



## KEY POINT SUMMARY

### OBJECTIVES

This paper reviews the cost implications of SFR design and compares those to its quantifiable benefits.

## The Business Case for Building Better Neonatal Intensive Care Units

Shepley, M., Smith, J.A., Sadler, B.L. & White, R.D. 2014 | *Journal of Perinatology* Volume 30, Issue 11, Pages 811-815

### Key Concepts/Context

There is increasing evidence that the physical environment of the Neonatal Intensive Care Unit (NICU) has a tangible effect on the vulnerable infants who spend the first crucial weeks or months of their life there. While many aspects of NICU design have been evaluated, none is more notable than the single-family room (SFR) concept because of its many potential benefits, possible hazards, and its increased cost of construction. Data is now available to allow us to establish a cost-benefit analysis of SFR design in the NICU by assessing its impact on operating costs.

### Methods

This paper uses literature review and cost-benefit analysis methods to assess the relationship between design features and capital costs. The authors also enumerate non-quantifiable benefits and hazards of SFR design and describe additional desirable, evidence-based design aspects for those who are considering new NICU construction or major renovation.

### Findings

The incremental cost of constructing a NICU with mostly single-family rooms rather than placing all beds in a multiple-bed room design may be recouped after the first year of operation, with substantial operating savings each year thereafter.

### Design Implications

There may be valid reasons for not placing some babies in an SFR NICU room, but financial barriers are not among them. Therefore, SFRs are considered to be a reasonable option for those considering the construction or renovation of NICUs.



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## Limitations

Insufficient evidence is available to draw additional inferences. If additional observed benefits were quantifiable, the savings from SFR design could be much greater.