ILPQC MNO-Neo Teams Call: Strategies and Opportunities for Improvement to Implement Systems Changes to Care for Opioid-Exposed Newborns

June 17th, 2019
1:00pm – 2:00pm
Call Overview

- ILPQC Updates
- Face-to-Face Recap
- Strategies to Implement Systems Changes MNO-Neo
  Structure Measures
  - Prenatal Consult
  - Non-Pharm Care
  - Pharm treatment
  - Safe Discharge
GLORIA, GLORIA!

Congratulations to our St. Louis Blues Fans on winning the Stanley Cup!

A team that went from last in the league to winning it all… a true story of CONTINUOUS QUALITY IMPROVEMENT!

Chicago fans- maybe next year…?
Face-to-Face Recap
ILPQC OB Face-to-Face Meeting Numbers

• 263 physicians, nurses, and public health professionals attended OB Meeting

• 204 attended the neonatal meeting on 5/31 with over 100 attendees present at both
Congratulations to the MNO-Neo Teams who received a QI Data Completion award at the Face to Face meeting! These teams submitted all patient level & structure measure data for baseline & July 2018 – March 2019

Advocate BroMenn Medical Center
Advocate Children's Hospital - Oak Lawn
Advocate Condell Medical Center
Advocate Children's Hospital - Park Ridge
AMITA St. Alexius Medical Center
St. Louis Children's Hospital
Blessing Hospital
Northwestern Medicine Huntley Hospital
Northwestern Medicine McHenry Hospital
Edward Hospital
Elmhurst Memorial Hospital
Heartland Regional Medical Center
HSHS St. Joseph's Hospital - Breese
Illinois Valley Community Hospital
Little Company of Mary Hospital
Loyola University Medical Center
Memorial Hospital East
Memorial Hospital of Carbondale
NM Central DuPage Hospital
NorthShore University Health System Evanston Hospital
Northwestern Memorial Hospital
OSF Saint Elizabeth Medical Center
OSF Saint Francis Medical Center
Palos Hospital
Presence St. Mary's - Kankakee
Riverside Medical Center
Rush Copley Medical Center
Saint Anthony Hospital
AMITA Health St. Joseph Hospital Chicago
SSM Health Cardinal Glennon Children's Hospital
SSM Health St. Mary's - St. Louis
Vista Medical Center East
# MNO-Neo Patient-Level Data Entry Status

<table>
<thead>
<tr>
<th>Monthly Process/Outcome</th>
<th>Total Records</th>
<th># Teams with Patient Level Data Reported</th>
<th># Teams with No Newborns to Report</th>
<th># Teams Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>276</td>
<td>62</td>
<td>12</td>
<td>74</td>
</tr>
<tr>
<td>July 2018</td>
<td>45</td>
<td>32</td>
<td>36</td>
<td>68</td>
</tr>
<tr>
<td>August 2018</td>
<td>88</td>
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<td>34</td>
<td>73</td>
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<td>September 2018</td>
<td>65</td>
<td>31</td>
<td>38</td>
<td>69</td>
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<tr>
<td>October 2018</td>
<td>64</td>
<td>31</td>
<td>34</td>
<td>65</td>
</tr>
<tr>
<td>November 2018</td>
<td>51</td>
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<td>38</td>
<td>64</td>
</tr>
<tr>
<td>December 2018</td>
<td>53</td>
<td>28</td>
<td>26</td>
<td>54</td>
</tr>
<tr>
<td>January 2019</td>
<td>65</td>
<td>33</td>
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<tr>
<td>February 2019</td>
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<td>March 2019</td>
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<td>April 2019</td>
<td>52</td>
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<td>65</td>
</tr>
<tr>
<td>May 2019</td>
<td>30</td>
<td>16</td>
<td>15</td>
<td>31</td>
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</table>
# MNO Neo Structure Measures

## Data Entry Status

<table>
<thead>
<tr>
<th>Monthly Structure Measures</th>
<th># Teams with Data</th>
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</thead>
<tbody>
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<td>Baseline</td>
<td>58</td>
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<tr>
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<tr>
<td>October 2018</td>
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</tr>
<tr>
<td>November 2018</td>
<td>40</td>
</tr>
<tr>
<td>December 2018</td>
<td>42</td>
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<tr>
<td>January 2019</td>
<td>52</td>
</tr>
<tr>
<td>February 2019</td>
<td>51</td>
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<tr>
<td>March 2019</td>
<td>53</td>
</tr>
<tr>
<td>April 2019</td>
<td>43</td>
</tr>
<tr>
<td>May 2019</td>
<td>16</td>
</tr>
</tbody>
</table>

Structure measures are important tools to review with your team monthly to monitor your progress towards sustainable improvement.

EVERYONE whether you see 1 to 100 infants/year your team can structure processes for success!
STRATEGIES TO IMPLEMENT SYSTEMS CHANGES MNO-NEO STRUCTURE MEASURES
Mothers and Newborns affected by Opioids- Neo Initiative

Aims:
- Decrease pharmacologic treatment in opioid-exposed newborns with NAS to 20%
- Increase safe and optimized discharge plans in opioid-exposed newborns to 95%
- Increase breastfeeding rates in opioid-exposed newborns at discharge to 70%

Measures:
- Percent of opioid-exposed newborns receiving a toxicology screen (urine/cord/meconium)
- Percent of opioid-exposed newborns requiring pharmacologic therapy for NAS
- Number of days of pharmacologic treatment for NAS
- Percent of mothers and newborns rooming together during infant hospitalization
- Percent of opioid-exposed newborns receiving maternal breast milk at neonatal discharge
- Percent of opioid-exposed newborns discharged with plan of safe care in place
- Average length of stay for opioid-exposed newborns
MNO-Neo 4 Structure Measures

1. Standardized prenatal consult for OENs
2. Implement a non-pharmacologic bundle
3. Standardize pharmacologic therapy for NAS
4. OENs discharged with plan of safe care in place
PRENATAL CONSULT
MNO-Neo Structure Measures: Standardized Prenatal Consult

This month’s featured measure!

Percent of hospitals that have implemented standardized protocols/guidelines for Prenatal Consult
All Hospitals, 2018-2019

<table>
<thead>
<tr>
<th></th>
<th>In Place</th>
<th>Working On It</th>
<th>Have Not Started</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>25%</td>
<td>46%</td>
<td>3%</td>
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<td>Jul-18</td>
<td>50%</td>
<td>47%</td>
<td>8%</td>
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<td>Aug-18</td>
<td>45%</td>
<td>56%</td>
<td>12%</td>
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<td>17%</td>
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<td>Oct-18</td>
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<td>65%</td>
<td>15%</td>
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<tr>
<td>Nov-18</td>
<td>20%</td>
<td>60%</td>
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<tr>
<td>Dec-18</td>
<td>21%</td>
<td>58%</td>
<td>26%</td>
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<tr>
<td>Jan-19</td>
<td>16%</td>
<td>61%</td>
<td>23%</td>
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<tr>
<td>Feb-19</td>
<td>16%</td>
<td>68%</td>
<td>23%</td>
</tr>
<tr>
<td>Mar-19</td>
<td>10%</td>
<td>71%</td>
<td>21%</td>
</tr>
<tr>
<td>Apr-19</td>
<td>7%</td>
<td>71%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Baseline (October - December 2017)
What is your biggest barrier to standardizing prenatal consults?

- OBs are not aware that prenatal consult is possible: 29%
- OBs do not know who to contact for a prenatal consult: 17%
- Consulting provider is not available to do the consult: 8%
- Consulting provider does not know how to provide anticipatory guidance to a family: 13%
- You didn’t list our biggest barrier: 33%
Strategies for navigating barriers to implementing a prenatal consult

**BARRIERS/CHALLENGES**

**UNCLEAR ABOUT...**

- Who is responsible for what?
- What elements are the neo/peds responsible for?
- How do we partner and engage varies disciplines ex: OBs?

**STRATEGIES FOR NAVIGATING**

- **Identify team member** who can serve as a Neo rep on an MNO-OB team
- Consider adding a **resident champion** to team to help build relationships
- Create a **prenatal consult process flow map** for patients who screen + for OUD on L&D
- Perform a small **PDSA on new prenatal consult process flow** and adapt accordingly
- **Create Prenatal Consult Checklist** specific to what ped/neo responsible for
- **Train** staff on the use of newly developed tools
- **Review** the ILPQC MNO Prenatal Consultation Guidelines
  - Identify which aspects of the guidelines are currently being documented
  - Consider building into your EMR or scan results into EMR
ILPQC MNO-Neo Toolkit Resources

- ILPQC MNO Prenatal Consultation Guidelines (for providers to complete with every mother with OUD)
- Patient and family education resources (share with patients prenatally & on L&D)
  - NAS What You Need to Know Booklet
  - NAS What You Need to Know 1/2 Page Card
Mothers and Newborns Affected by Opioids (MNO-NEO)

Eden Takhsh MD
Chairman of the Department of Obstetrics and Gynecology
Chief Quality Officer

Michele Bucciero MD, MBA-HCM
Director of Perinatal Services

Michelle Korzec CNM
Director of Midwifery Services

Kathleen Minogue MSN, RN
Manager of Perinatal Services
OUR PROBLEM:

Neonatologists not available at Saint Anthony to do outpatient clinics to do consults for pregnant patients with OUD

Patients affected with OUD would be unknown to inpatient Neonatology service prior to delivery

Lack of information and education was given to patients prior to admission for delivery leaving them not knowing what to expect

Misinformation was being circulated in community regarding our care of newborns that may have symptoms of opioid withdrawal
Prenatal Neonatology Consults

OUR SOLUTION:
Patients getting prenatal care will receive consultations with Neonatology and Anesthesia during scheduled antenatal testing appointments on Labor and Delivery.

Patients not receiving prenatal care will receive consults while on Labor and Delivery either during triage visits or delivery admission as soon as possible.
Barriers/Challenges
- Large health care system with recent merger
- Outpatient EMR change

Strategies implemented
- Individual sites had committees report to system MNO committee
- Web based interface (Sharepoint) to share resources
- Divided education creation
Barriers/Challenges
• Provider buy-in to promote work flow changes

Strategies implemented
• Neonatologist invited to be part of the site and system committee
• Bi-weekly meetings on all high risk prenatal patients*
• High Risk Maternal log in secure database
• Grand Rounds MNO Initiative
NON-PHARMACOLOGIC CARE
MNO-Neo Structure Measures: Standardized Non-Pharm Care

This month's featured measure!

Percent of hospitals that have implemented standardized protocols/guidelines for Non-Pharmacologic Care
All Hospitals, 2018-2019

Baseline (October - December 2017)

<table>
<thead>
<tr>
<th>Month</th>
<th>In Place</th>
<th>Working On It</th>
<th>Have Not Started</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul-18</td>
<td>65%</td>
<td>42%</td>
<td>3%</td>
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<tr>
<td>Aug-18</td>
<td>39%</td>
<td>14%</td>
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<td>Oct-18</td>
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<td>18%</td>
<td>26%</td>
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<tr>
<td>Nov-18</td>
<td>19%</td>
<td>24%</td>
<td>57%</td>
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<tr>
<td>Dec-18</td>
<td>19%</td>
<td>23%</td>
<td>56%</td>
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<tr>
<td>Jan-19</td>
<td>13%</td>
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<tr>
<td>Feb-19</td>
<td>10%</td>
<td>35%</td>
<td>56%</td>
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<tr>
<td>Mar-19</td>
<td>7%</td>
<td>35%</td>
<td>58%</td>
</tr>
<tr>
<td>Apr-19</td>
<td>10%</td>
<td>38%</td>
<td>53%</td>
</tr>
</tbody>
</table>
MNO-Neo Outcome Measures:
Eligible OENs Receiving Maternal Breast Milk at Infant Discharge

ILPQC MNO OB/Neo Initiative
Percent of Eligible OENs (≥35 weeks) Receiving Maternal Breastmilk at Infant Discharge
All Hospitals, 2018-2019

59%  56%  74%  76%  69%  52%  48%  58%  58%  59%  68%  68%
What is your biggest barrier to standardizing non-pharmacologic care?

- Unit culture: 44%
- Provider education: 24%
- Staffing ratios: 27%
- Electronic medical record documentation
- You didn't list our biggest barrier: 5%

When poll is active, respond at PollEv.com/il2019. Text IL2019 to 37607 once to join.
Strategies for navigating barriers to standardize non-pharm care

BARRIERS/CHALLENGES

Culture...
Unit/administration - Stigma, protocols, safety concerns, misinformation

Resources...
Staffing ratios, mother/family engagement

STRATEGIES FOR NAVIGATING

• Host a MNO-Neo Grand Rounds
• Implement stigma and bias training for all clinicians using items in the ILPQC toolkit
• Create education process flow map for new hires and clinicians to help ensure education is provided to everyone
• Share the MNO-Neo 1pager with your hospital administration
• Share and display your teams current data
• Implement a cuddler program to help provide non-pharm care
• Perform a language audit on all policies including visitation policies and signs
• Review patient education materials with patient advisor
Optimize Non-Pharmacologic Care

ILPQC Tool Kit Contents cont.

- **ILPQC Infant Bedside Sheet** (tool for providers & nursing to track assessment, family engagement, and non-pharm bundle)
- **ILPQC Newborn Care Diary** (tool for MOTHER and/or CAREGIVER to be engaged in tracking ESC & non-pharm care of newborn in conjunction with care team)
- **Sample Rooming-In policy** for mother-infant dyad impacted by in-utero opioid exposure (tool for team to model a rooming-in policy for unit)
- **NEW- FREE Trauma Informed Care eModules for providers, nurses, and staff**
  [https://www.aquifer.org/courses/trauma-informed-care/](https://www.aquifer.org/courses/trauma-informed-care/)
- **Engaging Mom/Caregiver in Non-Pharmacologic Care & Team Huddle SIMULATION VIDEOS & DEBRIEFS** (tools to train your providers, nurses, and staff)
  - Eat, Sleep, Console Simulation & Debrief
  - Engaging Mom in Non-pharm care & team huddle Simulation & Debrief

How is YOUR team utilizing these resources for every OEN every time?
Infant Bedside Sheet

Tracking OEN’s ability to eat, sleep & console

Tool for GROUP decision to reinforce Non-Pharm or escalate to pharm (Includes PARENTS)

Is your team optimizing the non-pharm bundle & engaging the mother/caregiver EVERY TIME before going down a pharm route?

<table>
<thead>
<tr>
<th>Shift Time (i.e. 7am-7pm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESC Assessment</td>
</tr>
<tr>
<td>Poor feeding due to NAS? Yes/No</td>
</tr>
<tr>
<td>Sleep &lt; 1 hr due to NAS? Yes/No</td>
</tr>
<tr>
<td>Unable to console within 10 minutes due to NAS? Yes/No</td>
</tr>
<tr>
<td>Care Plan</td>
</tr>
<tr>
<td>Recommend Full Care Team Huddle? Yes/No</td>
</tr>
<tr>
<td>Management Decision: 1. Optimize Non-Pharmacologic Care 2. Initiate Medication 3. Continue Medication 4. Other (please describe)</td>
</tr>
<tr>
<td>Parental/Caregiver Presence 0: No parent present 1: &lt; 1 hour 2: 1-2 hours 3: 2-3 hours 4: ≥ 3 hours</td>
</tr>
<tr>
<td>Non-Pharmacologic Care (check all that were) Rooming-in: Increase/Reinforce Parent/caregiver presence: Skin-to-skin contact: Holding by caregiver/cuddler: Safe swaddling: Optimal feeding at early hunger cues: Quiet, low-light environment: Non-nutritive sucking/pacifier: Limiting visitors: Clustering Care: Safe sleep/fall prevention:</td>
</tr>
</tbody>
</table>

*Was the above Infant Bedside Sheet fully completed for this shift? Yes/No
Newborn Care Diary

<table>
<thead>
<tr>
<th>Baby’s name:</th>
<th>Medical Record Number:</th>
<th>Date:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Time of feed (start to finish)</th>
<th>Breast feeding (total # minutes)</th>
<th>Bottle feeding (total # mL)</th>
<th>Time baby fell asleep</th>
<th>Time baby woke up</th>
<th>Did baby feed well? (If no, describe)</th>
<th>Did baby sleep for an hour or more? (If no, describe)</th>
<th>Did baby console in 10 min? (If no, describe)</th>
<th>Check box for diaper wet</th>
<th>Check box for diaper dirty (please describe)</th>
<th>Care provided and extra comments</th>
<th>Update given to care team</th>
</tr>
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<tbody>
<tr>
<td>8:10-8:20</td>
<td>L-10 R-15</td>
<td>8:20</td>
<td>11:00</td>
<td>Yes</td>
<td>Yes, but I had a hard time getting him to latch since he was crying. Took 10 min to get</td>
<td>Yes</td>
<td>Yes</td>
<td>√</td>
<td>✓</td>
<td>Skin to skin provided right when he woke up.</td>
<td>√ / 1/19 @ 1:20</td>
</tr>
</tbody>
</table>

How is YOUR team actively engaging mothers/caregivers/staff in non-pharmacologic care

MOTHER/CAREGIVER Tracking OEN’s ability to eat, sleep & console

MOTHER/CAREGIVER Tracking reinforcing Non-pharmacologic bundle
How is YOUR team actively engaging mothers/caregivers/staff in non-pharmacologic care

Cuddler Program launched by SSM Health St. Mary's Hospital and Cardinal Glennon. Example materials graciously shared with ILPQC by Mary Hope and her affiliated institutions:

- CGCH Volunteer Service Description
- Cuddler Presentation
- Cuddler Training
- Parent Letter
- SMH Volunteer Service Description
- Staff Update Letter CG
- Volunteer Tracking Sheet Cuddlers
Maternal Engagement

OUR PROBLEM:
Mothers affected by OUD were automatically separated from their babies due to a lack of training of Mother-Baby staff as well as outdated policy that mandated babies be monitored in nursery immediately after birth.

OUR SOLUTION:
We updated our policy to reflect current recommendations of breastfeeding, rooming-in, Eat-Sleep-Console when appropriate

Education of Mother-Baby staff regarding Modified Finnegan Scoring and guidelines for calling provider

New Lactation Consultants eager to assist these mothers with regular breastfeeding

If admission to nursery required, pharmacologic treatment standardized for NAS treatment
Barriers/Challenges
• NICU RN care for newborns with NAS
• MB RNs less experienced with NAS

Strategies implemented
• Formal in-person education rolled out:
  – Opioid Epidemic
  – ILPQC MNO initiative goals
  – ESC
  – Reducing stigma attached to opioid use disorder
• Modified ILPQC resources to meet system requirements for forms
Barriers/Challenges

- Mother discharged from hospital, but newborn is not

Strategies implemented

- Parent contract
- Update policies
- NICU admission if parents leave hospital
- Adjusted staffing depending on census
- RN and parent documents created
Newborn Care Diary
A Tool for Parents

Baby's Name: ______________________
Baby's MRN: ______________________
Date: _____________________________

<table>
<thead>
<tr>
<th>Time</th>
<th>Size of Baby's Feed</th>
<th>Breakdown (minutes)</th>
<th>Burps? Feeding (breasts/Formula)</th>
<th>Time baby fully awake/feeding up to this food</th>
<th>Time baby went to sleep/feeding up to this food</th>
<th>Did the baby eat for at least 15 minutes or enough to gain weight?</th>
<th>Did the baby sleep for at least 1 hour?</th>
<th>Did the baby cry within 24 hours of being born?</th>
<th>Check for:</th>
<th>Check for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example 15-30 mins</td>
<td>Example 15-30 mins</td>
<td>Example 15-30 mins</td>
<td>Example 15-30 mins</td>
<td>Example Yes</td>
<td>Example Yes</td>
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</tbody>
</table>

Introduction to Family
Care of the Newborn Undergoing Treatment for Neonatal Abstinence Syndrome (NAS)

Congratulations on the birth of your baby!

Your baby is undergoing assessment and treatment for Neonatal Abstinence Syndrome (NAS), and requires your specialized care to recover. The healthcare professionals at Advocate Aurora Health are committed to work with you as a partner to support your baby and your family. Our goal is to assist you and provide the support you need to recognize signs of NAS, and provide you with the guidance to keep your baby safe, calm and comfortable. Details are shared to help minimize the stress on your family and to encourage its disentragement during the birth experience.

Advocate Aurora Health care goal is to have you participate in your baby's care as much as possible. We ask for your cooperation as much as we possibly can during the treatment and care for your baby.

You are everything your baby needs to be safe and healthy!

Nursing care plans may be broader seen to support your baby for some common needs. These needs can include increased care, vigilance (awake or alert), risk of infection, difficulty breathing, and feeding issues. Monitoring, monitoring, monitoring....

Avoiding risks is necessary because some medications can be harmful to your baby. Please speak to your Lactation Consultant if you are breastfeeding your infant.

You are encouraged to talk with your infant if it is not too early. Your infant is a very important part of the experience. It is important for you to understand the care your baby needs. Infants will also come and go for the care you need, but they will stay the same.

You should be encouraged to provide your infant a warm and calming environment. Please keep your baby in your room as much as possible.

Make sure to have your baby's needs met. If you are concerned, contact your Lactation Consultant. Please keep your baby in your arms or in your arms. Please keep your baby in your arms, and if you are concerned, contact your Lactation Consultant.

Visit: www.advocateaurorahealth.com

Thank you for your cooperation.

JULIE Adopted from MINNESOTA Care Tool

Hematology/Oncology Care
Creation: October 30, 2018
Review Date: October 18, 2021
STANDARDIZING PHARM CARE
Percent of hospitals that have implemented standardized pharmacologic guidelines for OENs.

All hospitals, 2018-2019.

- **Baseline (October - December 2017)**: 45% In Place, 16% Working On It, 39% Have Not Started
- **July 2018 (Jul-18)**: 31% In Place, 27% Working On It, 42% Have Not Started
- **August 2018 (Aug-18)**: 27% In Place, 29% Working On It, 43% Have Not Started
- **September 2018 (Sep-18)**: 23% In Place, 33% Working On It, 44% Have Not Started
- **October 2018 (Oct-18)**: 22% In Place, 42% Working On It, 36% Have Not Started
- **November 2018 (Nov-18)**: 18% In Place, 48% Working On It, 35% Have Not Started
- **December 2018 (Dec-18)**: 19% In Place, 42% Working On It, 40% Have Not Started
- **January 2019 (Jan-19)**: 9% In Place, 40% Working On It, 51% Have Not Started
- **February 2019 (Feb-19)**: 10% In Place, 37% Working On It, 54% Have Not Started
- **March 2019 (Mar-19)**: 7% In Place, 39% Working On It, 54% Have Not Started
- **April 2019 (Apr-19)**: 7% In Place, 29% Working On It, 64% Have Not Started

This month’s featured measure!
MNO-Neo Outcome Measures: OENs Requiring Pharmacologic Treatment for NAS

ILPQC MNO OB/Neo Initiative
Percent of OENs (≥35 weeks) requiring pharmacologic treatment for NAS
All Hospitals, 2018-2019
What is your biggest barrier to standardizing pharmacologic care?

- Lack of agreement on when to give medication: 57%
- Lack of agreement on which medication to give: 9%
- Lack of agreement on how to wean medication: 21%
- You didn’t list our biggest barrier: 12%

When poll is active, respond at PollEv.com/il2019. Text IL2019 to 37607 once to join.
Strategies for navigating barriers to standardizing pharmacologic-care

BARRIERS/CHALLENGES

Lack of agreement...
When to give medication
Which medication to give
How and when to wean medication

STRATEGIES FOR NAVIGATING

• Host an [MNO-Neo Grand Rounds](#) for all your providers
• Review definitions and current [provider/staff understanding](#) of OEN and NAS treatment options
• Utilize [ILPQC Assessment Simulations](#) for provider education opportunities
• Create a [pharmacologic treatment protocol](#) specific to your institution
• Perform a small [PDSA on using new treatment protocol](#) and [target specific providers](#) to provide feedback
• Engage different hospital committees (M&M) to explore different options
• Review [ILPQC MNO-Neo webinar slides](#) for tools and accurate information
ILPQC Resources for pharmacologic care

**PRN Morphine Resources**
- ILPQC team webinar and QI corner
- SSM St Mary’s Protocol

**Weaning Resources**
- NNEPQIN ESC Protocol
- BMC Primary and Secondary Agent Algorithms
- OPQC NAS Protocol
Pharmacologic Care
Key Questions For Teams

Is YOUR Team...

Implementing the NON-PHARMACOLOGIC bundle of care for NAS Symptoms as the FIRST LINE treatment?

Standardizing your assessment process for NAS Symptoms across providers, shifts, etc.?

Actively engaging moms/caregivers in a huddle and the decision making to ESCALATE to pharmacologic treatment (after exhausting ALL EFFORTS to reinforce non-pharm care first?)
Barriers/Challenges

- Lack of agreement between neonatologists

Strategies implemented

- Provider discretion to use system recommendations
- System protocol created
SAFE DISCHARGE
MNO-Neo Outcome Measures:
OENs Discharged with a Safe Discharge Plan

ILPQC MNO OB/Neo Initiative
Percent of OENs (≥35 weeks) Discharged with a Safe Discharge Plan
Made in Partnership with Family, Hospital, and Community PCP
All Hospitals, 2018

--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
38% | 33% | 49% | 54% | 55% | 39% | 47% | 41% | 47% | 53% | 49%

Goal
MNO-Neo Structure Measures: Standardized Discharge Planning

This month's featured measure!

Percent of hospitals that have implemented standardized protocols/guidelines for Safe Discharge Planning
All Hospitals, 2018

<table>
<thead>
<tr>
<th>Month</th>
<th>In Place</th>
<th>Working On It</th>
<th>Have Not Started</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>60%</td>
<td>40%</td>
<td>7%</td>
</tr>
<tr>
<td>Jul-18</td>
<td>43%</td>
<td>45%</td>
<td>20%</td>
</tr>
<tr>
<td>Aug-18</td>
<td>45%</td>
<td>35%</td>
<td>28%</td>
</tr>
<tr>
<td>Sep-18</td>
<td>49%</td>
<td>28%</td>
<td>27%</td>
</tr>
<tr>
<td>Oct-18</td>
<td>60%</td>
<td>27%</td>
<td>21%</td>
</tr>
<tr>
<td>Nov-18</td>
<td>67%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Dec-18</td>
<td>65%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Jan-19</td>
<td>60%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Feb-19</td>
<td>65%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Mar-19</td>
<td>63%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Apr-19</td>
<td>69%</td>
<td>7%</td>
<td>7%</td>
</tr>
</tbody>
</table>
What is your biggest barrier to standardizing safe discharge planning?

- Disagreement about the definition of a safe discharge: 49%
- Provider education: 12%
- Outpatient pediatrician engagement: 21%
- Electronic medical record documentation: 1%
- You didn’t list our biggest barrier: 18%

When poll is active, respond at PollEv.com/il2019 BILE Text IL2019 to 37607 once to join.
Strategies for navigating barriers to implementing safe discharge

Unclear about...

What is included in a safe discharge?
How to partner and engage outpatient providers?

- Consider adding an **outpatient pediatrician champion** to your QI team
- **Identify team member** who can serve as a Neo rep on an MNO-OB team
- **Work with OB team** to create a maternal plan of safe care to include aspects of MNO-NEO Safe discharge
- Create a **Safe Discharge process flow map** to staff to reference during discharge
- Create **education material specific to foster families**
- Have **premade folders with education materials** specific to situation
- Perform a small **PDSA on new prenatal consult** process flow and adapt accordingly
ILPQC Resources for Coordinating Safe Discharge Bundle

- This **bundle** of safe discharge criteria should be completed for every family in conjunction with the hospital and community primary care provider before infant discharge.

- **IDPH/ILPQC: Accurate Reporting of NAS in APORS Fact Sheet:**
  - Fact sheet to provide guidance for APORS abstractors on accurate documentation of NAS in APORS

**IN DEVELOPMENT**

- Early Intervention (Child & Family Connections) Referral Guide
- Coordinating with DCFS Fact Sheet
- Mapping Resources Document for Community-Resources for OENs
Safe Discharge Plan
Key Questions For Teams

Is YOUR Team...

- Completing a safe discharge checklist before infant discharge?
- Submitting an APORS report within 7 days for an opioid-exposed Newborn?
- Communicating & coordinating a documented plan with the mother/caregiver, DCFS, and care team?
- Communicating & coordinating a community pediatrician for newborn follow up post-discharge?
Barriers/Challenges

• How to ensure all newborns receive the follow up and services they need

Strategies implemented

• Adapting ILPQC recommendations to work for all Advocate and Aurora hospitals using correct EMR format
Loyola University Medical Center
Maywood, IL

Neonatal ICU MNO Project
May 2019
Loyola University Medical Center

- Member of Trinity Health, one of the largest multi-institutional Catholic healthcare systems in the U.S., serving more than 30 million people across 22 states
- Loyola Medicine is a quaternary care system & includes Loyola University Medical Center (LUMC); located in Maywood, 13 miles west of the Chicago Loop
- 547-licensed-bed hospital, includes the William G. & Mary A. Ryan Center for Heart & Vascular Medicine, the Cardinal Bernardin Cancer Center, a Level 1 trauma center, Illinois's largest burn center, a certified comprehensive stroke center, a children’s hospital, the Loyola University Chicago (LUC) Stritch School of Medicine, and the LUC Marcella Niehoff School of Nursing

- In U.S. News & World Report's 2018-19 Best Hospitals rankings, Loyola ranks among the top three Illinois hospitals (among 200 in the state) and has six nationally ranked specialties
- Newsweek magazine named LUMC to its 2019 list of the World's Best Hospitals: ranking 49th among the 250 U.S. hospitals on the list
- For the sixth year in a row, Loyola University Medical Center has been named to Becker’s Hospital Review's List of "100 Great Hospitals in America"
Neonatal Intensive Care Unit

50 bed, State of Illinois, designated Level III Nursery
- Family centered program
- Provides comprehensive care to infants with pulmonary, neurologic, cardiac disorders, congenital anomalies, inborn errors of metabolism, and critically ill premature infants
- Short term special monitoring to complex, chronic long term hospitalization

Prior to Jan 2019, 3 Neonatal Abstinence Syndrome (NAS) infants (1 in 6/2018 & 2 in 9/2018) were admitted to the NICU:

<table>
<thead>
<tr>
<th>Baby 1</th>
<th>Baby 2</th>
<th>Baby 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure</td>
<td>MAT-methadone</td>
<td>Poly-substance (heroin, cocaine, xanax)</td>
</tr>
<tr>
<td>Days on meds</td>
<td>44 days morphine; discharged on phenobarbitol</td>
<td>24 days</td>
</tr>
<tr>
<td>LOS</td>
<td>28 days</td>
<td>21 days</td>
</tr>
</tbody>
</table>
MNO-NEO Team

TEAM LEAD  Lawrence Bennett, MD – Neonatologist

TEAM MEMBERS
- Anne Cunningham, MSN, RNC-NIC, NICU Manager
- Lisa Festle, MSN, RNC-NIC, APRN/CNS
- Barbara Hering, MSN, RNC-NIC, APRN/CNS
- Margaret Naber, MSN, APRN/NNP-BC
- Pamela Nicoski, PharmD BCPS
Interdisciplinary Workgroup

- Kim Reeks, VP & Chief Nurse Executive Support
- Matthew Leischner, MD, Quality Assurance
- Sachin Amin, MD, Director Neonatology
- Christine Sajous, MD, Neonatal Follow-up Clinic
- Patricia Hummel, NNP/PNP, Neonatal Follow-up Clinic
- Rasa Ragas, MSW, Case Manager
- Sara Schad, Manager of Patient & Volunteer Engagement

Pediatric Members
- Bridget Boyd, MD, Pediatrician
- Cindi Laporte, MSN, Pediatric/PICU Manager
- Josephine Pudwill, MSN, CNL, CPN, Pediatric Educator

OB Members
- Jean Goodman, MD, Director MFM
- Yara Andersen, MSN, Manager Women’s Health
- Teri Boland, MSN, CNS Women’s Health
Team Goals
Sept – Dec 2018

- MNO Algorithm
- Non-Pharmacologic & Pharmacologic Interventions
- NAS Admission Order Set (EMR)
- ESC Tool for Scoring
- Cuddler Program
- Safe Discharge Plan
<table>
<thead>
<tr>
<th>Period</th>
<th>NICU Activities: September 2018 – April 2019</th>
</tr>
</thead>
</table>
| **9/2018 – 10/2018** | • MNO Algorithm developed, including care in Women’s Health, Pediatric Unit, and NICU  
• Identified Non-pharmacologic interventions  
• Medication administration revised for ESC Scoring, i.e., PRN preferred over scheduled RTC doses  
• NAS Admission Order Set (all patient care areas)  
• Safe Discharge Plan  
• Ongoing monthly NICU & inter-disciplinary team meetings |
| **11/2018 – 12/2018** | • ESC multi-disciplinary in-servicing (Grand Rounds, unit in-services)  
• ESC e-learning competency with case study IRR test  
• Cuddler Program (special volunteer training for MNO patients)  
• Ongoing monthly NICU & inter-disciplinary team meetings |
| **1/2019**       | Go Live!  
• Purchased sleep bed recliner  
• Dedicated area in quiet area of open unit  
• RN staffing adjusted 1:1 for MNO patients  
• NAS folders for RN and mother/family (algorithm, ESC tool, diary, ILPQC/IDPH pamphlets)  
• Staff education bulletin board  
• NICU & inter-disciplinary team meetings |
| **2/2019 – 4/2019** | • Feb & March NICU & inter-disciplinary team meetings  
• 3 NAS admissions to NICU  
• Reviewed NICU cases in real time  
• Modified ESC approach for unexpected NICU MNO admissions not meeting criteria → NICU  
Fellows discussed ESC plan with families, administration supported 1:1 RN staffing, CNSs monitored use of ESC tool and reviewed with staff |
Neonatal Abstinence Syndrome Algorithm

Prenatal Clinics/L&D
1. Universal Screening (Audit-C and NIDA): 1st visit, 3rd trimester, and in L&D
2. Treatment Program: Refer to, if not already in one
3. Contract/Agreement: Documentation to ensure aware of plan ahead of time
   a. Rooming in: With infant after delivery in PostPartum and Peds
   b. Support: Family, friends, Cuddlers, RNs
4. Social Worker: Treatment Centers, Follow up appointments, DCF5/Child Advocacy Team
5. Neo Consult: During 2nd trimester

Delivery at ≥ 35 wks and meets criteria:
1. Mom stays in PP with infant
2. After Mom discharged, admit infant to Peds Floor and Mom rooms in
3. Infant managed by NB service
4. Follow MNO Order Set
5. ESC scores; “Team Huddle” PRN
   - Unstable ESC scores – may need to admit to Peds IMC or NICU

Delivery at ≥ 35 wks but does NOT meet criteria (i.e., Mother not in treatment, Support not available, Unstable ESC scores, Other medical issues):
1. Admit infant to NICU
2. Micro Unit, Bed 42
3. 1:1 RN/Infant, Cuddlers
4. Follow MNO Order Set
5. ESC scores (NWII if not eating): "Team Huddle" PRN

Delivery at < 35 wks:
1. Infant admitted to NICU
2. Micro Unit, Bed 42
3. 1:1 RN/Infant, Cuddlers
4. Follow MNO Order Set
5. ESC scores (NWII if not eating): "Team Huddle" PRN

Morphine needed?

NO
Reinforce/Increase non-pharm interventions
Home after stable ESC scores:
1. If maternal heroin or oxycodone use, discharge after 48-72 hours of observation
2. If maternal methadone or buprenorphine use, discharge after 4-7 days of observation

YES
1. Continue ESC (NWII if < 35 wks and/or not eating)
2. Increase dose per Order Set
3. PRN Doses:
   a. Consider scheduled doses after 3 PRN doses in a row
   b. Monitor/ESC (NWII) for 24 hrs after last PRN dose*
   c. Home if ESC scores stable/NWII < 8
4. Scheduled Doses:
   a. Wean 3%/day
   b. Monitor/ESC (NWII) for 48 hrs after last scheduled dose*
   c. Home if ESC scores stable/NWII < 8

*Minimum Stay:
If maternal heroin or oxycodone use, discharge after 48-72 hours of observation; if maternal methadone or buprenorphine use, discharge after 4-7 days of observation

11/15/2018
# Patient Data 1/2019 – 4/2019

<table>
<thead>
<tr>
<th>Patient/Month</th>
<th>Baby 1 - Feb 2019</th>
<th>Baby 2 - March 2019</th>
<th>Baby 3 - March 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GA/ BW/ Gender</strong></td>
<td>39.5/ 3.13kg/ Female</td>
<td>37.0/ 2.418kg/ Female</td>
<td>37.2/ 3.02kg/ Male</td>
</tr>
<tr>
<td><strong>Place of Birth</strong></td>
<td>Inborn</td>
<td>Transfer</td>
<td>Inborn</td>
</tr>
<tr>
<td><strong>Diagnosis</strong></td>
<td>RDS</td>
<td>RDS &amp; NAS</td>
<td>RO anomalies &amp; sepsis</td>
</tr>
<tr>
<td><strong>Mat Age/ Race</strong></td>
<td>36/ Caucasian</td>
<td>26/ Caucasian</td>
<td>28/ Caucasian</td>
</tr>
<tr>
<td><strong>Prenatal Care</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>OUD Identified</strong></td>
<td>Delivery admission (self-report; urine tox)</td>
<td>During current pregnancy (self-report; med record)</td>
<td>Prior to pregnancy (urine tox)</td>
</tr>
<tr>
<td><strong>Prescribed Opiates</strong></td>
<td>Yes</td>
<td>MAT - buprenorphine</td>
<td>No (illicit opiates)</td>
</tr>
<tr>
<td><strong>Other exposures</strong></td>
<td>Tobacco</td>
<td>Tobacco, benzodiazepines</td>
<td>Cocaine</td>
</tr>
<tr>
<td><strong>Mat Psychiatric Dx</strong></td>
<td>No</td>
<td>Yes – depression, anxiety</td>
<td>No</td>
</tr>
<tr>
<td><strong>Evidence of NAS/ESC</strong></td>
<td>Yes/ Yes - modified</td>
<td>Yes/ Yes- modified</td>
<td>Yes/ Yes- modified</td>
</tr>
<tr>
<td><strong>Withdrawal Meds</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Feeds</strong></td>
<td>Breast milk &amp; formula</td>
<td>Formula</td>
<td>Formula</td>
</tr>
<tr>
<td><strong>EI Referral</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>LOS/Safe DC Plan</strong></td>
<td>9 days/yes - mom</td>
<td>16 days/yes – DCFS safety plan of care mat aunt</td>
<td>13 days/yes – DCFS temp guardianship mat aunt</td>
</tr>
</tbody>
</table>
## Identified Barriers and Strategies

<table>
<thead>
<tr>
<th>NICU Barriers</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying SUD women prior to delivery to make them aware of ESC approach</td>
<td>• Review Prenatal Screening Tool</td>
</tr>
<tr>
<td></td>
<td>• Continue MNO education with network hospitals (maternal transports)</td>
</tr>
<tr>
<td>Neonatal complications, i.e., RDS and unable to PO feed</td>
<td>• Implement modified ESC approach as appropriate to minimize need for pharmacologic intervention</td>
</tr>
<tr>
<td>Maintaining RN staffing 1:1</td>
<td>• Enlist VP/CNO support</td>
</tr>
<tr>
<td>Low breastfeeding at discharge</td>
<td>• Enlist LC and Nutrition support</td>
</tr>
<tr>
<td></td>
<td>• Develop breastfeeding guidelines for women with SUD</td>
</tr>
<tr>
<td></td>
<td>• Encourage breastfeeding as appropriate</td>
</tr>
<tr>
<td>No core RN group to care for MNO patients</td>
<td>• Identify NICU RN champions</td>
</tr>
<tr>
<td></td>
<td>• <em>It Starts with Us: Decreasing Stigma Related to SUD</em> program (5/16/19)</td>
</tr>
<tr>
<td></td>
<td>• <em>VON Universal Training for NAS</em> e-learning program (spring/summer 2019)</td>
</tr>
</tbody>
</table>
Implementing Systems Changes: Closing Thoughts
Steps to drive QI change at your hospital:

- Work towards getting all MNO-Neo structure measures In Place (get to green!)
- Review and share your team’s progress toward key data benchmarks every month to determine if team is working to achieve metrics
- Schedule a Grand Rounds to educate providers and staff on the WHY this matters and WHAT to do to improve outcomes for moms/babies affected by opioids.
Implementing Systems Changes

How do we create system changes to impact this measure?

- Implement system wide education to providers, nurses, social works and other care team members

Provide appropriate patient education materials
- Review the current materials regarding literacy level and use of medical jargon
- Do a language audit check with your patient advisors to avoid stigmatizing words
- Consider using graphics/images that relate to the patient

- Coordinate policy changes and education across your hospital system
  - Ensure that prenatal providers, delivery providers and postpartum providers are education and updated
  - Revise policies and guidelines across your hospital system
# Upcoming MNO-Neo Teams Calls

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
</table>
| June 2019 – December | • Newborns with polysubstance exposure, Marijuana  
• Deeper dive into IDPH NAS Advisory Council Recommendations  
• Deeper dive into Coordinating a Safe Discharge  
• QI Topic Calls: Care of OENs who require NICU Stays, coordination between newborn nurseries & NICUs |

Other suggestions? Email them to info@ilpqc.org
THANKS TO OUR FUNDERS

IDPH
Illinois Department of Public Health

CDC
Centers for Disease Control and Prevention

DHS
Illinois Department of Human Services

JB & MK PRITZKER
Family Foundation
MNO-Neo Process Measures: OENs Receiving Toxicology Testing

ILPQC MNO OB/Neo Initiative
Percent of OENs (≥35 weeks) receiving a toxicology test (urine, cord, meconium) for NAS
All Hospitals, 2018-2019

<table>
<thead>
<tr>
<th>Month</th>
<th>% OENs</th>
</tr>
</thead>
<tbody>
<tr>
<td>May-17</td>
<td>90%</td>
</tr>
<tr>
<td>Jun-17</td>
<td>93%</td>
</tr>
<tr>
<td>Jul-17</td>
<td>88%</td>
</tr>
<tr>
<td>Aug-17</td>
<td>94%</td>
</tr>
<tr>
<td>Sep-17</td>
<td>97%</td>
</tr>
<tr>
<td>Oct-17</td>
<td>92%</td>
</tr>
<tr>
<td>Nov-17</td>
<td>98%</td>
</tr>
<tr>
<td>Dec-17</td>
<td>88%</td>
</tr>
<tr>
<td>Jan-18</td>
<td>94%</td>
</tr>
<tr>
<td>Feb-18</td>
<td>91%</td>
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<tr>
<td>Mar-18</td>
<td>92%</td>
</tr>
<tr>
<td>Apr-18</td>
<td></td>
</tr>
</tbody>
</table>
ILPQC MNO OB/Neo Initiative:
Percent of mothers with OUD/OENs (≥35 weeks) who roomed together during infant hospitalization
All Hospitals, 2018-2019

<table>
<thead>
<tr>
<th>Month</th>
<th>% of OENs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>63%</td>
</tr>
<tr>
<td>Jul-18</td>
<td>69%</td>
</tr>
<tr>
<td>Aug-18</td>
<td>67%</td>
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<td>Sep-18</td>
<td>65%</td>
</tr>
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<td>Oct-18</td>
<td>63%</td>
</tr>
<tr>
<td>Nov-18</td>
<td>70%</td>
</tr>
<tr>
<td>Dec-18</td>
<td>57%</td>
</tr>
<tr>
<td>Jan-19</td>
<td>64%</td>
</tr>
<tr>
<td>Feb-19</td>
<td>77%</td>
</tr>
<tr>
<td>Mar-19</td>
<td>75%</td>
</tr>
<tr>
<td>Apr-19</td>
<td>78%</td>
</tr>
</tbody>
</table>
Median Days of Pharmacologic Treatment for OENs (≥35 weeks) with NAS symptoms

ILPQC MNO OB/Neo Initiative
Number of days of pharmacologic treatment for OENs (≥35 weeks) with NAS Symptoms during Infant Hospitalization
All Hospitals, 2018

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<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Hospital Median</td>
<td>13.0</td>
<td>9.5</td>
<td>11.5</td>
<td>9.5</td>
<td>9.0</td>
<td>8.0</td>
<td>9.0</td>
<td>11.5</td>
<td>8.5</td>
<td>9.5</td>
</tr>
<tr>
<td>All Hospital Min</td>
<td>0.0</td>
<td>0.0</td>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>All Hospital Max</td>
<td>61.0</td>
<td>18.0</td>
<td>46.0</td>
<td>29.0</td>
<td>28.0</td>
<td>62.0</td>
<td>30.0</td>
<td>50.0</td>
<td>72.0</td>
<td>18.0</td>
</tr>
</tbody>
</table>
MNO-Neo Outcome Measures: Median Length of Stay for OENs

ILPQC MNO-Neo Initiative
Length of Stay for All OENS with NAS Symptoms (≤35 weeks)
All Hospitals, 2018-2019

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Hospital Median</td>
<td>10.0</td>
<td>6.0</td>
<td>9.0</td>
<td>6.5</td>
<td>8.5</td>
<td>9.5</td>
<td>6.0</td>
<td>10.5</td>
<td>7.0</td>
<td>9.0</td>
</tr>
<tr>
<td>All Hospital Min</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>2.0</td>
<td>3.0</td>
<td>2.0</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>All Hospital Max</td>
<td>71.0</td>
<td>25.0</td>
<td>54.0</td>
<td>54.0</td>
<td>35.0</td>
<td>64.0</td>
<td>40.0</td>
<td>94.0</td>
<td>72.0</td>
<td>39.0</td>
</tr>
</tbody>
</table>