Perinatal Substance Use Bundle

An Innovation Station Promising Practice

Purpose: This document is intended to support MCH professionals to implement a practice found in Innovation Station. This resource provides the information needed to replicate the practice and is divided into two sections: the first section provides a high-level overview of the practice while the second section describes how to implement the practice. For additional information on any of the content provided below, please reach out to the practice contact located at the bottom of this document.

Section I: Practice Overview

Location:	**Indiana**	**Title V/MCH Block Grant Measures Addressed**
Category:	**Promising Practice**	**Injury, Neonatal Abstinence Syndrome and Perinatal/Neonatal/Infant Mortality**
Date Submitted:	**October 2018**	

Practice Description

The Indiana Perinatal Quality Improvement Collaborative (IPQIC) drafted a PSU practice bundle to establish a uniform process of identification and intervention from screening at the first prenatal visit to discharge planning and follow-up for both the mother and the baby. The goal is to provide the tools necessary to address the needs of pregnant women who are using licit or illicit substances as well as their newborns who are exposed to the substances.

Purpose

This practice was developed by the IPQIC Perinatal Substance Use Taskforce. This task force was convened in May 2014 with approximately 50 members who met monthly to accomplish deliverables. The resulting PSU practice bundle was approved in October 2018 with plans to implement its use statewide in 2019.

The intended benefit of the practice bundle is to offer support resources to mothers, management recommendations to healthcare providers, and provide a standardized treatment plan for newborns exposed to perinatal substance use or diagnosed with NAS. The practice bundle promotes consistent communication between inpatient and outpatient health care providers and state social services.

Practice Foundation

Statistics across the nation show increasing incidence of perinatal substance use and resultant diagnosis of neonatal abstinence syndrome (NAS). In Indiana, the prevalence of opioid abuse among pregnant women is double the national average and the rates of marijuana use are even higher. Pregnant women in Indiana are in need of addiction treatment resources, while facilities and providers in our state are in need of guidance on how to treat families affected by perinatal substance use. In addition to collecting data on the diagnosis and treatment of NAS in Indiana, the Indiana Perinatal Quality Improvement Collaborative (IPQIC) Perinatal Substance Use Taskforce is working to facilitate screening and treatment that is responsive to the needs of pregnant women and their support system. Through this study, Indiana has found that of the cords tested the rate of opiates has been above the national rate (12.7 compared to 10.8) and the rate of marijuana abuse has been much higher than anticipated in a state where medical marijuana is not legalized (18.9). These results warrant the continued study of PSU and the establishment of additional treatment programs.

Core Components

Core components are those essential practice elements which are observable and measurable.

- *Example: The goal of our program was to improve the number of perinatal depression screens among OB/GYN providers. We did this by conducting a yearlong practice improvement program for OBGYN practices across the state. The core components of this program included virtual training by a nurse educator, provision of a referral sheet tailored to the local area for positive screened women, and follow-up with practices by our program manager.*

The established practice bundle is intended to assist professional caregivers in diagnosing and then supporting mothers and babies impacted by perinatal substance use disorder. The core components include: 1) establishing uniform diagnosis and education, and 2) sharing best practices and providing resources.

Practice Activities

Core Component	Activities	Operational Details
Establishing uniform diagnosis and education	Assessment of mothers and babies impacted by PSU	• A common definition for NAS; • Universal screening of pregnant women at the first prenatal visit and when presenting for delivery; • Screening of newborns whose mothers have had a positive screen or who have opted out of the screening protocol; • Educational materials for patients and providers.

Sharing best practices and providing resources	Development of a PSU Practice Bundle	• Process Overview • Pharmacologic Treatment Protocol • Non-Pharmacologic Treatment Protocol • Discharge Planning and Follow-up for Infant • Discharge Planning and Follow-up for Mother • Transfer Protocol when higher level of care needed • Educational Materials for pregnant women and families

Evidence of Effectiveness (e.g. Evaluation Data)

Participants: In 2016, four hospitals agreed to pilot practice. These hospitals represented urban, suburban and rural areas of the state. Based on initial findings, the pilot hospitals and the task force felt that expansion of the pilot was appropriate. By the end of 2017, there were 21 hospitals participating in the project including:

- Four Level I hospitals;
- Eight Level II hospitals; and
- Nine Level III/IV hospitals.

In 2018, Indiana has 29 out of 87 birthing hospitals in the state participating in this project.

Data Collection:

Current data reported over the last eighteen months by these facilities includes:

- Total number of births;
- Total number of NAS diagnoses;
- Total number of screenings done;
- Results from umbilical cord testing.

Hospitals are also required to submit NAS diagnosis codes to the Indiana Birth Defects and Problems Registry. These ICD-10-CM diagnosis codes are for fetal and newborn exposure to maternal infection or substance.

The cord samples that are submitted for testing by the pilot hospitals are sent to a single lab that then provides the ISDH with an aggregate sample of the statewide results. This both supports the core mission of the PSU pilot to determine a state prevalence rate for drug exposed newborns and prevents individual hospitals and communities from reporting results that are not reflective of the entire population of delivering women.

Data for 2017 reflects 19,048 births. The percent of cords tested was 16% (2,953 cords). The percentage of cords that tested positive was 39%. The rate of positive cords per 1,000 live births was 134.4. The combined data of 2017 and five months of 2018 has a rate of positive cords per 1,000 live births of 66.4.

Additional information can be found at: https://www.in.gov/laboroflove/208.htm

Replication

The PSU practice bundle will allow Indiana's additional 60 hospitals to implement the protocols that are based on the experience of the initial pilot hospitals over the last three years. In addition, Indiana has entered into a partnership with the Vermont Oxford Network (VON) to become a VON State Partner which will provide a wealth of resources to the participating hospitals, including online modules that will support not only the hospital personnel but also community members including medical home personnel, early intervention, home visiting, child welfare personnel and others. This will ultimately promote an informed workforce that can appropriately support both caregivers, infants, and each other.

Section II: Practice Implementation

Internal Capacity

The IPQIC support structure is funded by Title V and externally coordinated with a local vendor who coordinates and supports all meetings and efforts. Individuals volunteer their time to advance IPQIC efforts and have an equal voice at the table of task force meetings. Recommendations from task forces are taken to the IPQIC Governing Council by the task force co-chairs for review, feedback, and final approval of the recommendations made. These are then reviewed by the Indiana State Department of Health (ISDH) senior leadership team to determine the best group to carry the recommendations and best practices forward to implementation. This could result in actions such as legislation supported by the ISDH or implementation by the Indiana Hospital Association.

Collaboration/Partners

The IPQIC PSU taskforce has engaged at least one or more representatives from each of the following groups/fields:

- Regional Network Administrators
- Maternal and Neonatal Nursing Directors
- Clinical Nurse Specialists
- Maternal Fetal Medicine Specialists
- Obstetricians
- Pediatricians, including the Indiana State AAP President
- Neonatologists
- March of Dimes
- State of Indiana Mental Health Addiction Services

- State insurance representatives from Managed Health Services (Hoosier Healthwise, Anthem)
- Indiana School of Nursing
- Indiana Hospital Association
- Nurse Family Partnership
- Volunteers of America - Fresh Start Recovery Residential Treatment Center
- U.S. Drug Testing Lab

Practice Cost

The cost to implement the PSU practice bundle is the time and expertise of the IPQIC volunteers who are committed to imbed it in the practice of their individual hospitals. This implementation is also strongly supported by the Indiana Hospital Association.

Practice Timeline

The PSU practice bundle was implemented in 2018 at 29 of Indiana's 86 delivering hospitals with plans to implement to all of them in 2019.

Practice Timeline				
Phase	**Description of Activity**	**Date/Timeframe**	**# of hours needed to complete/ oversee activity**	**Person(s) Responsible**
Planning/ Pre-implementation	**Research current hospital diagnosis and treatment practices**	**Spring 2018**	**2 months**	**IPQIC**
	Drafted practice bundle	**Summer 2018**	**3 months**	**IPQIC**
	Vetted draft bundle with key stakeholders	**Fall 2018**	**1 month**	**IPQIC**
Implementation	**Rolled the bundle out to the already engaged hospitals**	**Fall 2018**	**3 months**	**IPQIC**
	Shared widely via e-mail and posted on website	**Fall 2018**	**Once with follow up**	**IPQIC**
	Recruited key stakeholders at each hospital to champion the use with their teams	**Fall 2018**	**Ongoing**	**Indiana hospitals**

Sustainability	**Plan to contract with the Indiana Hospital Association to support and reinforce the use**	**2019**	**TBD**	**ISDH and IHA**
	Plan to conduct a survey to determine the level of bundle adaptation	**2019**	**TBD**	**IPQIC**
	Potentially conduct a PDSA cycle if level of adaptation is concerning	**2020**	**TBD**	**IPQIC**

Resources Provided

https://www.in.gov/laboroflove/208.htm

Lessons Learned

Like most states across the nation, Indiana needs more obstetric providers who offer medicated assisted treatment (MAT) to their patients and more residential treatment centers for pregnant and newly delivery women. This need has been reflected in the PSU study lab results. Of the cords that tested positive in 2017, MAT was noted at low rates: Methadone at 1.58% and Buprenorphine at 3.47%. The hope is that as more treatment resources become available to pregnant women experiencing substance use disorder the rates of MAT will increase demonstrating engagement in treatment prior to delivery.

Next Steps

As Indiana gains further understanding of demographic areas in greatest need, funding for expanded services can be considered. Frequent discussions with providers regarding barriers to care and treatment guide funding and grant opportunities focused on perinatal substance use. Already, the data collected from this practice has helped to inform policy in Indiana. As a result of successes in screening, the governor has announced legislation to require verbal screening of substance use for pregnant women.

Practice Contact Information

For more information about this practice, please contact:

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