

# Vital sign collection based on patient risk for clinical deterioration

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Nighttime frequency of vital signs monitoring for low-risk medical inpatients might be reduced, according to a research letter by Jordan C. Yoder, B.A. and colleagues at the University of Chicago.

Overnight vital signs are collected frequently among hospitalized patients regardless of their risk of clinical deterioration and these vital checks may have negative effects on low-[risk patients](#) such as patient distress and [sleep deprivation](#), according to the study.

In total, 54,096 patients were included in the study, accounting for 182,828 patient-days and 1,699 [adverse events](#) between November 2008 and August 2011. Researchers investigated whether the Modified Early Warning Score (MEWS) could identify low-risk patients who might forgo overnight vital sign monitoring.

The median (midpoint) evening MEWS was 2. The adverse event rate increased with higher evening MEWS. However, the frequency of vital sign disruptions was unchanged, with a median of two vital sign checks per patient per night and at least one disruption from vital sign collection 99.3 percent of the nights regardless of MEWS category. Almost half of all nighttime vital sign disruptions (45 percent) occurred in patients with a MEWS of 1 or less.

"Given these findings, further study of approaches to tailor vital sign collection based on risk of clinical deterioration is warranted and may help improve [patient experience](#) and safety in hospitals," the study

concludes.

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