Neonatal NAS Initiative Webinar

Your line has been placed on mute. The webinar will begin shortly.

September 10, 2019
2:00-3:00pm
Key Driver Diagram

Please watch the following VON Micro-lessons this month (September 2019): Lesson #6 and Lesson #9

SMART Aim
We aim to decrease length of stay among newborns diagnosed with NAS in participating GaPQC hospitals from 11.2 days to 10.1 days by 9/30/2021

Global Aim
Improve care for babies and mothers impacted by NAS

Press *6 to unmute yourself
Key Driver Diagrams and Change Concepts

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Learning objectives

At the end of this, you will be able to:

1. Understand the construct of a key driver diagram
2. Apply change concepts to guide possible interventions to test in PDSA cycles
QI goal

- Doing the right thing (evidence based care)
- For every patient (equal care)
- Every time (consistent care)
The Quality of Health Care Delivered to Adults in the United States

Elizabeth A. McGlynn, Ph.D., Steven M. Asch, M.D., M.P.H., John Adams, Ph.D., Joan Keesey, B.A., Jennifer Hicks, M.P.H., Ph.D., Alison DeCristofaro, M.P.H., and Eve A. Kerr, M.D., M.P.H.

Participants received recommended care 55% of the time.
Model for Improvement – 7 Steps

1. Form a team
2. Make an AIM statement
3. Establish measures
4. Identify and select changes to test using process improvement tools
5. Test changes using PDSA cycles
6. Implement changes that work
7. Spread changes to other locations

The Model for Improvement is recommended by the Institute for Healthcare Improvement and was originally developed by API (http://www.apiweb.org/)
Model for Improvement – 7 Steps

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QI Essentials Toolkit

- Cause and Effect Diagram
- Driver Diagram
- Failure Modes and Effects Analysis (FMEA)
- Flowchart
- Histogram
- Pareto Chart
- PDSA Worksheet
- Project Planning Form
- Run Chart & Control Chart
- Scatter Diagram

IHI's QI Essentials Toolkit includes the tools and templates you need to launch and manage a successful improvement project. Each of the nine tools in the toolkit includes a short description, instructions, an example, and a blank template.
Example: Driver Diagram

Aim: Reduce by 50% colonization and infection with MRSA by August 1.

Primary Drivers:
- Reduce transmission of infection and colonization

Secondary Drivers:
- Decolonization
- Screening patients
- Good hygiene
- Reliable precaution routines
- Bundles

Change Ideas:
- Try chlorhexidine washcloths
- Test standing order for screening
- Feedback hand hygiene adherence rates
- Ensure ideal placement of sanitizer
- Incorporate adherence check on rounds
SMART Aim

We aim to decrease length of stay among newborns diagnosed with NAS in participating GaPQC hospitals from 11.2 days to 10.1 days by 9/30/221

Global Aim

Improve care for babies and mothers impacted by NAS
SMART Aim
We aim to decrease length of stay among newborns diagnosed with NAS in participating GaPQC hospitals from 11.2 days to 10.1 days by 9/30/221

Global Aim
Improve care for babies and mothers impacted by NAS

Primary drivers
- Improve identification of mothers and infants at risk
- Increase reliability of scoring for symptoms of NAS
- Increase non-pharmacologic treatment
- Provide family-centered care / avoid mother-infant separation
- Reduce pharmacologic treatment
- Reduce variation in treatment of infants with NAS
- Improve transition to home, engaging parents

Interventions
- Develop standard screening guidelines
- Educate staff on scoring
- Assess inter-rater reliability of scoring
- Use Eat, Sleep, Console
- Increase breastfeeding
- Use non-pharmacologic bundles of care
- Use a standard opioid treatment protocol
- Back-transfer infants stabilized on treatment
- Collaborate with support organizations/agencies
- Provider education to reduce stigma
Key Driver Diagram

Project Name: OPQC Neonatal NAS

GLOBAL AIM
To reduce the number of moms and babies with narcotic exposure, and reduce the need for treatment of NAS.

SMART AIM
By increasing identification of and compassionate withdrawal treatment for full-term infants born with Neonatal Abstinence Syndrome (NAS), we will reduce length of stay by 20% across participating sites by June 30, 2015.

KEY DRIVERS
- Prenatal Identification of Mom Implement Optimal Med Rx Program
- Improve recognition and non-judgmental support for Narcotic addicted women and infants
- Attain high reliability in NAS scoring by nursing staff
- Optimize Non-Pharmacologic Rx Bundle
- Standardize NAS Treatment Protocol
- Connect with outpatient support and treatment program prior to discharge
- Partner with Families to Establish Safety Plan for Infant
- Partner with other stakeholders to influence policy and primary prevention.

INTERVENTIONS
- All MD and RN staff to view “Nurture the Mother- Nurture the Child”
- Monthly education on addiction care
- Fulltime RN staff at Level 2 and 3 to complete D’Apolito NAS scoring training video and achieve 90% reliability.
- Swaddling, low stimulation.
- Encourage kangaroo care
- Feed on demand- MBM if appropriate or lactose free 22 cal formula
- Initiate Rx If NAS score > 8 twice.
- Stabilization/ Escalation Phase
- Wean when stable for 48 hrs by 10% daily.
- Establish agreement with outpatient program and/or Mental Health
- Utilize Early Intervention Services
- Collaborate with DHS/ CPS to ensure infant safety.
- Engage families in Safety Planning.
- Provide primary prevention materials to sites.
GLOBAL AIM

Improve the care of infants with NAS

AIM

Decrease the ALOS of infants with NAS by 50%

BALANCING

1) Transfers to ICU
2) Seizures
3) 30-day readmissions related to NAS

Key Drivers

Non pharmacologic interventions

Simplified assessment of infants

Decreased use of morphine

Communication between units

INTerventions

Standardized non pharmacologic care

Prenatal counseling of parents

Transfer from WBN to the inpatient unit

Development of novel approach to assessment

Rapid morphine weans

Morphine given as needed

Empowering messaging to parents

Spread of change concepts to NICU

KEY DRIVER DIAGRAM

Name: ____________________________ University/Organization Name: ____________________________
Project Title: ____________________________ Health System Sponsor Name: ____________________________
Team Members: ____________________________

Aim:

Primary Drivers

Secondary Drivers

Measures:

Aim/Primary Driver
Outcome Measure(s):

1.

Secondary Drivers
Process measure(s)

1.

2.
Before filling out the template, first save the file on your computer. Then open and use that version of the tool. Otherwise, your changes will not be saved.

Template: Driver Diagram

[Diagram showing a flowchart with sections for Primary Drivers, Secondary Drivers, and Specific Ideas to Test or Change Concepts]
Using Change Concepts to Come Up with Ideas*
(To learn more, see OI 102: How to Improve with the Model for Improvement.)

1. Eliminate things that are not used
2. Eliminate multiple entries
3. Reduce or eliminate overkill
4. Reduce controls on the system
5. Recycle or reuse
6. Use substitution
7. Reduce classifications
8. Remove intermediaries
9. Match the amount to the need
10. Use sampling
11. Change targets or set points
12. Synchronize
13. Schedule into multiple processes
14. Minimize handoffs
15. Move steps in the process close together
16. Find and remove bottlenecks
17. Use automation
18. Smooth workflow
19. Do tasks in parallel
20. Consider people as in the same system
21. Use multiple processing units
22. Adjust to peak demand
23. Match inventory to predicted demand
24. Use pull systems
25. Reduce choice of features
26. Reduce multiple brands of the same item
27. Give people access to information
28. Use proper measurements
29. Take care of basics
30. Reduce demotivating aspects of the pay system
31. Conduct training
32. Implement cross-training
33. Invest more resources in improvement
34. Focus on core process and purpose
35. Share risks
36. Emphasize natural and logical consequences
37. Develop alliances and cooperative relationships
38. Listen to customers
39. Coach the customer to use a product/service
40. Focus on the outcome to a customer
41. Use a coordinator
42. Reach agreement on expectations
43. Outsource for “free”
44. Optimize level of inspection
45. Work with suppliers
46. Reduce setup or startup time
47. Set up timing to use discounts
48. Optimize maintenance
49. Extend specialist’s time
50. Reduce wait time
51. Standardization (create a formal process)
52. Stop tampering
53. Develop operation definitions
54. Improve predictions
55. Develop contingency plans
56. Sort product into grades
57. Desensitize
58. Exploit variation
59. Use reminders
60. Use differentiation
61. Use constraints
62. Use affordances
63. Mass customize
64. Offer product/service anytime
65. Offer product/service anyplace
66. Emphasize intangibles
67. Influence or take advantage of fashion trends
68. Reduce the number of components
69. Disguise defects or problems
70. Differentiate product using quality dimensions
71. Change the order of process steps
72. Manage uncertainty—not tasks
More on Key Driver Diagrams

http://www.ihi.org/education/IHIOpenSchool/resources/Pages/Activities/GoldmannDriver.aspx
Improving Neonatal Abstinence Syndrome (NAS) Outcomes: Creating a Culture of Recovery

September 10, 2019

Brittany Smith, MSNEd., RNC-NIC, NICU Nurse Manager

Angie Reese, Team Lead Peer Recovery Coach, Georgia Council on Substance Abuse
Conflict of Interest

None
Objectives

• Discuss Evidence Based Practices for NAS
• Assess personal perceptions of substance use in patient families
• Discuss the impact of recovery language and culture
• Describe benefits of PEER Recovery Coaches in the NICU
Evolution of NGMC NAS Taskforce

- Team created:
  - Multidisciplinary
    - Neonatal Nurse Practitioner
    - Registered Nurses
    - Physical Therapists
    - Pastoral Care
    - Chief Neonatologist

- Grown to include:
  - Multidisciplinary
    - DFACS representatives
    - Family Treatment Court representative
    - Partners for a Drug Free Hall representatives
    - Georgia Council on Substance Abuse representatives

- Voluntary reporting to state: State Electronic Notifiable Disease Surveillance System (SendSS)
  - Results of mother’s and infant’s drug screens
  - Treatment required or not
  - Infant’s clinical symptoms
  - Department of Family and Children Services (DFACS) referral
  - Head Start Program referral

Hospital data collection
- Length of stay
- Length of treatment
Evolution of Taskforce

• Grown to include:
  • Avita Community Partners representative
  • DFACS representatives
  • Family Treatment Court representative
  • Partners for a Drug Free Hall representatives
  • Georgia Council on Substance Abuse representatives
### Average Length of Stay (LOS)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total NAS Scored</th>
<th>Tx with Methadone</th>
<th>Tx with Morphine</th>
<th>Rebounded</th>
<th>Transfer In</th>
<th>Avg LOS Methadone</th>
<th>Avg LOS Morphine</th>
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<tbody>
<tr>
<td>2014</td>
<td>65</td>
<td>11</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>37.6</td>
<td>25.4</td>
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<td>2015</td>
<td>59</td>
<td>0</td>
<td>12</td>
<td>7</td>
<td>6</td>
<td>0</td>
<td>21.3</td>
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<tr>
<td>2016</td>
<td>86</td>
<td>0</td>
<td>23</td>
<td>13</td>
<td>19</td>
<td>0</td>
<td>21.5</td>
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<tr>
<td>2017</td>
<td>73</td>
<td>0</td>
<td>20</td>
<td>3</td>
<td>10</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>2018</td>
<td>86</td>
<td>0</td>
<td>18</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>19.3</td>
</tr>
</tbody>
</table>
Education and Standardization

• Education
  • Vermont Oxford Network: Universal NAS Training 26
    • Requirement for all Neonatal Intensive Care Unit (NICU) staff
    • Mandatory for Labor and Delivery, Mother/Baby, and Pediatrics staff
  • Non-pharmacologic treatment techniques

• Standardization
  • Initiation of medication and treatment 12
  • Medication weaning guidelines among all providers 9
  • Policy created regarding which infant’s to receive NAS scoring (Finnegan), drug screens, and screening method
Expanding Staff Education

Swaddle bathing
- Improves temperature stability
- Maintains flexed, midline position
- Conserves energy
- Decreases physiological and motor stress

Neonatal Touch and Massage

Primary Care Nursing
- Care delivery system – hospital adopted

Speakers/Lunch and Learns
- Director of Emory Maternal Substance Abuse and Child Development Program
- PhD Candidate, Infant Mental Health Specialist
- Executive Director of Georgia Council on Substance Abuse

NICU Ethics Council
Prenatal Education

• Parents/Care Givers
  – Neonatologist consults
  – Guide for NAS Families \(^{22}\)
    • From Ohio Collaborative
    • Vermont Oxford Network NAS Training \(^{26}\)
  – WARM Line
  – Certified Addiction Recovery Empowerment Specialist (CARES) peer recovery coaches
Advancement of Standardization

- Change in staffing assignments
  - Higher Finnegan scores = lower patient to nurse ratio
- Created NAS order set in electronic health system
- Trialing Eat, Sleep, Console
- Parent/Infant rooming together $^{10,11,20}$
  - In NICU, if meets certain criteria
  - Possible transfer to pediatric floor
    - Once infant is stable in weaning process
- Family Partnership Agreement $^{11}$
- Hospital volunteer program: Cuddlers
- Development of Perinatal Work Group
- CARES NICU Peer Recovery Coaches
Recovery Language and Culture

• Staff
  – Mind set change $^{17,19,24}$
    • Recovery language versus treatment language
      – Disease versus moral failure
  – Recovery Language Training
    • Speaking engagements from Executive Director of Georgia Council on Substance Abuse and CARES peer recovery coaches
    • Do’s and Don’ts of recovery speak
      – Relapse is not a part of recovery
Expanding Recovery Culture

- Community
  - Obstetric offices
  - Pain clinics
  - Health departments
  - DFACS
Stories from the NICU
People support what they help to create...

Questions?
References

1-Anwar, M., Law, R., & Schier, J. (2016). Notes from the field: Kratom (Mitragyna speciosa) exposures reported to poison centers - United States, 2010-2015. MMWR. Mobidity and Mortality Weekly Report, 65(29), 748-749. doi:10.15585/mmwr.mm6529a4


6-Galbis-Reig, D. (2016) A case report of Kratom addiction and withdrawal. WMJ: Official Publication of the State Medical Society of Wisconsin,


Updates/Reminders

• **VON Monthly Lesson Reports**
  – There is an individual at your hospital with the ability to remove staff members. If you need to know who this is, email Bgeorge@vtoxford.org.
  – If you need to add members, or reassign core members, email me or Bgeorge@vtoxford.org.
  – We recommend having at least 5 core members.
    - 8 hospitals have fewer than 5

• **Quarterly LOS Data**

Press *6 to unmute yourself