

A Comparative Study of the Risk-Assessment Models used for the prevention of Thromboembolism in Pregnancy, United Kingdom

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INTRODUCTION

Pregnant and post-natal women are at a fourfold increased risk of developing a thromboembolic event, with an estimated 1-2 pregnancies/1000 affected by venous thromboembolism (VTE).

It remains the leading cause of direct maternal deaths in the UK as per the last 5 MBRRACE reports, accounting for 10-15% of deaths in pregnancy.

OBJECTIVE

The main objective of this study is to compare the two guidelines- **RCOG Green-Top** and **Regional all Wales Guidance** on VTE prevention and to assess their performance in risk stratification for the prevention of thromboembolism.

MATERIALS AND METGODS

- **Retrospective analysis** of **27 cases** of confirmed VTE during pregnancy and postpartum

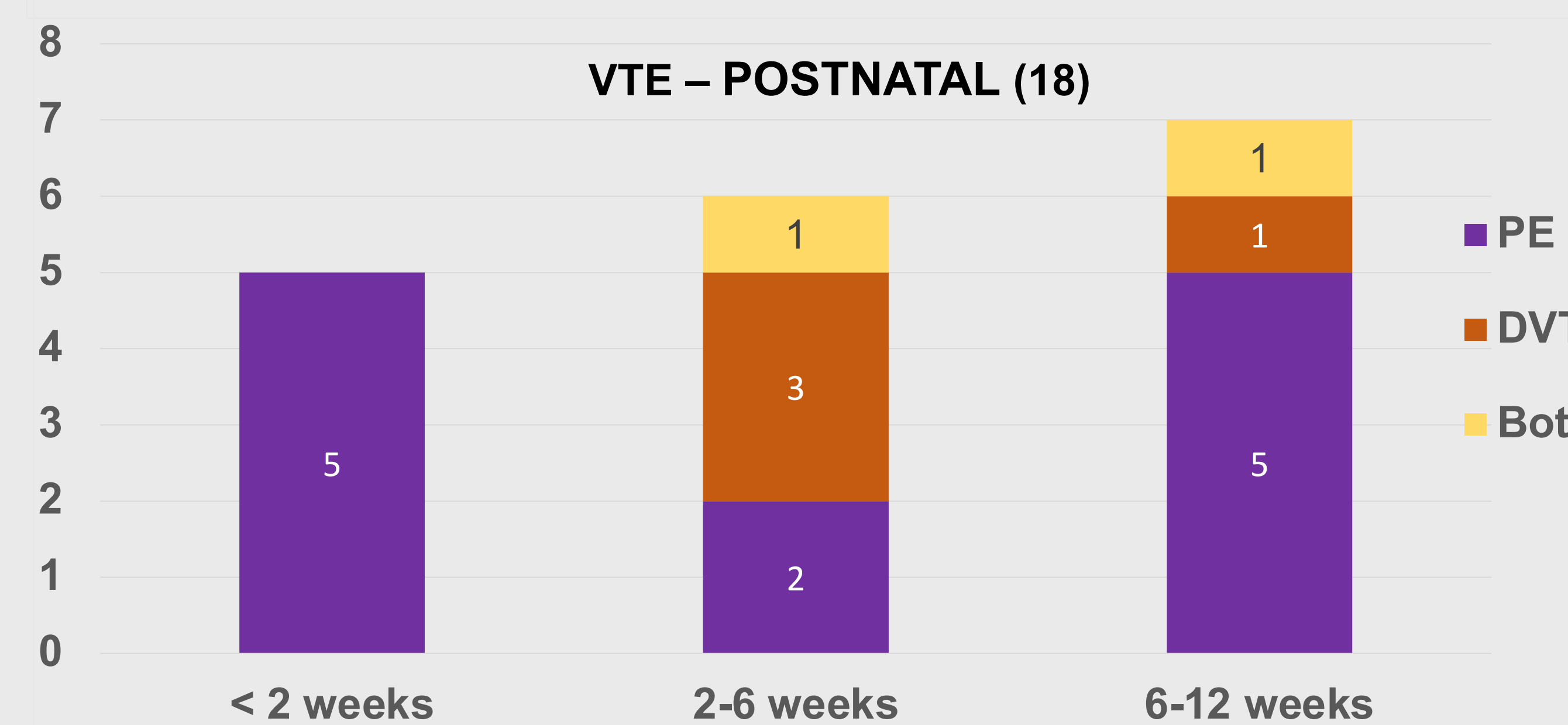
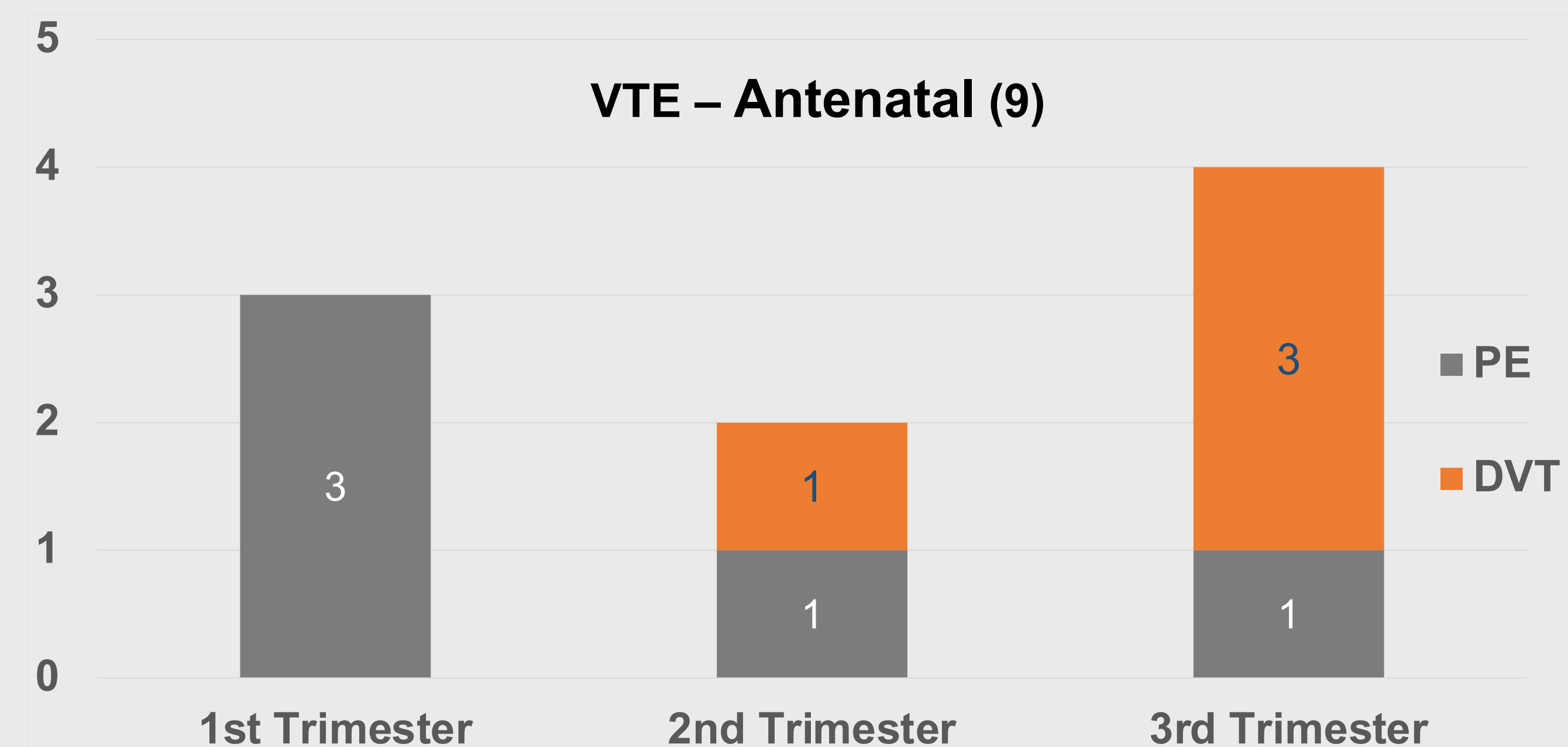
- **January 2020 to November 2022.**

The **Royal College of Obstetricians and Gynaecologists (RCOG)** considers 24 risk factors, with antenatal prophylaxis recommended in high risk women or those with risk score ≥ 3 and postpartum thromboprophylaxis for a risk score of ≥ 2 .

The **All-Wales VTE risk assessment** considers 7 antenatal risk factors and 11 postnatal factors, with prophylaxis with low molecular weight heparin (LMWH) recommended for a score of ≥ 1 .

Risk factors identified in the patients with confirmed VTE

RCOG		All Wales Guidance	
<u>Antenatal</u>	<u>Postnatal</u>	<u>Antenatal</u>	<u>Postnatal</u>
BMI > 30	Age > 35	BMI> 45	
Smoker	BMI > 30		
Family History	Parity > 3		
Pre-eclampsia	Preterm< 37 weeks		
	PPH > 1000 ml		
	Thrombophlebitis		
	Family History		
	Multiple pregnancy		



RESULTS

Average Incidence (ABUHB) – 0.1% (2020-7, 2021-8, 2022-12)

On comparison of the models- 29.6% discrepancy was noted

Risk reduction for VTE with RCOG - 7.3%

Risk reduction for VTE with Wales guideline - 1 %

100% (27) - Compliance with AN risk assessment

92.5% (25) - Appropriate thromboprophylaxis received

96.2% (26) - Managed appropriately as per the Regional Wales risk assessment

CONCLUSION

The **RCOG guideline** is more robust, especially in the postnatal period, advising pharmacological prophylaxis more frequently than the All-Wales guideline.

Despite extensive understanding of risk factors for VTE in pregnancy, addressing this is a challenge with the necessity to balance maternal and fetal well-being during decision-making.

RECOMMENDATION

- All at risk pregnant patients must have a thorough risk assessment and thromboprophylaxis

- Ensure all VTE cases are referred to Haematology services

- APLS screen to be performed in all VTE cases after 3 months

Whether to adopt or change to RCOG guidelines ?

- Analysis of more data over a longer duration

- Needs further collaboration with other Health Boards in Wales