

IMPROVING THE PRESCRIPTION OF CORRECT VENOUSTHROMBOEMBOLISM PROPHYLAXIS IN HAEMATOLOGY INPATIENTS AT ROYAL HALLAMSHIRE HOSPITAL

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INTRODUCTION

Venous thromboembolism (VTE) prophylaxis is an important part of inpatient care. As part of the admission process, VTE risk assessment is an important step to risk stratify patients based on the morbidity and mortality that it can cause. VTE risk assessment is particularly important in haematology patients as the risk of VTE versus bleeding needs to be assessed on a continuous basis on account of dynamic platelets counts and other bleeding risks.

In haematology inpatients, it is important to:

1. Perform the VTE risk assessment on admission and prescribe the appropriate VTE prophylaxis
2. Assess the VTE risk daily, especially in patients in whom platelet counts are expected to drop (for example, patients receiving stem cell transplant or chemotherapy.) In this group, low molecular weight heparin (LMWH) needs to be discontinued while platelet counts are low and restarted when they recover
3. Prescribe mechanical VTE prophylaxis when LMWH is discontinued on account of low platelets.

METHODS

The end point to be measured is the percentage of haematology inpatients with correct VTE prescriptions. A correct VTE prescription entails having a VTE risk assessment on admission, prescription of LMWH if platelets greater than $50 \times 10^9/L$ as long as no significant bleeding risks exist. In patients with a platelet count less than $50 \times 10^9/L$, mechanical VTE prophylaxis should be prescribed and LMWH discontinued.

The change was to be assessed by observing the change in the percentage of correct VTE prescriptions before and after the interventions

INTERVENTION

PDSA CYCLE 1

The first intervention was to introduce a column on the inpatient list for VTE prophylaxis. This served as a visual reminder to assess VTE prophylaxis daily. This list is maintained by the junior doctors who were informed of the new modification. Following this intervention, there was a reassessment approximately 2 weeks later which showed an improvement in correct VTE prescriptions to 73% (Graph 2).

PDSA CYCLE 2

The second cycle was performed and the intervention here was to further educate the junior doctors in haematology regarding the new modification and reinforcing the message of the importance of appropriate VTE assessment and prescription of prophylaxis. This improved the percentage of correct VTE prophylaxis to 83% (graph 3).

RESULTS

The assessment revealed that more than half of the patients had an incorrect prescription based on their platelet counts, as changes in the platelet counts had not triggered reviews of the prescription of low molecular weight heparin. The measures put in place to improve this, led to a significant improvement in correct VTE prophylaxis prescriptions from 46 percent to 83percent of patients on the haematology ward.

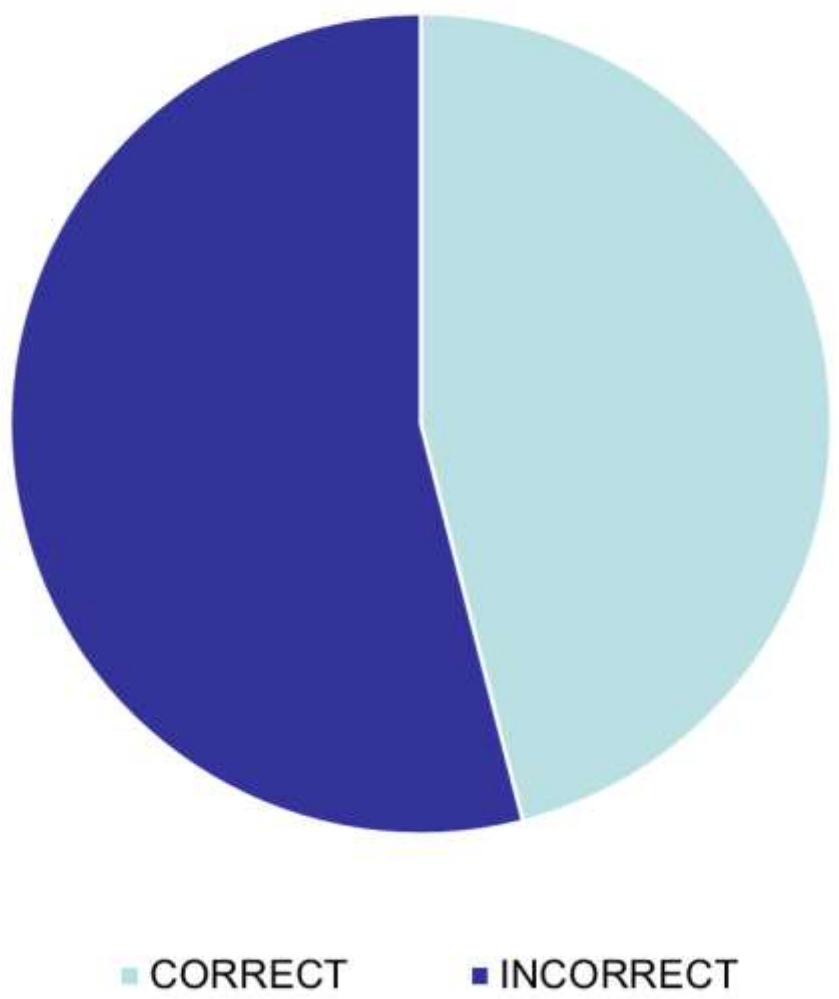
DISCUSSION

From the above results, it can be seen that the interventions helped significantly increase the percentage of correct VTE prescriptions from 46% to 83%.
What did not go well
The target of 100% was not achieved. Whilst this may seem an unrealistic target, we feel that given the nature of the conditions we are treating in this cohort of patients, the risk of VTE is significantly higher and therefore we should be assessing each individual patient on a daily basis.
Few PDSA cycles. This was mainly due to time constraints given that we were only working within the haematology department for 4 months. However a repeated PDSA cycle with the new cohort of junior doctors would give a fairer representation of the success of our intervention (PDSA 1) as it would eliminate the bias generated by the 2 juniors involved in this QUIP at the time of data collection (the total junior team during this period was 5).

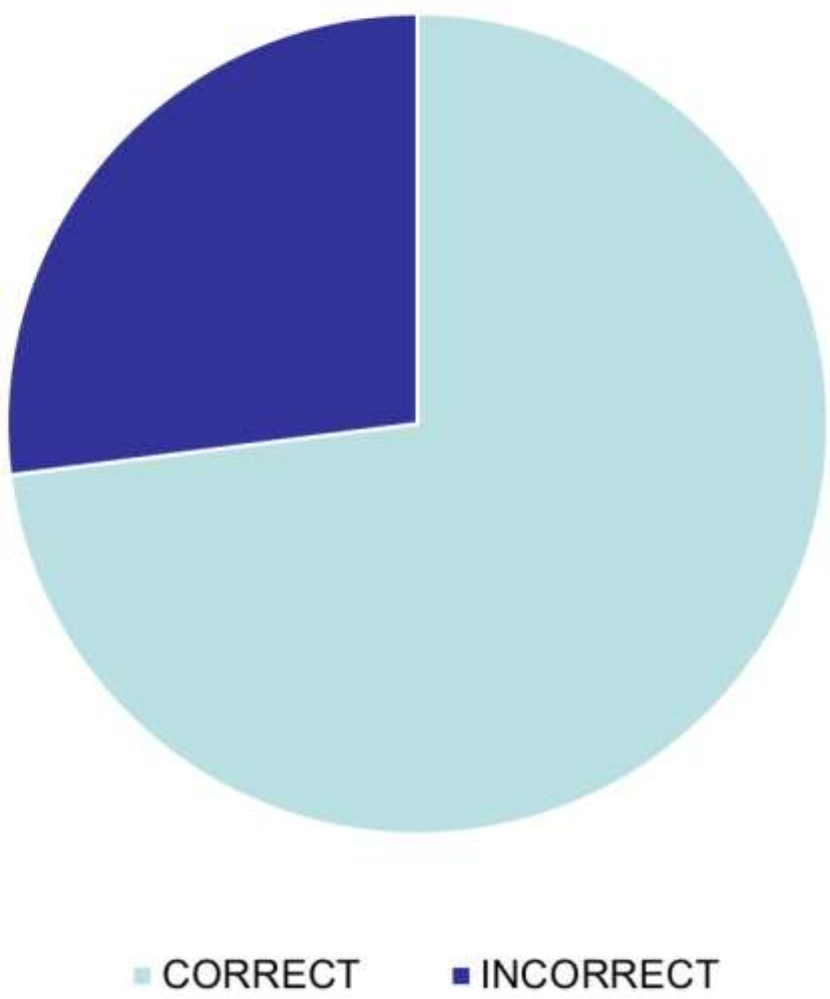
CONCLUSIONS

The interventions put in place led to improvement in the accuracy of VTE prophylaxis prescriptions which improves patient safety. Implementation of further cycles were recommended to improve the results even further.

Graph 1. VTE prescriptions prior to intervention



Graph 2. VTE Prescriptions post PDSA cycle 1



Graph 3. VTE Prescriptions post PDSA cycle 2

