

# Severe Maternal Morbidity (SMM)



NATIONAL PERINATAL  
EPIDEMIOLOGY CENTRE

Based on the findings of Severe Maternal Morbidity in Ireland Annual Report 2017

**17** MATERNAL  
MORBIDITIES  
AUDITED

In the NPEC SMM audit, a case of (SMM) was defined as a pregnant or recently-pregnant woman who experienced any one of seventeen maternal morbidities.



**60,910**

Maternities in the 19 Irish maternity units in 2017

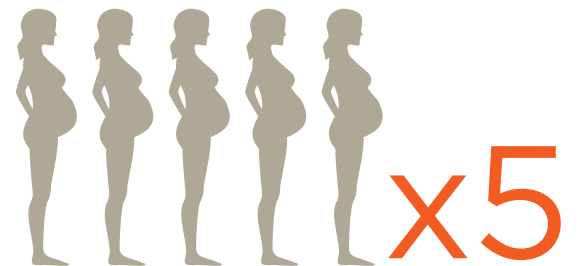
**1/156**

Incidence of women experiencing a SMM is one in 156 maternities



**149 women**

(38%) were admitted to Intensive Care Unit/ Critical Care Unit



A multiple pregnancy is associated with more than a fivefold increase risk of SMM

## Most common morbidities

**49%** Major obstetric haemorrhage

**13%** Renal or liver dysfunction

**8%** Peripartum hysterectomy

**6%** Pulmonary embolism

**3%** Septicaemic shock

**3%** Eclampsia

**3%** Pulmonary oedema

**2%** Uterine rupture

### IN THIS AUDIT A CASE OF (SMM) WAS DEFINED AS A:

- 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

# Recommendations

- **A quantitative approach involving volume and weight assessment to estimate blood loss should be considered for use in all maternity units.** Development of a national tool-kit would assist standardisation of such an approach. This is being addressed by the National Women's and Infants Health Programme.
- **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 same.
- **The implementation of a case assessment audit of major obstetric audit (MOH) is essential as it continues to be the leading cause of severe maternal morbidity.**
- (a) A public health education programme on maternal morbidity and modifiable risk factors should be developed.  
(b) When a pregnant woman is identified as high risk for significant morbidity, specific education should be directed to her during antenatal birth preparation.  
**A national curriculum on antenatal birth preparation for high risk pregnancies would be beneficial.**
- Maternal Newborn Clinical Management System (MN\_CMS) data from Irish maternity units should 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.
- **Research on the incidence of morbidly adherent placenta in Ireland is warranted.**
- The Ten Group Classification System (TGCS) is a method providing a common starting point for further detailed analysis within which all perinatal outcomes can be measured and compared. The NPEC encourages all units to collect TGCS data in order to facilitate local and national audit.

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