

Maternal mortality: lessons from the confidential enquiry

The Confidential Enquiry into Maternal Deaths is the world's longest running self-audit of professional practice. Its reports have appeared every 3 years since 1957. The most recent report (Department of Health, 1998), while taking care to preserve continuity, has revamped its presentation and broadened its scope. Some of its findings should shake our complacency.

CAUSES OF DEATH

The UK's leading cause of maternal mortality is pulmonary embolism, which led to 46 deaths in 1994–96. Fifteen of these occurred after caesarean section — an increase of only two from 1991–93. Bearing in mind the country's rapidly rising caesarean section rate, this might suggest that guidelines on thromboprophylaxis after surgery (Royal College of Obstetricians and Gynaecologists, 1995) are having an effect. We should now extend prophylaxis to all women at risk (Greer, 1997).

Thirteen of the deaths occurred in the first trimester, and ten (a sharp increase) after vaginal delivery. Known thrombophilia, family history, obesity or bed rest should lead to consideration of thromboprophylaxis. Worryingly, at least 16 of the 46 women complained of leg or chest symptoms before they died but were diagnosed as having 'muscle strain' or 'chest infection'. Such symptoms during or after pregnancy must be taken seriously. They can safely be investigated by ventilation/perfusion lung scanning or by ultrasound.

Increases occurred in deaths from sepsis, amniotic fluid embolism, pregnancy-induced hypertension and uterine rupture. Early antibiotic treatment is important in cases of possible sepsis. Clear guidelines are essential in man-

aging hypertension. In each unit, one named consultant should be responsible for protocols for serious conditions like pre-eclampsia, including guidance about when such patients should be transferred.

WOMEN AT RISK

The Enquiry provides new findings about which women are at high risk. The maternal mortality rate is now higher among women aged over 40 years than among 'grande multiparae'. The rate among black women is three times that in other ethnic groups, and although this finding is based on small numbers, similar trends have been recorded in the USA and in the Netherlands (Schuitemaker et al, 1998).

The report recommends increased consultant presence in the delivery suite. This has been suggested before and the benefits are sometimes questioned. The potential effect is demonstrated by the obstetric anaesthetists, who increasingly provide a consultant-based service. Direct deaths from anaesthesia had been reduced from 30 in 1976–78 to only one in 1994–96. This is a remarkable achievement by the anaesthetists.

Credit is also due to the obstetric services for the lives they save. In 1994–96 only 12 women died from haemorrhage. We know that life-threatening haemorrhage occurs in about 1 in 1000 deliveries (Drife, 1997; Mantell et al, 1998) and with over 600 000 deliveries each year, this means that some 600 lives are saved annually in the UK. In individual hospitals, however, massive haemorrhage is infrequent and practice drills for its management are recommended.

Medical conditions complicating pregnancy are also uncommon and the report is a unique learning oppor-

tunity. Ruptured aortic aneurysm, for example, caused seven maternal deaths in 1994–96. The lesson from these cases is that an unwell pregnant woman with chest pain should always have a chest X-ray. The report emphasizes that chest X-ray is safe in pregnancy.

The Enquiry reminds us that epilepsy can be lethal. It caused no fewer than 19 maternal deaths in 1994–96. Obstetricians often assume that women with epilepsy know all about their condition but lives can be saved by simple advice given in the antenatal clinic to women and their families.

This report's innovations include a chapter on psychiatric disorder and substance abuse, which caused a total of 28 deaths. The maternity care system repeatedly fails young substance abusers and their pathetic case histories make disturbing reading. In the antenatal clinic we often fail to recognize signs of psychiatric disorder.

'Fortuitous' deaths included 13 resulting from road traffic accidents and advice is given on wearing seat belts during pregnancy. Six women were murdered during or after pregnancy, in each case by a partner or ex-partner. Domestic violence is now a public health issue. We should be vigilant for warning signs and the report recommends that the booking history should include routine questions on domestic violence.

WHO SHOULD READ THESE REPORTS?

The reports are read by obstetricians but recommendations often affect other medical specialties. For example, one woman died of placental abruption soon after being assessed as low risk in an accident and emergency department. GPs, in particular,

need to be aware of the need for high indices of suspicion for thromboembolism and ectopic pregnancy. Women most at risk of death from ectopic pregnancy are those who speak little English and those in itinerant occupations.

The recommendations are being publicised among midwives, who are now fully involved in the Enquiry. The obstetricians' quest for perfect safety, after being questioned in recent years, is again in tune with public opinion. Incident reporting is part of clinical governance. The report includes auditable standards and the days when recommendations were simply repeated in successive reports should now be over.

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UK Confidential Enquiry into Maternal Deaths

For comments on this editorial and other articles in Hospital Medicine, please turn to the correspondence section on p. 221

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KEY POINTS

- Thromboembolism is the leading cause of maternal death and is increasing. Prophylaxis should be considered for all women at high risk.
- In every unit a named consultant should be responsible for protocols for the management of serious conditions such as pre-eclampsia.
- Regular practice drills should be held for managing massive haemorrhage, which occurs in 1 in 1000 deliveries.
- GPs and emergency doctors should be vigilant for ectopic pregnancy in any woman of reproductive age, and for thromboembolism during or after pregnancy.
- Suspected sepsis requires immediate and energetic treatment.
- In the antenatal clinic, the booking history should include questions about psychiatric disorder and domestic violence.
- Epilepsy is a potentially fatal disease. Antenatal advice to women with epilepsy and their families could save lives.
- Chest X-ray is safe in pregnancy and is a simple screening test in cases of chest pain.