

Fellows Column: Navigating Parental Psychiatric Illness in the NICU

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“The Neonatal Intensive Care Unit (NICU) can be a frightening and distressing environment for parents, especially given the sick infant’s appearance and behavior, the complex medical language and technology, invasive procedures, and the threat of potential loss of their child’s life (1). As such, it has been widely observed that parents of an infant admitted to the NICU are at higher risk of developing a mental health disorder. Research shows that at least 50% of parents in this situation will experience anxiety, post-partum depression, Acute Stress Disorder (ASD), or Post-traumatic Stress Disorder (PTSD).”

Introduction:

The Neonatal Intensive Care Unit (NICU) can be a frightening and distressing environment for parents, especially given the sick infant’s appearance and behavior, the complex medical language and technology, invasive procedures, and the threat of potential loss of their child’s life (1). As such, it has been widely observed that parents of an infant admitted to the NICU are at higher risk of developing a mental health disorder. Research shows that at least 50% of parents in this situation will experience anxiety, post-partum depression, Acute Stress Disorder (ASD), or Post-traumatic Stress Disorder (PTSD). While symptoms decline over time for most parents, about 25% are still suffering 1 year after the birth of their child (9). This is alarming because poor parental mental health negatively influences parent-child interactions and child development. Premature infants are already at high risk for adverse developmental, cognitive, academic, and mental health outcomes (8). This paper will explore the risk factors and long-term consequences of common psychiatric illnesses that impact parents in the NICU. We will also investigate how having a parent with a pre-existing mental health disorder may contribute to preterm birth and what preventative treatment can mitigate this event.

Risk Factors:

The most common health disorder seen in parents with an infant

in the NICU is post-partum depression (PPD). Maternal post-partum depression is the most common complication of childbirth and affects 10-15% of women with term deliveries and 40% of women with preterm deliveries (1, 2). One of the strongest predictors of PPD among mothers of preterm infants is a perceived lack of social support. Other risk factors for maternal PPD include previous history of depression, marital conflict, poverty, stressful life events, and low maternal education (3). There has also been heightened awareness of paternal PPD in NICU fathers. One study found that 60% of men with an infant in the NICU had a higher score on the Center for Epidemiologic Studies-Depression Scale (CES-D) and thus, exhibited elevated depressive symptoms at baseline (4). Interestingly, CES-D scores were independent of infant illness and more influenced by socioeconomic factors. This may be due to fathers reporting three common psychological themes after their premature infant was admitted to the NICU: vividly recalling their experiences (even years later), worrying about their significant other, and stressing about work/life balance (5). These themes may stem from socioeconomic challenges that have a more significant impact on the primary income earner for the household. A NICU hospital stay can average around \$76,164, while the cost of care for infants born prior to 32 weeks’ gestation is approximately \$280,811. If a NICU father is the primary income earner, this expense can produce lasting stress that goes beyond the course of hospitalization. Nonmodifiable factors, such as age, can also predispose fathers to higher stress levels. One study discovered that paternal age was a significant predictor of NICU-related stress, with younger fathers being more susceptible to it (6). This is significant because it has been reported that almost one-fifth of NICU fathers continue to report post-traumatic stress symptoms up to two years after birth (7).

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Health Outcomes in Premature Infants and Parents:

The negative infant health outcomes associated with parental psychiatric illness include avoidant attachment, behavioral and emotional difficulties, and cognitive delay. Parents diagnosed with ASD or PTSD in response to their infant's NICU admission often experience intense fear or helplessness. Common symptoms of ASD or PTSD are re-experiencing the event, dissociation, and physiological arousal. Re-experiencing occurs through intrusive thoughts, dreams, and flashbacks. Dissociation and avoidance of reminders occur through depersonalization, derealization, amnesia, or numbing behaviors, such as drug and alcohol intoxication. Lastly, physiological arousal manifests as sleep disturbances, hypervigilance, and irritability. ASD diagnosis is made if the presence of these symptoms is between 2 days and 4 weeks after the traumatic event or NICU admission. PTSD is diagnosed when symptoms persist for at least 1 month or longer (10).

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Parental Psychiatric Illness Risk Factor for Preterm Birth:

Current literature suggests that infants are more likely to be born prematurely if either their mother or father has a psychiatric diagnosis (11). Stress-related disorders, such as ASD or PTSD, are the diagnoses associated with the highest risk of preterm birth. The risk of preterm delivery increases by 23% if the father has a stress-related disorder and by 47% if the mother has it. The risk increases by 90% if the diagnosis is present in both parents. The risk of preterm delivery is lower in other parental psychiatric illnesses unless they occur comorbidity. For example, the risk prematurity increases by 25% if the mother has depression, by 39% if she has depression and schizophrenia, and by 65% if she has depression, schizophrenia, and an anxiety disorder. Similar patterns occur in fathers with multiple psychiatric disorders (12). The mechanism appears to be related to maternal stress setting off biological pathways that induce preterm labor, for instance, high cortisol levels inducing premature contractions (13).

Prevention:

Screening for psychological distress is essential for identifying families in need of referrals for psychiatric care and mental health resources. While NICU fathers experience mental health problems similar to their female partners, they are more susceptible to inadequate emotional support and not receiving essential information regarding care for their premature infant (5). For instance, one study found that fathers feel more excluded, helpless, and inactive in their infant's care because the medical team approaches the mother more frequently when discussing prognosis and making decisions. Additionally, some fathers will suppress their

emotions to appear strong for their family despite not coping well internally (5). Identifying parents at risk for psychological distress is essential and feasible with the use of well-validated screening instruments. Prevention requires us to provide adequate care to both parents, as the research shows that the father's support during pregnancy moderates the effects of maternal stress. One study demonstrated that women with chronic stress who have better emotional and financial support from the baby's father are at lower risk of preterm delivery (12).

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Treatment Recommendations:

It is not uncommon for women to present with the first onset of psychiatric illness while pregnant. Many pregnancies are unplanned and may unexpectedly occur while women are receiving treatment with medications for psychiatric disorders. Although many women consider abruptly stopping their medications after learning they are pregnant, this decision carries substantial risks. Untreated psychiatric illness in the mother may cause significant morbidity in both her and the child. Thus, discontinuing or withholding medications during pregnancy is not always the safest option. Clinicians must perform a thorough risk/benefit analysis of pregnant women with psychiatric illness, including evaluating the impact of untreated illness on the baby and the mother (14).

Conclusion

The mental health issues experienced by NICU parents, such as postpartum depression and PTSD, can range from one month up to seven years post-discharge (15). Parents who are at greater risk of developing a psychiatric illness include those who have a lack of social support, a history of a mental health disorder, younger age, and lower education and income levels. It is critical to identify these parents and provide psychological support and resources as their premature infants are also at increased risk for adverse developmental, cognitive, academic, and mental health outcomes. Furthermore, mothers with a pre-existing mental illness, such as bipolar disorder or Schizophrenia, are more likely to deliver prematurely and then develop postpartum psychosis due to their infant's hospitalization. Postpartum psychosis is a psychiatric emergency that can lead to death. Thus, proper screening tools and comprehensive interventions, like cognitive behavioral therapy, home visitation programs, and medication compliance, are essential in helping create better outcomes for both NICU par-

ents and their premature infants.

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