

Prevention of VTE Through Strictly Implementing Prophylaxis Guidelines in Hospitalized Medical Patients: A Cross-sectional Study

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Background

It is estimated that over half of hospitalized medical patients are at risk for venous thromboembolism (VTE, including DVT and PE). DVT prophylaxis in hospitalized patients decreases the risk of DVT anywhere from 10 to 80%, and PE is widely believed to be the most common preventable cause of hospital death if appropriate prophylaxis measures are implemented according to society and/or hospital guidelines. It is imperative to consider DVT prophylaxis in every hospitalized patient. Full history, physical examination, and important blood work are warranted to assess the risk of VTE and bleeding.

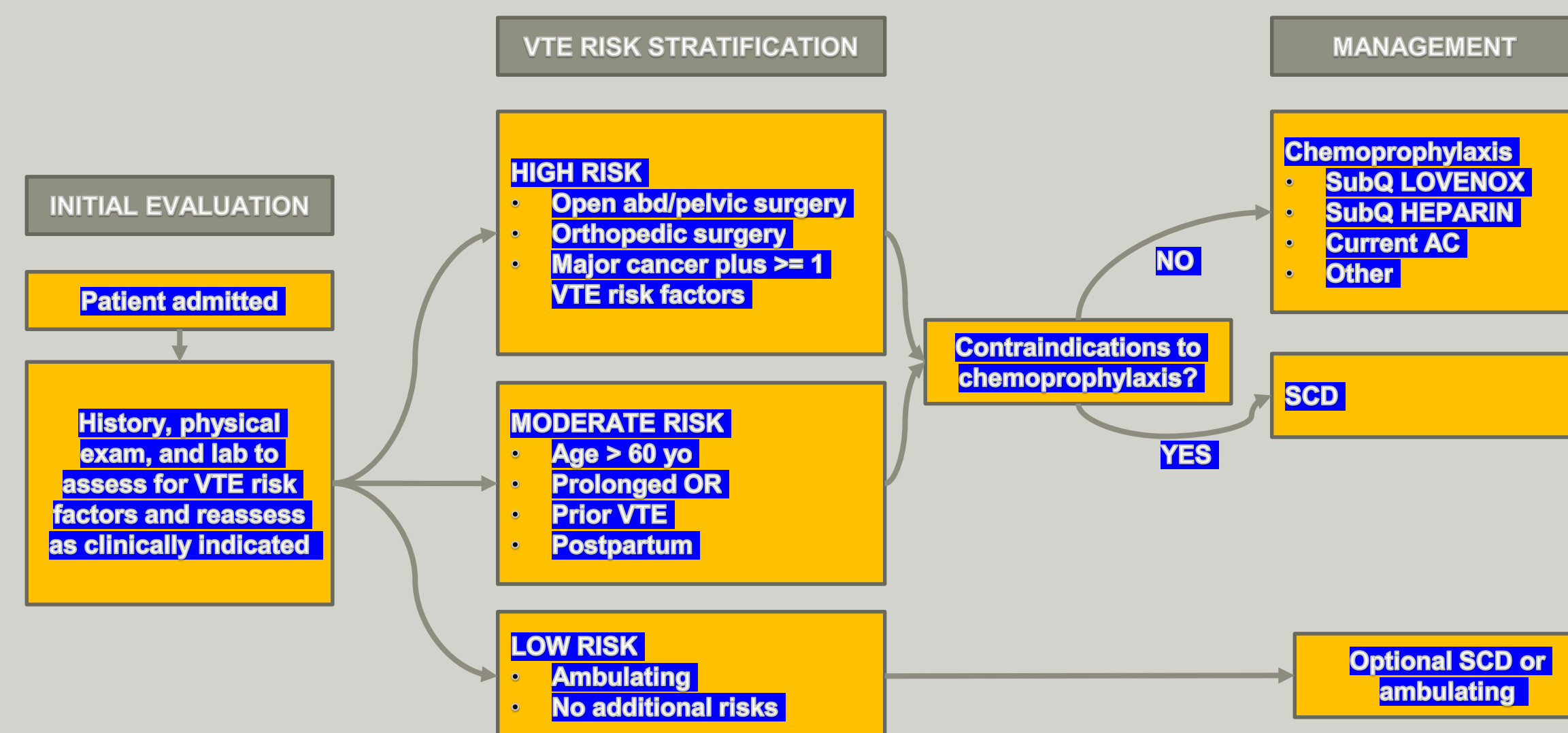
Purpose

This quality improvement project aimed to investigate whether VTE prophylaxis was implemented based on updated society and hospital guidelines by medical trainees at University Hospital.

Methods

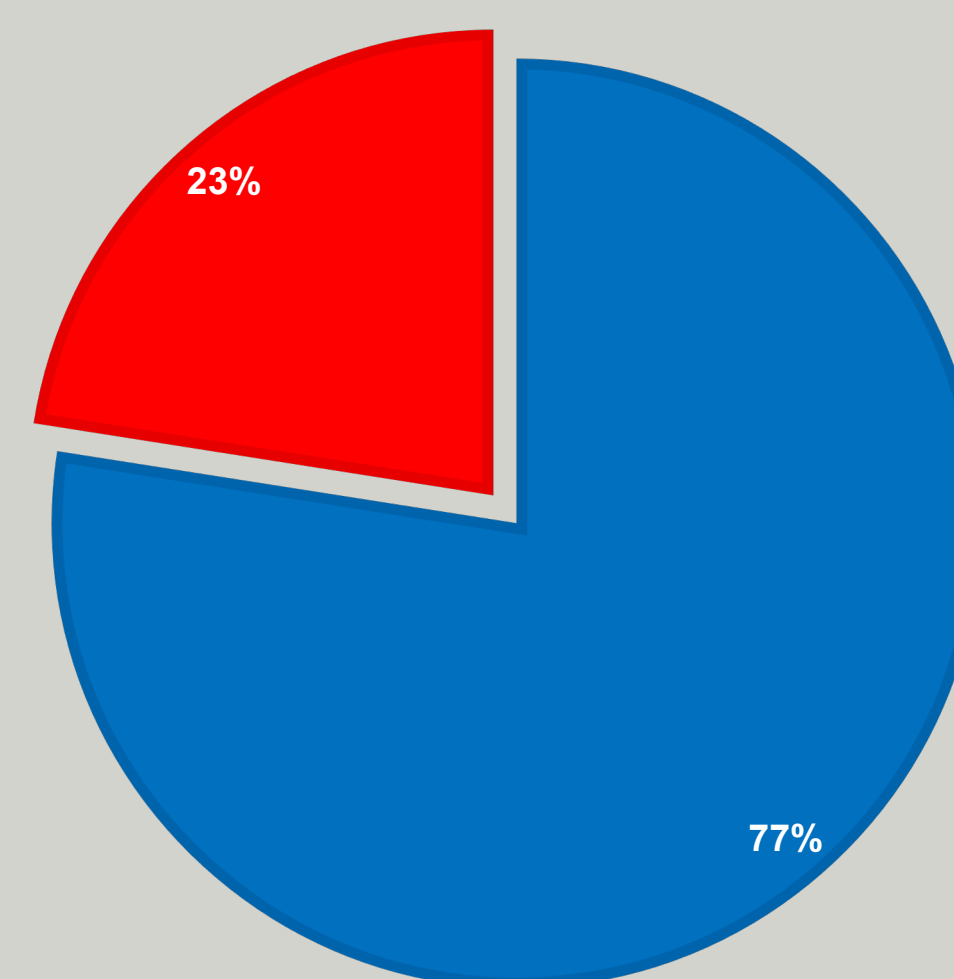
Patient demographic data (age, gender, height, weight) and possible factors affecting guideline applications (BMI, level of care, creatinine clearance, hemoglobin, platelet count, INR, acute bleeding, malignancy, contraindications, current anticoagulant use) were collected, and investigated in patients admitted to the teaching teams from 3/21/2022 to 3/27/2022 at UH.

UH VTE Prophylaxis Flowchart

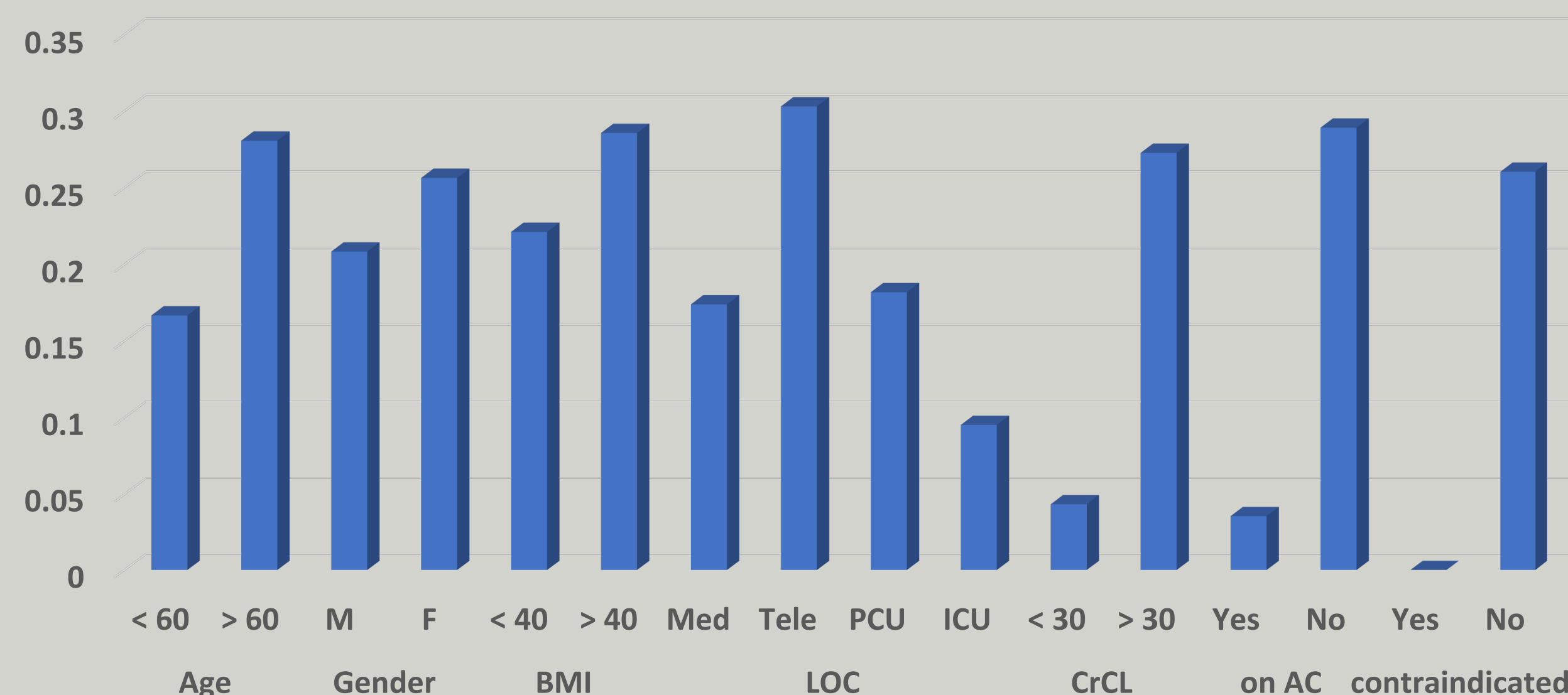


Are We Following the Guidelines?

■ Yes! ■ No X



Factor Leading to Wrong Guideline Application



Results

A total of 111 patients, 72 males and 39 females, ages ranging from 19 to 89 years were included in this cross-sectional study. We found that anticoagulants were correctly ordered in 77.5% (86/111) of the patients based on society and/or hospital guidelines. Further study showed significant factor affecting wrong AC management was CrCl (24/25, P < 0.05). Guidelines are applied more accurately in patients with current AC use (27/28, P < 0.05), with clear contraindications (15/15, P < 0.05), and in ICU patients (19/21, P < 0.05). There was no significant difference in age, gender, and BMI.

Conclusions

VTE prophylaxis with the correct formula and dose is effective at preventing avoidable death, disability, and chronic ill health in at-risk hospitalized medical patients. Increased awareness and special attention should be paid to factors that affect guideline applications to improve the accuracy, thus enhancing patient safety and standard of care.

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