Bonny Whalen MD
Newborn Nursery Medical Director
Pediatric Hospital
Children’s Hospital at Dartmouth
Assistant Professor
Department of Pediatrics
Geisel School of Medicine at Dartmouth
Lebanon, NH

Bonny Whalen MD is an Assistant Professor of Pediatrics at the Geisel School of Medicine at Dartmouth. Dr. Whalen received her MD degree from the University Of Vermont College Of Medicine and completed her Pediatrics Residency at the Massachusetts General Hospital in Boston, MA. She then spent six years as a general pediatrician and newborn hospitalist at the University of Wisconsin in Madison, WI before moving back to New England in 2005. She has spent the last 10 years as a general pediatrician specializing in newborn care, working as a newborn / pediatric hospitalist and Newborn Nursery Medical Director at the Children’s Hospital at Dartmouth / Dartmouth-Hitchcock Medical Center. Dr. Whalen is co-leading quality improvement efforts in her hospital and region to improve care for newborns at risk for and/or with Neonatal Abstinence Syndrome. Her work focuses on increasing baby- and family-centered care, improving staff consistency in NAS scoring, empowering families to best care for their newborns through prenatal education and in-hospital support, and increasing breastfeeding rates in this vulnerable population through encouraging abstinence prenatally and communicating with a mother’s outpatient treatment provider and the baby’s medical home to ensure safe breastfeeding after discharge. Dr. Whalen co-led a qualitative study on the hospital experience of families as it relates to a mother’s opiate exposure in pregnancy and care of her newborn postnatal.

NICQ Symposium Improvement Story, Friday October 2, 2015
Improved Family-Centered Care at Lower Cost: Rooming-in to treat NAS

Objective: Facilitate clarity regarding application of the Model for Improvement utilizing Potentially Better Practices and linking to family-centered and value aims.
**2015 Annual Quality Congress Improvement Story**

**Improved Family-Centered Care at Lower Cost: Rooming-in to treat NAS**

*Children’s Hospital at Dartmouth-Hitchcock*

*Lebanon, NH*

*Bonny Whalen MD*

---

**Setting**

- Located in Lebanon, NH
- Rural children’s hospital within an academic tertiary care center
- 18-basinette mother-baby LDRP unit, 30-bed Level II-III NICU, 23-bed pediatric inpatient unit
- ~1200 births, 450 NICU + 2500 inpatient pediatric admissions /yr

---

**Aims**

**Primary aim:** Decrease % infants Rx w/ morphine from 50 to 25% by Dec 2014 through the use of a coordinated and standardized program for NAS, utilizing mother-baby couplet care in a calm rooming-in environment

**Secondary aims:**
- Decrease % infants Rx w/ adjunctive agents from 15% to 5%
- LOS from 17 days to < 14 days for morphine-Rx infants
- Hospital costs by 50% for all opioid-exposed newborns

---

**Mechanisms**

*Key driver diagram for NAS QI project aims and change concepts*

---

**Disclosure**

Dr. Whalen does not have any financial arrangement or affiliations with a commercial entity.

She will not be discussing the unlabeled use of a commercial product in her presentation.
Improved Family-Centered Care at Lower Cost: Rooming-in to treat NAS
Bonny Whalen MD

Methods

1. RN scoring training/ reliability
2. Family interviews
3. Baby-centered scoring
4. Prenatal education
5. Parent symptom diary
6. Standardize score interpretation
7. Rooming-in pilot
8. “Cuddlers”
9. Full rooming–in
10. Addiction training
11. Transfers

Jan 2013: Formed Multi-D VON NAS QI team
April 2013 - Oct 2014: 11 PDSA cycles

Measure

Main Outcome Measures
• % opioid-exposed newborns treated with morphine
• % opioid-exposed newborns treated with adjunctive agents
• LOS for treated newborns
• Hospital costs of at-risk and treated newborns

Balancing Measures
• 30-day readmission rates:
  • All-cause
  • NAS symptoms
  • Failure to gain weight

Data / Results

% Opioid-exposed Newborns Receiving Morphine
% Opioid-exposed Newborns Receiving Adjunctive Agents

Hospital Costs per Treated Newborn

Discussion/ Next Steps

• Coordinated, standardized, mother-baby couplet care with rooming-in can safely reduce need for pharmacologic Rx, length of stay & hospital costs
• Prenatal pt education, Rx provider collaboration, ongoing staff education, and safe discharge to home are key to sustaining positive outcomes

Next steps:
– Have all staff complete VON Universal Curriculum
– Further improve prenatal education & collaboration with Rx providers and community resources
Improved Family-Centered Care at Lower Cost: Rooming-in to treat NAS

Bonny Whalen MD