



## KEY POINT SUMMARY

### OBJECTIVES

The objective of this article is to report on the observations of an interdisciplinary staff of a Single Family Room NICU unit after moving from a large open room NICU.

## From “Baby Barn” to the “Single Family Room Designed NICU”: A Report of Staff Perceptions One Year Post Occupancy

Cone, S. K., Short, S., & Gutcher, G. 2010 | *Newborn & Infant Nursing Reviews*. Volume 10, Issue 2, Pages 97-103

### Key Concepts/Context

Single Family Rooms (SFRs) are becoming an increasingly popular design model in the care of critically ill preterm infants. The advantages of this physical environment to the infant, family and care providers is well documented. Yet, the authors surmise, the lack of widespread awareness of the advantages deters healthcare professionals from taking advantage of the scope to improve their physical environment. The authors hope that the conclusions from their study of a newly designed SFR NICU will add to the knowledge base on the advantages of the single patient room in the case of critically ill preterm infants.

### Methods

Data for this study was collected from a post-occupancy survey administered to 107 members of the staff of a NICU unit 12 months after it was moved to a new building with SFR NICUs. Seventy-nine members of the team (with previous experience in the Open Design NICU) responded to the survey and they included nurses, physicians, respiratory therapists, and other support service personnel.

### Findings

In comparison to an Open Design NICU, 91% of the staff considered the SFR NICU to be better in terms of patient care delivery; 68% felt that it reduced stress for nursing staff; that it provided a more conducive environment for the development and care of preterm infants and an environment of privacy and confidentiality for their parents. Also, although 44% were apprehensive about isolation before moving to an SFR, only 35% reported feeling more isolated from co-workers in the new unit; 60% reported that although parents preferred the SFR to the old Open Room Design, there was no substantial change in their visitation patterns; they stayed



longer but rarely stayed the night. The staff indicated the biggest benefits of the SFR environment was that it was more family-oriented; resources were closer and had low stimulation.

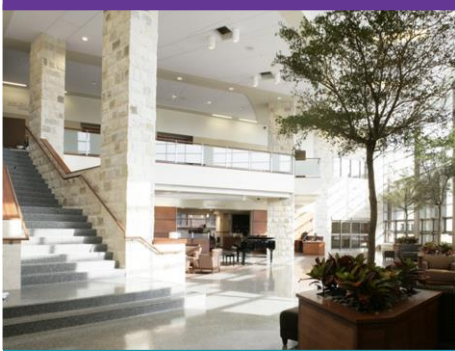
There was an overall feeling that the SFR provided a safe environment for the care of preterm infants -70% indicated that the SFR environment was not dangerous to the ventilated infant; 77% said that patient monitoring, alarm management, duty assignment and staff location technology contributed to the safety of the infants; over 70% felt positive about safety during emergency situations, infant security, evacuations, and accessibility to visitors; and 77% felt that availability of in-room sinks and waterless hygiene dispensers had improved hand hygiene. Some of the staff indicated they missed having a co-worker right there during an emergency or just as a second pair of eyes along with the ability to walk around and see all the infants

In reference to staffing assignments, 56% of the respondents agreed that the patient-staff ratio should remain at 2:1. About 70% of the respondents felt the SFR model increased the distances nurses walked; centralizing the supply storage was met with positive responses from 95% of the staff, and 93% responded positively about the efficacy of the bedside supply cart.

With regard to orientation of a new employee or the preparing a parent for discharge of their infant, 83% of the staff felt that the SFR was suitable for training and learning.

### Limitations

1. The study would have been more rigorous if a similar survey had been administered to the staff in the old unit and its findings submitted along with those from the new unit.
2. It is unclear from the tables and the text as to what data analysis was conducted by the researchers. In the absence of a comparative survey, the relevance of the P-value is not understood.
3. The authors do not disclose the presence or absence of conflict of interest.
4. There is no reference to IRB.
5. The authors mention that part of the questionnaire was based on the concerns and fears of the staff. But there is no indication as to the circumstances under which or the sources from which this information was collected.



The Center for Health Design:  
Moving Healthcare Forward

The Center for Health Design advances best practices and empowers healthcare leaders with quality research that demonstrates the value of design to improve health outcomes, patient experience of care, and provider/staff satisfaction and performance.

Learn more at  
[www.healthdesign.org](http://www.healthdesign.org)

## Design Implications

Although this study is supportive of the SFR for preterm infants, there are indications from the study that the designer may take into consideration the following aspects when designing these rooms:

- Visual access of patients,
- Visual access to other staff members,
- In-room hand hygiene provisions,
- Provision of bedside supply carts and a centralized storage space for the unit, and
- Space for a “meeter/ greeter” at the unit entrance.

The Knowledge Repository is provided with the funding support of:



Additional key point summaries provided by:



RESEARCH DESIGN  
connections