

Impact of Pulse Oximetry Surveillance on Rescue Events and Intensive Care Unit Transfers: A Before-And-After Concurrency Study.

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Background

Some preventable deaths in hospitalized patients are due to unrecognized deterioration. There are no publications of studies that have instituted routine patient monitoring postoperatively and analyzed impact on patient outcomes.

Methods

The authors implemented a patient surveillance system based on pulse oximetry with nursing notification of violation of alarm limits via wireless pager. Data were collected for 11 months before and 10 months after implementation of the system. Concurrently, matching outcome data were collected on two other postoperative units. The primary outcomes were rescue events and transfers to the intensive care unit compared before and after monitoring change.

Results

Rescue events decreased from 3.4 (1.89-4.85) to 1.2 (0.53-1.88) per 1,000 patient discharges and intensive care unit transfers from 5.6 (3.7-7.4) to 2.9 (1.4-4.3) per 1,000 patient days, whereas the comparison units had no change.

Conclusions

Patient surveillance monitoring results in a reduced need for rescues and intensive care unit transfers.