Chelsea and Westminster Hospital
NHS Foundation Trust

Venous Thromboembolism Prevention Measures for Women in Pregnancy and the Puerperium

GPI No. 50

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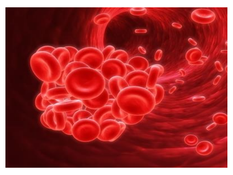


Introduction

Women who are pregnant or in the postpartum period have a 4-5 fold increased risk of venous thromboembolism (VTE) compared to non-pregnant women

Pregnancy is associated with hypercoagulability, increased venous stasis, decreased venous outflow, decreased mobility, thus increasing thrombogenic state particularly in postpartum period

VTE remains the leading cause of *direct* maternal deaths during or up to six weeks after delivery
with no evidence of a consistent decrease in mortality over the past 20 years despite national guidance

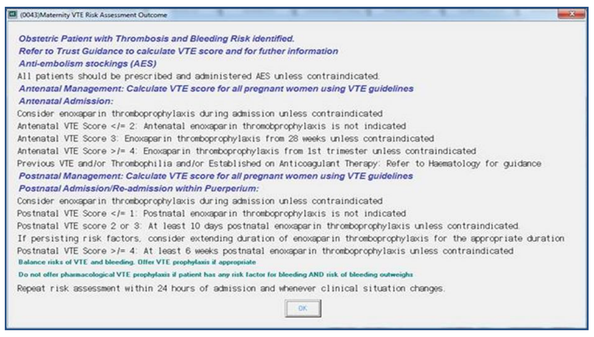
- The maternal mortality rate from VTE is now the same as it was in 1985-87, possibly reflecting the increased prevalence of VTE risk factors in the UK maternity population e.g. age, parity, obesity, smoking
- More interventions in practice e.g. caesarean section – placing women at increased risk of VTE

Aim

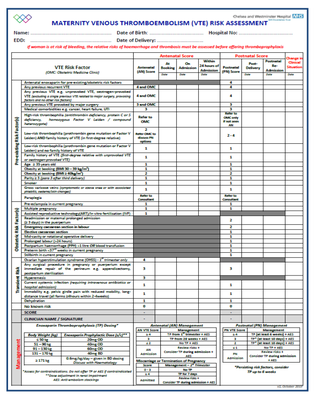
- VTE prevention measures for maternity patients were introduced in 2010, with further changes implemented to reduce mortality and morbidity

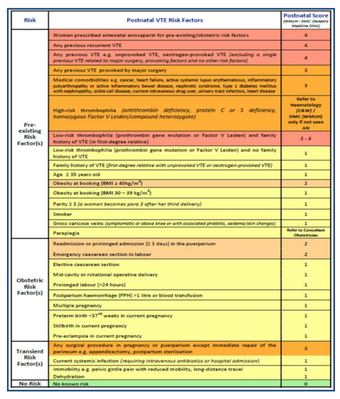
Methods and Interventions

Electronic VTE risk assessment introduced with mandatory alerts at relevant time-points
e.g. at booking, on admission, post-delivery, re-admission

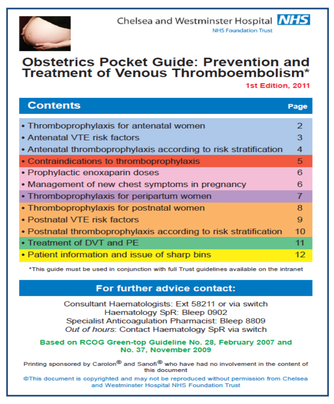


Simplification of the national VTE risk scoring system to ensure accurate completion of risk assessment(s) and user-ability



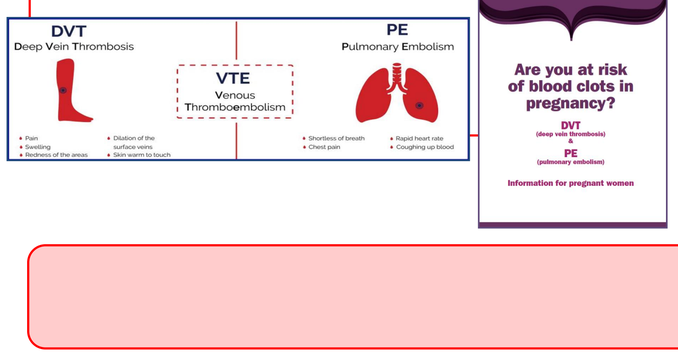


Clear hospital guidance on VTE prevention for pregnant women, including pocket guidance covering risk assessment and thromboprophylaxis



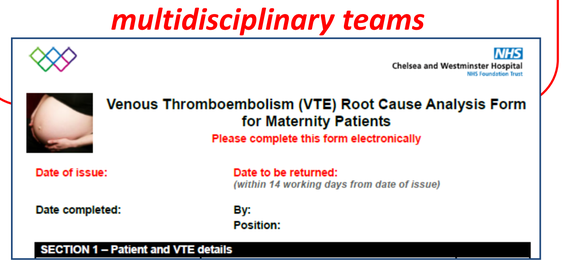
Staff education on mechanical thromboprophylaxis for correct use and monitoring to avoid adverse effects

VTE patient information leaflet covering signs and symptoms of VTE and when to seek urgent medical attention



Introduction of a 'mum and baby' app with information during pregnancy and postpartum

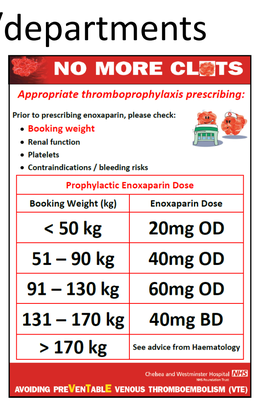
Root cause analysis performed on hospital associated VTE events, with shared learning of root causes and actions to prevent recurrence to multidisciplinary teams

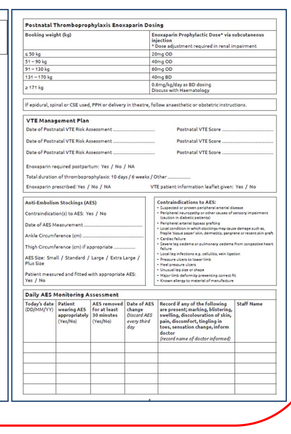


VTE education introduced and embedded in medical, midwifery and pharmacy training programmes, with regular updates in maternity risk newsletter

Results and Achievements

- Over 95% of women with VTE risk assessments on admission, with weekly and monthly performance reports for local monitoring and dissemination
- Pharmacy staff perform quarterly audits on appropriate thromboprophylaxis, with feedback to staff/departments
  - *97% inpatients received appropriate pharmacological thromboprophylaxis*
  - *88% inpatients were wearing anti-embolism stockings as mechanical thromboprophylaxis*
- VTE management plan pre-printed in maternity documentation to assist with transfer of care
- Development of an 'app' to provide patient information and improve VTE education and awareness
- Patients counselled on anticoagulation medication to support medication compliance
- VTE education embedded in staff training programmes
- VTE ward rounds for ongoing stewardship





Conclusion

- Robust and sustainable VTE interventions implemented in maternity departments at two hospital sites
- Audits and performance reports confirm improvements and compliance to national and local VTE targets

Next Steps

Increasing patient education and engagement on VTE prevention measures

Robust and sustainable interventions to improve patient outcomes

Staff engagement to embed VTE prevention measures in practice

Messages for Others

VTE champions to drive the local VTE prevention programme striving for excellence and to enhance patient safety

Multidisciplinary engagement for implementation of changes to practice

Shared learning and feedback for a positive culture

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Reference

1) Knight, M. et al. on behalf of MBRRACE-UK. Saving Lives, Improving Mothers' Care - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2014-16. University of Oxford (2018)