



# Patient safety alert

06



## Alert

2 March 2005

### Correct site surgery

Surgery performed at the incorrect anatomical site is rare. However, it can be devastating for patients. **Correct site surgery (CSS)** refers to operating on the correct side of the patient and/or the correct anatomical location or level (such as the correct finger on the correct hand).

Across the NHS there is no single, standard method for marking a surgical site, which increases the likelihood of confusion and error. Despite high professional standards and excellent best practice at a local level, safety can be improved by using a consistent national standard for pre-operative marking and a verification checklist.

The National Patient Safety Agency (NPSA) and the Royal College of Surgeons of England (RCS) have drawn up recommendations for surgical marking and a checklist to help staff rapidly confirm that steps to promote CSS have been taken. These are endorsed by a number of professional associations and Royal Colleges representing a cross-section of surgical staff (see page four).

### Action for the NHS

By 16 March 2005 NHS organisations providing acute care in England and Wales should have action underway to:

- use the national CSS pre-operative marking recommendations (see insert page one) or a robust local alternative;
- use the pre-operative marking verification checklist to ensure marking recommendations are carried out (see insert page two) or a robust local alternative;
- review existing pre-operative checklists or integrated care plans against these recommendations;
- raise awareness of any changes made locally with healthcare staff, and provide them with the appropriate information and support.

#### Immediate action



Action



Update



Information request



#### For response by:

- NHS acute trusts (including foundation trusts) in England and Wales

#### For action by:

- Medical directors

#### We recommend you also inform:

- Service managers surgery
- General managers surgery
- Surgeons
- Anaesthetists
- Nurses
- Theatre staff
- Theatre managers
- Ward staff of all grades
- Nursing directors
- Non-exec directors
- Clinical governance leads
- Modern matrons
- Risk managers
- Health and safety staff

- Communications leads
- Patient Advice and Liaison Service staff in England

#### The NPSA has informed:

- Chief executives of acute trusts in England and Wales
- Chief executives/regional directors and Clinical governance leads of Strategic Health Authorities (England) and Regional Offices (Wales)
- The Healthcare Commission
- The Healthcare Inspectorate Wales
- The Independent Healthcare Forum
- Monitor, Independent Regulator of NHS Foundation Trusts
- NHS Direct
- Chief Medical Officers (England and Wales)
- Ministers
- Department of Health
- Community Health Councils, Wales

- The Association of Anaesthetists of Great Britain & Ireland
- Royal College of Surgeons (England)
- The Senate of Surgery
- Royal College of Ophthalmologists
- Royal College of Anaesthetists
- Royal College of Obstetricians and Gynaecologists
- Royal College of Nursing (RCN)
- Royal College of General Practitioners
- General Medical Council
- Professional Standards Committees of the RCN
- National Association of Theatre Nurses
- The Association of Operating Department Practitioners
- The National Association of Assistants in Surgical Practice
- Health Professions Council
- Federation of Independent Practitioner Organisations



### **Action deadlines for the Safety Alert Broadcast System (SABS)**

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#### **Deadline (action underway): 16 March 2005**

Action plan to be agreed and actions started

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#### **Deadline (action complete): 16 March 2006**

All actions to be completed

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Further information about SABS can be found at

[www.info.doh.gov.uk/sar/cmopatie.nsf](http://www.info.doh.gov.uk/sar/cmopatie.nsf)

## **Background**

### **NPSA evidence base**

The NPSA's National Reporting and Learning System (NRLS) pilot study in 28 acute NHS organisations recorded 44 patient safety incidents related to 'wrong' procedure, site, operating list, consent, patient name and notes, between September 2001 and June 2002. A further period of testing and development between November 2002 and April 2003 identified 15 patient safety incidents linked to surgery at the wrong site: of these instances three were prevented, two led to the wrong procedure and one related to intervention on the wrong side. The outcomes of the other nine were not recorded.

The use of the CSS verification checklist builds on the evidence from the United States of America,<sup>1, 2</sup> where a systematic listings process has been used to confirm that appropriate documents, such as patient records and imaging studies, are available. Evaluation has shown that implementation of the recommendations was not an unduly arduous process<sup>3</sup> and that a large majority of theatre staff responded that the steps were worthwhile, sensible and likely to promote correct site surgery.

### **Factors that contribute to surgery on the wrong site**

Healthcare organisations in both the United Kingdom<sup>4</sup> and North America have identified that communication breakdowns and failures of all types are a feature of many surgical events at the wrong site.<sup>5, 6</sup> The increasing complexity of healthcare systems is a contributory factor. This CSS alert has been produced by the NPSA and RCS building on published literature from a number of healthcare organisations and, in particular, the work of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) in the United States of America.<sup>7, 8</sup>

### **Developing the recommendations**

The NPSA believes all the steps in the checklist are important and are practical to undertake. The NPSA extensively consulted key stakeholders on the content of the pre-operative marking recommendations and verification checklist. The NPSA then carried out a usability test with frontline NHS staff. Staff in the two trusts involved (ward and theatre nurses, surgeons and anaesthetists) used the checklist, adapting it to fit in with their local governance requirements as needed, and then provided feedback.



Findings suggest that the materials were well received, with over 75 per cent of respondents agreeing that a national recommendation and pre-operative marking verification checklist would help promote correct site surgery. In light of the feedback received from the usability testing, the marking recommendation and checklist were revised and further developed.<sup>9</sup>

The NPSA has devised a pre-operative marking checklist that provides a practical method for implementing the recommendations. It incorporates best practice for marking and subsequent checking of the mark, highlights the role of the surgeon and also other members of the operating theatre team in ensuring that patients receive the correct treatment.

### **Adapting the recommendations locally**

Although designed for use in an acute setting, this alert can be adapted for other care settings; for example as an aid for minor surgery in primary care. The NPSA recognises that local adaptations may be necessary for specific situations such as day case surgery. In these situations there should still be clear processes for the marking and checking stages.

### **References**

- 1 The Joint Commission on Accreditation of Healthcare Organisations. *Patient Safety Goals* (2004). <http://www.jcaho.org>
- 2 Scheidt RC. *Ensuring Correct Site Surgery: Patient Safety First*. The Association of Perioperative Registered Nurses. November 2002. Volume 76(5) pp 769-782.
- 3 Veterans Health Administration (VHA). *Ensuring Correct Surgery*. VHA Directive 2002-070. November 2002. Department of Veterans Affairs, Washington, DC.
- 4 The National Association of Theatre Nurses (NATN). *Safeguards for Invasive Procedures: The Management of Risks* (1998). NATN, Harrogate, Yorkshire. [Replacing *Theatre Safeguards* (1988) The Medical Defence Union (MDU), Medical Protection Society (MPS), Medical and Dental Defence Union of Scotland (MDDUS), NATN and the Royal College of Nursing (RCN)].
- 5 Commission for Health Improvement. *The Commission for Health Improvement Investigation into: Carmarthenshire NHS Trust*. Report to the Assistant Minister for Health & Social Services for the National Assembly for Wales, November 2000.
- 6 Committee on Orthopaedic Practice and Economics. The Canadian Orthopaedic Association. *Position paper on wrong sided surgery in orthopaedics*. June 1994
- 7 Joint Commission on Accreditation of Healthcare Organisation. *A follow-up review of wrong site surgery, Sentinel Event Alert No. 6* (August 1998) at [www.jcaho.org](http://www.jcaho.org)
- 8 Joint Commission on Accreditation of Healthcare Organisation. *A follow-up review of wrong site surgery, Sentinel Event Alert No. 24* (December 2001) at [www.jcaho.org](http://www.jcaho.org)
- 9 National Patient Safety Agency. *CSS recommendation usability testing results from two NHS Trusts*. January 2005 (unpublished).

# Patient safety alert 06

## Correct site surgery (CSS)

Page 4 of 4



### Endorsements

The NPSA and the RCS would like to thank the following organisations for endorsing this patient safety alert and advising on its content:



Royal College of Ophthalmologists



Royal College of Obstetricians and Gynaecologists



Royal College of Nursing (Perioperative and Surgical Nursing Forum)



The National Association of Theatre Nurses



The National Association of Assistants in Surgical Practice



The Association of Operating Department Practitioners



Independent Healthcare Forum

### Further details

For further details about this patient safety alert please contact the NPSA patient safety manager in your area. You can find their contact details at [www.npsa.nhs.uk/static/contacts](http://www.npsa.nhs.uk/static/contacts)

For further information about the NPSA's work on patient safety in surgery please visit: [www.npsa.nhs.uk](http://www.npsa.nhs.uk) or contact either of the below:

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A patient safety alert requires prompt action to address high risk safety problems.

This patient safety alert is written in the following context:

It represents the view of the National Patient Safety Agency, which was arrived at after consideration of the evidence available. It is anticipated that healthcare staff will take it into account when designing services and delivering patient care. This does not, however, override the individual responsibility of healthcare staff to make decisions appropriate to local circumstances and the needs of patients and to take appropriate professional advice where necessary.

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# Patient safety alert

06

## Pre-operative marking recommendations

Insert: Page 1 of 2

### The role of marking to promote correct site surgery

Pre-operative marking has a significant role in promoting correct site surgery, including operating on the correct side of the patient and/or the correct anatomical location or level (such as the correct finger on the correct hand).

### Using the NPSA's pre-operative marking recommendations and verification checklist

NHS organisations without a robust alternative will need to use the NPSA's pre-operative marking recommendations and verification checklist.

A new checklist will need to be fixed to patient notes and completed for each new surgical procedure. Therefore, NHS organisations will need to ensure that copies of the checklist are reproduced and made available at a local level. The standard layout of the verification checklist may be adapted to meet local needs, for example to make additional room for addressograph labels or handwritten details.

The marking recommendations will need to be accessible for reference.

### Circumstances where marking may not be appropriate

- 1 Emergency surgery should not be delayed due to lack of pre-operative marking.
- 2 Teeth and mucous membranes.
- 3 Cases of bilateral simultaneous organ surgery such as bilateral tonsillectomy, squint surgery.
- 4 Situations where the laterality of surgery needs to be confirmed following examination under anaesthesia or exploration in theatre such as revision of squint corrections.

**Organisations and healthcare personnel who choose not to follow this recommendation, or who are undertaking procedures where marking is not appropriate, should have alternative robust barriers in place to promote correct site surgery. Additional safeguards are needed where patients refuse pre-operative skin marking.**

### Pre-operative marking recommendations

**The National Patient Safety Agency (NPSA) and the Royal College of Surgeons of England (RCS) strongly recommend pre-operative marking to indicate clearly the intended site for elective surgical procedures.**

#### 1 How to mark

An indelible marker pen should be used. The mark should be an arrow that extends to, or near to, the incision site and remain visible after the application of skin preparation. It is desirable that the mark should also remain visible after the application of theatre drapes.

#### 2 Where to mark

Surgical operations involving side (laterality) should be marked at, or near, the intended incision. For digits on the hand and foot the mark should extend to the correct specific digit. Ascertain intended surgical site from reliable documentation and images.

#### 3 Who marks

Marking should be undertaken by the operating surgeon, or nominated deputy, who will be present in the operating theatre at the time of the patient's procedure.

#### 4 With whom

The process of pre-operative marking of the intended site should involve the patient and/or family members/significant others wherever possible.

#### 5 Time and place

The surgical site should, ideally, be marked on the ward or day care area prior to patient transfer to the operating theatre. Marking should take place before pre-medication.

#### 6 Verify

The surgical site mark should subsequently be checked against reliable documentation to confirm it is (a) correctly located, and (b) still legible. This checking should occur at each transfer of the patient's care and end with a final verification prior to commencement of surgery. All team members should be involved in checking the mark.

