

Admission rates increasing for newborns of all weights in NICUs

July 27 2015

Admission rates are increasing for newborns of all weights at neonatal intensive care units (NICUs) in the United States, raising questions about possible overuse of this highly specialized and expensive care in some newborns, according to an article published online by *JAMA Pediatrics*.

The neonatal mortality rate has fallen more than four-fold (from 18.73 per 1,000 live births to 4.04 per 1,000 live births in 2012) since the first NICU opened in the United States 55 years ago to provide highly specialized care to premature and sick [infants](#).

Few studies have looked beyond very low-birth-weight infants admitted to the NICU to examine how neonatal care relates more broadly to newborn care. A 2003 revision to the U.S. Standard Certificate of Live Birth includes a new field to indicate whether a newborn was admitted to the NICU, which allows researchers to study trends in [neonatal intensive care](#) for the majority of the U.S. newborn population across time.

Wade Harrison, M.P.H., and David Goodman, M.D., M.S., of the Dartmouth Institute for Health Policy and Clinical Practice, Geisel School of Medicine at Dartmouth, Lebanon, N.H., looked at data for nearly 18 million live births to U.S. residents from January 2007 through December 2012 in 38 states and the District of Columbia.

The authors found overall admission rates increased from 64.0 to 77.9 per 1,000 live births and that admission rates increased for all birth weight categories.

More specifically, the study reports that in 2012 there were 43 NICU admissions per 1,000 normal-birth-weight infants (2,500 to 3,999 grams), while the admission rate for very low-birth weight infants (less than 1,500 grams) was 844.1 per 1,000 [live births](#).

From 2007 to 2012, NICUs increasingly admitted term infants of higher birth weights and by 2012, nearly half of all NICU admissions were for normal-birth-weight infants or for those born at 37 weeks gestation or older, according to the results.

The authors note they cannot say from their data whether the lower admission rates in 2007 or the higher rates seen more recently are closer to the correct rate.

"Newborns in the United States are increasingly likely to be admitted to a NICU, and these units are increasingly caring for normal-birth-weight and term infants. The implications of these trends are not clear, but our findings raise questions about how this high-intensity resource is being used," the study concludes.

In a related editorial, Aaron E. Carroll, M.D., M.S., of the Indiana University School of Medicine, Indianapolis, writes: "Once again, it is critical to stress that the important work of Harrison and Goodman does not prove that the increased NICU admissions we are seeing are fraudulent or even merely wasteful. It is entirely possible that the admissions are justified. However, there is no doubt that they are expensive and carry potential harm. If hospitals want to argue that NICUs are necessary, they will need to prove that the need exists, especially in light of the increasing share of infants admitted who are at or near full term. If hospitals are unable to demonstrate that NICUs are necessary, then it is very likely that, at some point in the near future, policies will force them to reduce those admissions, which will have major implications for NICU and hospital finances."

More information: *JAMA Pediatr.* Published online July 27, 2015.
[DOI: 10.1001/jamapediatrics.2015.1305](https://doi.org/10.1001/jamapediatrics.2015.1305)

JAMA Pediatr. Published online July 27, 2015. [DOI: 10.1001/jamapediatrics.2015.1597](https://doi.org/10.1001/jamapediatrics.2015.1597)

Provided by The JAMA Network Journals

Citation: Admission rates increasing for newborns of all weights in NICUs (2015, July 27)
retrieved 20 January 2024 from <https://medicalxpress.com/news/2015-07-admission-newborns-weights-nicus.html>

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