (anticipated 14 day turnaround time).

Share your site's process map, guideline, checklists, or data collection sheets with other pilot hospital sites. Please submit any document you are willing to share on the FPQC project mini-site (email: mbalakri@health.usf.edu). This website (http://health.usf.edu/publichealth/chilescenter/fpqc/golden1.htm) will be password protected, allowing only participating pilot hospital sites access. As your site updates these documents, please email current copies to Maya and she will replace older versions. Maya will email instructions on receiving your site's password later this month when website access is available. Thank you for helping us to learn from each other through collaboration!

Update your project charter to ensure you have timely goals for each PDSA cycle and align your cycles with the aim statement. By keeping the overall project aims in mind you can keep your efforts within the project's intended scope.

Quality Improvement Focus: Variation

WHAT does variation refer to in Quality Improvement methodology?

- Variation is "deviation from expectation between 2 or more similar things". Variation is everywhere. It can never be completely eliminated, but our goal in quality improvement is to understand variation, control the degree of variation, and minimize its impact.
- In this picture, the left target shows a process that covers the entire target with all bullets hitting a target with very few in the bullseye. The center picture shows a process that is well grouped on the target with all bullets hitting the target in close proximity to each other but well off the bullseye. The far right target shows a process that is well grouped on the target with all bullets in the bullseye (www.isixsigma.com).

Figure 1: Targeting Process Variation

WHY is there so much focus on variation?

- The goal is to deliver a service in a predictable manner to produce a predictable and reliable result.
- In our project, the goal is to improve delivery room management to meet evidence-based benchmarks in this vulnerable population of infants to improve short and long term outcomes.

HOW is variation identified?

- On our control charts, we evaluate variation against the mean for each measure.
- Know how to differentiate between common cause and special cause variation.
  - *Common cause variation* is considered a natural and expected part of a process.
  - *Special cause variation* is caused by something "special" (i.e. non-random circumstance) that is external to a process. It can lead to an unstable or unpredictable process.

WHAT tools can be used to decrease variation?

- All special cause variation is not bad (i.e. by ensuring the ambient delivery room temperature is standardized, an increased number of VLBWs delivered there may be normothermic). Identifying the root cause(s) of special cause and common cause variation can help you take action to promote or prevent the root cause(s).
- Because special cause variations are external to a process, they must be addressed before common cause variation (i.e. if the unpredictability of a process is reduced, it is often easier to address expected variation).
- There are a number of tools to address variation, including:
  - Five "whys" is a method whereby a symptom is identified and one continues to ask "why" until the root cause is identified. When one does not have an answer to "why" (usually taking less than 5 "whys"), a cause and effect diagram can be used to further investigate root causes.
  - "RISE" method
    - Recognition: identify the situation (Define)
    - Investigate: gather facts, identify and verify root cause (Measure, Analyze)
    - Solution: identify and implement the best solution (Improve)
    - Evaluate: evaluate the effectiveness and transfer knowledge (Control)

WHERE can more information be found?

- Quality Forum 2012-Plenary Presentation-Kishore Visvanathan: http://www.youtube.com/watch?v=J9uEmAGicwk
- How to create a Cause and Effect diagram: http://www.au.af.mil/au/awc/awcgate/navy/bpi_manual/mod5-c-ediag.pdf
- 5 Whys: www.thinkreliability.com/Root-Cause-Analysis-CM-Basics.aspx

"...Variation is a thief. It robs from processes, products, and services the qualities they are intended to have." - Dr. Don Berwick

Site Spotlight: Baptist Hospital NICU

Data Collection Form

DELIVERY DATA (by L&D RN):			
Birth weight:	**Gestational age:** _____weeks _____ days ☐ best clinical/obstetric estimate ☐ 1st trimester U/S ☐ 2nd trimester U/S	**Date of birth:**	**Time of birth :**
Delivery type ☐ Vaginal ☐ C-section	**Pregnancy Complication:**	**Delayed cord clamping after delivery:** ☐ yes _____ Seconds ☐ no	**Cord Milked:** ☐ yes _____ # of times ☐ no
Apgar score at 5 minutes:	**Labs from placenta:** ☐ Blood Culture - 1mL ☐ CBC (Purple Micro)- 0.5mL ☐ Purple Vacu. – 3mL ☐ MST – 5 gtts ☐ Red Vacu. – up to 5mL	**Total mLs from placenta:** _____ mLs	**Cord Blood Collection intended:** ☐ yes ☐ no

POST DATA (in NICU):		
DURING THE FIRST HOUR		
Resuscitation required *any* chest compressions ☐ yes ☐ no ☐ n/a	**Resuscitation required ET or IV epinephrine** ☐ yes ☐ no ☐ n/a	**DR team roles:** (check all that apply) **Team leader:** ☐ yes ☐ no **Circulation:** ☐ yes ☐ no **Airway:** ☐ yes ☐ no **Scribe:** ☐ yes ☐ no **Other:**
Pre-delivery DR preparation: (check all that apply)	☐ Delivery team briefing prior to anticipated delivery ☐ Equipment check prior to delivery ☐ Radiant warmer turned to 100% heat prior to delivery	
Method of temperature regulation used (check all that apply)	☐ Hat applied to baby's head within 2 minutes of life ☐ Other / Comments: ☐ Chemical warming mattress activated prior to delivery ☐ Polyethylene wrap applied to baby within 2 minutes of life ☐ Attention paid to ambient room temperature	
Monitoring supplemental oxygen use	• Pre-ductal oxygen saturation at 10 minutes of life: _____% • FiO2 at 10 minutes of life: _____% • Pulse ox probe on RUE & connected to oximeter w/in 2 min of life: ☐ yes ☐ no	
Time of NICU admission :	**Temperature on NICU admission:** _____ °C *OR* _____ °F ☐ axillary ☐ rectal ☐ other:	
Timing of DR debriefing	☐ within 4 hours of resuscitation ☐ after 4 hours of resuscitation ☐ no debriefing	
Name 1-3 opportunities for improvement discussed in debriefing:	1) 2) 3)	
Respiratory support on transport to NICU	☐ Intubation w/PPV or mechanical ventilation ☐ CPAP ☐ Free flow oxygen ☐ Room air	
Time of surfactant administration:	**Time IV access obtained:**	**Time IV dextrose administered:**
Time to completion of initial stabilization: ☐ IV access obtained ☐ IV fluids initiated ☐ X-rays obtained (check all that apply)		

DURING THE FIRST 24 HOURS		
Labs Redrawn within first 24 hours: ☐ Blood Culture ☐ CBC (Purple Microtainer) ☐ Purple Vacutainer ☐ MST ☐ Red Vacutainer	**Hypoglycemia** ☐ yes ☐ no **Hypothermia** ☐ yes ☐ no	**Results of culture from placenta:**

DURING THE FIRST WEEK					
DATE	**HUS**	**DATE/TIME**	**HCT**	**DATE/TIME**	**BILI LEVELS**

DATE/TIME	VOLUME EXPANDER	DATE/TIME	BLOOD TRANSFUSION	DATE/TIME	PHOTO THERAPY

our practice is our passion.
University of South Florida College of Public Health