COST IMPACT ANALYSIS OF USING THE IMPROVE® TOOL FOR VENOUS THROMBOEMBOLISM RISK ASSESSMENT IN MEDICAL PATIENTS ADMITTED TO THE UK NHS HOSPITALS TO INFORM NICE CLINICAL GUIDELINE RECOMMENDATION

OBJECTIVES: To estimate the cost impact of using IMPROVE® venous thromboembolism (VTE) risk assessment tool, for medical admissions (MAs) to the UK National Health Service (NHS) hospitals, compared to Department of Health National tool.

METHODS: Cost impact analysis was undertaken. Speciality (HRG) codes for MAs and number of bed-days for those with length of stay>3 days were identified in Hospital Episode Statistics data (2015/16). The percentage of MAs that are assessed as at high risk of VTE, using each tool, were estimated using literature review and expert opinion. Prophylaxis cost/bed-day was calculated and multiplied by the difference in the number of bed-days. Result were adjusted for potential cost increase due to increased VTE incidence. Implementation costs were not included.

RESULTS: Based on the literature review, 80% and 40% of MAs would require prophylaxis when using the National tool and IMPROVE® tool, respectively. The total number of bed-days for MAs, with a length of stay of 3 days or more, was 18.8 million. The cost of prophylaxis per bed-day was £3.03 (cost year 2016). At the National tool intervention rate of 80%, the total cost of prophylaxis is approximately £45.5 Million. At IMPROVE® tool intervention rate of 40%, after adjusting for a small increase in VTE events, the net annual saving from the reduction in prophylaxis was estimated to be around £22 Million.

CONCLUSIONS: Using IMPROVE® tool for VTE risk assessment in medical patients admitted to UK NHS hospitals may lead to substantial cost saving over the currently used risk assessment tool. However, the costs of implementation have not been included in this analysis. Additionally, IMPROVE® tool has not been validated in the UK. Overall, the choice of a VTE risk assessment tool should not only take into account cost impact but also other factors including validity in the target population.