TIPQC: Tennessee Initiative for Perinatal Quality Care

Tennessee’s Maternal-Infant Quality Improvement and Patient Safety Collaborative

April 25, 2012
Overview

• Brief Introduction of TIPQC

• 2009 First Annual Meeting & First Project Start
• 2010 One project
• 2011 Five projects
• 2012 Twelve projects...
The Challenge 2008

- Infant Mortality 48th
- Preterm Birth 47th
- 34-36 wk EGA Birth 46th
- <32 week EGA Birth 44th
- <2500 gm Birth 42nd
- Births without PNC n/a

- March of Dimes Data Book, 2008

This is our system, and these are our results...
Low Birth Weight by County
1994-2004

Percent Low Birthweight
- 6.5 - 7.5
- 7.6 - 8.2
- 8.3 - 8.9
- 9.0 - 10.0
- 10.1 - 12.2

🌟 TIPQC-VON Data Contributor & Project Participant
🌟 TIPQC-Project Participant
The Opportunities

**Families**
- Accountability
- Accessibility
- Transparency

**Payors**
- Increase Value
- Pay-for-performance
- Non-payment for complications

**ABP**
- MOC
- Part 4 & QI

**IOM**
- Deaths due to error
- Failure to implement EBM

**Hospitals**
- Escalating costs
- Diminishing reimbursement
- Increasing need

**Economy**
- Health care spending vs. GDP
- Recession
- State Budget Crisis
TIPQC seeks to improve health outcomes for mothers and infants in Tennessee by engaging key stakeholders in a perinatal quality collaborative that will identify opportunities to optimize birth outcomes and implement data-driven provider- and community-based performance improvement initiatives.

**Goals**

- Establish a statewide perinatal database
- Foster state-wide quality improvement initiatives to reduce mortality and morbidity associated with premature birth and low birth weight
- Promote system changes by provider organizations to increase use of evidence based clinical practices for obstetric and NICU patients

Register now for the 2012 TIPQC Annual Meeting on March 1st and 2nd!
How do we improve?

3 Key Questions then PDSA

• Aim

• Measures

• Hypothesis/Expertise

• Toolkit of proven evidence based potentially better practices

Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?
TIPQC Organization Chart

Advisory Responsibilities

Regional (5) Advisory Committees
- Families
- Providers
- Institutions
- Regional payors
- Data collectors & monitors
- Non-governmental advocacy
- Government advocacy

Oversight Committee

Oversight Subcommittees (representatives from OC and RAC)
- QI Projects
- Data
- Education
- Communication
- Research

Operational Responsibilities

Operations Committee

Project Management
- TIPQC reports
- VON reports
- Regional reports
- Data requests
- Communication

Data Management
- Website management
- Public relations
TIPQC Organization Function

Advisory Responsibilities
- Regional (5) Advisory Committees
  - Families
  - Providers
  - Institutions
  - Regional payors
  - Data collectors & monitors
  - Non-governmental advocacy
  - Government advocacy

Operational Responsibilities
- Oversight Committee
  - Membership at Annual Meeting (NICU, Nursery, OB, MFM, Practices, Hospitals, Payers, THA, DOH, AWHONN)

- Operations Committee
  - Project Management
    - Project 1
    - Project 2
    - Project 3
    - Project 4
    - Project 5
  - Data Management
    - TIPQC reports
    - VON reports
    - Regional reports
    - Data requests
  - Communication
    - Website management
    - Public relations
Engaged Stakeholders & Active Participants

**Families**
- Oversight Committee
- Project Development
- Project Participants

**Payers**
- TennCare Medical Director
- MCOs
- Commercial Payers

**ABP**
- MOC Part 4 Provider
- QI Portfolio Manager

**TIPQC**

**Hospitals**
- THA
- TCPS
- CMO Society
- Local Hospital Leadership

**Government**
- GOCCC
- DOH Maternal Health*
- Vital Statistics
- HAI Branch

**VON & others…**
- States Collaborative Group
- OPQC
- PQCNC
- CPQCC
Project Selection
A Grass Roots Caucus Style Process

First Vote (Non-binding)
- Individuals (2 votes each)
- Posters with TN Data
- Evaluation Matrix
  - Strength of the evidence
  - Available interventions
  - Likelihood of success
  - Impact if successful
  - Personal enthusiasm

Second Vote (to develop...)
- Center (2 votes each)
- Nominate
  - Commitment to develop
- Seconded
  - Commitment to pilot test
- Vote by roll call of units present at State meeting
Perinatal Healthcare Spectrum

- Active Projects
- Projects in Development
- Sustainment Projects*

Prenatal
- BFP:Prenatal

Peripartum
- BFP:Delivery
- 39 weeks
- MM (PPH)

Postpartum/Maternal
- BFP:Prenatal
- BFP:Delivery
- MM (PPH)

Neonatal/Infant
- BFP:Delivery
- HM4NICU
- Golden Hour
- NAS
- Temperature
- CLABSI

• NICUFUN
• UCCHD

TIPQC
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*Maternal Arm *Statewide* Kick-off at March 1&2 Meeting
NICU “TEMPERATURE” PROJECT
Improved Thermal Management was not the primary Aim...

- Visited All Neonatology Groups in TN
- Toured 20 of 27 NICUs
- Found 106 discrete “QI” projects
- Several methodologies
- Many PD PD PD PD PD cycles...
- Few PDSA cycles (VON, PDX units)
- 3 Examples of successful spread
Project within a Project

Build QI Capacity
- IHI model
- Data quality
- Run charts
- SPC charts
- Team dynamics
- Simulations & Transparency
- Communication
- Sharing in webinar
- Sharing at State meeting

Improve Thermal Management
- Multi-disciplinary team
- Process flow charting
- PDPD to PDSA
- Menu of PBPs
  - Don’t reinvent the wheel
- Simple “Outcome” Measure
  - Built in Balancing Measure
- Local Process Measures
- Aggregate State “Outcome”
TIPQC Temperature

IHI Collaborative Paradigm

Prework
- Site visits
- Assessment

LS 1
March 2009
- AIM
- Methods
- Goals

LS 2
June/July
- Run Charts
- Change Mgt

LS 3
September
- Transparency
- Team Decisions
- Families

AP 1

AP 2

AP 3
March 2010
- Sustainment

HTG—Hold The Gains

Support:
- Regional Meetings
- QI Consultant
- Monthly Huddles (WeBeX)
- Improvement Advisor
- E-mail/website
- Forums

LS – Learning Sessions
AP – Action Period
VLBW Admission Temperatures

Sustainment or Hawthorne vs. Hardwire

- Hyperthermic (>37.5°C)
- Normothermic (36.5-37.5°C)
- Cool (36.0-36.5°C)
- Hypothermic (<36.0°C)

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- N/A
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NICU CLABSI REDUCTION
What is a CLABSI?

• Central Line
• In the NICU,
  – Reduces “sticks”
  – Replaces placenta
  – Critical for growth
• Risks: Infection
  – Around the catheter?
  – Through the catheter?
  – Associated with catheter?
• Immature gut, immature immune system
CLABSI Reduction

• Prior experience with adult HAI “bundles”
• Mandatory Reporting
• Collaboration with THA and DOH HAI Group
• Don’t reinvent the wheel- modify it
  – CPQCC HAI bundle phase 3
  – REDCap + R + TIPQC Server + ...
• Real-time data checks & SPC analysis
  – Local data as current as entry to drive local PDSAs
  – State Aggregate Report- like an 800+ bed NICU
IHI Collaborative Series
TIPQC CLABSI

Prework
• IRB
• Tool kit
• Local review

January 22, 2010

LS 1
AP1

January 22, 2010

LS 2
AP2

Month 4
• ‘Red Bead’
• Team check up
• SPC in REDCap
• Data integrity

LS 3
AP3

Month 8
• Conflict style
• Gen-?-comm.
• Team facilitation
• Extended Data Set

? HTG

Month

Project status six months after Program completion

Support:
- Regional Meetings
- Monthly Huddles (WeBeX)
- E-mail/website

- QI Consultant
- Improvement Advisor
- Forums

LS – Learning Sessions
AP – Action Period

HTG—Hold The Gains
3 CLABSIs/1,000 Line Days/Month

The following (u-chart) figures illustrate the rate of confirmed CLABSIs per 1,000 line days per month (CDC/NHSN definition). For those central lines with a missing date of removal, the baby’s date of discharge or ‘today’s’ date were appropriately used instead.

3.1 Overview, including pre-project data (Jan 1, 2008 - Dec 31, 2012)

The center line (CL) was recalculated after 10 consecutive months below the initial CL. The current CL is calculated based on pre-project and project data from Aug 2009 to May 2010.
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*Maternal Arm *Statewide* Kick-off at March 1&2 Meeting
“39 Weeks”

• Term 37 weeks completed gestation
• Emerging evidence of neonatal (and maternal) morbidity for “elective” deliveries 37 to 38 $^{6/7}$
• Challenge:
  – Spontaneous labor- far less morbidity & mortality
  – Indicated interventions to deliver prevent still-birth and likely reduce NICU morbidity
  – Paradoxically, NICU success makes “elective” choice before 39 weeks seem safe
Davidson County 39 Week Pilot:
Data, Awareness, Education, Review, Change

* – Includes scheduled deliveries for which no reason was indicated.
** – No. scheduled deliveries with a non-missing date of scheduled delivery and a non-missing gestational age at scheduled delivery.
Human milk

*How could something so simple get so complicated?*
All NICU Infants, HM at Discharge
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The Challenge 2012
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‘If States Were Countries…”
Tennessee GDP=Finland GDP
Economist, Jan 15, 2011

This is our system, and these are our results...
Questions and Discussion