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# An exploratory mixed-methods study of Scottish midwives' understandings and perceptions of clinical near misses in maternity care

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**Summary**
*Objective:* adverse outcomes and near misses are believed to share many characteristics in terms of clinical situations and care management problems. Little is documented concerning what prevents adverse outcomes from happening once the 'accident trajectory' begins. This two-stage pilot study set out to investigate midwives' understandings and recollections of clinical near misses.
*Design:* anoymous self-completion questionnaire and follow-up group interviews.
*Setting/participants:* cinically based midwives working in four maternity units in Scotland (questionnaire [$n = 34$]; interviews [$n = 26$]).
*Findings:* despite a low response rate to the questionnaire, the cited examples seem to confirm that near misses and adverse outcomes follow essentially similar routes until the former are halted by a saving intervention. Dangerous situations are created by heavy workloads, and are aggravated by sub-optimal skill-mix, poor communication and individuals making mistakes or not following accepted procedures. Overwhelmingly, what prevents this situation from resulting in an adverse outcome is an intervention by another practitioner — often reported to be by chance and not design. In the interviews, these situations were discussed with reference to unit culture, the causes of errors and near misses, helping to prevent mistakes, the consequences of near misses and staff confiding in one another.
*Conclusions/implications for practice:* this limited study reaffirms the view that clinical near misses have the same origins as actual poor outcomes. Practitioners need to be able to discuss clinical and operational matters openly with colleagues.

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Although the 'blame culture' was reported to be less prevalent when things go wrong, not all midwives feel comfortable about discussing incidents or near misses. This exploratory study makes no claim to encapsulate this complex and sensitive subject. Further detailed research into the nature and extent of near misses is required. Identifying what prevents a poor outcome from happening may be a valuable clinical resource.


## Introduction

UK health service 'mistakes' in recent years have received a great deal of publicity. These range from the institutional (such as the Bristol Heart Inquiry and Alder Hey body parts scandal) to the grossly negligent (e.g. fatal intrathecal injections [Berwick, 2001]; fatal surgery [Dyer, 2004]) and the criminal (e.g. Harold Shipman). In addition, reports by expert groups have identified the personal and financial costs of adverse incidents. These include 400 deaths or injuries annually from medical devices; 10,000 adverse reactions to drugs; 1150 suicides of mental health patients; and £400 million ($730 m; €600 m) paid to settle negligence claims (DoH, 2000). In addition, 15% of hospital-acquired infections may be avoided but, in total, have an estimated cost to the National Health Service (NHS) of £1 billion ($1.8 billion; €1.5 billion). The Making Amends report (DoH, 2003) noted that the 22,000 outstanding claims against the NHS in 2001 had an estimated value of nearly £5.6 billion ($10.6 billion; €8.1 billion). Litigation, in turn, may cause reactionary or defensive clinical practices (Symon, 2000).

These figures may give little indication of the potential scale of the problem; research indicates that a substantial proportion of those admitted to hospital experience an adverse outcome. Estimates range from 3.7% in the USA (Brennan et al., 1991; Leape et al., 1991) to 10.8% in England (Vincent et al., 2002) and 16.6% in Australia (Wilson et al., 1995). More recently, Aylin et al. (2004) have claimed that 850,000 medical errors occur in the NHS each year, and that these result in 40,000 deaths. This staggering claim has been picked up by the general media (Woolcock and Henderson, 2004), although criticism of the figures has been noted (Lachmann, 2004).

Although the National Patient Safety Agency has launched a national reporting system for adverse events and errors in England and Wales, and clinical risk management has sought to quantify the incidence of adverse events at unit level through clinical incident report forms, little is known about the incidence of 'near misses'. These are sequences of events that could have resulted in a poor clinical outcome but did not because of some saving intervention. Part of the imprecision about the extent of these occurrences stems from inconsistent definitions. Some studies include among 'near misses' events such as massive haemorrhage, cardiac arrest, and eclamptic or epileptic convulsions (Mantel et al., 1998; Brace et al., 2004).

Barach and Small (2000) are more restrictive: whereas an adverse outcome is 'any poor clinical outcome for the mother or her baby' (pp. 761–762), they define a near miss as 'any event that could have had adverse consequences but did not and was indistinguishable from fully fledged adverse events in all but outcome' (pp. 761–762). The Scottish body responsible for managing clinical risk in the health service has a very similar definition: 'an incident which did not lead to harm, but which could have done so' (CNORIS, 2003, p. 6). Barach and Small (2000) go on to note that it is important to catalogue near misses, as 'the same patterns of causes of failure and their relations precede both adverse events and near misses' (p. 759). They report that the pre-eminent example of doing so is the airline industry, whose aviation safety reporting system has logged 500,000 instances of a near miss. Although it is vital to record all poor clinical outcomes, and to derive what lessons are possible from these unfortunate events, it seems that the opportunity to learn from near misses (as defined by Barach and Small, 2000) is often overlooked. However, some work has been carried out in this area: in research published soon after the commencement of our own study, Ashcroft et al. (2003) report a semi-structured observational seven-site study, in which they combined a 'fly on the wall' approach together with interviews and analysis of relevant documents. They found that near misses were much more common than adverse events, and concluded that latent failures (what they termed 'accidents waiting to happen') were commonplace. These often resulted from poor staffing levels and ineffective staff deployment.

The current focus on systems rather than human error when analysing poor outcomes (DoH, 2000;