The NPSA recommendations to promote correct-site surgery

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NPSA recommendations to promote correct-site surgery have been published. This article considers the need for such guidance and highlights its implications for nurses.

The National Patient Safety Agency (NPSA) has published recommendations promoting correct-site surgery (NPSA, 2005a). These establish a consistent method of marking patients prior to surgery and provide a checklist of steps to be taken to avoid errors. Nurses have welcomed the guidance as an important tool to ensure patient safety and a team approach to accountability (Kenny, 2005).

Background

The incidence of surgery being performed at an incorrect anatomical site is rare (NPSA, 2005a). However, any error can be devastating and in some cases, such as the removal of a working rather than a diseased kidney, it can be fatal. Wrong-site surgery is therefore a serious issue and should be preventable with implementation of robust risk management systems.

However, a spot survey at a conference last year revealed that one in three theatre nurses had worked in an area where wrong-site surgery had occurred (Hartley, 2004). An NPSA investigation confirmed that wrong-site procedures occur with alarming frequency. Forty-four patient safety incidents related to presurgical checks were found in a study of 28 acute NHS organisations between September 2001 and June 2002. Between November 2002 and April 2003, 15 patient safety incidents linked to wrong-site surgery were identified. Of these, three were prevented, two led to the wrong procedure and one related to intervention on the wrong side. Outcomes of the other nine were not recorded (NPSA, 2005a).

The NHS has no standard method for marking surgical sites or conducting presurgical checks and this can be a source of error. Similar problems have been identified in health care systems in the US and Australia (Millenson, 2002), where action has been taken. Indeed, the NPSA recommendations are built on work from several organisations, in particular the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) in the US.

The NPSA recognises high standards and excellent best practice at a local level but suggests that safety could be improved by using a consistent national standard for preoperative marking and verification checking.

Together with the Royal College of Surgeons of England (RCS) it has drawn up recommendations for surgical marking and developed a checklist to help staff promote correct-site surgery. These recommendations have been endorsed by a number of professional associations including the RCN (Perioperative and Surgical Nursing Forum) and the National Association of Theatre Nurses.

The recommendations

One of the key issues in wrong-site surgery is communication failure (NPSA, 2005a). The NPSA has therefore introduced a robust risk management tool, which involves several stages of re-checking (Table 1), and makes clear who is accountable at each stage. This is a key part of any risk management strategy and is often referred to as the Swiss cheese model (Osw, 2000).

The NPSA has consulted key stakeholders and carried out a usability test to ensure its recommendations are workable. The test suggested that national recommendations and a preoperative marking verification checklist would help promote correct-site surgery. As a result the NPSA has developed an important tool, and although it cannot enforce its use, ignoring such an alert would compromise an NHS trust’s litigation cover (Kenny, 2005).

Public involvement

The NPSA has also issued information for patients who are having surgery (NPSA, 2005b). This explains that in preparation for an operation various members of the surgical team will carry out a number of checks. Patients are told to expect the surgeon carrying out the operation to mark their skin before premedication or anaesthetic so that they can make sure the mark is in the right place. The double-checking system is also explained and patients are urged to help by:

- Making sure they know what operation they are having and on which part of their body;
- Checking the surgeon’s marks are in the right place;
- Telling someone if they are not sure, or think the marks may be wrong;
- Being patient with the staff asking questions as part of the checking procedure.

Nursing implications

There is a significant role for nurses in implementation of these recommendations.

Marking of the site is the responsibility of the health care professional who is undertaking the procedure. However, the mark must be checked on several occasions and it is important for nurses involved in checking
to have a clear understanding of the correct marking requirements. The mark should be an arrow, in indelible pen and should extend to, or near to, the exact incision site. It needs to remain visible after the application of skin preparation and should ideally remain visible after application of theatre drapes. At verification stages the surgical site mark should be checked against documentation to confirm it is correctly located and still legible.

The NPSA checklist, or local variation of this, should be reproduced by all NHS organisations. A new copy of the checklist will need to be attached to patient notes and completed for each new surgical procedure (NPSA, 2005a). A version of the checklist can be downloaded from the www.npsa.nhs.uk/advice website.

### When marking is inappropriate

There will be some instances when this marking system may not be appropriate (NPSA, 2005a). These include:
- Emergency surgery where there is a clinical need to avoid delay;
- Surgery to teeth and mucous membranes;
- In bilateral simultaneous organ surgery such as bilateral tonsillectomy, squint surgery;
- Where the laterality of surgery needs to be confirmed following examination under anaesthesia or exploration in theatre such as revision of squint corrections.

There may be patients who refuse preoperative skin marking, such as those who are concerned about contact dermatitis linked with allergy to the marker ink. The NPSA (2005a) recommends that additional safeguards are needed in these circumstances.

### Deviation from the system

If there has been any deviation from the marking and verification system – for example one of the checks has not been completed and signed or a problem has been identified – the surgeon in charge of the operation should be informed and must assess the situation and decide what action to take. This can be either to return the patient to the ward or to record and sign a decision to proceed at risk (NPSA, 2005a). If the patient is returned to the ward a senior member of staff should offer an explanation and apology and a patient safety incident report should be completed in line with local policy.

### Future developments

The NPSA suggest that these recommendations can be adapted for other care settings, such as for minor surgery in primary care. As more surgical interventions are carried out in the primary care this important tool will undoubtedly prove valuable in this setting.

As information technology improves we are also likely to see the implementation of computerised safety systems (Bates, 2004). This could involve using computers in the operating theatre so surgeons can access key patient data before operating. These systems could be linked to the database of the operating theatre schedule so health care professionals could be alerted to any mismatches of information.

Computer-aided systems may have a role in the future. However, a robust multi-level checking system such as the NPSA recommended tool is an important step in risk management and in ensuring patients’ safety.

### TABLE 1. NPSA CORRECT-SITE SURGERY CHECKING PROCEDURE

<table>
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<tr>
<th>Check</th>
<th>Health care professional</th>
<th>Location</th>
<th>Action</th>
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| 1     | The operating surgeon, or nominated deputy, who will be present in the theatre at the time of the patient’s procedure | Ward or day care area prior to patient transfer to theatre and before any premedication | - Check the patient’s identity  
- Check documentation and/or images for intended site  
- Mark site in indelible pen with an arrow |
| 2     | Ward or day care staff | Prior to leaving ward/day care area | - Inspect and confirm the mark against supporting documentation  
- Ensure imaging studies accompany patient or are available in theatre |
| 3     | Operating surgeon or a senior member of the team | In the anaesthetic room prior to anaesthesia | - Inspect the mark and check against supporting documentation  
- Re-check the availability of imaging studies  
- Ensure the availability of the correct implant (if applicable) |
| 4     | Theatre staff directly involved in the intended operative procedure | Immediately prior to start of surgery | Pause for verbal briefing to confirm:  
- The correct patient  
- Marking of the correct site  
- Procedure to be performed |

### REFERENCES


This article has been double-blind peer-reviewed.

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