AIMS For a better birth...

# Saving mothers' lives

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*Nadine Edwards summarises the Eighth Report analysing Maternal Deaths*

This Report1 makes traumatic reading, covering as it does the deaths of women in the UK from 2006-2008 who died during pregnancy or birth or during the days, weeks or months after birth. '261 women died in the UK directly or indirectly related to pregnancy' (p1). Overall this is 11.39 women per 100,000 maternities.

Although maternal deaths are rare, analysis of their causes and failures is crucial, and also helps the larger numbers of women who suffer 'near misses' and may be seriously ill.

The overall findings of the Report are that fewer women died of direct causes, such as thromboembolism and haemorrhage. There was also a lower rate of death attributed to deprivation and lower socio-economic status - though this is very much still an issue. More women died who had Group A streptococcal infections. The Report 'identified substandard care in 70% of Direct deaths and 55% of Indirect deaths' (p1).

'The overall aim is to save the lives of as many mothers and newborns as possible through the expert anonymous review of the circumstances surrounding and contributing to each maternal death in the UK [...] to learn wider lessons and to formulate and disseminate more general recommendations' (p25). To do this, the Report is divided into 17 chapters, and appendices. Each chapter, by different authors, looks in depth at various causes of maternal deaths along with the care the women received. It provides specific recommendations for health care workers and outlines lessons to be learnt in that particular area.

The authors of the Report have also identified the 10 most recurrent problems arising from the chapters, along with urgent recommendations. The full Report with these recommendations is available free of charge on onlinelibrary.wiley.com/doi/10.1111/bjo.2011.118.issues1/ issuetoc, but can be summarised as follows:

- Pre-pregnancy counselling should be available for all women with medical conditions and ideally for all women.
- Professional interpretation services should be available for all women who do not speak English.
- When referrals are made to specialist services, these should be dealt with urgently, and good communication, and follow up, is essential.
- Women with serious pre-existing medical or mental health conditions, or who develop them during pregnancy or after birth, should be referred immediately to specialist centres of expertise.

- Clinical staff should have regular training in responding to obstetric emergencies and emerging emergencies, such as sepsis, and medical and mental health conditions.
- Health practitioners need to be able to identify and manage very sick women, and MEOWS (modified early obstetric warning score) should be used routinely in all women who become ill in pregnancy or after birth.
- Women who develop pre-eclampsia or have other signs, such as raised systolic blood pressure, should be treated urgently.
- All pregnant women and those who have recently given birth should get information about the risks, signs and symptoms of sepsis and how to prevent it by washing hands before and after going to the toilet or changing sanitary towels and being especially careful if they or their close contacts have a sore throat or upper respiratory tract infection. Health practitioners, particularly community midwives, need to be able to recognise signs and symptoms of developing sepsis and refer women immediately. Sepsis is complex and not well understood and while some deaths will be unavoidable, early aggressive intravenous antibiotic treatment is crucial.
- There needs to be a high-quality review of any maternal death. Many were of poor quality with little evidence of reflection and critical analysis, to the extent that, in some cases, the authors found 'no evidence that obvious lessons had been identified, let alone learnt' (p14).
- Better maternal autopsies are needed.
- We need national guidelines on the identification and management of sepsis and on how to do, and act on the results of, serious incident reviews.

Key research questions identified by the report included looking at the impact of reduced postnatal visits, examining the social, service and clinical factors that mean that mothers from certain minority ethnic groups are still more likely to die, identifying barriers to rapid communication, referrals and appointments for ill women, and determining whether or not the increase in sepsis and Sudden Adult Death Syndrome is real.

The authors include a Back to Basics section. Somewhat concerning, this includes improving basic medical and midwifery practice such as history taking, basic observations and understanding normality. It also identifies the problem of health practitioners attributing signs and symptoms of emerging serious illness to common symptoms. Improving communication and referrals is stressed throughout the Report and is highlighted here too. Many examples are given where failures in these basic requirements may well have contributed to a mother's death.

The main causes of direct maternal deaths are sepsis, pre-eclampsia/eclampsia, thromboembolism, amniotic fluid embolism, early pregnancy deaths, haemorrhage and deaths due to anaesthesia. The main cause of indirect deaths is cardiac disease. 26% of the women who died received little or no antenatal care, 42% who died had shared care between GPs, midwives and obstetricians and 37% of the women had not yet given birth. One of the most experienced authors, Gwyneth Lewis, suggests something that AIMS has been concerned about for some time – that mothers who are threatened that their baby will be taken into care may have committed suicide, and that the fear of a baby being taken at birth might make

vulnerable mothers, in need of support and care, avoid maternity services.

Many of the chapters in the Report highlight obesity and educating the community about sepsis as major problems – though in AIMS Journal Vol.23 No.4 Rosemary Mander, Ruth Deery and Sara Wickham suggest that the issues involved are complex and suggest some caution, as these can become a way of blaming women for their own deaths and morbidity and obscure other failures of health care.

Fragmentation of care, lack of continuity, and poor follow-up, along with high levels of busyness in hospitals, feature in many of the chapters.

In the chapter on thrombosis and thromboembolism, the author suggests that chest pains are not being investigated and that any chest symptoms occurring for the first time in pregnancy or after birth should be taken seriously. The chapter on pre-eclampsia and eclampsia also mentions numbers of symptoms that are not always followed up and suggests that: 'The single major failing [in clinical care] in the current triennium was, again, inadequate treatment of hypertension' (p68), and that the use of syntometrine for the third stage of labour should be avoided if a woman has hypertension or if her blood pressure is unknown. As the chapter on haemorrhage makes clear, severe bleeding can occur during childbearing for various reasons, but one of the reasons highlighted is placental problems following previous caesarean sections.

The author of the chapter on amniotic fluid embolism (AFE) suggests that with excellent care: 'Amniotic fluid embolism should no longer be regarded as a condition with near universal maternal mortality' (p77). It is significantly associated with induction of labour, but there is apparently no association between induction and fatality. If a mother does die from AFE, however, it is important that an autopsy is carried out very quickly, as otherwise a diagnosis of AFE is difficult or impossible. In the chapter on deaths in early pregnancy, one key message is to consider pregnancy when women present at Accident and Emergency, especially with diarrhoea, dizziness and vomiting. The author worryingly points out that this is one of the lessons that has not been learnt from the previous Report on maternal deaths. Although very different issues, the chapters on maternal deaths from sepsis and anaesthesia both identify similar failings for similar reasons – that both need swift and correct treatment from the right senior practitioners.

Communication is key. Not surprisingly, but of no less concern, both chapters identify from the case reports that 'providing good high-dependency care was difficult when the maternity service was already busy' (p 102). The chapter on deaths involving anaesthesia concludes: 'A number of case reports highlight that peak labour ward activity coincided with the emergency admission of a pregnant woman with an acute, severe illness. Many notes suggest that the midwifery, obstetric and anaesthetic workforce was already fully committed at times of peak activity in normal workload. This produces difficulties if a pregnant woman with an acute, severe illness is admitted and requires high-dependency care in addition. When staffing levels are calculated on average activity, there needs to be a clear contingency plan for all disciplines to obtain further skilled assistance' (p108).

In the chapter on cardiac disease, which is the leading cause of maternal deaths overall, once again, one of the main failures identified by the author was practitioners not recognising or investigating signs and symptoms of heart disease, such as pains in the neck, jaw and left arm, nausea and dizziness, and other less common symptoms. In the chapter on indirect maternal deaths, similar patterns emerged – symptoms being missed and not investigated. The authors point out that women who are victims of domestic violence, use drugs, smoke, do not speak English and/or are asylum seekers may be particularly unlikely to receive the care they need. They conclude that: 'This triennium the assessors have been struck by the lack of referral of potentially high-risk women' (p130).

The chapter on deaths from psychiatric causes stresses the need for high-quality specialist services for pregnant women and new mothers and points out that general psychiatric services are often inappropriate. It also stresses the need for specialised mother and baby units throughout the UK. The women who died were aged from 16-40, 90 per cent were white and most had partners and stable lifestyles: 'care needs to be taken not to equate risk of suicide with socio-economic deprivation' (p135). While the authors suggest that unexplained physical symptoms of distress and agitation should not be assumed to have a psychiatric cause, they also stress that lack of diagnosis and treatment for women at risk of developing severe psychiatric disorders was prevalent, pointing to lack of specialist services and fragmented care. They also criticised, as AIMS has repeatedly done, the fact that some women were reported to Social Services only because they were a 'psychiatric patient rather than because of specific concerns about the welfare of the infant. It was apparent from their notes that fear that the child would be removed was a prominent feature of the women's condition and probably led them to have difficulties in engaging with psychiatric care' (p137) and that mental illness should not routinely result in referral to Social Services. Three women committed suicide 'shortly after a decision to remove the child into care' (p138).

In the women who died from causes apparently unrelated to pregnancy, many died in road accidents, were murdered or died of drug overdoses. The author of this chapter suggests that women need information about positioning safety belts, and that women suffering from abuse need more support and information. Women who do not speak English need interpreters who are not family members, and information about domestic abuse needs to be recorded safely – otherwise this could put women at increased risk of further abuse.

The chapter on midwifery echoes many of the recommendations of the other chapters – that midwives need to provide and record excellent basic observations and care, inform women about the signs of sepsis and the importance of good personal hygiene, refer women to the right senior specialist/s at the right time, arrange interpreters where necessary and provide continuity of care for vulnerable women. The key messages are to listen to women and give them care that meets their physical, mental and social needs, and to provide information that the woman understands. One example given is of a woman who died following an induction with 'no evidence that the risks and benefits had been discussed with the mother' (p153). The chapter advocates what AIMS has long advocated – continuity of care and carer:

*'ensuring continuity of care and carer where possible plays a vital role in protecting the wellbeing of mothers and their babies' (p156). 'If there is a single "take home" message for midwives it is this: listen to the woman and act on what she tells you' (p157).*

Two potentially contradictory messages are of some concern: the authors describe the midwife in terms of being by the '[woman's] side, as her companion … also her advocate' but at the same time suggest that midwives 'need to develop clear boundaries between advocacy and collusion.' They then describe the midwife as the woman's 'care navigator' (p149-50) and there is mention of surveillance. They conclude that while the midwife is the woman's advocate, 'a midwife may be the woman's best advocate by challenging her and helping her to see that the course of action she is suggesting, although not the woman's choice, is in her best interest' (p157). Perhaps the longest AIMS campaign has been to support women who are being coerced or bullied by health practitioners into following courses of action that they do not want to follow. When midwives are caseloading and know women well, there is often an exchange of views, with woman and midwife being open and honest with each other.

Where there is trust they will both listen to and respect each other. However, when care is fragmented in the way it is across the country, strong, challenging advice from a midwife is often experienced as coercing and bullying. In the chapter on GPs, the author recommends that GPs need to recognise and act on signs of ectopic pregnancy, cardiac disease, severe asthma, venous thromboembolism (VTE), deep vein thrombosis (DVT), pre-eclampsia and sepsis for example, that they need to be aware of guidelines and act on these for numbers of physical and mental health problems during pregnancy and after birth, and that they need to refer women to specialists when appropriate and make sure that appointments have been made and take place and that other health practitioners have the information they need – 'referral is not treatment' (p165). The GP is seen as central to co-ordinating care and particularly key for women who have mental health challenges at a time when services are fragmented and overstretched. In one case where the woman died: 'All the health professionals involved in this woman's care worked from different sites, they had no meetings or mechanisms for communication and they were all overstretched. This is a reflection of the current fragmentation of care' (p164).

The authors recommend that midwives should have access to women's GP notes, 'preferably' with the woman's consent. While, in the context of this report, it may seem obvious that more practitioners and agencies should have access to information about women, AIMS has witnessed some of the problems

when this occurs: for example, sensitive information being shared inappropriately with everyone and anyone over which the woman has no control, other practitioners prejudging women based on one person's subjective opinion, more inappropriate referrals to Social Services, lack of confidentiality, and not listening to women. The balance is complex. Both the chapters on GPs and midwives recommended that these practitioners should be involved in inquiries when a mother dies and that this was not always the case.

The chapter on emergency medicine highlights the importance of identifying and responding to serious illness and emergencies during the childbearing period, and transferring women to the correct senior specialist if needed. This is particularly necessary in Accident and Emergency Departments when women present with unexplained symptoms. Common symptoms that can be suggestive of serious illness include pyrexia, shortness of breath, headache, diarrhoea, vomiting, epigastric pain, chest pain, proteinuria, hypertension, abdominal pain and tachycardia. The focus in the chapter on critical care is on early protocol-driven care for severe sepsis – 'time is of the essence in initiating treatment' for developing sepsis (p175) and responding to severe obstetric haemorrhage. Simulation training is suggested as a possible avenue for exploration; the use of MEOWS, involving senior staff, collaboration and communication are stressed – prompt care, delivered in a structured fashion and by well-trained staff.

The chapter on pathology recommends improving the standard of maternal autopsy. Of the 221 (out of 261 deaths) completed for this Confidential Enquiry, some were 'dreadfully inadequate' (p181). Most are carried out on the instructions of the Coroner (or Procurator Fiscal in Scotland) rather than to provide a full explanation about the death of a mother.

The Report is meticulous and detailed, with many recommendations about how to improve the substandard care identified by the authors. However, similarly to the King's Fund Report[2] the solutions remain mostly within a medical philosophy and model of care which emphasises surveillance, more timely referrals to specialist services, and a reliance on technology once problems develop. It is obviously difficult, within our complex population and services, to balance the facts that most women are healthy and well and remain so during childbearing and that a very tiny number become critically ill and require excellent medical care quickly and at the right level of seniority. However, while the importance of caseloading midwifery care is recognised, the potential for prevention, reduction or earlier identification of problems through midwifery support is still not fully understood, nor is it being fully explored, despite the wealth of evidence in its favour.

Whatever one believes about the underlying philosophy, it is difficult to see how the Report's many recommendations could be put in place, systematically, by a service that is on its knees and continuing to suffer from cutbacks in resources and staff. Asking overstretched practitioners to do more visits, to be more vigilant, to follow up more closely and to become more knowledgeable about research and guidelines seems impossible without investing in staff and services. One cannot avoid fearing that more rather than fewer women will die over the next years, simply because the health services are unable to provide the level of care needed.

**References**

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2. Edwards, N (2008) Safe Births: Everybody's business. AIMS Journal Vol. 20 No, 3, 18-19