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Editorial

Mounting evidence favoring single-family room neonatal intensive care

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Abstract. Controversy regarding the optimal design for neonatal intensive care has existed for more than 20 years. Recent evidence confirms that in comparison with the traditional open-bay design, the single-room facility provides for improved control of excessive noise and light, improved staff and parental satisfaction with care and equal, or possibly reduced, cost of care. Single-room care was not associated with any increase in adverse outcomes. To optimize long term developmental outcomes, single-room care must be augmented with appropriate developmental therapy and programs to actively support parental involvement.

Keywords: Evidence-based NICU design, outcomes of care, single-family room NICU

Controversy has existed for nearly 20 years regarding the ideal design for neonatal intensive care units (NICU). Debate has continued due to the fact that much of the evidence, until recently, has been anecdotal. A number of substantial research investigations have been published in recent years which serve to shift the weight of evidence toward the single-family room (SFR) with appropriate developmental and family support.

In our early work, we documented the improved ability to control environmental factors such as sound and light exposure in the SFR [1]. We also reported improved staff [2] and parent [3] perceptions of care. In this journal, we published no significant increase in adverse medical outcomes with SFR care [4]. In all of our research, developmental therapy implemented by appropriately trained neonatal developmental specialists were used in both the open bay and SFR environments, possibly reducing the impact upon many of the variables measured.

Recently, Lester et al. [5] have published compelling information regarding improved outcomes of NICU neonates, but only with appropriate developmental care in the SFR environment. Not all of the evidence regarding SFR design has been positive. Pineda et al. [6] questioned whether the long-term development of neonates cared for in the SFR is less advanced than those cared for in a traditional open-bay facility. This

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author has also described the potential for increased maternal stress in the SFR NICU [7].

Recently, we have published findings that the direct cost of NICU care in the SFR is no greater, and is very likely less, than the traditional open-bay facility [8]. In a theoretical business plan for a SFR NICU, using data from two independent studies [8, 9], Shepley et al. demonstrated that the cost of constructing a SFR NICU may be recuperated within the first 12 months of operation [10].

In light of substantial evidence accumulating in favor of the SFR NICU, it is evident that care may be provided safely, efficiently and at no added cost. As pediatricians have known for decades, all pediatric care must be augmented by appropriate developmental support primarily by parents and enhanced by health providers when necessary. All NICU care must be provided with close attention to developmental support by the medical, nursing and administrative teams. In instances were parental involvement is limited, multibed facilities may be developmentally preferable for stable neonates.

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Disclosure statement

None of the authors have financial disclosures or conflicts of interest to declare.

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