DOI: 10.32481/djph.2018.05.010

The Pregnancy Recovery Support Program:

Comprehensive Services for Pregnant Women with Substance Use Disorder

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The opioid epidemic has adversely impacted Delaware and its citizens as described in the August issue of this Journal. An especially challenging aspect of the epidemic is in the care and management of women with a substance use disorder who are pregnant. They are at significantly greater risk for sexually transmitted diseases and domestic partner violence because of high risk behaviors. The intense societal stigma of untreated addiction and pregnancy often prevents these women from seeking prenatal care. Adverse outcomes associated with addiction include preterm birth, fetal demise, intrauterine growth restriction, placental abruption and Neonatal Abstinence Syndrome (NAS).[1]

The American College of Obstetricians and Gynecologists (ACOG), in a recent Committee Opinion published jointly with the American Society of Addiction Medicine (ASAM), noted a fivefold increase in antepartum maternal opioid use from 2000 to 2009. The Committee Opinion also reported an increased incidence of Neonatal Abstinence Syndrome (NAS) from 1.5 cases per 1,000 hospital births in 1999 to 6.0 per 1,000 hospital births in 2013, resulting in a staggering $1.5 billion increase in related annual hospital charges.[1] Similarly, as illustrated in Figure 1, the rate of NAS reported by hospitals in Delaware has progressively increased.

Figure 1. Delaware Birth Hospitals NAS 2013-2016

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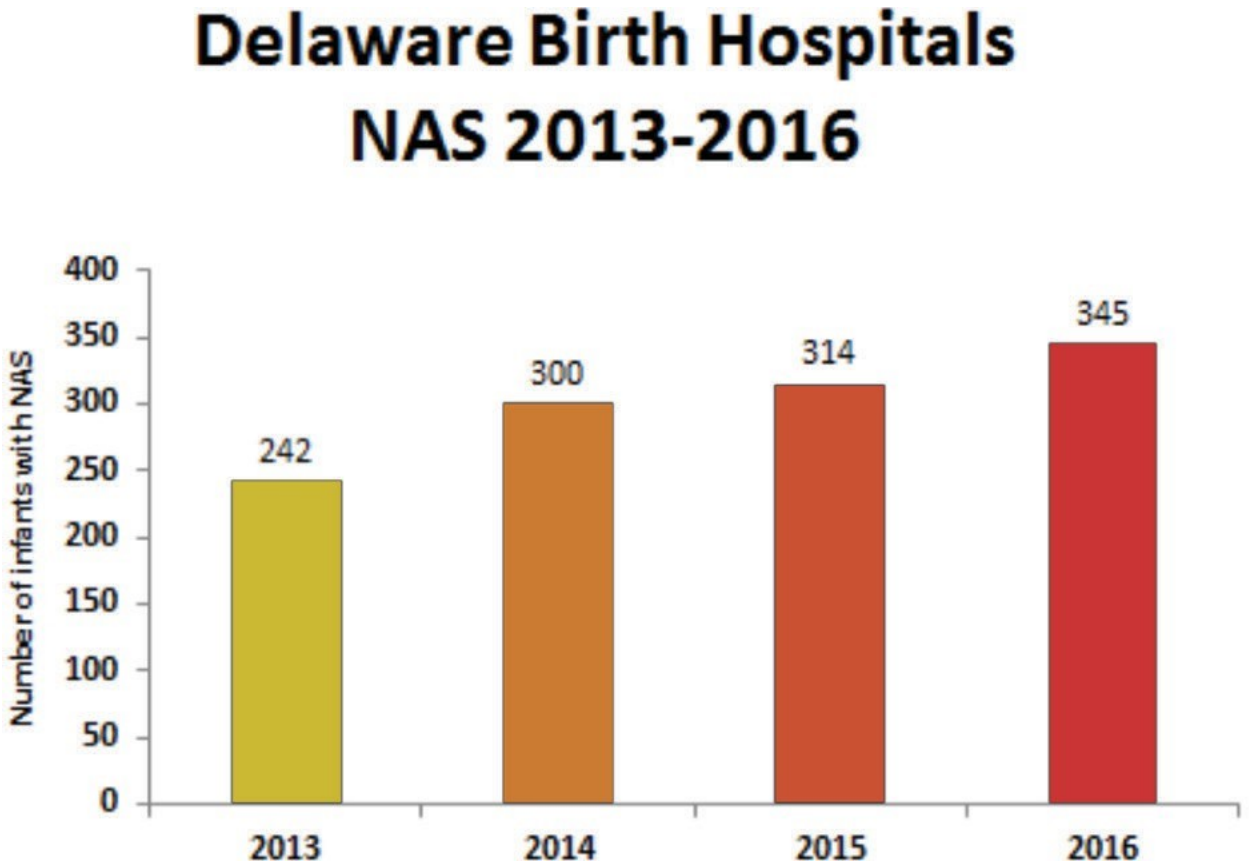

There is a direct association with opioid prescribing rates among health care providers and the incidence of NAS. States with the highest rates of opioid prescribing have the highest rates of NAS1. The Centers for Disease Control and Prevention (CDC) reported on prescribing patterns in eight states in the October 16, 2015 edition of the Morbidity and Mortality Weekly Report. Delaware and Maine ranked highest in both mean daily opioid dosage and in the percentage of opioid prescriptions written for >100 morphine milligram equivalents (MMEs) per day. The top 1% of prescribers wrote one in four prescriptions in Delaware, compared with one in eight in Maine.[2] While this data is reflective of practice patterns in 2013, the resultant impact on NAS rates is cause for concern. Data specific to Christiana Care Health System, the region's Perinatal Referral Center, demonstrates a continued increase in patient days related to NAS (see Figure 2).

Figure 2. NAS Patient Days, Christiana Hospital, 2010-2017

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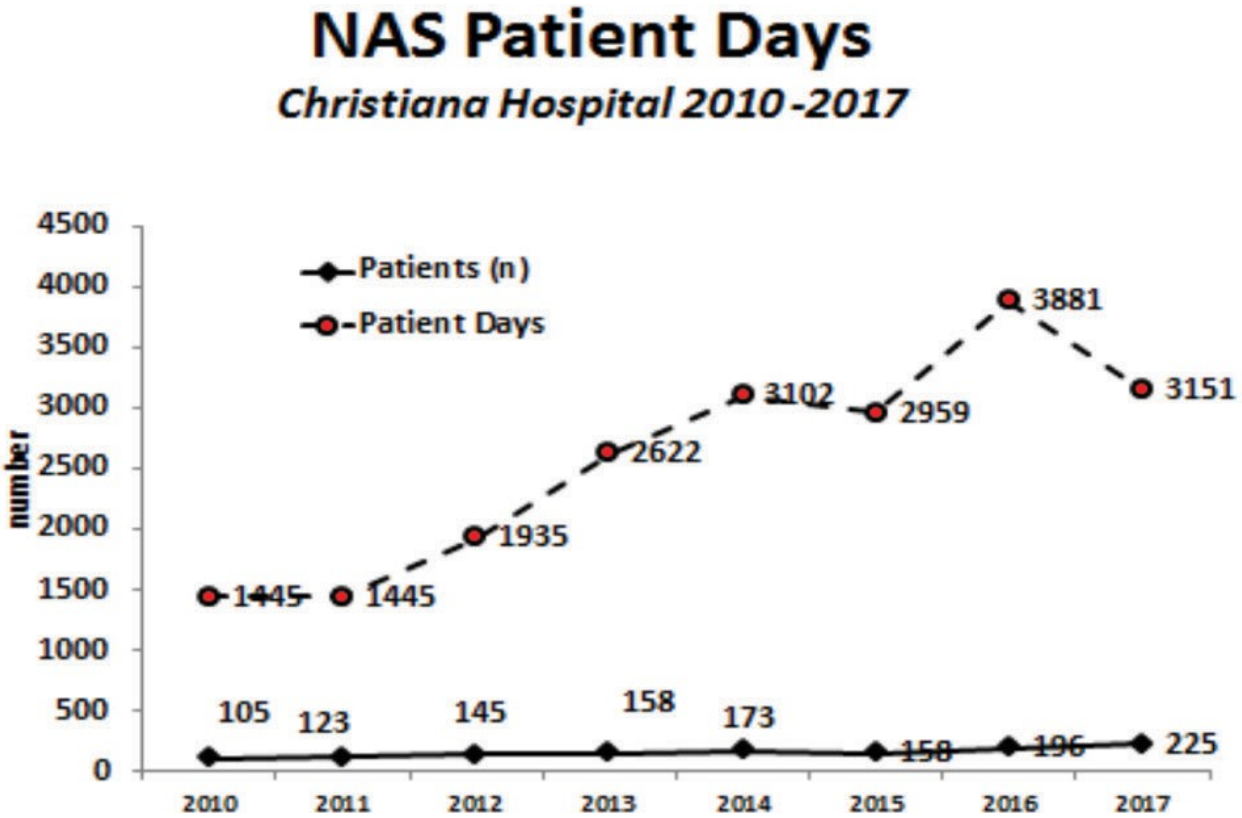

Current evidence does not demonstrate an association between medical supervised withdrawal and fetal death or preterm delivery. ACOG does not recommend that women undergo medical supervised withdrawal from opioids during pregnancy because relapse rates ranging from 59% to more than 90% have been reported among this cohort of patients. Risks associated with relapse include communicable disease transmission, accidental overdose because of loss of tolerance, obstetric complications and lack of prenatal care.[1]

The most frequently abused opioids are prescription medications such as oxycodone followed closely by heroin. The vast majority of patients who are in Medically Assisted Treatment (MAT) are currently treated with methadone. There is a growing body of evidence that supports the use of buprenorphine for pregnant women. Treatment with buprenorphine allows for outpatient management without the need for daily visits to an opioid treatment center. In addition there are reports of less severe incidence of NAS in infants whose mothers were treated with buprenorphine.[3] The resultant shorter newborn length of stay is an important parameter given overall trends in NAS patient days and the resultant costs.

The need for an integrated approach to care for pregnant patients with a substance use disorder at Christiana Care was identified in 2015. Consultation and a site visit with the team at Magee Women's Hospital at the University of Pittsburgh Medical Center provided members of the steer with the operational details of an established program. A team consisting of physician and nursing representatives from Obstetrics and Gynecology, Behavioral Health, Neonatology as well as peer counselors (Project Engage) and social services was assembled to determine the appropriate course of action.

The most immediate challenge identified by the group was in the management of pregnant patients presenting to Christiana Care in active withdrawal to the OB Triage Unit or any of the

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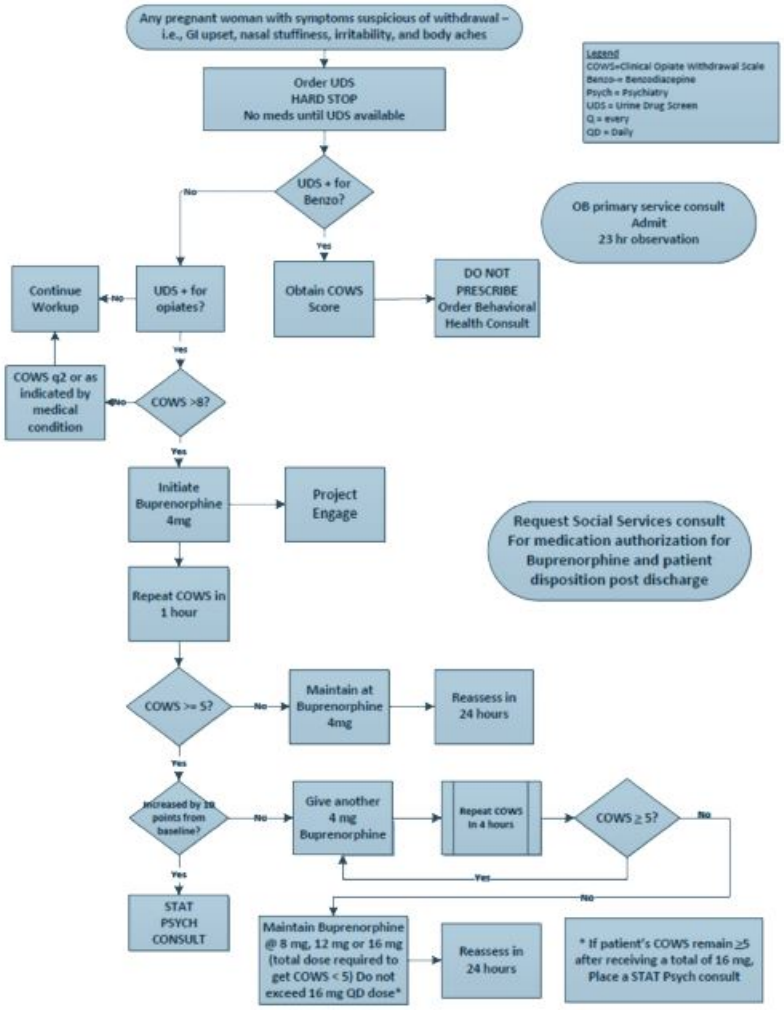
Health System's Emergency Rooms. Several obstetric providers obtained certification in buprenorphine prescribing through the Substance Abuse and Mental Health Services Administration in order to facilitate patient care. The team developed the algorithm below as a guide for management (see Figure 3).

Figure 3. Algorithm for Management of Pregnant Patients in Withdrawal



Education for the medical staff consisted of Grand Rounds presentations as well as special lectures for the residents. Focused in-service presentations were conducted for nursing personnel. The challenge of providing appropriate prenatal care for patients was also recognized. Disordered and chaotic home environments pose challenges for regularly scheduled appointments. As stated earlier, the stigma of addiction and pregnancy serves as a significant barrier to prenatal care for these patients. Traditional care in a physician's office does not provide the behavioral health, social services and peer support needed for these patients to succeed in their recovery journey. Group visits have long been a maintain of therapy in behavioral health.

The Centering Model of Prenatal Care is group prenatal care that has been implemented in the United States and abroad since 1995. It provides an integrated approach to prenatal care in a group setting, incorporating family members, peer support and education.[4]

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A subgroup consisting of midwives, women's health nurse practitioner and nursing case manager was formed to adapt the proscriptive Centering model to the needs of pregnant patients with a substance use disorder. Content for ten educational sessions was developed and tailored for this patient population. A pilot program in collaboration with Brandywine Counseling was launched in January, 2016. Sessions were conducted on the first and third Tuesdays of the month and lasted for two hours. Enrollment was open to any pregnant patient receiving treatment at Brandywine Counseling. Participants were able to choose their provider for prenatal care and were not obligated to deliver at Christiana Care Health System.

Initial data from the pilot demonstrated earlier entry into prenatal care among participants as well as greater acceptance of long acting reversible contraception when compared with nonparticipants. Of note, participants would also include the baby's father in group prenatal sessions.

The successes realized with the pilot, as well as an increase in prenatal patients treated with buprenorphine by Christiana Care's Behavioral Health team, resulted in the formation of the Pregnancy Recovery Support Program. Initiated in September, 2017, the program is based at the Wilmington campus of Christiana Care Health System and meets on a weekly basis. The team consists of a midwife, addictions counselor, addiction psychiatrist and case management for prenatal as well as social service needs. Additional support is provided by a program coordinator and women's health medical assistant.

There has been a steady increase in participation in the program to date. Future expansion for the program will be the addition of group care for the postpartum period in an effort to continue support at a time when the likelihood of relapse to addiction increases significantly. Outcomes that will be analyzed are gestational age at entry to care, gestational age and birthweight at delivery, acceptance of contraception postpartum and breast feeding rates.

A recent meta-analysis that compared group prenatal care with traditional prenatal care indicated reduced preterm delivery rates among African American women who participated in a group prenatal care model. An explanation offered by the study is the provision of social support, coping strategies and stress reduction through group prenatal care.[5] While of varied ethnic background, pregnant women with substance abuse disorder are a vulnerable cohort at high risk for a number of adverse pregnancy outcomes. The goal of the Pregnancy Recovery Support Program is to provide group prenatal care as well as comprehensive support services in a welcoming environment. Expansion of this vital work and reporting to the medical community at large of our outcomes will be an essential component of our continued efforts to combat the challenges posed by the opioid epidemic.

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