



**CHOC – Children's Health Orange County  
Best Evidence and Recommendations (BEaR)**

**An Evidence-Based Initiative to Address Postpartum Depression of Parents in  
the Neonatal Intensive Care Unit**

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**Abstract**

Parents with infants admitted to the neonatal intensive care unit (NICU) are at an increased risk for postpartum depression (PPD), which can negatively impact the parent-infant bond. The CHOC NICU utilizes the Edinburgh Postnatal Depression Scale (EPDS) as a postpartum depression screening tool. This evidence-based project aimed to determine the best practices for 1) implementing the screening tool, 2) analyzing the results of the screenings, 3) communicating the findings between the different healthcare disciplines, and 4) providing family-centered interventions based on the findings. After completing a critical appraisal and synthesis of the literature, practice recommendations include the following:

- Ensure social work and nursing staff work collaboratively to screen parents for PPD
- Adjust the EPDS cutoff score to 10 or greater,
- Discuss the utilization of Cerner to document and communicate screening results and care plans, and
- Improve staff education on PPD.

Anticipated outcome measures include tracking the percentage of parents screened and monitoring the trends in EPDS scores of parents over time.

**Keywords**

Postpartum depression, screening for postpartum depression, Edinburgh Postnatal Depression Scale, NICU, and postpartum mothers

**PICO(T)**

In the use of the Edinburgh Postnatal Depression Scale (EPDS) to evaluate postpartum depression of parents in the NICU, what best practices have emerged for implementation, analysis of results, communication of findings, and family-centered interventions based on the findings?

**Background and Significance**



Postpartum depression (PPD) is a form of depression that occurs in some women after giving birth. PPD begins within four weeks after delivery and can be expressed in physical, emotional, and behavioral changes that can directly impact both mother and father and indirectly impact the baby. Approximately 11% of women in the United States develop PPD (Office on Women's Health in the U.S. Department of Health and Human Services, 2019). This percentage increases to about 40% for mothers of infants admitted to the NICU (Murthy et al., 2021). PPD has also been documented in new fathers, with prevalence rates ranging from 2-25% (Earls et al., 2019). Risk factors for PPD include but are not limited to multiple births, preterm birth, and infants born with any physical or neurodevelopmental deficit (Earls et al., 2019). The American Academy of Pediatrics (2019) recommends that parents be screened for PPD during well-child visits at one month, two months, four months, and six months after birth (Earls et al., 2019). When an infant is admitted to the NICU, these well-child visits may be missed, and the parents may not be adequately screened for this challenging mental health condition. PPD, when left undiagnosed and untreated, may negatively impact parent-infant bonding, which has been associated with poor infant growth, developmental delays, and an increase in the length of the hospitalization stay for NICU patients (Vaughn & Hooper, 2020).

Addressing PPD with the parents of NICU patients aligns with the organization's focus on delivering patient and family-centered care. Collaboration, one of the organization's values essential to patient and family-centered care, is defined as "working together with our colleagues and partners to achieve" the organization's mission "to nurture, advance, and protect the health and well-being of children" (CHOC Children's, 2018, p. 4). These partners include the parents. Another key to the organization's focus on family-centered care is advocating for parents to participate in care discussions and decisions (CHOC, n.d.). Fostering parental collaboration and participation begins with nursing their mental health and well-being needs are supported as they partner with the healthcare team during their child's hospitalization.

During the change of shift report in the NICU, nurses relay information about parental or guardian involvement in patient caregiving activities. Often, it is shared that, rather than actively participating in an infant's care, one or both parents sit and watch the nurse perform all care or are not present at the bedside to participate in caregiving activities. Lack of parental engagement in the infant's care should raise concerns for the healthcare team. Parents may be challenged to care for their neonate if the parents are struggling with physical, mental, and psychosocial challenges. With the desire to support family-centered care in the NICU, this project emerged from recognizing that healthcare providers need to ensure parental well-being is addressed and that parents are supported in their efforts to manage and cope with their child's condition.

## **Framework**



This EBP project utilizes the "Translating Evidence into Practice: CHOC's Approach to EBP" model, adapted from the EBPI Model © 2007 Brown & Ecoff (Ecoff, Stichler & Davidson, 2020).

### **Search for the Evidence**

Databases searched for this review included PubMed, Ovid, CINAHL, and Google Scholar. Key search words: NICU, postpartum depression, Edinburgh Postnatal Depression Scale, nursing, and screening. This search yielded over 100 articles, including systematic reviews, randomized control trials, quasi-experimental studies, practice guidelines, and cohort studies. After a critical review, 27 articles were found specific to the EPDS.

Professional organization websites reviewed include Postpartum Support International (PSI) and the American Academy of Pediatrics (AAP).

Communication with personnel at other facilities, including Children's Hospital of Philadelphia and UPMC Children's Hospital of Pittsburgh.

### **Critical Appraisal and Synthesis of the Evidence**

- Implementation
  - There is no clear evidence for a specific timeline to screen and rescreen parents for PPD.
  - AAP recommends screening at 1, 2, 4, and 6 months postpartum (Earls et al., 2019, p. 4).
  - The nurse was the most frequently used healthcare personnel to administer the screening (Ahlqvist-Björkroth et al., 2019; Chaudron et al., 2004; Cyr-Alves et al., 2018; Hanna et al., 2004; Leung et al., 2010; Logsdon et al., 2018; Murthy et al., 2021; Segre et al., 2013; Segre et al., 2014; Sheeder et al., 2009; Top et al., 2016; Vasa et al., 2014).
- Analysis of Results
  - A cutoff score of 10 is recommended by PSI and AAP and was the most frequently used to determine a positive versus a negative screening (Chaudron et al., 2004; Hanna et al., 2004; Leung et al., 2010; Logsdon et al., 2018; Murthy et al., 2021; Sheeder et al., 2009; Edmondson et al., 2010; Hawes et al., 2016; Lind et al., 2017; Smith et al., 2012).
  - To rule out PPD with certainty, a cutoff score of 9/10 provides "convincing diagnostic evidence" (Gibson et al., 2009, p. 360).
- Communication of Findings
  - There is a lack of evidence on the best practices for communicating screening results between healthcare disciplines.
  - AAP recommends including the screening tool, the results, and a referral plan in the infant's chart (Earls et al., 2019, p. 4).
- Interventions



- Family-centered interventions to reduce the risk of developing PPD include referrals to a healthcare provider, counseling, parent education, bedside bonding activities, and community resources such as support groups and crisis hotlines (Chaudron et al., 2004; Hanna et al., 2004; Leung et al., 2010; Logsdon et al., 2018; Murthy et al., 2021; Segre et al., 2013; Segre et al., 2014; Sheeder et al., 2009; Top et al., 2016; Vasa et al., 2014; Hawes et al., 2016; Lind et al., 2017; Smith et al., 2012).
- Staff education programs have been shown to decrease the prevalence of PPD (Ahlqvist-Björkroth et al., 2019; Segre et al., 2014; Lind et al., 2017; Smith et al., 2012; Gordon et al., 2006).

### **Practice Recommendations**

- Ensure social work and nursing staff works together as screeners to increase the percentage of parents screened.
- Discuss using a cutoff score of 10 and determine if it is more important to rule out PPD based on CHOC's patient population, demographics, and culture.
- Discuss using Cerner as a centralized location to document screening results and interventions so all healthcare team members can easily access information related to screenings.
- Improve education to nursing staff on PPD, including the definition of PPD, risk factors, diagnostics, treatment options, prognostics, and nursing interventions.
- While barriers are being addressed, planning for the future integration of the evidence includes five key steps:
  1. Educating nursing staff on PPD
  2. Continuing collaboration between social work and nursing to develop an effective PPD screening process in the NICU based on best practices
  3. Establishing an interdisciplinary protocol defining each team member's roles and responsibilities within the screening process
  4. Considering the Information Systems Department as a possible future key stakeholder to develop PPD screening applications within Cerner
  5. Measuring outcomes by tracking the percentage of parents screened and monitoring trends in EPDS scores.

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