INDIANA PERINATAL QUALITY IMPROVEMENT COLLABORATIVE

PERINATAL SUBSTANCE USE SURVEY REPORT 2024

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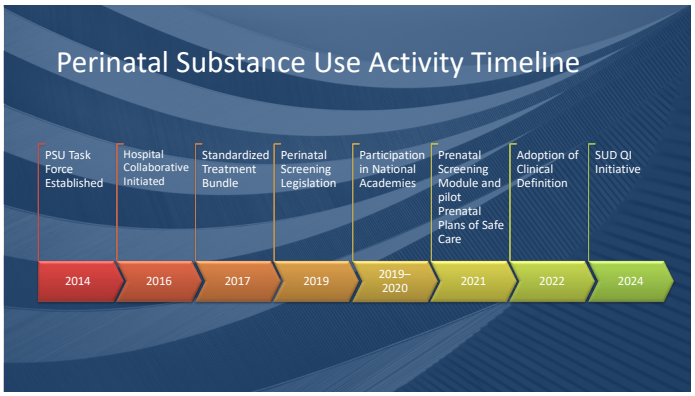
Introduction

The work of the Perinatal Substance Use (PSU) Task Force of the Indiana Perinatal Quality Improvement Collaborative (IPQIC) began with the passage of SB 408 in 2014 and their five required components:

> (1) The appropriate standard clinical definition of "Neonatal Abstinence Syndrome."
> (2) The development of a uniform process of identifying Neonatal Abstinence Syndrome.
> (3) The estimated time and resources needed to educate hospital personnel in implementing an appropriate and uniform process for identifying Neonatal Abstinence Syndrome.
> (4) The identification and review of appropriate data reporting options available for the reporting of Neonatal Abstinence Syndrome data to the state department, including recommendations for reporting of Neonatal Abstinence Syndrome using existing data reporting options or new data reporting options; and
> (5) The identification of whether payment methodologies for identifying Neonatal Abstinence Syndrome and the reporting of Neonatal Abstinence Syndrome data are currently available or needed.

In 2016 four hospitals initiated pilot programming for pregnant women and their newborns. In each subsequent year, additional hospitals joined the effort and now, in 2024, there are seventy-one delivering hospitals participating in the PSU Hospital Collaborative. The timeline and activities of the PSU Task Force are identified in the graphic below.



A baseline survey of the twenty-nine participating hospitals was conducted in 2019 with a second survey conducted with participating hospitals in 2022. The purpose of each survey was to identify the variations in program screening, diagnosis, and treatment as well as training and policy development related to the status of pregnant women who present for delivery and screen positive for substance exposure as well as the care that their newborn receives.

In the fall of 2024, the survey was repeated with all delivering hospitals in Indiana regardless of their participation in the PSU Hospital Collaborative. With the closure of obstetric units, the number of delivering hospitals in 2024 is seventy-four.

Demographics

Fifty-six hospitals completed the survey representing all four levels of care for a response rate of 74.6%. This compares to a response rate of 78.5% in 2022. The goal was to ensure there was a representative sample across all levels of care for Indiana's delivering hospitals Respondents by Level of Care

- Level I: eighteen total respondents.
- Level II: eighteen total respondents.
- Level III: eighteen total respondents.
- Level IV: two total respondents.

For the purpose of data analysis, Level III and IV responses were combined to keep all results de-identified.

Hospitals were asked if they were a participant in the PSU Hospital Collaborative. Forty-eight of the 56 hospitals (86%) reported they participate in the PSU Hospital Collaborative.

Forty-six hospitals use USDTL for cord tissue testing. Other reported laboratories include ARUP, Quest, and NMS Labs.

Maternal Screening Procedures

These questions are related to the Universal Maternal Testing Algorithm developed as part of the original PSU toolkit.

Do you ask each pregnant person, upon presentation for delivery, if they were screened by their prenatal care provider? Check all that apply.

Ten hospitals responded yes, nine hospitals responded no, and forty-three hospitals responded that they check the patients' chart for evidence of prenatal screening. The chart below provides the responses based on Level of Care.

	Level I	Level II	Level III/IV
Yes	4	2	4
No	0	2	7
Check patient chart	14	14	15

If you are tracking data regarding prenatal screening, please estimate the percentage of pregnant women who report that they were screened prenatally.

Twenty-five hospitals responded to this question. The median percentage reported by the respondents was 90% with a range from 0-100.

	Level I (9)	Level II (8)	Level III/IV (8)
Median	95%	90%	24%
Range	0-100	80-98	0-92

Does each and every pregnant person that presents for delivery at your facility receive a verbal screen for substance use?

Forty-nine hospitals responded to this question. Forty-six hospitals indicated that every pregnant woman receives a verbal screen, one hospital responded no, and two hospitals responded they did not know.

	Level I (15)	Level II (16)	Level III/IV (18)
Yes	15	16	15
No	0	0	1
I don't know	0	0	2

What screening tool are you using?

Fifty-one hospitals responded to this question. Thirty-one hospitals reported that they use the 5Ps screening tool. One hospital reported using the 4Ps tool and thirteen hospitals use a hospital developed tool.

	Level I (16)	Level II (14)	Level III/IV (15)
4Ps	1	0	0
5Ps	9	11	11
Hospital Developed Tool	6	3	4

In addition to the verbal screen, are you conducting a toxicology screen? Check all that apply.

Fifty-one hospitals responded to this question. Twenty-five hospitals reported they conduct a toxicology screen for each and every woman presenting for delivery. Twenty-one hospitals conduct toxicology screens for women who have a failed screen, and twenty-five hospitals conduct toxicology screens for women with risk factors. No hospital reported they do not conduct toxicology screens.

	Level I (16)	Level II (14)	Level III/IV (15)
Yes, for each and every pregnant woman	9	8	8
Yes, for those with a positive verbal screen	5	17	9
Yes, for those persons with risk factors	6	8	11
We do not conduct toxicology screens	0	0	0

Is the pregnant woman required to give permission/consent prior to performing the toxicology test?

Forty-eight hospitals responded to this question. Twenty-two hospitals reported that testing is a standard protocol for all patients and no permission is required. Twenty-six hospitals request permission before testing.

	Level I (15)	Level II (16)	Level III/IV (15)
Standard protocol, no permission	6	10	6
Request permission	9	6	11

If a pregnant woman has either of positive verbal or positive toxicologic screening, do you refer for a behavioral health consult?

Forty-nine hospitals responded to this question. Fourteen respondents indicated they always refer. Twenty-one respondents refer for behavioral consult sometimes. Ten indicated there is no referral if the woman is already in treatment and four indicated there is no referral at any time.

	Level I (15)	Level II (14)	Level III/IV (15)
Yes, always	3	8	3
Yes, sometimes	7	6	8
No referral if already in treatment	2	2	6
No referral at any time	3	1	

Neonate Screening and Testing Procedures

These questions are related to the Neonate Screening and Testing Algorithm developed as part of the original PSU toolkit.

What screening tests are conducted for neonates with suspected prenatal substance exposure? Check all that apply.

Fifty-two hospitals responded to this question. Fifty-two hospitals are testing the cord tissue. Sixteen are testing meconium, and thirty-one are testing urine.

	Level I (17)	Level II (16)	Level III/IV (19)
Cord Tissue	17	16	19
Meconium	4	6	6
Urine	12	8	11

- If positive for THC only, cord not always sent
- We send a urine & meconium
- unless there is a cause for toxicology to be positive
- unless there is a cause for toxicology to be positive

- Yes, if it is positive for alcohol use during the pregnancy or illicit substance use during the pregnancy (soon we will exclude neonatal umbilical cord testing for THC use)

If either the verbal or toxicology screening of the birthing parent are positive, is the neonate's umbilical cord sent for testing?

Fifty hospitals responded to this question. All fifty indicated they send the umbilical cord. There were several comments:

- If positive for THC only, cord not always sent
- We send a urine & meconium
- unless there is a cause for toxicology to be positive
- Yes, if it is positive for alcohol use during the pregnancy or illicit substance use during the pregnancy (soon we will exclude neonatal umbilical cord testing for THC use)

If the verbal screen is positive but permission for toxicology testing was denied, is the neonates umbilical cord sent for testing?

Fifty-three hospitals responded to this question. Fifty indicated they send the umbilical cord. Three hospitals provided the following comments:

- If risk factors exist. We don't send a toxicology test on every patient, and they have the right to refuse.
- Permission is given with routine care orders
- We have not encountered this situation.

If either the verbal or toxicology screens of the birthing parent are positive, do you keep the neonate under observation for at least 48 hours for signs of withdrawal?

Fifty-three hospitals responded to this question. Twenty-two hospitals keep all exposed neonates for at least forty-eight hours. Thirteen hospitals do but only for opioid exposure and three hospitals do not keep the neonate for at least forty-eight hours. Fifteen hospitals provided comments.

- 16 hours
- 72 hours
- Opioids and benzodiazepines
- It depends on the provider and substance.
- It depends on the substance
- Except for THC
- Provider and substance dependent
- Provider dependent
- Some providers keep them >48hours
- Sometimes we do not receive the screening results prior to discharge.
- Usually but not always
- We try our best to keep the infants
- Yes, for all substances other than THC
- Yes, but only when positive for opioids or if the provider has assessed the neonate and the situation and has concerns about opioid withdrawal
- Yes, for 5 days when positive for Opioids, Suboxone or Methadone

	Level I (17)	Level II (16)	Level III/IV (19)
Yes, for all substances	17	16	19
Yes, but only for opioids	4	6	6
No	12	8	11

If the neonate has tested positive, how long do you keep the neonate under observation?

Fifty-three hospitals responded to this question. Twenty-nine hospitals indicated that it depends on the substance. Eleven hospitals responded five days and each of the other responses (2, 3 and 4 days) had one hospital. Comments include:

- 3-5 days
- By the time we get results infants are usually discharged. We refer to DCS
- It depends on the provider and substance.
- It depends on the substance and NAS scores
- If mom is on Subutex or methadone, keep up to 5 days
- It depends on the drug. It may be longer than 48 hours
- If newborn cord is positive for opiates or benzodiazepines, the newborn will remain in the hospital for a minimum of 72 hours; If the newborn cord is positive for

methadone, buprenorphine or oxycontin, the newborn remains in the hospital for 5-7 days of life to observe for signs of withdrawal
- Opioids 4-7 days, all others minimum 48 hours based on symptoms
- The cord drug screen does not come back before the infant is discharged
- It varies among providers

If a neonate shows any sign of withdrawal, what scoring system do you use? Check all that apply.

Fifty-one hospitals responded to this question. Thirteen hospitals identified Finnegan, twenty-nine hospitals indicated Eat Sleep Console, and seven hospitals indicated they use both. One hospital indicated they used NASCEND, and another uses FNAST.

	Level I (17)	Level II (17)	Level III/IV (20)
Finnegan	11	5	6
Eat Sleep Console	9	14	15
NASCEND/FNAST		1	1

If you use the Eat Sleep Console treatment methodology, where do you implement the intervention? Check all that apply.

Fifty-three hospitals responded to this question. Thirty-eight hospitals identified rooming-in. Seventeen hospitals identified the nursery, and eighteen hospitals identified the NICU.

	Level I (12)	Level II (16)	Level III/IV (16)
Rooming In	12	15	11
Nursery	6	8	3
NICU	1	5	12

Comments include:

- Depends on circumstances
- Not currently using
- Pediatric Unit
- Postpartum/pediatrics
- Postpartum/pediatrics
- Unless there is other/ additional medical indication for admission to special care nursery.
- We informally utilize Eat Sleep Console
- We place these patients in a private side room in our NICU. Once we move to our new building in January 2025, all NICU rooms will be private and allow parents to stay overnight in their baby's room.

What criteria does your facility use to assign a diagnosis of NAS? Check all that apply.

Fifty-three hospitals responded to this question. The most frequently cited criteria were signs, selected by forty-three hospitals. Thirty-six hospitals cited positive cord for opioids and

twenty-eight hospitals identified a positive maternal verbal or toxicology screen for opiate use. Nine hospitals identified pharmacologic treatment as optional, and twelve hospitals required pharmacologic care.

	Level I (16)	Level II (15)	Level III/IV (18)
Positive maternal verbal or toxicology screen for opiate use	10	10	8
Positive cord for opioids	10	13	13
Signs	15	12	16
Pharmacologic treatment (optional)	1	3	5
Pharmacologic treatment (required)	5	4	3

Comments included:

- Depends on physician
- Depends on physician
- I am not sure. The pediatricians/neonatologists follow the recommendation from the state
- in utero exposure and 2 of 5 signs
- Indiana standard definition
- P961 - Neonatal Withdrawal symptoms from maternal use of drugs of addiction
- S/S with history of opioid exposure by sampling or maternal hx
- We transfer all babies with a diagnosis of NAS.

What percentage of the neonates with an NAS/NOWS diagnosis receive pharmacologic care?

Thirty-nine hospitals responded to this question. The median percentage of neonates with an NAS/NOWS diagnosis that receive pharmacologic care was 5% with a range of zero to 100%.

Does your facility support breastfeeding for the neonate showing signs of NAS?

Fifty-two hospitals responded to this question. Six hospitals indicated they support breastfeeding, and forty-six hospitals responded yes as long as it is not contraindicated by the drug that was used.

	Level I (16)	Level II (17)	Level III/IV (19)
Yes	2	3	1
Yes, as long as it is not contraindicated by the drug that was used.	14	14	18

Screening Panel

Hospitals were asked to identify what drugs were included in their testing panel. Fifty-four hospitals responded to the question regarding toxicology screening of the pregnant woman at presentation for delivery. Fifty-two hospitals provided information regarding the drugs that were included in their cord tissue testing. As documented in the chart below, there is variability across hospitals in which drugs are included in each hospital's testing protocol.

	Mother (54)	Baby (52)
Cotinine	13.0%	17.3%
Cocaine	92.6%	94.2%
Cannabinoids	96.3%	94.2%
Buprenorphine	61.1%	84.6%
Benzodiazepines	92.6%	94.2%
Barbiturates	81.5%	67.3%
Tramadol	22.2%	40.4%
Oxycodone	75.9%	88.5%
Opioids	94.4%	96.2%
Methamphetamines	87.0%	88.5%
Methadone	79.6%	94.2%
Fentanyl	59.3%	80.8%
Ethyl Glucuronide	27.8%	61.5%

Discharge Planning

These questions are related to the Postpartum and Newborn discharge planning materials developed as part of the original PSU bundle.

Which of the following resources do you use as part of discharge planning for substance-exposed neonates?

Thirty-five hospitals responded to this question. Twenty hospitals utilize the Newborn Discharge Readiness Checklist. Ten hospitals use the Newborn Primary Care Provider Letter. Twenty-one hospitals use the English and Spanish versions of the Newborn Withdrawal Going Home document. Four hospitals use the Spanish and English versions of Alcohol Exposure – Going Home and five hospitals use the Department of Child Services (DCS) Patient Handout.

	Level I (11)	Level II (12)	Level III/IV (12)

Newborn Discharge Readiness Checklist	4	8	8
Newborn Primary Care Provider Letter	3	3	4
Newborn Withdrawal Going Home	8	7	6
Alcohol Exposure – Going Home	1	1	2
Department of Child Services (DCS) Patient Handout	1	2	2

Comments included:

- AVS with NAS information - refer to developmental follow-up clinic
- Communication to outpatient peds
- DCS Involvement
- Discharge instructions from Meditech on NAS
- Infants exposed to substance use during pregnancy, Neonatal Abstinence Syndrome
- NAS dx infants are transferred, and discharge planning is done per the discharging facility.
- NAS newborns would be transferred
- none of the above
- Not sure
- I'm not sure we utilize any.
- NOWS informational pamphlets, ESC informational pamphlets
- Our EMR system has a handout
- Resources built into EMR
- Social work consults in house
- Specific, patient-centered instructions are presented by the neonatologist and printed into After Visit Summary.
- We have a booklet that was created for families
- We have discharge criteria and checklist built into our policy and provide the primary care provider with a discharge summary of the patients stay. Social work verbally explains DCS's role and then coordinates the initial meeting with DCS - DCS then provides any patient handouts related to their department.
- We rarely have NAS babes leave unless past point of concern, if using medications, they are transferred
- We use AVS from Epic We could do better in this area. We follow up with medical provider and send them discharge summary.

Which of the following resources do you use as part of discharge planning for the birthing parent with substance use disorder (SUD)?

Twenty-five hospitals responded to this question. Nineteen hospitals report using the Postpartum Discharge Planning and Referral Checklist. Six hospitals use the DCS Patient Handout, and three hospitals use the Postpartum Letter to Primary Care Provider.

	Level I (8)	Level II (9)	Level III/IV (8)
Postpartum Discharge Planning and Referral Checklist.	6	8	5
Postpartum Letter to Primary Care Provider	1	0	2
DCS Patient Handout	3	2	1

Is there an order set for discharge planning for birthing parents affected by substance use embedded in your EMR system?

Fifty-three hospitals responded to this question. Forty-six hospitals responded no, one hospital responded yes and six provided comments.

- Has to be selected in EMR system.
- No - social work individualizes their discharge planning according to patient's specific needs and geographic location.
- Not sure
- Not that I am aware of
- This responder is not sure.

Is there an order set for discharge planning for neonates affected by substance use embedded in your EMR system?

Fifty-three hospitals responded to this question. Six hospitals responded yes. Forty-one hospitals responded no, and six hospitals provide comments.

- Has to be selected in EMR system.
- We have a discharge checklist attached to our policy
- NAS newborn is normally transferred
- Not that I am aware of
- This responder is not sure.

Training/Policies/Guidelines

These questions are related to the types of training, policy development and guidelines that hospitals have put in place. Hospitals were asked to identify which topics they provide training for their staff. They were also asked to identify which topics they have developed policies or guidelines.

	Provide Training	Policies Guidelines

Indications and procedures for screening for maternal substance use	82.6%	86.5%
Evaluation and comprehensive treatment of infants at risk for or showing signs of withdrawal	76.9%	80.7%
Routine use of scoring systems to evaluate signs and symptoms of drug withdrawal	78.8%	76.9%
Standardization of scoring	69.2%	75.0%
Pharmacologic treatment	57.6%	61.5%
Breastfeeding or expressed human milk	88.4%	78.8%
Non-pharmacologic treatment	86.5%	82.6%
Data Submission to IDOH (IBDPR)	48.0%	44.2%
Discharge Planning for mothers	44.2%	40.3%
Discharge Planning for neonates	48.0%	48.0%
Referral to First Steps	61.5%	50.0%
Implicit Bias/Stigma	80.7%	50.0%
Respectful Care	82.6%	51.9%
Clinical Opiate Withdrawal Scale	21.1%	28.8%
Team Approach to care and treatment	61.5%	51.9%

Data Collection

Do you currently submit monthly data to the IDOH RedCap database regarding the number of births, number of cords tested, number of positive cords and the number of NAS diagnoses?

Forty-nine hospitals responded to this question. Forty-five of the forty-nine hospitals reported they submit data on a monthly basis.

Does your hospital submit the appropriate ICD 10 codes for every baby that tests positive for substance exposure to the Indiana Birth Defects Problems Registry (IBDPR)?

Forty-eight hospitals responded to this question. Thirty-six hospitals indicated they submit the appropriate code. Three said they do not submit the codes, and nine hospitals responded they did not know whether the data was submitted.

Do you have access to IBDPR data to periodically reconcile with the data submitted to RedCap?

Forty-six hospitals responded to this question. Twenty-eight hospitals do not have access, seven hospitals responded they do have access, and eleven hospitals indicated they did not know.