Mother & Baby Substance Exposure Toolkit

A part of the California Medication Assisted Treatment Expansion Project

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Executive Summary

Maternal and newborn providers and staff face an increasing number of opportunities to care for women and newborns affected by Substance Use Disorder (SUD), and particularly Opioid Use Disorder (OUD), in offices, clinics, urgent care centers, and hospitals.

> *"As California, and the nation, has seen rising rates of social inequity, homelessness, mental illness, and despair, so too do we see increases in opioid abuse, addiction, overdose and deaths, especially among those most marginalized in our society.*
>
> *The State of California, working in partnership with health care, academia, philanthropy, and at the community level, has taken a collective action approach and built a structure, anchored by the Statewide Opioid Safety Workgroup, to track the epidemic and pivot policy and programmatic interventions to address the changing realities of addiction in the state.*
>
> *Because of our collective efforts, California has consistently had rates below the national average. Yet, the magnitude of the impact of the epidemic is great, and the work of the state and our partners is ongoing."*
>
> *- Dr. Karen Smith, Former State Public Health Officer and CDPH Director*

The project team from Health Management Associates, California Perinatal Quality Care Collaborative and California Maternal Quality Care Collaborative gathered a diverse task force of obstetric and pediatric providers, anesthesiologists, nurses, social workers, and public health professionals to create a toolkit focused on maternal and newborn care from the prenatal period through hospital discharge. Content creators and reviewers for **The Mother & Baby Substance Exposure Toolkit** are experts in their fields.

The toolkit takes into consideration the intricacies that potential scenarios present: difficulties in screening, stigmatized care, variability of provider and staff knowledge, and the challenges of care coordination. Also taken into consideration is the work of the many stakeholders who are committed to the well-being of both mother and newborn and who have identified opportunities for improved collaboration. This toolkit clarifies practices that support and improve the care of mother and newborn, guided by the following foundational principles:

- Every pregnant woman should be screened for substance abuse
- Every pregnant woman with OUD should be on Medication Assisted Treatment (MAT)
- An increasing evidence base supports the use of non-pharmacologic treatment for newborns with Neonatal Abstinence Syndrome (NAS)
- Mothers and babies should receive support to keep them together

The included implementation guide offers guidance on how to put this toolkit into practice. Each of the best practices is followed by resources drawn from experts and programs around the country. The toolkit is divided into the following sections, each listing best practices within critical topic areas:

Screening

Topic areas include: universal screening with a validated verbal screening tool, maternal urine toxicology and the role of explicit/implicit bias in decision-making, and implementing selective newborn biological toxicology testing.

Treatment

Topic areas include: inpatient treatment protocols, pain management and anesthesia, minimizing opioid use, breastfeeding, pharmacologic and nonpharmacologic treatment of newborns with NAS, and establishing a pharmacologic weaning protocol.

Transitions of Care

Topic areas include: creating a dyad-centered Plan of Safe Care, implementing a discharge checklist, linking to home visitation programs, and other resources, and communication with the follow-up newborn provider.

Education

Topic areas include: educating staff about OUD, NAS, stigma, and Trauma-Informed Care.

It is important to state here that there are many people in the community who do not identify as women but who desire to have a child or are currently pregnant or in the postpartum period. While we use the term mother in this toolkit, we must reiterate that **all birthing people are equally deserving of patient-centered care that helps them attain their full potential and live authentic, healthy lives**. For this endeavor to be successful, providers and community collaborators must work toward more inclusivity and best practices that are free of judgement and predetermined norms.

The term NAS will be used in this toolkit to refer to newborns who are withdrawing from substances to which they were exposed in utero, with a focus primarily on withdrawal from opioids. In the past few years, the term NOWS (neonatal opioid withdrawal syndrome) has been introduced to describe the subset of NAS which relates to opioid withdrawal. To avoid confusion and until NOWS comes into more widespread use with both the medical community and the public, this toolkit will continue to use the term NAS.

The overarching goals of this toolkit are to maintain the mother-baby dyad whenever possible, and to keep the patient in treatment, thereby reducing the incidence of NAS. These goals drive a lucidity of purpose to offer safe, effective, patient-centered, hopeful care that is free of stigma and prejudice. As they carefully mapped out the best available, evidence-based care practices in this toolkit, the experts were guided by the lessons learned from the personal stories of patients, many with histories of abuse and no place left to turn. Clearly, shared decision making is a key part of these best practices. The toolkit authors acknowledge that more work lies ahead. Community collaboration must be expanded, more data need to be gathered, and patient voices must be amplified. The authors and collaborating partners on this project are grateful for the work of others who began this journey before us, and we look forward to further collaboration on behalf of all community members, newborns, and families affected by opioid use disorder.

Lastly, readers should remember that this toolkit is considered a resource, but does not define the standard of care in California. Readers are advised to adapt the guidelines and resources based on their local facility's level of care and patient populations served and are also advised to not rely solely on the guidelines presented here.

References

- California Department of Public Health. California's approach to the opioid epidemic.

Accessed December 1, 2019. https://www.cdph.ca.gov/Pages/Opioids.aspx

The Case for Improving Care for Substance Exposed Mothers & Newborns

Why is this Toolkit Needed?

Opioid Use Disorder has ravaged many parts of the United States and is increasing rapidly in California. While the emphasis in this toolkit is on Opioid Use Disorder (OUD), most of the principles and resources described herein are applicable to all Substance Use Disorders (SUD). Pregnancy offers a unique opportunity for intervention, as pregnant women may be more willing to seek care and more motivated to remain in treatment than at other times in their lives.

Several studies now report that opioid overdose deaths decline during pregnancy, but peak in the year following pregnancy, and are now one of the leading causes of mortality among women during that period. One study estimates that OUD pregnancy-related hospitalizations cost an additional $30 million dollars annually (Whiteman VE, et al, 2014).

Significant morbidity and costs may be associated with infants exposed to opioids, particularly when pregnant mothers have not been in treatment prior to delivery. Health care data highlight the attention that newborns with Neonatal Abstinence Syndrome (NAS) need and deserve. Incidence of newborns with NAS increased 5-fold from 2000 to 2012, from 1.2 to 6 per 1000 live births, and continues to increase, with recent data citing as many as 20 cases per 1000 live births (Wachman EM, et al, 2018). In California, NAS incidence increased from a rate of 2.9 per 1,000 delivery hospitalizations in 2008 to 6.4 per 1000 in 2013, according to data from the California State Inpatient Databases. The cost of NAS admissions was almost $316 million in 2012, not including ongoing costs for follow-up care. The first several days after birth are vital for establishing a bond between mother and newborn, identifying and monitoring symptomatic newborns, and initiating appropriate management. Ensuring that newborns are discharged to a stable environment and with proper medical follow-up is essential to achieve the best possible outcomes.

There are many barriers to safe, effective, patient-centered care of pregnant and parenting women with OUD and their newborns, including:

1. Knowledge gaps among inpatient and outpatient obstetric and pediatric providers and staff including
    a. Neurobiological underpinnings of addiction
    b. The evidence-based approach to OUD treatment
    c. Uses of screening and assessment questionnaires as well as biological (toxicology) testing
    d. Performing brief interventions
    e. Knowledge of available community resources for referrals following a positive screen
    f. Prenatal plans of care for women with OUD
    g. Inpatient care, including pain management in both the intrapartum and postpartum periods
    h. Appropriate monitoring of withdrawal symptoms in newborns
    i. Appropriate non-pharmacological and when needed, pharmacological management of affected newborns
    j. Best practices for family-centered care of opioid exposed newborns and

mothers
   k. Discharge Plan of Safe Care for mothers and newborns, including treatment and recovery service continuity
2. Gaps in care coordination and communication among:
   a. Prenatal care providers, Medication Assisted Treatment (MAT) providers, and drug treatment and recovery services
   b. Outpatient providers and inpatient providers
   c. Obstetric and pediatric providers
   d. Inpatient obstetric providers, MAT and treatment and recovery providers for post discharge care
   e. Pediatric providers and early childhood service providers
   f. Child Protective/Welfare Services providers or staff
3. Stigma and prejudice towards women with OUD by providers and staff
4. Inadequate capacity to meet the treatment and recovery needs of pregnant and parenting women:
   a. Insufficient numbers of MAT waivered women's health care providers
   b. Insufficient recovery and treatment options for pregnant and parenting women
   c. Insufficient access to MAT for pregnant and parenting women who are incarcerated
   d. Reluctance of some narcotic treatment programs and other providers to offer all three FDA-approved options for MAT

This toolkit is designed to support the preparation of maternity and pediatric caregivers to overcome barriers and deliver safe, effective, and coordinated care for mothers and newborns affected by OUD. The ultimate goal, if possible, is to keep the mother and newborn together. This can often provide the motivation necessary to do the work of treatment and recovery. Multiple studies have shown the importance of the mother-newborn bond in the well-being and development of the child. This can be facilitated by our second goal which is to keep the mother in care. Research has shown the importance of on-going care, after the initial treatment, to support the mother in her recovery. This would include on-going assessments of her biopsychosocial needs, modeling new coping skills, assisting her to navigate the health care and other systems and teaching her about child development and parenting.

We are thankful to our colleagues in other states as well as The Alliance for Innovation on Maternal Health (AIM), who have so generously shared many of their resources to aid us in the construction of this toolkit. In particular, we wish to thank Marilyn Meyer, MD, of The Northern New England Perinatal Quality Improvement Network and Patricia Lee King, Ph.D. of the Illinois Perinatal Quality Collaborative.

Resources

- The Alliance for Innovation on Maternal Health (AIM): https://safehealthcareforeverywoman.org/aim-program/
- The Illinois Perinatal Quality Care Collaborative. http://ilpqc.org/
- The Northern New England Perinatal Quality Improvement Network: https://www.nnepqin.org/

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The Current State of the Addiction Treatment Ecosystem

The treatment of addiction is no different than any other chronic illness. Treatment should be approached from the basic framework of screening, assessment, level of care determination, treatment and monitoring. The evaluation of the most appropriate level of care is very important to successful recovery. In most of medicine, we use the framework of:

1. Self-care
2. Outpatient
3. Inpatient
4. Intensive care

For addiction, the concept is the same; however, the levels of care are numbered and standardized as to intensity and array of service.

1. Early intervention (0.5)
2. Outpatient (1 and 1 OTP)
3. Intensive outpatient (2.1 and 2.5)
4. Residential (3.1, 3.3, 3.5 and 3.7)
5. Medically managed intensive inpatient (4)

While it is out of the scope of this document to detail each level of care, we must be cognizant that the location of care matters and directly impacts outcomes.

The specialty of Obstetrics and Gynecology has been around since 1889; however, addiction medicine is early in its development and thus lacking in both numbers and formal structure within the “house of medicine.” Given this, some communities will have all levels of care for addiction treatment, while some will have only one. In the most rural parts of the United States there will be no specialty treatment available. Therefore, it is of the utmost importance that all providers who care for pregnant and parenting women have a working knowledge of both the disease and the available treatments.

Proper addiction treatment also differs from most medical conditions, in that it requires access to focused behavioral health treatment and support for standard social services, such as housing, transportation, and communication.

Implementation Guide

Even when there is great enthusiasm around starting a quality improvement project, getting to the the goal(s) is hard without a specific plan in place. A step-by-step strategic approach or blueprint for project implementation will ensure the best possibility for success. This document is designed to guide participants through the process of implementing the toolkit to improve outcomes for mothers and newborns.

Consider the Unique Collaboration Required for Implementation

The implementation of this particular toolkit may be considered to be one of a more complex nature due to the variety of stakeholders and sites involved. Collaboration between hospitals, community resources and public health is indispensable to the implementation. Mothers and newborns affected by OUD will receive care from a diverse group of care providers. The care may well be provided in various locations outside the hospital setting. This community collaboration may add a new aspect to the hospital-focused quality improvement approach at your facility. Some facilities have a history of working closely with the community and public health. Should your facility be new to this type of collaboration, consider these partnerships as integral to success.

Education Regarding Stigma – Changing Minds

The success and sustainability of the implementation depends on the staff and provider education that takes place. While clinicians understand the importance of the right dose of the right medication, the right words are sometimes missing. "Research shows that the language we use to describe this disease can either perpetuate or overcome the stereotypes, prejudice and lack of empathy that keep people from getting the treatment they need. Scientific evidence demonstrates that this disease is caused by a variety of genetic and environmental factors, not moral weakness on the part of the individual. Our language should reflect that" (Ferner M, et al, 2017). The toolkit offers recommendations and best practices for education on stigma and substance use disorder.

Build the Right Team to Support Your Case for the Implementation Effort

Champions have the ability to communicate broadly regarding the importance of implementatio, and to gain consensus for the effort. Recruit both physician and staff champions who can promote education, facilitate the implementation of the best practices and encourage others to become engaged.

The team should include those with clinical and technical knowledge, those who deal with the day to day functioning of the unit or department, and those at a higher management level with the ability to remove barriers to implementation. In a clinic setting, the team might be quite small, but teams in a more complex hospital setting require broader representation. Build a team that includes members from as many of the points of care as possible. Providers, nursing, and pharmacy professionals are all essential members of the team. Anesthesiology providers must be involved to address pain management effectively. Staff with analytic and EHR expertise should optimally be involved from the start. Quality

improvement facilitators/project managers can be beneficial in organizing, communicating, and introducing QI tools at appropriate times as needed. Additionally, identify members who have been successful in previous implementation projects – large or small. **Central to success, however, is finding members with a passion for improving the quality of care for substance exposed mothers and newborns.**

The champions and team members should be familiar with the current state of care in the hospital as well as the data related to the goals of the implementation. Transparency regarding the data is a motivator for commitment to changing practice and minds. Reviewing the data not only identifies key opportunities but is crucial in measuring progress.

The champions and team members should have a consistent story to tell that is concise and hits the meaningful points of the goals of the implementation, the project scope and general information such as timeline and milestones.

Finally, consider including a patient representative. Hospitals are increasingly seeking input from patient and family advisory councils. This input can be especially valuable in terms of identifying the current state of the patient experience, including the practice of shared decision making.

Identify All Stakeholders and Resources

Identifying stakeholders may be simplified after an assessment of all points of care and entry in your clinic or hospital. Stakeholders may also be considered in terms of flow of care, from the prenatal period through discharge, as an example. Widen your focus to include stakeholders from outside the hospital. The goals of the toolkit (keeping the dyad together, keeping the mother in treatment, and reducing rates of NAS) can only be accomplished with ongoing relationships (communication) with providers and outside resources. In the hospital environment, as an example, it may be decided that the department representative to the medical group will support the initiative to screen patients in the office settings. Perhaps the local Department of Public Health will champion patient education materials for use in and out of the hospital.

Do not forget to include the key leaders within the hospital and outpatient services who can make critical decisions for financial and other support. Reach out to those who can assist with the appropriate channels for education for both providers and staff.

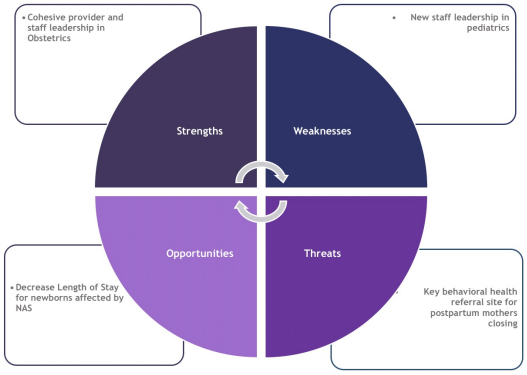
Understand the Current Landscape at Your Facility

All team members and leaders should have a shared mental model of the current culture of care in the facility as well as current practice. Transparency regarding the current state will focus implementation efforts on the most valuable areas requiring change. Transparency enables the critical discussions that need to take place in order to identify the goals for the project. What is the current state of communication and work between maternal, neonatal and pediatric departments? Where are the key connections made with community providers and resources? Are there current gaps in care?

SWOT Analysis

Understanding your current environment involves knowing your internal capabilites as well as the external environment. A SWOT Analysis is one way to evaluate your current state by categorizing your culture of care according to strengths, weaknesses, opportunities, and

threats. We have included an example of an analysis below.



Example SWOT Analysis when considering toolkit implementation

Identify the Scope of the Project and Barriers that May Impede Progress

Scope

Identifying the scope of your project is key to success. After the team's analysis of the current landscape at your facility, the team must make some critical decisions about which of the best practices of the toolkit should be immediately implemented. As described above, understanding the landscape of your organization, the external resources and available community services will not only illuminate what should be implemented, but also what realistically can be implemented. The scope reflects the parameters of the project – what the team will pursue and will not pursue to reach the identified goal. Just as with understanding the current landscape of care, stakeholders and the clinical champions who form the backbone of the implementation team should be included in scope planning.

Barrier Identification

Assessing barriers to implementation is also key. Many overt, general barriers to the success of the project may be easily illuminated with the SWOT or other landscape analyses described above. In this case, the barriers may be identified as weaknesses or threats. However, a more detailed, granular assessment of the barriers to the specific best practices you wish to implement will also be needed. One example of a simple brainstorming method to identify the barriers to implementing specific best practices is the "5 Whys" method. The "5 Whys" is a method of finding the root cause of why things are done a certain way (and therefore where the bottlenecks may be when trying to implement a new best practice). When you come to an answer (sometimes there is more than one answer), you ask "why does this happen" again, until you get to the actual root cause. Many brainstorming methods exist. The key is to sit down with your team and map out the possible barriers for each of the best practices you wish to implement. In the end, this methodical approach will prove impactful.

Develop Your Goals and Timeline

Based on your conversations and work to this point, develop the goals and timeline for the implementation. What are the expected outcomes? What are you really trying to accomplish? What changes can you make that will lead to improvement?

The use of SMART goals or methodology (see Resources) will move the project forward. The mnemonic is a useful tool for identifying specific, measurable, achievable, relevant, and time-bound goals. Perhaps initial project goals will revolve around self-reported screening or the identification of a template for a Plan of Safe Care. The measurable aspect may become the focus of a goal itself. Do you have a current way of measuring the percentage of patients who are screened upon admission to the hospital in labor? One of the important initial steps in designing the blueprint is to identify what you need to accomplish in the first month and then the second month and then continue to plan for every two months what specific things to accomplish. Team meetings to go over progress and strategies to overcome barriers should occur regularly. We recommend weekly or at least every two weeks at the start. Once the project is moving along, monthly meetings will likely be adequate. Research show that setting time aside from everyone's busy schedule is an essential statement of importance and helps drive progress.

In addition, an important aspect within the timeline is the identification of milestones. Milestones note significant phases in a project, a clear sequencing of events. Reaching a milestone is also a reason to celebrate. Do not await the end of the project to celebrate – wins along the way promote cohesiveness in the team and lead to further successes.

Develop a Plan for Communication

All those involved in the implementation should be communicated with in advance of the start of the project. Utilize communication channels that have been successful in the past. There are several items to take into consideration when developing the plan:

- Would the current state of knowledge regarding the opportunity for improving outcomes for mothers and newborns affected by OUD necessitate a great deal of background information regarding the project?
- Does the comfort level of improvement efforts by staff necessitate more in-depth communication?
- Are there other ongoing improvement efforts that can be communicated with jointly in a coordinated manner?

Getting Started

It is often hard to pick which of the best practices to do first, but you can't do them all! Different facilities will be at different stages for this project so everyone will have a different list. However, the following is a place to begin for those that are starting from scratch.

1. Identify multidisciplinary project team and schedule regular meetings
2. Include community partners
3. Provide staff education for OUD and stigma
4. Develop education and strategies for implementation of universal screening for SUD (including OUD)
5. Establish working groups to address discharge plans (and checklists) for mothers and newborns

Resources

- California Maternal Quality Care Collaborative https://www.cmqcc.org/
- California Perinatal Quality Care Collaborative http://www.cpqcc.org

- The History and Evolution of Smart Goals
  https://www.achieveit.com/resources/blog/the-history-and-evolution-of-smart-goals
- Institute for Health Care Improvement
  http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx
- Institute for Health Care Improvement – Physician Engagement
  http://www.ihi.org/resources/Pages/IHIWhitePapers/EngagingPhysiciansWhitePaper.as
- U. S. Department of Health and Human Services Health Resources and Services Administration: Quality Improvement
  https://www.hrsa.gov/sites/default/files/quality/toolbox/508pdfs/qualityimprovement.p

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Acronyms

AAP American Academy of Pediatrics

ACA Affordable Care Act

ACES Adverse Childhood Experiences

ACOG American College of Obstetricians and Gynecologists

AIM Alliance for Innovation on Maternal Health

ASAM American Society of Addiction Medicine

ASI Addiction Severity Index

CAPTA Child Abuse Prevention and Treatment Act

CARA Comprehensive Addiction and Recovery Act

CDC Centers for Disease Control

CEU Continuing Education Unit

CHVP California Home Visiting Program

CME Continuous Medical Education

CMQCC California Maternal Quality Care Collaborative

CPQCC California Perinatal Quality Care Collaborative

CPS Child Protective Services

CPSP Comprehensive Perinatal Services Program

CRAFFT Clinical assessment tool designed to screen for substance-related risks and problems in adolescents (stands for Car, Relax, Alone, Forget, Friends, Trouble)

DSM - 5 Diagnostic and Statistical Manual Mental Disorders

ESC Eat-Sleep-Console

GC/MS Gas Chromatography – Mass Spectrometry

HFA Healthy Families America

HIPPA Health Insurance Portability and Accountability Act

HIV Human Immunodeficiency Virus

HMA Health Management Associates

ILPQC Illinois Perinatal Quality Collaborative

IV Intravenous

L&D Labor & Delivery

LOS Length of Stay

LOT Length of Treatment

MAT Medication-Assisted Treatment

MI Motivational Interviewing

NAS Neonatal Abstinence Syndrome

NFP Nurse-Family Partnership

NICU Neonatal Intensive Care Unit

NIDA National Institute on Drug Abuse

NNEPQIN Northern New England Perinatal Quality Improvement Network

NSAID Nonsteroidal Anti-Inflammatory Drug

OB/GYN Obstetrician-Gynecologist

OUD Opioid Use Disorder

PCA Patient Controlled Analgesia

PCP Primary Care Provider

PTSD Post-Traumatic Stress Disorder

QI Quality Improvement

QL Quadratus Lumborum

RCT Randomized Control Trial

SAMHSA Substance Abuse and Mental Health Services Administration

S.E.L.F. Safety, Emotions, Loss, Future

SBIRT Screening, Brief Intervention, and Referral to Treatment

SNRI Serotonin Norepinephrine Reuptake Inhibitor

SSRI Serotonin Synaptic Reuptake Inhibitor

SUD Substance Used Disorder

TAP Transverse Abdominus Plane

TIC Trauma-Informed Care

WHO World Health Organization

WIC Women, Infants, and Children Program

Use validated verbal screening and assessment tools to evaluate all pregnant women for substance use disorders

Best Practice No. 1

Outpatient, Labor and Delivery, Nursery/NICU, and Screening, Assessment and Level of Care Determination

Overview

Implement universal screening for substance use disorder (SUD) with a standardized, evidence-based screening tool at all locations that provide medical care to pregnant women. A universal screening tool for self-reporting of opioid use and identification of risk for opioid use disorder (OUD) should not be confused with toxicology testing (refer to **Best Practice #3** for more on toxicology testing).

Why we are recommending this best practice

Identification of women with SUD as early as possible in pregnancy is critical in connecting them to treatment. Treatment for SUD, particularly OUD, during pregnancy results in better outcomes for mom and for her newborn.

Drug addiction affects all racial, ethnic, and social groups. Universally screening all women minimizes the potential for implicit bias that can occur when providers use subjective risk factors to determine who should be screened and may also decrease the stigma associated with SUD and screening. Universal screening at the time of entry into prenatal care allows more time to intervene and mitigate the harms associated with SUD in pregnancy and to stabilize the home environment for newborns. If an individual screen is positive for risk of OUD or other SUD, a validated assessment tool (a deeper evaluation intended to solidify a diagnosis and severity of a condition) should be administered to determine the presence and severity of the SUD. It is important to remember that substance use is not synonymous with addiction.

Strategies for Implementation

- Educate staff on how to administer a validated screening tool and the importance of universal screening in order to reduce implicit bias.

- Initial screening for risk takes little time and can be done at many points within care. Validated screening tools include the NIDA quick screen, 4Ps Plus, and the CRAFFT (for women and adolescents 12-26 years old). Refer to a full list of validated screening tools in the Resources section of this Best Practice.

- Screening should be performed at intake of prenatal care to identify needs as early as possible and at regular intervals thereafter.

- If screening is positive, use a validated verbal assessment tool to establish the diagnosis and severity of an actual SUD. Ideally, this assessment should immediately follow a positive screen. Examples include, but are not limited to, AUDIT-C (alcohol specific), ASSIST (Alcohol, Smoking, and Substance Involvement Screening Test), and DAST-10 (drug use). For descriptions of these and other validated assessment tools, refer to the AIM Opioid Screening Tools in the Resources section of this Best Practice.

- A positive screening should stimulate a brief intervention and referral to appropriate treatment using resources within your setting and community. *Determining severity of disease is critical in referring to the correct level of care* (refer to **Best Practice #2**).

- Screen all women for coerced sex and the possibility of human trafficking. An Adult Human Trafficking Screening Tool has been created by the US Department of Health and Human Services. Please also see a commentary from *The Journal of Ethics* in the References section of this Best Practice.

- Inquire about polysubstance use. If smoking tobacco or drinking alcohol, provide brief intervention and referral to services. Encourage cessation and refer to cessation services to decrease risk for a variety of adverse pregnancy outcomes and to decrease severity of neonatal abstinence syndrome (NAS). If drinking alcohol, counsel the patient that there is no known safe amount of alcohol during pregnancy. Inform patient/family that alcohol is the leading known cause of birth defects.

Kayla

Kayla comes to her local community health clinic and asks to be seen for her ongoing problems with back pain and anxiety. Her history elicited the need for a routine pregnancy test. Kayla starts crying when she finds out she is pregnant and it is unclear at first what this means, but through continued discussion the physician realizes that although Kayla didn't plan on getting pregnant now, she definitely wants to continue the pregnancy and is excited about this new possibility.

The physician asks Kayla if it would be ok to ask some questions about Kayla's personal and family history. She explains that they ask these questions of all women who are pregnant to make sure they get the best possible care during pregnancy. With Kayla's permission, the physician reviews Kayla's medical, social, and family histories; she includes an evidence-based screening tool for substance use disorder that takes only a few minutes to administer. It was only through this interview that the physician identified Kayla as a person with possible SUD and was subsequently able to start her on the best possible care pathway to meet her unique needs.

Resources

1. AIM Opioid Screening Tools.
2. SAMHSA-HRSA Center for Integrated Health Solutions.
3. Council on Patient Safety Women's Health Care Safety Bundle for Obstetric Care for Women with Opioid Use Disorder.
4. Clinical Guidance for Treating Pregnant and Parenting Women with Opioid Use Disorder and Their Infants. SAMHSA.
5. Adult Human Trafficking Screening Tool and Guide.
6. Accuracy of Three Screening Tools for Prenatal Substance Use.
7. ACOG Postpartum Toolkit (see screening tools in Table 1 of the Substance Use Disorder section of this toolkit).

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Candy Stockton-Joreteg

MD, FASAM

Dr. Stockton is Board Certified in both Family Medicine and Addiction Medicine. Candy's passion is providing patient-centered care to pregnant and parenting women with addiction as well as addressing the upstream causes of addiction in her community. She is Chief Medical Officer at the Humboldt IPA, and is a practicing physician at their Priority Care Center. In her role at the IPA, she oversees the developing School Based Health Center Program and is the clinical champion for the Humboldt RISE Project (a county-wide Perinatal Substance Use Disorder project) and Humboldt County's Jail MAT program. She serves as a consultant for the implementation of the Hub and Spoke project in Northern California and for California's Opioid Response Network, based out of UCLA.

Carrie Griffin

DO

Dr. Carrie Griffin is a family medicine physician who specializes in maternal, child and reproductive health and practices in Humboldt County. She completed her residency at Maine Dartmouth Family Medicine Residency and fellowship at the University of New Mexico. Perinatal substance use is her clinical area of interest and expertise; she currently serves as a mentor for CMQCC's Mother Baby Substance Exposure initiative and the Humboldt RISE project, a community initiative to promote screening and case management services for women with substance use disorders in pregnancy.

Once substance use is identified, perform a brief intervention and referral to appropriate treatment (SBIRT)

Best Practice No. 2

Outpatient, Labor and Delivery, Nursery/NICU, and Screening, Assessment and Level of Care Determination

Overview

Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a comprehensive, evidence-based approach to the identification and delivery of services for a variety of conditions including substance use disorder (SUD). Once substance use is identified, perform a brief intervention and refer to the treatment most appropriate for a patient's needs. A brief intervention is a patient-centered, structured conversation that utilizes the principles of Motivational Interviewing (refer to **Best Practice #8**), in order to motivate the person to progress through the stages of readiness toward concrete changes that address their SUD. Brief interventions have been shown to improve outcomes for patients with substance use, and formal treatment is required for those with a diagnosable SUD.

Why we are recommending this best practice

SBIRT is a validated process for addressing SUD. Each facility should identify resources in their community to assist women who screen positive and include a warm hand-off to a care navigator to help connect them with appropriate resources.

Strategies for Implementation

- Identify and train the appropriate staff in the use of screening and brief intervention techniques. This can include sample scripting for staff around screening itself and how to respond to positive screens – this is important for any type of screening completed. Refer to **Best Practice 7** for more information on Trauma-Informed Care and how to avoid re-traumatization.

- Have a list of resources or informational packets available for each American Society of Addiction Medicine (ASAM) level of care to support women at all levels of risk.

- Establish a clear system and workflow for positive, validated screening and/or assessment tools.

- Please see the Resources section of this Best Practice for information on risk ("AIM Opioid Screening Tools").

  - Low risk patients can receive brief advice related to their identified substance.
  - Moderate risk patients should have a brief intervention
  - As described in Best Practice # 1, after a positive screen for SUD, use a validated assessment tool to determine the presence and severity of the SUD followed by the identification of and referral to the appropriate level of care that matches the severity of the patient's needs. The state of California mandates that all counties with Drug Medi-Cal Organized Delivery System (DMC-ODS) contracts use the ASAM criteria to determine the appropriate level of care for an individual with SUD. The ASAM Co-triage or the ASAM Continuum clinical decision supports are ideal assessment tools to meet that requirement.

- Other than the Co-triage, which is designed as a ten-minute provisional evaluation tool, each assessment typically takes an hour to complete. Identifying clinic personnel who can be trained to effectively administer the chosen screen, assessment, and level of care evaluation prior to SBIRT implementation will streamline workflow.

- Identify local options for each level of care, including the full spectrum of office-based treatment (level 1), methadone clinic management (level 1 OTP), intensive outpatient centers (levels 2.1 and 2.5), residential treatment centers (levels 3.1, 3.3, 3.5, and 3.7) and medically managed inpatient treatment (level 4). Please see the Resources section of this Best Practice for the SAMHSA treatment locator tool. For more on levels of care, please refer to the ASAM CONTINUUM in the Resources section of this Best Practice.

- Referral sites may be any of the above depending on the level of care determined to be most appropriate.

Kayla

Kayla's screen is positive for risk of substance use disorder, and she has shared that she is using opioid pain medications for her back pain, marijuana for her anxiety, and smoking cigarettes. While you are talking, she takes a pack of cigarettes out of her purse and throws it in the trash. She tells you that she knows smoking isn't good for her baby, and she is going to quit right now. She explains that she knows she should stop everything, but she needs the pain medication and marijuana to manage her back pain and anxiety, especially since pregnancy will probably make her back pain worse.

The physician applauds Kayla's desire to make healthy choices for herself and her baby. She explains that all medications women take during pregnancy may have some effects on the baby and that there are treatments available for women who have become dependent on opioids; these treatments not only help mom feel better but are safer for developing babies. She explains that abruptly stopping opioids suddenly can be dangerous for her baby. She asks if Kayla would like to meet with Hannah (a social worker), who can help her set up an appointment to talk about treatment, as well as assist with any other needs Kayla may have during her pregnancy.

Resources

1. SAMSHA’S guide to SBIRT.
2. ASI (Addiction Severity Index) Sample.
3. ASAM Continuum - Guide to Levels of Care for Substance Use Treatment.
4. NNEPQIN Toolkit for Perinatal Care of Women with Substance Use Disorders. Chapter 3 on SBIRT.
5. SBIRT Oregon’s online curriculum guide to teaching and using SBIRT.
6. AIM Opioid Screening Tools.
7. Behavioral Health Treatment Services Locator.

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Candy Stockton-Joreteg

MD, FASAM

Dr. Stockton is Board Certified in both Family Medicine and Addiction Medicine. Candy’s passion is providing patient-centered care to pregnant and parenting women with addiction as well as addressing the upstream causes of addiction in her community. She is Chief Medical Officer at the Humboldt IPA, and is a practicing physician at their Priority Care Center. In her role at the IPA, she oversees the developing School Based Health Center Program and is the clinical champion for the Humboldt RISE Project (a county-wide Perinatal Substance Use Disorder project) and Humboldt County’s Jail MAT program. She serves as a consultant for the implementation of the Hub and Spoke project in Northern California and for California’s Opioid Response Network, based out of UCLA.

Carrie Griffin

DO

Dr. Carrie Griffin is a family medicine physician who specializes in maternal, child and reproductive health and practices in Humboldt County. She completed her residency at Maine Dartmouth Family Medicine Residency and fellowship at the University of New Mexico. Perinatal substance use is her clinical area of interest and expertise; she currently serves as a mentor for CMQCC's Mother Baby Substance Exposure initiative and the Humboldt RISE project, a community initiative to promote screening and case management services for women with substance use disorders in pregnancy.

Maternal urine toxicology and the role of explicit/implicit bias in decision-making

Best Practice No. 3

Outpatient, Labor and Delivery, and Screening, Assessment and Level of Care Determination

Overview

Understanding toxicology testing and its limitations is important for providing optimal care to women who use substances during pregnancy. Universal screening via a validated verbal screening tool (see **Best Practice #1**) should not be confused with urine or blood toxicology, which historically has been applied inconsistently and has often resulted in a system of race and class-based testing. Thus, toxicology testing should be carefully applied with the intention of improving clinical decision-making, such as informing the pain management approach during the intrapartum period and improving efforts to link the mother with appropriate services and treatment.

Providers and staff should be educated on how explicit or implicit bias may impact their decision to perform biological toxicology testing on a pregnant or laboring woman. Standardization of criteria for toxicology testing may help curb the impact of these biases.

Why we are recommending this best practice

Toxicology testing has a necessary role in the care of women who use substances during pregnancy. The results are useful to encourage dialogue with the patient and can be necessary for clinical decision making. However, the results can also have devastating consequences for the mother and baby when used inappropriately by other agencies and can result in punitive consequences. Furthermore, toxicology results are easily misinterpreted by those who are unfamiliar with the nature and limitations of testing. Limitations of testing include, but are not limited to, the following:

- Many substances may not be detected (false negatives), including synthetic opioids and designer drugs
- Risk of false positives
- Need for confirmatory testing for any positive toxicology result
- Testing does not provide information on severity or duration of use
- Testing can only assess for current or recent use
- Even if results are negative, sporadic use is not ruled out
- A positive urine toxicology does not confirm a substance use disorder (SUD) any more than a negative result rules it out

The evidence suggests that hospital staff are more likely to perceive Black women as being at higher risk of using drugs, even though white women have similar rates of illicit drug use. Black women are therefore more likely to be tested, and more likely than white women to face punitive consequences such as having their children placed in protective care.

Even objective medical criteria for determining who should have toxicology testing may be

subject to inadvertent bias. For example, “inadequate prenatal care” is a common, and often necessary, criterion for toxicology testing. If this criterion is used as a prompt for toxicology, providers and nurses must understand that a variety of factors other than substance use may influence whether a woman can remain in care, including lack of insurance, inability to take time off of work, and lack of culturally appropriate care. All these factors are more likely to impact poor women and women of color.

Strategies for Implementation

- Ensure policies that delineate criteria for toxicology testing do not directly or indirectly target low income women and women of color.
- Behaviors *(*e.g signs of acute intoxication) are more important as prompts for toxicology screening than selective indicators of risk.
- Each institution should be aware of the sensitivity and specificity of the tests used at their facility.
- Everyone should be familiar with the current laws and regulations for their county and state. Each institution should have the following:
    - A clear policy, consistent with state and federal law, regarding what constitutes grounds for reporting to child protective services (CPS)
    - Education for all staff members who work with pregnant women about this policy
    - Routine reviews to ensure that the policy is being applied consistently and appropriately

- Every patient must be able to give informed consent. Informed consent requires a clear explanation of why testing is necessary, the benefits of testing, and risks of testing including the potential legal, criminal, or child welfare consequences. If the provider or nurse is unable or unwilling to thoroughly explain the typical course of events after a positive drug test at their facility, a reasonably prudent patient would not have sufficient information to make an informed decision. Additional talking points are included in the Resources section of this Best Practice.

- Every patient has a right to withhold consent and coercive language should not be used.

- Multiple biological substances can be used for toxicology testing, including urine, saliva, blood, hair, and meconium. Urine is often used to test pregnant women as the filtering action of the kidneys allows detection of smaller quantities for a longer period than blood.

- Toxicology tests generally fall into two types: screening tests and confirmatory tests.

- It is essential to confirm unexpected results from toxicology screening tests. If the result of the screening test matches an expected result, it is usually not necessary to

obtain confirmatory testing. Examples of unexpected results might include:
  - A patient tests positive for a substance that she denies taking
  - A patient tests negative for a substance that is prescribed, and she indicates she is taking regularly

- Toxicology testing does not provide information on how recently someone used a substance or the quantity they used. Toxicology screening tests are qualitative and only indicate the presence/absence of a substance. Confirmatory testing often does report a quantitative level, but this should not be used to infer how much a woman is using a substance. Many factors are involved, and any value over the cutoff level should be a qualitative positive unless evaluated by a medical review officer.

- Urine drug toxicology on admission to the hospital need to be monitored for timing of the sample related to administration of intrapartum pain medications. Fentanyl can lead to false positive opioid results. Ephedrine and vasopressin can lead to false positive amphetamine.

- For an excellent review of drug screening immunoassays for clinicians to become proficient in understanding and interpretation of results, please see Nelson ZJ et al. They also provide a full description of false positives and false negatives.

	Screening Tests	Confirmatory Tests
Methodology	Usually enzyme-linked immunosorbent assay (ELISA) like pregnancy strep tests.	Gas chromatography–mass spectrometry (GC/MS); Liquid chromatography–mass spectrometry (LC/MS); others
Accuracy	Can produce false positives and negatives.	Very sensitive to the drug being tested for but may have difficulty with synthetic versions.
Cost	Relatively inexpensive	More expensive then ELISA
Speed	Can be done at point of care thus providing relevant information at time of visit.	Needs to be sent off resulting in delays in making clinical decisions.

Toxicology Screening vs. Confirmatory Testing

Resources

1. Maternity Drug Policies by State.
2. Toxicology FAQs.

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Elliott Main

MD, FACOG

Dr. Main is the Medical Director of the California Maternal Quality Care Collaborative (CMQCC) and has led multiple state and national quality improvement projects. He is also the Chair of the California Pregnancy-Associated Mortality Review Committee since its inception in 2006. For 14 years, he was the Chair of the OB/GYN Department at California Pacific Medical Center in San Francisco. He is currently clinical professor of Obstetrics and Gynecology at Stanford University. Dr. Main has been actively involved or chaired multiple national committees on maternal quality measurement. In addition, he helps direct a number of national quality initiatives with ACOG, the CDC and Maternal Child Health Bureau (HRSA) including the multi-state AIM project. In 2013, Dr. Main received the ACOG Distinguished Service Award for his work in quality improvement.

Holly Smith

MPH, MSN, CNM

Holly Smith is a certified nurse-midwife with 20 years experience in diverse practice settings. She is the project manager for the CMQCC/CPQCC Mother and Baby Substance Exposure Initiative. Previous to this role, she was a the lead editor for the CMQCC Toolkit to Support Vaginal Birth and Reduce Primary Cesareans, and a clinical lead for the CMQCC Collaborative to Support Vaginal Birth and Reduce Primary Cesareans, a large-scale quality improvement project with over 90 California hospitals. Her primary role as clinical lead focused on assisting southern California hospitals with the implementation of evidence-based practices to reduce cesarean. She is a hospital coach and steering committee member for the American College of Nurse-Midwives' Reducing Primary Cesareans Project, and expert consultant on various national and state quality improvement and health policy initiatives. Additonally she chairs the Health Policy Committee of the California affiliate of the American College of Nurse-Midwives and is a health policy consultant to the California Nurse-Midwives Foundation.

Scott Haga

MPAS, PA-C

Scott Haga is Senior Consultant wiht Health Management Associates and is a passionate patient advocate with a focus on motivational training, evidence-based treatment, collaboration and tackling the national opioid crisis head-on. He is an experienced medical provider who co-founded and co-led an interdisciplinary complex care intervention for high frequency emergency department utilizers. He has been recognized as a subject matter expert on addiction, medication assisted treatment for substance use disorders, and building well-functioning interdisciplinary treatment teams.

Tipu V. Khan

MD, FAAFP, FASAM

Dr. Khan is an Addiction Medicine specialist and Chief of Addiction Medicine consult-liason service and outpatient specialty clinic at Ventura County Medical Center. He is the medical director of Prototypes Southern California which has hundreds of residential treatment beds as well as medical-withdrawal (detox) beds throughout Southern California. Dr. Khan is the Medical Director of the Ventura County Backpack medicine group, and Primary Care Hepatitis C Eradication Project. His niche is managing SUD in pregnancy and is a national speaker on this topic.

Create a prenatal checklist for care of women with opioid use disorder

Best Practice No. 4

Outpatient and Screening, Assessment and Level of Care Determination

Overview

Create a flow chart and/or checklist of care steps for antenatal care of women with opioid use disorder (OUD). Refer to the example below and an additional example in the Resources section of this Best Practice.

Why we are recommending this best practice

A checklist will help providers remember the many steps involved in the antenatal care of women and families with OUD. While these services and activities would normally be addressed over the course of prenatal care, they may need to be compressed depending on when the woman presents for care. Referenced are examples from the Illinois Perinatal Quality Care Collaborative and the Northern New England Perinatal Quality Improvement Network.

Strategies for Implementation

Collaborate with health care team members to adapt a written checklist that is specific for your site of care.

OUD Clinical Care Checklist (Adapted for CA)

Checklist Element	Date	Comments
Antepartum Care		
Counsel on MAT for OUD and arrange appropriate referrals		
Counsel and link to behavioral health counseling /recovery support services		
Social work consult or navigator who will link patient to care and follow up		
Obtain recommended lab testing- • HIV / Hep B / Hep C (if positive viral load & genotype) • Serum Creatinine/ Hepatic Function Panel		
Institutional drug screening policies and plan for testing reviewed		
Urine toxicology testing for confirmation per policy (consent required)		
Discuss Narcan as a lifesaving strategy and prescribe for patient / family		
Neonatology/Pediatric consult provided, discuss NAS, engaging mom in non-pharmacologic care of opioid exposed newborn, and plan of safe care.		
Child Protective Services policies reviewed, discuss mom/baby safe discharge plan		
Screen for alcohol/tobacco/non-prescribed drugs and provide cessation counseling		
Screen for co-morbidities (ie: mental health & domestic violence)		
Consent for obstetric team to communicate with MAT treatment providers		
Consider anesthesia consult to discuss pain control, L&D and postpartum		
Third Trimester		
Repeat recommended labs (HIV/HbsAg/GC/CT/RPR)		
Ultrasound (Fluid/Growth)		
Urine toxicology with confirmation (consent required), and review policy		
Review safe discharge care plan and DCFS process		
Patient Education: OUD/NAS, participating in non-pharmacologic care of the opioid exposed newborn, including breastfeeding, and rooming in.		
Comprehensive contraceptive counseling provided and documented		
During Delivery Admission		
Social work consult, peds/neonatology consult, anesthesia consult		
Verify appointments for support services (MAT/Behav Health/ Recovery Services)		
Confirm Hep C, HIV, Hep B screening completed		
Discuss Narcan as a lifesaving strategy and prescribe for patient / family		
Provide patient education & support for non-pharmacologic care of newborn		
Review plan of safe care including discharge plans for mom/infant		
Schedule early postpartum follow-up visit (within 2 weeks pp)		
Provide contraception or confirm contraception plan		

ILPQC OUD Clinical Care Checklist (adapted for CA)

Deep Dive

Checklists come in many forms: some for use in emergencies, some for use prior to surgery, and some simply as reminders for the supermarket. A prenatal checklist serves both as an ongoing set of reminders and as documentation of important tasks completed. A checklist, such as the one above, is central to the care of a complex patient with many external consultations over a long period of time, and a pregnant woman with substance use disorder is one of the most challenging to care for. A provider must navigate special laws and unfamiliar regulations, co-manage with other key providers, order different panels of blood tests, approach building communication and developing trust differently, and provide education on topics not usually covered in prenatal care. Examples of the latter include special plans for labor pain management, preparation for neonatal substance withdrawal, and most important of all, developing a Plan of Safe Care (POSC) for both the baby and mother.

The Prenatal Checklist provides the central direction for the team's actions in antenatal care. It belongs front and center in the prenatal record and should be reviewed at

every visit by providers, staff, and the patient. This toolkit provides several examples. Through small tests of change, modifications can be made to the example checklists until it meets the needs of patients at the care site. Follow up at the postpartum visit should include questions about what the patient thinks could be improved—no checklist is ever a final product!

Resources

1. ILPQC MNO-OB OUD Protocol.
2. ILPQC OUD Clinical Care Checklist.
3. NNEPQIN Opioid Use Disorder Clinical Pathway.

Elliott Main

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Identify substance-exposed newborns

Best Practice No. 5

Nursery/NICU and Screening, Assessment and Level of Care Determination

Overview

- Substance use disorder (SUD) during pregnancy—whether involving illicit, legal, or prescription drugs—is an issue critical to the health of mothers and newborns, and the incidence is increasing in all socioeconomic groups. The examples included below demonstrate the multitude of exposures for mothers, fetuses, and newborns for which appropriate screening (verbal, written), or biologic testing exist.

- The following are some of the substances and syndromes associated with maternal use and/or in utero exposure: opioids (neonatal abstinence syndrome), nicotine, alcohol (fetal alcohol syndrome), methamphetamine, cocaine, serotonin-synaptic reuptake inhibitor (SSRI), serotonin-norepinephrine reuptake inhibitor (SNRI), and marijuana.

Identifying substance exposure during pregnancy requires effective communication within the multidisciplinary team caring for the mother/baby dyad, the best screening methods and assessments to convey information on possible effects, and mobilization of available inpatient, outpatient and community resources to promote good health and bonding.

Why we are recommending this best practice

- Newborn selective (i.e., risk-based) screening policies, including toxicology testing, should be developed in conjunction with the policies of the maternal care team to support a family-centered approach to identification and treatment. These policies should be consistently applied to limit potential bias.

- The results of maternal substance use screening and biological toxicology testing with confirmation provide important information to guide newborn health care providers on appropriate management, specifically if the newborn is demonstrating symptoms consistent with NAS.

Strategies for Implementation

- We recommend that all hospitals with maternity services maintain updated policies and procedures for newborn selective (risk-based) screening policies, based on a family-centered approach which includes the results of maternal screening for substance use (refer to **Best Practice #1** for more information on maternal screening).

- Risk-based screening may consist of items from a detailed prenatal history (including inquiries into prescription and nonprescription drug use), validated maternal SUD screening questionnaires, maternal symptoms, and newborn signs of withdrawal (refer to the References and Resources in this Best Practice for more details).

- Maternal risk is based on the care team's interpretation of verbal screening and, when appropriate, toxicology testing for each patient. If maternal toxicology testing or treatment history has been confirmed, testing of the newborn may not be clinically necessary; however, it is often requested by external agencies such as child protective services (CPS). Education of CPS about the validity of other information can avoid unnecessary and in appropriate use of screening resources.

- Universal biological toxicology testing for the newborn is not recommended, as the specific maternal situation will guide the approach to the newborn.

- The policies for newborn biological toxicology testing (e.g., of urine, meconium, or umbilical cord samples) should reflect a common understanding or written collaborative agreement from each of the following groups: obstetric and newborn medical and nursing staff, hospital-based social work and risk management, and the local/county CPS office.

- Newborn biological toxicology testing may be warranted in certain instances including but not limited to:
    - Mother with limited or no prenatal care
    - Maternal symptoms of drug intoxication or withdrawal that are otherwise unexplained
    - Newborn signs and symptoms of potential substance exposure (i.e., withdrawal) that are otherwise unexplained

- Consent for inpatient neonatal drug testing, may not be required for the purposes of guiding healthcare interventions and follow-up after discharge, and may depend on state specific regulations. However, each healthcare facility should develop its own policy given that most state regulations leave the decision about who should be tested to the health-care provider. Local CPS can neither require testing nor dictate the method of testing in the absence of specific state or federal regulatory requirements (i.e., it may be covered under the facility's general consent).

Baby M

Kayla's opioid use was identified during prenatal care and confirmed in Labor and Delivery through urine testing. This information was communicated to Baby M's providers and prompted them to communicate early with Kayla and to provide her with information on his risk of developing NAS and the potential complications that could arise with a small for gestational age newborn. Baby M's providers knew the importance of establishing a non-judgmental relationship with Kayla and by doing so were able to discuss her prenatal screening results with her, precluding the need to conduct further biological testing to screen Baby M for substance exposure. However, in some medical systems, testing may still be required. If biological testing is performed, urine will give the fastest result but reflects exposure in the prior few days. Meconium and umbilical cord testing will reflect exposure up to several months prior.

Resources

1. State of Vermont Guidelines for Screening for Substance Abuse During Pregnancy.

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Dr. David Golembeski is a neonatologist at Rady Children's Hospital-San Diego and a professor of pediatrics at UC San Diego School of Medicine. He is medical director of Rady Children's NICU at Palomar Medical Center and of the NICU at Pomerado Hospital. Dr. Golembeski is a mentor for the CMQCC/CPQCC Mother & Baby Substance Exposure Initiative where he assists hospitals in improving patient-centered care to mothers and babies with substance exposure.

David Kim

MD

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Helen DuPlessis

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Dr. Helen DuPlessis is a Principal at Health Managment Associates.

She has a rich history of involvement in healthcare administration for a variety of organizations, expertise in program and policy development, practice transformation, public health, maternal, and child health policy, community systems development, performance improvement, and managed care. Prior to joining HMA, Dr. DuPlessis served as the chief medical officer with St. John’s Well Child and Family Center. Other notable professional experiences include her work as senior advisor to the UCLA Center for Healthier Children, Families and Communities where she provided leadership, research, program development support, counsel and representation to local, state and national efforts, and community level systems transformation. She also trained and mentored students in various disciplines and educational levels.

Jadene Wong

MD

Dr. Jadene Wong is Clinical Assistant Professor of Pediatrics at Stanford University School of Medicine. She has practiced as a neonatal hospitalist at Lucile Packard Children's Hospital Stanford for more than 10 years, and practiced in primary care outpatient community settings for more than 20 years. She is a member of the task force for the joint CMQCC/CPQCC Mother & Baby Substance Exposure Initiative. She is also the Newborn Clinical Lead for this project and mentors Central California hospitals participating in the initiative.

Robert Castro

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Dr. Castro is a Board-Certified Pediatric physician with a specialization in Neonatal-Perinatal Medicine. Dr. Castro is currently the Director of the LPCH-affiliated NICU in Monterey County, CA and a Clinical Professor of Pediatrics at Stanford University School of Medicine. He has completed a term as the President of the Southern Society of Pediatric Research and is a Fellow of the American Academy of Pediatrics (AAP). He served on the AAP Perinatal Section Executive Committee and completed a six-year term on the AAP NeoReviews Journal Editorial Board. More recently, he is a member of the CPQCC Advisory Board and in 2016, he was elected to the California Association of Neonatologists Board of Trustees. In 2019, Dr. Castro was selected to serve on the American Board of Pediatrics-Subboard Neonatal Perinatal Medicine.

Vaneet Kalra

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Implement selective newborn biological toxicology testing

Best Practice No. 6

Nursery/NICU and Screening, Assessment and Level of Care Determination

Overview

Newborn toxicology testing is an important identification tool. However, it is limited by testing sensitivity and timing requirements.

Why we are recommending this best practice

- The incidence of substance use in pregnancy is difficult to quantify. Maternal screening using validated surveys, and when necessary, toxicology testing in pregnancy may still underrepresent the true incidence.

- If in utero substance exposure has been identified from either prenatal history (including inquiries into prescription and nonprescription drug use) or maternal toxicology testing, this information is vital for guiding assessment and treatment options and may lead to improved outcomes for mothers and newborns.

- If maternal toxicology testing or treatment history has been confirmed, testing of the newborn may not be clinically necessary; however, it is often requested by external agencies such as child protective services (CPS). Education of CPS about the validity of other information can avoid unnecessary and in appropriate use of screening resources.

- Newborn health care providers should be provided with information on the usefulness and limitation of the birth center's biological toxicology testing and the availability/appropriateness of confirmatory testing.

Strategies for Implementation

- When the information would influence healthcare treatment, Selective biological toxicology testing should be considered for newborns when diagnostic information about the mother is limited or not available, or when the clinical picture indicates risk for in utero exposure, including but not limited to:
    - Mother with limited or no prenatal care
    - Maternal symptoms of drug intoxication or withdrawal that are otherwise unexplained
    - Newborn signs and symptoms of potential substance exposure (i.e., withdrawal) that are otherwise unexplained

- Hospital policies and procedures should include protocols that would trigger newborn biological toxicology testing.

- Toxicology testing is limited by substance levels (concentrations) and timing. Therefore, samples should be collected and sent for analysis as soon as possible after delivery.

- Review available biological toxicology testing methods at each birth center. Traditionally, urine immunoassay has been used as the initial screen, and multiple commercial antibodies are validated.

- For certain substances, immunoassay-based urine toxicology testing is a reliable method with rapid turnaround time. For opioid exposure, routine opioid testing panels usually only detects morphine, codeine, and heroin metabolites. Synthetic opioids such as methadone, oxycodone, fentanyl, buprenorphine, etc. may require more specific testing.

- A newborn who has a biological toxicology test with unexpected positive results should have confirmatory testing (gas chromatography-mass spectrometry) and/or confirmation of drug presence by a more time specific test sample (i.e., meconium, umbilical cord).

- Providers should be aware of false-positive drug testing from common maternal medications including antihistamines, antidepressants, antibiotics, decongestants, analgesics, antipsychotics, and over-the-counter products (See table below).

- Due to assay limitations, a negative biological toxicology result does not represent an absence of in utero substance exposure, specifically if the newborn exhibits clinical signs consistent with neonatal abstinences syndrome (NAS) and all other diagnoses have been appropriately ruled out.

- A positive biological toxicology result, in and of itself, does not represent child abuse or neglect. Hospitals must ensure that the multidisciplinary team caring for mothers and newborns includes social workers trained in care and treatment resources for affected families. Care should be taken to ensure that policies which delineate criteria for toxicology testing do not directly or indirectly target low income women and women of color (refer to **Best Practice #3** for more information on this).

	Amphetamine/ Methamphetamine	Benzodiazepine	Barbiturate	Phencyclidine (PCP)	Methadone
Bupropion	X				
Dextromethorphan				X	
Diphenhydramine					X
Doxylamine					X
Fioricet/Fiorinal			X		
Labetalol	X				
Metformin	X				
Promethazine	X				
Quetiapine (≥ 125 mg)					X
Sertraline (150 mg or >)		X			
Trazadone	X				
Venlafaxine				X	

*Source: Kirsten Harter, PharmD (Zuckerberg San Francisco General Hospital). Reproduced with permission.

Commonly prescribed medications in obstetrics that may result in false positives

Resources

1. State of Vermont Guidelines for Screening for Substance Abuse During Pregnancy.
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Implement Trauma-Informed Care to optimize patient engagement

Best Practice No. 7

Outpatient, Labor and Delivery, Nursery/NICU, and Treatment

Overview

Implement Trauma-Informed Care to optimize patient engagement in prenatal care.

Why we are recommending this best practice

Many pregnant women with opioid use disorder (OUD) have experienced significant traumatic events, adversity, and toxic stress in their lives, including sexual abuse and other Adverse Childhood Experiences (ACEs). Trauma refers to intense and overwhelming experiences that involve serious loss, threat, or harm to a person's physical and/or emotional well-being. These experiences may occur at any time in a person's life; they may involve a single traumatic event or may be repeated over many years. These traumatic experiences often overwhelm a person's coping capacity. In many cases, prescription and/or illicit opioid use begins as a coping mechanism to manage the symptoms of post-traumatic stress disorder (PTSD).

Trauma-Informed Care is a strengths-based service delivery approach "that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment" (Hopper E, et al, 2009). Trauma-Informed Care acknowledges a patient's life experiences as key to improving engagement and outcomes while lowering unnecessary utilization. It changes the paradigm from one that asks, "What's wrong with you?" to one that asks, "What has happened to you?" Just as with "universal precautions" for infection control, Trauma-Informed Care necessarily assumes that every patient, and indeed every provider or staff person, has a history of traumatic stress.

In order to be successful, Trauma-Informed Care must be adopted at both the organizational and clinical levels and cannot be implemented as a singular, disconnected intervention that occurs between providers and a few patients who are seemingly appropriate for this kind of care based on their diagnosis and social history. Successful implementation requires a commitment from the agency, service line, or department for significant culture change at the organizational and clinical levels. Trauma-Informed Care is not a "one and done" training for staff and management. Rather, it is a comprehensive journey to implement systematic changes in how care is delivered for every person who enters care. It involves vigilance in anticipating and avoiding institutional processes and individual practices that are likely to retraumatize individuals, and it upholds the importance of consumer participation in the development, delivery, and evaluation of services. Furthermore, a trauma-informed organizational structure addresses the impact of trauma across the lifespan and the critical role of health care service delivery systems to interrupt the cycle of trauma by employing trauma-aware services, policies, and mindsets.

SAMHSA recognizes six principles that are fundamental to a Trauma-Informed Approach:

- Safety. Do we help promote a sense of safety for every person?
- Trustworthiness and Transparency. Do we conduct all patient care with complete transparency and with the goal of building and maintaining trust?
- Peer Support. Do we provide any peer support services or mutual help services that build upon the trauma-informed framework of safety, trust, and collaboration in care?
- Collaboration and Mutuality. Do we share power in decision making in a meaningful way and maximize the ability of patients to engage in care decisions?
- Empowerment, Voice, and Choice. How are we providing the resources necessary to both staff and patients in order to ensure skill building, goal-setting, and non-coercive treatment for every patient
- Recognition of cultural, historical, and gender issues. Are we actively working to move beyond cultural stereotypes based on gender-identity, race, sexual orientation, socio-economic status, and more? Do we recognize historical trauma and impact on race-based disparities?

Strategies for Implementation

- The Trauma-Informed Care Implementation Resource Center, developed by the Center for Health Care Strategies with support from the Robert Wood Johnson Foundation, offers a one-stop information hub for health care providers interested in implementing Trauma-Informed Care. It houses the following:
    - foundational content regarding the impact of trauma on health
    - testimonials from providers who have adopted trauma-informed principles
    - in-the-field examples illustrating how to integrate Trauma-Informed Care into health care settings
    - practical strategies and tools for implementing trauma-informed approaches
    - information for state and federal policymakers interested in supporting Trauma-Informed Care

- Review SAMHSA’s Concept of Trauma and Guidance for a Trauma-Informed Approach (refer the Resources section of this Best Practice), which offers first steps to organizational assessment and development around the Trauma-Informed Care model of care. Identify how this model of care can be integrated into your current care model.

- Create a comprehensive organizational structure, whereby the entire workforce operates under a Trauma-Informed Care model. The San Francisco Department of Public Health Workforce Training Model and The Sanctuary Model examples can be found in the Resources section of this Best Practice.

- Start to adopt new organizational and clinical practices that address the impact of trauma on patients and staff, including but not limited to:
    - Lead and communicate about being trauma-informed
    - Engage patients in organizational planning and shared decision making about treatments

- Train both clinical and non-clinical staff in trauma-specific approaches and build a trauma-informed workforce
- Create a safe physical and emotional environment
- Prevent secondary traumatic stress in staff
- Hold each other accountable
- Screen all patients for trauma
- Engage referral sources and partner organizations that are also trauma-informed

Resources

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Margaret Lynn Yonekura, M.D., F.A.C.O.G. is a board certified obstetrician-gynecologist with subspecialty certification in Maternal-Fetal Medicine. She is a recognized expert in the fields of infectious diseases in Ob-Gyn and perinatal substance abuse. Throughout her career Dr Yonekura has established comprehensive care programs to address her patients' complex needs. She is currently a member of the Women's Health Policy Council of L.A. County's Office of Women's Health, L.A. County Perinatal & Early Childhood Home Visiting Consortium, Reproductive Health and the Environment Advisory Committee, and L.A. County Diabetes Prevention Program Community Advisory Committee.

Understand and implement the principles of Motivational Interviewing

Best Practice No. 8

Outpatient, Labor and Delivery, Nursery/NICU, and Treatment

Overview

Motivational Interviewing (MI) is a patient-centered counseling approach rooted in key theoretical principles—including decisional balance, self-perception theory, and the transtheoretical model of change—that uses directed techniques to enhance patients' intrinsic motivations for and reduce their ambivalence toward behavior change. Introduced in the early 1980s as a counseling strategy for encouraging behavior change among people with alcohol dependence, the principles, methods, and specific techniques employed in MI have been researched and analyzed for a variety of health conditions for which behavior change is a critical part of health-promoting interventions. MI has now been firmly established as an effective, evidence-based practice in the treatment of substance use disorders (SUDs) and other health conditions including diabetes, obesity, and smoking cessation.

MI uses principles of collaboration between the provider and client (rather than confrontation), the intent of which is to develop rapport and trust, along with evocation of the client's own thoughts and ideas (rather than imposing the provider's opinions), and autonomy and self-efficacy (rather than authority). MI recognizes that true motivation for behavioral change rests within the client. While the provider may have different opinions about the timing or approach to a particular condition, an understanding of the client's experience and beliefs and ultimately eliciting the client's own motivations for changing unhealthful behaviors is more likely to result in lasting change.

The optimal implementation of this best practice would be for hospital and office-based providers to organize MI trainings and regular practice opportunities for all of their staff, especially clinical staff involved in gathering patient information who might have the opportunity to motivate behavior change. In the absence of resources for MI training, this best practice includes several techniques that can be employed without significant training. Additionally, the curriculum included in the Resources section of this Best Practice incorporates links to several web-based videos demonstrating some of these techniques that may be helpful adjuncts to staff interested in further MI exposure and practice.

Why we are recommending this best practice

- Motivation is a key to behavior change. It is multidimensional, dynamic, and fluctuating; influenced by social interactions; and can be modified and influenced by the provider's style. The provider's task is to elicit and enhance motivation.

- MI is effective as an adjunct to enhancing entry into and engagement and retention in interventions that support various kinds of behavior change, including but not limited to substance abuse treatment. It has also been used to encourage rapid return to

treatment following relapse.

- MI is increasingly used as a stand-alone brief intervention during routine encounters with patients.

- MI is an approach that has been empirically shown to be more effective than giving advice, which tends to occur frequently in health care delivery.

- “Readiness to change bad habits is generally a developmental process, and the precepts of MI, including patience, listening, empathy, and change talk, can be useful tools.” (Prochaska J, et al, 1995).

Strategies for Implementation

Ideally, providers can use MI curricula to become more proficient in these techniques, and all levels of staff can participate in these curricula and employ these techniques. One such curriculum is included in the Resources section for this Best Practice. In the absence of formal training, several specific MI strategies and techniques are described below.

Incorporate the foundational principles of MI into communication with pregnant and parenting women with opioid use disorder (OUD). These foundational principles of MI should be employed continuously over time and include:

- Express empathy through reflective listening
- Develop discrepancy between patient’s goals or values and their current behavior
- Avoid argument and direct confrontation
- Adjust to patient resistance rather than opposing it directly
- Support self-efficacy and optimism

Employ the following general style of MI in all patient communication:

- **Asking Permission** – Permission is a deeply respectful foundation of mutual dialogue
- **Engaging** – Engagement is the establishment of trust and a mutually respectful relationship
- **Focusing** – Focus is the ongoing process of seeking and maintaining a direction for the exploration conversation
- **Evoking** – Evoking refers to eliciting the patient’s own motivation for change.
- **Planning** – Planning is the process of deciding on a specific plan for change that the patient agrees is important and is willing to undertake.
- **Linear and Iterative Processes** – Change talk within MI is both a linear and iterative process.

The following are specific motivational skills and strategies that can be practiced and incorporated into all patient engagements, especially those that involve behavior change and compliance with treatment plans. Each of these strategies is described in more detail in the MI Curriculum included in the Resources section of this Best Practice.

Employ the **OARS+** model as one set of specific MI skills.

- **O**pen ended questions elicit crucial information that may not be gathered from close ended questions.
    - *Instead of asking "Have you used any drugs during your pregnancy?", one might say "I treat a number of women who have used prescription medications and other drugs during their pregnancy. Please share with me which kinds of prescription meds or other drugs, if any, you have used during or before this pregnancy."*
    - *Instead of asking "Have you ever been in treatment?", one could request "Tell me about your recovery journey."*

- **A**ffirmations are statements of appreciation
    - *"I'm impressed that you followed up with the MAT referral"*
    - *"You've stayed off drugs for 2 months. That's great!"*

- **R**eflections establish understanding of what the patient is thinking and feeling by saying it back to the patient as statements, not questions.
    - *Patient: "I've been this way for so long."*
    - *Provider reflection: "So this seems normal to you" or "So this seems like a hard cycle to break."*

- **S**ummaries are highlights of the patient's ambivalence that are slightly longer than brief reflections and serve to ensure understanding and transition from one topic to another.
    - *For a patient wanting to stop using drugs during pregnancy: "You have several reasons for quitting drugs: You want to get your life back, you want to give your baby the best chance at a healthy life, and you want to be able to manage life's issues without relying on drugs as a crutch. On the other hand, you're worried about what kind of recovery path would work for you; you're worried that you won't have the motivation and strength to stick with a recovery path. Would that sum it up?"*

Rolling with resistance requires the listener/provider to pause and shift conversations when signs of an argument or confrontation begin to appear. Resistance behavior occurs when points of view differ, generally when the provider is moving the patient ahead too quickly, or the provider fails to understand something of importance to the patient. When resistance appears, the listener/provider should change strategies and utilize OARS techniques.

Developing discrepancy involves the listener/provider guiding the conversation so the patient can articulate their personal beliefs and future goals (listen especially for statements about life, family, health, financial status, living situation, and other personal considerations). Developing discrepancy between the patient's behaviors and their broader life goals is essential because patients are more often motivated to change when they arrive at that conclusion themselves rather than hearing it from someone else.

Change Talk is defined as statements made by the patient that indicate motivation for,

consideration of, or commitment to change behavior. There are clear correlations between patients' change talk and outcomes. Once the listener/provider and patient have established a trusting relationship and have open communication about the patient's substance use, the listener/provider can guide the patient to expressions of change talk using some of the techniques listed below. Each of these strategies is described in more detail in the Motivational Interviewing Curriculum included in the Resources section of this Best Practice, along with additional strategies for eliciting change talk.

- **Preparing change talk** employs the **DARN** model as one set of specific MI skills
  - **D**esire to change (*Ask "Why do you want to make this change?")*
  - **A**bility to change (*Ask "How might you be able to do it?")*
  - **R**easons to change (*Request "Share one good reason for making this change.")*
  - **N**eed to change (*Ask "On a scale of 0-10, with 10 being the highest, how important is it for you to make this change?")*

- **Implementing change talk** employs the **CAT** model as one set of specific MI skills.
  - **C**ommitment (*Ask "What do you intend to do?")*
  - **A**ctivation (*Ask "What are you ready (or willing) to do"?)*
  - **T**aking steps (*Ask "What steps have you already taken?")*

Coding and Reimbursement – MI focused on increasing the patient's understanding of the impact of their substance use and motivating behavior change can be coded for reimbursement whenever a positive screen (through interview, formal screening tool, or toxicology) is identified and documented in the medical records. Evaluation and Management (E/M) service codes for both assessment and intervention are listed below (and can be coded with modifier 25 when they are performed during the same clinical visit as other E/M services):

- 99408 – Alcohol and/or substance abuse (other than tobacco) structured assessment and brief intervention services 15-30 minutes (the comparable Medicare code is G0396)
- 99409 – Alcohol and/or substance abuse (other than tobacco) structured assessment and brief intervention services greater than 30 minutes (the comparable Medicare code is G0397)

Deep Dive

Decisional Balance is a Motivational Interviewing tool that encourages change talk by eliciting the client's own ideas and motivations for change. The grid below is an easy way of remembering the questions asked in Decisional Balance, which are most effective when asked in sequence.

1. **What are some of the good things about using *fill in the substance*?**
This will not elicit much change talk, but will get the client talking in a non-defensive way.

2. **What are some of the bad things about using *fill in the substance*?**
This question begins to elicit a client's ambivalence about their behavior and will start the change talk.

3. **What are some of the downsides of getting into a treatment/recovery program?**
Clients will often start talking about their fears.

4. **What are some of the good things about getting into a treatment/recovery program?**
This question will likely elicit the most change talk, as the client discusses their own ideas and motivations for change. When this comes from the client instead of the provider, it comes without resistance and may include some motivations that the provider would not have considered.

	Good	Not so Good
Not Changing	1. What are the advantages of the status quo?	2. What are the disadvantages of the status quo?
Changing	3. What are the advantages of changing	4. What are the downsides of changing?

Decisional Balance Grid

Resources

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Helen DuPlessis

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She has a rich history of involvement in healthcare administration for a variety of organizations, expertise in program and policy development, practice transformation, public health, maternal, and child health policy, community systems development, performance improvement, and managed care. Prior to joining HMA, Dr. DuPlessis served as the chief medical officer with St. John’s Well Child and Family Center. Other notable professional experiences include her work as senior advisor to the UCLA Center for Healthier Children, Families and Communities where she provided leadership, research, program development support, counsel and representation to local, state and national efforts, and community level systems transformation. She also trained and mentored students in various disciplines and educational levels.

Encourage breastfeeding for women with opioid use disorder

Best Practice No. 9

Outpatient, Labor and Delivery, Nursery/NICU, and Treatment

Overview

Women should feel empowered to make an informed decision about newborn feeding. Women should be given information about the benefits of breastfeeding, as well as information that addresses concerns specific to opioid use disorder (OUD) and breastfeeding.

Why we are recommending this best practice

The first few hours and days of a newborn's life constitute a critical window for establishing lactation. Breastfeeding confers many advantages on both mother and infant. The United States Surgeon General, World Health Organization (WHO), and American Academy of Pediatrics (AAP) recommend exclusive breastfeeding for the first six months unless contraindicated.

California State Bill (SB) 402, signed into law in 2013, states "This bill would require all general acute care hospitals and special hospitals that have a perinatal unit to adopt, by January 1, 2025, the 'Ten Steps to Successful Breastfeeding,' as adopted by Baby-Friendly USA, per the Baby-Friendly Hospital Initiative, or an alternate process adopted by a health care service plan that includes evidenced-based policies and practices and targeted outcomes, or the Model Hospital Policy Recommendations as defined."

Although a stable mother being treated for OUD with pharmacotherapy is encouraged to breastfeed her infant, there are some situations where breastfeeding is not recommended, including if the mother is HIV-positive, has active tuberculosis, has active herpes simplex lesions, is Hepatitis B or C-positive and has cracked or bleeding nipple(s), or has returned to illicit or inappropriate drug use.

HIV: In resource rich areas such as the United States, the CDC recommends AGAINST breastfeeding in mothers with HIV regardless of the viral load or treatment history.

Hepatitis B, Hepatitis C, Herpes Simplex: The CDC recommends breastfeeding for women with Hepatitis B infection when infants have been appropriately immunized with Hepatitis B Immunoglobulin and vaccine; and for women with Hepatitis C infection, as long as nipples are not cracked or bleeding. If the mother with Herpes Simplex Virus has lesions on the breast, or who has Hepatitis B or C and has cracked or bleeding nipples, the CDC recommends to temporarily stop nursing and to express and discard the breastmilk. When the nipple(s) are well-healed and no longer bleeding, the mother may return to breastfeeding. If only one side is affected, the mother may continue to breastfeed on the unaffected side.

Active (untreated) tuberculosis: The AAP recommends against breastfeeding in the setting

of active, infectious tuberculosis. In this situation, expressed milk can still be given to the newborn. Breastfeeding can resume after a minimum of 2 weeks of treatment for tuberculosis, and when the mother is documented to no longer be infectious.

Illicit or Inappropriate Drug Use*:* According to the AAP "maternal substance abuse is not a categorical contraindication to breastfeeding" and therefore well-nourished narcotic dependent mothers being treated for OUD with pharmacotherapy are encouraged to breastfeed in the absence of illicit drug use. Breastfeeding is contraindicated if "relapse" occurs, or a return to any illicit drug use or frequent legal substance misuse, especially if relapse has occurred in the 30-day period prior to delivery. Infrequent substance use, especially if outside of the 30-day window before delivery, may not necessarily be a contraindication to breastfeeding, but each woman must be carefully and individually evaluated for type of substance used, length of time since last use, and other risk factors. Refer to ABM Clinical Protocol #21 in the References section of this Best Practice for more detailed guidelines.

Strategies for Implementation

- **Develop breastfeeding protocol for women with OUD.** Create a multidisciplinary team ideally including obstetricians, midwives, family physicians, pediatricians, nurses, lactation specialists, pain/addiction specialists, pharmacists, and social workers to create a facility-specific protocol addressing the following topic areas:
    - Information for women with OUD and clinicians caring for them: Create user-friendly resources on the benefits of breastfeeding for women with OUD and their newborns and include important contraindications.
    - Develop a protocol for identification of women with OUD and mobilization of required resources to support breastfeeding, emphasizing best practices such as early skin-to-skin care.
    - Develop a plan for outpatient breastfeeding and newborn nutritional support. Develop a workflow to ensure pregnant patients with OUD are discharged with a plan to support breastfeeding and the overall nutrition for their newborns; this plan should include appropriate short interval pediatric follow-up, access to advice on lactation continuation, and access to local or online breastfeeding support resources.

- **Train the workforce on breastfeeding for women with OUD.** Educate physicians, nurses, and other care team members on the benefits of breastfeeding for women with OUD and institute multimodal strategies for implementation of developed protocols.
    - Educate clinical staff on the strength of evidence and criteria for safety of breastfeeding for women with OUD. Determine appropriate avenues through which to educate hospital staff (e.g., emails, physical bulletin boards, staff meetings) and mitigate discrimination and bias toward patients with OUD.
    - Train providers on OUD treatment protocols. Create standards for providers caring for pregnant patients to provide information relevant to breastfeeding decisions and ask questions about the mother's concerns and barriers surrounding breastfeeding.

- **Implement quality improvement strategies to improve breastfeeding in women**

with OUD: Create process metrics that allow for regular evaluation of facility-based breastfeeding support protocols.

- Define target metrics for breastfeeding in OUD. Develop facility-specific metrics for tracking implementation and effectiveness of the breastfeeding program for women with OUD, including measurement of initiation and continuation of breastfeeding.
- Delineate role(s) for OUD treatment assessment and improvement. Designate either an individual or a team to take accountability for ongoing facility-level assessment and improvement of metrics for breastfeeding in women with OUD.

Baby M

As soon as Baby M is born, the maternity nurse asks if she can place him on Kayla skin-to-skin. Although Kayla had been unsure about breastfeeding, with encouragement from the nurse with whom she has begun to establish a trusting relationship, she decides to place Baby M on the breast. This makes Kayla feel happy and helps her bond with Baby M. She feels that she can soothe his cries by breastfeeding.

Breastfeeding is beneficial for the health of both the mother and newborn. It reduces the risk of infection, immune mediated disorders, and obesity in the newborn; and it reduces the risk of postpartum hemorrhage, hypertension, diabetes, and breast and ovarian cancer in the mother. In newborns at risk for NAS, breastfeeding reduces the need for pharmacologic treatment. The process of breastfeeding stimulates the release of oxytocin. Oxytocin induces the dopaminergic pathway of the reward system, which mediates a mother's behavioral response to her newborn's cues, promoting bonding and attachment between mother and newborn. Supporting breastfeeding in a woman with OUD empowers her to provide the best care for her newborn. The reward and stress response pathways may be altered in women with OUD, making it especially important that providers promote breastfeeding in this vulnerable population to optimize emotional and behavioral outcomes for both mother and newborn.

While promoting breastfeeding and skin-to-skin care, it is important to emphasize safe sleep methods. If a mother is fatigued or too sleepy to safely hold her newborn, she should lay the newborn on its back on a firm sleeping surface to decrease the risk of sudden infant death syndrome.

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Mimi Leza is the Perinatal Services Coordinator for Ventura County Public Health and currently the co-chair of the Perinatal Substance Use Taskforce of Ventura County. Her background is in Pediatric nursing with extensive experience in caring for NICU babies with NAS and children with prenatal substance use exposure. As a Public Health Nurse, she specialized in providing case management for pregnant and parenting women with SUD and recruiting and training perinatal providers in the SBIRT process.

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Dr. Pamela Flood is Professor of Anesthesiology, Perioperative, and Pain Medicine at Stanford University. Her research interests include prevention and reduction of pain and opioid use in women after delivery. She divides her clinical time between labor and delivery and her outpatient pain management clinic. She clinical work is directed toward compassionate weaning of high dose opioids and management of pelvic pain syndromes.

Initiate medication assisted treatment in the prenatal setting

Best Practice No. 10

Outpatient and Treatment

Overview

Implement an outpatient protocol for evidence-based evaluation, treatment, and continuity of care for pregnant patients with opioid use disorder (OUD). Arranging for the provision of medication assisted treatment (MAT) on site is an optimal way to deliver the standard of care for pregnant women with OUD.

Why we are recommending this best practice

The pregnant woman with OUD who presents for prenatal care has a unique opportunity to initiate treatment for OUD. While the care team may initially find such a patient challenging, they have a chance to introduce life-changing therapy. Along with the screening and brief intervention portions of SBIRT, obstetric providers can offer MAT treatment. Few obstetric providers have received training in OUD management and understandably feel reluctant to begin this practice. Obstetric providers often feel more comfortable referring patients with OUD to a stand-alone outpatient opioid treatment clinic or other office-based outpatient treatment (OBOT) program for induction and management of OUD with MAT. However, the desired future state in opioid treatment is for patients with OUD to be able to begin treatment wherever they receive medical or prenatal care. Providers who can initiate treatment for OUD will have a significant impact on the unmet treatment gap in their county.

Strategies for Implementation

- Engage the whole team. Successful integration of a new service will require front office, back office, and providers all educated about the successful outcomes in pregnant women with OUD who are on MAT.

- Providers must receive a Drug Addiction Treatment Act of 2000 (DATA 2000) X waiver to be able to prescribe MAT. Federal legislation (SUPPORT Act, 2018) and previous legislation includes CNMs, NPs, and CRNAs in addition to physicians as eligible to complete this training. Online training programs are readily available. Physicians require 8 hours of training, and non-physician providers require 24 hours of training.
- Build policies/procedures for MAT to allow for a uniform care delivery system.

- Use a toolkit. Numerous toolkits exist that provide clinics with the education and resources needed to offer MAT. One such is example is the Providers Clinical Support System (PCSS). https://pcssnow.org/resources/clinical-tools/

- Identify who to call for help. Know how to refer patients who fail buprenorphine to methadone treatment programs when necessary. Consider using a consultation service such as the FREE Clinician Consultation Center at UCSF which has a Substance Use Warmline at 855-300-9595 and is available Monday through Friday during daytime business hours, and a specific Consultation line for licensed practitioners in California that is available 24/7. This line is staffed by physicians, pharmacists, and nurses with special expertise in pharmacotherapy options.

- Explore emerging therapies. Aside from traditional in-office induction, consider other modalities that best suit your patients. These include home and hospital induction, micro-dosing transition, and Buprenorphine Quick Start.

Resources

1. SAMHSA Waiver Application and Training.
2. Providers Clinical Support System (PCSS). Clinical Tools.
3. Guidelines for Physicians Working in California Opioid Treatment Programs. Chapter 4.
4. ED Bridge. Buprenorphine Quick Start in Pregnancy Algorithm.
5. California Health Care Foundation Webinar: “Expanding Access to Buprenorphine in Primary Care Settings”.
6. California Health Care Foundation. Everything You Need to Know About Buprenorphine.
7. Urban Institute: California County Fact Sheets: Treatment Gaps in Opioid-Agonist Medication Assisted Therapy (OA-MAT) and Estimates of How Many Additional Prescribers Are Needed.
8. UCSF Substance Use Warmline

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2. Apply for a Practitioner Waiver. Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/medication-assisted-treatment/training-materials-resources/apply-for-practitioner-waiver. Updated April 16, 2020.

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Implement an inpatient treatment protocol for pregnant women with opioid use disorder

Best Practice No. 11

Labor and Delivery and Treatment

Overview

While the ideal timing for initiation of medication assisted treatment (MAT) would be early in the pregnancy, implementation of an inpatient protocol for evidence-based evaluation, treatment, and discharge of pregnant patients with opioid use disorder (OUD) is the next best opportunity to address the chronic disease of OUD and improve long term outcomes for the pregnant woman and her affected infant.

Why we are recommending this best practice

The patient with OUD who presents to labor and delivery in labor also presents with a unique opportunity to initiate treatment for opioid use. While the provider and nursing staff may initially find such a patient challenging, they can introduce life-changing therapy at this distinct moment. Providers often feel uncomfortable prescribing MAT for various reasons, many of which are common misperceptions, including:

- Myth: Inpatient providers believe they cannot treat OUD because they do not have a waiver to prescribe MAT ("X waiver").
    - ***Fact: federal law allows providers without an X waiver to administer or dispense (but not prescribe) buprenorphine on an inpatient basis for up to 72 hours. This law is known as the "three-day rule" and provides for effective treatment of acute withdrawal in the emergency department or inpatient setting.***

- Myth: There may be possible deleterious fetal effect.
    - ***Fact: MAT, particularly buprenorphine, is the gold standard for treatment of OUD and is safe during pregnancy. Split dosing or even higher overall dosing may be required during pregnancy. On the other hand, withdrawal is associated with high rates of relapse and poor outcomes for both mother and infant.***

- Myth: Neonatal abstinence syndrome (NAS) will be more severe, especially with the higher doses of buprenorphine needed during pregnancy.
    - ***Fact: Buprenorphine reduces NAS severity and the dose is not correlated with NAS severity.***

A clear, informed protocol that providers can leverage for safe management of OUD in

pregnant women will increase provider comfort in caring for these patients and optimizing health outcomes for patients and their newborns.

It is important to recognize that not all areas of the country have access to the same resources for MAT, especially for women who are pregnant. In rural and/or underserved areas, there may be access to only one type of treatment and/or treatment setting, and each group implementing this toolkit should become familiar with the treatment options available in their community. These settings may be integrated into primary care or OB/GYN offices (e.g., office-based outpatient treatment), stand-alone outpatient treatment programs, residential treatment programs, opioid treatment programs (“methadone clinics"), emergency departments, hospital labor and delivery units, or within the general hospital setting. Each of these locations has its own unique strengths and challenges. Referral protocols should be built by individual locations to reflect assessment of the severity of OUD matched with the ASAM level of care resources that are available in the local community with the goal of providing access to treatment for women during their pregnancy and after delivery.

Outpatient Services
Not all women may require or accept inpatient induction of MAT. If a woman presenting for care declines inpatient or emergency department induction, ensure that the institution has referral processes in place to directly connect the patient with outpatient services, such as office-based outpatient treatment or an opioid treatment program, and provide a warm handoff.

Strategies for Implementation

- Utilize a multidisciplinary team, ideally with obstetricians, midwives, psychiatrists, nurses, anesthesiologists, addiction and pain medicine specialists, pharmacists, and social workers to create a facility-specific protocol that addresses the following:
    - Evaluation of patients for OUD with a non-judgmental, trauma-informed approach (please see the Resources section of this Best Practice: Sample Evaluation of Opioid Use Disorder in Pregnancy Checklist).
    - Shared decision making for OUD treatment, emphasizing the risks of OUD in pregnancy and options for MAT, as well as the risks of supervised withdrawal (Please see the Resources section of this Best Practice: Considerations for, Treatment of Opioid Use Disorder in Pregnancy).
    - Development and utilization of a treatment algorithm for inpatient MAT initiation for both buprenorphine and methadone, including adjunctive therapies to optimize MAT induction (please see the Resources section of this Best Practice: Sample Inpatient Medication-Assisted Treatment Induction Algorithms and the Buprenorphine Quick Start in Pregnancy Algorithm).
    - Development and utilization of a treatment algorithm for outpatient buprenorphine induction. If capacity for close follow up with provider(s) comfortable with outpatient induction of buprenorphine in pregnancy is available, develop guidelines for which patients can consider outpatient induction of MAT and develop a protocol for outpatient buprenorphine induction (please see the Resources section of this Best Practice: Sample Outpatient Buprenorphine Induction Algorithm). Consider partnering with local residential treatment facilities and withdrawal management (detoxification) centers.

- Development of a Plan of Safe Care to ensure pregnant patients with OUD are discharged with appropriate transition to outpatient care with a focus on coordination of MAT (e.g., handoffs to methadone treatment programs and buprenorphine prescribing providers) and harm reduction. The “Transitions” section of this toolkit includes multiple best practices that will support development efforts in these areas (**See Best Practice #29**).

- Educate physicians, nurses, and other care team members on OUD in pregnancy, strategies for caring for patients with OUD, and implementation of developed protocols.
    - Create awareness of OUD in Pregnancy through various mediums to educate hospital staff about OUD in pregnancy (e.g., emails, physical bulletin boards, staff meetings) and mitigate stigma, bias and discrimination toward patients with OUD.
    - Create opportunities for the workforce to learn about trauma-informed care in the inpatient setting (**See Best Practice #7**).
    - Train providers on OUD treatment protocols for pregnancy and encourage them to obtain a waiver to prescribe buprenorphine.

- Train nurses on OUD treatment protocols and the use of the Clinical Opiate Withdrawal Scale and the Ramsay Sedation Scale (refer to the Resources section of this Best Practice) in the care of patients taking buprenorphine and methadone (refer to the Resources section of this Best Practice: Considerations for Administration of Buprenorphine and Methadone).

- Create process metrics to regularly evaluate the implementation of the facility-based protocols.
    - Define target metrics for OUD treatment. Develop facility-specific metrics to track implementation and effectiveness of OUD treatment protocols (e.g., development of a dashboard if enough volume vs. audit of OUD cases if a few cases) and assess for disparities in treatment (e.g., examine outcomes by race, preferred language).
    - Delineate role(s) for assessment and improvement of OUD treatment. Designate either an individual or a team to take accountability for ongoing facility-level assessment and improvement of OUD treatment in pregnancy to ensure access and health equity.

Kayla

When building an inpatient treatment protocol, consider increasing the total daily dose as we well as dividing the patient's MAT doses to help with acute pain control. For example, if Kayla is taking 24 mg of buprenorphine as an outpatient and has acute pain from her delivery, one may consider increasing her total daily dose to 32 mg but providing it in 8 mg doses every 6 hours. Build a basal/bolus pain control protocol into your admission order sets. Both buprenorphine and methadone can be divided into 6-8-hour dosing regimens to allow for better basal pain control. While it is clear that methadone maintenance therapy usually necessitates increases in the baseline daily methadone dose during pregnancy, especially during the third trimester to account for changes in pharmacokinetics, there is emerging evidence of a similar need to increase the daily dosage of buprenorphine during pregnancy. These recommendations are useful for pain management during the intrapartum and immediate post-partum period, after which a return to pre-labor dosing is appropriate.

Reference: Alford DP, Compton P, Samet JH. Acute pain management for patients receiving maintenance methadone or buprenorphine therapy. Annals of internal medicine. 2006;144(2):127-134.

Deep Dive

For acute pain requiring bolus control, consider using a moderate affinity μ-opioid agonist such as morphine IV at 4-6 milligrams or a strong affinity μ-opioid agonist such as fentanyl IV 100 micrograms. Evidence shows that total opioid requirements is less when MAT is continued as a basal pain medication.

Reference: Macintyre PE, Russell RA, Usher KA, Gaughwin M, Huxtable CA. Pain relief and opioid requirements in the first 24 hours after surgery in patients taking buprenorphine and methadone opioid substitution therapy. Anaesthesia and intensive care. 2013;41(2):222-230.

Resources

1. COWS: A clinical opioid withdrawal scale designed to monitor signs of opioid withdrawal.
2. Ramsay Sedation Scale: Designed for use in critically ill adults that has broad applicability in evaluation of the range between agitation and over sedation in response to sedatives and analgesics.
3. Considerations for Administration of Buprenorphine and Methadone.
4. Considerations for Treatment of Opioid Use Disorder in Pregnancy.
5. Sample Evaluation of Opioid Use Disorder (OUD) in Pregnancy Checklist.
6. Sample Inpatient Medication-Assisted Treatment Induction Algorithms.

7. Sample Outpatient Buprenorphine Induction Algorithm.
8. NNEPQIN Opioid Use Disorder Clinical Pathway.
9. ED Bridge. Buprenorphine Quick Start in Pregnancy Algorithm.

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Implement evidence-based anesthesia practices in the peripartum period for opioid use disorder in pregnancy

Best Practice No. 12

Labor and Delivery and Treatment

Overview

Implement evidence-based best practices for anesthesia care and pain relief for pregnant women with opioid use disorder (OUD).

Why we are recommending this best practice

Pregnant women with OUD have pain relief and anesthetic needs that vary from women without OUD in the peripartum period. Early consultation and use of best practices for management of intrapartum and postpartum pain relief will optimize maternal and newborn outcomes. Individual hospitals/settings will have different availability of anesthetic/analgesic options.

Strategies for Implementation

Pre-delivery

- Consult with an anesthesiologist at the delivering facility who will be able to review and develop an anesthetic plan that addresses the patient's needs and accounts for the options available at the local institution.

- Utilize shared decision making for the degree of pain relief desired during intrapartum and postpartum recovery.

- Provide resources for anesthesia providers about OUD and anesthetic consideration/needs.

Intrapartum

- Neuraxial anesthesia provides the best quality of pain relief, especially in opioid tolerant individuals. Patients will need adjustment of medication types and concentrations for optimal pain relief that do not interfere with and will not be affected by OUD or OUD medications. Increased strength or concentration of a medication (e.g., local anesthetic or the total dose or frequency of a dose of a medication that has a uniform concentration) will likely be needed. Neuraxial adjuncts may be helpful.

Patients with a prior history of OUD who fear relapse may desire a method of analgesia/anesthesia that omits opioids entirely.

- Avoid nitrous oxide in combination with high dose opioids. Nitrous oxide is not recommended in this setting as nitrous combined with opioids may produce excessive sedation or respiratory depression, causing the patient deep sedation or general anesthesia. When the preferred method, epidural analgesia, is contraindicated, nitrous oxide may be considered under close supervision as an adjunct with other systemic therapies.

Cesarean Delivery

- Adjust use of neuraxial anesthesia according to the individual patient's OUD or OUD medications and tolerances. Adjunct neuraxial medications may be considered.

- Use general anesthesia only as otherwise indicated. This is not the preferred method for routine cesarean in pregnant women with OUD.

Post-delivery pain relief

- Create a multimodal analgesia and multidisciplinary care plan.

- Understand that multiple non-narcotic adjuncts are available. Choices may be affected by local resources and availability.

- Emphasize local anesthetics used in neuraxial infusion and/or peripheral nerve blocks (e.g, Transverse Abdominis Plan (TAP), Quadratus Lumborum Block (QL2), epidural infusion, and wound liposomal bupivacaine). Consider use of a catheter for continued infusion of local anesthetics and adjuvants, as well as scheduled acetaminophen and NSAIDs.

- IV patient-controlled analgesia (PCA) opioids may be used as a supplement to other multimodal treatment, but the requirements may be higher.

- Post-delivery monitoring requirements should be considered.

Additional Considerations

- Develop an informational packet for anesthesia providers.

- If the patient was previously on buprenorphine, continue buprenorphine, although the dose may need to be split (e.g.,TID), and total dose may need to be increased.

- Use of multiple opioids, analgesics, adjuncts, and/or sedatives may result in pharmacologic/pharmacogenetic additive or synergistic effects and result in shifting from minimal sedation to moderate sedation/analgesia to deep sedation/analgesia or even general anesthesia. Caution is urged, and proper monitoring for respiratory depression and oxygenation may be warranted. Underlying medical conditions will amplify the effect of sedatives, analgesics and other medications (e.g., obstructive sleep apnea, chorioamnionitis with fever). Rescue capacity is required under the Patients' Rights standard at §482.13(c)(2), guaranteeing patients care in a safe setting (CMS Interpretive guidelines).

Kayla

Kayla's physician referred her for a consultation at 36 weeks of pregnancy with the anesthesiologist at her delivering facility. They reviewed together her current medications, any non-prescription medication usage including herbals and marijuana derivatives, medical issues, as well as her personal concerns about pain, pain medications, and her overall pain tolerance. Kayla expressed great concern about getting her regular pain medications and additional oxycodone for pain. The anesthesiologist reassured her that epidural analgesia for labor or post-cesarean does not aggravate her increasing back pain with the pregnancy and provides the highest quality pain relief for labor and post-partum. The use of non-narcotic neuraxial adjuvants is very important, as Kayla's current total opioid and non-opioid pharmaceutical consumption may produce opioid induced hyperalgesia—suggesting use of another type of medication could be very helpful. If Kayla undergoes a cesarean delivery, increased doses of neuraxial narcotic will be needed as well as additional non-narcotic analgesic regimens (e.g., TAP Quadratus Lumborum type 2 local anesthetic block, or wound infusion). Even a complicated vaginal delivery (for example, a third- or fourth-degree laceration) may benefit from neuraxial morphine and adjuvants for post-delivery analgesia. The anesthesiologist will need to notify the hospital pharmacy if adjuvants will be used, as they may not be standard stock (e.g., clonidine for epidural administration), and if the hospital can accommodate post-delivery epidural infusions for analgesia, particularly adjuvants like clonidine.

Failure to secure a pre-delivery consultation may adversely affect intrapartum or postpartum care. Not all anesthesia providers are familiar with OUD in pregnancy, and a consultation allows discussion and implementation of a multimodal analgesia plan, combining patient preferences and shared decision making with what is available at her particular delivery location. Care coordination becomes even more important if a consultation is not an option.

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Ensure methadone and buprenorphine doses are not tapered in the immediate postpartum period

Best Practice No. 13

Labor and Delivery and Treatment

Overview

Implement an inpatient postpartum protocol to ensure that patients on medication assisted treatment (MAT) have a plan for continued treatment in the postpartum period.

Why we are recommending this best practice

Women whose opioid maintenance therapy is interrupted are at high risk of relapse and overdose during the postpartum period.

Strategies for Implementation

- Train providers on evaluation of opioid withdrawal and over-sedation in women on opioid maintenance therapy. Create opportunities for nurses responsible for caring for pregnant inpatients to learn and ask questions about facility-specific protocols as well as to learn how to use the Clinical Opiate Withdrawal Scale and the Ramsay Sedation Scale in the care of patients taking maintenance buprenorphine and methadone (Please see the Resources section of this Best Practice: Considerations for Administration of Buprenorphine and Methadone).

- Provide information to providers on how to educate women with opioid use disorder (OUD) about MAT. Educate providers on the importance of continuation of maintenance medication in the postpartum period and reassure women on this treatment that it will not be interrupted.

- Develop a protocol for ensuring regular dosing of maintenance methadone and buprenorphine. Work with nursing, obstetrics, and pain/addiction medicine specialists to create a protocol to ensure regular dosing and to assess for the need for increased or split dosing during the postpartum period.

- **Methadone:** Providers should not decrease the methadone dose in the immediate postpartum period unless it is at the patient’s request and the provider and patient agree using shared decision making or unless over-sedation is observed. Providers can consider increasing or splitting the postpartum methadone dose for better pain control post-cesarean.

- **Buprenorphine:** Doses should not be decreased in the immediate postpartum period unless it is at the patient's request and the provider and patient agree using shared decision-making or if over-sedation is observed. Providers can consider increasing or splitting the postpartum buprenorphine dose for better pain control post-cesarean. Consider transitioning buprenorphine-only patients to buprenorphine/naloxone prior to discharge.

- Develop a plan for safe outpatient hand-off to a provider who can maintain the patient on MAT. Develop a workflow to ensure pregnant patients with OUD are discharged with a mechanism for uninterrupted continuation of their therapy. Best practice is to continue MAT in the immediate postpartum period. Tapering or stopping MAT in the acute pain or recovery period may increase maternal morbidity and complications. Warn women that relapse and therefore overdose is common in the postpartum period and close follow-up is necessary.

- Ensure follow-up with a physician or midwife who is aware of the patient's OUD and MAT therapy. Ideally the patient will already know this provider. This follow-up should be made within 1-2 weeks of discharge. Postpartum depression should be assessed at this appointment or prior to discharge. Encourage anti-depressant medication for patients with a positive screen to treat their mood and improve MAT retention.

- See Resources section below for tools for evaluating patients on chronic opioids for withdrawal.

Kayla

Having her baby was one of the most amazing things Kayla had ever experienced. When she held her new baby, she felt like everything was good in the world. Kayla was inspired to take control of her health and her social situation for Baby M.

The postpartum period is a critical time for the mother and baby. Sudden, disruptive changes in the care plan that do not account for the patient's preferences and what is presently working may lead to unintended consequences. As a rule, MAT should not be tapered in the postpartum period. Additionally, switching from methadone to buprenorphine is more difficult than the switch from buprenorphine to methadone, and should be done with caution, with full disclosure, at an appropriate time, and with a careful plan in place.

Resources

1. Ramsay Sedation Scale: Designed for use in critically ill adults that has broad applicability in evaluation of the range between agitation and over sedation in

response to sedatives and analgesics.

2. COWS: A clinical opioid withdrawal scale designed to monitor signs of opioid withdrawal.

3. Sample Inpatient Medication-Assisted Treatment Induction Algorithms.

4. Sample Outpatient Buprenorphine Induction Algorithm.

5. Considerations for Administration of Buprenorphine and Methadone.

6. Considerations for Treatment of Opioid Use Disorder in Pregnancy.

7. Sample Evaluation of Opioid Use Disorder (OUD) in Pregnancy Checklist.

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Implement care pathways for peripartum and postpartum pain management for pregnant patients without opioid use disorder to minimize opioid use

Best Practice No. 14

Labor and Delivery and Treatment

Overview

Postpartum pain is common. All women experience uterine cramping in the early postpartum period that is necessary to prevent excess bleeding, and women with lacerations from vaginal birth experience perineal pain. After cesarean birth, women experience pain from the laparotomy. It is necessary to treat pain adequately to support maternal comfort and to reduce the stress response of the mother and newborn. It is also critically important to limit the amount of opioids prescribed on discharge that may lead to prolonged use and possibly misuse. Leftover medication is a common source of opioids that are diverted for misuse. The potential for diversion and misuse of opioids make it a public health priority to prescribe only the minimum amount required by the patient.

Cesarean birth is the most commonly performed surgery in the United States, yet little is known about appropriate pain management at discharge. In general, women consume half the amount of opioids prescribed to them on discharge. For example, a recent study found that the median number of opioid tablets prescribed was 40 and the median consumed was 20 (Bateman BT, et al, 2017). The amount of opioid consumed was directly proportional to the amount prescribed. However, the amount of opioids dispensed did not correlate with patient satisfaction, pain control, or the need to refill the opioid prescription. The majority of women do not require an opioid prescription after vaginal delivery. Despite the well-known risks, 29% of women were prescribed an opioid at the time of discharge after vaginal delivery.

Enhanced Recovery: There is a national effort for all surgeries to redesign care for the peri-operative period to enhance recovery. In May 2019, the Society for Obstetric Anesthesia and Perinatology (SOAP) released a comprehensive set of guidelines (see Resources) for each phase of care for women undergoing a cesarean birth known as Enhanced Recovery After Cesarean (ERAC). Every obstetric unit should strongly consider these recommended approaches. A part of enhanced recovery is optimizing care so that the need for opioid pain medications is markedly lowered and/or replaced by non-opioid approaches. A Call to Action for ERAC with a comprehensive discussion was published in the August 2019 issue of *The American Journal of Obstetrics and Gynecology*. One of the goals is to ensure that all women have access to adequate pain control while reducing the harms of opioid exposure.

Why we are recommending this best practice

There is considerable evidence that new mothers are consistently over-prescribed opioids after delivery. Better pain control is achievable with less opioids using a multimodal

approach. There is evidence that most women require fewer than 20 opioid tablets following uncomplicated cesareans and that scheduled non-opioid analgesics provide superior pain relief and facilitate reduced opioid consumption compared to PRN dosing. A similar protocol did not result in an increase in outpatient opioid refill rate.

Strategies for Implementation

- Establish a multidisciplinary team to implement a unit-wide ERAC protocol.

- Scheduled NSAIDs and acetaminophen are the first line agents for postpartum pain control. Ibuprofen 600 mg and Acetaminophen 650 mg PO Q 6 hours can be concurrent or staggered dosing. The oral route is preferred unless inappropriate.

- Offer oxycodone 5 mg PO Q6 hours PRN pain instead of the combination of APAP/oxycodone. Avoid codeine and tramadol in breastfeeding women.

- Consider a lidocaine patch for post-cesarean laparotomy pain. Consider transverse abdominus plane block immediately post-cesarean for post-incisional pain. See **Best Practice #15**.

- Evaluate the amount of opioids used by the patient in the 24 hours prior to discharge and use shared decision making to decide how many oxycodone tablets to give the patient, but limit the amount to a three-day supply or on average 15-20 tablets.

- Perineal pain requiring opioids should prompt a careful evaluation for hematoma, wound breakdown, or infection.

	Vaginal birth	Cesarean Birth
Non-opioids	• Ibuprofen 600 mg Q 6 hours. Dispense # 30, 600 mg tablets (1-week supply). • Acetaminophen 650 mg Q 6 hours. Dispense #60, 325 mg tablets (1-week supply).	• Ibuprofen 600 mg Q 6 hours. Dispense # 60, 600 mg tablets (2-week supply). • Acetaminophen 650 mg Q 6 hours. Dispense #120, 325 mg tablets (2-week supply)
Opioids	• Opioids not prescribed unless required by patient for pain control during the hospital stay.	• Use shared decision making and consider CDC safe prescribing of only 3 days' supply. • Oxycodone 5 mg Q 6 hours PRN pain. Dispense 15-20 tablets (3 days' supply).

Sample guideline for oral analgesic prescribed at discharge

Proposed guidelines for uncomplicated normal spontaneous vaginal birth (Mills JR, et al, 2019)

- **Guideline 1:** Long-term opioid use often begins with the treatment of acute pain. When opioids are started, providers should order the lowest effective dosage and prescribe no greater quantity of opioids than needed for the expected duration of pain severe enough to require opioids.

- **Guideline 2:** When starting opioid therapy, providers should prescribe immediate-release opioids instead of extended-release or long-acting opioids. This is especially important on the day of discharge.

- **Guideline 3:** Providers should avoid prescribing opioid pain medications and benzodiazepines concurrently whenever possible.

- **Guideline 4:** Nonpharmacologic therapy and non-opioid pharmacologic therapy are preferred for patients who had a normal, spontaneous vaginal delivery with no complications. Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient. If opioids are used, they should be combined with nonpharmacologic therapy and non-opioid pharmacologic therapy, as appropriate.

- **Guideline 5:** When providers identify a patient with opioid use disorder (OUD), treatment discussions should be prioritized during hospitalization, on discharge, and at the postpartum appointment.

Deep Dive

There are many elements of ERAC that can help limit opioids while providing adequate pain control.

- Neuraxial long-acting opioids.
- Non-opioid analgesia started in the operating room unless contraindicated. These are ideally started prior to onset of pain (ketorolac 15-30 mg IV after peritoneum closed and/or acetaminophen IV after delivery or PO before/after delivery).
- Consider local wound pain control such as TAP block or lidocaine patch at incision site.
- Promote return of bowel function. Constipation can lead to increased unnecessary post-operative gas pain; limiting opioids, scheduled bowel regimen, and mobilization can mitigate this.

For all patients, remember immediate skin-to-skin, early promotion of breastfeeding, early ambulation and promotion of rest periods all improve the maternal psyche and can improve overall perception and coping with pain.

Reference: Society of Obstetric Anesthesia and Perinatology (SOAP) Enhanced Recovery After

Cesarean (ERAC) Consensus Statement, https://soap.org/SOAP-Enhanced-Recovery-After-Cesarean-Consensus-Statement.pdf

Resources

1. Sample patient-oriented teaching regarding multimodal pain management after cesarean delivery: UNC School of Medicine, Center for Maternal and Infant Health.

2. Sample discharge instructions regarding pain medication after delivery: UNC School of Medicine, Center for Maternal and Infant Health.

3. Society of Obstetric Anesthesia and Perinatology (SOAP) Enhanced Recovery After Cesarean (ERAC) Consensus Statement.

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Utilize shared decision making to tailor post-procedure pain control

Best Practice No. 15

Labor and Delivery and Treatment

Overview

Individual patients often fear the loss of autonomy in a hospital setting and, knowing their increased tolerance for medication, fear for their ability to relieve their pain.

Why we are recommending this best practice

There is extensive variability in the needs of women with opioid use disorder (OUD) for pain control over and above their maintenance therapy.

Shared decision making is a dynamic process during which the provider and patient engage in an informed discussion to make health related choices that are best for the patient and in alignment with the patient's personal values (refer the Resources section of this Best Practice for more information), Shared decision making has been shown to reduce overall opioid use.

Strategies for Implementation

- For each patient with OUD, engage in an open and honest discussion about pain control and encourage shared decisions about pain management.

- Consider Transverse Abdominis Plane (TAP) block, Quadratus Lumborum Block (QL2), or paravertebral blocks/catheters with the consultation of an anesthesiologist. Create facilities, training, and procedures for providers to maintain these catheters and advise patients on their benefits and use.

- Schedule adjuvant medications including non-steroidal anti-inflammatory medications and acetaminophen to reduce the need for opioid dose escalation. Develop procedures and training for the administration of other adjuvant medications including gabapentin or pregabalin, or short-term ketamine in consultation with and under the supervision of an anesthesiologist.

- Consider local analgesic and other analgesic patches for postsurgical pain.

- Do not routinely give opioids above maintenance doses for vaginal births.

Kayla

Shared decision making will shift Kayla's focus away from the disease and towards creating a partnership with greater participation and compliance. Individual preference of and tolerance to advanced pain strategies may affect which ones are chosen together. Choices for Kayla include:

- Scheduled (not PRN) non-narcotic pain medications including acetaminophen and nonsteroidal anti-inflammatory drugs (NSAIDs).
- Local anesthetic to prevent and treat pain. A local anesthetic wound infusion or injection of long acting local anesthetic such as a Transverse Abdominus Plane (TAP) block or Quadratus Lumborum (QL) type2 block single dose or catheter-based infusion.
- Epidural infusion of low dose local anesthetic, preferably with non-narcotic adjuvants (e.g., alpha$_2$ adrenergic agonists clonidine, epinephrine).
- Administration or infusion of other non-narcotic adjuvants (e.g., gabapentin/pregabalin, infusion of low dose ketamine).
- Avoidance/minimizing regular opioids (e.g., oxycodone) at high doses for post-delivery pain.

Deep Dive

What is shared decision making and why does it matter? Shared decision making occurs when the patient is considered a critical part of the team. Two axioms are important to shared decision making: "No decision about me without me" and "this patient is the only patient." Together, this means each patient is an individual and should be treated as such, and their own individual values and preferences should be the starting point for all conversations. When done right, shared decision making leads to improved quality of care, improved outcomes, and better patient experience.

The basic components of shared decision making are:

1. **S**eek your patient's participation
2. **H**elp your patient explore and compare treatment options
3. **A**ssess your patient's values and preferences
4. **R**each a decision with your patient
5. **E**valuate the decision

More information and an entire toolkit on the "SHARE Approach" can be found on the ARHQ website at: https://www.ahrq.gov/health-literacy/curriculum-tools/shareddecisionmaking/index.html.

Resources

1. Ramsay Sedation Scale: Designed for use in critically ill adults that has broad applicability in evaluation of the range between agitation and over sedation in response to sedatives and analgesics.
2. COWS: A clinical opioid withdrawal scale designed to monitor signs of opioid withdrawal.
3. Considerations for Administration of Buprenorphine and Methadone.
4. Considerations for Treatment of Opioid Use Disorder in Pregnancy.
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Implement a non-pharmacologic bundle of care for neonatal abstinence syndrome for medical staff and parents to follow

Best Practice No. 16

Nursery/NICU and Treatment

Overview

Implement a non-pharmacologic bundle of care for neonatal abstinence syndrome (NAS) for medical staff and parents to follow.

Why we are recommending this best practice

A non-pharmacologic bundle of care for NAS will help to prioritize non-pharmacologic interventions over medication, may reduce the length of stay, and will keep staff and parents aligned on the care being provided to the newborn.

Strategies for Implementation

Collaborate with nursing and health care teams to develop a written guideline with a bundle of care that is specific for your unit. An example of a non-pharmacologic bundle of care for NAS would include:

- **Parent/caregiver contact:** Emphasize parental presence at the bedside (rooming in, where available), the importance of skin-to-skin/holding the newborn, swaddling with the newborn's hands near the mouth, and non-nutritive sucking/pacifier use. Consider a volunteer cuddler when a parent or caregiver is unavailable.

- **Environment:** Establish an environment that is quiet with low lighting, limit the number of visitors, avoid excessive handling, encourage only one stimulus at a time (e.g., do not walk or sway while feeding). Swinging is okay but should be stopped if the newborn is overstimulated.

- **Nursing care:** Cluster nursing assessments and interventions at times when the newborn is awake.

- **Feeding:** Feed on-demand; encourage breastfeeding and lactation consultation if eligible (in the absence of any contraindications, breastfeeding should be encouraged while the mother is on methadone or buprenorphine treatment as part of a program); prioritize feeding consult if bottle feeding; and if formula feeding, consider reduced

lactose or partially hydrolyzed lactose (not evidence-based) and consider 22 kcal/oz after day 2-3 if there is poor weight gain (loss of >10% of birthweight or not back to birthweight by 7 days of life).
    - Determine contraindications for maternal breastfeeding by unit for consistency. There are no medical contraindications to breastfeeding based on maternal methadone (prescribed as part of a treatment program), buprenorphine, or short-term low-dose prescription opioid use alone. The concentrations of methadone that can be found in human milk are low, and women on stable doses of methadone maintenance should be encouraged to breastfeed regardless of maternal methadone dose if they are in a treatment program. Buprenorphine has low levels in breastmilk and poor oral bioavailability in newborns.
    - Use breastmilk when not contraindicated to reduce the severity of NAS and to minimize the need for pharmacologic exposure. Ensure a mother eligible for breastmilk use has a lactation consultation, access to a breast pump, and adequate instructions for its use.
    - Feed based on hunger cues/ad lib (usually q2-3 hours), if medically appropriate.
    - Anticipate possible increased caloric needs.
    - Rule out non-NAS causes of poor feeding including transitional sleepiness or frequent spit-ups in the first 24 hours of life, poor latch due to newborn/maternal anatomic factors or immature gestational age, and physiologic cluster feeding.

- **Skin:** Practice proactive prevention of diaper dermatitis and skin breakdown. Start diaper/barrier creams on day one and treat other areas of skin excoriation due to newborn tremors promptly.
    - Frequent stools increase the risk of perianal breakdown. This can be prevented by:
        - Starting diaper creams/barrier creams on day one
        - Frequent diaper changes
        - Liberal application of emollients and/or moisturizers
        - Careful assessment with each diaper change
    - Excoriation from tremors is most common on the extremities, face, chin, knees, and gluteal folds.
        - Applying a medical dressing over the knees and other body surfaces that are being rubbed can be protective.
        - Using mittens to decrease scratching can also be helpful.
        - Avoid friction with cleansing. Do not use harsh wipes.
        - Use only water for cleansing; a sitz bottle works well.
        - Use gentle patting to dry.
        - Apply a no-sting barrier to areas of skin breakdown.
        - Apply a skin protectant to areas of skin breakdown.
        - Leave areas of skin breakdown open to air as much as possible.
        - Treat areas of breakdown for at least 24 hours.
        - Teach parents proper skin care techniques.

Baby M

Baby M is now 24 hours old and is being assessed for withdrawal based on functional impairment (his ability to eat, sleep, and be consoled within set periods of time). The hospital has recently implemented this system in place of the traditional Finnegan score assessment, and the staff has found that fewer newborns need medication and many are able to go home sooner. A nurse performs the assessment after Baby M awakens and is concerned because he slept less than an hour and has high-pitched cries. However, Kayla is able to breastfeed, and Baby M is calmer after feeding. The nurse is pleased that Baby M was adequately consoled. She talks to Kayla about keeping Baby M calm by decreasing environmental stimulation with low light, fewer visitors, and low sound. She also shows Kayla various techniques of how to console Baby M such as speaking to him softly, bringing his hands to his mouth, bringing his flexed arms and legs to the center of his body, placing him skin-to-skin or swaddling him, gently rocking him, giving him a pacifier, or feeding him if he shows hunger cues. The nurse talks to the charge nurse and moves Kayla and Baby M to a single room in the postpartum unit to minimize environmental stimulation.

Resources

1. PQCNC and MAiN resources under pharmacological section.
2. ILPQC Newborn Care Diary.
3. Ohio Perinatal Quality Collaborative Provider Resources.
4. Ohio Collaborative Crib Card.
5. NeoQIC Resources for Hospitals.

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Develop guidelines for inpatient monitoring of newborns managed with a non-pharmacologic bundle of care

Best Practice No. 17

Nursery/NICU and Treatment

Overview

When a newborn who is exposed to opioids in utero does not require pharmacotherapy and is managed solely with a non-pharmacologic bundle of care, we recommend a minimum of 72 hours of inpatient monitoring.

Why we are recommending this best practice

Opioid clearance in newborns is variable due to patient clearance characteristics, type of opioid, and the presence of other drugs. Most newborns will present with withdrawal symptoms by 24–72 hours, depending on the half-life of the opioid used by the mother and the potential for exposure to multiple substances. Inpatient monitoring is important to allow for potential symptoms to present and for the newborn to receive the appropriate treatment.

Strategies for Implementation

- A recommended observation period should be included in each hospitals' written guidelines.

- Documentation of potential opioid exposure should be included in the medical record to provide medical necessity justification when the observation period exceeds the otherwise expected length of stay.

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Consider parental rooming-in with the newborn when safety of mother and newborn can be ensured

Best Practice No. 18

Nursery/NICU and Treatment

Overview

Parental rooming-in with a newborn should be considered when a plan can be implemented to ensure safe care of the mother and newborn.

Why we are recommending this best practice

Rooming in and/or parental presence at the newborn’s bedside supports dyad care and bonding, and can reduce pharmacotherapy use and length of stay.

Strategies for Implementation

- If rooming in is being considered, it is important to establish a patient care plan that includes assessment of the patient for appropriateness to room in and nursing vigilance to prevent and monitor for potential adverse events due to rooming in.

- It is also important to ensure that staff approach mothers with opioid use disorder (OUD) in a respectful and non-judgmental manner to optimize use of non-pharmacologic methods for managing neonatal abstinence syndrome (NAS).

- Safe sleep habits should be taught and reinforced by staff throughout the hospital stay to prepare for discharge.

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Prioritize measurement of functional impairment as a basis for initiation and escalation of pharmacologic treatment

Best Practice No. 19

Nursery/NICU and Treatment

Overview

Instead of basing pharmacologic initiation and escalation of treatment solely on a total Finnegan score, consider prioritizing measures of functional impairment. A functional impairment-based strategy for managing neonatal abstinence syndrome (NAS) should employ staff who have been trained in engaging mothers with opioid use disorder (OUD) and in using non-pharmacologic interventions for the newborn. The use of a functional impairment-based treatment strategy should be designed and tailored to a specific unit within the context of a formal quality improvement initiative so that safety may be routinely monitored and reviewed.

Why we are recommending this best practice

Subacute symptoms of NAS can continue for weeks or months. Prolonged inpatient management and pharmacotherapy may lead to adverse infant neurodevelopment and poor parental engagement. Focusing on a newborn's functional impairments to guide pharmacotherapy may reduce length of stay and pharmacotherapy exposure. Studies of this method indicate no increase in readmission rates; however, there are no long-term studies to evaluate benefit versus harm of this method.

Strategies for Implementation

- Create a unit protocol for nurse scoring of functional measures, conduct nursing and staff education prior to implementation, and educate health care providers regarding guidelines for use of pharmacotherapy. Monitor acceptability and feasibility of this protocol within the hospital as well as readmission rates for infants.

- Examples of published methods emphasizing functional impairment are:
    - Finnegan Symptom Prioritization focuses on certain function-based items in the Finnegan score. Most recent reports include poor feeding, poor sleep, and continuous crying as prioritized functional measures. Other components of the Finnegan score that are sometimes included are emesis, diarrhea, tachypnea, or fever.
    - "Eat, Sleep, Console" prioritizes a newborn's inability to take an age-appropriate volume of food, sleep more than one hour after feeding, or be consoled within ten minutes.

- Functional-based assessment and management of newborns with NAS should be

designed for the specific hospital. The formal “Eat, Sleep, Console” (ESC) approach was initially developed by Dr. Matthew Grossman at Yale New Haven Children’s Hospital. Similar quality improvement programs are being successfully implemented at both academic centers and community hospitals as part of a non-pharmacologic approach.

- These are emerging (best) practices with encouraging short-term outcomes, and about which further study is needed to confirm long term outcomes.

- Alternative strategies employ the use of a modified Finnegan checklist with the mother scoring subjective functional items (e.g., quality of cry, stool consistency, tremulousness, etc.).

Deep Dive

The total Finnegan score describes NAS symptoms, but it does not reflect how NAS severity affects the infant’s ability to function. Several of the symptoms included in the Finnegan scoring system can be attributed to cluster feeding or other normal newborn behaviors. This symptom-based score may lead to unnecessary opioid treatment of infants without functional impairment. Studies show that opioid pharmacotherapy and length of stay decrease significantly with use of a function-based assessment compared to use of the total Finnegan score alone. Use of a function-based assessment can avoid initiation of opioid treatment, separation of the dyad, and a newborn’s transfer to the high-stimulation NICU environment.

Resources

1. Eat Sleep Console as part of neoQIC
2. Eat Sleep Console Pathway, Yale New Haven Children’s Hospital

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If pharmacotherapy is indicated, consider a trial of morphine every 3 hours PRN as an initial strategy for the treatment of neonatal abstinence syndrome instead of scheduled dosing or more long-acting pharmacotherapy options

Best Practice No. 20

Nursery/NICU and Treatment

Overview

If criteria for pharmacotherapy are met per a hospital-specific written guideline, morphine every3 hours as needed (PRN) may be trialed as an initial strategy for the treatment of neonatal abstinence syndrome (NAS) instead of scheduled dosing or more long-acting pharmacotherapy options.

Why we are recommending this best practice

Signs of NAS are not consistent throughout the day, nor is parental presence. Pharmacologic treatment may not be necessary every 3 hours. PRN dosing of morphine may minimize pharmacotherapy exposure and therefore side effects from scheduled morphine doses (e.g., respiratory depression, bradycardia, hypotension, urinary retention, decreased intestinal motility) or long-acting pharmacotherapy such as methadone.

Strategies for Implementation

Incorporate guidelines for initiation of PRN morphine for the treatment of NAS into the hospital’s guideline when a newborn meets criteria to initiate pharmacotherapy. Consider including guidelines to describe a threshold for escalating to scheduled q3 hour dosing and when to escalate the dose of scheduled morphine. Consider cardiorespiratory monitoring continuously or intermittently when the newborn is receiving morphine.

Baby M

Kayla continues to care for Baby M with breastfeeding, holding skin-to-skin, and minimizing overstimulation. A nurse assesses Baby M and notes at 2 days old that he is unable to sleep for at least one hour after feeding and has continuous crying. The nurse confirms that both she and Kayla have had difficulty consoling Baby M and that at the time of the last assessment he was still crying after 10 minutes of attempts at consolation. He also has moderate tremors when disturbed, a hyperactive Moro reflex, and nasal stuffiness. The nurse assists Kayla with trying to optimize non-pharmacologic interventions, but Baby M continues to have poor sleep and persistent crying. Kayla and the medical team discuss the situation and, given their concern for functional impairment, Baby M is moved to an inpatient room where he is given one dose of PRN morphine by mouth and placed on a cardiorespiratory monitor. Medical staff have recently worked with hospital administrators to ensure newborns with NAS can be placed in private rooms to preserve the mother/baby dyad. After Kayla is discharged, she can stay with him and continue to provide his care.

Non-pharmacologic measures continue to be optimized. After feeds, Baby M is occasionally irritable, but with swaddling and holding he soothes quickly. Once soothed, he sleeps until the next feeding. He requires one additional dose of PRN morphine the following day for poor feeding and inconsolability, after which his symptoms do not recur. He completes a period of monitoring without medication for a day and a half, with Kayla providing all of his care. Baby M is discharged home to Kayla with close follow-up from the outpatient pediatrician.

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Consider methadone as first-line pharmacotherapy for the treatment of neonatal abstinence syndrome following evaluation of its benefits/risks

Best Practice No. 21

Nursery/NICU and Treatment

Overview

Methadone may be considered as first-line pharmacotherapy for the treatment of neonatal abstinence syndrome (NAS) following evaluation of its benefits/risks.

Why we are recommending this best practice

- Multiple studies have shown decreased length of treatment with methadone compared to morphine for the treatment of NAS. The decreased length of treatment varies from 2–7 days. One single site randomized controlled trial (RCT) reported a shorter length of treatment on methadone versus morphine with a median of 14 vs. 21 days.

- Multiple studies have also shown decreased length of stay with methadone compared to morphine treatment. The decreased length of stay varies from 2–5 days.
    - One multi-site RCT reported decreased mean length of stay by 2.7 days and decreased mean length of treatment by 2.3 days in NAS infants treated with methadone compared to morphine.
    - A multicenter, non-randomized, retrospective study (Pediatrix dataset) showed a decreased median length of stay of 18 days with methadone vs. 23 days with morphine.
    - An analysis of 14 children's hospitals showed NAS infants treated with methadone had shorter mean length of treatment (17.4 days with methadone vs. 22.2 days with morphine) and mean length of stay (21 days for methadone vs. 25 days for morphine) compared to those treated with morphine.

- Methadone's longer half-life allows for fewer swings in NAS symptoms and fewer drug administrations per day. The longer half-life, however, also makes it more complicated to titrate.

- Methadone is associated with prolonged QTc in adults and in newborns exposed to maternal methadone in the first two days of life, but it is unclear if this is clinically significant or an issue with doses used to treat newborns.

- Infants treated with morphine or methadone have similar short and long-term neurobehavioral outcomes.

- There are no studies to date comparing scheduled methadone to PRN morphine treatment strategies.

Strategies for Implementation

Develop a unit-specific guideline for initiation, escalation, and weaning of methadone to promote consistency and safety of practice.

Special Consideration

Buprenorphine pharmacologic treatment in newborns is not yet recommended until additional studies regarding safety and efficacy are available. A small phase one clinical trial in newborns has been conducted. There is currently minimal safety data on use in newborns and the phase one trial formulation contained 30% ethanol. However, breastfeeding for mothers on buprenorphine is recommended (refer to **Best Practice #30**).

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Deep Dive

Some centers have studied and adopted a practice of using methadone as first-line pharmacotherapy for the treatment of NAS. Methadone has a longer half-life and provides a steadier exposure. However, the longer half-life may also make dose adjustment more complicated. Hospitals should develop a protocol that addresses all available options for pharmacotherapy for NAS within that institution, including information on initiation, monitoring with PRN dosing, when to escalate to scheduled dosing and strategies for using methadone. Developing such a protocol is likely to facilitate standardization of practice and reduce cumulative pharmacotherapy received.

While most newborns that require pharmacotherapy for NAS will need only one medication, some newborns with NAS whose symptoms are not controlled with first-line agents such as morphine and methadone may benefit from a second-line medication/adjunctive therapy. While phenobarbital has been a traditional second-line treatment, it is not an ideal therapy for opioid withdrawal. Therefore, clonidine is recommended as the second-line treatment of choice. Because of the theoretical risk of an effect on autonomic function, newborns receiving clonidine should have their heart rate and blood pressure closely monitored during the first two days of administration and also for 48 hours after discontinuation.

Regardless of which medication(s) are used, a pharmacotherapy weaning protocol should be established to guide practice. During the weaning process and for several days after completing pharmacotherapy, newborns should be monitored as an inpatient and assessed for rebound symptoms. Newborns that receive morphine or clonidine for NAS should receive inpatient monitoring for at least 48 hours and those receiving methadone for at least 72 hours after receiving the last dose of medication.

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Consider clonidine instead of phenobarbital as a potential second line/adjunctive therapy for neonatal abstinence syndrome

Best Practice No. 22

Nursery/NICU and Treatment

Overview

Clonidine may be considered as a second line/adjunctive therapy for neonatal abstinence syndrome (NAS). Studies are ongoing on the use of clonidine as a first-line agent.

Why we are recommending this best practice

Phenobarbital is a nonselective central nervous system depressant that is sometimes used in combination therapy for NAS. It has been recommended mainly for non-opioid withdrawal in polysubstance exposure as an adjunct therapy. Its role is limited in opioid withdrawal given several disadvantages, such as lack of relief of gastrointestinal symptoms, impaired bonding and feeding in infants due to central nervous system depression, and potentially more long-term neurodevelopmental effects. Clonidine is an alpha-2 adrenergic receptor agonist that inhibits central nervous system sympathetic outflow and reduces norepinephrine levels. It reduces the autonomic symptoms (mediated in the locus coeruleus) of NAS. Clonidine has at least one high quality RCT supporting its use as an adjunctive agent to reduce length of pharmacotherapy treatment for NAS.

Strategies for Implementation

- Develop unit-specific guidelines for initiation of clonidine as adjunct therapy if NAS is not adequately controlled with first-line therapy alone.

- Establish guidelines for escalation of clonidine.

- When weaning clonidine, consider a two-step reduction of the clonidine dose over 48 hours or weaning of opioids before stopping clonidine. This may reduce rebound NAS withdrawal symptoms.

- Clonidine has the potential to cause heart rate or blood pressure changes and monitoring is recommended. Monitor heart rate and blood pressure more closely during the first two days of clonidine therapy and for 48 hours after discontinuation.

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Develop guidelines for inpatient monitoring of newborns receiving morphine, clonidine, or methadone pharmacotherapy prior to discharge

Best Practice No. 23

Nursery/NICU and Treatment

Overview

When morphine and/or clonidine are used for pharmacologic treatment in a newborn with neonatal abstinence syndrome (NAS), our consensus-based recommendation is that the newborn be monitored as an inpatient for a minimum of 48 hours after the last dose. A newborn treated with methadone, given the longer half-life, should be monitored as an inpatient for a minimum of 48–72 hours after the last dose of methadone is administered.

Why we are recommending this best practice

Medication clearance in newborns is variable. There are no well-established, evidence-based guidelines for duration of monitoring after pharmacotherapy cessation for NAS.

Strategies for Implementation

A recommended observation period after discontinuation of medication should be included in a hospital's written guidelines.

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Establish a pharmacotherapy weaning protocol

Best Practice No. 24

Nursery/NICU and Treatment

Overview

Hospitals should establish a clear weaning protocol for all potential pharmacotherapy treatments of neonatal abstinence syndrome (NAS) rather than relying on individual approaches that are likely to yield patient outcomes and experiences that are highly variable.

Why we are recommending this best practice

Regardless of the treatment opioid chosen, newborns receiving protocol-based weans experience a significantly shorter duration of opioid treatment (17.7 vs. 32.1 days, $P < .0001$) and shorter hospital stay (22.7 vs. 32.1 days, $P = .004$).

Strategies for Implementation

Collaborate with members of the care team to establish an acceptable weaning protocol for all pharmacologic therapies for NAS. Some hospitals may consider weaning opioid doses q24-48 hours if meeting criteria; others may wean as rapidly as 10% up to three times a day.

Special Consideration

We do not recommend routine discharge of newborns while still weaning pharmacotherapy due to the evidence for longer length of pharmacotherapy exposure associated with this practice. However, we recognize that this strategy may be utilized in specific situations in which a well-established structure between the discharging hospital and the community PCP exists for close monitoring, strict follow-up criteria and prescription tracking are used, and the family is deemed reliable to follow-up.

While discharging home on outpatient pharmacotherapy decreases the initial hospital length of stay, outpatient NAS pharmacotherapy has been associated with longer length of treatment (60 vs. 19 days) and higher rates of emergency department utilization within 6 months of discharge compared to infants treated exclusively as inpatients.

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Pamela has been at UCI Medical Center in Irvine, California for 35 years in several roles including staff nurse in the NICU for 17 years, Outpatient Nurse Manager for Primary and Specialty Services, and currently the Quality and Patient Safety Advisor for the NICU and OB departments. She is also a member of the Data Committee Advisory Group for CPQCC, and is the data nurse coordinator at UCI for both CPQCC and CMQCC.

Priya Jegatheesan

MD

Dr. Priya Jegatheesan is the Chief of Newborn Medicine and the Regional NICU Director for Santa Clara Valley Medical Center in San Jose, California, an institution committed to the medically underserved. Her main area of interest is outcomes and data-driven quality improvement. She established a comprehensive computerized database system in the SCVMC NICU that enables prospective data collection for quality improvement and research. She also actively participates in CPQCC's Perinatal Quality Improvement Panel and chaired the QI infrastructure sub-committee for 2 years. She became a member of the Society for Pediatric Research in 2014 and has actively participated in clinical research. She is currently the study site Principal Investigator for a NIH funded multi-center study evaluating ondansetron (5HT3 antagonist) for prevention of neonatal abstinence syndrome in newborns born to mothers who had chronic opioid use during pregnancy. She is a passionate champion for optimizing care of newborns exposed to substances during pregnancy to prevent neonatal abstinence syndrome by promoting mother-infant couplet care.

Identify community care resources for the mother and newborn

Best Practice No. 25

Outpatient, Labor and Delivery, Nursery/NICU, and Transition of Care

Overview

Identify community care resources for the mother and newborn and appropriate partner agencies and services in the community.

Why we are recommending this best practice

Providing adequate transitions of care pre- and postnatally that include outpatient support structures with expertise in addressing the needs of both mothers with opioid use disorder (OUD) or substance use disorder (SUD) and their exposed newborns can improve outcomes and support the development of protective factors that reduce or mitigate the effects of adverse life experiences for children and their families. Early interventions like home visits are a prime example of this.

Strategies for Implementation

- Involve the mother and newborn in outpatient support programs as early as possible, ideally prenatally for the mother. Descriptions of evidence-based programs can be found below.

- Each unit should maintain an updated list of outpatient resources (federal, state, and local) that families can access.

- Arrange a system to refer the mother and newborn to outpatient OUD/SUD treatment and recovery programs. The system should clarify who refers (physician, social worker, etc.) and when to refer (upon admission or discharge). Consider a default referral on admit orders.

- Inform and educate mothers on these referrals and highlight the benefits of these programs.

- Potential short-term and long-term neurodevelopmental delays exist for these infants. Early intervention programs, child protective services, and/or health care services are recommended to cover neurodevelopmental, psycho-behavioral, growth and nutrition, ophthalmologic, and family support assessments. Refer to **Best Practices #31 and**

#32 for additional information on these topics.

- The identification of key community care resources and supports for mom and baby should be incorporated into the Plan of Safe Care as described in **Best Practice #29.**

Pre-, Peri-, and Postnatal Programs: The programs described below begin services during pregnancy and cover the mother/baby dyad. Most pre-, peri-, and postnatal programs are federally funded. In California, many of these programs are also funded by local First 5 Commissions, which use money from a state excise tax on cigarettes and other tobacco products to fund programs from birth (i.e., during pregnancy) to five years of age. In addition to the ones listed in this toolkit, other evidence-based pre-, peri-, and postnatal programs can be found in the Resources section of this Best Practice.

- California Home Visiting Program (CHVP): CHVP oversees implementation of various evidence-based home visiting programs throughout California, including the Nurse-Family Partnership (NFP) and Healthy Families America (HFA), and currently 23 California counties have these evidence-based programs. State-level agency workgroups conduct needs assessments to determine the greatest need for and potential impact from these programs based on factors such as poverty rates, rates of child abuse and neglect, and the ability to find and enroll at-risk parents in particular areas.
  - ***NFP:*** Geared towards low income, first-time pregnant women. Care starts in pregnancy and follows the dyad until the child reaches two years of age. The mother must be referred before 28 weeks of pregnancy.
  - ***HFA*:** Geared towards low-income, at-risk families from birth to a minimum of three years.

- Early Head Start*:* Early Head Start provides preschool and home visiting services geared towards low-income, at risk families. This is one of the few programs that can be started either during pregnancy or after delivery and follows the dyad until the child reaches three years of age.

- CalWORKS: CalWORKS offers a new three-year home visiting pilot initiative that began in January 2019. It is supported by both state General Fund and federal Temporary Assistance for Needy Families dollars. The program provides up to 24 months of home visiting for pregnant and parenting people, families, and infants born into poverty.

- Healthy Start*:* Healthy start targets communities with infant mortality rates that are at least one and a half times the U.S. national average. Women and their families can be enrolled into Healthy Start at various stages of pregnancy, including pre- inter-, and post-conception. Each family that enrolls receives a standardized, comprehensive assessment.

Postnatal Programs: These programs are primarily geared towards infants and can be implemented in the postnatal period.

- Early Start: Early Start is California's early intervention program (i.e., Part C of the Individuals with Disability Education Act), providing early intervention services to at-risk infants and children less than three years of age who meet eligibility criteria based on the presence or risk of developmental disability. Services include infant education, occupational therapy, physical therapy, and speech therapy. Referrals can be made from the NICU or newborn nursery and are often coordinated by a social worker, although anyone can make a referral, including parents, medical providers, neighbors, family members, foster parents, and day care providers.

- Home Health Visits: A number of public and commercial insurance companies offer home health visits, usually in response to a medical need. If the patient does not have insurance, or if the patient's insurance declines to cover the home health visit, the county often will provide a public health nurse. Some counties or local areas have established their own system (e.g,. Palomar Home Health Services).

Resources

1. California Budget and Policy Center Report: Home Visiting is a Valuable Investment in California's Families.
2. Helping Hands: A Review of Home Visiting Programs in California.
3. Nurse Family Partnership.
4. Healthy Families America.
5. Local First 5 Commission websites and their local programs.
6. National Head Start Association.
7. Early Head Start.
8. California Head Start.
9. CalWORKS.
10. Comprehensive Perinatal Services Program.
11. Healthy Start.
12. Early Start.
13. Palomar Home Health Services.

References

1. Kocherlakota P. Neonatal abstinence syndrome. Pediatrics. 2014;134(2):e547-561.
2. McQueen K, Murphy-Oikonen J. Neonatal abstinence syndrome. N Eng J Med. 2016;375(25):2468-2479.

Jadene Wong

MD

Dr. Jadene Wong is Clinical Assistant Professor of Pediatrics at Stanford University School of Medicine. She has practiced as a neonatal hospitalist at Lucile Packard Children’s Hospital Stanford for more than 10 years, and practiced in primary care outpatient community settings for more than 20 years. She is a member of the task force for the joint CMQCC/CPQCC Mother & Baby Substance Exposure Initiative. She is also the Newborn Clinical Lead for this project and mentors Central California hospitals participating in the initiative.

Katherine Weiss

MD

Dr. Katherine Weiss is a neonatologist at Rady Children's Hospital-San Diego and an assistant professor of pediatrics at UC San Diego. Previously, she was a clinical assistant professor of pediatrics for the University of Arizona.

Her areas of interest are in quality improvement, education and international health.

Codevelop a multidisciplinary peripartum plan of care for pregnant women on medication assisted treatment and ensure a warm handoff to the hospital

Best Practice No. 26

Outpatient and Transition of Care

Overview

Develop a patient-centered approach to developing a peripartum plan of care for pregnant patients with opioid use disorder (OUD) to facilitate continuation of appropriate medication assisted treatment (MAT) dosing, pain management and related needs.

Why we are recommending this best practice

A clear, informed plan developed with patients and relevant providers for the management of OUD in the peripartum period will avoid physiologic instability, facilitate patient buy-in, and optimize transitions of care.

Strategies for Implementation

- Develop a peripartum checklist for patients with OUD, ideally with multidisciplinary input, highlighting key patient health information, current MAT therapeutic regimen, contact information for providers, and recommended activities to prepare patients for the peripartum period in the hospital (please see the Resources section of this Best Practice: Sample Peripartum Checklist for Patients with OUD).

- Develop a protocol to utilize the peripartum checklist. Plan strategically for how to incorporate the designed checklist into prenatal care (ideally at the beginning of the third trimester, or at any time for late entrants into prenatal care) and how to share the checklist with the hospital at which a patient intends to deliver (e.g., faxing when checklist is completed, and/or at 36 weeks).

- Implement peripartum checklist. Ideally patients and providers would have updated copies of the checklist and it could be customized (e.g., more elaborated paper checklist for patients, abbreviated electronic text checklist for providers). Consider incorporating it into the electronic medical record.

Kayla

Kayla is now 38 weeks pregnant and doing well on buprenorphine. She calls your office complaining of leaking fluid. You advise her to go to obstetrical triage for evaluation. She is found to have ruptured membranes and is admitted by the laborist for induction. Kayla is quite uncomfortable and neglects to inform her care team that she is on buprenorphine. The staff is unable to retrieve her prenatal records. Twelve hours into her stay, she begins having significant pain, sweats, nausea, and chills. The nurse also notes some irregularities and changes in the fetal heart rate. Kayla finally states she is experiencing opiate withdrawal and requests buprenorphine. Unfortunately, the hospital does not have buprenorphine immediately available in the medication dispensing machine. Two extremely uncomfortable hours later, Kayla receives her buprenorphine and is finally comfortable again. By this point her records, including the consultation with the anesthesiologist, have been retrieved and her pain is managed with an epidural.

Failed communication to inpatient providers leads to fragmented care once the patient is admitted for labor. There are various ways that a warm handoff can be undertaken at the time of labor to ensure that patient care is not compromised. These include, but are not limited to, a third trimester patient review with the hospital team and/or a pre-registration exchange of critical information (including buprenorphine duration and dosage) that allows confidential information sharing with the medical staff, a prenatal care summary or card **specific to MAT** that allows the patient to confidentially inform hospital staff of her medication and dosage upon admission, and having the prenatal care provider discuss with the patient the importance of disclosing her MAT needs with hospital staff at the time of admission.

Resources

1. Sample Peripartum Checklist for Patients with SUD.

Martha Tesfalul

MD

Dr. Martha Tesfalul is currently a Maternal-Fetal Medicine Fellow at at the University of California, San Francisco. Having served as the Quality Improvement (QI) Chief in her final year of residency, she has a professional interest in health systems strengthening and health equity. She has received local, regional and national recognition for her efforts in clinical care, education, and research including awards from the Pacific Coast Obstetrical and Gynecological Society and the Foundation for the Society for Maternal-Fetal Medicine. In addition to her commitment to improving the care of pregnant patients in California, Dr. Tesfalul engages in QI-focused research in in the East African country Eritrea.

Tipu V. Khan

MD, FAAFP, FASAM

Dr. Khan is an Addiction Medicine specialist and Chief of Addiction Medicine consult-liason service and outpatient specialty clinic at Ventura County Medical Center. He is the medical director of Prototypes Southern California which has hundreds of residential treatment beds as well as medical-withdrawal (detox) beds throughout Southern California. Dr. Khan is the Medical Director of the Ventura County Backpack medicine group, and Primary Care Hepatitis C Eradication Project. His niche is managing SUD in pregnancy and is a national speaker on this topic.

Implement opioid use disorder discharge checklists for all hospital-based points of entry

Best Practice No. 27

Labor and Delivery, Nursery/NICU, and Transition of Care

Overview

All collaborators for the Plan of Safe Care (refer to **Best Practice # 29**) should focus on interventions that take into consideration the safety and needs of both mother and newborn. While there has been extensive attention to a Plan of Safe Care for the newborn, a plan for the mother is equally important. The Plan of Safe Care should instill confidence in the mother in her ability to care for herself and her newborn; build trust and relationships with providers and other health and wellness partners; facilitate connections to resources; and ensure access to care that is inclusive of the mental, emotional, and physical aspects of opioid use disorder (OUD) postpartum and newborn health, and motherhood.

The following Plan of Safe Care discharge recommendations are best practice guidelines known to support the safety, recovery, and wellness of the mother/baby dyad, yet they should not limit the provision of resources, support, and/or interventions that may be necessary to overcome unique situations and challenges of individual mothers and newborns.

Every episode of care is an important opportunity to implement a Plan of Safe Care regardless of the point of entry or disposition (e.g., delivered or undelivered). Some patients have not received prenatal care, been referred to and/or participated in available support services, and may initially present to an emergency department or an alternate point of entry for care. Pregnant women presenting to the emergency department prior to 20 weeks gestation are traditionally declined by L&D units for interdepartmental transfer and, therefore, only receive care in the emergency department. Finally, not all pregnant women who present to labor and delivery (L&D) units will progress to delivery.

Why we are recommending this best practice

For some pregnant women, L&D units and emergency departments are the first providers of pregnancy-related care; in fact, these environments may be their only source of care during pregnancy. Providers should understand that:

- Recognition and identification of mothers with OUD at the earliest point of care will support efforts to protect the fetus from continued opioid exposure and sequela and will support maternal recovery and wellness.

- Reinforcement and assessment of the Plan of Safe Care during each episode of care is an opportunity to prevent program fallouts through reinforcement of positive

behaviors through praise and recognition of successes and the identification of challenges and barriers to participation, gaps of service/support, and new service/support needs.

- Transitions of care (e.g., hospital discharges) place the OUD screen positive mother/baby dyad at risk due to potential gaps in service, communication, and understanding of the Plan of Safe Care.

- Implementation of a discharge checklist supports the team and individuals responsible for this complex discharge by aiding memory, team communication, and consistency of practice. All elements of the discharge checklist should be evidence-based, taking into consideration the unique characteristics of the mother/baby dyad and the community into which they are being discharged.

- Postpartum women with OUD are at very high risk for perinatal mood and anxiety disorders and should be screened using the Edinburgh Postnatal Depression Scale or the PHQ-9 plus GAD-7 prior to discharge.

The Discharge Checklist (please see example in the Resources section of this Best Practice):

- Provides an opportunity to identify and implement opportunities for reinforcement of the OUD plan of care.

- Ensures consistency of best practices and equity of the services, referrals, and resources required to achieve and sustain recovery and wellness.

- Should support/encourage breastfeeding if not contraindicated.
    - Women should feel empowered to make an informed decision about infant feeding.
    - Women should be given complete information on the benefits of breastfeeding and the recommendations surrounding OUD and breastfeeding.

Strategies for Implementation

This is a critical portion of the toolkit and we have therefore provided especially detailed implementation steps.

- Identify and assess all hospital-based points of entry (inpatient/outpatient) used by the pregnant OUD patient (e.g., L&D, antepartum, emergency department).

- Engage hospital leadership and partner with department leaders to recruit at least one provider and staff champion from each identified point of entry for support and implementation of the standardized maternal OUD screen positive discharge checklist.

- Explain the importance of a discharge checklist with identified care providers and teams. Get their buy-in.
    - What is the goal?
    - What is the benefit of implementation for the patient, provider, and community?

- Assess culture and staff readiness for implementation of a checklist.

- Understand the roles and responsibilities for the discharge planning project.
    - Who comprises the care teams?
    - Where is discharge occurring?
    - Who is creating the discharge plan?
    - Who is facilitating the discharge?
    - Who is providing/managing care for pregnant and/or delivered mothers in the inpatient and outpatient settings?
    - Where is the discharge occurring (e.g., L&D, postpartum, antepartum, emergency department, medical/surgical unit)?
    - Who are the receiving teams for discharge (e.g., community, provider resource, service representatives)?

- As a team, create and/or adopt an evidence-based OUD discharge checklist (please see the Resources section of this Best Practice for an example)

- Circulate the OUD discharge checklist and provide education for all care providers responsible for discharge of the OUD mother and newborn.

- Use the teach-back method to ensure all staff understand:
    - Tool use
    - Goals of a successful maternal OUD discharge
    - Shared accountability of the tool and use of standard work
    - Resources available for support

- Monitor use of the OUD discharge checklist:
    - Regularly observe the process
    - Audit patient charts for standard work compliance and completion/support of the elements of the Plan of Safe Care.

- Encourage and sustain use of the OUD discharge checklist by providing feedback to staff about:
  - Successes and opportunities of tool use
  - Case outcomes

- Monitor outcomes:
  - Assess the discharge checklist and process early and often after implementation.
  - Ask for feedback related to successes, challenges, and barriers. Be open to feedback.
  - Use feedback and outcomes data to guide quick tests of change that support quality improvement.

Deep Dive

The checklist has quickly become the gold standard for high reliability health care organizations that want to provide exceptional, team-based care. For example, the Safe Surgery Checklist was adapted for use in U.S. hospitals in 2009 and quickly became the benchmark for improving quality and safety in the surgical suite. But are checklists enough to save lives?

In 2017, the *New England Journal of Medicine* published a report [1] on the BetterBirth Study, one of the largest maternal-newborn studies with over 300,000 women and their babies, that looked at maternal and newborn outcomes after implementation of the WHO Safe Childbirth Checklist. The checklist improved adherence to best practices that are associated with better outcomes; but in this large-scale study in India, there was no difference in perinatal mortality, maternal mortality, or maternal morbidity between the control and intervention groups, even though the intervention groups showed high adherence to the checklist protocols.

Checklists in and of themselves are not enough. A discharge checklist cannot simply be about "checking the box." The postpartum period is the most complex for mother and newborn, with multiple opportunities for relapse and the resulting sequelae. Therefore, the discharge checklist must be about providing better communication between all care providers; inpatient providers must better engage with their outpatient counterparts and community-based organizations who will be responsible for helping the patient navigate a complex pathway to recovery. ***It's about changing the system, not just checking a box.***

Reference: Semrau KEA, Hirschhorn LR, Marx Delaney M, et al. Outcomes of a Coaching-Based WHO Safe Childbirth Checklist Program in India. The New England journal of medicine. 2017;377(24):2313-2324.

Resources

1. Maternal-Postpartum Opioid Use Disorder Discharge Checklist.

References

1. Hudak ML, Tan RC. Neonatal drug withdrawal. Pediatrics. 2012;129(2):e540- 560.
2. MCPAP for Moms Toolkit. Massachusetts Child Psychiatry Access Project. www.mcpapformoms.org.
3. ACOG committee opinion no. 757: screening for perinatal depression. Obstet Gynecol. 2018;132(5):e208-e212.
4. Semrau KEA, Hirschhorn LR, Marx Delaney M, et al. Outcomes of a coaching-based WHO safe childbirth checklist program in India. N Eng J Med. 2017;377(24):2313-2324.

Elliott Main

MD, FACOG

Dr. Main is the Medical Director of the California Maternal Quality Care Collaborative (CMQCC) and has led multiple state and national quality improvement projects. He is also the Chair of the California Pregnancy-Associated Mortality Review Committee since its inception in 2006. For 14 years, he was the Chair of the OB/GYN Department at California Pacific Medical Center in San Francisco. He is currently clinical professor of Obstetrics and Gynecology at Stanford University. Dr. Main has been actively involved or chaired multiple national committees on maternal quality measurement. In addition, he helps direct a number of national quality initiatives with ACOG, the CDC and Maternal Child Health Bureau (HRSA) including the multi-state AIM project. In 2013, Dr. Main received the ACOG Distinguished Service Award for his work in quality improvement.

Jacqueline Rad

MSN, RN

Jacqueline Rad is the nurse manager for the Family Birth Center at Sutter Lakeside Hospital where she provides patient-centered care to mothers and newborns exposed to opioids, and teaches providers and nurses about the challenges these families face.

Continue to establish a therapeutic relationship with parents/caregivers once the infant has been born and empower parents to be involved with the care of their newborn

Best Practice No. 28

Labor and Delivery, Nursery/NICU, and Transition of Care

Overview

After delivery continue to establish a therapeutic relationship with parents/caregivers and engage and empower parents to be involved with the care of their newborn.

Why we are recommending this best practice

Involving parents in newborn care early will increase their confidence in and preparation for managing neonatal abstinence syndrome (NAS) symptoms, establish healthy attachment to their newborn, and allow both mother and baby to better succeed in the transition to home.

Strategies for Implementation

- Ideally, parents receive prenatal counseling and meet members of the newborn care team.

- Train staff to maintain a non-judgmental and supportive attitude and treat the mother as a parent first, not someone with a substance use problem.

- Provide consistency in care team members as much as possible.

- Ensure confidentiality by not discussing NAS or other clinical matters in front of other family members or friends unless the parents have explicitly consented.

- Promote positive maternal/paternal attachment to the newborn:
    - Engage the parents in the care of their newborn.
    - Encourage the parents to visit and help them maintain a quiet environment for the newborn.
    - Emphasize and reinforce positive attributes of the newborn and

maternal/paternal behavior.

- Consider providing a parent/caregiver diary so that the parents may record eating and sleeping information about their newborn.

- Consider posting a HIPAA-compliant sign at the bedside to remind parents and staff about general tips for calming their newborns, skin care, feeding, and other non-pharmacologic interventions.

- Consider providing a brochure or written guide about NAS for parents and standardizing the hospital's method of pre-natal and postnatal counseling.

Kayla

Since Kayla was identified as having been exposed to opioids during pregnancy, the pediatric team was notified prior to delivery. The pediatrician assigned to care for Baby M met with Kayla and started to build a relationship with her, describing Kayla's important role as a mother and the importance of skin-to-skin care and breastfeeding. In addition, due to her exposure, the pediatrician explained the plan for assessing Baby M for symptoms of NAS after delivery.

Training staff to maintain a non-judgmental and supportive attitude and treat the mother as a parent first is an important aspect of establishing a constructive therapeutic relationship with the family. This attitude should be present whether or not the baby develops NAS. Staff should not discuss confidential information in front of family and friends unless the mother has given explicit consent for that communication to occur.

Resources

1. ILPQC Newborn Care Diary.
2. NAS Symptom Diary.
3. NAS Parent Brochure used by NNEPQIN.
4. NAS Parent Guide used by OPQC.

References

1. Grossman MR, Berkwitt AK, Osborn RR, et al. An initiative to improve the quality of care of infants with neonatal abstinence syndrome. Pediatrics. 2017;139(6).
2. Wachman EM, Grossman M, Schiff DM, et al. Quality improvement initiative to improve inpatient outcomes for neonatal abstinence syndrome. J Perinatol.

2018;38(8):1114-1122.

Alexandra Iacob

MD

Dr. Alexandra Iacob is a Neonatal-Perinatal Fellow at University of California, Irvine (UCI) based out of UCI Medical Center and Miller Children's and Women's Hospital Long Beach. While in fellowship, she is also pursuing a Master in Public Health at Johns Hopkins University. She is passionate about improving neonatal outcomes across all socioeconomic classes via both quality improvement projects and policy efforts. She is particularly interested in neonatal abstinence syndrome and the impact it has on the mother, the baby, and the family as a whole.

Angela Huang

MPH, RNC-NIC

Angela Huang is a clinical nurse in the Neonatal Intensive Care Unit at Santa Clara Valley Medical Center, where she is also a nurse coordinator managing and leading quality improvement and research projects. She is actively involved in hospital-wide and county-wide opioid use reduction initiatives, specifically outcome improvement for mother/infant dyads with a history of substance use and exposure. Angela is also the co-chair for the CPQCC Maternal Substance Exposures Workgroup which is assessing the statewide scope of NAS and NAS management practices.

Kathryn Ponder

MD, MMS

Dr. Ponder is a neonatologist with East Bay Newborn Specialists, working in the neonatal intensive care units at the UCSF Benioff Children’s Oakland, John Muir Walnut Creek, and Alta Bates hospitals. She is also the director of the John Muir High Risk Infant Follow-Up clinic. She has revised her practice’s guidelines for the care of infants with Neonatal Abstinence Syndrome and is leading a quality improvement initiative at John Muir to implement these changes. She has previously conducted research and published in the fields of developmental/placental biology and maternal health. She continues to be interested in the developmental origins of disease and optimizing neurodevelopmental outcomes for infants.

Lisa Chyi

MD

Dr. Lisa Chyi is a practicing neonatologist at Kaiser Walnut Creek. She is co-chair for the CPQCC Maternal Substance Exposures Workgroup which is assessing the statewide scope of NAS and NAS management practices. She also helped develop the NAS management guideline and oversees NAS patient care for the Kaiser Northern California region.

Pamela Aron-Johnson

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Pamela has been at UCI Medical Center in Irvine, California for 35 years in several roles including staff nurse in the NICU for 17 years, Outpatient Nurse Manager for Primary and Specialty Services, and currently the Quality and Patient Safety Advisor for the NICU and OB departments. She is also a member of the Data Committee Advisory Group for CPQCC, and is the data nurse coordinator at UCI for both CPQCC and CMQCC.

Priya Jegatheesan

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Dr. Priya Jegatheesan is the Chief of Newborn Medicine and the Regional NICU Director for Santa Clara Valley Medical Center in San Jose, California, an institution committed to the medically underserved. Her main area of interest is outcomes and data-driven quality improvement. She established a comprehensive computerized database system in the SCVMC NICU that enables prospective data collection for quality improvement and research. She also actively participates in CPQCC's Perinatal Quality Improvement Panel and chaired the QI infrastructure sub-committee for 2 years. She became a member of the Society for Pediatric Research in 2014 and has actively participated in clinical research. She is currently the study site Principal Investigator for a NIH funded multi-center study evaluating ondansetron (5HT3 antagonist) for prevention of neonatal abstinence syndrome in newborns born to mothers who had chronic opioid use during pregnancy. She is a passionate champion for optimizing care of newborns exposed to substances during pregnancy to prevent neonatal abstinence syndrome by promoting mother-infant couplet care.

Develop a dyad-centered Plan of Safe Care

Best Practice No. 29

Labor and Delivery, Nursery/NICU, and Transition of Care

Overview

California Penal Code 11165.13 was amended in 1990 with language indicating that a "positive toxicology screen at the time of the delivery of an infant is not in and of itself a sufficient basis for reporting child abuse or neglect," but would require "…any indication of maternal substance abuse to lead to an assessment of the needs of the mother and child." According to California Penal Code 123605, the assessment must be established by protocol "…between county health departments, county welfare departments, and all public and private hospitals in the county…" More recently, in 2016, the federal Comprehensive Addiction and Recovery Act (CARA) amended the long-standing Child Abuse Prevention and Treatment Act (CAPTA) to require development of a Plan of Safe Care, a concept that encourages a comprehensive, multidisciplinary care plan that addresses the needs of both infant and mother/caregiver. While there is still discussion about the interpretation of these state and federal regulations, it is clear that the Plan of Safe Care shifts the response to maternal and infant substance exposure from one centered predominantly on newborn safety to one that anticipates the needs of the mother/baby dyad.

This Best Practice addresses the Plan of Safe Care for the dyad, regardless of whether the mother and newborn are discharged together, or parental rights have been temporarily suspended. Because evidence demonstrates that retention of the mother/baby dyad is preferable to separation, attention to her well-being is essential to the welfare of the dyad.

Key elements of a dyad-centered Plan of Safe Care are the development of structured protocols at the county and hospital level, comprehensive assessment of needs and assets, collaborative wraparound care, transparency, and the identification and engagement of community partners.

Why we are recommending this best practice

A dyad-centered Plan of Safe Care will facilitate positive outcomes for the mother and baby. Having these services in place during the pregnancy and certainly prior to postpartum discharge support mothers to acquire or optimize the skills necessary to provide a safe and nurturing environment for the dyad and family. There is an opportunity and an obligation to ensure new families have the best opportunities afforded them.

Strategies for Implementation

Structured Protocols: Although protocols may have been developed years ago in response to CA Penal Code 11165.13 and Health and Safety Code 123605, new evidence supports best practices that address the effects of adverse childhood events (ACE) on long term health and wellbeing, attachment and bonding, early intervention, the treatment of substance use disorder (SUD), and the role of protective factors in eliminating or mitigating risk in families and communities. While no one template fits all situations, domains covered in the Plan of Safe Care might include:

- Maternal primary, obstetric, and gynecological care, including interconception care and family planning
- Behavioral health and substance use prevention, treatment, and recovery
- Parenting and family support
- Infant and family safety, including intimate partner violence
- Infant health and child development, including primary care, early intervention, and infant and early childhood mental health (IECHM) services

The adoption and implementation of standardized protocols to develop, execute, and monitor a Plan of Safe Care for all women and children in need is critical. Further, the Plan of Safe Care protocol should reflect the collaborative expertise of key agencies at the county level (e.g., behavioral health and substance use treatment departments, social service departments, Child Protective Services (CPS), etc.), and multiple disciplines in the hospital and other health care settings (e.g., pediatric and OB/GYN health care providers, medical social work, etc.).

Collaboration: To provide a Plan of Safe Care for the dyad, community-based organizations and agencies must collaborate to make wrap-around services covering the above domains easily accessible. To address the needs of the mother, communities must come together to support her with a network of programs and providers that transcend stigma and engage mothers with respect and trust, are trauma-informed, and have expertise in the care of women with substance use disorders (SUDs). Similarly, addressing the needs of the infant should include providers and agencies skilled in high risk infant follow-up, Early Head Start and other early intervention programs, and primary care pediatric providers with expertise in managing infants exposed to substances or at risk for neurodevelopmental challenges. The mother/caregiver must be the core member of this partnership. The partnership should include:

- Primary care providers
- Medication assisted treatment (MAT) providers (office-based or narcotics treatment programs) or other treatment and recovery programs
- Public health nursing, including home visitation programs
- Behavioral health providers
- Peer support
- Board-certified lactation consultant if the mother desires to breastfeed or provide expressed breastmilk (and it’s not medically contraindicated)

Providing Transparency: From the initial meeting with the mother, clarity of purpose is fundamental, and expectations are based on how each individual program or service can meet the needs of the dyad. Assessment of the mother’s needs, with consideration for her self-efficacy, SUD treatment, and recovery, will support her goal attainment. Follow through with plans and interventions developed with her input will further a sense of security in the relationship. Communication between community supports should occur with full knowledge and consent from the mother and include her whenever possible. Community partners should maintain transparency with each other to avoid duplication of services and provision of conflicting information to the mother, which may confuse and overwhelm her.

Presently, guidance regarding interpretation of the federal and state legislation in this area

is not straightforward, and hopefully will be clarified soon. Counties vary in how they address the Plan of Safe Care requirement within their communities. In many instances, CPS will take the lead; however, if there is no CPS involvement, or CPS does not address the provision of services to the mother, the community should be ready to support mothers with trauma-informed programs and partners that employ the Five Protective Factors model (refer to the Resources Section of this Best Practice). If CPS engagement is anticipated, full understanding of the laws and resources will afford medical and other service providers the ability to have more transparent conversations with mothers.

Community Partners: The partners from the community may include: CPS, Cal-Works eligibility, behavioral health providers, peer support workers, hospital social workers, MAT providers, recovery programs specific to parenting women, First 5, mother-infant intervention programs (e.g., Minding the Baby or Parents as Teachers), Regional Center, Early Start, Medicaid, and Women, Infants and Children (WIC). Communities may identify and designate additional partners specific to their region.

Federal and State Child Welfare Regulations: In 2016, the Comprehensive Addiction and Recovery Act (CARA) amended the Child Abuse and Prevention Treatment Act (CAPTA) to require the development of a Plan of Safe Care for all children referred to their agency who are born affected by legal or illegal substance use, have withdrawal symptoms resulting from prenatal drug exposure, or have indications of Fetal Alcohol Spectrum Disorder.

In response to California Penal Code 11165.13, and the Federal CARA/CAPTA amendments, the California Department of Social Services (CDSS) All County Letters (17-92 and 17-107) state, “when investigating a referral, the county child welfare agency must assess and identify any safety threats to the child, including any safety threat posed by the parent’s substance abuse. The caseworker must document such safety threats when completing statewide safety assessment tools. This also includes the completion of a risk assessment. If the caseworker determines the caregiver has the protective capacity to mitigate such safety threats and/or risks with appropriate services while keeping the child in the home or placement, the caseworker shall develop a safety plan as described in CDSS Manual of Policies and Procedures, section 31-002(s) (2)… to permit the child to remain in the home with specific, timely actions that mitigate the identified safety threats.”

Initial Steps to Consider

- Contact the county Public Health Department (Maternal Child and Adolescent Health), Child Protective Services, and/or Hospital Council to determine if a current protocol exists for the identification of perinatal substance exposure and the development of Plans of Safe Care that is consistent with state and federal law.
- If a county-level protocol does not exist, or needs revisions, establish a county-level multidisciplinary Plan of Safe Care Committee. Stakeholders to engage might include champions from the aforementioned agencies, Pediatrics, Obstetrics, Midwifery, Family Medicine, Addiction Medicine, Psychiatry, Behavioral Health, Family Treatment Court, and community organizations that serve this population (essential for culturally appropriate and engaging care). Protocols should address at least the following:
    - Define which mothers and newborns will qualify for a Plan of Safe Care and whether it will be used only for substance exposed mothers and infants as mandated or for the many other families at risk (e.g., prematurity, intimate partner violence, mental health issues, etc.).
    - Identify who will oversee implementation of the Plan of Safe Care, and at which stage of the pregnancy the plan of safe care may be initiated. Current CDSS All

County Letters assign that responsibility to the local CPS agency regardless of whether the newborn is discharged in the care of the mother.
    - Identify key community-based organizations and resources and establish relationships including with primary care providers, substance use treatment and recovery providers, community resources for collaborative support of vulnerable families, home visitation, parenting classes, lactation support, addiction support (if needed), and early intervention services.
    - Outline ongoing care plans that identify family challenges and strengths (and tools to support those assessments, such as Protective Factors Survey 20 or 30), detail recommended/required resources and supports to ensure ready access to those services, and include contact information and appointments for benefit of the family and support network.
    - Prioritize continuity of care with maternal treatment and recovery providers and with infant care providers wherever possible and appropriate
    - Ensure that the Plan of Safe Care covers a sufficient duration to ensure a foundation of stability.
    - Include a comprehensive release of information consent signature page (see Delaware's Plan of Safe Care example) to facilitate timely information sharing and coordination between organizations to ensure shared understanding and accountability.

- Ensure that hospital protocols are in place for the identification of substance exposed mothers and infants and the development and implementation of Plans of Safe Care for the dyad. These should be consistent with local, state, and federal policies and regulations.

- Ensure families and providers are educated about the Plan of Safe Care, what to expect in the hospital and beyond, the focus on maintaining the mother/baby dyad, and the potential for CPS involvement.

- Engage the mother/caregiver in collaborative decision making around what supports are most valuable for them and any anticipated challenges for program participation while maintaining sobriety, work obligations, or court hearings.

- Consider using the Plan of Safe Care as a dynamic document that may evolve over time in response to regular assessments of the parent and infant health and well-being.

- Ensure sufficient monitoring of maternal depression and anxiety, continuing recovery, and parental capacity to meet her infant's and her own needs. There are many conflicting demands placed on these mothers such as attachment, sustaining employment, recovery, and the voluntary programs we recommend.

- Consider using a consultant or the complete reference below to implement of a Plan of

Safe Care.

The relationships we build across departments and in the community will afford us a greater support network, and transparency and accountability in caring for our most vulnerable new families during a peak emotional time. The dyad-centered Plan of Safe Care is an opportunity for providers to leverage community resources and ensure optimal support of new families impacted by substance use or other risk factors.

Kayla

In the past year, the hospital Kayla delivered at held a monthly meeting to develop and refine a thorough county-wide Plan of Safe Care (POSC). These meetings consisted of interdisciplinary representatives from the inpatient hospitals, outpatient clinics, CPS, community organizations, and health care system clients. They have been developing, refining, and organizing roll out plans for policies and procedures that link the practices of the entire community through the processes of urine toxicology, outpatient and inpatient screening, support opportunities, inpatient management, and ultimately the coordination and documentation of a POSC. The team has effectively kept their focus on keeping families intact and supporting the family as a unit.

After delivery, Kayla's primary care provider and primary outpatient social worker (SW) called a team meeting to review and adjust (as needed) Kayla's POSC. Kayla was involved in this meeting as it focused on her as the most important piece of Baby M's health and well-being. She was given time to ask questions, discuss concerns and invite any further support. Prior to this meeting, Kayla's traumatic life history was also briefly reviewed in the POSC as well as the services and safe guards that were already in place (MAT, GED attainment, and more).

Prior to Kayla's discharge, the outpatient SW, who is responsible for tracing the POSC and is the team member who best knows Kayla, provided further support. Kayla identified herself as early in sobriety and continuing to struggle with feelings of anxiety that were triggered in the role as a new parent. Kayla chose a supportive housing community resource that felt like the right fit for her family, and her primary SW assigned referrals to this program to be completed. The inpatient SW had met a representative from this community program at the monthly POSC meeting and felt comfortable describing their services and participation requirements. This added to Kayla's comfort to explore this option of support.

Resources

1. National Center on Substance Abuse and Child Welfare. A Planning Guide: Steps to Support a Comprehensive Approach to Plans of Safe Care. March 2018 Draft. Retrieved 4/10/19.

2. A Collaborative Approach to the Treatment of Pregnant Women with Opioid Use Disorders.

3. Children and Family Futures presentation with national statistics, overall background,

concept of family-centered treatment and suggestions for the implementation of Plans of Safe Care.

4. Delaware Plan of Safe Care Template Example.
5. Vermont Plan of Safe Care Template Example.
6. National Center on Substance Abuse and Child Welfare. Child Abuse and Prevention Treatment Act (CAPTA) Substance Exposed Infants Statutory Summary.
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Dr. Heather Briscoe is an Assistant Professor at University of California, San Francisco based at Zuckerberg San Francisco General Hospital in the Department of Pediatrics. She is a pediatric hospitalist and is engaged in a number of projects around the interface of pregnancy and social complexity including an active role in the Plan of Safe Care Community Collaborative of San Francisco. She is particularly interested in how substance use policy affects pregnant women both positively and negatively with regard to utilization of prenatal care, access to needed resources, family unity & safety, and trauma-informed patient-centered care.

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Dr. Helen DuPlessis is a Principal at Health Managment Associates.

She has a rich history of involvement in healthcare administration for a variety of organizations, expertise in program and policy development, practice transformation, public health, maternal, and child health policy, community systems development, performance improvement, and managed care. Prior to joining HMA, Dr. DuPlessis served as the chief medical officer with St. John’s Well Child and Family Center. Other notable professional experiences include her work as senior advisor to the UCLA Center for Healthier Children, Families and Communities where she provided leadership, research, program development support, counsel and representation to local, state and national efforts, and community level systems transformation. She also trained and mentored students in various disciplines and educational levels.

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Kelly Brandon, MSN, RNC, CNS, IBCLC has been a nurse for over a decade. She currently works as a Perinatal Clinical Nurse Specialist at Zuckerberg San Francisco General Hospital and Trauma Center where she oversees the training, education, policy writing and implementation of nursing care in the Birth Center at ZSFGH. Prior to her nursing work she was a counselor and program manager for a street outreach program in downtown San Francisco. Kelly focuses her clinical work by involving compassion, kindness, and patient autonomy in every encounter.

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Implement a warm handoff strategy to follow at time of discharge

Best Practice No. 30

Labor and Delivery, Nursery/NICU, and Transition of Care

Overview

Implementation of a warm handoff process at the time of discharge, when key information can be easily lost or forgotten, will reduce the risk of communication breakdowns that compromise patient safety and jeopardize a smooth and cohesive transition to care.

Why we are recommending this best practice

- Use of warm handoffs:
  - Increases patient safety through improved communications and provides an opportunity to question, clarify, and confirm information.
  - Builds partnerships for improved care, outcomes, and experiences.
  - Increases shared decision making and patient/family engagement.

- Use of standardized workflows (the most efficient method or approach that all follow):
  - Provides a structured communication tool and handoff process.
  - Decreases variation in practice.
  - Prevents omission of practice elements, ensuring every discharge/transition of care will benefit from all aspects of the warm handoff.
  - Allows for analysis of practice and process improvement when issues or gaps are identified.

Strategies for Implementation

- Collaborate with discharge caregivers, receivers, and patients to develop written standard work that supports next steps of the plan of care and meets the needs of all team members.

- Warm handoff standard work should:
  - Be in person (whenever possible) and in front of the patient and/or family.
  - Include an introduction by the discharging team member to the next care provider.
  - Include pertinent details related to prenatal care and the acute care stay.
  - Include a review of the discharge goals and plan.
  - Include a review of next steps and who is responsible.
  - Include a review of what is important to the patient/family.
  - Provide an opportunity for all participants, including patient and family, to question, clarify, and confirm information.

Kayla

The hospital caring for Kayla has both an inpatient and outpatient social worker who routinely meet to discuss cases and prepare for postpartum discharges. Both social workers rely on a newly developed, structured process for the warm handoff. The process was developed by a multidisciplinary group of stakeholders in the maternity and newborn departments, similar to the group that developed the Plan of Safe Care recommendations that are included in the discharge checklist. It was quickly realized that the discharge checklist was necessary but not sufficient to complete the warm hand off in the transition from inpatient to outpatient care. A standardized communication tool outlines the warm handoff process for each patient that: occurs in person with the patient, verbally reviews the discharge checklist and Plan of Safe Care, outlines who is responsible for specific next steps of the process, provides an introduction to the next care provider whenever possible, and provides an opportunity for the patient and family to ask questions and clarify any missing information.

Kayla agreed to meet with the outpatient social worker who will oversee her and Baby M's Plan of Safe Care. Contact with Kayla's post-discharge caregiver was completed, based on Kayla's preferences, and a comprehensive transmission of medical records was underway. The nurse caring for Kayla was able to attend part of the warm handoff meeting to review the discharge checklist and complete all medication reconciliation oversight. Kayla was discharged feeling supported.

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Christina is the Associate Director of Programs at CMQCC and a nurse leader dedicated to process improvement, high quality health care for all, technological innovation and staff growth & development. She has extensive experience in lean improvement, patient relations/experience, Informatics, provider relations and change management. Christina's clinical program background includes Maternal Fetal Medicine, Gynecological Surgery and Obstetrical & Gynecological Ultrasound.

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Ensure linkage to home visitation programs or that other in-home supports are in place

Best Practice No. 31

Labor and Delivery, Nursery/NICU, and Transition of Care

Overview

Prior to discharge, appropriate referrals to home-based services should be made, or if the patient has previously been referred, services should be confirmed. This may include Public Health Nursing, Early Head Start Programs, or any other program that provides evidence-based in-home supports to the family.

Why we are recommending this best practice

Home Visitation Programs have shown high rates of return on investment. By participating in prenatal and early childhood home visiting programs, families gain the necessary knowledge and resources to successfully parent. These programs not only provide one-on-one in-home support to the families, but also ensure that the family is linked to any additional resources and aid the family in ensuring that all medical care is followed. Especially within the first weeks of the newborn's life, it may be difficult for the parent to leave the house; by receiving services in the home, there is better ability to ensure that the family does not fall out of care.

California Home Visiting Program (CHVP): CHVP oversees implementation of various evidence-based home visiting programs throughout California, including the Nurse-Family Partnership (NFP) and Healthy Families America (HFA), and currently 23 California counties have these evidence-based programs. State-level agency workgroups conduct needs assessments to determine the greatest need for and potential impact from these programs based on factors such as poverty rates, rates of child abuse and neglect, and the ability to find and enroll at-risk parents in particular areas.

- ***NFP:*** Geared towards low income, first-time pregnant women. Care starts in pregnancy and follows the dyad until the child reaches two years of age. The mother must be referred before 28 weeks of pregnancy.
- ***HFA*:** Geared towards low-income, at-risk families from birth to a minimum of three years.

Early Head Start*:* Early Head Start provides preschool and home visiting services geared towards low-income, at risk families. This is one of the few programs that can be started either during pregnancy or after delivery and follows the dyad until the child reaches three years of age.

CalWORKS: CalWORKS offers a new three-year home visiting pilot initiative that began in January 2019. It is supported by both state General Fund and federal Temporary Assistance for Needy Families dollars. The program provides up to 24 months of home visiting for

pregnant and parenting people, families, and infants born into poverty.

Healthy Start*:* Healthy Start serves communities with infant mortality rates that are at least one and a half times the U.S. national average. Women and their families can be enrolled into Healthy Start at various stages of pregnancy, including pre- inter-, and post-conception. Each family that enrolls receives a standardized, comprehensive assessment.

Early Start: Early Start is California's early intervention program (i.e., Part C of the Individuals with Disability Education Act), providing early intervention services to at-risk infants and children less than three years of age who meet eligibility criteria based on the presence or risk of developmental disability. Services include infant education, occupational therapy, physical therapy, speech therapy, and home visits. Referrals can be made by the NICU or newborn nursery and are often coordinated by a social worker, although anyone can make a referral, including parents, medical providers, neighbors, family members, foster parents, and day care providers.

Home Health Visits: A number of public and commercial insurance companies offer home health visits, usually in response to a medical need. If the patient does not have insurance, or if the patient's insurance declines to cover the home health visit, the county often will provide a public health nurse. Some counties or local areas have established their own system (e.g., Palomar Home Health Services).

Strategies for Implementation

Ensure that staff is trained and has a full understanding of the availability of specific home visitation programs that are available to the population. It is optimal to refer the mother during prenatal care and to resume home visits following delivery.

Maintain resource listings and referral forms for home visitation programs in your area. These can be kept in a binder that is easily accessed by providers and staff or can be kept digitally. It is important to regularly review and update agency referral forms to ensure the accuracy of referrals.

- Readily available referral forms will streamline the referral process.

- Determine if the patient has already been working with a home visiting program.
  - If she has, ensure care coordination happens with that program so the home visitor is aware of the delivery and that no gap in services occurs.
  - If she had not been referred, ensure a referral is made and inform the patient.

- The key to this referral is ensuring that the patient buys in and that the family understands the kind of support a home visiting program can provide.

- Explore the availability of warm handoffs to programs prior to discharge. Sometimes a program might be able to do an intake while the patient is still admitted to the hospital.

Kayla

When Kayla found out she was pregnant at 11 weeks, she was offered a visit with a social worker but declined the meeting at that time. Prior to discharge of Baby M, another referral was made for public health nursing follow-up, and Kayla was able to understand how home visiting services could provide ongoing support to her and Baby M. They received monthly home visits from a public health nurse who supported the dyad in bonding, breastfeeding, and identifying other needs. The home visitor quickly identified that Kayla had challenges with transportation to her treatment appointments and was able to facilitate reliable transportation for her. Additionally, the home visitor was able to facilitate referral to a support group for new moms and provide additional resources for Kayla. The home visitor followed Kayla and Baby M for the entire first two years of Baby M's life.

Referring patients to home visiting services allows for evaluation of socioeconomic factors that may impact a patient's ability to seek care for themselves or their child. By identifying and working with the patient to address these factors, they can meet the dyad's basic needs, work on goal setting, and identify strengths that the mother already possesses. Additionally, ongoing follow-up with a home visitor can help to facilitate comprehensive and consistent medical care.

Resources

1. California Budget and Policy Center Report: Home Visiting is a Valuable Investment in California's Families.
2. Helping Hands: A Review of Home Visiting Programs in California.
3. Nurse Family Partnership.
4. Local First 5 Commissions.
5. National Head Start Association.
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Emillie began working in Lake County Public Health in 2015 as a Public Health Nurse in the California Children’s Services Program and Home Visitation Program, and has worked in different capacities in the department for the last five years. She currently provides oversight to the Maternal Child and Adolescent Health Program and the Nurse Home Visiting Program. As the MCAH Director, Emillie has works with a number of community stakeholders to address perinatal substance use in Lake County, and to create a recovery ecosystem where there is no wrong door into accessing services.

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Ensure referral and linkage to other necessary services/resources at discharge

Best Practice No. 32

Labor and Delivery, Nursery/NICU, and Transition of Care

Overview

Other community agency referrals are needed to ensure that both the mother's and newborn's basic needs are met. These referrals can include WIC, family resource centers, parenting classes, the Department of Social Services, support groups, local treatment centers at a level of care appropriate to the patient's assessed needs, peer support, and recovery groups.

Why we are recommending this best practice

A collaborative and multidisciplinary approach to providing support to mothers and newborns affected by opioid use disorder (OUD) is necessary to ensure that the dyad has all basic needs met. Other service providers and agencies can influence a woman's decisions for care and treatment. A more comprehensive approach to supporting the family is taken when multiple agencies and service providers are engaged.

Strategies for Implementation

- Ensure staff training on local resources and eligibility criteria, as well as the referral process.

- Routinely engage hospital social work to support these activities.

- Maintain or ensure access to a comprehensive listing of resources for easy reference when needs are identified.

- Determine if an agency is providing services to the family that include case management and care coordination.
    - If there is an agency that is already involved with the family, ensure access and determine the needs and gaps in services that the family may have.

- Identify agencies that may be available to address the needs of the family.

- Make direct referrals whenever possible; ensure that the referral is received by the

agency or program.
    - Make follow-up outpatient appointments for postpartum follow-up.
    - “The American College of Obstetricians and Gynecologists recommends a revised approach to postpartum care, including a postpartum visit within the first three weeks postpartum and a comprehensive exam at or before 12 weeks after delivery (ACOG, 2018). However, women with substance use disorders (SUDs) may benefit from additional support. Providers should consider scheduling an initial postpartum visit within 1-2 weeks after delivery, and biweekly until at least 6 weeks” (SAMHSA, 2018; Alliance for Innovation in Maternal Health, 2018).

- Inform the patient of the referral and provide contact information and information regarding the services to which they are being referred. This includes reporting to CPS.
    - When there are no safety concerns, the provider should try to openly discuss referrals to Child Protective Services (CPS) and reassure the parent that it may be an opportunity for the family to receive additional support. This should only be done when deemed safe and when the conversation would benefit the family.
    - Utilize warm handoffs. Refer to **Best Practice #30**.

- Schedule follow-up appointments before discharge.
    - Appointments should include, but are not limited to:
        - Recommended routine maternal appointments at one to two and six weeks postpartum.
        - Public health and/or home health home visit within three days of discharge.
        - Recommended routine newborn appointments within 24-72 hours after discharge.

- Where possible, provide or engage care navigators to support mothers in accessing service referrals and identifying additional needs.

Kayla

Prior to discharge, the L&D staff review several community-based resources where Kayla may be able to receive services. Since Kayla is separated from Baby M, who is still in the NICU, the discharge nurse refers Kayla to WIC to obtain a breast pump so that she can establish that her milk supply. When Kayla attends her WIC appointment, she is also provided with lactation support and education. By the time Baby M is discharged from the NICU, Kayla has established her milk supply and is ready to begin breastfeeding Baby M. Additionally, Kayla can schedule a follow-up appointment with WIC for lactation support or any other issues that may interfere with successful breastfeeding.

Resources

1. A Collaborative Approach to the Treatment of Pregnant Women with Opioid Use Disorders.
2. Clinical Guidance for Treating Pregnant and Parenting Women with Opioid Use Disorder and Their Infants. SAMHSA, 2018.
3. Alliance for Innovation in Maternal and Child Health.
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Communicate directly with the outpatient primary care provider prior to the newborn leaving the hospital to review the hospital course and discuss follow-up

Best Practice No. 33

Nursery/NICU and Transition of Care

Overview

The treating physician within the hospital setting should communicate directly with the outpatient primary care provider (pediatric or family medicine provider) prior to the newborn leaving the hospital to review the hospital course, inform the primary care provider of social issues, discuss feeding plans, and ensure timely follow-up appointments are available within 24–72 hours of discharge from the hospital. In addition to the primary care provider, scheduling of home visit(s) by a nurse and/or social worker is ideal if available (see **Best Practices #25, #29 and #31**).

Why we are recommending this best practice

- Newborns exposed to illicit or non-medicinal uses of substances during pregnancy are at risk of withdrawal, as well as ongoing neurodevelopmental and other challenges. They require high risk or other close follow-up care to ensure early identification of and intervention for potential adverse outcomes.

- Primary care providers should be aware of the current feeding regimen to ensure that the newborn continues to receive adequate caloric intake for growth and development and to adjust as necessary.

- Newborns who are initially breastfed by women on medication assisted treatment (MAT) and whose mothers stop breastfeeding may be at higher risk of experiencing a recrudescence of withdrawal symptoms. Although the risk is minor, as breastmilk concentrations of both methadone and buprenorphine are low, primary care providers should be informed.

- Subacute signs of neonatal abstinence syndrome (NAS) may last up to six months.

- Drug exposure in utero is a marker of environmental risk. Caretaker involvement, family resources, and community resources are protective factors that can improve long-term outcomes for children.

Strategies for Implementation

Consider a NAS discharge checklist for inpatient providers and primary care providers caring for exposed newborns, which should ideally be incorporated into the electronic health record.

Baby M

Baby M no longer needs pharmacologic therapy and will be ready to go home soon. In preparation for that transition, the pediatrician who has cared for Baby M in the hospital calls the pediatrician who will care for Baby M as an outpatient. During the phone call, the pediatrician describes Kayla and Baby M's social and medical history, summarizes the hospital course, and suggests all aspects of care after discharge.

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Dr. Alexandra Iacob is a Neonatal-Perinatal Fellow at University of California, Irvine (UCI) based out of UCI Medical Center and Miller Children's and Women's Hospital Long Beach. While in fellowship, she is also pursuing a Master in Public Health at Johns Hopkins University. She is passionate about improving neonatal outcomes across all socioeconomic classes via both quality improvement projects and policy efforts. She is particularly interested in neonatal abstinence syndrome and the impact it has on the mother, the baby, and the family as a whole.

Angela Huang

MPH, RNC-NIC

Angela Huang is a clinical nurse in the Neonatal Intensive Care Unit at Santa Clara Valley Medical Center, where she is also a nurse coordinator managing and leading quality improvement and research projects. She is actively involved in hospital-wide and county-wide opioid use reduction initiatives, specifically outcome improvement for mother/infant dyads with a history of substance use and exposure. Angela is also the co-chair for the CPQCC Maternal Substance Exposures Workgroup which is assessing the statewide scope of NAS and NAS management practices.

Kathryn Ponder

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Dr. Ponder is a neonatologist with East Bay Newborn Specialists, working in the neonatal intensive care units at the UCSF Benioff Children's Oakland, John Muir Walnut Creek, and Alta Bates hospitals. She is also the director of the John Muir High Risk Infant Follow-Up clinic. She has revised her practice's guidelines for the care of infants with Neonatal Abstinence Syndrome and is leading a quality improvement initiative at John Muir to implement these changes. She has previously conducted research and published in the fields of developmental/placental biology and maternal health. She continues to be interested in the developmental origins of disease and optimizing neurodevelopmental outcomes for infants.

Lisa Chyi

MD

Dr. Lisa Chyi is a practicing neonatologist at Kaiser Walnut Creek. She is co-chair for the CPQCC Maternal Substance Exposures Workgroup which is assessing the statewide scope of NAS and NAS management practices. She also helped develop the NAS management guideline and oversees NAS patient care for the Kaiser Northern California region.

Pamela Aron-Johnson

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Pamela has been at UCI Medical Center in Irvine, California for 35 years in several roles including staff nurse in the NICU for 17 years, Outpatient Nurse Manager for Primary and Specialty Services, and currently the Quality and Patient Safety Advisor for the NICU and OB departments. She is also a member of the Data Committee Advisory Group for CPQCC, and is the data nurse coordinator at UCI for both CPQCC and CMQCC.

Priya Jegatheesan

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Dr. Priya Jegatheesan is the Chief of Newborn Medicine and the Regional NICU Director for Santa Clara Valley Medical Center in San Jose, California, an institution committed to the medically underserved. Her main area of interest is outcomes and data-driven quality improvement. She established a comprehensive computerized database system in the SCVMC NICU that enables prospective data collection for quality improvement and research. She also actively participates in CPQCC's Perinatal Quality Improvement Panel and chaired the QI infrastructure sub-committee for 2 years. She became a member of the Society for Pediatric Research in 2014 and has actively participated in clinical research. She is currently the study site Principal Investigator for a NIH funded multi-center study evaluating ondansetron (5HT3 antagonist) for prevention of neonatal abstinence syndrome in newborns born to mothers who had chronic opioid use during pregnancy. She is a passionate champion for optimizing care of newborns exposed to substances during pregnancy to prevent neonatal abstinence syndrome by promoting mother-infant couplet care.

Provide staff and provider education on opioid use disorder

Best Practice No. 34

Outpatient, Labor and Delivery, Nursery/NICU, and Education

Overview

Educate all providers and administrative staff about opioid use disorder (OUD) in pregnancy, strategies for caring for patients with OUD, and develop protocols that address all team members' roles.

Why we are recommending this best practice

Treatment of OUD is a multidisciplinary endeavor that begins with a patient's first encounter in the health care environment. For this reason, all staff need to have a strong foundational understanding of OUD as a chronic illness and must be provided with adequate training and tools to interact with patients in a way that does not undermine a patient's effort to seek care. Understanding the underlying stigma and biases that nurses and ancillary staff may unintentionally bring to the treatment of patients should be a primary focus of all inpatient, outpatient, and ambulatory care staff.

While the OUD epidemic affects women from all socioeconomic, racial, and cultural backgrounds, many caregivers and staff members have mistaken ideas about the reality of addiction. These misconceptions often result in a patient being denied needed treatment or alienated from the medical system before she has established care with a provider.

In all medical settings, it is important that the first contact a woman with OUD has with the health system is one that is free of stigma and alienating language, incorporates Trauma-Informed Care, and is tailored to the individual woman's needs. This initial meeting should be one that helps move a patient forward to an empowering relationship with her provider and toward medication assisted treatment (MAT) before her intrapartum period. If a patient is initiating care during the intrapartum period, it is equally important that the care is viewed by all staff as an opportunity to implement the best practices for mothers and newborns included in this toolkit during the postpartum period and beyond. Pregnancy provides a unique window of opportunity when a woman is highly motivated to enter treatment not only out of concern for the health of the fetus but also because during pregnancy, she can envision a different future for herself and her child.

Staff and provider training is key to disrupting the stigmatizing interactions that women with OUD encounter or perceive when they present for care. Recognizing OUD as a chronic illness is imperative to providing patient-centered care that establishes a trusting and safe environment. The first contact for these women in both inpatient and outpatient settings, often at registration or reception, needs to be free of stigmatizing behaviors and language. The subsequent encounter with a medical assistant or nurse is profoundly influenced by the presentation of the patient from the initial contact. Whether or not a patient has sought prenatal care, her parity, family structure, history, and other factors all influence how she is perceived and received. Many factors can contribute to initial perceptions of patients by

staff and nurses, and targeted interventions have been shown to significantly impact how women with substance use disorder (SUD) or opioid use disorder (OUD) are distinguished from other patients presenting for care.

Strategies for Implementation

- **Create Awareness of OUD in Pregnancy:** Determine appropriate avenues through which to educate office/clinic and hospital staff about OUD in pregnancy (e.g., emails, physical bulletin boards, staff meetings) with a focus on mitigation of discrimination and bias toward patients with OUD. Utilize content such as our "Education on OUD Tool" (Refer to the Resources section of this Best Practice).

- **Train Staff and Providers on Trauma-Informed Care**: Create opportunities for staff and providers to learn about Trauma-Informed Care.

- **Be Aware of Local Cultures**: Identify "cultural coaches" to help explain the nuances of local culture that may impact care and treatment.

- **Train Providers on Use of OUD Treatment Protocols**: Create opportunities for providers responsible for evaluating and treating pregnant patients to learn and ask questions about facility-specific OUD treatment protocols and to obtain a waiver to prescribe buprenorphine.

- **Train Nursing on Use of OUD Treatment Protocols:** Create opportunities for nurses responsible for caring for pregnant inpatients to learn and ask questions about the facility-specific protocol developed as well as how to use the Clinical Opiate Withdrawal Scale (COWS) and the Ramsay Sedation Scale (Ramsay Sedation Scale) in the care of patients with OUD and how to administer buprenorphine and methadone.

Deep Dive

Educating providers and staff about OUD may seem overwhelming at first, especially if the culture of care at your center has historically taken a punitive or judgmental approach to caring for mothers with a substance use disorder. Demystifying the educational "roadmap" can go a long way in giving clinical champions the most important starting points for educating the multidisciplinary health care team. This may consist of the following basic concepts:

- Every pregnant woman should be verbally screened for substance use at multiple points in care

- OUD is a chronic medical condition that can be treated

- Substance use is almost always connected to significant past trauma and/or Adverse Childhood Events (ACEs). A Trauma-Informed Care approach that emphasizes empathy and reduces stigma and bias is the standard of care and improves outcomes.

- MAT (methadone or buprenorphine) is the standard of care for pregnant women with OUD. Withdrawal is dangerous for both mother and fetus. MAT is linked to better maternal and neonatal outcomes and reduces overdose deaths.

- Education about the signs, symptoms, and treatment of NAS is critical. Non-pharmacologic treatment of NAS such as rooming-in, skin-to-skin contact, swaddling, and reducing external stimuli results in better support of the mother/baby dyad, reduced need for pharmacologic treatment, and shorter hospital stays.

- Treatment requires provider, peer, family, and community support. Systems of care for women with OUD should always address transitions from one location of care to another, including comprehensive discharge planning and the development of a Plan of Safe Care that ensures maternal continuation of treatment and recovery, and appropriate medical, developmental, and safety follow-up for the newborn.

- The overarching goal is to preserve the mother/baby dyad.

Resources

1. Confronting the Stigma of Opioid Use Disorder and Its Treatment.
2. AMA Opioid Task Force Resources.
3. Words Matter: How Language Choice Can Reduce Stigma.
4. SAMHSA. Clinical Guidance for Treating Pregnant and Parenting Women with Opioid Use Disorder and Their Infants. HHS Publication No. (SMA) 18-5054, Rockville, MD, 2018. Factsheet #2 Initiating Pharmacotherapy for Opioid Use Disorder. Factsheet #4 Managing Pharmacotherapy Over the Course of Pregnancy.
5. Clinical Opiate Withdrawal Scale (COWS).
6. Ramsay Sedation Scale.
7. Education on OUD Tool.

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3. Committee opinion on opioid use and opioid use disorder in pregnancy. https://www.acog.org/Clinical-Guidance-and- Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Opioid- Use-and-Opioid-Use-Disorder-in-Pregnancy?IsMobileSet=false. Accessed December 15, 2019.

Jennifer Carraher

RNC-OB, PHN, MS

Jennifer Carraher is an obstetric and public health nurse with advanced practice specialization in perinatal women's health. She is also a medical sociologist with an extensive background in social theory and science and technology studies. Her current research includes health disparities, birth equality and intrapartum harm reduction. Jennifer remains a bedside nurse committed to care in San Francisco Bay Area communities.

Educate patients and families about opioid use disorder

Best Practice No. 35

Outpatient, Labor and Delivery, Nursery/NICU, and Education

Overview

Addiction is a chronic, relapsing condition. Pregnancy can motivate women to discontinue drug use, but abrupt discontinuation of opioids during pregnancy can have deleterious effects for both the mother and fetus. Patients and their families may not be aware that medication assisted treatment (MAT) is the standard of care for opioid use disorder (OUD) during pregnancy and may adopt risky strategies such as abrupt and complete cessation of opioids without realizing the risk to their pregnancy and to their recovery.

Why we are recommending this best practice

Patients need to be educated on different types of opioids to understand how they will affect their body. Understanding different types of opioids opens the discussion about withdrawal symptoms, warning signs to look for, and when to obtain medical help for withdrawal. Patients and their families need to fully understand the nature of addiction, the potential impact of continued opioid use during pregnancy, the recommended treatment for OUD during pregnancy and beyond, the need to address potential or co-occurring mental health conditions, the members of the treatment team involved in their comprehensive care, and the aim of partnering with them every step of the way.

Strategies for Implementation

- **Educate the patient on the definition of opioid use disorder (OUD).** Patients should be informed that OUD is defined as a pattern of opioid use characterized by tolerance, craving, inability to control use, and continued use despite adverse consequences.

- **Assess and educate the patient for potential causes of opioid use disorder, including but not limited to:**
    - Chronic pain
    - History of trauma
    - Opioid misuse

- **Assess the patient for co-occurring mental health conditions.** A preliminary assessment conducted on intake should be followed by a second assessment once patient's OUD is stabilized on MAT or another course of OUD treatment. For many women with OUD, what appears at first to be significant mental illness may resolve or lessen significantly once the OUD is addressed. Validated screening tools include GAD-7, MDQ, PHQ-9, ACE, and the Edinburgh Postnatal Depression Scale (See the **Resources** for more tools). Assess patients for:

- Depression
- History of trauma
- PTSD
- Anxiety
- Other psychiatric disorders such as bipolar, schizophrenia, and personality disorders

- **Educate the patient on the different types of opioids.** For short-acting opioids, such as heroin, withdrawal symptoms can occur 4-6 hours after ingestion, can peak at 1-3 days, and gradually subside over 5-7 days. For long-acting opioids, such as methadone or buprenorphine, withdrawal symptoms occur 24-36 hours after ingestion and may last days to several weeks.

- **Withdrawal Symptoms:**
  - Generalized pain
  - Muscle pain
  - Nausea
  - Vomiting
  - Diarrhea
  - Sweating
  - Rhinorrhea
  - Tearing and dilated pupils
  - Tremors
  - Restlessness and anxiety

- **Educate patients on why treatment during pregnancy is important and what it involves:**
  - Better outcomes for the patient and her newborn.
  - Abrupt cessation of opioids, and withdrawal, is harmful to the fetus.
  - Planning for safe care.
  - Connecting mother and newborn to resources to help them after discharge.
  - Helping the mother receive treatment that will help her and that is recommended for her and her newborn.

- **Develop an OUD management plan with the patient and her family:**
  - Review dose and appropriateness of current opioid use, and limit opioid prescribing for post-partum pain as detailed in **Best Practice #14.**
  - Discuss risks and benefits of opioid use, review treatment goals, review neonatal abstinence syndrome (NAS).
  - Take a thorough history and review the prescription drug monitoring program.
  - Ensure adequate resources for psychosocial support, substance abuse treatment programs, and locally available resources.
  - If appropriate and resources are available, discuss the potential for outpatient buprenorphine induction (refer to **Best Practice #10**).
  - Discuss harm reduction. Have resources available to discuss the use of naloxone, safe injection sites, needle exchange clinics and safe needle handling. See

Resources below for an infographic from the CDC regarding the cleaning of syringes.
- Discuss dangers of abrupt cessation of opioids.

- **Educate patient and family on use of naloxone (Narcan):**
  - Naloxone is used, along with other emergency medical treatment, to reverse the life-threatening effects of a known or suspected opioid overdose. Naloxone is in a class of medications called opioid antagonists. It works by blocking the effects of opioids to relieve dangerous symptoms caused by high levels of opioids in the blood. Naloxone will not reverse the effects of non-opioid drugs.
  - Naloxone comes as a liquid solution that can be sprayed into the nose, or as a liquid in a vial that can be injected into muscle. It is usually given as needed to treat opioid overdoses.
  - Keep the nasal spray available at all times to use in case of an opioid overdose. Be aware of the expiration date on the medication and replace it when this date passes. Some harm reduction kits include two doses of naloxone. Explain how the patient can continue to access naloxone so that it is always available.
  - Symptoms of an opioid overdose include excessive sleepiness, not awakening when spoken to in a loud voice or when the middle of the chest is rubbed firmly, shallow or stopped breathing, or small pupils (black circles in the center of the eyes). If someone sees a person experiencing these symptoms, he or she should give the first naloxone dose and then call 911 immediately. After giving the naloxone nasal spray, someone should stay with the patient and watch closely until emergency medical help arrives.
  - A **“Guide for Patients and Caregivers”** is available to print in pamphlet format. See the Resources section of this Best Practice.
  - Fentanyl: Whether taken knowingly or as a contaminant with other drugs, fentanyl’s increased potency relative to other opioids may require the administration of greater doses of naloxone per overdose event.
  - Call 911 for any suspected overdose event.

Kayla

The midwife at one of Kayla's prenatal visits reassures her that no baby is born an addict. She educates her about how prenatal exposures to medications can lead to temporary withdrawal within newborns and that for opioid-exposed newborns there is an evidence-based treatment for NAS called Eat Sleep Console that makes her mothering and ability to console her baby the most important part of her newborn's treatment. Kayla seems relieved after the midwife shares this with her.

The midwife than speaks with her about how substance use is a chronic disease, similar to diabetes or hypertension, and like any other long-term process, it requires a wide-ranging treatment plan to ensure good health outcomes for her and her baby. She shares that the medication buprenorphine prevents relapse, decreases cravings and even helps some of the chronic pain. The midwife also suggests other mind-body techniques to help with chronic pain and substance use, such as counseling, physical therapy, and other manual therapies to decrease her pain and desire for pain pills. Kayla has relaxed more and is even starting to smile and make more eye contact with the midwife. She wants to know how long she'll have to be on a medicine like buprenorphine or methadone. The midwife tells her that although the medical literature indicates that Medication Assisted Treatment (MAT) is effective and the best treatment for OUD during pregnancy and postpartum, the optimal duration of treatment with MAT is unknown. Just as with other effective medications for chronic conditions, like insulin or blood pressure medicine, MAT is not usually prescribed with an expected end date. The midwife reassures her that breastfeeding is safe with either of these medication options and is in fact strongly encouraged to help diminish the symptoms associated with NAS. Lastly, she points out to Kayla that the clinic has a Seeking Safety group and she may want to attend to learn more about trauma and panic disorders.

Resources

1. A Guide for patients and caregivers regarding overdose and naloxone administration.
2. CDC infographic on cleaning syringes.
3. MBSEI Resource Library.

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Carrie Griffin

DO

Dr. Carrie Griffin is a family medicine physician who specializes in maternal, child and reproductive health and practices in Humboldt County. She completed her residency at Maine Dartmouth Family Medicine Residency and fellowship at the University of New Mexico. Perinatal substance use is her clinical area of interest and expertise; she currently serves as a mentor for CMQCC's Mother Baby Substance Exposure initiative and the Humboldt RISE project, a community initiative to promote screening and case management services for women with substance use disorders in pregnancy.

Lorena Watson

FNP

Lorena Watson is a Family Nurse Practioner. Her focus is rural health and providing compassionate patient-centered care in Lake County, CA. She coordinates and provides care for mothers with OUD through pregnancy and postpartum. Before becoming an FNP, Lorena was a labor and delivery nurse for 16 years.

Educate pregnant women about opioid use disorder in pregnancy and the hospital experience

Best Practice No. 36

Outpatient, Labor and Delivery, Nursery/NICU, and Education

Overview

Thoughts about labor and delivery, for most pregnant women, are riddled with questions and anxiety about the unknown. For the pregnant woman with opioid use disorder (OUD), there is an additional layer of stress, emotions, and anxiety related to childbirth and motherhood associated with her path to wellness and recovery. After having built relationships and trust with her prenatal care team, the thought of transitioning care to a new team of providers in the L&D unit can cause additional stress for the mother with OUD. She may or may not have already met or had an opportunity to build trust and relationships with this staff and may question their motives, feel judged, and begin to worry that her newborn will be taken from her or that her pain will not be managed due to her OUD status.

Providing education about expected health care services and processes is associated with social and psychological benefits including reduced fears and anxiety, and provides patients with an opportunity to ask questions, thus increasing a patient's overall knowledge related to the anticipated experience. Providing education on what to expect in the hospital during a prenatal care appointment can reinforce previously received childbirth education and/or facilitate education for those who were unable or chose not to attend.

The "what to expect in the hospital" conversation during a prenatal care appointment is an opportunity to introduce the new L&D team and to discuss goals and options for pain management and institutional screening and drug testing. It is also an opportunity to address and debunk any myths or untruths about the upcoming experience, especially regarding social and child welfare referrals and support. Transparency in the provision of information shows that providers care and facilitates continued engagement by the mother with OUD in the development of a Plan of Safe Care and self-management. Ultimately these efforts increase coping skills and support the increased likelihood of a positive labor experience.

Why we are recommending this best practice

Education and social support are the best ways to facilitate continued engagement with the Plan of Safe Care, recovery & wellness, positive progression through the continuum of care, and optimal patient experience.

Strategies for Implementation

- Include "what to expect in the hospital" in the prenatal checklist. The discussion should be scheduled for the third trimester.

- Present the topic of postpartum care coordination. The postpartum period represents a time of increased vulnerabilities, and women with OUD relapse and even overdose far more often in the postpartum period than during pregnancy. Relapse is a common part of addiction, and often someone with OUD will relapse several times before successfully quitting. Forty-nine percent of women with OUD treated with medication assisted treatment (MAT) in an initial pregnancy were not in treatment at the start of a subsequent pregnancy, even with specific transition plans for MAT continuation (including warm handoffs). Of those on MAT, only 37% of women had the same MAT provider for both pregnancies. Education for the family and the patient around this is very important. Patients often have “all or none” thinking, but slips and relapses commonly occur, and it doesn’t mean failure. Stressful events are triggers for relapse, including loss of insurance and access to treatment, demands of caring for a new baby, sleep deprivation, and fear of losing child custody.
    - Discuss postpartum information, such as contraception and access to psychosocial support.
    - Emphasize that the first obstetrical follow-up visit is between weeks one and two.

- Engage hospital L&D staff and prenatal providers.
    - Recruit from both environments (clinic/provider office and hospital) to champion the collaboration.
    - Discuss important workflows and policies and ensure that prenatal care providers are sharing accurate information.
    - Discuss offering an opportunity to schedule a “meet and greet” that supports a warm handoff.
    - Understand the hospital’s intrapartum pain management policies in order to educate the patient on pain control options and encourage transparency regarding OUD for optimal management of pain and symptoms.

- Design an educational “what to expect in the hospital” curriculum unique to your hospital.

Kayla

Kayla is currently receiving prenatal care in an integrated care model. The prenatal care team includes nurse midwives and high-risk obstetricians to provide prenatal information and monitor the status of the pregnancy. Psychiatrists, mental health counselors, and addiction medicine professionals manage Medication Assisted Treatment (MAT) and develop relapse prevention strategies. Because multidisciplinary caregivers are co-located in the same space, Kayla can receive medical services, mental health care, and psychosocial support in one appointment. A streamlined process for scheduling improves retention and keeps Kayla engaged in her own care. Education opportunities are also provided in Kayla's management and include parenting classes, prenatal education, and classes that prepare her for challenges of caring for a baby who has been exposed to opioids in utero. Her care team prepares her for the hospital experience by aiding in preparation of admission paperwork and involving her in the plan of care for pain management. Kayla has an upcoming appointment with an anesthesiologist to discuss pain management and a tour of the hospital to follow.

Resources

1. NNEPQIN Checklist-Chart- Template (Prenatal Checklist).
2. MBSEI Resource Library.

References

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Lorena Watson

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Lorena Watson is a Family Nurse Practioner. Her focus is rural health and providing compassionate patient-centered care in Lake County, CA. She coordinates and provides care for mothers with OUD through pregnancy and postpartum. Before becoming an FNP, Lorena was a labor and delivery nurse for 16 years.

Martha Tesfalul

MD

Dr. Martha Tesfalul is currently a Maternal-Fetal Medicine Fellow at at the University of California, San Francisco. Having served as the Quality Improvement (QI) Chief in her final year of residency, she has a professional interest in health systems strengthening and health equity. She has received local, regional and national recognition for her efforts in clinical care, education, and research including awards from the Pacific Coast Obstetrical and Gynecological Society and the Foundation for the Society for Maternal-Fetal Medicine. In addition to her commitment to improving the care of pregnant patients in California, Dr. Tesfalul engages in QI-focused research in in the East African country Eritrea.

Provide health care providers with stigma education/resources

Best Practice No. 37

Outpatient, Labor and Delivery, Nursery/NICU, and Education

Overview

Treatment of substance use disorder (SUD) is often eclipsed by the misperception that SUD is a personal weakness or a willful choice. Whether or not these misconceptions are consciously employed, they can have a dramatic impact on patient outcomes and adherence to treatment during recovery. Stigma can be experienced across several domains: self, social, and structural stigma. This toolkit focuses on structural stigma oriented toward health care professionals and systems-based approaches.

Providers who interact with OUD/SUD patients often cite them as their most challenging patients due to expectations of cooperation, aggression, demands, and low rates of treatment completion. It is therefore not uncommon for health professionals who interact with these patients to show unconscious bias whether or not they explicitly report negative attitudes. Stigma can come from staff interactions at all contact points and through materials provided in clinical settings.

Why we are recommending this best practice

Several studies have shown that perceived discrimination and stigma from providers has a significant impact on treatment completion by increasing the likelihood of dropout and decreasing retention. Whether or not adoption of stigmatizing beliefs is conscious, evidence shows that health professionals not trained to interact with patients with SUDs may avoid or shorten appointment visits or express less empathy to these patients. This may reduce quality of care and decrease patient retention.

Strategies for Implementation

Perform a language audit of all internal (EHR, protocols) and external (brochures, educational pamphlets) materials.
Designate a staff member to review all materials distributed or posted in the clinic regarding OUD/SUD to address any stigma-perpetuating language. An analysis of materials should identify the following terminology, and materials should be updated accordingly:

- **Diagnosis** - In alignment with DSM - 5, replace older categories of substance “abuse”, “drug habit”, and “dependence” with a single classification of “substance use disorder” (SUD) or “opioid use disorder”. Use clinically accurate terminology which reflects the treatable, clinical, and chronic nature of SUD and moves away from choice-based terminology.

- **Person-first language** – Discussing substance use should follow the accepted standard for discussing people with disabilities and/or chronic medical conditions. Replace “abuse”, “abuser”, “addict”, “druggie”, “alcoholic” with “person with SUD” or “person experiencing” with “person struggling.”

- **Testing and Toxicology** – Replace “clean” and “dirty” urine drug screens with “positive” and “negative” or “expected” vs. “unexpected” and use “consistent with prescribed medications.” “Person in Recovery” focuses on the process and acknowledges the consistent management of symptoms and stable conditions.

- **Medications** – Avoid using “replacement” and “substitution” therapy. Preferred are “Medication Assisted Treatment” (MAT), “pharmacotherapy for …”, and specifically “medications for OUD” (MOUD) or “medications for SUD”. Additionally, once an individual is receiving MAT, “medically indicated tapering” or “decreasing of dosage” (from buprenorphine or methadone) conveys that the medications might be noxious toxins leaving the body and should also therefore be replaced.

- **Maternal and Newborn** - Although not commonly employed in medical literature or materials, use of the language “crack baby,” “opioid baby,” or “drug-addicted baby” should be replaced with neonatal abstinence syndrome (NAS), for opioid or heroin exposure, and prenatal cocaine exposure, or colloquially “in utero exposure to [substance] …”.

Individual identification of stigma
Provide opportunities for individual identification of stigma:

- Formally through Implicit Associations Test– Mental Health, a test for unconscious bias in relation to mental health

- Informally through Stigma Self-Assessments

Addressing stigma: healing stigma through training and intervention
Broad education campaigns oriented toward changing public perception have been found to have limited impact on changing attitudes about opioid use disorder. However, targeted intervention with staff, medical personnel, and trainees has been shown to reduce stigmatizing language and behaviors. Contact-based interventions where individuals with SUD can humanize patients has been shown to significantly reduce stigmatizing ideology compared to education alone. When training is not immediately available, the Woll Healing Approach is recommended and has a self-directed workbook. Their approach addresses beliefs and accountability in order to heal the potential trauma and effects of working with OUD and SUD populations. Several training opportunities are available to educate medical

professionals and staff, some more informal than others. Potential training opportunities are listed below in order of feasibility and scale:

- Informal staff and patient-facing personnel (including health professional) intervention:
  - Focus on inadvertent ways personnel may be perpetuating stigma
  - Explore the perceptions personnel may hold towards the SUD population
  - Facilitate discussion on how to adopt alternative language

- Empathy training or defined stigma curricula:
  - Many regional Addiction Technology Transfer Centers have access to CME and CEU credit for completion of their curricula:
    - Addiction Technology Transfer Centers Network Center: https://attcnetwork.org/centers/global-attc/training-and-events-calendar
    - Pacific Addiction Technology Transfer Centers: https://attcnetwork.org/centers/global-attc/training-and-events-calendar
    - California Health care Foundation: https://www.chcf.org/topic/opioid-safety/
    - Acceptance and Commitment Training (ACT), a cognitive-based approach incorporating flexibility and mindfulness, has shown to significantly increase positive attitudes toward people with SUDs and decrease negative thoughts toward SUD clients among SUD providers.

- Medical trainee education:
  - Integrate stigma training in medical curricula. An upstream approach is shown to be among the most effective.
  - Trainee education can be effective in combating stigma by integrating understanding and efficacy into medical residency programming, with particularly positive outcomes for work with pregnant women. Self-reflection techniques and training rotations in specialized prenatal clinics has been shown to significantly increase the comfort level of working with this population and reduce negative ideology.
  - Many clinics and hospitals interact with or supervise clinical trainees. Integrating, introducing, or providing stigma reduction trainings to medical residents, fellows, and post-docs may be an effective tool.

Kayla

During mid-pregnancy, Kayla's midwife identifies a pattern of cancelled and missed appointments. It would be useful to explore with Kayla the reason for the pattern. A common assumption might be that she hasn't prioritized her prenatal care. However, through positive reframes of inquiry, you might uncover that she had a stigmatizing experience that may have included language barriers, rushed appointments, or judgmental attitudes from physicians at another clinic that currently influences her desire to seek health care from an unknown provider. Kayla may also be worried about disclosing her OUD and putting herself at risk for subsequent CPS involvement. Use possible reframes oriented toward determining prior stigmatizing experiences with health care providers and provide Kayla with reassurance. Determining why Kayla hasn't utilized clinical services can decrease her feelings of judgement at your clinic. It can also inform a more targeted approach for your interaction with Kayla directly, leading to a higher chance of care-seeking for prenatal care. It's important to understand that your practice operates within a larger health care landscape that stigmatizes and creates disincentives for care-seeking among substance using patients. Investigating your role and other stigmatizing contact points within a patient's lifetime can better inform care.

Resources

1. Toward an Addiction-ary; Language, Stigma, Treatment, and Policy.
2. Words Matter: How Language Choice Can Reduce Stigma.
3. Anti-Stigma Toolkit: A Guide to Reducing Addiction-Related Stigma.
4. Healing the stigma of addiction: A guide for treatment professionals.

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Educate pregnant women and families about neonatal abstinence syndrome and the newborn hospital experience

Best Practice No. 38

Outpatient, Labor and Delivery, Nursery/NICU, and Education

Overview

Provide education to pregnant women and families regarding neonatal abstinence syndrome (NAS), including both short-term effects and long-term consequences. Prepare pregnant women and families for an optimal hospital experience for their substance-exposed newborn by educating them on what to expect during their stay.

Why we are recommending this best practice

Educating pregnant women and families about what signs and symptoms of NAS to anticipate, and how to identify these symptoms in their newborn, can help them be active participants in the newborn's care immediately after birth.

- Short-term effects can appear within 1-5 days and most commonly within 2-3 days. Symptoms can include but are not limited to high-pitched cries, tremors, difficulty sleeping, poor feeding, and diarrhea. Depending on the severity, the newborn's hospital stay may be prolonged.

- Long-term effects can appear within months to years. These consequences may include problems with vision, motor skills, and behavior/cognition, sleeping disturbances, and ear infections. Early intervention programs can ameliorate these effects and provide surveillance for them.

Optimizing the newborn hospital experience can decrease the length of stay (LOS) and the need for pharmacotherapy. Evidence-informed practices include rooming-in, skin-to-skin contact, breastfeeding, decreasing environmental stimulation, and functional scoring of the newborn (engaging mothers to participate in scoring objective elements such as quality of cry, stool consistency, and tremulousness can be both empowering and helpful). Pregnant women and families who are informed in advance can be prepared to participate in these practices.

Strategies for Implementation

Conduct a prenatal visit to discuss newborn care and the newborn hospital experience. This can be accomplished in a variety of ways, including a pediatric provider appointment, hospital nursery/NICU visit, social worker appointment, group visit, community support

group, or public health nurse outreach. Areas of discussion should include the following:

- Rooming-in when available. Encourage close and frequent maternal contact if unable to room-in.

- Initiating early skin-to-skin contact with the newborn which promotes bonding, soothes the newborn, and aids in breastfeeding.

- Promoting breastfeeding if the mother is on a stable medication assisted treatment (MAT) regimen and has no contraindications. Breastfeeding is encouraged for mothers taking methadone or buprenorphine regardless of dose, as transfer into milk is minimal. Breastfeeding is associated with decreased severity of symptoms, less need for pharmacotherapy, and shorter length of stay. Refer to **Best Practice #9** for more information regarding breastfeeding.

- Decreasing stimulation by having limited visitors, reducing noise, and using low lighting.

- Using functional scoring to evaluate withdrawal (e.g., ability to eat, sleep, and be consoled). Refer to **Best Practice #19** for more information regarding functional scoring.

- Preparing the family for potential escalation of care based on the clinical pathway used by the hospital. Discuss the environment (e.g., NICU or Level 2 nursery), level of family involvement, role of pharmacotherapy, weaning protocol, and discharge criteria.

- Explaining the potential for the newborn to be discharged without treatment if feeding and sleeping well with minimal or no signs of withdrawal after three days for opioids with a short half-life and 5-7 days for opioids with a long half-life. This period allows for adequate identification and monitoring of possible withdrawal symptoms, the onset of which may vary depending on the medication dose, the infant's metabolism, and the presence of polysubstance abuse. Refer to Table 1 in Reference #8 for detailed information regarding specific withdrawal patterns by substance. Refer to **Best Practice #30** for information on inpatient monitoring of newborns managed with a non-pharmacologic bundle of care.

- Preparing the family for potential involvement of Child Protective Services (CPS). In California, there are no laws mandating that prenatal substance exposure be reported to CPS, unless the required assessment identifies other factors that indicate significant risk to a child. If CPS involvement is warranted, they will determine a safe home

environment for the newborn. A safe and permanent home and family is the best place for children to grow up. CPS focuses on building family strengths and provides parents with the assistance needed to keep their children safe so that the family may stay together. CPS efforts are most likely to succeed when patients are involved and actively participate in the process. When concerns about risk factors don't rise to the level of an investigation by CPS, a Plan of Safe Care is developed upon hospital discharge (or perhaps earlier in the pregnancy when opioid use disorder is identified) to support treatment and recovery for the mother and enhance protective factors for the dyad. Alternatively, if CPS makes an initial determination of child neglect or abuse, they may create an agreement between a parent or caretaker that is called a safety plan and which may restrict a parent from having any contact or unsupervised contact with a child. CPS must make reasonable efforts to develop safety plans to keep children with their families whenever possible, although CPS may refer for juvenile or family court intervention and placement when children cannot be kept safely within their own homes. When children are placed in out-of-home care because their safety cannot be assured, CPS will work to develop a permanency plan as soon as possible.

- Providing pregnant women and families with educational handouts, such as the NAS Parent Brochures developed by the Illinois Perinatal Quality Collaborative (ILPQC) (see Resources below) and others available on the MBSEI website.

- Enrolling the newborn in early intervention programs and developmental follow-up clinics prior to discharge.

Deep Dive

Pediatric prenatal visits are a critical opportunity for health care professionals to provide pregnant women and their families with information about caring for their newborn. However, this opportunity is highly underutilized. The American Academy of Pediatrics (AAP) reports only 5-39% of all first-time parents and 5% of urban poor pregnant women attend a pediatric prenatal visit (Yogman, et al.). These prenatal visits are especially important when opioid exposure is involved as they allow providers to educate families about NAS and to prepare them for what to expect from their newborn's hospital experience.

All pregnant women with OUD should be strongly encouraged by the OB/GYN team to attend a pediatric prenatal visit. Local offerings may dictate the choice of who conducts this visit, and it may be offered individually or in a group setting. A nursery or NICU provider can speak directly to inpatient policies, parent involvement, and hospital treatment options. A pediatrician identified in advance can provide continuity and ongoing support after discharge. Social workers and public health nurses can provide education on available resources. It is best to hold the prenatal visit at the start of the third trimester. Providing educational handouts will allow families to review the information that was shared during the visit after they go home.

Reference: Yogman, et al. The Prenatal Visit. Pediatrics 2018;142(1).

Resources

1. NAS What You Need To Know.
2. Addiction Free CA.

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Educate clinical providers and staff about neonatal abstinence syndrome

Best Practice No. 39

Outpatient, Labor and Delivery, Nursery/NICU, and Education

Overview

Educate clinical providers and staff regarding:

- Neonatal abstinence syndrome (NAS) identification, evaluation, and treatment of the newborn.

- Supportive, non-judgmental interactions with parents.

Why we are recommending this best practice

Clinical providers and staff who have a strong foundation of knowledge can educate and support families. Positive provider and staff interactions with families of newborns with NAS contribute to better outcomes and a successful hospital experience. Please refer to **Best Practice #34**, **and** **Best Practice #37** for more information about provider and staff education on opioid use disorder (OUD).

Clinical providers and staff who have a strong foundation of knowledge can educate and support families. Positive provider and staff interactions with families of newborns with NAS contribute to better outcomes and a successful hospital experience. Please refer to **Best Practice #34** for more information about provider and staff education on OUD.

Strategies for Implementation

- CME and in-service training can provide the information and skills needed to educate clinical providers and staff.

- Families can play a valuable role in the care team. They should be encouraged to initiate skin-to-skin contact and participate in other aspects of care.

- Mothers should be encouraged to breastfeed if on a stable medication assisted treatment (MAT) dose. Breastfeeding is discouraged if the mother is using marijuana, and mothers should be counseled about the potential risk of exposure during lactation. Breastfeeding is contraindicated if the mother is taking illicit drugs or is infected with HIV.

- Patient care and communication of clinical information should be clear and consistent.

- Provider and staff interactions with families should be supportive and non-judgmental (see Resources section below).

- Providers and staff should be aware of external factors involved, such as a parent dealing with the disease of addiction and its treatment.

Baby M

During Baby M's hospitalization for NAS, Kayla reflects on both the positive and negative experiences she has had with providers and staff in the hospital. She notices that the interactions would set the tone for her mood that day and be reflected in the enthusiasm and confidence she had in caring for Baby M. She really liked when the hospital's policies and protocols were made clear to her, and she appreciated when providers and staff encouraged her to take a large part in Baby M's care. It made her feel successful when some of the nurses commented that Baby M was so much calmer when Kayla was holding him. On the other hand, Kayla felt less confident when the staff did not seem to know about the disease and treatment of OUD and could not relate to all the conflicting feelings she was experiencing. She became upset when she sensed that providers and staff were judging her negatively because of her OUD. She just wanted them to treat her respectfully as Baby M's mother and help her learn the best ways she could help care for him.

Resources

1. Language Matters Information Sheet.

2. Refer to Best Practice #34 (Educate patients and families about OUD) for resources relevant to educating families.

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Additional Resources

Protocols, Guidelines and Safety Bundles

The best practices included in this toolkit make reference to a number of protocols, guidelines and safety bundles for improving care of mothers and newborns affected by substance use disorder. To access a quick reference guide of these protocols, guidelines, and safety bundles, click here.

Key Messages for Providers

The Mother & Baby Substance Exposure Toolkit is guided by the following foundational principles:

- Every pregnant woman should be screened for substance use
- Every pregnant woman with OUD should be on Medication Assisted Treatment (MAT)
- An increasing evidence base supports the use of non-pharmacologic treatment for newborns with Neonatal Abstinence Syndrome (NAS)
- Mothers and babies should receive support to keep them together

With these principles in mind, we have developed the following key messages for providers about improving care for substance exposed mothers and newborns. To download the key messages as a PDF, click here.

Screening: If you don't look for it, you won't find it.

Identification of pregnant women with or at risk for opioid or other substance use disorders is undertaken to optimize pregnancy outcomes and facilitate initiation into treatment, and is best accomplished through universal screening at multiple points during pregnancy utilizing validated questionnaires such as the 4Ps+, T-ACE, TWEAK and the NIDA quick screen. Biological testing utilizing toxicologic assays of bodily fluids and other biomaterials, such as urine, blood or hair, is best used to confirm or augment information first obtained through questionnaire screening.

Medication Assisted Treatment (MAT): Like most other medical diseases, evidence-based medical treatments exist and must be offered; MAT is the standard of care.

Medication assisted treatment (MAT) – principally Methadone, a historically-tested, but pharmacologically challenging medication to administer, and Buprenorphine, about which growing evidence is demonstrating its effectiveness – is the gold standard of treatment for pregnant women with opioid use disorder, owing to improved pregnancy outcomes, better treatment retention, and reduced overdose deaths.

Neonatal Abstinence Syndrome (NAS): If you don't look for it, you won't find it. When you find it, non-pharmacologic treatment probably works for the majority of infants with NAS.

An increasing evidence-base demonstrates the superiority of environmental interventions – rooming-in, skin-to-skin contact, swaddling, and reducing external stimuli – for the treatment of neonatal abstinence syndrome, which results in better support of the mom-baby dyad, reduced need for pharmacologic treatment, and shorter hospital stays.

Transitions of Care: Systems of care for women with Opioid Use Disorder (OUD) or

Substance Use Disorder (SUD), as for any other medical disorder, should always address transitions from one location of care to another.

An optimal continuum of care for pregnant women with opioid and other substance use disorders includes pre-partum education and planning regarding labor, delivery, management of pain and neonatal abstinence syndrome, as well as comprehensive discharge planning through development of a plan of safe care that ensures maternal continuation of treatment and recovery, and appropriate medical, developmental and safety follow-up for the newborn.

Effectively engaging women with or at risk for OUD and other SUDs: Start with humanity as the deepest element of your initial contact with women who have SUD.

Conversations with pregnant and parenting women about opioid and other substance use disorders should utilize non-judgmental, non-stigmatizing, compassionate, trauma informed, motivational interviewing techniques to build trust and effectively engage women in discussions about affirmative behaviors to optimize their wellbeing and pregnancy outcomes.

Preserve the mom and baby dyad: Provide supports to enable moms, babies and families to stay together.

Keeping moms, babies and families together is ideal under all but the most high-risk situations, and requires support services to build necessary protective factors such as parental resilience, social connections, concrete support in times of need, knowledge of parenting and child development, and growing children with social and emotional competence. These skills, strengths, resources, supports and coping strategies help parents deal more effectively with stressful events and mitigate or eliminate risk in families and communities.

About the Toolkit

The Mother & Baby Substance Exposure Initiative Toolkit was developed, as part of the California Medication Assisted Treatment Expansion Project, by a group of maternal and newborn health care providers from across California and the United States who volunteered their time and expertise to create this resource for hospitals caring for mothers and newborns affected by substance exposure. The California Maternal Quality Care Collaborative (CMQCC), the California Perinatal Quality Care Collaborative (CPQCC), and Health Management Associates (HMA) collectively express our deep gratitude to the following individuals for their contributions to this product.

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About the Mother & Baby Substance Exposure Initiative

The Mother & Baby Substance Exposure Initiative (MBSEI) is a partnership between Health Management Associates (HMA), the California Maternal Quality Care Collaborative (CMQCC), and the California Perinatal Quality Care Collaborative (CPQCC) that aims to decrease neonatal abstinence syndrome (NAS) severity and length of stay in the hospital and increase the number of mothers with substance use disorder in long-term recovery.

For more information about MBSEI, click here.