NATIONAL PERINATAL EPIDEMIOLOGY CENTRE
Severe Maternal Morbidity Audit

Peripartum Hysterectomy in Ireland (2021-2024) – Findings from a national clinical audit by the National Perinatal Epidemiology Centre (NPEC).

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Background

Peripartum hysterectomy (PH), the surgical removal of the uterus, is a rare but potentially life saving procedure carried out in obstetric complications and emergencies; such as to prevent or arrest major obstetric haemorrhage (MOH). Previous studies have identified abnormal placentation, previous caesarean section (CS), advancing maternal age and parity as risk factors for PH.[1] An increase in PH rates in Ireland has been identified through the NPEC's Severe Maternal Morbidity (SMM) audit. The PH rate increased from 0.33 per 1,000 maternities in 2011-2013 (1 in every 3,000 maternities), to 0.52 per 1,000 maternities in 2022-2024 (1 in every 1,900 maternities) [Figure 1].

Methods

Since 2011, the NPEC has conducted a national clinical audit on SMM. Eligibility for the audit was defined as a pregnant or recently pregnant woman (within 42 days following the end of pregnancy) experiencing at least one of 14 clearly defined organ dysfunction morbidities (including PH) and/or two management proxies for SMM.

Definitions are available through the QR code below:

Findings

From 2021-2024, of the 218,398 maternities in Ireland, 111 women had a PH, giving a rate of 0.51 per 1,000 maternities (95% Confidence Interval: 0.42-0.61) for the four-year period. This is greater than the reported rate of 0.35 per 1,000 deliveries in the Nordic countries, similar to the rate of 0.52 per 1,000 in the UK, and less than the rates of 0.83 per 1,000 and 0.91 per 1,000 in the US and Slovakia, respectively.[2-5]

Of the women who had a PH, 96% delivered by CS, with nearly 40% of these PHs reported as planned procedures. Placenta Accreta Spectrum (PAS), an abnormal adherence of the placenta into the myometrium potentially causing MOH, is the most frequently reported (63.1%) primary indication for PH.

MOH due to uterine atony was the next most common indication in over a quarter of PH events (28.8%) [Table 1]. Two PHs were reportedly due to cervical cancer.

Interventional Radiology (IR) was used to prevent or arrest bleeding in approximately one in every five women experiencing a PH (n=23 of 111, 20.7%).

Previous caesarean (CS) section has been identified as a risk factor for PAS, with increasing CS rates recorded nationally.[6,7] Our study identified that of the women experiencing a PH due to PAS, 93.5% had had a previous CS delivery (n=58 of 62, unknown for 8).

Further, high BMI has been associated with an increased risk of PH in Ireland. [8]

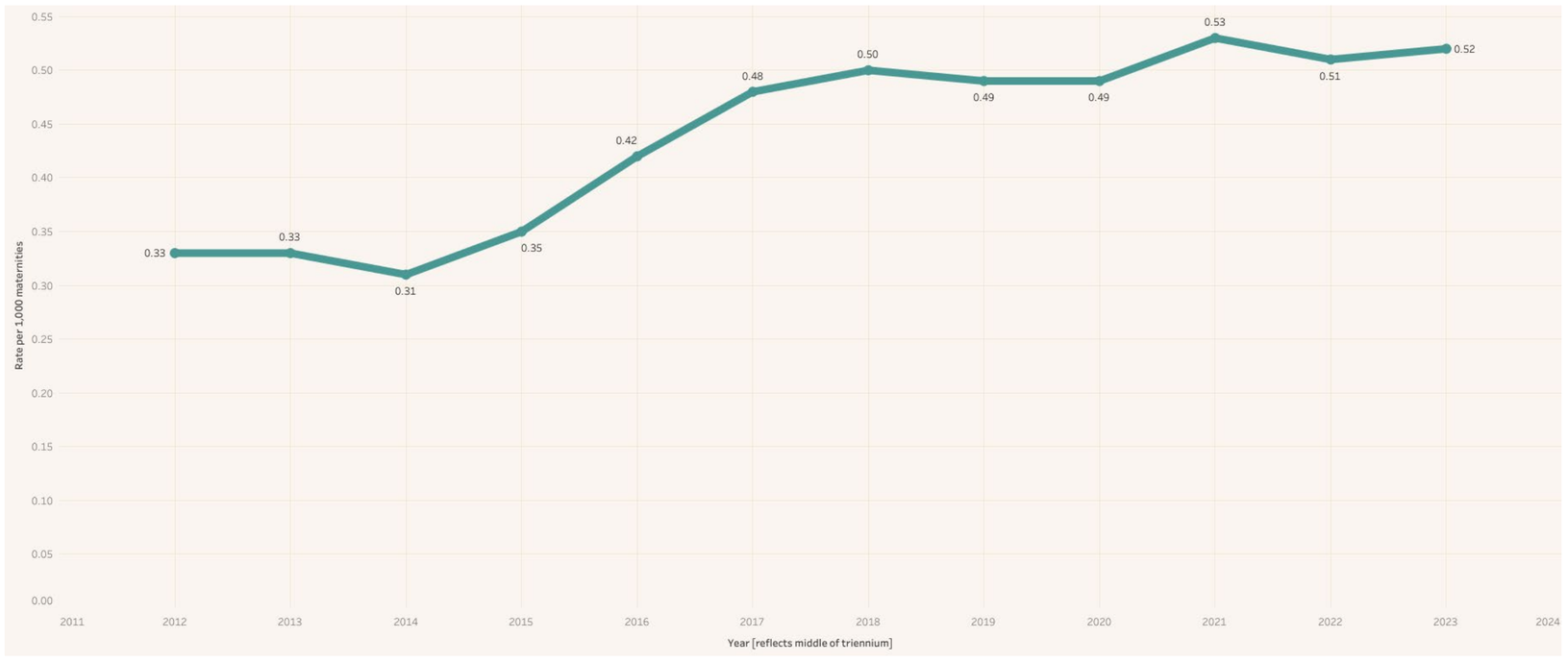
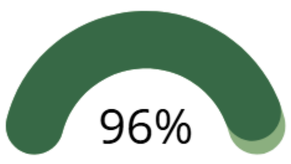
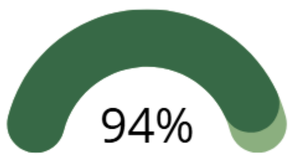


Figure 1. Trend in the rate of PH, 2011-2024.



96% of women who experienced a PH in 2021-2024 delivered by ceasarean section.

40% of PHs from 2021-2024 were reported as planned procedures.



The majority (93.5%) of women expereiencing a PH due to PAS had had a previous CS.

Table 1: Primary indication for PH, 2021-2024

Primary indication for PH	PAS	MOH	Other
2021	18/28 (64.3%)	7/28 (25.0%)	3/28 (10.7%)
2022	22/32 (68.8%)	7/32 (21.9%)	3/32 (9.4%)
2023	10/25 (40.0%)	14/25 (56.0%)	1/25 (4.0%)
2024	20/26 (76.9%)	4/26 (15.4%)	2/26 (7.7%)
Total	70/111 (63.1%)	32/111(28.8%)	9/111 (8.1%)

Conclusion

Increasing rates of CS and PH in Ireland require continuous monitoring through clinical audit. In Ireland, the established association between previous CS, PAS and PH continues in recent years. This highlights the need for antenatal detection and management of PAS. Further, antenatal education on modifiable risk factors should include risk associated with repeat caesarean section.

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