



## Enhancement of Neonatal Intensive Care Unit (NICU) Psychosocial Services: Call for Future Directions and to Close Implementation Gaps

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### Abstract

The Neonatal Intensive Care Unit (NICU) is a high-acuity, stressful unit for both parents and staff. Up to 50% of mothers and partners experience emotional distress (i.e., depression, anxiety or posttraumatic stress) during NICU hospitalization and 30%-60% continuing to experience distress after discharge. Similarly, up to 50% of NICU staff report burnout and emotional distress. However, psychosocial care for parents and support for staff are inadequate. Recently, healthcare providers developed interdisciplinary guidelines for psychosocial care to enhance resources for all both parents and staff. Despite the knowledge that psychosocial services are essential for improving resiliency in parents and staff, implementation is lacking. Given the lack of standardized psychosocial care, innovative, feasible and accessible psychosocial interventions are needed more than ever.

**Keywords:** Neonatal intensive care; Psychosocial care; Postpartum; Parents

### Description

The purpose of this viewpoint is to describe; need for psychosocial interventions for NICU parents and staff, existent psychosocial programs and their gaps and limitations and future directions for psychosocial care in NICU settings. We argue that brief, evidence-based, resiliency and relationship-based programs are warranted to enhance parent, staff and ultimately quality of care and child development.

The Neonatal Intensive Care Unit (NICU) provides care to some of the most vulnerable patients and stressed families in the hospital. As babies fight for survival, parents struggle to establish a parenting role amid a myriad of emotions (fear, guilt, anger, anxiety, helplessness). Because of babies complex medical needs and families stress and desire for answers that are yet to come, pressures on NICU staff are enormous. The high rates of NICU admissions (7%-15% of US annual births), parental distress and staff burnout, emphasize the need for action. Effective and sustainable psychosocial services for parents and staff are needed more than ever [1].

### Consensus to enhance psychosocial care

About 40%-50% of NICU parents report depression, anxiety and posttraumatic stress during hospitalization and 20%-60% experience symptoms post-discharge. Parental emotional distress is essential to address because it can contribute to conflict between partners, create tension between parents and staff and negatively impact parent-child interactions and child development. Emotional distress is also prevalent among NICU staff. A recent survey of healthcare workers across 44 NICUs indicated that 7.5% to 54.4% reported burnout, including up to 50% of neonatologists and nurses. Staff burnout has been linked to increased care-associated infections, self-reported errors, clinician attrition and staff shortages. Given these alarming rates of distress, National Perinatal Association (NPA) developed interdisciplinary recommendations to improve psychosocial support for both parents and staff. Hall and colleagues recommended that the NICU broaden its mission and scope to include parents as active partners with the healthcare team and coined the term "Newborn Intensive Parenting Unit (NIPU)." The NIPU care model describes physical, operational and culture changes that could enhance relationships among families and staff [2]. However, an important first step is to build these relationships is to enhance resiliency and alleviate emotional distress. Decreasing emotional distress through resiliency skills, such as mindfulness and emotion regulation, can help improve communication and in turn, relationships [3].

### Current NICU psychosocial programming

Although national perinatal association has called for enhanced psychosocial support, a recent survey of NICU psychologists indicated that 50% of them work in the NICU less than 10 hours/week and 25% did not offer staff education. In addition, the teamwork climate varies widely across NICUs, impacting staff burnout and quality of care. Improvements in teamwork and resiliency can help decrease emotional distress, prevent burnout and improve quality of care. Despite this evidence, implementation of psychosocial services in NICUs lags behind [4].

Over the past 15 years, about a dozen psychological interventions have been developed for parents, however, they are limited in efficacy and sustainability. A meta-analysis revealed no intervention effects for depression and anxiety at post-intervention, but depression improved at follow-up (6 months-8 years later) a " sleeper effect [5]." This limited efficacy may be because interventions: Focus on reducing distress for either depression, anxiety or posttraumatic stress, although they are frequently co-morbid, often exclude parents who are non-biological mothers, even though all parents report distress, overlook relationship dynamics, despite interdependence of stress and rarely include patient or provider perspectives, limiting clinical utility. The lack of sustainability may be, in part, the result of limited efficacy as well as variability in methodology (duration; 3 days-12 months amount of time: 0.6 hrs-22 hrs) and the high refusal rates (~30%) and attrition (~20%). Parental participation challenges may be related to inadequate clinical and multidisciplinary support-NICU practitioners may not be aware of or involved in psychosocial clinical research. For these reasons, no interventions have been implemented as part of clinical care. In addition, few interventions for staff burnout exist and only one resiliency program has been developed for NICU staff. This web-

based intervention exhibited efficacy in reducing burnout in staff within a pragmatic RCT. However, 44.3% of eligible staff enrolled in the program, suggesting possible resistance among staff and a need for standardized mental health support [6]. Overall, psychosocial care in the NICU is limited because current interventions for parents tend to lack post-intervention efficacy or effectiveness; few staff programs exist; resources and support for psychosocial programs are limited and researchers and clinicians are working in silos. The need for innovative strategies to enhance psychosocial care is clear [7].

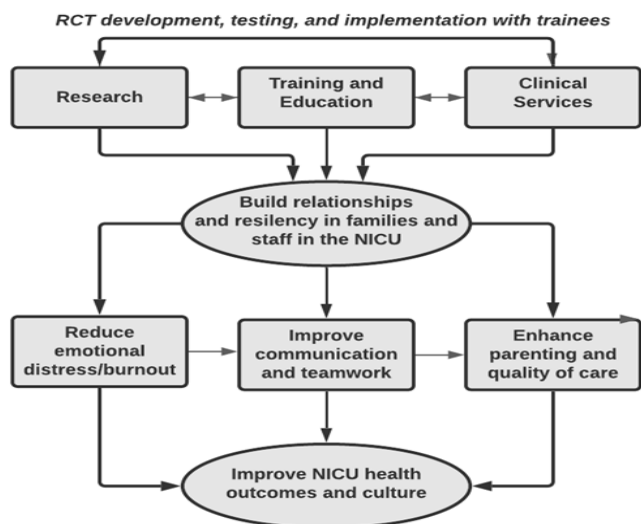
Comprehensive psychosocial resources are necessary for everyone in the NICU—both families and staff and may be best achieved through clinical-research-trainee collaborations. This displays the proposed conceptual model. Clinical investigators who have the skills and expertise to secure funding can build research-clinical-training programs to develop and test interventions for feasibility-acceptability and efficacy-effectiveness, train the next generation of researchers and clinicians and offer clinical services through research and trainee support [8]. Such a program has been successful in the neurosciences intensive care unit, with efficacy-effectiveness testing ongoing [9]. Given challenges of securing funding, collaborations with medical and nursing leaders is essential to ensure the support and acceptance of psychosocial initiatives. Programs that aim to improve resiliency and relationships are ideal given their positive impact on parental emotional distress, staff burnout and ultimately, parent-child interactions and quality of care. To enhance sustainability, virtual programs may be an innovative way to overcome physical and financial barriers to larger-scale implementation [10]. It is our responsibility, as NICU providers and collaborators; to work together to implement the psychosocial recommendations and NIPU vision to improve NICU culture and long-term adjustment of families, staff and children (Figure 1).

## Conclusion

At Massachusetts general hospital, we developed a multidisciplinary collaboration with NICU leadership, clinical psychologists (expertise in intervention design), neonatology, nursing, social work and psychiatry. We are building the infrastructure needed to develop and test psychosocial interventions. Currently, we are conducting prospective research to examine resiliency and relationships among parents in the NICU. We plan to conduct qualitative interviews with families and medical stakeholders and develop a virtual, relationship-based, resiliency program for parents in the NICU (and ultimately staff). We hope that a cost-effective, accessible, virtual intervention will set the stage for a new standard of care across NICUs. We urge colleagues to develop multidisciplinary initiatives and consider innovative ways to enhance and sustain psychosocial services for NICU families and staff.

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**Figure 1:** Proposed conceptual model for NICU psychosocial programs.