

PREEMIE PROGRESS: A Video-Based NICU Intervention

Bailey, R. (BS), Reigel A. (BA), Gerber A. (BS), Weber A. (RN, PhD)
Case Western Reserve University, University Hospitals

Results

Figure 1— Priority Modifications to PREEMIE PROGRESS: Video Series and Website Modifications that were the highest priority are presented above, with corresponding excerpts from expert interviews demonstrating need for adjustment. Corresponding concepts from the FRAME and RE-AIM theoretical models are included., as well as future directions for continued refinement.

Priority Adjustments Identified	Excerpt Quotes and Summaries	RE-AIM Concepts	FRAME Concepts	Modifications Made to Date	Future Directions
Increase Gender and Racial/Ethnic Diversity of PREEMIE PROGRESS	<p>"I think every single time and it doesn't happen much but maybe three times, when the text is talking about signs of stress or your baby is stressed, it's always a Black baby or a Black mom."</p> <p>"Really, there is not a whole lot of dads in the video."</p> <p>"If there are any other families configurations that you can include in so it's not just mom or dad or Black or White. If you've got any Hispanic families that you can add in but just to even it up as much as possible."</p>	<p>Increasing Reach of the Intervention</p> <p>Planned, Proactive Modification</p>	<p>Addressing health equity and cultural norms at the implementer and researcher level</p>	<p>Addressing the heterogenous NICU Cultures across the country (normalizing Kangaroo Care)</p> <p>Acknowledge healthcare worker implicit bias based on gender, race and ethnicity</p> <p>Included images for fathers and minorities</p> <p>Equalized representation of children when displaying positive, neutral and negative topics (i.e. displaying both white and black babies when discussing NICU stress)</p>	<p>Include Closed Captioning for Parents with Hearing disabilities</p> <p>Increase usability of PREEMIE PROGRESS for working parents</p> <p>include dubbing/subbing for additional languages</p>
Website Modifications (Graphics, navigation, layout)	<p>Throughout every expert interview, a standardized question set identified glitches, bugs and technical issues that needed to be addressed. This guided a continuous refinement process.</p>	<p>Increasing Adoption and Addressing Implementation Barriers</p>	<p>Tailoring, tweaking, refining</p>	<p>Significant remodeling of PREEMIE PROGRESS website to increase usability</p>	<p>Optimize layout for use with mobile phones</p> <p>test additional operating systems (android, iOS) especially previous versions</p>
Include Actual Examples of NICU Parents in PREEMIE PROGRESS Videos	<p>"what challenges do families face in the NICU? That was a question that she was asked and my only comment on that was it'd be nice if you actually had families answer that question rather than the nurse."</p>	<p>Mechanisms of Effectiveness</p>	<p>Content additions to increase health equity at the parent/patient level</p>	<p>Modified scripts to include concepts from interviews</p>	<p>Add direct video clips of NICU parents discussing challenges, goals, and strategies for their real-world experience of raising a premature child</p>
Conceptual Changes	<p>"You are looking for things that measure things you think are important to you. You have to think how much of my intervention will help a parent cope generally with this baby and how much of it is about while their body is in the NICU."</p> <p>"There must be a couple of times where it's talking about how important parents are in rounds and yet visually, it's very apparent that there is no parent in the rounds. You've got to put those together."</p>	<p>Mechanisms of Effectiveness</p>	<p>Integrating another implementation strategy</p> <p>Tailoring, tweaking, refining</p>	<p>Modified PREEMIE PROGRESS scripts to normalize emotions experienced in the NICU environment</p> <p>Visually model ideal parent engagement in the NICU</p> <p>Provide definitions for Theories, Scope of the intervention (NICU vs Post-discharge), Process and Outcome Measures Utilized</p>	<p>Incorporate Stanford Self-Management Website Material</p> <p>Incorporate McMaster General Family Assessment Scale</p>
Teaching Methods	<p>"If the nurse doesn't let you do this or the team doesn't let you do this, ask why and what milestones need to be met for you to do kangaroo care, mouth care, XYZ"</p> <p>"I think that all fathers could use some coaching to be involved in every aspect of a child because it makes you feel closer to the child and it makes the child feel closer to you."</p> <p>"...preparation for the nursing staff... So that if a parent has completed a problem sheet...the nurse could be helped to understand what it's all about and its significance."</p>	<p>Addressing Barriers to Implementation</p>	<p>Integrating another implementation strategy</p>	<p>Implemented Quiz Questions and downloadable worksheets</p>	<p>Provide standardized guidance to families and NICU clinicians on goal-setting and education in response to PREEMIE PROGRESS lessons</p> <p>Referral to educational resources and support groups for NICU Parents</p>
Seeking Feedback from Parents	<p>"ask how could I continue to refine this intervention to be more helpful to you in managing those stressors?"</p> <p>"I think you're presenting it to people that this is pilot work, so it's really important for them to give you input on what they thought was working and what they thought wasn't working or what is in some ways too much to expect from them."</p>	<p>Maintenance</p>	<p>Parent and Patient Level Context</p>	<p>Incorporating feedback boxes in PREEMIE PROGRESS videos</p>	<p>Seek feedback from clinicians utilizing preemie progress as a supplementary resource</p>

Background

PREEMIE PROGRESS is a web-based video series intended to educate parents of premature children on the NICU environment. Aim 1 for the K23 Grant for this Randomized Control Trial is to modify and optimize the website and video series, with the end-goal to implement the program nationally.

Population

English-speaking parents age 18 years or older of Premature Infants born 25-32 weeks gestational age

Learning Objectives

Learn the strengths and differences of Qualitative Research, Quantitative Research, and Mixed Methods Approaches for Public Health.

Develop skillsets for working within an interprofessional research environment, including the synthesis and analysis of new data, generation of reports (i.e. posters, publications), and day-to-day coordination of research logistics.

Participate in the process of refining an evidence-based intervention that will be implemented in a randomized control trial. This includes applying initial methodology, and applying ethnographic methods to codify unmeasured aspects of care.

Methods

Expert interviews were conducted through a semi-structured interview format. Recordings were then transcribed, matched with Redcap Demographic Data and qualitatively coded using Dedoose Software.

Deductive Coding was based on RE-AIM (Glasgow, 2020) and FRAME theoretical models (Witsley Stirman, 2019). These models allowed for dynamic modifications and adaptations to the intervention, utilizing an evidence-based workflow designed for systematic documentation of the reasoning, goals, impact, and nature of the modification.

Activities

Research Coordination and training of new personnel
Qualitative Coding and Ethnographic Memo'ing

Deliverables

Standard Operating Procedures for Lab Functions
Qualitative Coding Database

Lessons Learned

Every family's journey through the NICU is a unique experience. Considering the nested individual and the complex and interrelated influences on health promotion and chronic disease management requires a holistic approach.

Public Health Implications

Developing a standardized family management educational video series will allow NICU clinicians to foster a family-centered care model that promotes health and optimizes outcomes for premature children. This can help address the disparities in neonatal mortality which are prevalent in the Cleveland area.

Acknowledgements

Kristin C Voos, MD, FAAP, Tamlyn M. Bakas, PhD, RN, FAHA, FAAN, Jared B. Rice, DHSc, MSN, CCRN, RNC-NIC, Heather L. Tubbs-Cooley, PhD, RN, FAAN, Matthew J. Rota, PhD, Heather C. Kaplan, MD, MSCE

QR Code for Presentation:



SCAN ME