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The Increase in Neonatal Abstinence Syndrome from Opioids Affects Us All

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Opioid misuse and dependence during pregnancy has increased dramatically in the U.S. in recent years, paralleling the increase in opioid use disorders seen in the general U.S. population. This has resulted in a rapid increase in the number of babies who are born with neonatal abstinence syndrome (NAS) - physical dependence on opioids. Cases of NAS nearly doubled from 13,500 in 2009 to 25,000 in 2016 and continue to rise.[1] Resulting from exposure to opioids in the womb, newborn babies begin to develop the symptoms of physical withdrawal within 48 hours of birth. Symptoms include extreme sensitivity to touch and light, a high-pitched cry, an abnormally high heart rate, overactive reflexes, seizures, and tremors. At least 50 percent of babies exposed to opioids during pregnancy will develop opioid dependency, increasing the risk of birth complications, low birth weight, respiratory problems, underdevelopment in the womb, and even death.[2]

The Costs of NAS are Substantial

Compared to an average 5-day hospital stay for newborns without NAS, opioid-exposed babies require an average 17-day hospital stay after birth. The hospital cost is more than three times higher for an infant born with NAS (average cost of $16,893) compared to an infant without NAS (average cost of $5,610).[3] Additional outpatient treatment after discharge increases the costs of NAS even more, to up to $238,000 above that of an unaffected newborn.[4] Because opioid dependence is more prevalent among low-income populations, a substantial portion of the treatment costs for NAS fall on state Medicaid budgets. From 2004 to 2014, NAS resulted in approximately $2 billion in excess Medicaid costs.[5] Some state budgets have been hit especially hard. For example, NAS cost Missouri's Medicaid budget $10 million in 2016. Rates of NAS in Pennsylvania increased by over 1,000 percent between 2000 and 2018,[5] with a cost of $14.1 million to its Medicaid budget in 2017 alone. This added burden to state Medicaid budgets means that other essential services could go underfunded.

The costs go beyond the financial. NAS heightens the probability of developing an educational disability and speech or language impairments in early childhood and increases the likelihood of requiring classroom support or speech therapy by a third.[6] Not only does this increase the burden on stretched public resources, but it also reduces the probability that these children will reach their full productive potential. Ultimately, NAS and the opioid crisis more broadly have major human and societal costs.

We Must Address the Root Causes of Addiction

Many people see NAS as purely the result of a voluntary drug habit of an irresponsible mother. This view ignores the physiological and social realities of addiction. Addiction is a chronic relapsing brain disease, with roots in individual early-life trauma and broader economic and

social despair.[7] Adverse childhood experiences, like abuse, witnessing parental domestic violence, and parental incarceration or death place children at higher risk of developing substance abuse and mental health disorders in adulthood.[8] In addition, we cannot fully understand or reverse the opioid crisis without considering its social determinants. Social determinants of health are the structural conditions in which people live, work, and socialize that influence stress, health behaviors, and mortality, including economic resources, social relationships, and labor markets. At a societal level, thanks to several decades of economic and social decline in once thriving communities, many places in the U.S. were primed to be vulnerable to opioids - drugs that numb both physical and psychological pain.[9] Addressing NAS requires addressing opioid addiction, but more broadly requires reversing social and economic distress and despair.

Further Action is Necessary

There are no easy solutions to the opioid crisis. In the short term, strategies to reduce NAS should focus on encouraging stigma-free treatment for women with addictions who become pregnant. We must also understand that mothers continue to need support after delivery. By making treatment more accessible, women may be more inclined to seek help. This is gradually beginning to take place. In 2016, the Child Abuse Prevention and Treatment Act (CAPTA) was amended in conjunction with the Comprehensive Addiction and Recovery Act (CARA) to begin awarding funds to states in support of NAS treatment. In 2018, New York State allocated $3.6 million of CAPTA funding to the treatment of NAS and support for mothers with opioid addiction or dependence. As stipulated by CARA, this funding has led to the development of a program that will provide a plan of safe care for all babies identified as suffering from NAS and prioritizes keeping mothers with their babies during treatment. New York's approach may become an example of the way forward, but there is much more to do.

At the national level, NAS has drawn far less attention from policymakers than it should. A centralized strategy to *reduce*, rather than just *treat*, NAS is only starting to take shape as part of the *SUPPORT for Patients and Communities Act of 2018*, but this may not be formalized for another year. With so much at stake, it is important that policymakers at all levels take a more proactive approach to reverse the trend of increasing NAS rates. Additionally, a wholesale re-evaluation of our stigma toward pregnant women who use drugs will be necessary for any lasting impact. In 18 states, child abuse proceedings are still explicitly permitted to charge pregnant women for drug use during pregnancy.[11] Tennessee went as far as to introduce legislation to criminalize the use of opioids during pregnancy, but allowed it to expire in 2016 after it failed to prevent a continued rise in rates. It is time to critically reassess the idea that criminalization will reduce rates of addiction and NAS and begin treating addiction as the population health issue that it is. Given the human and financial costs, failure to effectively tackle opioid addiction and prevent NAS affects us all, regardless of whether we personally know someone who is dealing with addiction.

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