**BEST LEAD(S) REGARDING QT INTERVAL MEASUREMENT FOR BEDSIDE ECG MONITORING: A SYSTEMIC REVIEW**

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Objectives: To investigate the best lead(s) for QT interval measurement for accurately and practically measuring bedside ECG monitoring.

Background: Relevant literature shows inconsistency regarding lead(s) for measuring QT interval that are accurate and practical. Some studies consider lead selection essential for accurately measuring QT interval. Varying findings make conclusions difficult. Current health care environments require scientific and empirically supported clinical practice.

Method: PubMed, Web of Science, EBSCO, and Google Scholar databases plus bibliographies of relevant studies were searched form January 1966 to February 2012. using the search terms¡§ QT interval, QT interval measurement, QT prolongation¡¨. The selection criteria were limited to adult human. The outcomes assessed were those with the most measurable and most often displayed as the longest QT intervals across 12 leads. Two reviewers assessed studies to determine eligibility, validity, and quality; and any disagreements will be resolved by consensus among team researchers.

Results: Nine studies from 1966 to February 2012 comprising 4478 subjects with 5145 ECG records were analyzed. The heterogeneity of study design used and the diversity of procedures precluded from formal meta analysis, despite the small sample size and moderate quality of these studies. Lead V3 represented the most measurable and longest lead in 8 out of 9 studies; whereas Lead V4 was the longest lead in 4 studies.

Conclusion: The authors suggest using lead V3 as a single lead for bedside monitoring. V4 could be used as an alternative. Future research integrating Positron emission tomography may determine whether results relate to repolarization affects.