

## **Risk assessment and thromboprophylaxis with SARS-CoV-2 infection in pregnancy and post-partum**

*Irish Haematology Society Coagulation Special Interest Group  
Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland  
National Women and Infants Health Programme, HSE*

**January 2022 Update**

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### **Guidance**

#### *Justification*

The risk of thromboembolic disease is increased during pregnancy and postpartum and appears to be further increased in the presence of COVID-19 disease, though absolute risk remains low. Thromboembolic disease with SARS-CoV-2 infection in pregnancy may be more likely in the presence of more severe infection and hospitalisation. The evidence base in this clinical setting is evolving and may be incomplete due to the exclusion of pregnant women from many clinical trials.

*In the context of the evidence that is currently available, the following statements are made to provide guidance to Clinicians.*

- The Institute of Obstetricians and Gynaecologists Guideline on Venous Thromboprophylaxis in Pregnancy (RCPI, 2013) should continue to be followed during the COVID-19 pandemic.
- COVID-19 infection should be considered as an additional transient risk factor for thrombosis and incorporated into VTE risk assessment tools.
- Vaccinated and unvaccinated women should be evaluated and managed in the same way.
- Women with a COVID-19 diagnosis who are self-isolating at home should be encouraged to stay hydrated and mobile. They should be aware of the signs and symptoms of thromboembolism and advised to seek medical advice if these occur.
- Women who are already on antenatal or postnatal thromboprophylaxis should continue this as prescribed, if they contract COVID-19.
- An updated thrombosis risk assessment is appropriate for women with COVID-19 who are self-isolating at home. They should be advised to contact their maternity unit / service provider so that this is arranged.
- If women are hospitalised with COVID-19 illness or a COVID-19 diagnosis is detected incidentally on admission or during an inpatient stay, a thrombosis risk assessment should be done and pharmaceutical thromboprophylaxis should be offered unless birth is expected within 12 hours or there is significant bleeding risk.
- In women with severe SARS-CoV-2 infection, the appropriate dosing regimen for pharmaceutical thromboprophylaxis should be discussed by a multidisciplinary team (MDT), including a senior obstetrician or clinician with expertise in managing thrombosis in pregnancy.
- The duration of thromboprophylaxis, if prescribed, should be individualized. In general, thromboprophylaxis is continued as long as the risk factor for thrombosis is present, which may range from 7-14 days in an acute, short lived illness to longer periods in women with more severe illness and other ongoing risk factors for thrombosis. Post discharge thromboprophylaxis or postpartum thromboprophylaxis for up to 6 weeks may be required if women have ongoing risk factors including immobility.
- Confirmed thrombosis with COVID-19 infection should be managed with therapeutic anticoagulation, as per usual practice.

## VTE Risk Assessment Tool (updated; 2022)

Interim updated tool – attached

### Evidence summaries at:

Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland and HSE Clinical Care Programme in Obstetrics and Gynaecology and Irish Haematology Society. Clinical practice guideline venous thromboprophylaxis in pregnancy. November 2013

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Royal College of Obstetricians and Gynaecologists, London. Treatment of COVID-19 in Pregnant Patients. 7 December 2021

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COVID-19 Interim Clinical Guidance - VTE protocol and patient information for Acute Hospitals (CD 120/21.04.20). HSE, 2020

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NIH. The COVID-19 Treatment Guidelines Panel's Statement on Anticoagulation in Hospitalized Patients With COVID-19. 5<sup>th</sup> January 2022.

[https://www.covid19treatmentguidelines.nih.gov/therapies/statement-on-anticoagulation-in-hospitalized-patients/?utm\\_campaign=highlights](https://www.covid19treatmentguidelines.nih.gov/therapies/statement-on-anticoagulation-in-hospitalized-patients/?utm_campaign=highlights)

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[https://www.npeu.ox.ac.uk/assets/downloads/mbrpace-uk/reports/MBRRACE-UK\\_Maternal\\_Report\\_June\\_2021\\_-\\_FINAL\\_v10.pdf](https://www.npeu.ox.ac.uk/assets/downloads/mbrpace-uk/reports/MBRRACE-UK_Maternal_Report_June_2021_-_FINAL_v10.pdf)

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Maternal and Perinatal Outcomes Associated With the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Delta (B.1.617.2) Variant.

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*Obstet Gynecol*. 2021 Dec 1;138(6):842-844. DOI: [10.1097/AOG.0000000000004607](https://doi.org/10.1097/AOG.0000000000004607)

Servante J, Swallow G, Thornton JG, Myers B, Munireddy S, Malinowski AK, Othman M, Li W, O'Donoghue K, Walker KF. Haemostatic and thrombo-embolic complications in pregnant women with COVID-19: a systematic review and critical analysis.

*BMC Pregnancy Childbirth*. 2021 Feb 5;21(1):108. DOI: [10.1186/s12884-021-03568-0](https://doi.org/10.1186/s12884-021-03568-0)

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## Rapid Risk Assessment Tool for VTE Thromboprophylaxis in Pregnancy / Post-partum \*

All pregnant women require risk assessment for VTE:

■ At first booking visit   ■ At every antenatal admission   ■ With current COVID-19 Infection

Pre-existing Risk Factors	TICK
Family history VTE	<input type="checkbox"/>
BMI >30	<input type="checkbox"/>
Parity > 3	<input type="checkbox"/>
Maternal Age >35	<input type="checkbox"/>
Smoking	<input type="checkbox"/>

  

Medical Co-morbidities	TICK
Varicose Veins	<input type="checkbox"/>
Paraplegia	<input type="checkbox"/>
Nephrotic syndrome	<input type="checkbox"/>
IV drug user	<input type="checkbox"/>
Inflammatory bowel disease	<input type="checkbox"/>
Haematological condition	<input type="checkbox"/>
- Sickle cell anaemia	<input type="checkbox"/>
- Polycythaemia /Thrombocythaemia	<input type="checkbox"/>
- Myeloproliferative d/o	<input type="checkbox"/>
Diabetes requiring insulin	<input type="checkbox"/>
Active SLE	<input type="checkbox"/>
Other relevant risk factor	<input type="checkbox"/>

  

Transient Risk Factors	TICK
COVID-19 infection (current)	<input type="checkbox"/>
Hospital admission	<input type="checkbox"/>
Immobility (>4 days bedrest)	<input type="checkbox"/>
Surgery in/after pregnancy	<input type="checkbox"/>
Caesarean section	<input type="checkbox"/>
Instrumental delivery	<input type="checkbox"/>
Excessive blood loss (>1L)	<input type="checkbox"/>
Blood transfusion	<input type="checkbox"/>
Pre-eclampsia	<input type="checkbox"/>
Systemic infection	<input type="checkbox"/>
Multiple Pregnancy	<input type="checkbox"/>
Assisted Reproduction	<input type="checkbox"/>
Hyperemesis gravidarum	<input type="checkbox"/>
Dehydration	<input type="checkbox"/>
Post-partum wound infection	<input type="checkbox"/>

  

Women with **THREE** or more of the above risk factors

➔ Consider LMWH Thromboprophylaxis

\*Women with a personal history of VTE = LMWH Thromboprophylaxis