



## SOMANZ top-five recommendations on low value practices

The Society of Obstetric Medicine of Australia and New Zealand (SOMANZ) aims to advance clinical and scientific knowledge of hypertensive diseases and medical disorders in pregnancy. SOMANZ also fosters collaboration with other regional and international societies interested in hypertension in pregnancy and obstetric medicine. It is a specialty society affiliated with the Royal Australasian College of Physicians.

SOMANZ Council members initially identified nine recommendations on low value clinical practices

in obstetric medicine of potential relevance to SOMANZ members. This was cut down to seven following an evidence review. All advanced trainees and Fellows of SOMANZ were surveyed online for their views and feedback on these remaining recommendations. Respondents assigned a score to each using three criteria. The total scores were collated for each recommendation, and revisions were made to two closely related recommendations. Based on this process, the following were selected as the Society's final top-five recommendations.

- 1** Do not perform a D-Dimer test for the exclusion of venous thromboembolism during any trimester of pregnancy
- 2** Do not test for inherited thrombophilia for placental mediated complications
- 3** Do not do repeat testing for proteinuria in established pre-eclampsia
- 4** Do not undertake methylenetetrahydrofolate reductase (MTHFR) polymorphism testing as part of a routine evaluation for thrombophilia in pregnancy
- 5** Do not measure erythrocyte sedimentation rate (ESR) in pregnancy

### ABOUT EVOLVE

EVOLVE is a physician-led initiative to ensure the highest quality patient care through the identification and reduction of low-value practices and interventions.

EVOLVE is patient-centred and evidence-based, with rigorous and transparent processes. Its focus is to stimulate clinical conversations – between colleagues, across specialties, and with patients – to ensure the care that's delivered is the best for each patient.

EVOLVE is part of a worldwide movement to analyse medical practices and reduce unnecessary interventions. It is an initiative in partnership between the RACP and the Specialty Societies, Divisions, Faculties and Chapters.



# 1

## Do not perform a D-Dimer test for the exclusion of venous thromboembolism during any trimester of pregnancy

As D-dimer levels are raised during pregnancy, they do not have a high positive predictive value for venous thromboembolism (VTE) in pregnancy (i.e. they are unreliable for ruling in VTE in pregnancy). However, nor are they a reliable rule-out test for VTE. One study estimated the sensitivity of the D-Dimer test at 73 per cent, meaning that 27 per cent of patients with a negative D-Dimer had VTE. There have also been case reports of pregnant women with pulmonary embolism presenting with a negative D-Dimer. Therefore, there is no value in performing a D-Dimer test for the exclusion of venous thromboembolism at any trimester in pregnancy.

# 2

## Do not test for inherited thrombophilia for placental mediated complications

While older retrospective studies suggested that inherited thrombophilia is associated with adverse pregnancy outcomes such as stillbirth, recurrent miscarriage and placental abruption, more recent and more rigorous studies have either failed to find an association or have found only a weak association. Moreover, the association is a moot point as there is now good quality evidence from randomised controlled trials that low-molecular-weight heparin does not significantly reduce the rate of placental mediated complications.

# 3

## Do not do repeat testing for proteinuria in established pre-eclampsia

Measuring proteinuria is useful as a diagnostic but not as a prognostic criterion for pre-eclampsia. This is because the level of proteinuria does not correlate with the severity of maternal complications in women with pre-eclampsia, nor are these levels useful in determining the timing of delivery. Thus, repeat testing for proteinuria in managing established pre-eclampsia is not recommended, particularly given the availability of superior prognostic models.

## 4 Do not undertake methylenetetrahydrofolate reductase (MTHFR) polymorphism testing as part of a routine evaluation for thrombophilia in pregnancy

Patients with the thermolabile variant of the methylenetetrahydrofolate reductase (MTHFR) polymorphism are at higher risk of hyperhomocysteinaemia which has been associated with venous thrombosis. However, these associations appear to hold only in countries lacking grain products nutritionally fortified as a public health measure. Moreover, homozygous variants are found in up to 15 per cent of some populations, so that detection of this variant would lead to many women undergoing complex counselling unnecessarily and may also be a cause of distress. Polymorphism is not more prevalent in women with pregnancy-associated venous thromboembolism and testing for this polymorphism is not recommended as part of a routine evaluation for thrombophilia in pregnancy.

## 5 Do not measure erythrocyte sedimentation rate (ESR) in pregnancy

Measuring the erythrocyte sedimentation rate (ESR) is a non-specific test to identify inflammation. An elevated result indicates inflammation but does not indicate where it is in the body or the cause. The normal range outside of pregnancy in women aged 18-50 is <20mm/h. One study found that levels varied from 4-70mm/hr and another found a range from 4-112mm/hr, with levels being affected by gestational age and haemoglobin concentration. This is likely to reflect normal changes in pregnancy, meaning that testing for an elevated ESR does not sufficiently differentiate between healthy pregnant women and those who may be suffering from inflammatory diseases.

### *\*How this list was developed...*

*SOMANZ Council members considered potential low value clinical practices in obstetric medicine of relevance to SOMANZ members, and developed a shortlist of nine items. Council members then worked with the RACP to compile and review the published research on each of these practices. Based on the review, the list of potential items of interest was refined down to seven and recommendations for these were formulated.*

*All Fellows and advanced trainees of SOMANZ were surveyed online for their views on these seven draft recommendations and provided with evidence summaries for each, and for their suggestions of other practices not already included. They were asked to score each recommendation based on whether they thought it was evidence based, currently undertaken in significant volume, and important for reducing harms and/or unnecessary healthcare costs. Based on the scores and feedback, the final top-five recommendations were then finalised and approved by SOMANZ Council.*



## Society of Obstetric Medicine of Australia and New Zealand – Top-five recommendations on low value clinical practices

### EVIDENCE SUPPORTING RECOMMENDATION 1

Damodaram M, Kaladindi M, Luckit J, Yoong W. D-dimers as a screening test for venous thromboembolism in pregnancy: is it of any use? *Journal of Obstetrics and Gynaecology*. 2009; 29(2):101-32.

McLintock C, Brighton T, Chunilal S, et al. Recommendations for the diagnosis and treatment of deep venous thrombosis and pulmonary embolism in pregnancy and the postpartum period. *Aust N Z J Obstet Gynaecol*. 2012 Feb;52(1):14-22.

To MS, Hunt BJ, Nelson-Piercy C. A negative D-Dimer does not exclude venous thromboembolism in pregnancy. *Journal of Obstetrics and Gynaecology*. 2008;28(2):222-40.

### EVIDENCE SUPPORTING RECOMMENDATION 2

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Rodger MA, Walker MC, Smith GN, et al. Is thrombophilia associated with placenta-mediated pregnancy complications? A prospective cohort study. *J of Thrombosis & Haemostasis*. 2014. 12: 469-784.

Rodger MA, Hague WM, Kingdom J, et al. Antepartum dalteparin versus no antepartum dalteparin for the prevention of pregnancy complications in pregnant women with thrombophilia (TIPPS): a multinational open-label randomised trial. *Lancet*. 2014 Nov 8;384(9955):1673-83.

Said JM, Higgins JR, Moses EK, et al. Inherited thrombophilias and adverse pregnancy outcomes: a case-control study in an Australian population. *Acta Obstet Gynecol Scand*. 2012 Feb;91(2):250-5.

Silver RM, Saade GR, Thorsten V, et al. Factor V Leiden, prothrombin G20210A, and methylene tetrahydrofolate reductase mutations and stillbirth: the Stillbirth Collaborative Research Network. *Am J Obstet Gynecol*. 2016;215(4):468.e1-468.e17.

### EVIDENCE SUPPORTING RECOMMENDATION 3

Lowe SA, Brown MA, Dekker G. et al. *SOMANZ guidelines for the management of hypertensive disorders of pregnancy*. 2014

Payne B, Magee LA, Côté AM, et al. PIERS proteinuria: relationship with adverse maternal and perinatal outcome. *J Obstet Gynaecol Can*. 2011;33(6):588-97.

Thangaratinam S, Coomarasamy A, O'Mahony F, et al. Estimation of proteinuria as a predictor of complications of pre-eclampsia: a systematic review. *BMC Med*. 2009; 7:10

von Dadelszen P, Payne B, Li J, Ansermino JM, et al. Prediction of adverse maternal outcomes in preeclampsia: development and validations of the fullPIERS model. *Lancet*. 2011; 377(9761):219-27.

### EVIDENCE SUPPORTING RECOMMENDATION 4

Den Heijer M, Lewington S, Clarke R. Homocysteine, MTHFR and risk of venous thrombosis: a meta-analysis of published epidemiological studies. *J Thromb Haemost* 2005;3:292-299

Eldibany MM, Caprini JA. Hyperhomocysteinemia and thrombosis: an overview. *Arch Pathol Lab Med* 2007; 131:872-884.

Holmes MV, Newcombe P, Hubacek JA, et al. Effect modification by population dietary folate on the association between MTHFR genotype, homocysteine, and stroke risk: a meta-analysis of genetic studies and randomised trials. *Lancet* 2011;378:584-594

McLintock C, Brighton T, Chunilal S, et al. Recommendations for the prevention of pregnancy-associated venous thromboembolism. *ANZJOG* 2012; 52:3-13

### EVIDENCE SUPPORTING RECOMMENDATION 5

Abbassi-Ghanavati M, Greer LG, Cunningham FG. Pregnancy and Laboratory Studies: A Reference Table for Clinicians. *Obstet Gynecol*, 2009. 114: p. 1326-31.

van den Broe NR, Letsky EA. Pregnancy and the erythrocyte sedimentation rate. *BJOG*. 2001; 108(11):1164-7.

DISCLAIMER: All reasonable care has been taken during the process of developing these recommendations. The health information content provided in this document has been developed by the members of the Society of Obstetric Medicine of Australia and New Zealand. The health information presented is based on current medical knowledge and practice as at the date of publication (July 2017).