

Severe Maternal Morbidity (SMM)



NATIONAL PERINATAL
EPIDEMIOLOGY CENTRE

Based on the findings of Severe Maternal Morbidity in Ireland Annual Report 2021



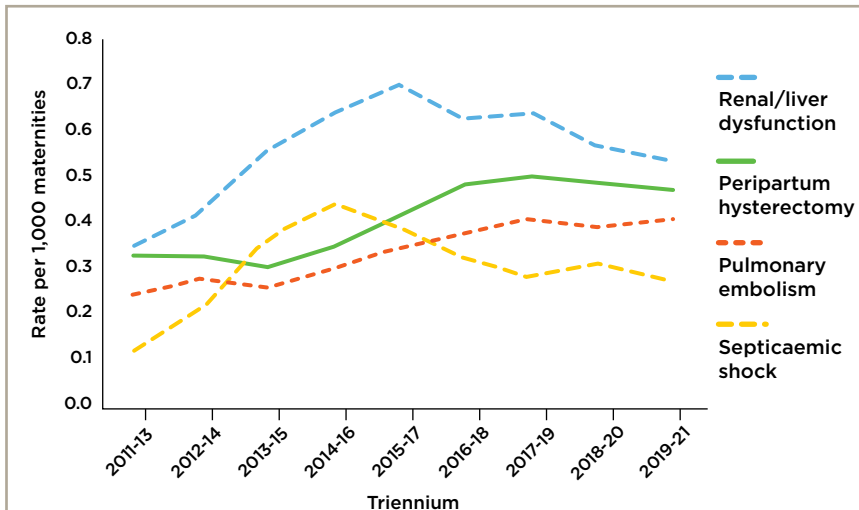
In this audit, a case of SMM was defined as a pregnant or recently-pregnant woman who experienced any one of sixteen maternal morbidities/care events.

374 SMM

Among 58,953 maternities in the 19 Irish maternity units in 2021

1/158

Incidence of women experiencing a SMM is one in 158 maternities (6 per 1000 maternities)



40%
ICU

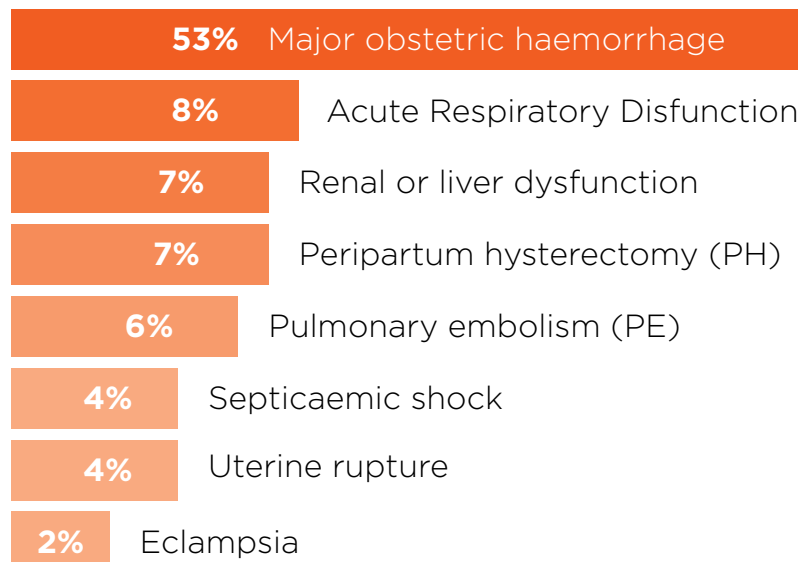
151 women

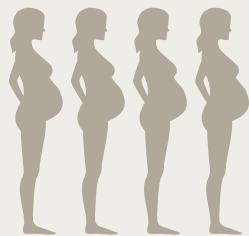
(40%) were admitted to Intensive Care Unit/Critical Care Unit

16 Maternal Morbidities/Care Events audited, defined as:

- major obstetric haemorrhage (MOH) – estimated blood loss \geq 2500ml and or transfused 5 units of blood
- uterine rupture
- peripartum hysterectomy
- eclampsia
- renal or liver dysfunction
- pulmonary oedema
- acute respiratory dysfunction
- pulmonary embolism
- cardiac arrest
- coma
- cerebrovascular event
- status epilepticus
- septicaemic shock
- anaesthetic complications
- admission to an intensive care or coronary care unit
- interventional radiology

Most common morbidities





x4

A multiple pregnancy was associated with more than a fourfold increase risk of SMM



BMI

2 x SMM risk

- Obese women had double the risk of PE and PH
- Women with high BMI had 50% higher risk of MOH or ICU admission



x5

Perinatal mortality rate (PMR) was 5 times higher in women experiencing SMM

Selected Recommendations

- Robust clinical audit on adverse maternal outcomes requires the protected time of clinical staff. Funding should be provided by the Health Service Executive (HSE) to facilitate the same.
- A public health education programme on maternal morbidity and modifiable risk factors should be developed.
- Antenatal education:
 - (a) Antenatal education/information should be provided by the multidisciplinary team to women to ensure an understanding of maternal morbidity and complication awareness.
 - (b) When a pregnant woman is identified as high risk for significant morbidity, specific education should be available during antenatal care and birth preparation.
 - (c) The national standards on antenatal education should provide guidance on specific education for maternal morbidity awareness.
- Internationally, social inequalities have been shown to impact on risk of SMM. There is a need to establish the evidence in this regard in Ireland. This requires improved maternity data at national level and more research in order to establish this evidence.

There is an opportunity with the Maternal Newborn Clinical Management System (MN_CMS) data from Irish maternity units to mine data at national level. These data could be collated to identify the influence of risk factors for SMM in Ireland including ethnicity, maternal age, body mass index (BMI), smoking, employment status and other socio-economic factors. This should overcome the current deficit in the pregnant population data at national level.

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The full report is available
on the NPEC **website**

