



QI project reduces nighttime vital sign monitoring

March 1, 2022

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Article type: [Health Briefs](#)

Topics: [Fetus/Newborn Infant](#), [Hospital Medicine](#), [Hyperbilirubinemia](#), [Quality Improvement](#), [Sleep Medicine](#)

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- Lin HM, et al. *Hosp Pediatr*. <https://bit.ly/3KBLdan>.

A quality improvement intervention led to a significant reduction in vital signs taken at night in infants hospitalized with low-risk conditions, and no adverse events occurred.

Studies have shown that sleep is important for recovery during hospital stays. Yet, it is common to obtain vital signs every four hours (Q4H), even though little evidence supports the practice.

Researchers at an academic children's hospital aimed to reduce vital sign monitoring from midnight to 6 a.m. to improve sleep in patients admitted for hyperbilirubinemia and failure to thrive. These patients were chosen because they were at low risk of clinical deterioration.

The project had three plan-do-study-act (PDSA) cycles that included educating staff on the intervention; removing preselected vital sign frequency Q4H from the electronic health record and requiring manual selection; and displaying reminder signs at workstations.

From March 2020 through April 2021, 287 infants were admitted for hyperbilirubinemia with 467 inpatient nights, and 162 patients were admitted for failure to thrive with 1,083 inpatient nights. Patients' median age was 2.9 months and 38% were female.

Results showed vital sign checks decreased from 98% of patient nights in January 2019 (baseline) to 38% in January 2021. Routine vitals were not obtained for 708 patient nights during the study period. The authors

noted that most of the improvement came during the third PDSA cycle when they collaborated with nursing and patient care assistant (PCA) teams.

There were no adverse safety events, including emergent transfers or code blues outside the intensive care units, during the baseline or study periods.

Future studies should include additional patient populations and increase the amount of time without disruptions at night, researchers said.

“This project highlights how reducing excessive monitoring for stable patients is unlikely to lead to adverse clinical outcomes and that the frequency should be individualized to each patient and their clinical course,” the authors concluded. “Furthermore, eliminating vital signs on clinically stable patients hypothetically provides greater flexibility to nurse and PCA workflow to devote more time to higher acuity patients.”

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