Prevention, Screening & Treatment of Neonatal Abstinence Syndrome

Response to House Concurrent Resolution No. 162

Submitted March 1, 2016

Table of Contents

EXECUTIVE SUMMARY

Neonatal abstinence syndrome (NAS) is both preventable and costly – yet in Louisiana from 2003-2013, the number of infants born with neonatal abstinence syndrome (NAS) quadrupled, and Medicaid expenditures increased six-fold (from $1.3 million to $8.7 million for inpatient-related services only)[1]. NAS describes the constellation of symptoms in newborns that were exposed to opioids during pregnancy. NAS is associated with increased risk for low birth weight and congenital abnormalities, such as heart and neural tube defects, as well as impaired neurodevelopment**.** Not all infants that are exposed will develop NAS, but all that are exposed are at risk[2,3].

In response to the data illuminating an increasing burden of NAS in Louisiana, House Concurrent Resolution (HCR) 162 of the 2015 Regular Session of the Louisiana Legislature directed the Commission on Perinatal Care and Prevention of Infant Mortality (Perinatal Commission) to study and make recommendations related to the prevention, screening, and treatment of NAS. Three main strategies to prevent NAS consistently emerged after extensive review:

1. **Prevention: Strengthen efforts to prevent NAS before it occurs**
   Prevention of NAS requires a three-pronged approach: prevent or treat substance use disorder in Louisiana's families, prevent unintended pregnancy while using opioids (legal or illicit), and educate both doctors and the public on the dangers of using opioids during pregnancy.
2. **Screening: Enhance screening for NAS risk factors in primary care and obstetric settings**
   Universal verbal screening for substance use and subsequent referral for treatment of all patients of reproductive age with a positive verbal screen has been demonstrated to effectively reduce the occurrence of NAS in both primary care and obstetric settings. In addition, providers that prescribe opioids should screen for pregnancy at each visit in an effort to identify pregnancies early and mitigate risk to the developing baby.
3. **Clinical Care and Care Coordination: Improve the quality of and access to behavioral and medical patient-centered care for families affected by NAS, including improving interagency collaboration**
   Access to treatment for substance use disorders and Medication Assisted Treatment (MAT) is important to any strategy to address NAS. Ensuring availability of Suboxone and Methadone on the state's Medicaid formulary is consistent with national best practices. Strengthening systems of coordinated care is also central to ensure patients receive the right care at the right time, while avoiding unnecessary duplication of services and medical errors. In addition to coordinated care between the prenatal care and behavioral health providers, coordinated care and support for the family and child after birth are also critical. Examples of such supports include EarlySteps, voluntary evidence-based home visitation, specialty mental health care services for children or families with mental health needs, and other innovative or wrap-around services that provide early intervention and promotion of healthy development in a child. There is a need for strong referral pathways and parenting support for family members in recovery.

Some states have attempted to quell the rise in NAS cases through policies that criminalize mothers whose infants are born with NAS. In addition to the above strategies, the Perinatal Commission's research into the subject, including recommendations from groups such as the American Congress of Obstetricians and Gynecologists (ACOG), and subsequent deliberations emphasized that such policies be strictly avoided. Evidence suggests that policies that focus on criminalization present a barrier to families who are candidates for early intervention and treatment and do not result in improved outcomes[4].

[1] Louisiana Medicaid data (2016).
[2] Bada HS. "Low birth weight and preterm births: etiologic fraction attributable to prenatal drug exposure." J Perinatol. 2005. 25(10):631-637.
[3] Broussard, C. "Maternal treatment with opioid analgesics and risk for birth defects". AJOG. 2011.204, (4): 314.e1–314.e11
[4] ASTHO (2013). Neonatal Abstinence Report http://www.astho.org/prevention/nas-neonatal-abstinence-report/

INTRODUCTION

House Concurrent Resolution (HCR) 162 of the 2015 Regular Session of the Louisiana Legislature (Attachment A) directed the Commission on Perinatal Care and Prevention of Infant Mortality (Perinatal Commission) (Attachment B) to study and make recommendations related to the prevention, screening, and treatment of neonatal abstinence syndrome (NAS) and to submit a written report of its findings and recommendations to the House and Senate committees on health and welfare no later than March 1, 2016. As a result, the Perinatal Commission conducted a study of the issue of NAS and the following document represents the findings and recommendations therein.

The occurrence of NAS – the constellation of problems in newborns exposed to opioids during the prenatal period – is rising throughout the United States and here in Louisiana. These babies suffer from the symptoms of drug withdrawal that lead to costly, prolonged hospital stays. Beyond the hospital stay, prenatal exposure to opioids show increased risk for low birth weight, congenital abnormalities, and impaired neurodevelopment[5,6]. Mothers who took opioids during the first two months of pregnancy have been found to be two times more likely to have a pregnancy affected by a neural tube defect than women who did not use opioids during pregnancy[7]. Not all exposed infants may develop NAS, but all are at risk for needing treatment for the withdrawal symptoms associated with NAS, which may last for days, weeks or even months[8]. NAS increases the risk of respiratory complications at birth, low birth weight, prematurity, feeding difficulties and seizures[9]. While there is not yet consensus on the long term effects of prenatal opiate exposure, current research suggests that opiate-exposed infants may experience delayed mental development, motor function deficits, and hyperactivity and short attention span during their first years of life[10]. Furthermore, families who struggle with substance abuse often have several other co-occurring risk factors that can contribute to poor outcomes for children (e.g., mental illness, chaotic family environments, exposure to violence, parent-child relationship problems, health needs, inconsistent access to food, safe housing, and other basic needs), which may increase the complexity of families' needs.

> "I was on METHADONE throughout my pregnancy due to addiction to opioids… and I stayed refrained from using any kind of drugs. IT SAVED MY BABY'S LIFE."
>
> *-Louisiana PRAMS Mom*

The number of infants insured through Louisiana Medicaid born with NAS quadrupled over a ten-year period (2003-2013). In the same time period, the state experienced a six-fold increase in expenditures to treat these infants, from $1.3 million to $8.7 million dollars for inpatient related services alone[11]. This calculation does not include the potential costs associated with the long-term effects for healthcare, early intervention services, and other resource needs. Approximately 66% of the births in Louisiana were eligible to be financed through the Medicaid Managed Care Organizations within the Bayou Health program in 2014. And, starting in 2015, behavioral health services to NAS-affected children and families have now been incorporated into the Bayou Health

[5] Bada HS. "Low birth weight and preterm births: etiologic fraction attributable to prenatal drug exposure." J Perinatol. 2005. 25(10):631-637.
[6] Broussard, C. "Maternal treatment with opioid analgesics and risk for birth defects". AJOG. 2011.204, (4): 314.e1–314.e11
[7] Yazdy MM et al. (2013). Periconceptional use of opioids and the risk of neural tube defects. *Obstetrics & Gynecology, 122*(4), 838-844
[8] Kocherlakota, P. (2014). Neonatal Abstinence Syndrome. *Pediatrics, 134*(2), e547-e561. DOI: http://dx.doi.org/10.1542/peds.2013-3524
[9] Ramakrishnan M. (2014) *Neonatal Abstinence Syndrome: How States Can Help Advance the Knowledge Base for Primary Prevention and Best Practices of Care*. From: www.astho.org/prevention/nas-neonatal-abstinence-report/
[10] Behnke, M.; Smith, V.C.; the Committee on Substance Abuse & the Committee on Fetus and Newborn (2013). Prenatal Substance Abuse: Short- and Long-term Effects on the Exposed Fetus. *Pediatrics, 131*(3), e1009-e1024. DOI: http://dx.doi.org/10.1542/peds.2012-3931
[11] Data provided by Medicaid Quality Management, Statistics and Reporting via the Medicaid MARS Data Warehouse. Louisiana Bureau of Health Services Financing, 2015).

system for Medicaid eligible beneficiaries. As such, the state has significant interest in and opportunity for improving outcomes.

According to Medicaid data, the majority of NAS births were to women over the age of 25, and of all substances, opioids were the most commonly identified substance of exposure among mothers with a diagnosis code for drug dependence during pregnancy. NAS can occur due to illicit drug use by a mother during pregnancy, but can also predictably develop after prenatal exposure to legitimately prescribed medications. In 2012, according to data from the Louisiana Pregnancy Risk Assessment Monitoring System (PRAMS), less than half of all pregnancies in Louisiana (43.1%) were intended or planned at the time of conception[12]. That fact, coupled with opioid use in the general population, increases the risk of exposure to these substances during pregnancy. Guidance of the Association of State and Territorial Health Officials (ASTHO) recommends for states to employ a comprehensive approach to addressing NAS, with efforts addressing both the upstream (prevention) causes and downstream (treatment) effects[13].

While some states have attempted to address NAS concerns through legislation that criminalizes women whose infants are born exposed to opioids, these laws may have diminishing returns when compared to robust prevention, enhanced screening, and improved quality of care. March of Dimes, the maternal and child health advocacy organization that works to prevent premature births, noted that "targeting substance-abusing pregnant women for criminal prosecution is inappropriate and will drive women away from treatment"[14]. Effective prevention, identification, and treatment of NAS require a coordinated effort between state agencies, healthcare providers, and community organizations. And yet, Louisiana as a whole lacks a sufficient mental health infrastructure to assist families struggling with drug dependence before, during, and after a pregnancy. Criminalization will not ensure families have a pathway to optimal health.

This response to HCR 162 contains background information about NAS, a description of the process employed by the Perinatal Commission to study the problem, and specific findings and recommendations to address the problem of NAS in Louisiana.

Three main strategies to prevent NAS consistently emerged after extensive research:

1. Prevention: Improve efforts to prevent NAS before it occurs
2. Screening: Enhance screening for NAS risk factors in primary care and obstetric settings
3. Clinical Care and Care Coordination: Improve the quality of and access to behavioral and medical patient-centered care for families affected by Substance Use Disorders (SUD) and NAS, including improving interagency collaboration

[12] Louisiana Pregnancy Risk Assessment Monitoring System (PRAMS), 2012.
[13] ASTHO. (2015). *How State Health Departments Can Use the Spectrum of Prevention to Address Neonatal Abstinence Syndrome: Companion Report.* From: www.astho.org/Prevention/Rx/NAS-Framework/
[14] March of Dimes: Neonatal Abstinence Syndrome http://www.marchofdimes.org/advocacy/neonatal-abstinence-syndrome.aspx#

STUDY PROCESS

HCR 162 requires the Perinatal Commission to study and make recommendations related to the prevention, screening, and treatment of NAS and to submit a written report of its findings and recommendations to the House and Senate committees on health and welfare. In response, the Perinatal Commission began by identifying groups and individuals in Louisiana that provide substance use and NAS prevention and treatment. These groups included individuals from Louisiana Medicaid, Louisiana Department of Health and Hospitals' (DHH) Office of Behavioral Health (OBH) and Office of Public Health (OPH), Woman's Hospital, Louisiana chapter of the American Congress of Obstetricians and Gynecologists (ACOG), specialists in substance use disorders and private practitioners. In addition, perspective was sought from DHH's Office of Citizens with Developmental Disabilities (OCDD) - EarlySteps, and the Department of Children and Family Services (DCFS).

The Perinatal Commission divided into seven subgroups to evaluate NAS in Louisiana based on the timing of opioid exposure, the type of treatment provider, and other related issues: Preconception/Inter-conception, Prenatal Providers, Prenatal Birthing Hospitals, Pediatrics/NICU, Behavioral Health, Infancy/Childhood, and Medicaid. A Data subgroup was identified to support the clinical groups.

Each subgroup was asked to review best practices and answer the following questions from the perspective of their individual subgroup:

1. What are the major drivers of NAS in Louisiana?
2. What are the major barriers to NAS prevention in Louisiana?
3. What are specific recommendations to prevent NAS in Louisiana?

Each subgroup provided written and verbal reports to the Perinatal Commission that were used to formulate this response.

FINDINGS AND RECOMMENDATIONS

Following the period of study of NAS in Louisiana, the Perinatal Commission reviewed the subgroups' responses for common themes. The findings and recommendations are grouped in three areas – Prevention, Screening, and Clinical Care and Care Coordination. While there is some overlap and commonality among recommendations, they all are significant for consideration.

Prevention

NAS is an avoidable condition, and its prevention could eliminate tremendous pain and suffering for families, as well as the burden on the healthcare system. Several issues to consider in the prevention of NAS are preventing opioid addiction, preventing unintended pregnancy while using any opioid (prescribed or illicit), and ensuring providers and patients are aware of the risks associated with pregnancy and opioid use.

According to the Centers for Disease Control and Prevention (CDC)[15,16], 259 million prescriptions for analgesics, many of which are opioids, were written in 2012. The CDC also states that the strongest risk factor for heroin addiction, which is on the rise, is addiction to prescription opioid painkillers. People often assume prescription pain relievers are safer than illicit drugs because they are medically prescribed;

[15] Vital Signs: Variation Among States in Prescribing of Opioid Pain Relievers and Benzodiazepines — United States, 2012. Morbidity and Mortality Weekly Report (MMWR) July 4, 2014 / 63(26);563-568

[16] Decline in Drug Overdose Deaths After State Policy Changes — Florida, 2010–2012. Morbidity and Mortality Weekly Report (MMWR) July 4, 2014 / 63(26);569-574

however, when a pregnant woman takes an opioid her baby is at risk for NAS. Various states have successfully used prescription drug monitoring programs to curb over-prescribing of opioids. Ten of the thirteen highest opiate prescribing states are in the South, with Louisiana ranked 7th in the nation with 118 opiate prescriptions per 100 people in 2012. Beginning in 2012, New York required prescribers to check the state's prescription drug monitoring program database before prescribing opioids to patients. By the following year, there was a 75% drop in patients seeing multiple prescribers for the same drugs, and an overall reduction in new prescriptions for opioids. Similarly, Florida began tightly regulating pain clinics in 2010, and among other changes they disallowed the dispensation of medication from the clinics themselves. In line with other states' efforts, in 2014, Louisiana passed legislation that requires a prescriber to access the database prior to an initial prescribing of any Scheduled II[17] substance for the treatment of non-cancer related chronic or intractable pain. Anecdotal evidence suggests that this database is underutilized by Louisiana prescribers.

> "There needs to be MORE INFORMATION available to pregnant women or women planning to become pregnant if they are being treated with methadone before becoming pregnant and/or during pregnancy. Especially to any woman seeking answers and information about this. Thank you!"
>
> *-Louisiana PRAMS Mom*

Prescribing doctors and individuals involved in care of individuals before and between pregnancies have an opportunity to help ensure each pregnancy is intended and families are in optimal health at conception. Patient and provider education on prescribing best practices and the risks associated with opioid and opioid substitution medications, in combination with enhanced screening for substance use, have the potential to reduce NAS significantly.

It is important to note that prevention strategies should not be limited to prescribing providers, and it is recommended that the appropriate partners work together to fill gaps in mental healthcare needs for Louisianans and ensure provision of adequate mental health and social services statewide. The availability of earlier high-quality mental healthcare may divert people on the pathway to substance abuse.

Recommendations

Preventing Opioid Addiction

- It is recommended that comprehensive "Clinical Practice Guidelines on Prescribing Opioids" be developed by the state, which are based on nationally recognized best practice guidelines. These would support physicians in making informed and consistent decisions when prescribing opioids.
- It is recommended that a study be conducted to determine if the 2014 changes to Louisiana's prescription drug monitoring program database have had an effect on prescribing patterns as intended.
- It is recommended that additional research be conducted to identify the personal, social, and structural influences within the population of women in Louisiana having babies at risk for NAS.

Preventing Unintended Pregnancy

- It is recommended that when the "Clinical Guidelines on Prescribing Opioids" referenced above are developed that they support and maximize referral pathways to high quality reproductive

[17] Schedule II substances are those that have a high potential for abuse, a currently accepted medical use, and abuse of the drug or other substances may lead to severe psychological or physical dependence.

health services, including access to long acting reversible contraceptives (LARCs), while using Medication Assisted Treatment (MAT) or other opioids.

- It is recommended that the national Quality Family Planning Guidelines[18], which include pregnancy testing and counseling, preconception health, and contraceptive services, be implemented in all healthcare settings providing care to women of reproductive age, where allowable.

Education

- It is recommended that providers and patients are made aware of the risks associated with pregnancy and opioid use to significantly help reduce the incidence of NAS. Information about NAS should be incorporated into curricula for medical students, residents, and medical providers so they understand all drugs that may contribute to NAS or fetal substance exposure, and to prescribe non-narcotics when appropriate. It is important for provider training to include data supported information about outcomes, education regarding family factors related to substance use, and how best to support affected families.
- It is recommended that the public be made aware of the effects of substance use (including of tobacco and alcohol) when used prior to and during pregnancy[19].

Screening

Adequate screening for substance use, pregnancy and risk of unintended pregnancy are key to identifying risks early, leading to improved outcomes for families. The effects of NAS can be drastically mitigated or even prevented with early intervention in the course of primary care and prenatal care. There is a lack of standard protocols for recognition and treatment of NAS. Providers, especially those who prescribe opioids, can impact NAS prevention by screening families for substance use, ensuring women are aware of family planning options, and identifying pregnancies early on. Similarly, obstetricians can identify substance use early in pregnancy through the implementation of a simple verbal screening tool in their clinics. Both approaches allow providers to work with families to mitigate the effects of substance use and provide evidence-based care tailored to that family's needs. Furthermore, individuals who are generally healthy, or who do not have health coverage due to income limitations, often have few medical visits, providing limited opportunities for screening.

As a part of the inquiry for this report, a Perinatal Commission subgroup queried a sample of birthing hospitals in the state on maternal screening, referral and treatment practices, and NAS assessment and treatment protocols. From the 26 hospitals that responded, it appears that Louisiana hospitals neither use evidence based verbal screens to universally screen for substance use among women during pregnancy, nor do they universally perform urine drug screens on pregnant women who present to labor and delivery. Several hospitals report conducting urine drug screens upon hospital admission for pregnant women when there is a concern of potential substance use; however, opioid use is so widespread that selective screening will lead to many missed opportunities for treatment. The survey also assessed practices for determining neonatal status for infants who were exposed or believed to be at risk for NAS. Many reported using the Finnegan scoring tool[20] to assess the severity of NAS.

---

[18] MMWR (2014). "Providing Quality Family Planning Services: Recommendations of CDC and the U.S. Office of Population Affairs." http://fpntc.org/sites/default/files/resource-library-files/QFP%20Recommendations%20MMWR%20April%202014.pdf

[19] ASTHO (2014). "Neonatal Abstinence Syndrome: How States Can Help Advance the Knowledge Base for Primary Prevention and Best Practices of Care." http://www.astho.org/prevention/nas-neonatal-abstinence-report/

[20] The Finnegan Scoring Tool is a 31 item scale is designed to quantify the severity of NAS and to guide treatment, and is administered every 4 hours. The individual NAS symptoms are weighted (numerically scoring 1–5) depending on the symptom, and the severity of the symptom expressed. Infants scoring an 8 or greater are recommended to receive pharmacologic therapy. The most comprehensive of scales, it is found to be too complex by many nurseries for routine use

Louisiana Medicaid, in partnership with DHH OPH and OBH, DCFS and other state and local entities, is currently participating in a Medicaid Innovator Accelerator Program (IAP) initiative through the federal Centers for Medicare and Medicaid Services (CMS) with a focus on Substance Use Disorders (SUD). Nationally, CMS has identified SUD as a key area "to improve how health care is delivered, measured, and experienced." In Louisiana, the Medicaid IAP is focusing on NAS. Through this initiative promising practices for screening, referral, and care have been identified. DHH is working to develop a SUD toolkit for clinicians and facilities. This toolkit will serve as a comprehensive resource for screening tools, substance use disorder counseling recommendations and other resources. It includes a sample client/patient referral and service flow diagrams that can provide guidance for referral and care of pregnant women and newborns at risk for NAS. It is recommended that the toolkit be made available to all providers who treat families with risk factors for NAS.

Recommendations

- It is recommended that verbal screening for substance use be conducted in the primary care and obstetric settings.
- It is recommended that universal screening for substance use be conducted for reproductive age individuals, using a validated screening tool at the time of visits with all medical providers. The SBIRT[21] Screening Tool (Screening, Brief Intervention, Referral, and Treatment) is one example of a validated tool utilized in many areas of the state.
- It is recommended that the substance use disorder toolkit referenced above, when completed, be made available and utilized by all providers who treat families who have risk factors for NAS.
- It is recommended that screening for pregnancy be conducted in the prescribing providers' office.
- It is recommended that providers and clinics that participate in the care of women of reproductive age who are prescribed opioids, or who are on Medication Assisted Treatment (MAT) for addiction, should facilitate linkage to high quality reproductive health services, and encourage and offer pregnancy testing during all visits to identify pregnancy early and create an appropriate care plan for women who become pregnant.

Clinical Care and Care Coordination

In order to reduce the incidence of NAS, there are three key intervention points where care must be coordinated - during and after pregnancy, at birth, and during early childhood. There is no single, widely accepted definition of care coordination. However, three concepts appear in most definitions[22]:

1. Comprehensive: All services a family receives, including services delivered by systems other than the health system, are to be coordinated.
2. Patient-centered: Care coordination is intended to meet the needs of the child and the family, both developmentally and in addressing chronic conditions.
3. Access and Follow-up: Care coordination is intended not only to connect children and their families to services, but also to ensure that services are delivered appropriately and that information flows among care providers and back to the primary care provider.

Medical providers typically involved in the treatment of children with NAS and their families include obstetricians, neonatologists, substance abuse treatment specialists, and general pediatricians. The goal of

[21] There are multiple SBIRT tools. Louisiana started with the 4Ps Plus tool developed by Ira Chasnoff, MD. Other tools recommended on the SAMSHA website include CAGE, CRAFFT, ASSIST, AUDIT, Michigan Alcoholism Screening Tool (MAST), and Drug Abuse Screening Tool (DAST).

[22] Making Connections: Strengthening Care Coordination in the Medicaid Benefit for Children and Adolescents. https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Downloads/EPSDT-Care-Coordination-Strategy-Guide.pdf

coordinated care is to ensure patients receive the right care at the right time, while avoiding unnecessary duplication of services and preventing medical errors.

Studies show that enrolling opioid-dependent pregnant women in a program with experience in the care of pregnancies at risk for NAS can improve the pregnancy outcome[23], but pregnant women in Louisiana who use opioids have few treatment options. In addition, there have been significant gaps in covered services. While Suboxone is covered by Louisiana Medicaid, since 1991 Louisiana has prohibited Medicaid reimbursement for the use of narcotics – including Methadone– in the treatment of substance use disorders. Further, the state is home to only ten state-sanctioned, privately owned, and licensed Methadone clinics. These clinics are regulated by the Louisiana DHH Office of Behavioral Health. All ten of the clinics treat pregnant women as a priority population, and inpatient hospitalization is not a mandate for transitioning pregnant women into treatment. However, anecdotal reports from providers indicate that the prevailing pattern of practice in Louisiana is for addiction treatment providers to dismiss pregnant patients from their care for the fear of liability and concern for poor outcomes. This practice could lead to insufficient prenatal care and resultant poor pregnancy outcomes. To improve the quality of care in these clinics, the DHH Office of Behavioral Health is working with Louisiana Medicaid to seek federal CMS approval for Medicaid reimbursement of Methadone treatment for pregnant women. Additional policy changes include amending the state plan and requiring all Methadone providers to have applied to at least one managed care organization within Bayou Health. However, this historical gap in Medicaid coverage has presented significant cost and transportation barriers to treatment for many families. In addition, contracting with only one Bayou Health Plan may not be adequate.

At the same time, anecdotal evidence from discussions with obstetricians in Louisiana reflect their belief that the customary care for opioid dependent patients during pregnancy should be to provide minimal opioid maintenance throughout the pregnancy in an effort to minimize the severity NAS symptoms. However, national guidelines from the Substance Abuse and Mental Health Services Administration (SAMHSA) have not found compelling evidence supporting reduced maternal methadone dosages to avoid NAS. In fact, dosages commensurate with maternal weight and other factors have been associated with increased weight gain, decreased illegal drug use, and improved compliance with prenatal care by pregnant women in MAT and with increased birth weight and head circumference, prolonged gestation, and improved growth of infants born to women in MAT[24]. Methadone and Suboxone are currently the drugs of choice for transitioning pregnant women into treatment for addiction. The Drug Enforcement Agency (DEA) only allows 72 hours of admission time to transition pregnant women to methadone in a general hospital setting without a formal request for additional treatment time for complications[25]. After discharge, referrals for follow-up send women to Methadone treatment centers.

Infants with NAS require additional care, both pharmacologic and non-pharmacologic. Parents can play a significant role in their child's care management, resulting in shortened hospital stays and better preparation for discharge[26]. However, mandatory reporting requirements to ensure the child's safety also need to be considered. As part of the federal Child Abuse Prevention and Treatment Act (CAPTA), mandated reporters[27] must report families to DCFS to be investigated for prenatal neglect when a child 30

[23] "Buprenorphine during pregnancy reduces neonate distress." (2012) <https://www.drugabuse.gov/news-events/nida-notes/2012/07/buprenorphine-during-pregnancy-reduces-neonate-distress>
[24] "Medication-Assisted Treatment for Opioid Addiction During Pregnancy." (2005) *Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs.* Substance Use and Mental Health Administration. U.S.
[25] 21 CFR 1306.07 (b)
[26] Kocherlakota, P. Pediatrics, Volume 134, Number 2, August 2014, pg. 3547.
[27] Mandated reporters include: health practitioners, mental health & social service practitioners, members of the clergy, teaching or child care providers, police officers & law enforcement officials, commercial film & photographic print processors, mediators, court-appointed special advocates, organizational or youth activity providers, and coaches.

days or younger has withdrawal symptoms, a positive screen, or observable harmful effects in physical appearance or functioning and the mother unlawfully used (or in a manner not prescribed) a controlled dangerous substance. DCFS has had a policy in place on referrals and investigations involving substance-exposed newborns since 2006. This protocol includes a referral to DHH OBH or another local treatment facility for substance abuse assessment and treatment for the parents, a referral to DHH OCDD EarlySteps early intervention services for the child, a safety assessment and referral planning for discharge, and follow-up with DCFS Family Services program for the family.

Substance exposed newborns, including children with NAS, are eligible for developmental support based on child/family needs through EarlySteps[28], the state's early intervention program for children 0-3 with or at risk for developmental delays. Further, the EarlySteps approach to identification of the need for services is based on a deficit model – if developmental delays are not immediately identified, services may not be provided. There is danger in missing the opportunity to support development proactively and address family issues that may contribute to later-emerging developmental delays, mental health and behavioral issues.

A medical home[29] is needed for children with NAS once they leave the hospital. There is a lack of comprehensive and consistent services available throughout Louisiana for children and families of substance exposed infants post-discharge. No agency takes the lead on following these children, and there is limited attention to supporting positive parent-child interactions, one of the most important ways of promoting resilience in children exposed to adversity.

Recommendations

During and After Pregnancy

- It is recommended that public and private managed care organizations develop a preferred network of physicians or advanced care providers who are experienced not only in routine obstetrical care but also in the management of opioid maintenance.
- It is recommended that a process be developed so that providers at Opiate Substitution Treatment Programs, Methadone Maintenance Treatment Programs, and Office Based Addiction Treatment programs coordinate with an individual patient's other care providers.
- It is recommended that the state support birthing facilities' efforts to obtain authorization from DEA to allow birthing hospitals at least 72 hours or longer, if indicated, to transition pregnant women to MAT.
- It is recommended that providers who are experienced in the care of women whose babies are at risk for NAS be listed in conspicuous areas (i.e., posters in the lobby and in bathroom stalls) where prenatal care and opioid maintenance are provided.
- It is recommended that providers and clinics that participate in the care of a woman of reproductive age, who is not sterile and who is prescribed opioids during the course of treatment, or is on MAT for addiction, encourage and offer pregnancy testing during all visits. Early identification of pregnancy can help minimize the effects of NAS.

[28] EarlySteps provides services to families with infants and toddlers aged birth to three years (36 months) who have a medical condition likely to result in a developmental delay, or who have developmental delays. Children with delays in cognitive, motor, vision, hearing, communication, social-emotional or adaptive development may be eligible for services. EarlySteps services are designed to improve the family's capacity to enhance their child's development. These services are provided in the child's natural environment, such as the child's home, child care or any other community setting typical for children aged birth to 3 years (36 months).

[29] A medical home is a cultivated partnership between the patient, family, and primary provider in cooperation with specialists and support from the community. The patient and their family is the focal point of this model, and the medical home is built around this center.

- It is recommended that voluntary evidence-based home visitation programs (such as Nurse-Family Partnership, Parents as Teachers) and other supports such as Healthy Start and the Fussy Baby Network be supported as they provide comprehensive management including care coordination with linkages to important resources for families at risk for SUD and NAS.
- It is recommended that each Medicaid managed care organization provide care management resources specific to substance use disorders for pregnant women.

At Birth

- It is recommended that each birthing facility have a defined protocol to identify and treat NAS.
- It is recommended that all providers who care for affected families receive adequate training about the immediate and ongoing needs of families whose children experience NAS.
- It is recommended that supportive services that provide an easier transition to life with a new baby with NAS be part of anticipatory guidance and discharge planning. These supports should include parental education about caring for an infant with NAS and appropriate therapeutic services for entire family. Support should extend beyond education to include resources necessary to apply this knowledge.
- It is recommended that further review be conducted of referral pathways within and across state and local systems to ensure access to follow-up care for families and to adequately address safety concerns for infants diagnosed with NAS.
- It is recommended that healthcare payors, both government and private, consider adequately reimbursing for care and care coordination services associated with high-risk pregnancies, including physical and mental health needs, and other services along the continuum of care.
    - Enhanced reimbursement to neonatal intensive care units that follow evidence-based protocols and meet quality standards, and incentivized payment structures, such as NAS score reduction or length of stay tied to provider reimbursement rates, should also be considered.
    - Risk-adjusted reimbursement and provider incentives for care of patients receiving opioid maintenance should be considered, as well as support for data collection and quality metrics on process measures, clinical outcomes and cost savings.

> "I was on pain meds BEFORE I became pregnant. When I found out I was pregnant, I was honest with my [doctor] because I was worried about my baby. He then REFERRED ME TO A TREATMENT CENTER that I am still at today and I am 100% sober and clean."
>
> *-Louisiana PRAMS Mom*

Early Childhood

- It is recommended that professionals and managed care entities work together to create a comprehensive system of services inclusive of prevention, acute medical care, ongoing developmental support and mental health/substance abuse treatment for the whole family.
- It is recommended that a medical home for infants with NAS be provided so that care can be comprehensively coordinated.

- It is recommended that mental health and psychosocial support be addressed by the inclusion of a qualified mental health professional on children's treatment teams, or include consultation with a mental health professional who has expertise in substance-exposure and early childhood mental health.
- It is recommended that further study be conducted into ways to continue to support and expand evidence based home visiting programs and home-based mental health services that have a focus on promoting positive parent-child relationships and are in a key position to provide support, both prenatally and post-partum, for families who voluntarily seek help.
- It is recommended that a systematic environmental scan be conducted to identify existing local level practices and innovative models that are effectively coordinating care and supports throughout pregnancy and early childhood. Several such practices have been identified though the Medicaid IAP SUD initiative.
- It is recommended that further study be conducted into ways to develop a more extensive workforce that is well trained to identify and provide culturally competent interventions for prenatal substance exposure and resultant conditions. It is recommended that medical home personnel, home visitation personnel, and others involved in the care of children with NAS receive training and professional education in the area of SUD and NAS, so that they have a comprehensive and functional understanding of how to recognize and address psychosocial, mental health, substance abuse, parent-child relationship and other family issues that may be associated with NAS.

> "My child was born ADDICTED to Methadone. It's a medicine I take for opioid addiction I had. The [hospital] detoxed my baby. He was released 5.5 weeks after birth. He is a STRONG AND INTELLIGENT 3 month old and I'm very happy to have him home now. The program called EarlySteps came to my home and detected no problems with him. "No slowness" [Fussy Baby Program] also! IF I HAD CONTINUED HEROIN during my pregnancy he may not be here. So starting the Methadone clinic at 2 weeks pregnant helped majorly and between the clinic, my prenatal and my hospital. My baby made it 37.1 weeks. I always thank them and pray for other detox babies"
>
> *-Louisiana PRAMS Mom*

CONCLUSION

The findings of this study indicate it is critical for efforts that mitigate neonatal abstinence syndrome (NAS) span the areas of prevention, screening, and clinical care and care coordination. Therefore, specific recommendations are grouped into these three main strategies:

Prevention: Strengthen efforts to prevent NAS before it occurs
Prevention of NAS requires a three pronged approach: prevent or treat substance use disorder in Louisiana's families, prevent unintended pregnancy while using opioids (legal or illicit), and educate both doctors and the public on the dangers of using opioids during pregnancy.

Screening: Enhance screening for NAS risk factors
Universal verbal screening for substance use and subsequent referral for treatment of all patients of reproductive age with a positive verbal screen has been demonstrated to effectively reduce the occurrence of NAS in both primary care and obstetric settings. In addition, providers that prescribe opioids should screen for pregnancy at each visit in an effort to identify pregnancies early and mitigate risk to the developing baby.

Clinical Care and Care Coordination: Improve the quality of and access to behavioral and medical patient-centered care for families affected by NAS, including improving interagency collaboration
The goal of coordinated care is to ensure patients receive the right care at the right time, while avoiding unnecessary duplication of services and medical errors. Access to treatment for substance use disorders and Medication Assisted Treatment (MAT) is important to any strategy to address NAS. Ensuring availability of Suboxone and Methadone on the state's Medicaid formulary is consistent with national best practices. Strengthening systems of coordinated care is also central to ensure patients receive the right care at the right time, while avoiding unnecessary duplication of services and medical errors. In addition to coordinated care between the prenatal care and behavioral health providers, coordinated care and support for the family and child after birth are also critical. Examples of such supports include EarlySteps, voluntary evidence-based home visitation, specialty mental health care services for children or families with mental health needs, and other innovative or wrap-around services that provide early intervention and promotion of healthy development in a child. There is a need for strong referral pathways and parenting support for family members in recovery.

Some states have attempted to quell the rise in NAS cases through policies that criminalize mothers whose infants are born with NAS. In addition to the above strategies, the Perinatal Commission's deliberations emphasized that such policies be avoided. Evidence suggests that policies that focus on criminalization present a barrier to families who are candidates for early intervention and treatment and do not result in improved outcomes.

> "I WAS TOO AFRAID TO GET HELP WHILE I WAS PREGNANT, but I know now that I should have done something about my problem then and not after my baby was born too early. Please spread the word. *Get help with any drug problems asap so that your baby is born healthy. There is help out there. Ask your doctor or call your local hotlines...Thank you for your time!"
>
> *-Louisiana PRAMS Mom*

GLOSSARY

Addiction
Addiction is a primary, chronic, neurobiologic disease with genetic, psychosocial, and environmental factors influencing its development and manifestations. Addiction is characterized by behaviors that include one or more of the following:

- Impaired control over drug use; compulsive use;
- Continued use despite harm;
- Cravings.

Buprenorphine
Buprenorphine activates opioid receptors like other opioids but produces a diminished response, even with full occupancy – meaning that, like opioids, Buprenorphine produces effects such as euphoria or respiratory depression; however, these effects are weaker than those of full drugs such as heroin and methadone. The single agent product Subutex is recommended during pregnancy to avoid any potential prenatal exposure to naloxone.

- Buprenoprhine with naloxone = suboxone, butrans, zubsolv, bunavail
- Buprenorphine without naloxone = subutex, buprenex

Detoxification/"Detox"
A set of interventions aimed at managing acute intoxication and withdrawal, or a medical intervention that maintains a patient safely through withdrawal to recovery

Intoxication
From the ICD 10 Manual: a transient condition following the administration of alcohol or other psychoactive substance resulting in disturbances in level of consciousness, cognition, perception, affect or behavior, or other psychophysiological functions and responses. Opiate acute intoxication symptoms include:

- Warmth, intense pleasure or rush, high 3-5 hours for heroin
- Followed by sedation, tranquility ("on the nod")
- Papillary miosis (pinpoint pupils)
- Respiratory depression (slowed breathing)
- Slowed movements and decreased level of consciousness

Maintenance
Medication Assisted Treatment, also known as MAT maintenance, is a term used when a patient is being treated in an outpatient clinic and a dosage of opioid agonist medication has been determined that maintains her in recovery. In other words, a dosage of MAT that stabilizes the patient so she is no longer caught in the cycle of intoxication and withdrawal

Medication Assisted Treatment (MAT)
MAT describes the use of FDA-approved medication for the treatment of opiate/opioid addiction and substance abuse. Medication options for MAT include methadone or buprenorphine.

Methadone

Methadone is a substance that fully activates opioid receptors. MAT with methadone is the standard of care for the opiate addicted pregnant patient to minimize withdrawal, prevent relapse, and improve outcomes. Since the 1970s, methadone has been the standard treatment for heroin addiction during pregnancy. Outpatient methadone MAT maintenance is prescribed and dispensed to a patient daily by federally licensed/registered treatment center. Methadone MAT minimizes peak (highest concentration of drug in body) and trough (lowest concentration of drug in body) fluctuations in maternal opioid levels during pregnancy, thereby reducing fetal exposure to the effects of repeated intoxication and withdrawal. Further, Methadone is considered safe for breastfeeding mothers and babies.

Neonatal Abstinence Syndrome (NAS)

NAS refers to a collection of drug-withdrawal symptoms that infants can display if their mother takes a drug that causes dependency during pregnancy. NAS is recognized by the following symptoms in newborns:

- Dysregulation in central, autonomic and gastrointestinal systems functioning (Finnegan 1991)
- Central nervous system features include high-pitched cry, reduced quality and length of sleep, increased muscle tone, tremors, convulsions
- Autonomic features include yawning, sweating, sneezing, increased respiratory rate
- Gastrointestinal features include excessive sucking, poor feeding, regurgitation or vomiting, loose stools

Withdrawal usually begins within 24 hours after birth (heroin) to 72 hours after birth (methadone and buprenorphine), but may be delayed up to 5 to 7 days in some infants

Substance Use Disorder (SUD)

Substance use disorders occur when the recurrent use of alcohol and/or drugs causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home. According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), a diagnosis of substance use disorder is based on evidence of impaired control, social impairment, risky use, and pharmacological criteria.

Transition

Transition describes the process of assisting a patient's transition from illicit drug use to MAT in order to lessen withdrawal symptoms. Transition typically occurs in an in-patient treatment center, but the ultimate goal is long-term maintenance that will be completed at outpatient clinic

Withdrawal

Withdrawal is a substance-specific maladaptive change that is the result of cessation of or reduction of heavy and prolonged substance use. Withdrawal includes behavioral, physiological, physical and cognitive features. Opiate withdrawal is measured with Clinical Opiate Withdrawal Scale (COWS).

APPENDIX A – House Concurrent Resolution No. 162

ENROLLED

2015 Regular Session

HOUSE CONCURRENT RESOLUTION NO. 162

BY REPRESENTATIVES BARROW, JACKSON, POPE, SIMON, STOKES, WHITNEY,

AND WILLMOTT AND SENATORS ALLAIN, DORSEY-COLOMB, AND

MILLS

A CONCURRENT RESOLUTION

To urge and request the Commission on Perinatal Care and Prevention of Infant Mortality to

study and make recommendations related to the prevention, screening, and treatment of neonatal abstinence syndrome and to submit a written report of its findings and recommendations to the House and Senate committees on health and welfare no later than March 1, 2016.

WHEREAS, R.S. 40:2018 established the Commission on Perinatal Care and Prevention of Infant Mortality and provided for certain functions that are to be carried out by the commission which include all of the following:

(1) Research and review all state regulations, guidelines, policies, and procedures that impact perinatal care and, when appropriate, making recommendations to the secretary of the Department of Health and Hospitals and to the legislature; and

(2) Provide, through comparison of available data and research, for a plan that the state of Louisiana can adopt to reduce the number of teenage pregnancies, sick infants, and infant mortalities; and

(3) Propose a plan for an equitable system of financing comprehensive health and social services for indigent pregnant women and infants that incorporates the Medicaid program in the most efficient and cost-effective manner available to public and private hospitals in the state of Louisiana; and

(4) Compile and analyze information on existing infant mortality education programs and make recommendations for the implementation of public policies, for proposed legislation, and for a statewide program to combat the problem of infant mortality to coordinate and improve the services of the state, local governments, private and voluntary agencies, community organizations, and schools which serve to educate high risk candidates and their families; and

(5) Educate women of child-bearing age to be able to choose food wisely and understand the hazards of smoking, alcohol, pharmaceutical products, and other drugs during pregnancy and nursing; and

WHEREAS, neonatal abstinence syndrome (NAS) is a constellation of physiologic and neurobehavioral signs exhibited by newborns exposed to addictive prescription or illicit drugs taken by a mother during pregnancy and infants with NAS generally experience prolonged hospital stays, serious medical complications, and their treatment is very costly; and

WHEREAS, there has been a significant increase in the national prevalence of NAS with the diagnosis of NAS increasing from over one per one thousand hospital births in 2000 to over three per one thousand hospital births in 2009; and

WHEREAS, many healthcare providers believe that there has also been a significant increase of cases of NAS in Louisiana, although there is a lack of accurate and robust data to verify; and

WHEREAS, public health experts generally believe that the rise in NAS births goes hand-in-hand with a significant increase in prevalence of mothers dependent on or using opiates at the time of delivery and compounding this problem is the fact that the population of pregnant women with opioid dependence is varied, and their circumstances span the spectrum from heroin addiction, polydrug abuse, prescription opioid abuse, MAT (methadone maintenance or buprenorphine maintenance), and chronic opioid use prescribed for medical indications; and

WHEREAS, it is in the best interest of the state that a deeper understanding of this problem is developed and more accurate and robust data is compiled which will allow the state to adopt meaningful recommendations and reforms to address this growing epidemic affecting so many children of our state.

THEREFORE, BE IT RESOLVED that the Legislature of Louisiana does hereby urge and request the Commission on Perinatal Care and Prevention of Infant Mortality to study and make recommendations related to the prevention, screening, and treatment of neonatal abstinence syndrome and to submit a report of the data and recommendations to the House and Senate committees on health and welfare no later than March 1, 2016.

BE IT FURTHER RESOLVED that the Legislature of Louisiana hereby urges and requests the Department of Health and Hospitals to provide all necessary data to adequately determine the prevalence and cost of NAS to the state of Louisiana and to require the Bayou

Health managed care plans to make available to the commission all current treatment protocols and guidelines currently in effect regarding NAS.

BE IT FURTHER RESOLVED that the Medicaid Quality Committee shall provide the requisite clinical expertise and recommendations to the commission for purposes of assisting in the development of recommendations concerning the prevention, screening, and treatment of NAS.

BE IT FURTHER RESOLVED that the commission shall seek the input and guidance of the office of behavioral health of the Department of Health and Hospitals.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to the Commission on Perinatal Care and Prevention of Infant Mortality and the secretary of the Department of Health and Hospitals.

APPENDIX B – RS 40:2018 Commission on Perinatal Care and Prevention of Infant Mortality

§2018. Commission on Perinatal Care and Prevention of Infant Mortality; maternal and infant mortality studies; confidentiality; prohibited disclosure and discovery

A. There shall be established within the Department of Health and Hospitals, a commission which shall be designated the "Commission on Perinatal Care and Prevention of Infant Mortality", composed of sixteen members, as provided in Subsection B of this Section.

B.(1) Fourteen members shall be appointed by the governor as follows:

(a) Two neonatologists, one of which shall be actively engaged in medical education, and one of which shall be actively engaged in private practice.

(b) One obstetrician.

(c) One family practitioner.

(d) One pediatrician.

(e) One female health nurse practitioner.

(f) One representative from a family planning clinic in the state.

(g) One neonatal nurse specialist.

(h) Two health care administrators representing the public and private sector respectively.

(i) One social worker.

(j) One nutritionist.

(k) Two perinatologists.

(2) Two members shall be appointed as follows:

(a) One member of the Louisiana House of Representatives appointed by the speaker of the House of Representatives.

(b) One member of the Senate appointed by the president of the Senate.

(3) Each appointment by the governor shall serve at his pleasure and shall be subject to Senate confirmation. The legislative members shall serve at the pleasure of the presiding officer of the respective legislative body.

C. The chairman of the Commission on Perinatal Care and Prevention of Infant Mortality shall be elected annually by the commission members and shall serve as chairman without a salary. The chairman shall report directly to the governor.

D. The commission shall hold at least six regular meetings each year at a place designated by the chairman. The commission members shall be compensated for travel in connection with the commission meetings and official commission business as approved by the chairman of the

commission. Reimbursement shall be in accord with the travel regulations of the Department of Health and Hospitals.

E. (1) The secretary of the Department of Health and Hospitals shall assist the commission and provide any data the commission requires that is available to the state, in order to reduce the number of infant deaths and the number of unmarried, teenage pregnancies in the state of Louisiana.

(2) Reports on the status of available perinatal care and other reports as are considered appropriate based on the research shall be made to the commission.

F. The functions of the commission shall be to:

(1) Research and review all state regulations, guidelines, policies, and procedures that impact perinatal care and, when appropriate, make recommendations to the secretary of the Department of Health and Hospitals.

(2) Research and review all state laws that impact perinatal care and, when appropriate, make recommendations to the legislature.

(3) Accept grants and other forms of funding to conduct maternal and infant mortality studies.

(4) Contract, in accordance with the applicable provisions of state law, for the performance of maternal and infant mortality studies.

G. Within the confines of available resources, the goals of the commission shall be to strive to:

(1) Provide, through comparison of available data and research, a plan that the state of Louisiana can adopt to reduce the number of teenage pregnancies, sick infants, and infant mortalities.

(2) Propose a plan for an equitable system of financing comprehensive health and social services for indigent pregnant women and infants that incorporates the Medicaid program in the most efficient and cost-effective manner available to public and private hospitals in the state of Louisiana.

(3) Compile and analyze information on existing infant mortality education programs and make recommendations for the implementation of public policies, for proposed legislation, and for a statewide program to combat the problem of infant mortality to coordinate and improve the services of the state, local governments, private and voluntary agencies, community organizations, and schools which serve to educate high risk candidates and their families.

(4) Reduce the infant mortality rate to not more than nine deaths per one thousand live births.

(5) Reduce the number of babies born with low birth weight to not more than five percent of all live births.

(6) Reduce the infant mortality rate for each parish and for each racial or ethnic group of the population to not more than twelve deaths per one thousand live births.

(7) Educate women of child-bearing age to be able to choose food wisely and understand the hazards of smoking, alcohol, pharmaceutical products, and other drugs during pregnancy and nursing.

H. The commission shall have the right and authority to analyze any data available through any state system that may improve perinatal outcomes in Louisiana.

I. (1) Notwithstanding any other provision of law to the contrary, the commission or its agent shall be authorized access to medical and vital records in the custody of physicians, hospitals, clinics, other health care providers, and the office of public health in order that it may conduct maternal and infant mortality studies. All such medical and vital records obtained by the commission or its agent in accordance with the provisions of this Subsection, as well as the results of any maternal and infant mortality study, shall be confidential and shall not be available for subpoena, nor shall such information be disclosed, discoverable, or compelled to be produced in any civil, criminal, administrative, or other proceeding nor shall such records be deemed admissible as evidence in any civil, criminal, administrative, or other tribunal or court for any reason.

(2) Nothing in this Subsection shall prohibit the publishing by the commission of statistical compilations relating to maternal and infant mortality which do not identify individual cases or individual physicians, hospitals, clinics, or other health care providers.

Acts 1989, No. 352, §2; Acts 1991, No. 515, §1; Acts 1992, No. 326, §1.

-