

# Is induction of labour associated with an increased rate of postpartum haemorrhage?

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## About induction of labour:

- In 2004-2016, 40.5% of selected women in Australia having their first baby had their labour induced (AIHW, 2018)
- The rate of induction of labour during the 6-month period November 2018 to April 2019 at this tertiary hospital was 39% for all women giving birth

## About postpartum haemorrhage:

- Rates of PPH in South Australian were 10.4% in 2010 (Scheil, 2012)
- The rates of PPH at this hospital during the 6-month period November 2018 to April 2019 were 26%
- PPH is likely responsible for over 50% of severe maternal morbidity (Joseph et al, 2007)
- In Australia obstetric haemorrhage (including antepartum haemorrhage) is responsible for 11-18% of maternal deaths (AIHW: Humphrey et al, 2015; AIHW: Johnson et al, 2014)

## What do we already know about IOL and PPH?

- IOL increases the rate of instrumental vaginal birth (NICE, 2008), which is an independent risk factor for PPH (Magann et al, 2005; Sheiner et al, 2005)
- The second most common indication for induction of labour in Australia is prolonged pregnancy (AIHW, 2019), which increases the likelihood of a macrosomic fetus, another risk factor for PPH (Weissmann-Brenner et al, 2012)
- A literature review gives mixed results: Brun et al (2019) found no increased risk of PPH with IOL; Khirddine et al (2013) found an association but only in women with other risk factors for PPH; Magann et al (2005) and Sheiner et al (2005) found IOL to be risk factors for PPH

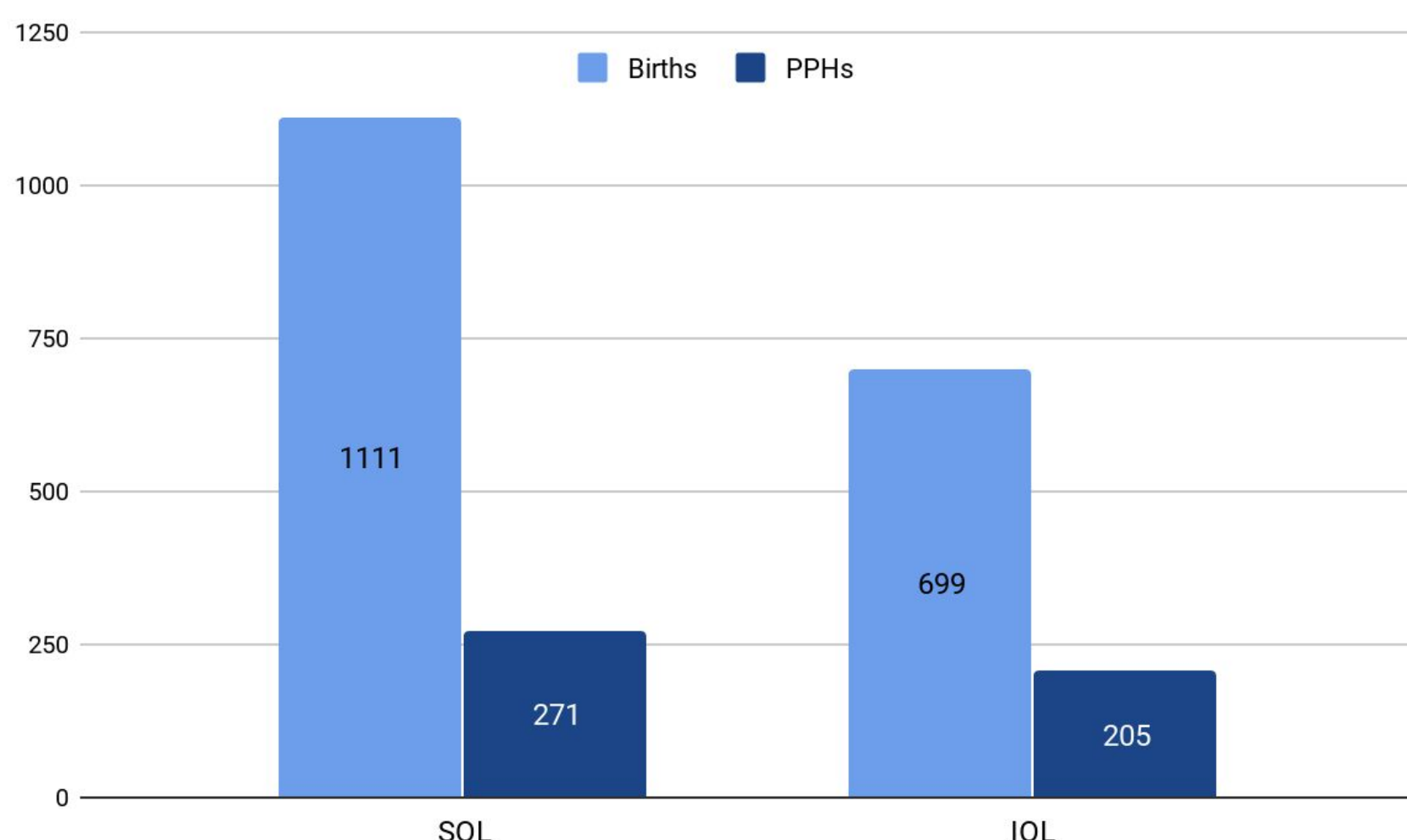
**Results** - During this period the total number of women who gave birth was 1810, and of these labour was induced in 699. Of these 699, 205 had a PPH, or 29.33%. Of the 1111 women with spontaneous onset of labour (SOL), 271 had a PPH, or 24.39%. The rate of PPH amongst those who received IOL was 20.23% higher than those with SOL. This is a statistically significant result (p-value or 0.0103).

**Discussion** - The association may be partially explained by the common indications for IOL also being risk factors for PPH, including multiple pregnancy, macrosomia, antepartum haemorrhage, an increased BMI, diabetes mellitus, and hypertensive disorders (SA PPG, 2013). Another explanation is the increased rate of instrumental birth, another risk factor for PPH. While not all PPHs are preventable, it is important for clinicians to continue to recognise the association between IOL and PPH and update guidelines accordingly. Clinicians should identify individual risk factors in women undergoing IOL and consider prophylactic measures in all stages.

**Introduction** - The aim was to determine if patients undergoing induction of labour (IOL) were more likely to have a postpartum haemorrhage (PPH), where PPH is defined as blood loss of 500 millilitres or greater in the puerperium.

**Method** - A review of perinatal statistics of women who birthed in a major tertiary hospital in South Australia for the 6-month period of November 2018 to April 2019 was undertaken and retrospectively analysed using a two-tailed test with alpha value 0.05.

## Induction of labour is associated with postpartum haemorrhage, but this may be due to other pre-existing risk factors in women who have their labour induced



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