

The Resource Utilization Inflection Point: A New Way to Look at Readiness for Discharge

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High-risk infants who warrant a stay in a neonatal intensive care unit (NICU) require significant hospital resources until they meet criteria for moving to a step-down nursery or discharge. How consistent are different NICUs in their lengths of stay for similar types of neonatal problems and how can we measure whether a NICU stay is too long, too short, or just right? To answer that question, Goldin et al ([10.1542/peds.2019-3708](#)) in a new study in our journal introduce us to a new measure—the resource utilization inflection point (RU-IP), defined as the point in time when a NICU patient's total daily standardized cost falls to <10% of the mean first-day NICU room-cost and then stays at that level until discharge. The authors looked at RU-IPs for 43 different NICUs and 80, 821 infants and found significant variation in the days beyond the RU-IP for infants, the total standardized cost of hospital days beyond the RU-IP, and the percentage of patients who are post the RU-IP and still hospitalized. In aggregate 24.3% of total NICU days were post the RU-IP and contributed to \$483,281, and 268 in costs. Most notably the percentage of infants reaching an RU-IP ranged in these NICUs from 33.1 to 98.7%. The authors go so far as to share factors and conditions associated with fewer days post-RU-IP and those with increased days. Rather than highlight them, link to this study, learn about the RU-IP and then see what it means for the length of stay in the NICU that cares for your high-risk infants. The authors hope that the RU-IP will be reported by all hospitals and best-performers will teach those who need improvement how to shorten length of stay without compromising outcomes such as readmissions or patient safety.

Doesn't this new way to look at length of stay for neonates sound promising for standardizing length of stay across institutions? While it certainly is worth learning about and using as a metric for driving improvement in discharge variability across NICUs, an accompanying commentary ([10.1542/peds.2020-006213](#)) by Harvard Medical School neonatologists Drs. John Zupancic, Sarah Kunz, and DeWayne Purseley reminds us of the other factors that can affect a discharge and may slow it down even if a baby is quantitative ready by reaching the RU-IP for discharge. The availability of adequate nursing care for an infant to transition to home where such nursing care may not be available, or even the home environment and family structure itself can delay going home if resources are not in place in that environment for a safe discharge. While the RU-IP is a start at standardizing discharge criteria for a particular neonatal set of problems, additional metrics will be needed, and the commentary suggests what those might be. Learn about the points made in this study and commentary that will introduce you to the Resource Utilization Inflection Point—and then share what you learn with our NICU colleagues to see what improvements can be made in the safe, cost-effective discharging of babies in ways that reduce variability in overall length of stay.

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