

CHALLENGES TO IMPLEMENTING IMPROVED NEONATAL ABSTINENCE SYNDROME MANAGEMENT IN A DIVERSE AND COMPLEX HEALTH SYSTEM

Heather Podgorski, Sue Pfister, Erin Stepka, Nancy Fahim, Carmen Henke, Andrea Leo, Matt Thunselle, Letty Tam, Rebecca Ratzlaff, Sally Walstrom, Cathy Anderson, and Mary Pylipow
 North Memorial Medical Center, Robbinsdale, Minnesota
 Maple Grove Hospital, Maple Grove, Minnesota

The authors have documented they have no financial relationships to disclose or conflicts of interest to resolve.



AIM

Decrease length of stay for patients with NAS from baseline without increasing readmissions

Improve communication by providing educational materials about NAS and expected hospital course to mothers at risk for delivering affected infants

Increase staff education about NAS symptoms, scoring and non-pharmacologic management

Standardize guidelines for pharmacologic therapies

METHODS

1. Patient Communication

- Educational brochure available before delivery (example at right)
 - Parental survey to evaluate communication with staff
- ### 2. Nursing Educational Materials
- Video of non-pharmacologic calming techniques
 - Online materials to refresh general NAS knowledge

3. Pharmacologic Guideline

- Order set for electronic medical record

What is Neonatal Abstinence Syndrome (NAS)

NAS is a group of problems that occur in a newborn who was exposed to prescription or other opiates before birth.

Why does my baby need to stay in the hospital?

Babies who are withdrawing from opiates are at risk for many side effects including: fever, abnormal reflexes, excessive sucking, irritability, poor feeding and even seizures.

Our staff will follow up with you by phone after you go home.

How long does my baby need to stay in the hospital?

The average baby with NAS stays in the hospital three to four weeks. Some babies go home earlier and some stay as long as six weeks or more.

How will you decide how long my baby needs to stay?

While your baby is here we will assess him or her using a NAS score sheet on a regular schedule.

We will assess:

1. Presence of high pitched cry
2. How long he/she sleeps
3. Startle reflex
4. Presence of tremors
5. Muscle tone
6. Signs of irritated skin
7. Sweating
8. Fever
9. Yawning
10. Mottling
11. Stiffness/Sneezing
12. Nasal flaring
13. Excessive sucking
14. Vomiting
15. Stools

If his/her score is elevated we will begin treatment with methadone or morphine. We will continue to assess his/her score and adjust the medication as needed. We will try to wean your baby's medication every 2 to 3 days as he or she tolerates. We will work with you to get your baby home as soon as possible.

Are there things I can do to help with my baby's symptoms?

Babies with NAS like a quiet area with little stimulation. Many babies will enjoy quiet classical music because of the unique rhythm it has. Your baby may also enjoy baby massage. Our staff will guide you in discovering what is comforting for your baby.

Can I breast feed my baby?

We encourage breast feeding. Breast milk is the best food for babies and it is the best way for you to bond with your infant. Medications, both prescribed and others, can pass through your breast milk. If you are being treated with buprenorphine or methadone, giving your baby breast milk with our treatment helps your baby wean from the opiate faster. If you have been using other opiates or substances we discourage breastfeeding. If you choose to supplement your baby's feedings with formula, we will most likely give mixed breast/milk formula feedings to spread the breast milk out over the day. Formula fed infants tolerate weaning well, too.

What are other things I can do to help with my baby's feeding time?

You can help your baby by learning to "read" his or her cues and responding in a calming and consistent manner. Your baby may need some help learning to suck, swallow and breathe easily and a pacifier may help to calm your baby as well as provide practice in sucking.

Neonatal Abstinence Syndrome



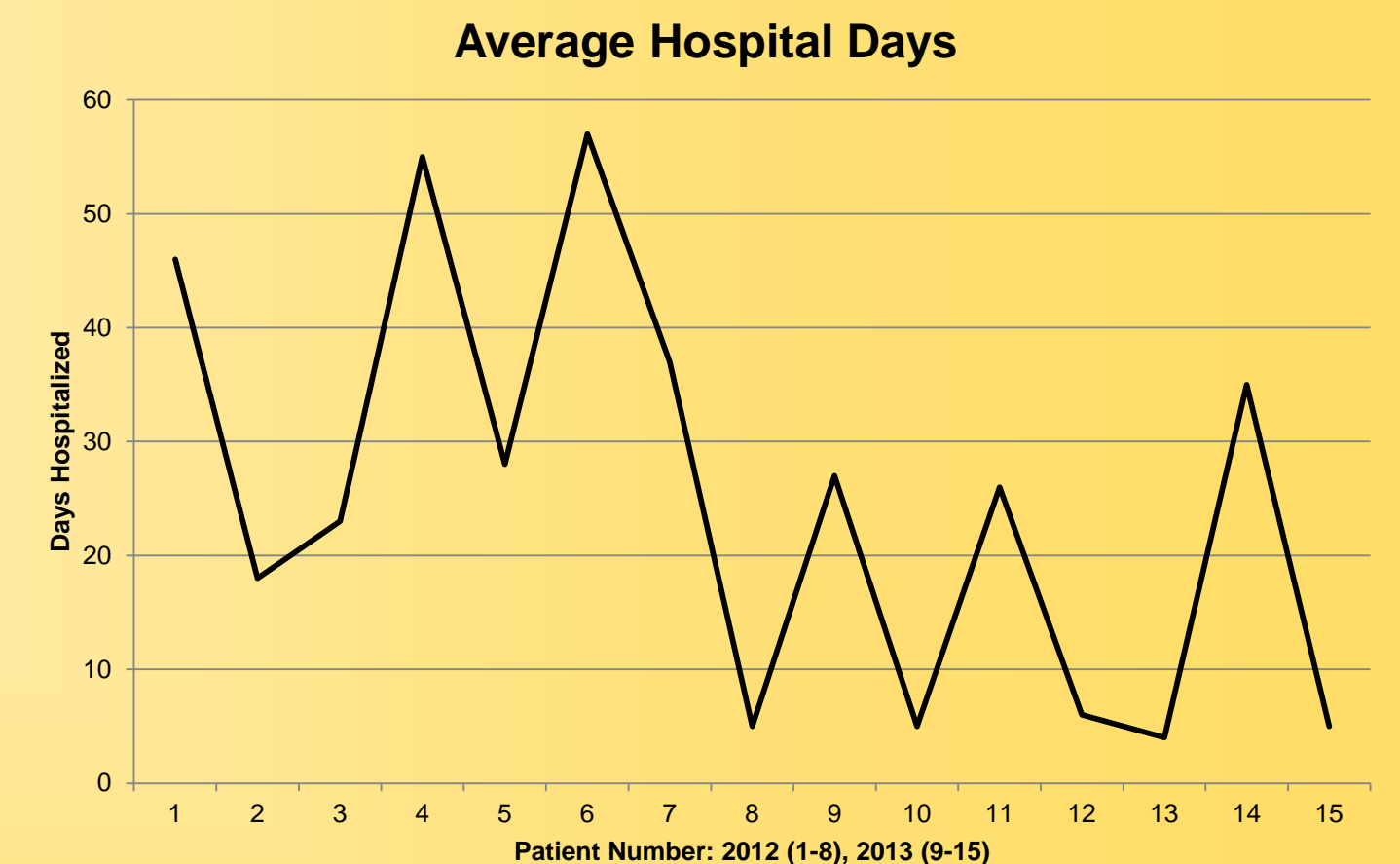
TEAM

- Neonatology
- Social Work
- Nursing
- OT
- Lactation
- NNPs
- Pharmacy
- Speech
- Nutrition



RESULTS

- Average length of stay 33 days in 2012 decreased to 15 days in 2013
- 14 positive urine or meconium drug screens for any illicit drugs in 2013 with 4 positive for opiates
- 2 Patients received non-pharmacologic treatment only in 2013



SETTING

- Level III Urban NICU and Level II Suburban NICU
- Academic Neonatologists
- Separate Administrators and Staff
- 4878 Births and 756 NICU Admissions in 2013

DISCUSSION

Implementing change for two separate NICUs with separate leadership, nursing staff, and support staff has been challenging. To overcome this challenge, the importance of the subject has been impressed upon all stakeholders with a positive response. Input from members of a multi-disciplinary team from both sites including: pharmacy, nursing, social work, occupational therapy, nutrition, speech therapy, nurse practitioners, and physician staff. Learning the process as a team has been valuable for this project and for future quality improvement work.