



Queensland
Government

The incidence of peripartum hysterectomy in Queensland

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Peripartum hysterectomy is rare, but is associated with increased rates of morbidity and near-miss mortality. It is arguably one of the more devastating complications in obstetrics, particularly for women wanting to maintain their fertility. The primary indication for a hysterectomy is postpartum haemorrhage associated with abnormal placentation and uterine abnormalities or uterine rupture¹.

The purpose of this report was to describe the incidence of peripartum hysterectomy and associated risk factors in Queensland from 2000/2001 to 2010/2011. Peripartum hysterectomy was defined as those completed during the birth episode of care and identified using ICD-10-AM procedure block codes 1268 and 1269. Cases were enumerated from the Queensland Hospital Admitted Patient Data Collection (QHAPDC) as the Queensland Perinatal Data Collection (QPDC) was found to underestimate peripartum hysterectomies. The cases were then linked to the relevant birth record in the QPDC.

The assessment of risk factors was based on available data. While data were available for most risk factors over the entire study period, this was not the case for all measures. The data were truncated for three measures - adherent placenta (available from July 2002), body mass index (BMI) (available from July 2007) and postpartum haemorrhage (PPH) (available from July 2007). PPH was recorded throughout the study period; however, a definitional change in July 2007 precluded the use of earlier data.

There were 602,759^p births and 419* peripartum hysterectomies in Queensland during the study period (2000/2001 to 2010/2011), which corresponds to an incidence of 0.7 hysterectomies per 1,000 births. This is consistent with rates reported in other developed countries - most notably, in the USA^{2,3}. The incidence has generally remained stable between 2000/2001 and 2010/2011, ranging from 0.6 to 0.9 hysterectomies per 1,000 births. Hysterectomy case rates were higher amongst older women, multiparous women and those who were overweight and obese, but did not vary according to patient chargeable status. The incidence was also higher in larger facilities (Table 1). Over the 11 years included, there were 7 maternal deaths that occurred during the hospital episode in which the hysterectomy occurred[§].

Morbidly adherent placenta and postpartum haemorrhage are viewed as clinical indications for a peripartum hysterectomy. The peripartum hysterectomy case rate among women who had an adherent placenta was 260.3 per 1,000 compared to 0.5 per 1,000 in those who did not have an

Table 1: Incidence of peripartum hysterectomy in Queensland by selected demographic and facility characteristics, 2000/2001 to 2010/2011

Measure	Incidence (per 1,000)	Odds Ratio (95%CI)
Age (years)		
<35	0.5	1.00
35-39	1.4	2.79 (2.25, 3.45)
40+	2.2	4.35 (3.10, 6.09)
Parity		
Nulliparous	0.2	1.00
Multiparous	1.0	5.09 (3.78, 6.86)
BMI[†] (2007/2008 to 2010/2011)		
Healthy weight	0.5	1.00
Overweight	0.9	1.73 (1.21, 2.48)
Obese	1.0	1.81 (1.24, 2.65)
Patient chargeable status		
Public	0.7	1.00
Private	0.7	1.07 (0.87, 1.31)
Facility size (births per month)		
0 - 99	0.4	1.00
100 - 199	0.6	1.51 (1.15, 1.98)
200+	1.0	2.47 (1.90, 3.20)

[†]Underweight excluded as there were only 7 peripartum hysterectomies in this group

^p 2010, 2011 perinatal data preliminary, extracted 6 March 2012

*16 additional cases were found but excluded from further analysis as they could not be linked to QPDC

§ It is possible that other deaths occurred after the initial episode but data issues preclude follow up of all cases.

adherent placenta (Table 2). Case rates were also higher among women who had a PPH when compared to those who did not (6.4 versus 0.5 per 1,000).

Caesarean section (CS) is also viewed as a risk factor for peripartum hysterectomy, and in this study, case rates were higher among women who delivered by CS than those who did not (Table 2: 1.8 versus 0.2 per 1,000). The relationship between CS and peripartum hysterectomy may be due to the increased risk of severe postpartum haemorrhage associated with this method of delivery. However, this remains a point of contention as it is equally plausible that caesarean sections are routinely performed in pregnancies that are considered high risk (for example, those involving abnormal placentation). An examination of reason for CS (without labour) provides support for the latter interpretation (Table 3). In total, 290 women had a CS before labour and subsequently, a peripartum hysterectomy. The primary reason for caesarean section amongst these women was placenta praevia, previous uterine scar and morbidly adherent placenta. These causes accounted for 76% of caesarean sections amongst women in this group.

Available evidence has suggested that a previous caesarean section is linked to peripartum hysterectomy through an increased risk of abnormal placentation in subsequent pregnancies.⁴ When multiparous women were evaluated separately in this study, hysterectomy case rates were higher amongst those who previously had a caesarean section when compared to those who hadn't (Table 2). Furthermore, the risk associated with prior caesarean sections increased as the number of previous caesarean sections increased (Table 2).

Peripartum hysterectomy rates in Queensland are comparable to those reported in other industrial nations. It remains a rare event affecting less than 1 pregnancy per 1,000. Adherent placentation, PPH and caesarean section delivery (current or previous) were linked to the incidence of peripartum hysterectomy, although the causal pathways remain to be fully elucidated.

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References

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Table 2: The incidence of peripartum hysterectomy by selected clinical indications: Queensland, 2000/2001 to 2010/2011

Measure	Incidence (per 1,000)	Odds Ratio (95% CI)
Adherent Placenta (2002/2003 to 2010/2011)		
No	0.5	1.00
Yes	260.3	683.2 (528.2, 883.7)
Postpartum haemorrhage⁺⁺ (2007/2008 to 2010/2011)		
No	0.5	1.00
Yes	6.4	13.26 (9.94, 17.69)
Caesarean section		
No	0.2	1.00
Yes	1.8	10.05 (7.82, 12.93)
Previous caesarean section		
No	0.5	1.00
Yes	2.6	5.64 (4.53, 7.02)
Number of previous caesarean sections		
None	0.5	1.00
One	1.6	3.55 (2.76, 4.58)
Two	4.0	8.85 (6.59, 11.89)
Three or More	12.4	27.48 (20.01, 37.74)

⁺⁺This may be an underestimate due to uncertainty regarding the completeness of recording of PPH in the QPDC.

Table 3: Reason for caesarean section (CS) amongst women who had a peripartum hysterectomy following a CS prior to labour, Queensland 2000/2001 to 2010/2011

Reason for CS	CS prior to the onset of labour N (%)
Placenta praevia	
With haemorrhage	99 (34.1)
Without haemorrhage	20 (6.9)
Uterine scar	58 (20.0)
Morbidly adherent placenta	44 (15.2)
Total	221 (76.2)