

Supporting the Development of Preterm Newborns

Summary of Evaluation Findings

Vida Health Communications, Inc. (Vida) produced two DVD programs that provide information about preterm infant brain development and its implications for newborn care in the Neonatal Intensive Care Unit (NICU):

- *No Matter How Small; A Parents' Guide To Preterm Infant Behavior And Development* - for parents
- *Focus on the Brain Part 1: The Science of Preterm Infant Development* - for clinical staff

The impact of these programs on the users was evaluated in a rigorous clinical trial. The evaluation examined three research questions:

- 1) Whether the DVD for parents would significantly increase knowledge and confidence and reduce stress levels of parents of newborns in the NICU when compared to parents receiving the usual education and support,
- 2) Whether the DVD for NICU staff would significantly increase nurses' knowledge of, and positively influence their attitudes about, preterm infant brain development, and,
- 3) Whether the programs would positively influence the environment of care in the NICU such that there is an overall trend toward developmentally supportive care.

Key Findings

1. NICU parents who viewed *No Matter How Small; A Parents' Guide To Preterm Infant Behavior And Development*:

- Gained in their knowledge of fetal and neonatal development,
- Exhibited reduced levels of parental stress, and
- Displayed increased parental confidence in applying developmentally supportive care concepts,

when compared to parents who did not view the DVD program. The increase in parents' confidence in applying developmentally supportive care concepts persisted after three months.

2. NICU staff who viewed *Focus on the Brain Part 1: The Science of Preterm Infant Development*,

- Gained in knowledge
 - Across five combined domains regarding developmentally supportive care.
 - Specifically about developmentally supportive care strategies and techniques, and
 - Specifically about the importance of developmentally supportive routine care and medical procedures.
- Exhibited an improved attitude towards developmentally supportive care

when compared to staff who did not view the DVD program. All of these changes persisted over three months, while combined knowledge actually grew during this time period.

3. The DVD programs appear to have had a significant influence on the environment of care, as the two single-intervention sites displayed positive gains across most or all studied domains.

Domain	No Intervention	Parent Intervention	Staff Intervention	Parent and Staff Intervention
Staff partnering with families	--	Positive	Positive	--
Staff creation of a developmentally supportive environment	--	--	Positive	Negative
Staff use of DSC strategies and techniques	--	Positive	Positive	--
Staff attitudes about DSC and changes over the course of the study	--	Positive	Positive	--
Parents ability to offer DSC	--	Positive	Positive	--

Note: Blank cells represent a lack of observed changes in study environments.

The effect the DVD program had on parent and staff knowledge is clear and valuable. However, the effect on parental confidence and stress, staff attitudes, and the environment of care may prove ultimately to be more important. Qualitative analysis of interviews indicates that the DVD programs were valued and had an impact. Taking the quantitative and qualitative findings together, one can conclude that the DVD programs hold great promise.

Despite the intervention's effectiveness, other factors affecting the study NICUs, clinicians and parents are important to note. Factors other than the interventions affected the study NICUs, clinicians and parents are worthy of note. NICUs are highly specialized environments rife with life and death pressures and a host of social, medical, financial, and organizational factors at play. The study sites varied greatly in physical design and in their culture, leadership and institutional profile regarding developmentally supportive care. Although the quasi-experimental aspect of the design was added to counterbalance limitations of randomizing only four sites, these other factors still had the potential to confound the study findings or frustrate its conclusions. It is, therefore, all the more important to report these results.

These DVD programs provide powerful, cost-effective tools to promote healthy infant brain development in today's healthcare environment, where time and dollars for patient and clinician education and support are always under pressure. They offer flexibility of administration: They can be used in a classroom or small group, or self-administered, and can be repeated or viewed non-sequentially at the convenience of the user. By utilizing modern media formats and technologies, Vida has been able to create cost-effective and reusable tools with great potential to move the substantive body of research knowledge about the power of developmentally supportive care from the "bench" to the bedside.

Intervention

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