Managing unexpected births in the emergency department

Anna Lyons outlines the potential scenarios in which urgent care staff should treat women undergoing emergency births, and recommends the development of specific guidelines for this area of clinical practice.

Summary
Nurses in emergency departments can be the first contact for patients who require assessment and management because they suspect they are about to give birth. This article discusses some of the challenges of caring for these women and considers the development of guidelines for practice.

Keywords
Emergency birth, guidelines, multiprofessional teams

Until recently, birth rates in the UK have been rising (Office for National Statistics 2009) and this rise, along with a review of maternity services (Department of Health (DH) 2007a), may lead to an increase in the number of births that occur in emergency departments (EDs).

In England, in 2008, 2,276 births took place in areas other than designated hospital wards and, of these, 63 took place in EDs (Sky News 2009). Women can give birth in EDs because they:

- Have received no antenatal care.
- Have gone into labour precipitously and have been unable to reach a maternity unit.
- Are new to the area, for example because they are recent immigrants or refugees, and are unaware of available services.
- Want to avoid midwives, for example because they do not want to be traced by social services.
- Have been concealing their pregnancies, perhaps because they are under the age of consent.
- Have been unaware of their pregnancies, perhaps because they are older women.

The development of guidelines can help ED staff prepare for, and respond to, the complexities of care for these women.

These guidelines can also help staff assess and provide care quickly, and ensure that they have access to the appropriate facilities. They should also make clear how, for example, blood loss should be managed, and how neonatal care and resuscitation should be provided, and should explain what documentation is required.

The guidelines should also include strategies for catering for the needs of underaged girls, people with learning difficulties or those with histories of drug abuse who are undergoing emergency births, with details of who should be contacted and procedures for obtaining consent (DH 2004).

Where there are no guidelines in place, ED staff can liaise with obstetric, midwifery, haematology, anaesthetic and paediatric departments to gain support for their introduction.

This liaison also encourages collaboration, and increases understanding of different roles and remits (Leiba and Glenn 2003, DH 2007b). Working parties can then be commissioned to develop guidelines that build on the experiences of these staff.

This article outlines the form that guidelines for emergency births in EDs should take, focusing on three stages of management: making triage assessments, drawing up care plans and providing postnatal care.

Triage assessments
As soon as ED nurses suspect that an emergency birth may be about to take place, they should confirm whether the woman concerned is pregnant. If they find that she is, they should ascertain when her baby is due, when she began to experience pain and whether the membranes have ruptured. If they have, ED nurses need to know when this occurred and the colour of the amniotic fluid. All of this information
must be documented and reported to the midwife and children's doctor on handover.

Severe abdominal pain can be caused by a variety of conditions so assessments of vital signs, urinalysis and abdominal palpation should be undertaken to exclude ectopic pregnancy (Lewis 2007), appendicitis (Sinclair and Marzalik 2009), bladder infection or pain from a sexually transmitted infection.

Triage staff should then ask if the woman has her maternity notes, which are generally given to pregnant women at around the 16th week of their pregnancies to bring with them if they present to an ED. These notes provide information such as the estimated date of delivery, blood type, relevant history, and contact numbers for the appropriate labour ward staff or midwife.

If the notes are unavailable, ED nurses should look for the relevant information from the unit’s alert folder, which is part of a national database of information on pregnant women who may be at risk, and which may be available in hard copy. This may highlight social issues or care-order plans of which ED nurses should be aware (DH 2004).

It should be remembered that the ED nurses may not have time to read the notes, and that the woman concerned may be unable to answer questions, perhaps because she is in too much pain or cannot communicate with nurses in a common language. When communication becomes difficult, an interpreter should be requested.

Emergency department nurses should ask if the woman has experienced bleeding, which can indicate placenta praevia, when the placenta is on or near the cervix at the end of pregnancy, or cervical dilation (Lindsey 2004). In either case, blood can be lost rapidly and urgent care is required.

Nurses must also assess blood loss and vital signs, gain intravenous access and begin fluid therapy. They should also contact a medical team.

A woman losing blood may require transfer to theatre, but this is decided after assessment by the medical and obstetric teams.

Nurses should assess if the woman has passed urine and commence a urine output chart because the descent of her baby and completion of the third stage of labour can be impeded by a full bladder (Lindsey 2004).

Finally, ED nurses should assess whether the woman is, for example, under 16 or has a history of drug or alcohol use (Siney 2001, Lewis 2007).

When such social issues arise, there may not be time to contact social services but ED nurses should try to identify a named person to contact after the birth.

When the assessment is completed, an ED doctor or midwife should devise a plan of care based on the woman’s stage of labour (Table 1). An example of such a care plan, to be completed with the appropriate specialist team, is shown in Figure 1, page 26.

The woman concerned should be told whether she will be transferred to a maternity unit or, if she is about to give birth and cannot be transferred safely or quickly, a midwife will see her at the ED. She should also be kept informed about when these events are likely to take place. It should be remembered that she may be feeling shocked at giving birth in the ED.

If a midwife can attend the ED, nurses should ensure that the following equipment is available:

- A delivery pack.
- Uterotonic drugs, such as synthetic oxytocin, which stimulate the uterus to contract.
- Protective eye wear, gloves and an apron.
- Resuscitation equipment for the baby.

Women who are about to deliver need a calm atmosphere and reassurance, and, if possible, should be moved to a quiet room. They may also be in a lot of pain, so staff should offer nitrous oxide (Nursing and Midwifery Council (NMC) 2008).

Women who do not request pain relief can be encouraged to adopt breathing techniques such as panting (Brayshaw 2004), especially in the second stage of labour when the vertex, the area of the fetal skull that usually presents first during birth, is advancing.

Nurses should be alert to requests for opiates that may be used illicitly (Siney 2001). These kinds of drug should not be given without the appropriate assessment and advice from the obstetric team.

Signs that the birth is imminent may include the appearance of the presenting part, by the woman saying that she feels she is about to give birth or defecate, or by her screaming.

Emergency department nurses may have too little time or experience to assess babies at this stage, but a fetal, or Pinard, stethoscope or Doppler fetal

<table>
<thead>
<tr>
<th>Stage</th>
<th>Signs</th>
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<tr>
<td>First</td>
<td>Onset of contractions, effacement of the cervix, full dilation of the cervical os, or opening. Possible rupture of amniotic membrane.</td>
</tr>
<tr>
<td>Second</td>
<td>Dilation of the cervix to about 10cm in diameter. Expulsion of the fetus, confirmed by the appearance of the presenting part of the baby.</td>
</tr>
<tr>
<td>Third</td>
<td>Separation and expulsion of placenta and membranes.</td>
</tr>
</tbody>
</table>
monitor can be made available for the midwife or obstetric team to assess the fetal heart rate. If the heart rate is unknown, ED nurses should tell the midwife or obstetric team members as soon as possible (National Institute for Health and Clinical Excellence (NICE) 2008a).

The woman’s position for birth should be whatever she finds most comfortable, although the supine position should be avoided to reduce pressure on the vena cava, which can affect the blood supply to the baby and cause dizziness and nausea in the mother (Walsh 2004).

**Care after birth**

**Resuscitation** The baby’s gestational age, or the number of weeks since the last menstrual period, and date of delivery can be estimated from the woman’s notes or verbal history. This information is useful in planning the immediate postnatal care of the baby, including resuscitation.

Midwives are qualified to assess and initiate resuscitation of babies (NMC 2004). A midwife or children’s doctor trained in advanced resuscitation of the newborn should be present at any birth where the gestational age is confirmed to be less than 37 weeks or where there is, for example, suspected fetal growth restriction, meconium-stained liquor, or known or suspected illicit drug use by the mother (Resusitation Council UK 2005).

If the gestational age is unknown, the obstetric team must be present (Stanton 2007). Resuscitation begins with an assessment of the baby at one minute after birth and is repeated at five minutes after birth.

During these assessments, scores of between zero and two should be recorded for respiratory effort,
colour, tone and response to stimuli of the neonate, producing an overall ‘Apgar score’ of up to ten (Apgar 1953) (Table 2).

Assessment of the baby must continue five minutes after the birth so that rapid changes in condition can be monitored, particularly after a precipitate labour, which is one completed within one hour of the start of intense frequent contractions (Michaelides 2004).

Warming and resuscitation equipment should be ready for use and the temperature in the delivery area should be at least 21°C, if there is time to achieve this. Once the baby’s head has been delivered, ED nurses may notice the umbilical cord has become wrapped, loosely or tightly, around the baby’s neck. There is some debate about whether or not the cord should be cut at this time but, if it is not cut immediately, it should be clamped and cut once the baby is out.

It is vital to understand that the umbilical cord carries the baby’s oxygen supply (Downe 2004), and so it should be cut with care, although the supply is protected by Wharton’s jelly, which surrounds the cord.

**Hypothermia and hygiene** Once the baby is delivered, its vital signs should be recorded, with special attention being paid to body temperature to assess for hypothermia. Warmed towels and a hat for the baby should be available to reduce risk of this (Michaelides 2004).

Universal precautions should be observed for all aspects of care to maintain hygiene and prevent the spread of infection (Wilson 2006).

**Bleeding** Emergency staff should be familiar with the uterotonics drugs based on oxytocin or ergometrine that are used in the third stage of labour (Table 2). However, due to contraindications and variations in the route of administration, these can be administered only by a midwife or a member of the obstetric team (NMC 2008, NICE 2008b).

Because of the risk of further bleeding, the mother should remain in the ED for at least one hour before she is transferred to an appropriate ward, and should continue to have her vital signs and blood loss assessed and recorded.

Blood loss can increase after a rapid birth, so should be assessed and recorded regularly to exclude postpartum haemorrhage. Blood loss can be caused by precipitate labour, a hypotonic uterus, retention of pieces of the placenta, relaxation of the uterus, or a missed perineal or cervical tear (Lindsey 2004).

The woman’s blood group and rhesus status should be indicated in her notes but, if there is no record of these, blood samples should be taken after the birth from the umbilical cord while it is attached to the placenta, and from the woman, to ascertain if anti-D immunoglobulin is required to prevent haemolytic disease of the newborn (NICE 2008b).

**Wellbeing** In addition to their duty of care to the baby, ED nurses should make at least one appointment with the mother while she is unaccompanied except, if necessary, by an interpreter or patient advice and liaison services representative.

At these meetings, nurses should try to confirm the identity of anyone accompanying the mother, and to establish whether the people identified are involved in human trafficking or illicit drug use. If they are, such information should be reported to the police (DH 2004, 2010).

Any other concerns about the woman’s emotional and physical wellbeing should also be identified and addressed at this stage. For example, if she has concealed her pregnancy, she may not want to give ED staff details that could alert her family, or she may not want to acknowledge the baby (Elliott and Henshaw 2005).

These situations must be treated sensitively and the support of senior colleagues, social services and, if possible, midwives who care for vulnerable women and children may be needed (DH 2004).

Finally, all women will require reassurance and information about the ongoing plan of care for them and their babies.

**Table 2 Apgar signs and scores**

<table>
<thead>
<tr>
<th>Sign</th>
<th>Score</th>
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<tbody>
<tr>
<td>Heart rate</td>
<td>Absent</td>
</tr>
<tr>
<td></td>
<td>Fewer than 100 beats per minute</td>
</tr>
<tr>
<td></td>
<td>More than 100 beats per minute</td>
</tr>
<tr>
<td>Respiratory rate</td>
<td>Absent</td>
</tr>
<tr>
<td></td>
<td>Slow and irregular</td>
</tr>
<tr>
<td></td>
<td>Good or crying</td>
</tr>
<tr>
<td>Muscle tone</td>
<td>Limp</td>
</tr>
<tr>
<td></td>
<td>Some limb flexion</td>
</tr>
<tr>
<td></td>
<td>Active</td>
</tr>
<tr>
<td>Reflex response to stimuli</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Minimal grimace</td>
</tr>
<tr>
<td></td>
<td>Cough or sneeze</td>
</tr>
<tr>
<td>Colour</td>
<td>Blue, pale</td>
</tr>
<tr>
<td></td>
<td>Body is pink but extremities are blue</td>
</tr>
<tr>
<td></td>
<td>Completely pink</td>
</tr>
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(Adapted from Apgar 1953)
Debriefing  Staff debriefing sessions are useful for highlighting necessary changes to practice and reflecting on recent events, the equipment used, the team members required and learning needs. These sessions should include full reviews of emergency births, and the care required and given, to assess the efficacy of the care pathways. In addition, risk assessments can be undertaken to identify further needs (Fox 2007).

Conclusion  The development of guidelines to manage pregnancies and births in EDs requires the involvement of emergency care, obstetric, midwifery, anaesthetic, paediatric and haematology teams. These guidelines must cover scenarios that involve assisted deliveries, including breech births, shoulder dystocia and those requiring forceps or ventouse delivery. They can be based on, for example, the ‘green top’ guidelines for care published by the Royal College of Obstetricians and Gynaecologists (2005a, 2005b, 2006, 2008, 2009).

To embed them into practice, ‘emergency drill sessions’ similar to those outlined by Lewis (2007) can be initiated for all staff.

Implications for practice  Pregnant women who present to emergency departments (EDs) need high quality, competent and multidisciplinary care. All ED staff must be familiar with the correct procedures to manage pregnancies and births, and the development of guidelines can ensure that they do. In all cases, guidelines must emphasise the need for quick action and assessment, and the liaison of multi-professional teams, to ensure good outcomes. To embed new guidelines into practice, ‘emergency drill sessions’ similar to those outlined by Lewis (2007) can be initiated for all staff.


Royal College of Obstetricians and Gynaecologists (2005b) Shoulder Dystocia: Green Top 42. RCOG, London.


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