Delays of VTE Prophylaxis on Admission

Haley Lombardo, Tara Knox, Rachel Fulton, Jessica Knapp, Meghan Lóser, Kishan Patel, Alison Hallam, Anthony Macchiavelli MD

Geisinger Commonwealth School of Medicine and AtlantiCare Health System

Abstract

Venous thromboembolism (VTE) is a significant cause of morbidity and mortality for hospitalized patients. There are approximately 900,000 new VTE events and 100,000 VTE-related deaths every year. VTE are considered preventable events with appropriate prophylaxis; however, prophylaxis is frequently delayed on hospital admission. With this information in mind, we chose to investigate the incidence of VTE prophylaxis delays for 100 high-risk patients admitted to AtlantiCare Regional Medical Center (ARMC) between December 2018 and March 2019. We performed a retrospective chart review and calculated the Padua Prediction Score for these 100 patients to assess ARMC’s adherence to VTE prophylaxis guidelines. We found that 75% of patients received their first dose of prophylaxis within 24 hours of arrival and only 25% of patients received their first dose within 8 hours. Of the 100 patients, 13 at-risk patients did not receive prophylaxis during their hospital stay. We found significant delays between prophylaxis order placement and time to administration: 74% of patients received prophylaxis within 12 hours of order placement and only 36% of patients received prophylaxis in under 4 hours. Collectively, 62% of patients had a calculated Padua score of at least 4 on admission, indicating these patients were high risk for VTE. Taken together, our research highlights significant delays of VTE prophylaxis on admission. Therefore, it is worth considering the efficiency and cost-effectiveness of implementing a universal STAT VTE prophylaxis approach, based on Padua Prediction scores, to improve clinical outcomes for high-risk, hospitalized patients.