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NCT Briefing: Substandard Care and Maternal Mortality

'Substandard care' is care that is considered to be below acceptable standards. The most recent confidential enquiry into maternal deaths, *Saving Mothers' Lives: Reviewing maternal deaths to make motherhood safer 2003-2005*[1] assessed the extent to which substandard care contributed to maternal deaths in the UK. This briefing presents data from that report, providing statistics on substandard care and maternal deaths incidents and summarizing findings about common factors which contribute to failures in maternity care and maternal deaths.[1] Full maternal death and substandard care definitions are listed at the end of the briefing.

The number of substandard care and maternal death incidents

While cases of substandard care are extremely difficult to evaluate, between 2003-5 in the UK:

- 64% of *direct* deaths (84 in total) were assessed as having some degree of substandard care.
- 40% of *indirect* deaths (65 in total) had some degree of substandard care.
- 51% of all deaths (*direct* and *indirect*, 149 in total) had some degree of substandard care (*major* or *minor).*
- 40% of all deaths (*direct* and *indirect*, 117 in total) had *major* substandard care in which different treatment may have affected the outcome.

Since the last report of 2000-2002 the overall rate of substandard care for *direct* deaths has fallen slightly while there has been a small increase in the rate for *indirect deaths.* The overall percentage of substandard care cases has not increased.

The report concludes that 'maternal deaths are extremely rare, and the proportion of the very small numbers of mothers whose care was less than optimal has not increased for many years'.

Substandard care incidents by cause of death

Below are the percentages of which various causes of death were associated with substandard care (*major or minor*).

[1] For further information about the full findings of the *Saving mothers' lives*, an NCT Document Summary of the report is available: DS15 (December 2007).

Direct deaths

- 56% deaths by thromboembolism (the most common cause of *direct* death) were associated with some degree of substandard care.
- 72% deaths by pre-eclampsia/eclampsia were associated with some degree of substandard care.
- 59% of deaths by haemorrhage were associated with some degree of substandard care.
- 79% of deaths in early pregnancy were associated with some degree of substandard care.
- 100% of deaths by anaesthetic were associated with some degree of substandard care.

Indirect deaths

- 46% of cardiac deaths (the most common cause of in*direct* death) were associated with some degree of substandard care.
- 42% of psychiatric deaths were associated with some degree of substandard care.

Types and reasons for substandard care

Substandard care can take a number of forms. It refers to a failure in clinical care, including failure by health care professionals to recognise or act on risk factors and symptoms, and the underlying factors of low care standards, including resource constraints, low staffing levels and administrative failures. The report highlights a number of common factors which were found to contribute to substandard care. These are discussed below.

Lack of clinical knowledge and skills

Although there was no increase in the overall percentage of deaths considered to be avoidable, in the recent report more so than in previous years, there were a particularly surprisingly high number of incidents involving a lack of clinical knowledge and skills of health professionals. This included failures to identify and manage common medical conditions or potential emergencies outside of their expertise and incidents where resuscitation skills were poor. Non-identification or recognition of early warning signs of maternal collapse was also a feature in some cases.

Lack of senior support

Many of the women who died were not seen by an appropriately trained senior or consultant doctor in time, and a few were not seen at all, despite being in a Critical Care unit. This was generally due to a lack of awareness by more junior doctors, or midwives, of the severity of the illness.

Lack of / poor communication and multi-disciplinary work

Poor or non-existent cross disciplinary working, team working and communication was identified as common in many cases. A failure to share relevant and important information between health professionals, including GPs, the maternity team and social services contributed to some cases. Poor interpersonal skills were identified, as well as inappropriate or too short consultations taking place over the phone.

Poor management of higher risk, vulnerable women

A disproportionate number of all maternal deaths between 2003-2005 (not only those attributed to substandard care) were of women who came from the most excluded and vulnerable social groups. These included teenagers, non-English speaking women, asylum seekers and refugees and women with mental health or substance abuse problems. The enquiry found that overall, women who live in the poorest circumstances are up to seven times more likely to die than women from other demographic groups.

While the report does not provide data showing the extent to which socially disadvantaged women were more likely to die either *directly* or *indirectly* as a result of substandard care, poor management of higher risk women was identified as a common factor contributing to substandard care. And socially disadvantaged, vulnerable women are more likely to have complex, high risk pregnancies. This is because they are more likely to be in poorer general health and have a multiplicity of physical and mental health problems and social problems.

While a larger proportion of women with medically or psychiatrically complex pregnancies now receive care from a multidisciplinary team, overall this is still lacking, which was identified as a reoccurring problem identified by CEMACH. Even when multidisciplinary care was provided, sometimes there was not a clear management plan, leading to some women not receiving all of the services they needed, and other women experiencing serious problems and difficulties when they required emergency treatment.

The report also found a lack of active-follow up of women who were booked to attend maternity care, but consistently failed to attend, even for women with known high risk conditions. Vulnerable women were far less likely to access maternity care in early pregnancy or to remain in regular contact with maternity services. 17% of all the women who died booked for maternity care after 22 weeks or had missed over four antenatal visits. These findings reiterate that it is the women who are in most need of maternity care who are least likely to receive it.

Another major concern expressed by the report affecting socially vulnerable women is a lack of liaison and communication between health and social services in providing support to vulnerable women – linked to the overall lack of / poor communication and multi-disciplinary work identified.
Strong links were found between the women who died and social services and child protection issues. 10% of the women lived in families known to social services and a third of their pre-existing children were in the care of social services. Some of the women therefore tried to conceal their pregnancies from social services and avoided maternity care despite being aware they were at higher risk of physical or mental problems. Yet even when social services were aware of a client's pregnancy it was assumed, often wrongly, that they were accessing antenatal care.

It was also commonly found that women who had infants taken away and put into care, due to substance misuse or other difficulties, did not receive adequate follow-up for care in the postnatal period. The crucial need for follow-up of these women is shown by how a total of 23 women died after the removal of her child by social services, five from suicide and eighteen by substance misuse, which could not be proved or disproved as intentional.

Errors and problems with emergency response

Several cases involved the wrong emergency responses, such as the woman being taken to the nearest Emergency Department by paramedics, despite knowing she was pregnant. There were also cases where the midwife did not know the emergency telephone number to summon help, or the paediatric emergency team was wrongly called to a maternal collapse, causing a crucial delay to resuscitation. Delays to resuscitation also occurred due to incorrect or missing emergency equipment. Some incidents involved agency staff who were unaware of emergency drills.

Clinical incident reports and internal reviews

Cases were found where critical incident reports or internal reviews were not undertaken following serious untoward incidents (SUIs) or deaths. In addition, even when incident reports and reviews

did take place, their quality was variable and a lack of learning from these was identified, indicating poor dissemination of the findings and inadequate implementation of recommendations.

Many of these underlying factors and failures related to substandard care mirror the findings of other investigations into maternal deaths, such as the investigation into the 10 maternal deaths which occurred at Northwick Park Hospital between 2002 and 2005[2], some of which are included in this report. This demonstrated the common and serious lack of learning from lessons shown by internal reviews.

Substandard care and midwife-led services

There were relatively few deaths of women who had midwife only or midwife / GP only antenatal care, and in the majority of cases this care was appropriate. In only five of 36 deaths of women who had midwife-led antenatal care was the midwifery care considered substandard. Despite being few, these cases highlight the problem of midwifery-led care being provided inappropriately for known, or potentially, higher risk women.

Some cases involved failures by midwives to recognise deviations from the normal, thereby failing to refer for medical opinion. In a number of cases, despite obvious symptoms, midwives failed to take basic observations such as temperature, pulse and blood pressure, which would have alerted the midwife to potentially serious conditions. Although in the majority of cases appropriate referrals for medical opinion were made, in many cases when midwives had made a referral they appeared to believe the woman was no longer their responsibility. The report emphasises that even when midwifes have made referrals they still have a duty of care and responsibility for the woman involved. On the other hand there were incidents where despite making a referral, midwives worried that their concerns were ignored by medical staff. In these instances the report stresses that midwives must seek a second opinion, and then if necessary support from a supervisor of midwives and midwifery manager

Recommendations

Three of CEMACH's 'top ten' recommendations were made specifically in relation to the substandard care findings:

Clinical skills

- 'Service providers and clinical directors must ensure that all clinical staff caring for pregnant women actually learn from any critical events and serious untoward incidents (SUIs) occurring in their Trust or practice. How this is planned to be achieved should be documented at the end of each incident report form.'
- 'All clinical staff must undertake regular, written, documented and audited training for:
    - the identification and management of serious medical and mental health conditions which, although unrelated to pregnancy, may affect pregnant women or recently delivered mothers
    - the early recognition and management of severely ill pregnant women and impending maternal collapse
    - the improvement of basic, immediate and advanced life support skills.

  There is also a need for staff to recognise their limitations and to know when, how and whom to call for assistance.'

Early warning scoring system

- 'There is an urgent need for the routine use of a national obstetric early warning chart, similar to those in use in other areas of clinical practice, which can be used for all obstetric women to help more timely recognition, treatment and referral of women who have, or are developing, a critical illness. In the meantime all Trusts should adopt one of the existing early warning scoring systems of the type described in the Chapter on Critical Care, which will help in more timely recognition of women who have, or are developing, critical illness. It is important these charts can be used for pregnant women being cared for outside the

obstetric setting for example in Gynaecology, Emergency Departments and in Critical Care Units.

Additional recommendations are made by CEMACH throughout the report which is available for free download online[1].

Definitions used in the report

Maternal deaths

Maternal deaths
'Deaths of women while pregnant or within 42 days of the end of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not form accidental or incidental causes'

Direct deaths
'Deaths resulting from obstetric complications of the pregnant state (pregnancy, labour and puerperium), from interventions, omissions, incorrect treatment or from a chain of events resulting from any of the above'

Indirect deaths
'Deaths resulting from previous existing disease, or disease that developed during pregnancy and which was not due to direct obstetric causes, but which was aggravated by the physiologic effects of pregnancy'

Late deaths
'Deaths occurring between 42 days and one year after abortion, miscarriage or delivery that are due to *Direct* or *Indirect* maternal causes'

Coincidental (Fortuitous) deaths
'Deaths from unrelated causes which happen to occur in pregnancy or the puerperium'

Pregnancy-related deaths
'Deaths occurring in women while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death'.

Substandard care

'Major' substandard care
'Contributed significantly to the death of the mother. In many, but not all cases different treatment may have altered the outcome'

'Minor' substandard care
'It was a relevant contributory factor. Different management might have made a difference but the mother's survival was unlikely in any case'.

References and further sources of information:

1. Lewis G. *The Confidential Enquiry into Maternal and Child Health (CEMACH). Saving mothers' lives: reviewing maternal deaths to make motherhood safer - 2003-2005. The seventh report of the Confidential Enquiries into Maternal Deaths in the United Kingdom.* London: CEMACH; 2007. Available from: http://www.cemach.org.uk/Publications/CEMACH-Publications/Maternal-and-Perinatal-Health.aspx

2. Healthcare Commission. *Investigation into 10 maternal deaths at, or following delivery at, Northwick Park Hospital, North West London Hospitals NHS Trust, between April 2002 and April 2005 .* London: Commission for Healthcare Audit and Inspection; 2006. Available from: http://www.healthcarecommission.org.uk/

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