



Neonatal Abstinence Syndrome (NAS) Initiative

NAS Data Collection: Definitions, Procedures and Tools

Partnering to Improve Health Care Quality
for Mothers and Babies



Welcome!

- **Please enter your Audio PIN on your phone so we can un-mute you for discussion**
- If you have a question, please enter it in the Question box or Raise your hand to be unmuted
- This webinar is being recorded
- Please provide feedback on our post-webinar survey

Agenda

- 👤 Key Driver Diagram
- 👤 Definition and ICD-10 codes
- 👤 Inclusion and Exclusion Criteria
- 👤 Type and Frequency of Data Collection
- 👤 Data Collection Tools
- 👤 Upcoming Webinars

Save the Date: April 4-5, Tampa FPQC 2019 Conference

- 👤 **Racial/ethnic disparities in maternal mortality & morbidity – Elizabeth Howell, MD, MPP**

Professor of Population Health Sciences & Policy, Obstetrics, Gynecology, and Reproductive Science, & Psychiatry, Mount Sinai Health System



- 👤 **Parent topic – Lelis Vernon**

NICU Mom, National Network of Perinatal Quality Collaboratives, Patient and Family Centered Care advocate



- 👤 **Racial/ethnic disparities in NICU care quality – Jochen Profit, MD**

Associate Professor of Pediatrics (Neonatology), Stanford University



- 👤 **Change Management– Bethany Robertson, DNP, CNM**

Assistant Professor Clinical, Emory University



For More Information, go to www.fpqc.org



Partnering to Improve Health Care Quality
for Mothers and Babies

Aim

By 6/2020, FPQC participating hospitals will have a 20% decrease in average length of stay^{1,2} for infants ≥ 37 weeks GA diagnosed with NAS regardless of inpatient hospital location.

¹ Baseline length of stay pending – derived from an average of each hospital's baseline LOS

² Length of stay starts with date of birth and ends with date of final disposition.

Primary Drivers

Caregiver engagement

Nonpharmacologic treatment

Pharmacologic treatment

Safe discharge

Interventions

Educate staff and providers on trauma-informed care, psychology of addiction, and communication methods

Educate the primary parent for each NAS infant

Assess parent perception of communication prior to hospital discharge using standardized FPQC survey

Assess duration of rooming-in

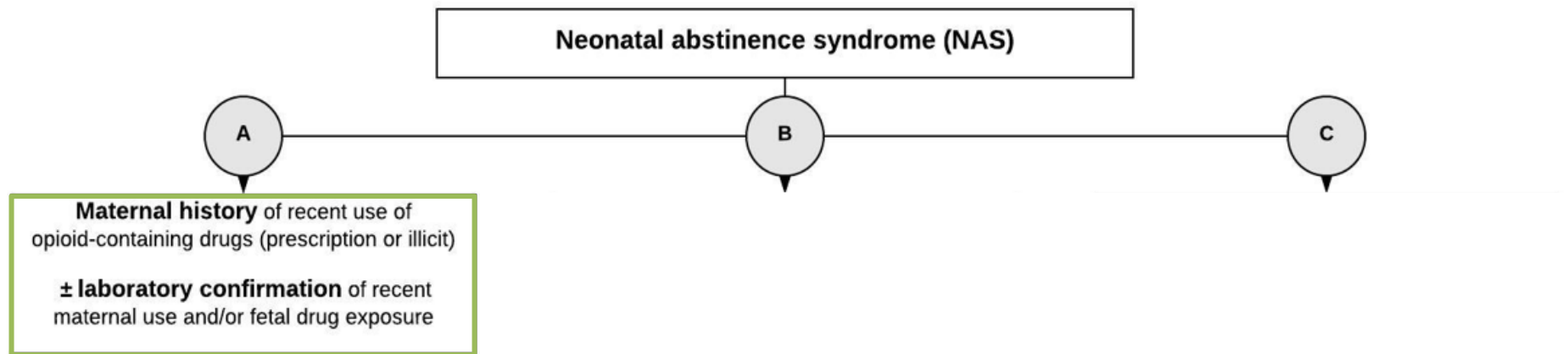
Determine rates of any breastfeeding or MOM intake on day of life 3 and day of discharge to home

Comply with a standardized NAS guideline including use of recommended initial drug and dose, and medication weaning

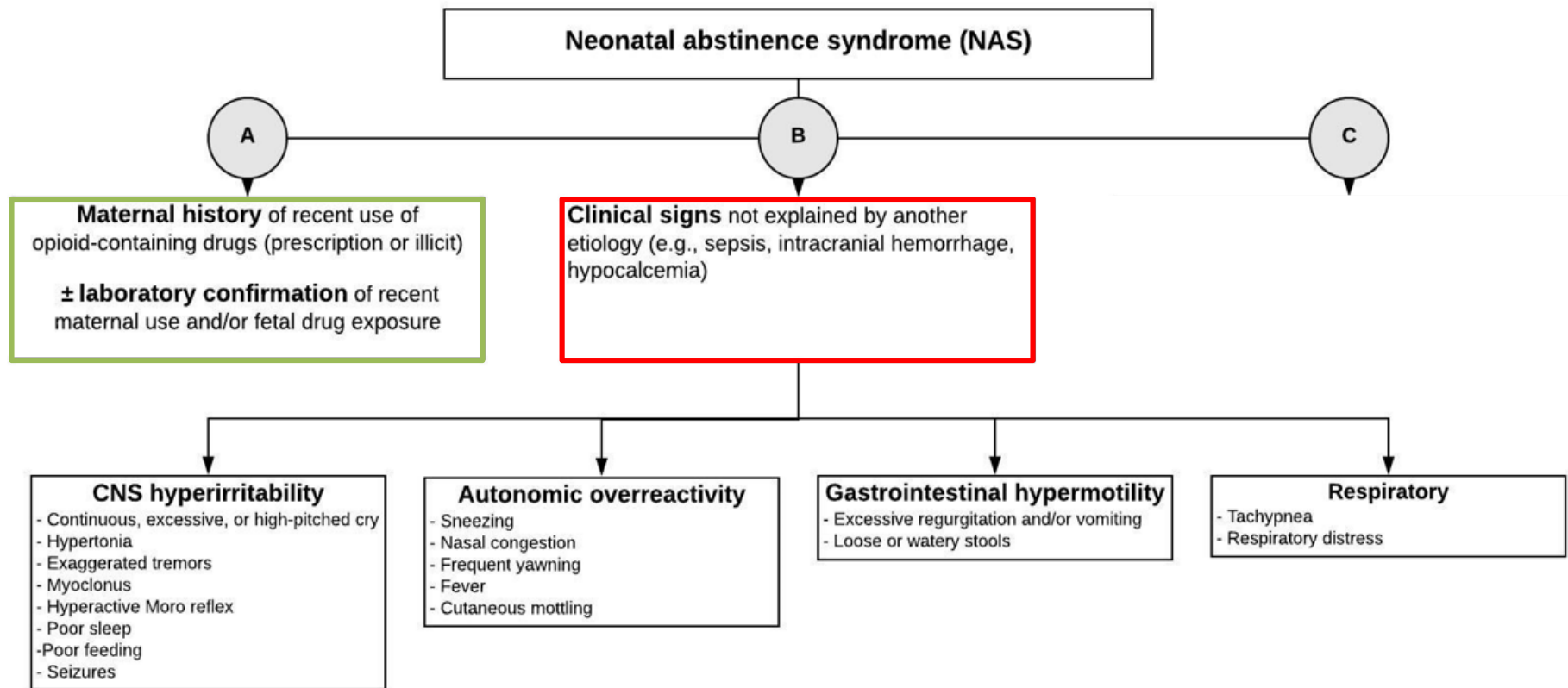
Achieve $\geq 90\%$ inter-rater reliability on NAS scoring tool

Comply with all elements of FPQC's safe discharge care plan for NAS infants

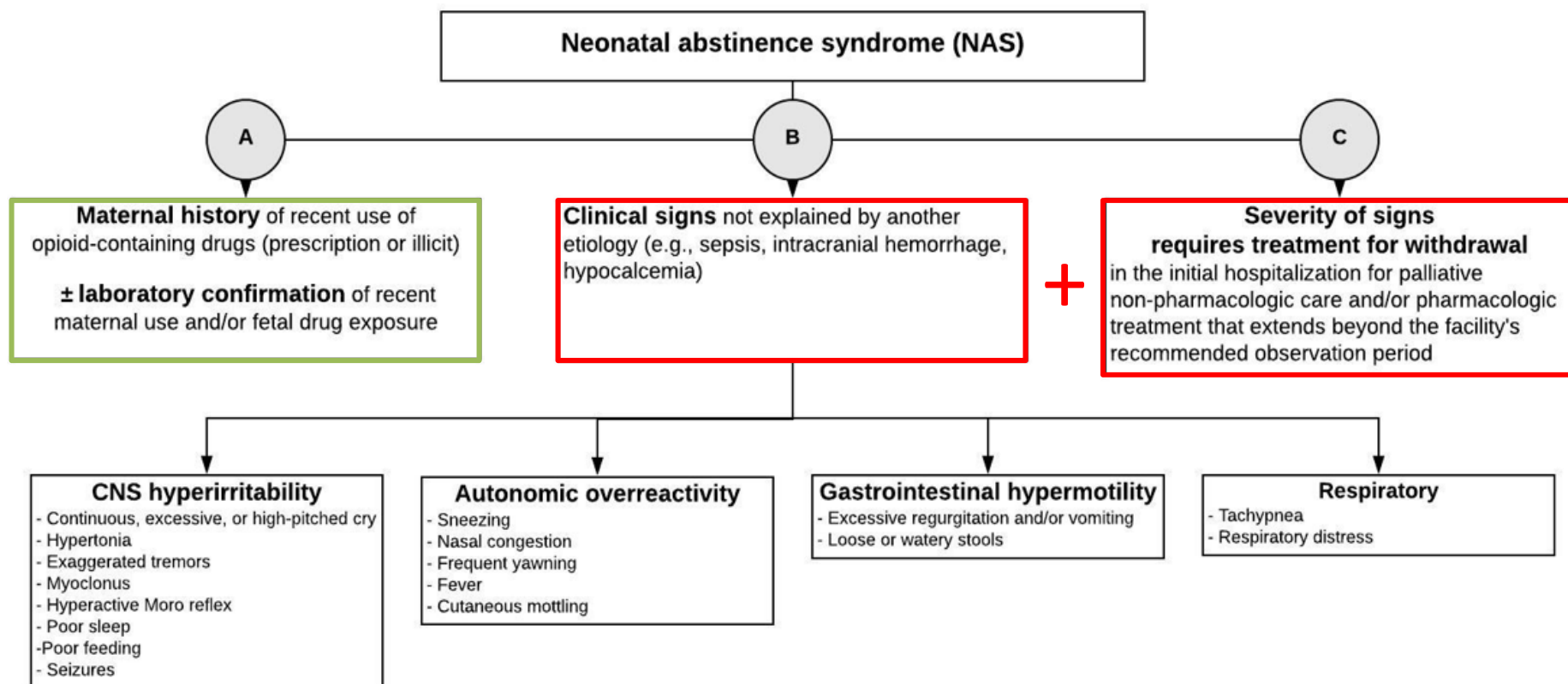
NAS Definition



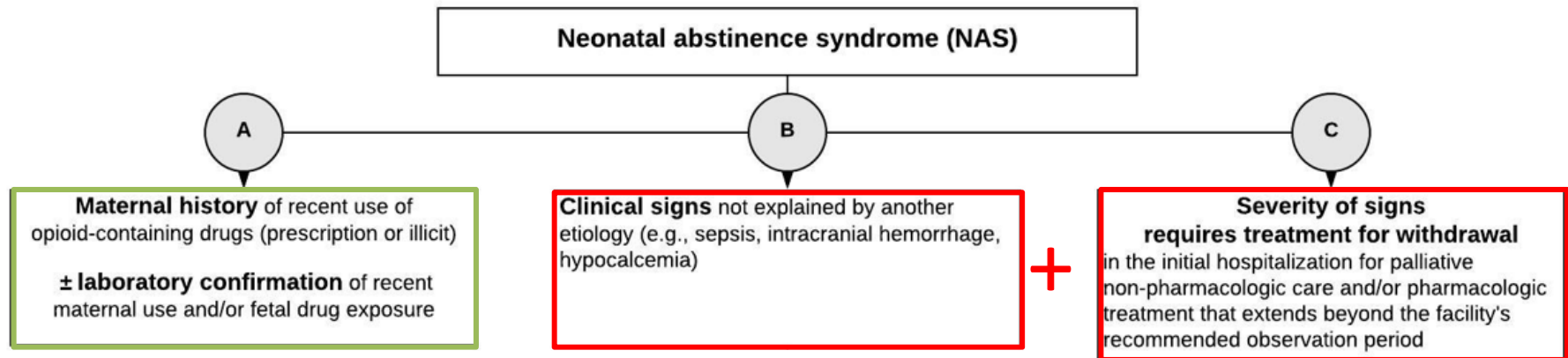
NAS Definition



NAS Definition



NAS Definition



INCLUDED in FPQC NAS Initiative

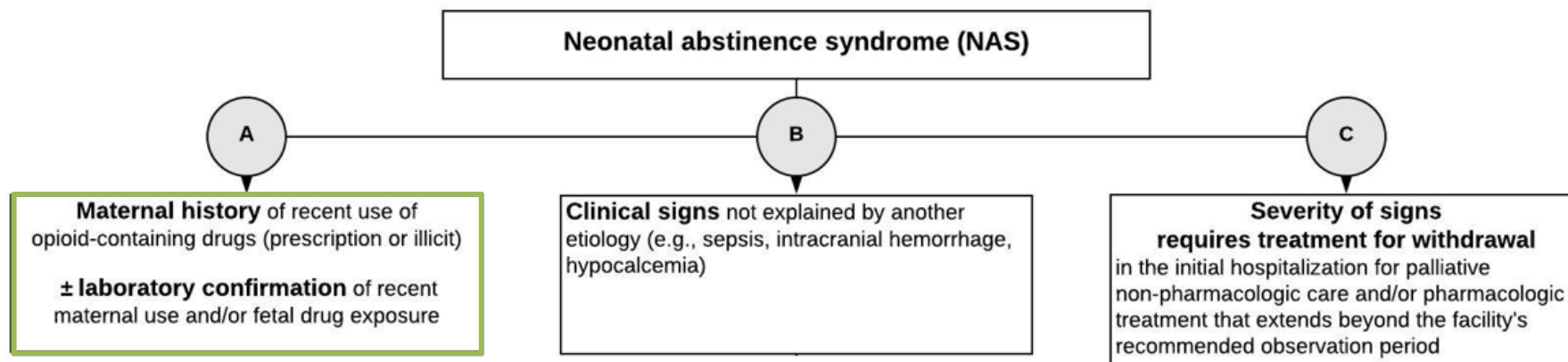
$$\text{NAS} = \text{B} + \text{C} \pm \text{A}$$

Infant ICD-10 diagnosis code

P96.1

Used to report neonates with signs of withdrawal due to antenatal exposures to illicit use or misuse of drugs

Monitoring for Withdrawal



DO NOT INCLUDE in FPQC NAS Initiative

Monitoring = A

Infant ICD-10 diagnosis code

P04.49

**Newborn (suspected to be)
affected by maternal use of drugs
of addiction**

ICD-10 CODES

NAS diagnosis

P96.1

Used to report neonates with signs of withdrawal due to antenatal exposures to illicit use or misuse of drugs



Monitoring for Withdrawal

P04.49

Newborn (suspected to be) affected by maternal use of drugs of addiction



Inclusion and Exclusion Criteria

| INCLUDES | EXCLUDES |
|---|---|
| <ul style="list-style-type: none">• Gestational age ≥ 37 weeks• Infant admitted in any hospital location with <u>NAS diagnosis (ICD-10 = P96.1)</u><ul style="list-style-type: none">• Clinical signs• Severity of signs requires treatment beyond hospital observation period (non-pharmacologic and/or pharmacologic) | <ul style="list-style-type: none">• Observation for possible NAS• Readmissions• Iatrogenic withdrawal• Conditions which in themselves may prolong length of hospital stay (e.g., major congenital anomalies, genetic syndromes, HIE, surgical diagnoses) |

+/- maternal history
+/- lab confirmation

NAS Data Measurement Grid



NAS Measures

Neonatal Abstinence Syndrome Initiative Measurement Grid

Definition of NAS (Inclusion Criteria): Any infant ≥ 37 0/7 weeks gestational age admitted in any inpatient hospital location with all of the following: 1) NAS signs not explained by another etiology (e.g., sepsis, intracranial hemorrhage, hypocalcemia) AND 2) severity of NAS requires treatment (nonpharmacologic or pharmacologic) that extends beyond the facility's recommended observation period.

Definition of NAS (Exclusion Criteria): Exclude the following: 1) infants readmitted for management of NAS signs; 2) infants with iatrogenic withdrawal (ICD-10 code P96.2) defined as neonates who require opioids to prevent or treat signs of withdrawal following prolonged use of opioids for valid medical conditions (e.g., extracorporeal life support, or treatment of pain after surgical procedures); 3) conditions which in themselves may prolong length of hospital stay (e.g., major congenital anomalies, genetic syndromes, HIE, surgical diagnoses)

NOTE: These measures are subject to change during the process of finalizing data collection and reporting tools.

| # | Outcome Measure | Description | Frequency |
|---|-----------------|---|-----------|
| 1 | Length of Stay | Numerator: Total # of days of each infant's duration of hospitalization (i.e., date of final disposition minus date of birth) Denominator: # of infants ≥ 37 0/7 weeks GA admitted anywhere in the hospital with a diagnosis of NAS | Monthly |

| # | Process Measures | Description | Frequency |
|---|--|---|---|
| | Some process measures will be reported on individual infants, and some will be reported on individual hospitals. | | |
| 1 | NAS education bundle compliance for staff and providers. | Bundle includes: 1) trauma-informed care, 2) psychology of addiction, 3) motivational interviewing, and 4) NAS signs, scoring, and non-pharmacologic techniques. Nurses: Numerator: # of nurses who received education on EACH topic of the NAS education bundle to date Denominator: Total # of nurses who care for NAS infants to date Providers: Numerator: # of advance practice nurses (ARNPs, PAs), and physicians who received education on EACH topic of the NAS education bundle to date Denominator: Total # of advanced practice nurses (ARNPs, PAs) and physicians who care for NAS infants to date Exclusion: Obstetric providers | Quarterly (cumulative % for EACH individual topic) |



Data type and frequency of reporting

Monthly

- **Patient level data**
 - Pharmacologic management
 - Rooming-in
 - Safe discharge, etc.

Auto-submission

- **Parent engagement survey**

Quarterly

- **Action level data**
 - Staff education
 - Inter-rater reliability with scoring tool

Data type and frequency of reporting

Monthly

- **Patient level data**

- Pharmacologic management
- Rooming-in
- Safe discharge, etc.



Submit data on each infant with a diagnosis of NAS

Auto-submission


- **Parent engagement survey**

Quarterly

- **Action level data**

- Staff education
- Inter-rater reliability with scoring tool

NAS Data Collection Sheet

|  | | STUDY ID : _____ | |
|--|--|--|---|
| FPQC Neonatal Abstinence Syndrome (NAS) Initiative Data Collection Sheet | | | |
| INCLUSION CRITERIA | | | |
| NAS <input type="checkbox"/> Infant w/ NAS signs <input type="checkbox"/> Infant req. treatment in the hospital beyond observation period | | Admit type <input type="checkbox"/> Inborn <input type="checkbox"/> Transfer in | |
| ON INFANT ADMISSION | | | |
| DOB | DOA | GA Weeks | Days |
| Sex <input type="checkbox"/> Male <input type="checkbox"/> Female | Mother's Race <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Asian <input type="checkbox"/> Other: _____ <input type="checkbox"/> Unknown | Barriers to visitation <input type="checkbox"/> Incarcerated <input type="checkbox"/> Inpatient MAT <input type="checkbox"/> Adoption <input type="checkbox"/> Foster care <input type="checkbox"/> Supervised visits req. <input type="checkbox"/> None <input type="checkbox"/> Other: _____ | BW grams |
| Type of insurance <input type="checkbox"/> Medicaid <input type="checkbox"/> Private <input type="checkbox"/> Uninsured <input type="checkbox"/> Unknown | | | |
| Enrolled in MAT at delivery <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown | | | |
| DRUG EXPOSURE | | | |
| <input type="checkbox"/> Mom / Infant +ve lab confirmation of opioid <input type="checkbox"/> Mom +ve opioid history Select any of the following if there is a maternal history OR positive maternal lab confirmation OR positive infant lab confirmation | | | |
| <input type="checkbox"/> Methadone <input type="checkbox"/> Subutex (Buprenorphine) <input type="checkbox"/> Suboxone (Buprenorphine/Naloxone) <input type="checkbox"/> Other opioid | <input type="checkbox"/> Benzodiazepine <input type="checkbox"/> Barbiturates <input type="checkbox"/> PCP <input type="checkbox"/> Amphetamines | <input type="checkbox"/> Cocaine <input type="checkbox"/> SSRI <input type="checkbox"/> Tobacco <input type="checkbox"/> Marijuana | <input type="checkbox"/> Alcohol <input type="checkbox"/> Other: _____ |
| DURING INFANT ADMISSION | | | |
| INFANT NUTRITION | | | |
| MOM contraindicated <input type="checkbox"/> Yes <input type="checkbox"/> No MOM at initial disposition <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not documented | | | |
| PHARMACOLOGIC TREATMENT | | | |
| Pharmacologic treatment received <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| | 1st line | 2nd line | 3rd line |
| Morphine | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Methadone | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Phenobarbital | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Clonidine | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Initiation correct <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Prior to admit First dose correct <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Prior to admit | EACH weaning opportunity correct <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Documentation inconclusive <input type="checkbox"/> No wean before initial disposition | | |
| Rooming-in (# of days where a caregiver was present for at least 6 hours per day): _____ days | | | |
| ON INITIAL DISPOSITION | | | |
| Discharged when medically cleared <input type="checkbox"/> Yes <input type="checkbox"/> No | Date medically cleared _____ Date initial disposition _____ | | |
| Reason for delayed discharge <input type="checkbox"/> Caregiver related <input type="checkbox"/> Hospital related <input type="checkbox"/> DCF related <input type="checkbox"/> Other: _____ | Safe discharge plan | | |
| Initial disposition <input type="checkbox"/> Mother <input type="checkbox"/> Father/family member <input type="checkbox"/> Foster <input type="checkbox"/> Adoption <input type="checkbox"/> Transfer to another hospital | Caregiver education provided <input type="checkbox"/> Safe sleep <input type="checkbox"/> Shaken baby syndrome <input type="checkbox"/> Postpartum depression <input type="checkbox"/> Expectations of hospital stay <input type="checkbox"/> NAS signs and nonpharmacologic management | | |
| | DCF report filed <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| | DCF discharge clearance determined <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| | Pediatrician appointment <input type="checkbox"/> Scheduled <input type="checkbox"/> Instructed | | |
| Discharged outside FL <input type="checkbox"/> Yes <input type="checkbox"/> No Outpt. NAS medication <input type="checkbox"/> Yes <input type="checkbox"/> No | Early Steps <input type="checkbox"/> Not offered Referral <input type="checkbox"/> Caregiver declined <input type="checkbox"/> Referral made | Healthy Start <input type="checkbox"/> Not offered Referral <input type="checkbox"/> Caregiver declined <input type="checkbox"/> Referral made | |

All data collected in this document strictly is for quality improvement purposes only and is not part of the infant's medical record.

FPQC Neonatal Abstinence Syndrome (NAS) Initiative Data Collection Definitions

Collect data on all infants with: 1) NAS signs AND 2) Infant requires treatment (nonpharmacologic or pharmacologic) > observation period

INCLUSION CRITERIA

NAS: Select all options that apply (Mom +ve history, Mom +ve drugs, Infant w/NAS signs, Infant req. treatment)

- Infant w/NAS signs:** Infant has clinical signs not explained by another etiology (e.g., sepsis, intracranial hemorrhage, hypoglycemia). For details of symptoms, see FPQC NAS Definition algorithm located in the FPQC NAS toolkit.

- Infant req. treatment:** Infant's severity of signs requires treatment for withdrawal with initial hospitalization for palliative non-pharmacologic care and/or pharmacologic treatment that extends beyond the facility's recommended observation period.

Admit type: Select one option that applies: **Inborn** (NAS infant is born in the hospital completing this data form) or **Transfer in** (NAS infant is transferred to the hospital completing this data form).

ON INFANT ADMISSION

DOB: Infant's date of birth. Collect in MM/DD/YY format.

DOA: Infant's date of admission to the unit managing NAS signs. Collect in MM/DD/YY format.

GA: Infant's birth gestational age. Collect in weeks and days. Infants must be ≥ 37 0/7 weeks to be included.

BW: Infant's birth weight. Collect in grams.

Type of insurance: Mother's insurance type as documented in the medical record.

MAT: Mother is enrolled in medication-assisted treatment (MAT) at the time of infant's birth.

Race & Ethnicity: Mother's race and ethnicity as documented in the medical record.

Barriers to visitation: Select any barrier that applies at any point in the infant's hospitalization. Mother is **incarcerated**, receiving **inpatient MAT**, **adoption**, **foster care** placement, or **supervised visits required**. Select and describe any other barriers to visitation that mother may have.

DRUG EXPOSURE

Mom / Infant +ve lab confirmation of opioid: Mom or infant have positive laboratory confirmation of opioid-containing drug(s).

Mom +ve opioid history: Mom has a positive history of recent use of opioid-containing drugs (prescription or illicit).

Select any that apply for the listed drugs (illicit or prescribed) based on maternal report or drug screen (mother, infant).

DURING INFANT ADMISSION

MOM contraindicated: Based on your hospital's policy or guideline, breastfeeding or mother's own milk (MOM) is contraindicated.

MOM by DOL 3: Infant received any mother's own milk (MOM) on day of life (DOL) 3. Day of birth is counted as DOL 0. MOM can be provided as expressed breast milk or breastfeeding. Skip this measure if breastfeeding or MOM is contraindicated, mother is incarcerated or inpatient MAT, infant is to be adopted or placed in foster care.

Any MOM at initial disposition: Infant received any mother's own milk (MOM) on initial disposition. Skip this measure if breastfeeding or MOM is contraindicated, mother is incarcerated or inpatient MAT, infant is to be adopted or placed in foster care.

Pharmacologic treatment: If no medication was administered for NAS management, skip this section.

- Check the box if any of the listed medications were administered to the infant for NAS management. Note if the medication was administered as a 1st, 2nd, or 3rd line medication, as well as the start and stop date(s) for each medication. If the infant is discharged on any of the listed medications, the stop date is the discharge date.

- Initiation correct:** Infant was started on 1st line medication when treatment threshold was met, per your hospital's guideline. If infant was already started on medication prior to transfer to your hospital, select **prior to admit**.

- 1st dose correct:** Infant was started on 1st line medication at the correct dose, per your hospital's guideline. If infant was already started on medication prior to transfer to your hospital, select **prior to admit**.

- EACH weaning opportunity correct:** Infant met ALL opportunities to be weaned per your hospital's guideline from "capture" to medication discontinuation or initial disposition (whichever comes first). Capture is defined as the time from peak dose of the last added medication to 1st wean. Skip this measure if initial disposition happens before medication weaning occurs.

Rooming-in: Number of days during infant's hospitalization, when a parent, other caregiver, or hospital "cuddler" visits with the infant for greater than or equal to 6 hours per day. This may occur at the infant's bedside and does not require a private room.

ON INITIAL DISPOSITION

Discharged when medically cleared: Infant was discharged timely after medically cleared for discharge.

Date medically cleared: Date when the infant was medically cleared. Collect in MM/DD/YY.

Reasons for delayed discharge: If the infant was not discharged timely after medically cleared, select the reason related to the delay.

Date of initial disposition: Date of infant's initial disposition. Collect in MM/DD/YY format.

Initial disposition: This is the infant's initial disposition from the hospital completing this form. Select the option that applies.

Discharged outside FL: The infant is being discharged outside the state of Florida.

Outpatient NAS med: An outpatient medication for NAS was prescribed at hospital discharge.

Safe discharge care plan: Select all options that apply: **Education provided** to the caregiver on safe sleep, shaken baby syndrome, postpartum depression, NAS signs and nonpharmacologic techniques, and expectations of hospital stay; **DCF report filed**; **DCF discharge clearance determined**; **Pediatrician appointment made within 3 business days of infant discharge** prior to hospital discharge; **Early Steps referral status** made prior to hospital discharge; **Healthy Start referral status** made prior to hospital discharge.

NAS Data Collection Sheet

STUDY ID : ____ _

(NAS) Initiative Data Collection Sheet

| INCLUSION CRITERIA | | | |
|--|------------------------------------|---|---|
| Admission in the hospital on period | | Admit type <input type="checkbox"/> Inborn <input type="checkbox"/> Transfer in | |
| ADMISSION | | | |
| Age | Weeks | Days | BW grams |
| Race | | Barriers to visitation | |
| White | | <input type="checkbox"/> Incarcerated | |
| Black | | <input type="checkbox"/> Inpatient MAT | |
| Asian | | <input type="checkbox"/> Adoption | |
| Other: _____ | | <input type="checkbox"/> Foster care | |
| Unknown | | <input type="checkbox"/> Supervised visits req. | |
| Hispanic | | <input type="checkbox"/> None | |
| Non-Hispanic | | <input type="checkbox"/> Other: | |
| Unknown | | | |
| EXPOSURE | | | |
| <input type="checkbox"/> Mom +ve opioid history | | | |
| Initiative maternal lab confirmation OR positive infant lab confirmation | | | |
| Cocaine | <input type="checkbox"/> Cocaine | <input type="checkbox"/> Alcohol | |
| | <input type="checkbox"/> SSRI | <input type="checkbox"/> Other: | |
| | <input type="checkbox"/> Tobacco | | |
| Heroin | <input type="checkbox"/> Marijuana | | |
| POST-ADMISSION | | | |
| NUTRITION | | | |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Any MOM at initial disposition | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Not documented |
| MEDICINE TREATMENT | | | |
| Medicine received | <input type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 3rd line | Start date | Stop date | |

- ✓ **Study ID:** Start with 001 and add consecutively for each infant throughout the initiative
- ✓ Please keep a record of the infant's medical record number (or/and other identifiable information) with the assigned Study ID
- ✓ This will be helpful for data validation, verification or corrections

Length of stay

- Main outcome measure or primary aim of NAS initiative
- Total # of days the infant was hospitalized
- Starts with **date of birth** and ends with **date of final disposition**



O1

Discharged when Medically Cleared

- 👶 Assess impact on length of stay
- 👶 Address possible causes and solutions
- 👶 Hospital defines “Medically Cleared”

| ON INITIAL DISPOSITION | |
|--|---|
| Was the infant <u>discharged when medically cleared</u>? <small>* must provide value</small> | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Reason for delayed discharge <small>* must provide value</small> | <input type="radio"/> Caregiver related <input type="radio"/> Hospital related <input type="radio"/> DCF related <input type="radio"/> Other |
| Date medically cleared <small>* must provide value</small> | <input type="text"/> <small>31</small> <small>Today</small> <small>M-D-Y</small> |

Primary caregiver NAS education bundle

☺ Bundle includes:

- ☑ Safe Sleep
- ☑ Expectations of hospital stay
- ☑ Shaken Baby Syndrome
- ☑ Postpartum Depression
- ☑ NAS signs and nonpharmacologic techniques



☺ **Documented completion** of ALL topics of the NAS education bundle

☺ Only 1 parent or primary caregiver needs to receive education bundle per NAS infant

☺ **Exclusion:** foster care only requires NAS signs and nonpharmacologic techniques; non-biological mother placement does not require postpartum depression

P4

Rooming-in frequency

- 👤 Number of **days** where parent, other caregiver and/or hospital “cuddler” visit with the infant for **≥ 6 hours/day**



Rooming in:

* must provide value

of days where a caregiver was present for at least 6 hours per day

P5

Sample rooming-in data collection tool

NAS Project: Rooming-in Data Collection Tool

Record estimated number of hours each shift that parent, any family member or friend, or ~~cuddler~~ spent with baby.

| | | | | | | | |
|----------------|--|--|--|--|--|--|--|
| Date | | | | | | | |
| 7A-7P hours | | | | | | | |
| 7P-7A hours | | | | | | | |
| Total hours | | | | | | | |

| | | | | | | | |
|----------------|--|--|--|--|--|--|--|
| Date | | | | | | | |
| 7A-7P hours | | | | | | | |
| 7P-7A hours | | | | | | | |
| Total hours | | | | | | | |

| | | | | | | | |
|----------------|--|--|--|--|--|--|--|
| Date | | | | | | | |
| 7A-7P hours | | | | | | | |
| 7P-7A hours | | | | | | | |
| Total hours | | | | | | | |

| | | | | | | | |
|----------------|--|--|--|--|--|--|--|
| Date | | | | | | | |
| 7A-7P hours | | | | | | | |
| 7P-7A hours | | | | | | | |
| Total hours | | | | | | | |

Any breast milk within first 3 days of life and at initial disposition

- ☺ Infants receiving **any MOM** (breastfeeding or EBM) within **first 3 DOL** and at **initial disposition**



- ☺ **Exclusion:** MOM contraindicated, foster care placement, mother is incarcerated, adoption, or mother in inpatient MAT or other reason (e.g. mother hospitalized for a medical reason)

P6&7

DURING INFANT ADMISSION

MOM contraindicated

* must provide value

- ☐ Yes
☒ No

Based on your hospital's policy or guideline

Infant received MOM by DOL 3

* must provide value

- ☐ Yes
☐ No
☐ Transferred \geq DOL 3
☐ Not documented

Day of birth is counted as DOL 0. MOM can be provided as expressed breast milk or breastfeeding.

Infant received any MOM at initial disposition

* must provide value

- ☐ Yes
☐ No
☐ Not documented

Pharmacologic management

First line medication: initiation

- ☉ Infant was **started on** your institution's **first line medication** when treatment threshold was met
- ☉ Treatment threshold is defined by your institution
- ☉ **Exclusion:** already started on medications prior to transfer



Pharmacologic management

First line medication: recommended 1st dose

- 👶 Infant was **started on** your institution's **first line** medication at the **correct dose**
- 👶 Correct drug and dose is determined by your institution
- 👶 **Exclusion:** already started on medications prior to transfer



PHARMACOLOGIC TREATMENT

Pharmacologic treatment received

* must provide value

☒ Yes

☐ No

reset

Select any medications administered to the infant for NAS management

* must provide value

- ☐ Morphine
- ☐ Methadone
- ☐ Phenobarbital
- ☐ Clonidine
- ☐ Other

Initiation correct: was the first line medication started when treatment threshold was met?

* must provide value

☐ Yes

☐ No

☐ Prior to admission

reset

1st dose correct: was the first line medication started at the correct dose?

* must provide value

☐ Yes

☐ No

☐ Prior to admission

reset

Pharmacologic management

Medication name, type and duration

After selecting the medication(s) administered to the infant, indicate:


- ✓ If the medication was first, second or third line
- ✓ Medication's start date
- ✓ Medication's end date



| | |
|--|---|
| Select any medications administered to the infant for NAS management <small>* must provide value</small> | |
| <input checked="" type="checkbox"/> Morphine <input type="checkbox"/> Methadone <input type="checkbox"/> Phenobarbital <input type="checkbox"/> Clonidine <input type="checkbox"/> Other | |
| Morphine was administered as: <small>* must provide value</small> | <input type="radio"/> 1st line medication <input type="radio"/> 2nd line medication <input type="radio"/> 3rd line medication |
| Morphine was started on: <small>* must provide value</small> | <input type="text"/> <small>MM/DD/YYYY</small> Today M-D-Y <small>Collect in MM/DD/YY format.</small> |
| Morphine was stopped on: <small>* must provide value</small> | <input type="text"/> <small>MM/DD/YYYY</small> Today M-D-Y <small>If the infant is discharged on the medication, the stop date is the discharge date</small> |

Pharmacologic management

First line medication: weaning

- ☺ Infant **weaned** per your institution's guideline **from "capture" to medication discontinuation or initial disposition** (whichever comes first) 
- ☺ “Capture” is defined as time from peak dose of medication to first wean
- ☺ Weaning parameters are determined by your institution



Sample “rounding tool” to capture weaning opportunities

Patient sticker

| | Mon | | Tues | | Wed | | Thurs | | Fri | | Sat | | Sun | |
|---------------------------|-----|-----|------|-----|-----|-----|-------|-----|-----|-----|-----|-----|-----|-----|
| Date (MM/DD/YY) | | | | | | | | | | | | | | |
| Finnegan scores (min-max) | | | | | | | | | | | | | | |
| Wean | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| If WEANED by | 20% | 25% | 20% | 25% | 20% | 25% | 20% | 25% | 20% | 25% | 20% | 25% | 20% | 25% |
| If NOT WEANED, why? | | | | | | | | | | | | | | |

A: Scores too high. B: Not gaining weight well. C: Physician discomfort. D: Nurse discomfort. E: Parent discomfort.

EACH weaning opportunity correct

* must provide value

- ☐ Yes
- ☐ No
- ☐ Documentation inconclusive
- ☐ No wean before initial disposition

reset

Infant met ALL opportunities to be weaned from "capture" to medication discontinuation or initial disposition (whichever comes first)



Partnering to Improve Health Care Quality
for Mothers and Babies

Safe discharge bundle

Bundle includes:

- ☒ Education provided on safe sleep, hospital expectations, shaken baby syndrome, postpartum depression, NAS signs and non-pharmacologic techniques (P4)
- ☒ DCF report filed
- ☒ Discharge clearance determined
- ☒ Early steps referral made prior to hospital discharge
- ☒ Healthy Start referral made prior to hospital discharge
- ☒ Pediatrician appointment made within 3 business days of infant discharge

Documented completion of the topics of the NAS Safe Discharge bundle



Exclusion: infant discharged to a state outside of Florida or initial disposition is not infant discharge

P12

*

Safe discharge plan - select all the options that apply

* must provide value

- ☐ All education provided (safe sleep, shaken baby syndrome, postpartum depression, NAS, and expectations of hospital stay)
- ☐ DCF report filed
- ☐ Discharge clearance determined
- ☐ Early Steps referral
- ☐ Healthy Start referral
- ☐ Pediatrician appointment

Outpatient medication management for NAS

☺ Infant **discharged** home with any **medication** to manage **NAS signs**

☺ This is a key balancing measure

☺ **Exclusion:** None



Outpatient NAS medication prescribed at hospital discharge

* must provide value

☐ Yes

☐ No

B1

Data not related to NAS measures

- Specific characteristics are also collected for each infant such as:
 - Sex, Birthweight & Gestational Age
 - Mother's Race & Ethnicity
 - Type of Insurance
 - Barriers to visitation
 - MAT status at delivery
 - Drug Exposure
 - Initial disposition type
 - Discharged when medically cleared, if not, reasons for delayed discharge
- These data will inform case composition and track population change overtime



Guidelines determined by your institution

Please determine your hospital's guidelines for the management of NAS infants, including:

- ☺ Recommended observation period
- ☺ Treatment threshold
- ☺ 1st, 2nd and 3rd line drug and correct dose
- ☺ Weaning parameters
- ☺ Define what it entails that the infant is “medically cleared”



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- ☺ Weaning parameters
- ☺ Define what it entails that the infant is “medically cleared”

URGENT

Data Collection Process

1

Identify infant with NAS

Check Inclusion & Exclusion Criteria

Start data collection as soon as infant is diagnosed

Rooming-in & Weaning actively tracked throughout hospital stay

EHR

2

Medical Chart Abstraction

STUDY ID : _____

FPQC Neonatal Abstinence Syndrome (NAS) Initiative Data Collection Sheet

| INCLUSION CRITERIA | | Admit type | |
|--|--|--|---|
| NAS | <input type="checkbox"/> Infant with NAS signs | <input type="checkbox"/> Infant req. treatment in the hospital beyond observation period | <input type="checkbox"/> Inborn <input type="checkbox"/> Transfer in |
| ON INFANT ADMISSION | | | |
| DOB | GA | Weeks | Days |
| EW | grams | | |
| Sex | <input type="checkbox"/> Male <input type="checkbox"/> Female | <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Asian <input type="checkbox"/> Other | Barriers to visitation <input type="checkbox"/> Incarcerated <input type="checkbox"/> Inpatient MAT <input type="checkbox"/> Adoption <input type="checkbox"/> Foster care <input type="checkbox"/> Supervised visits required <input type="checkbox"/> None <input type="checkbox"/> Other |
| Type of insurance | <input type="checkbox"/> Medicaid <input type="checkbox"/> Private <input type="checkbox"/> Uninsured <input type="checkbox"/> Unknown | Mother's Race | |
| Enrolled in MAT at delivery | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown | Mother's Ethnicity | <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic <input type="checkbox"/> Unknown |
| DRUG EXPOSURE | | | |
| <input type="checkbox"/> Methadone <input type="checkbox"/> Subutex (Buprenorphine) <input type="checkbox"/> Suboxone (Buprenorphine/Naloxone) <input type="checkbox"/> Other opioid <input type="checkbox"/> Bupropion <input type="checkbox"/> Barbiturates <input type="checkbox"/> PCP <input type="checkbox"/> Amphetamines <input type="checkbox"/> Cocaine <input type="checkbox"/> Other | | | |
| DURING INFANT ADMISSION | | | |
| INFANT NUTRITION | | | |
| MOM | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Transferred to DOL 3 <input type="checkbox"/> Not documented | MOM initial disposition | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not documented |
| PHARMACOLOGIC TREATMENT | | | |
| Pharmacologic treatment received | <input type="checkbox"/> Yes <input type="checkbox"/> No | 1st line | 2nd line 3rd line Start date Stop date |
| | | Morphine | |
| | | Methadone | |
| | | Phenobarbital | |
| | | Clonidine | |
| | | Other: | |
| Initiation correct | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Prior to admit | EACH weaning opportunity correct | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Documentation inconclusive <input type="checkbox"/> No wean before initial disposition |
| First dose correct | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Prior to admit | | |
| Rooming-in (# of days where a caregiver was present for at least 6 hours per day): _____ days | | | |
| ON INITIAL DISPOSITION | | | |
| Date initial disposition | UNADJUDY | Safe discharge plan | |
| Initial disposition | <input type="checkbox"/> Mother <input type="checkbox"/> Father/family member <input type="checkbox"/> Foster <input type="checkbox"/> Adoption <input type="checkbox"/> Transfer to another hospital <input type="checkbox"/> Discharged outside FL <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Output, NAS medication <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Safe sleep <input type="checkbox"/> Postpartum depression <input type="checkbox"/> NAS signs and nonpharmacologic management <input type="checkbox"/> DCF report filed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Discharge clearance determined <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Pediatrician appointment <input type="checkbox"/> Scheduled <input type="checkbox"/> Instructed <input type="checkbox"/> Early Steps <input type="checkbox"/> Not offered <input type="checkbox"/> Healthy <input type="checkbox"/> Not offered <input type="checkbox"/> Start <input type="checkbox"/> Caregiver declined <input type="checkbox"/> Referral <input type="checkbox"/> Referral made | |

All data collected in this document strictly for quality improvement purposes only and is not part of the infant's medical record.

3

Enter data in the REDCap data portal

Neonatal Abstinence Syndrome (NAS) Initiative

Please complete the survey below for any infant ≥ 37 0/7 weeks gestational age admitted in any inpatient hospital location with: 1) NAS signs not explained by another etiology (e.g., sepsis, intracranial hemorrhage, hypocalcemia) AND 2) severity of NAS requires treatment (nonpharmacologic or pharmacologic) that extends beyond the facility's recommended observation period.

Do not complete for infants:

- Readmitted for management of NAS symptoms
- With iatrogenic withdrawal (ICD-10 code P96.2)
- In observation with no signs of NAS
- With conditions which in themselves may prolong length of hospital stay (e.g., major congenital anomalies, genetic syndromes, HIE, surgical diagnoses)

Thank you!

Hospital name

Study ID #

Admission type: ☐ Inborn ☐ Transfer in

Date of birth:

Date of admission to the unit managing NAS signs:



Data Collection

- 👤 **Data collection starts** for infants discharged (referred to as “initial disposition”) as of **January 1, 2019**
- 👤 “Rolling” data submission = submit when infant is discharged or transferred out
- 👤 **Reporting date:** 7th of the following month (e.g. data for infants discharged in January is due February 7th)
- 👤 Reports will be sent out by the 21st of the following month

Data type and frequency of reporting

Monthly

- **Patient level data**
 - Pharmacologic management
 - Rooming-in
 - Safe discharge, etc.

Auto-submission

- **Parent engagement survey**



Rolling submission

Quarterly

- **Action level data**
 - Staff education
 - Inter-rater reliability with scoring tool

Primary caregiver perception of “engagement” during infant’s hospitalization

- Likert scale response from parent or primary caregiver on their perception of engagement during hospitalization
- Completely anonymous – no PHI required & no paper documentation
- Voluntary to the parents
- **Completed electronically before final disposition or discharge to home**
- **Exclusion:** Foster care placement, mother is incarcerated, adoption, mother in inpatient MAT or hospitalized for a medical reason and transfer to another hospital

P2

Caregiver survey

- ✓ Hospital will facilitate completion of electronic survey
- ✓ Each hospital will be provided with a unique hospital link

Caregiver Engagement Survey - NAS

Start of Block: Neonatal Abstinence Syndrome

Q14 We need your input to help us improve the care we provide to families and their babies. Please take a moment to share your opinion about your recent experience while your baby was admitted here receiving care for Neonatal Abstinence Syndrome. There are no right or wrong answers—we just want your honest feedback.

You do not have to complete this survey if you don't want to; **deciding not to answer will NOT impact the care and services you and your baby receive.**

Thank you for your consideration... your feedback is important to us!

Please read each statement below and choose the answer that best matches your opinion.

Q1 The NICU/hospital staff encouraged me to spend as much time as possible with my baby.

☐ Strongly Disagree (1)

☐ Disagree (2)

☐ Undecided (3)

☐ Agree (4)

☐ Strongly Agree (5)

Online Survey Software [Qualtrics] X

← → C https://usfhealthaz1.qualtrics.com/jfe/form/SV_4IsE26YteeVjJf ☆

We need your input to help us improve the care we provide to families and their babies. Please take a moment to share your opinion about your recent experience while your baby was in our hospital receiving care for Neonatal Abstinence Syndrome. There are no right or wrong answers—we just want your honest feedback.

You do not have to complete this survey if you don't want to; deciding not to answer will NOT impact the care and services you and your baby receive.

Thank you for your consideration... your feedback is important to us!

Please read each statement below and choose the answer that best matches your opinion.

The hospital staff encouraged me to spend as much time as possible with my baby.

☐ Strongly Disagree ☐ Disagree ☐ Undecided ☐ Agree ☐ Strongly Agree



Partnering to Improve Health Care Quality
for Mothers and Babies

Data Collection Process

1

**Offer survey to
primary caregiver**

Recommended Script
Available

Use link to access survey
Do NOT share link

Select caregiver
preferred language
(Available in English,
Spanish or Creole)

2

**Provide caregiver with electronic device
(tablet/computer) and privacy**



Something positive I would like to
share about my NICU/hospital
experience is:

Remind caregiver to
click on the arrow at
the end of the page
to complete
submission



Data Collection

- 👤 Offer the survey to the caregiver starting with those infants with final disposition after **January 1, 2019**
- 👤 Parent engagement survey report will be sent out the **21st of the month after the quarter ends** (e.g. the report for Quarter 1 will be sent out April 21st)
- 👤 Your facility needs to have **at least 5 surveys** before we can report to protect individuals

Data type and frequency of reporting

Monthly

- **Patient level data**
 - Pharmacologic management
 - Rooming-in
 - Safe discharge, etc.

Auto-submission

- Parent engagement survey

Quarterly

- **Action level data**
 - Staff education
 - Inter-rater reliability with scoring tool





Completed Quarterly
One entry/hospital

NAS education bundle for staff and providers

Bundle includes:

- ☒ Trauma-informed care
- ☒ Psychology of addiction
- ☒ Motivational interviewing
- ☒ NAS signs, scoring, and non-pharmacologic techniques

Report cumulative percent of:

-  Nurses who receive education on EACH topic of the NAS education bundle to date
-  Advance practice nurses (ARNPs, PAs), and physicians who receive education on EACH topic of the NAS education bundle to date



Staff NAS education bundle

- 👤 FPQC hopes to provide this education in small 15 minute segments accessible via FPQC website
- 👤 Hospitals track completion (attestation of completion, roster, etc.)

Inter-rater reliability with scoring tool

- 👤 Institution determines how to measure inter-rater reliability (FPQC will provide suggestions)
- 👤 Example: Finnegan – agree on 19/21 items; Lipsitz – agree on 10/11 items
- 👤 % of staff demonstrating $\geq 90\%$ reliability

Numerator: # of current nurses who have demonstrated $\geq 90\%$ inter-rater reliability with your institution's NAS scoring tool

Denominator: Total # of current nurses caring for NAS infants to date

Exclusion: institution decides which nurses to exclude (i.e. floats, core group of nurses that perform scoring, etc.)



Quarterly Data

1

Track data for staff and providers individually

EHR

2

Complete Data Collection Form with aggregate data

3

Enter data in the REDCap data portal

Florida Perinatal Quality Collaborative



Partnering to Improve Health Care Quality for Mothers and Babies

Resize font

Neonatal Abstinence Syndrome (NAS) Initiative

Please complete the survey below to report your hospital's quarterly process measures.



Data Collection

- 👤 Data collection starts **January 1, 2019**
- 👤 **Reporting date:** 7th of the month after the quarter ends (e.g. Quarter 1 data is due April 7th)
- 👤 Reports will be sent out by the 21st of the month

Practice & Get Ready

- 👤 Collect data for NAS infants discharged in December using the NAS Data Collection Sheet
- 👤 If your hospital has a signed DUA, we will send you the link to REDCap, please practice entering data and contact us with any questions
- 👤 This data will NOT be used for reports, it is meant for practice only



Upcoming Webinars

**Will be held the 3rd Tuesday of the month
at 1:00 pm**

We will be sharing webinar information soon!





THANK YOU!

Technical Assistance:

erubio1@health.usf.edu

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for Mothers and Babies

