Ethical Issues Related to Long-Term Consequences of Neonatal Abstinence Syndrome (NAS)

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Content and Objectives

• **Content:** Describe common ethical issues related to caring for babies affected by NAS and their families. Differentiate issues that usually arise early in the child’s life from those that become evident later.

• **Learning Objective:** Suggest strategies for resolving ethical issues related to caring for babies affected by NAS and their families.
Some Ethical Assumptions

• Good ethics begins with good facts.
  – Beliefs, even those strongly held, are not necessarily facts.
  – Reliance on anecdotal evidence leads to hasty generalization.
  – Causal relationships are better supported by larger, more representative samples.
  – Demonstration of causation requires more than assumptions of cause.
Consequentialism

• Consequentialists judge actions based on outcomes. They can focus on outcomes:
  – for individuals (e.g., infants with NAS)
  – for primary stakeholders (e.g., mothers and infants)
  – for society at large (e.g., taxpayers funding healthcare)
  – of isolated acts (e.g., a woman’s opiate use)
  – of social patterns (e.g., racism, economic disparities)
  – of rules (e.g., a law that likely deters prenatal care)
  – in the short term or over the long term
Consequentialist Assumptions

• The future is unknown; predictions concern the probable future.
  – Past behavior is generally an accurate predictor of future actions.
    • A history of substance use points to the difficulty of rehab; use is often a chronic problem.
    • A history of discriminatory enforcement of law suggests non-targeted law will not be fairly enforced.

Consequentialism favors actions that on balance produce more benefit than harm.
Deontological Assumptions

• Deontological (duty-based) analysis generally favors actions that respect autonomy or self-determination.
  – The harm principle limits respect for self-determination.
  • To be justified, restriction of an individual’s freedom must be effective in preventing the harm in question and no option that would be less intrusive to individual liberty would be equally effective at preventing the harm

NAS Definition

• Neonatal abstinence syndrome (NAS) is a group of problems that occur in newborns exposed to addictive opiate drugs while in the mother’s womb.

• At birth, the baby may still be dependent on the drug. Symptoms of withdrawal may occur, because the baby is no longer getting the drug after birth.

Presentation & Duration

• Symptoms of NAS often begin within 1 - 3 days after birth, but may take up to a week to appear.
• Neonatal abstinence syndrome can last from 1 week to 6 months.

• Among the 3.39 per 1000 infants treated for NAS in the United States annually, average length of hospitalization is ~16 days, but prolonged stays are common.
  http://pediatrics.aappublications.org/content/134/2/e527.full
Symptoms of NAS

- Blotchy skin coloring (mottling)
- Diarrhea
- Excessive or high-pitched crying
- Excessive sucking
- Fever
- Hyperactive reflexes
- Increased muscle tone
- Irritability

- Poor feeding
- Rapid breathing
- Seizures
- Sleep problems
- Slow weight gain
- Stuffy nose, sneezing
- Sweating
- Trembling (tremors)
- Vomiting
Short-Term Responses to NAS

• Provide a quiet, comfortable environment
  – Try swaddling

• Recognize that strengthening the mother-child bond is good for the child
  – Encourage skin-to-skin contact
  – Encourage breast feeding

• Provide pharmacologic assistance as needed

Long-Term Effects Related to Prenatal Drug Exposure

• Growth
• Behavior
• Cognitive/executive functioning
• Language
• Achievement
• Predisposition to own drug use

Effects depend on multiple factors—substance(s) used, frequency of use, when used, environmental factors
Long-term Effects Related to Prenatal Drug Exposure

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http://pediatrics.aappublications.org/content/131/3/e1009/T2.expansion.html#fn-4
Long-term Effects Related to Prenatal Opioid Exposure

• Hyperactivity and short attention span have been noted in toddlers prenatally exposed to opiates.
  

• Older exposed children have demonstrated memory and perceptual problems.
  
Long-term Effects Related to Prenatal Opioid Exposure

“There is, however, increasing evidence of adverse effects [of methadone maintenance treatment] upon developing cortical and visual function in children of treated heroin-addicted mothers. The longer-term implications of this are not yet clear, and are confounded by poly-drug misuse and ongoing social deprivation.”

Long-term Effects Related to Prenatal Opioid Exposure

“There is a paucity of evidence regarding outcome for infants who require pharmacological treatment for neonatal abstinence syndrome compared to those who have only mild symptoms. Well-controlled studies of the treatment of heroin misuse in pregnancy that take account of both neonatal and longer term outcomes for the child are urgently required.”

Financial Consequences of NAS

“Between 2000 and 2009, total hospital charges for NAS are estimated to have increased from $190 million (95% CI, $160-$230 million) to $720 million (95% CI, $640-$800 million), adjusted for inflation ($P$ for trend $< .001$). In 2009, the estimated number of newborns with NAS was 13 539 (95% CI, 12 441-14 635), or approximately 1 infant born per hour in the United States with signs of drug withdrawal.”

NAS Prevalence

• Over the last decade, newborns have experienced a threefold increase in NAS hospitalizations.

http://pediatrics.aappublications.org/content/134/2/e527.full

• Recently, a collaborative of neonatology groups representing Ohio’s 6 regional perinatal centers recognized the emergence of an NAS epidemic.
  – Baseline data confirmed that the groups managed >600 infants diagnosed with NAS in 2011, representing an increase of ~50% in NAS cases compared with 2009

The Ohio Children's Hospital Neonatal Research Consortium, unpublished data, July 2012.
NAS Prevalence

• Over a decade, maternal antepartum opioid use increased from 1.19 to 5.63 per 1000 hospital births annually.


• In 2011, up to 12.9% of women were dispensed an opioid at some point during pregnancy.

TN  SB 2532/HB 1519

• Allows prosecution of a woman for illegal use of a narcotic while pregnant.

• Permits women to avoid prosecution by:
  – enrolling in a long-term addiction recovery program while pregnant,
  – Remaining in the program after delivery, and
  – Successfully completing the program
NAPW Analysis: Unintended Effects

• Peer-reviewed research indicates that testing with the threat of child welfare interventions will actually undermine maternal, fetal, and child health by deterring women from seeking prenatal care and in-hospital births.

• [The law will] deter those women who did seek such care from speaking honestly and openly about their drug or alcohol problems to their health care providers.

NAPW Alternatives

• Ensure that drug treatment, prenatal care, and other reproductive and mental health services are widely available and fully accessible to pregnant and parenting women and their families.

• Create and fund treatment programs that follow the recommendations of experts on women’s treatment including and those things women themselves identify as necessary for recovery.

• Provide meaningful training to child welfare workers on issues of drug and alcohol use and treatment for drug addiction, as well as issues of post traumatic stress disorder that are highly associated with drug and alcohol problems.

NAPW Alternatives

• Increase training for child welfare workers in related areas including how trauma affects parents as well as children; and reduce their caseloads so that they can identify and respond appropriately to all cases where a parent’s behavior in fact indicates an inability to parent.

• Enforce anti-discrimination laws against existing drug treatment programs that deny access to pregnant women.

• Increase support for family preservation services generally so that expensive foster care is not the only option available to caseworkers who seek to protect children rather than punish families.