

The Role of Clinical Informatics in Improving the Assessment of Venous Thromboembolism Risk and Prophylaxis

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Rationale: Due to the morbidity and mortality associated with hospital acquired venous thromboembolism (VTE), Accreditation Canada has made the documentation of VTE risk assessment a required organizational practice. We wanted to determine how a recently implemented Computerized Provider Order Entry (CPOE) system could support this requirement.

Description of concept: A hospital specific VTE prophylaxis guideline had informed the development of a paper-based physician's order set which included risk assessment documentation. This order set was used to build the service specific admission order sets during CPOE implementation. Following implementation of CPOE, data from the physician ordering system was extracted to identify the percentage of patients with documented VTE prophylaxis assessment and/or treatment within 24 hours of admission. Data was compiled quarterly on a corporate and admitting service basis and shared unblinded with physician and care team leadership.

Methods and Evaluation: Initial assessment/treatment rates were established. Following the initial roll-out, optimizing strategies were implemented using Plan Do Study Act methodology to assess for impact on the overall and individual service rates. Changes implemented included; incorporating the VTE order set into the admission order sets that had been missed on initial build, opening the VTE order set section within the admission order set to prompt for assessment, modifying order set content to address surgical services pre-operative considerations and adding an electronic reminder when patients were admitted not using an admission order set. Each of these contributed to increasing rates of VTE prophylaxis assessment/treatment.

Conclusions: The use of clinical informatics order set standardization and design principles and the sharing of service level data was successful in improving the rates of VTE prophylaxis assessment/treatment.