NICU2Home

Navigation & Discharge Coordination



Proven Results: NICU2Home Impact Summaries

Concise summaries of published research and presentations showing how ***NICU2Home enhances*** discharge preparation, care coordination, and family confidence.

An mHealth intervention to support psychosocial well being of racial and ethnically diverse families in the neonatal intensive care unit. Garfield, C. F., Santiago, J. E., Jackson, K. L., Patra, K., Loughead, J. L., Fisher, J. B., O'Sullivan, K., Christie, R., & Lee, Y. S. (2025, May). Journal of Pediatrics, 280, Article 114470. https://doi.org/10.1016/j.jpeds.2025.114470

Study Details: A quasi-experimental study, time-lapsed design across 3 NICUs; Data collection at NICU admission (AD), discharge (DC), and 30 days post-discharge (DC+30)

- **Study Sample(s)**
  - Initial Analysis: 400 participants across 3 Level III NICUs
    - Representing distinct infants, (156 intervention; 244 control)
  - Secondary Analysis: 156 participants
    - Subsample of parents with infants born < 32 weeks' gestation (75 intervention; 81 control)
- **Measures**
  - Parental Sense of Competence (PSOC), stress, anxiety, and social support (with subscales)
    - Subscale of emotional/informational support & positive social interaction

Findings:

- **Primary Study Findings - similar in each study arm**
  - Significant increase in parental sense of competence (AD-DC, DC+30)
  - Decrease in stress (AD-DC+30)
  - Decrease in anxiety (AD-DC, DC+30)
  - Increase in social support (AD-DC)
- **Secondary Analysis of all infants born <32 weeks' gestation**
  - Decreased stress (AD-DC+30)
  - Significant increase in social support among participants who self-identified as Black
    - Significant increase in subscales of emotional/informational support and positive social interaction
- **Potential Key Implications**
  - Concise educational content enables parents to absorb information at their own pace, away from the bedside hustle, ask questions, and engage with providers more equitably, which helps them feel more supported during a stressful time.
  - By offering real-time visibility into who is caring for their infant and daily clinical updates, the app may promote transparency, fostering greater trust and a more profound sense of inclusion among this vulnerable parent population.

AngelEye HEALTH

A mobile health intervention to support parenting self-efficacy in the neonatal intensive care unit from admission to home. Garfield, C., Kerrigan, E., Christie, R., Jackson, K. & Lee, Y. (2022, May). Journal of Pediatrics, 244:92-100

Study Details: A quasi-experimental, time-lagged study in a large, Level III NICU

- **Enrollment:**
  - Control period enrollment: April - August 2018
  - Intervention period enrollment: February - October 2019
  - 298 Parents of premature infants (256 completed 1 or more PSOC screenings)
    - Control group, 43%; Intervention group, 57%
- **Measures**
  - Parental self-efficacy (PSOC): at day of life 7; 1 day before discharge, then 14, and 30 days post-discharge
  - Used validated self-reporting method to measure parental self-efficacy and confidence

Findings:

- **Primary Outcome**
  - Parental Sense of Competence (PSOC)
    - Parents in intervention group consistently reported higher PSOC scores compared to control group from first measurement and onward
    - Average and above-average users had significantly higher PCOS scores compared with controls or below-average users
  - Taps per Day (intervention group)
    - Average use of app 15 taps/day
      - Above-average group - 29 taps/day
      - Average group - 12 taps/day
      - Below average group - 5 taps/day
- **Key Points**
  - Parents of premature infants who used NICU2Home, especially those who used it more frequently, reported consistently higher self-efficacy throughout the study period compared to the control group.
  - Solutions like NICU2Home are valuable in helping parents navigate challenging and stressful situations.
  - Parental self-efficacy has been linked to positive outcomes for child development: improved parent-infant bonding, parental wellness, and competence, plus decreased parental stress and anxiety.

Supporting parents of premature infants transitioning from the NICU to home: A pilot randomized control trial of a smartphone application. Garfield, C. F., Lee, Y. S., Kim, H. N., Rutsohn, J., Kahn, J. Y., Mustanski, B., & Mohr, D. C. (2016, May). Internet Interventions, 4(Pt 2), 131–137. https://doi.org/10.1016/j.invent.2016.05.004

Study Details: A 4-week randomized controlled trial

- **90 Parents of Very Low Birth Weight Infants (VLBW)**, randomized to usual care (n=44) or usual care + NICU2Home (n=46).
- **Measures**
  - Parental Sense of Competence (PSOC) at baseline, day after discharge, and 2 weeks post-discharge
  - Secondary Outcomes: preparedness for discharge and length of stay

Findings:

- **Primary Outcome**
  - Parental Sense of Competence (PSOC)
    - 7% increase in intervention group compared to control group
    - 14% increase above average user vs control (dose-dependent improvement)
    - 11% increase average user vs control
    - 6% increase below average user vs control
- **Secondary Outcomes**
  - Decreased Length of Stay (LOS)
    - LOS 1-day shorter for above-average users compared to control group
  - Discharge Preparedness - Feeling prepared for their infant's discharge
    - Intervention group reported higher endorsements compared to control group
    - Above average user group had higher endorsements compared to all other groups
- **Key Points**
  - Parents of VLBW infants had improved parental self-efficacy and discharge preparedness - largely influenced by usage of NICU2Home.
  - Low parental self-efficacy associated with depression; children with overly concerned parents may have restricted social development and behavioral problems.
  - Parents who are well-supported by NICU2Home feel more confident and prepared for discharge, resulting in shorter infant LOS.

Proven Results: NICU2Home Unpublished Data

NICU2Home feedback from nurses

- 92% strongly agree helps parents better understand baby's stay in NICU
- 80% strongly agree improved communication between staff and family
- 95% strongly agree daily update useful in keeping parents aware of the baby's progress in last 24 hours

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