

NICU private rooms save money, avoid costly infections

February 16 2017, by Blaine Friedlander

Newborns in neonatal intensive care units require lots of love. So when doctors put babies – and their families – into private hospital rooms, it may seem expensive. But when in private rooms, babies heal faster, saving hospitals the cost of longer treatment.

With those savings, the construction costs of private rooms rather than old-style open bay intensive care units are justified, according to a new Cornell study published Jan. 25 in the *Journal of Intensive Care Medicine*. The study illustrated the financial implications – from a hospital's perspective – of current best practices in neonatal [intensive care unit](#) design.

"Scientific evidence points toward the benefit of private single-family rooms over open bays in the hospital, and providing lower costs for care," said lead author Hessam Sadatsafavi, a postdoctoral researcher in the Cornell Institute for Healthy Futures and the Department of Design and Environmental Analysis in the College of Human Ecology. "While private single-family units require additional space, come with higher initial [construction costs](#), ongoing operation and maintenance expenses, it does lower long-term costs of care."

Due to hospital-acquired infections, extra medication, using lab and support services, and personnel and supply expenses, the overall costs for medical centers soar when newborns are hospitalized for a longer period of time, said Sadatsafavi. He and his colleagues found that by building a private single-family room in a [neonatal intensive care](#) unit, a hospital

will gain between \$1.30 and \$1.80 for each dollar invested by avoiding the cost of longer hospitalization, and lowering the need for medications, support services, personnel and supplies.

"These babies are incredibly frail. Birth is supposed to be a positive and thrilling moment in a parent's life. Instead, when a baby is placed in [intensive care](#), the experience becomes excruciatingly painful and a frightening," said Mardelle Shepley, professor of design and environmental analysis.

"With the traditional open bays, you would walk into a room full of very ill babies. It was noisy due to the activity and alarms going off," said Shepley. "Now we recognize the need to provide research-informed healing environments – where families can nurture their newborn children. We have moved from intimidating families to creating environments that are more supportive."

More information: Hessam Sadatsafavi et al. Probabilistic Return-on-Investment Analysis of Single-Family Versus Open-Bay Rooms in Neonatal Intensive Care Units—Synthesis and Evaluation of Early Evidence on Nosocomial Infections, Length of Stay, and Direct Cost of Care, *Journal of Intensive Care Medicine* (2017). [DOI: 10.1177/0885066616689774](#)

Provided by Cornell University

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