Improving the Care of Opioid-Exposed Newborns: The Massachusetts Experience

TIPQC Annual Meeting OEN Breakout
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Leadership Team

Academic Partners
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- Peg Harvey (MassHealth)
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- Anne Hemmer (EHS)
- Doni Anderson (Baystate)
- Julie Maida
- Megan Perry
- Cieara McManus
- Latisha Goullaud

Families
- Patricia McDonnell

2012-2015

Improvement 1.0
- Focus on neonatal abstinence syndrome (NeoQIC)
- Primarily hospital-based teams
- Collaborations with DPH, BSAS, DCF, EI
- VON curriculum, data audits, practice surveys, summits
- Standardizing practices, Finnegan scoring, pham therapy, breast milk use, non-pharm care

2016-present

Improvement 2.0
- Focus on perinatal opioid use (PNQN)
- Primarily hospital-based teams
- Partnerships with HPC, AG, DPH, BSAS, DCF, EI, EHS, Moms Do Care, etc.
- QI training, REDCap database, data reports, practice surveys, toolkits, website, site visits, statewide summits
- Broader improvement goals
### Project Goals

1. **Pregnancy**
   - Identify opioid-use-disorder in pregnancy and insure women are in treatment, including MAT

2. **Newborn**
   - Strive for family-centered care in the hospital, including rooming-in and non-pharmacologic care

3. **Post-Discharge**
   - Improve support and follow-up after discharge, including enrollment in Early Intervention

### Project Activities

- **Pregnancy**
  - SBIRT, MAT engagement and training
  - AIm bundles
  - Trauma-informed care trainings

- **Newborn**
  - Hospital protocols
  - Non-pharm care, family engagement
  - Eat-sleep-console (ESC)

- **Post-Discharge**
  - EI referrals and data linkage project
  - Early Head Start partnership
  - Plans of Safe Care

### Project Components

- Statewide summits
- Core database with progress reports
- State NAS dashboard from administrative data
- QI training
- Hospital site visits
- Practice surveys
- Staff attitude and knowledge survey
- Family engagement survey (in the works)
Hospital Engagement

- 44 perinatal hospitals in the state (about)
- 37 hospitals in at least one component
- 29 entering data in REDCap database
- 36 at a summit in the last year
- 35 participating in ESC (10 have implemented)
- 22 in AIM opioid bundle
- 5 hospitals pursuing EI QI project

Hospital Improvements (a sample)

- Increasing screening for OUD in pregnancy
- SBIRT and MAT when maternal OUD is identified
- Improving reliability of ‘scoring’ for NAS
- Standardized pharm therapy protocols
- Standardized guidelines for breast milk use
- Enabling rooming-in of infants with parents
- Improving non-pharm care, including use of cuddlers
- Insuring referral to EI prior to hospital discharge
- Warm hand-offs to follow-up providers

Twice-Yearly Statewide Summits
Core Data Form and REDCap Database
**REDCap Shared Database**

- Hospitals collect data (volunteer!)
  - Opioid-exposed newborns (OENs) and their mothers
- Common data form
  - Core form: about 30 elements, revised 2019
  - Supplemental ESC form: short
  - Maternal AIM form coming!
- Data entered in REDCap at BIDMC (DUA needed)
- Monthly statewide and quarterly hospital reports

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**Project Measures (selected)**

- **Pregnancy**
  - MAT use
  - Illicit drug use
- **Newborn**
  - Non-pharm care
  - Need for pharm therapy
  - Length of stay
- **Post-Discharge**
  - EI referrals
  - DCF referrals
  - Discharge with biologic family

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**Hospital Progress Reports**

[Image of PNQIN (Perinatal Neonatal Quality Improvement Network of Massachusetts) report]
State Dashboard

State Dashboard: EI Referrals by Race

Percent of infants with NA-I referred to an EI program within six months after birth

The Early Intervention (EI) program provides family-centered services to support child development. Currently, all infants with a diagnosis of NA-I are automatically eligible for one year of EI services. Those infants should be referred as soon as possible, ideally before discharge, to encourage early enrollment and maximum benefit of the EI program.
EI Referrals and EI Enrollment

**Population-level measures**

https://www.mass.gov/guides/neonatal-abstinence-syndrome-dashboard

Quality Improvement Training

**NICHQ QI Training Webinar Series**

2020 Q3: Building a Culture of Improvement

2020 Q4: Data Collection and Utilization

2021 Q1: Team Building

2021 Q2: Team Building

2021 Q3: Building a Culture of Improvement

2021 Q4: Data Collection and Utilization

2022 Q1: Team Building

2022 Q2: Team Building

2022 Q3: Building a Culture of Improvement

2022 Q4: Data Collection and Utilization

Quality Improvement Training

**PQIN QI Training Workshop: May 8, 2019**

This interactive workshop will focus on fundamental quality improvement methods. Through hands-on activities presented by multiple healthcare systems, participants will gain an understanding of improvement methodology and apply it to improvement projects led by their teams. The workshop will focus on Lean thinking, a foundational, data-driven approach necessary for efforts to understand and improve healthcare processes or products.
Practice Survey (2017, 2020)

Practice Survey (2017)

Infants with NAS Routinely Monitored

Attitude and Knowledge Survey

Attitudes Toward Parents With OUD & Infants With NAS (13-25)

Knowledge and Skills for Parents With OUD & Infants With NAS (15-25)
Eat-Sleep-Console Support

- Training workshops
- Webinar series
- Online resources

Early Intervention Linkage Project

<table>
<thead>
<tr>
<th>Early Intervention (EI) Status</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible for study</td>
<td>256 (100%)</td>
</tr>
<tr>
<td>Referred to EI</td>
<td>197 (77%)</td>
</tr>
<tr>
<td>Intake</td>
<td>171 (67%)</td>
</tr>
<tr>
<td>Evaluated</td>
<td>162 (63%)</td>
</tr>
<tr>
<td>Eligible</td>
<td>148 (58%)</td>
</tr>
<tr>
<td>Enrolled</td>
<td>123 (48%)</td>
</tr>
<tr>
<td>Enrolled + 6 months</td>
<td>96 (38%)</td>
</tr>
</tbody>
</table>
Early Intervention Linkage Project

Early Head Start

Lessons, Take-Home Points
Take-Home Points 1: Pregnancy

- Getting more moms with OUD engaged and on treatment may be the most important goal of all of this work.
- This will likely INCREASE the number of newborns with NAS, but that’s ok.
- Newborn outcomes are largely dependent on maternal outcomes.

Take-Home Points 2: Newborn

- Increasing engagement with families in the care of the opioid-exposed newborn after birth will improve outcomes.
- Non-pharmacologic therapy really works!
- Of note, this makes the definition of NAS messy.

Take-Home Points 3: Post-Discharge

- While we don’t know much about what happens to these infants after discharge, we know the post-partum period is particularly high-risk for moms and babies.
- Discharge planning should include good follow-up and referrals to programs such as Early Intervention and Early Head Start.
- We need to do more work in this area!!
Project Progress

- Pregnancy
  - Some progress, but hard!
- Newborn
  - Pretty good progress!
- Post-Discharge
  - Lots of opportunities!