Background:

Current protocol for post-operative patients admitted to medical-surgical/telemetry units states vitals are taken every 15 minutes for 1 hour, every 30 minutes for 2 hours and then every 4 hours for 24 hours. The purpose of this review is to determine if the frequency and duration of vital signs are required to identify a deviation greater than 20% of patient baseline. To date, published evidence-based research regarding the frequency and duration of vital signs to safely monitor post-operative patients is limited. The goal is to determine best practice in post-operative vital sign monitoring to ensure safe patient care.

Project Aim:

Determine frequency and duration of post-operative vital signs through detected deviations to recommend best practice.

Project Actions Taken:

A total of 742 post-operative patients’ charts were evaluated. A time-frame in which vital signs deviated greater than 20% from patient baseline was established from the data collected. A chart was created depicting these results; listing the total deviated by individual vital sign and time-frame.

Summary of Results:

Results show blood pressure and heart rate have the greatest deviation from baseline followed by pulse-oximetry. Temperature deviations are widespread, while changes in respiratory rate are seen within the first hour. Findings indicate vital signs can be taken less frequently in post-operative patients and deviations are still detected.

Outcomes:

- 742 patient charts were reviewed for 20% baseline deviations
- 65% of the patients reviewed had a 20% baseline deviation
- Blood Pressures were 50% of deviated vital signs
- Heart Rates were 45% of deviated vital signs
- 27% of deviations occurred 4-8 hours after admission
- 13% of deviations occurred 8-12 hours after admission
- 9% of deviations occurred 1.5 hours after admission
- 7% of deviations occurred 12-16 hours after admission

Interpretation:

Based on the results recorded, best times to take post-operative vitals, while still detecting deviations, are:

- Every 15 minutes for 30 minutes upon admission
- 1.5 hours after admission
- 4 hours after admission
- Every 4 hours for 20 hours