

Co-Creating EmBRACE

A Mobile Health Solution to Improve Mental Health Screening and Support for NICU Parents: Preliminary Findings

Pamela A. Geller, PhD¹, Sharon Ettinger, MA¹, Leah B. Sodowick, MS¹, Caroline Hayes, BA¹, Mona Elgohail, PhD², Yi Cui, MS², Tony Ma, MS², Katie Chang, MS², Chavis A. Patterson, PhD³

1. Drexel University 2. Benten Technologies 3. Children's Hospital of Philadelphia

Introduction

- EmBRACE (Empower NICU – A Bridge to Resources for Adjusting and Coping with Emotions) is a mobile health application that we are co-creating with parents of infants hospitalized in the neonatal intensive care unit (NICU) and NICU healthcare providers (HCPs).
- EmBRACE will:
 - Screen and monitor psychological symptoms in NICU parents.
 - Allow parents to complete assessments at a time and place of their convenience.
 - Identify those at risk.
 - Connect parents with services, information, support, and resources.
 - Provide psychoeducation via tailored short videos in the app.

Methods

- The first phase of co-creation with NICU parents (N = 8) included focus group discussions and/or in-depth interviews with:
 - Four parents with a current/recent NICU hospitalization at the Children's Hospital of Philadelphia at the time of data collection
 - Four parents who experienced a child's NICU hospitalization in the past
- Semi-structured interview and focus group questions centered around experiences with mental health screening and support in the NICU and ideas relevant to an app.
- Transcriptions were reviewed by the study team to identify themes.

Pains and Challenges Identified from Focus Groups with NICU Parents



Themes

Experiences with and beliefs about mental health screening in the NICU

Barriers to completing mental health screening questionnaires

Thoughts about and suggestions for an app

Parent Perspectives

- 5 participants reported that they completed mental health screening questionnaires in the NICU
- Parents believe that mental health screening is important and all NICU parents should be screened
- Parents shared considerations for the timing of screening administration:
 - Screening in the first few days after NICU may be too early given acute stressors and adjustment-related needs
 - Parents with infants who have shorter-term hospitalizations should still be screened

- Stress and exhaustion
- Difficulties prioritizing parental needs over infant needs
- Concerns about mental health stigma
- Concerns about the potential for child welfare service involvement

- All participants (n = 8) expressed support for an app
- An app would be accessible and convenient
- Suggestions and recommendations for an app:
 - Integration of peer support
 - Include education and tips about infant bonding
 - App should be coupled with in-person support
 - Building trust and rapport with NICU families creates a more supportive environment for parents to complete mental health screening questionnaires

Quotes

- "I feel that all NICU parents should have equal opportunity and equal access to mental health services."
- "Parents with 'short-term stays' (3-5 days) shouldn't be shortchanged for mental health services. They're facing trauma as well."
- "You're bombarded with so much. [...] Those first 48, 72 hours [are] a fog. It's such a blur to us as parents that it's really after day five that I feel like you're really ready to have conversations and things are going to start sticking."
- "If I disclose all of this to the social worker or the psychologist, they'll think I'm an unfit parent and they'll call child protective services or something. [...] There is a fear that could be involved with that [screening]."
- "There [is] still some stigma and shame in certain communities for receiving mental and behavioral health services."
- "When I was in the NICU, I only cared about my son and his recovery. I came second to myself because [...] my focus was on him."
- "I live on my phone, as I'm sure most parents do. So that sounds really simple and easy."
- "I think anything that can sort of help to explain what is going on in the environment, whether it's people, equipment, or the emotions and sensations of being in the NICU, I think could be really helpful."

Discussion

- The identified themes and suggestions for app features and functionality are contributing to the EmBRACE prototype design.
- The availability of a mobile app co-created with NICU parents and HCPs can shift the current paradigm of virtually no consistent or standardized mental health screening for NICU parents to the provision of universal standardized screening that addresses current barriers.
- EmBRACE has the potential to address the current gap in mental health care for NICU parents while assisting overburdened NICU HCPs and optimizing parent and infant outcomes.

Acknowledgments

The EmBRACE project is funded by the Agency for Healthcare Research and Quality, Department of Health and Human Services (Grant 1R21HS029554-01; P.A. Geller, Principal Investigator)

