



NAS Case Definition and Coding

Jodi Jackson, MD
KPQC Chairperson



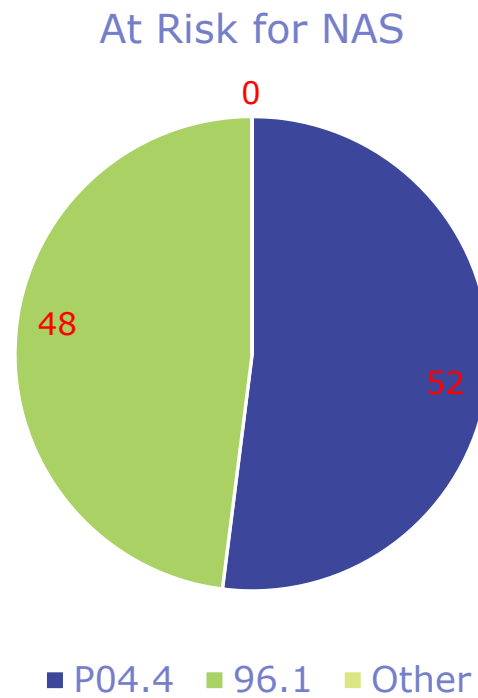


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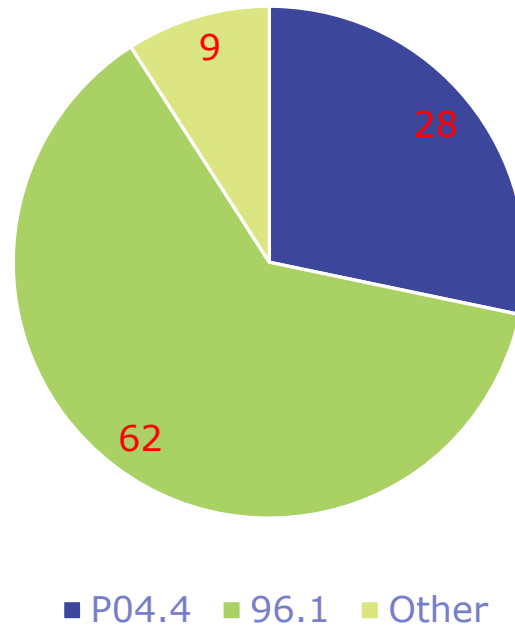


KPQC Centers: At Risk for NAS



KPQC Centers: Infant treated for NAS

Pharmacological Tx for NAS



Definition of NAS

- CSTE defines **confirmed, probable** or **suspect NAS**
- There is a use of “diagnosis of NAS, or chief complaint of NAS, or a clinically compatible presentation of 3 or more signs of withdrawal” in the definition
- It is difficult for clinicians to be consistent with their diagnosis, when the actual diagnosis is used in the definition.
- We propose use of the Florida definition of NAS for Kansas.
- To be the true NAS code 96.1
 - Documented or known exposure to opioid, benzo or barbiturate
 - Signs of NAS requiring some care different than routine observation:
 - Medical treatment or
 - Prolonged hospital stay for comfort cares beyond normal observation period:
 - 72 hours : exposure to short acting opiate
 - 5 days: exposure to long acting opiate
 - Excessive need for comfort cares during hospitalization (i.e. 24/7 holding)
- Always start with the known exposure code



Exposure Codes

- These ICD-10-CM codes were new in October 2018 to designate in utero exposure:
 - P04.14 Newborn affected by maternal use of opiates
 - P04.17 Newborn affected by maternal use of sedative-hypnotics
 - P04.1A Newborn affected by maternal use of anxiolytics
 - P04.11 Newborn affected by maternal antineoplastic chemotherapy
 - P04.12 Newborn affected by maternal cytotoxic drugs
 - P04.13 Newborn affected by maternal use of anticonvulsants
 - P04.14 Newborn affected by maternal use of opiates
 - P04.15 Newborn affected by maternal use of antidepressants
 - P04.16 Newborn affected by maternal use of amphetamines
 - P04.17 Newborn affected by maternal use of sedative-hypnotics
 - P04.1A Newborn affected by maternal use of anxiolytics
 - P04.18 Newborn affected by other maternal medication
 - P04.19 Newborn affected by maternal use of unspecified medication
 - P04.41 Newborn affected by maternal use of cocaine
 - P04.3 Newborn affected by maternal use of Alcohol
 - P04.2 Newborn affected by maternal use of tobacco
 - P04.42 Newborn affected by maternal use of hallucinogens
 - P04.49 Newborn with exposure to methadone, at risk for methadone withdrawal
 - P04.9 Intrauterine drug exposure ----- write in drug if not one of the above



Which Codes to Use?

- P04.xx Codes to be used when:
 - There is a known exposure (history or drug screen)
 - No clinical signs of withdrawal
 - Classified as “suspect” (exposure) by CSTE
- P04.xx Codes to be used when:
 - There is a known exposure (history or drug screen)
 - Clinical signs of withdrawal
 - No exposure to narcotics, benzos or barbiturates
 - Classified as “suspect” (exposure) by CSTE
- P04.xx **and** 96.1 Codes to be used when:
 - There is a known exposure (history or drug screen)
 - Clinical signs of withdrawal
 - Yes exposure to narcotics, benzos or barbiturates
 - Classified as “possible or confirmed NAS” by CSTE



Which Exposures Could be 96.1 and P04.xx

- Could possibly be coded as 96.1:
 - P04.14 Newborn affected by maternal use of opiates
 - P04.17 Newborn affected by maternal use of sedative-hypnotics
 - P04.1A Newborn affected by maternal use of anxiolytics
 - P04.13 Newborn affected by maternal use of anticonvulsants
- Cannot be coded as 96.1:
 - P04.11 Newborn affected by maternal antineoplastic chemotherapy
 - P04.12 Newborn affected by maternal cytotoxic drugs
 - P04.15 Newborn affected by maternal use of antidepressants
 - P04.16 Newborn affected by maternal use of amphetamines
 - P04.18 Newborn affected by other maternal medication
 - P04.19 Newborn affected by maternal use of unspecified medication
 - Any others



CSTE Definitions

- Confirmed NAS; code 96.1
 - + infant drug screen for opioids, benzos or barbiturates
 - Symptoms requiring increased care (as defined slide 1)
- Probable NAS; code 96.1
 - History of exposure to above or + maternal drug screen for opiates, benzo or barbiturates
 - Negative infant drug screen
 - Symptoms requiring increased care (as defined slide 1)
- Suspected NAS; coded by exposure code P04.xx
 - All other drug exposures with or without symptoms
 - Exposure to opioids, benzo or barbiturates without significant symptoms
- See slides for many more details!



Neonatal Abstinence Syndrome (NAS) Standardized Surveillance Case Definition Position Statement



Council of State and Territorial Epidemiologists

Definition of NAS



Neonatal abstinence syndrome (NAS) is withdrawal in neonates following chronic *in utero* exposure to medications or illicit drugs, most commonly opioids, benzodiazepines and barbiturates

- Withdrawal signs:

- central nervous system (high pitched cry, hypertonia, tremors, seizures, hyperactive Moro reflex, poor sleep, seizures, poor feeding)
- autonomic nervous system (sneezing, nasal congestion, frequent yawning, fever, mottling)
- gastrointestinal (regurgitation, vomiting, loose stools)
- respiratory dysregulation (tachypnea, respiratory distress)

PROPOSED CASE DEFINITIONS



Council of State and Territorial Epidemiologists

Tier 1 NAS Case Definitions: CONFIRMED CASE (96.1)



- Hospitalized neonate <28 days of age
- Presentation / clinical signs not explained by another etiology*

| <i>In utero exposure</i> ** | Diagnosis, Chief Complaint or Clinically Compatible Presentation | Neonatal Confirmatory Laboratory Evidence |
|--|--|---|
| opioids, barbiturates, benzodiazepines | Diagnosis of NAS | Positive |
| opioids, barbiturates, benzodiazepines | Chief complaint of NAS | Positive |
| opioids, barbiturates, benzodiazepines | Clinically compatible presentation of 3 or more signs of withdrawal*** | Positive |

Dx, CC or signs: Signs of NAS requiring some care different than routine observation

- Medical treatment
- Prolonged hospital stay for comfort cares
- Excessive need for comfort cares during hospitalization

*e.g., sepsis, intracranial hemorrhage, hypocalcemia

**opioids (any level) including natural (e.g., morphine, codeine), semi-synthetic (e.g., heroin), and synthetic (e.g., fentanyl, or fentanyl analogs), or opioid metabolites (e.g., 6-monoacetylmorphine), benzodiazepines (e.g., diazepam, alprazolam), or barbiturates (e.g., phenobarbital)

***Withdrawal signs:

central nervous system (high pitched cry, hypertonia, tremors, seizures, hyperactive Moro reflex, poor sleep, seizures, poor feeding)

autonomic nervous system (sneezing, nasal congestion, frequent yawning, fever, mottling)

gastrointestinal (regurgitation, vomiting, loose stools)

respiratory dysregulation (tachypnea, respiratory distress)

Tier 1 NAS Case Definitions: PROBABLE CASE – Types 1 & 2 (96.1)



- Hospitalized neonate <28 days of age
- Presentation / clinical signs not explained by another etiology*

| Type | Maternal History of Chronic Substance** Use in the 4 Weeks Prior to Delivery | Diagnosis, Chief Complaint or Clinically Compatible Presentation | Maternal Confirmatory Laboratory Evidence | Neonatal Confirmatory Laboratory Evidence |
|------|--|--|---|---|
| 1 | # | Diagnosis of NAS | | No/unknown |
| 1 | # | Chief complaint of NAS | | No/unknown |
| 1 | # | Clinically compatible presentation of 3 or more signs of withdrawal*** | | No/unknown |
| 2 | | Diagnosis of NAS | Positive## | No/unknown |
| 2 | | Chief complaint of NAS | Positive## | No/unknown |
| 2 | | Clinically compatible presentation of 3 or more signs of withdrawal*** | Positive## | No/unknown |

Dx, CC or signs: Signs of NAS requiring some care different than routine observation

- Medical treatment
- Prolonged hospital stay for comfort cares
- Excessive need for comfort cares during hospitalization

*, **, *** See Tier 1 Confirmed Case Slide

#chronic opioid use (including Medication Assisted Therapy, illicit use, or pain medication), or benzodiazepine, or barbiturate use

##opioid, benzodiazepines or barbiturates

Tier 1 NAS Case Definitions: SUSPECT CASE – Types 1 – 5 (P04.XX)



- Hospitalized neonate <28 days of age
- Presentation / clinical signs not explained by another etiology*

| Type | Maternal History of Chronic Substance Use in the 4 Weeks Prior to Delivery | Diagnosis, Chief Complaint or Clinically Compatible Presentation/Clinical Presentation | Maternal Confirmatory Laboratory Evidence | Neonatal Confirmatory Laboratory Evidence |
|------|--|--|---|---|
| 1 | Non-opioid, non-benzodiazepine or non-barbiturate | Diagnosis of NAS | No/unknown | No/unknown |
| 1 | Non-opioid, non-benzodiazepine or non-barbiturate | Chief complaint of NAS | No/unknown | No/unknown |
| 1 | Non-opioid, non-benzodiazepine or non-barbiturate | Clinically compatible presentation of 3 or more signs of withdrawal*** | No/unknown | No/unknown |
| 2 | Unknown type | Diagnosis of NAS | No/unknown | No/unknown |
| 2 | Unknown type | Chief complaint of NAS | No/unknown | No/unknown |
| 2 | Unknown type | Clinically compatible presentation of 3 or more signs of withdrawal*** | No/unknown | No/unknown |

Dx, CC or signs: Signs of NAS requiring some care different than routine observation

- Medical treatment
- Prolonged hospital stay for comfort cares
- Excessive need for comfort cares during hospitalization

*,***See Tier 1 Confirmed Case Slide

Tier 1 NAS Case Definitions: SUSPECT CASE – Types 1 – 5, cont. (P04.XX)



- Hospitalized neonate <28 days of age
- Presentation / clinical signs not explained by another etiology*

| Type | Maternal History of Chronic Substance Use in the 4 Weeks Prior to Delivery | Diagnosis, Chief Complaint or Clinically Compatible Presentation/Clinical Presentation | Maternal Confirmatory Laboratory Evidence | Neonatal Confirmatory Laboratory Evidence |
|------|--|--|---|---|
| 3 | | Diagnosis of NAS | Positive§ | No/unknown |
| 3 | | Chief complaint of NAS | Positive§ | No/unknown |
| 3 | | Clinically compatible presentation of 3 or more signs of withdrawal*** | Positive§ | No/unknown |
| 4 | Opioid, benzodiazepine or barbiturate | Clinical presentation of 1 or 2 signs of withdrawal*** | No/unknown | No/unknown |
| 5 | | Clinical presentation of 1 or 2 signs of withdrawal*** | Positive§§ | No/unknown |

Dx, CC or signs: Signs of NAS requiring some care different than routine observation

- Medical treatment
- Prolonged hospital stay for comfort cares
- Excessive need for comfort cares during hospitalization

* , ***See Tier 1 Confirmed Case Slide

§Non-opioid, non-benzodiazepine or non-barbiturate drug of abuse in the 4 weeks prior to delivery

§§Chronic opioid, benzodiazepine or barbiturate use in the 4 weeks prior to delivery

Proposed Laboratory Criteria



Confirmatory laboratory evidence -- NEONATE

Detection of opioids (any level) including natural (e.g., morphine, codeine), semi-synthetic (e.g., heroin), and synthetic (e.g., fentanyl, or fentanyl analogs), or opioid metabolites (e.g., 6-monoacetylmorphine), benzodiazepines (e.g., diazepam, alprazolam), or barbiturates (e.g., phenobarbital) in any clinical specimen from a screening or other laboratory test (See Appendix 3 for exact laboratory criteria). This would include positive immunoassay results as well as confirmatory testing based on liquid or gas chromatography-mass spectrometry.

Presumptive laboratory evidence – BIRTH MOTHER

Detection of opioids (any level) including natural (e.g., morphine, codeine), semi-synthetic (e.g., heroin), and synthetic (e.g., fentanyl, or fentanyl analogs), or opioid metabolites (e.g., 6-monoacetylmorphine), benzodiazepines (e.g., diazepam, alprazolam), or barbiturates (e.g., phenobarbital) in blood or urine from a screening or other laboratory test in the four weeks prior to delivery (See Appendix 3 for exact laboratory criteria). This would include positive immunoassay results as well as confirmatory testing based on liquid or gas chromatography- mass spectrometry.

Supportive laboratory evidence – BIRTH MOTHER

Detection of a non-opioid, non-benzodiazepine, or non-barbiturate drug of abuse, including cocaine, methamphetamine, amphetamine, or cannabinoid in blood or urine from a screening or other laboratory test in the four weeks prior to delivery (See Appendix 3 for exact laboratory criteria). This would include positive immunoassay results as well as confirmatory testing based on liquid or gas chromatography-mass spectrometry.