

# The Incidence of Hospital-Acquired Venous Thromboembolism and the Use of Preventive Prophylaxis

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**Purpose:** To identify the incidence of hospital-acquired venous thromboembolism (HAVTE) in medical and surgical patients with risk factor(s) on admission, and evaluate the use of recommended prophylaxis (mechanical and pharmacological) according to the 2008 American College of Chest Physicians (ACCP) guidelines. Several problems are at stake without adherence to the guidelines which include the Center of Medical Services who has stopped reimbursing hospitals for additional care required to treat patients who develop venous thromboembolism (VTE).

**Methods:** The hospital database was queried from January 2011 through December 2012 for all patients admitted without VTE and diagnosed with HAVTE during their hospitalization. A data collection sheet was used to abstract and record the data from the medical record for each case from the sample population of both medical and surgical patients. Each risk factor score for both pre-existing and acute/changing conditions were given a weighted number according to severity of risk factor in relationship to VTE as determined by evidence-based literature.

**Results:** Medical records identifying HAVTE (n=46) were reviewed; with two eliminated, and a total sample of 44 patient records. The sample was comprised of 24 (55%) males and 20 (45%) females with an overall mean age of 63 (Range=24-91). High pre-existing risk factors ( $\geq 4$ ) occurred in 19 patients (43.2%), with VTE incidence of 18% deep vein thrombosis, 54% pulmonary embolism, and 28% both. Eight (18.2%) patients did not receive any VTE prophylaxis within 48 hours after admission. Of those patients in our study who died (n=6), two (33.3%) had a risk score above  $\geq 4$ .

**Conclusions:** The incidence of HAVTE was much higher than anticipated during 2011 and 2012. ACCP guidelines were not followed in medical and surgical patients based on admission risk assessment score. Quality improvement efforts are needed to improve VTE rates and to minimize risk to patients. An automated process through the electronic medical record that triggers actions related to VTE prophylaxis is being implemented in the study hospital. The goal is to prevent VTE and to lower the rates found in this study to zero percent mortality.