Correct ECG Placement Makes Sense ... and Makes the Difference
Vivian Mendoza, RN
Ben Taub General Hospital, Harris Health System
Ada Cortez, Shaiby Cherukara, Emely Babas, Veeda Miranda, Thushara Paul, Bindu Roy, Shanall Houston

Problem: Inconsistent practices among nurses when conducting 12 lead ECGs can result in inaccurate interpretations which may lead to less than optimal treatment plans. Nurses in a coronary care unit (CCU) identified an opportunity to improve practice consistency with 12 lead ECGs placement on patients with varying chest circumferences, for example when patients are obese or have large breast tissue volume.

Evidence: Studies of electrode placement have demonstrated that deviations of more than 20-25 mm from the standardized position can result in clinically significant ECG changes.

Strategy: EBP Process steps were followed to ASK a clinical question; GATHER and APPRAISE scientific evidence; implement identified best practice recommendations (ACT); and EVALUATE outcomes. Accurate 12 lead positioning and potential outcomes of incorrect lead placement were identified and best practice recommendations were implemented.

Practice Change: Education was provided to raise nurses’ awareness of the importance of correct ECG lead placement, with special consideration for lead placement on obese patients with wide chest circumference or large volume of breast tissue. In women, the placement of chest electrode ON the breast rather UNDER the breast is recommended in order to achieve accurate ECG results.

Evaluation: The EBP team assessed CCU nurses’ ECG skills, provided education with competency validation, and conducted follow-up evaluations to sustain practice for correct lead placement.

Results: Initial assessment revealed that only 22% of CCU nurses demonstrated skills for accurate 12 lead placements. After education and competency assessment, the accuracy rate increased to 100%. Ongoing assessment has supported that CCU nurses (100%) are consistently placing the 12 leads correctly.

Recommendations: Provide training, continuing education and ongoing skill assessment; use competency validation tools; employ measures to standardize practice; and develop guidelines for clinical areas where 12 lead ECGs are used as a diagnostic tool.

Lessons Learned: Adequate training and education regarding correct 12 lead ECG placements supports accurate interventions of high quality standards of care to achieve patient safety and optimal outcomes.

Bibliography:


ACE has published this as received and with permission from the author(s).