Reducing pharmacologic treatment, improving value, and enhancing the family experience of newborn opioid withdrawal (NAS)

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Neonatal Abstinence Syndrome

Presentation

• Syndrome of drug withdrawal in neonates
• Spectrum of signs of and symptoms

Diagnosis/Course

• History
• Toxicology screens
• Environmental care
• Medication

Dartmouth-Hitchcock
Triple Aim

- Population Health
- Experience of Care
- Per Capita Cost

Dartmouth-Hitchcock
MMWR August 2018

Cases per 1,000 deliveries hospitalizations

Dartmouth-Hitchcock
NAS Regionally

[Map of the United States showing varying regions with different color intensities indicating NAS rates, ranging from areas with no data to areas with ≥ 20.0 rates.]
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SPECIAL ARTICLE

Increasing Incidence of the Neonatal Abstinence Syndrome in U.S. Neonatal ICUs

Veeral N. Tolia, M.D., Stephen W. Patrick, M.D., M.P.H., Monica M. Bennett, Ph.D., Karna Murthy, M.D., John Sousa, B.S., P. Brian Smith, M.D., M.P.H., M. L. Crowther, B.S., H. Clark, M.D.,

4% of NICU beds occupied by babies with NAS

BACKGROUND
The incidence of the neonatal abstinence syndrome, a drug-withdrawal syndrome that most commonly occurs after in utero exposure to opioids, is known to have

LOS: 24 to 32 days
**Parent Voices**

**Desire for education/preparation**

*I wish I had known a lot more about NAS before I gave birth…I didn’t think the consequences… would affect the baby so much."

**Partners in care team**

“I know my baby more than anybody else does. So they have to rely on that to help them out you know with scoring and knowing what she’s going through.”

**Interactions with staff**

“I’m a recovering heroin addict. I think overcoming something like that and then feeling like you are judged because of it, you end up building some resentment towards people.”

Results: LOS

Results: Hospital costs


Exposed population: $11,000 to $5,300
Meta-analysis: NAS, rooming-in, LOS

Meta-analysis: pharmacotherapy

Parent Voices

**Education and Preparation**

““My weekly meetings with them [Moms in Recovery Program] really prepared us for what they were going to do for testing the baby to see if they were healthy.”

**Assessment Process and Care Focus**

“I had a baby born 5 years ago and they were more rigid on their scoring at that time, following the protocol more. I was less fearful this time”

**Parental Role**

“They’ve told us multiple times [mom’s] the best medication for him, skin to skin or milk and just being here in the room.”

**Care Environment**

“Since I’m with my baby all the time, I’ve been able to tell if something is caused by withdrawal or normal behavior.”
Implications

- Centers with LOS of a month or more could significantly shorten hospital course

- If model adopted widely, potential cost savings and positive impact on families are tremendous

$2.5 billion—charges
$900 million--costs