Portsmouth Hospitals NHS
NHS Trust

SURGICAL SITE MARKING PROTOCOLS AND POLICY

Reference Number	3.5
Version	1
Name of responsible (ratifying) committee	Theatre Management Team (TMT)
Date ratified	05.05.2010
Document Manager (job title)	Theatre Training Professional Development Manager
Date issued	23.07.2010
Review date	20.05.2012
Electronic location	Corporate Policies
Related Procedural Documents	See section 8 of this policy
Key Words (to aid with searching)	Wrong Site Surgery; Surgical Site Marking; Laterality; Bilateral; Digit Surgery; Anaesthetic Blocks

CONTENTS

QUICK REFERENCE GUIDE....3
1. INTRODUCTION....4
2. PURPOSE....4
3. SCOPE....4
4. DEFINITIONS....4
5. DUTIES AND RESPONSIBILITIES....4
6. PROCESS....5
7. TRAINING REQUIREMENTS....8
8. REFERENCES AND ASSOCIATED DOCUMENTATION....8
9. MONITORING COMPLIANCE WITH, AND THE EFFECTIVENESS OF, PROCEDURAL DOCUMENTS....8

QUICK REFERENCE GUIDE

For quick reference the guide below is a summary of actions required. This does not negate the need for those involved in the process to be aware of and follow the detail of this policy.

1. The person who is responsible for making the mark on the patient is the Operating Surgeon who will be performing the procedure, or his/her deputy.

2. The surgeon who makes the mark must be present for that specific operation.

3. The patient's surgical site is to be marked before the patient is moved to the location where the procedure will be performed. The patient will be involved, awake and aware; preferably before any prescribed pre-medication is administered

4. The mark is to be an arrow pointing to the site of the operative procedure, as close as possible to the incision site

5. The mark is to be made with an indelible, permanent black marker pen and should be sufficient to remain visible after skin preparation and draping; if practicable

6. The site for all procedures that involve incisions, percutaneous punctures, or insertion of instruments must be marked

7. All site markings must be made in conjunction with checks made on the patient's diagnostic imaging results i.e. X-rays, scans, electronic imaging or other appropriate test results, ensuring these match the patient's medical notes and identity band.

8. Exceptions to marking are at section 6.3

9. Specialty specific instructions are at section 6.4

1. INTRODUCTION

In a service as large and complex as the NHS, there will be occasions when things do not go as planned. These include such events as wrong site, wrong procedure or wrong person surgery.

This policy has been formulated in response to the recommendations made by the National Patient Safety Agency (NPSA) and is designed to complement the World Health Organisation (WHO) checklist implemented on 1 June 2009.

The policy has been formulated in response to the Department of Health publications Building a Safer NHS, Doing less Harm and the National Patient Safety Agency publications Building a memory: preventing harm, reducing risks and improving patient safety, and Seven Steps to Patient Safety. However, the ultimate aim is to reduce the risk of harm to patients through improving the safety and quality of services and the environment.

2. PURPOSE

The purpose of this policy is to clarify and inform a universally acceptable method within Portsmouth Hospitals NHS Trust (the Trust), by which patients undergoing a surgical procedure will have their operative site marked appropriately and accurately.

It will:

- Minimise the risk of surgery on the wrong site or wrong patient
- Minimise the risk of the wrong procedure being performed
- Inform and guide the operating surgeon as to the method used to mark the skin and operative site
- Where anatomically the site will be marked
- When the marking will be undertaken.

3. SCOPE

This policy applies to all permanent, locum, agency and bank surgeons or their deputies who work in Portsmouth Hospitals NHS Trust, the MDHU (Portsmouth) and who are responsible for the identification and marking of a patient's surgical site.

'In the event of an infection outbreak, flu pandemic or major incident, the Trust recognises that it may not be possible to adhere to all aspects of this document. In such circumstances, staff should take advice from their manager and all possible action must be taken to maintain ongoing patient and staff safety'

4. DEFINITIONS

World Health Organisation (WHO) Checklist: a checklist developed by the WHO and collaborators at the Harvard School of Public Health, the checklist identifies key safety steps during perioperative care that should be accomplished during every single operation no matter the setting or type of surgery. It has been shown to significantly reduce complications and deaths from surgery.

Time Out Section of WHO Checklist: a momentary pause taken by the team just before skin incision in order to confirm that several essential safety checks are undertaken and involves everyone in the team

5. DUTIES AND RESPONSIBILITIES

Director of Clinical Standards (Medical Director)

The Director of Clinical Standards has ultimate responsibility for ensuring that appropriate processes are in place for the safe management of surgical patients, including preoperative marking.

Clinical Directors
Clinical Directors in each specialty have responsibility for ensuring their surgeons mark patients' accordingly and carry out the instructions within this policy.

Operating Surgeon (or deputy)
It is the responsibility of the operating surgeon or deputy to mark the operative site in accordance with this policy

Anaesthetists
Anaesthetists are responsible for marking the site of any proposed local/regional block

WHO Checklist Coordinator/practitioner
The Coordinator is responsible for ensuring that each individual patient has been marked appropriately prior to arrival in theatre.

The Operating Theatre Team
The operating theatre team carries out the WHO Checklist has joint responsibility for ensuring that the correct site has been identified prior to commencement of surgery.

6. PROCESS

6.1 Making the Mark

6.1.1 The patient's surgical site is to be marked before the patient is moved to the location where the procedure will be performed. The patient will be involved, awake and aware; preferably before any prescribed pre-medication is administered

6.1.2 The mark is to be an arrow pointing to the site of the operative procedure, as close as possible to the incision site

6.1.3 The mark is to be made with an indelible, permanent black marker pen and should be sufficient to remain visible after skin preparation and draping; if practicable

6.1.4 The site for all procedures that involve incisions, percutaneous punctures, or insertion of instruments must be marked taking into consideration

- Surface, spine level, specific digit or lesion to be operated on
- Laterality. For procedures involving laterality of organs, but where the decision or approach may be from the mid-line or natural orifice, the site must be marked and a note made of the laterality

6.1.5 All site markings must be made in conjunction with checks made on the patient's diagnostic imaging results i.e. X-rays, scans, electronic imaging or other appropriate test results, ensuring these match the patient's medical notes and identity band.

Other sites that may require marking, are those necessary for some other aspect of care that directly relates to the planned, proposed procedure – i.e. dual/multiple surgical sites, stoma sites.

6.2 Who Marks the site?

6.2.1 The person who is responsible for making the mark on the patient is the Operating Surgeon who will be performing the procedure, or his/her deputy.

6.2.2 If the deputy marks the site, that deputy must also be present during the operative procedure.

6.2.3 In summary, the surgeon who makes the mark must be present for that specific operation.

6.2.4 The exception to this is where a patient will require a stoma as a result of a planned, elective procedure. The stoma site may be marked by the stoma nurse specialist pre-operatively in collaboration with the surgical team.

6.3 Exceptions to Site Marking

6.3.1 All endoscopies without planned intentional, invasive procedures are considered exempt from surgical site marking. Also, such sites where there is no predetermined site of surgical access, such as cardiac catheterisation and other minimally invasive procedures, would be considered exempt.

6.3.2 There may also be exemption instances where the laterality of surgery needs to be confirmed following examination under anaesthetic (EUA) or exploration.

6.3.3 Procedures that have a midline approach for specific named treatments intended for a single specific organ i.e. caesarean section, hysterectomy or hyroidectomy, can also be exempted from site marking.

6.3.4 It is acknowledged that there is no practical or reliable way of marking teeth or mucous membranes; especially in the case of teeth planned for extraction. A review of the dental records and radiographs with the tooth/teeth must be undertaken and their anatomical numbers for extraction clearly marked on these records and radiographs.

6.3.5 Other areas/patients where it is anatomically and technically difficult to mark the operative site include areas such as the perineum, friable skin around the site and with neonates or premature infants.

6.3.6 For obvious wounds or lesions, site marking is not applicable if that wound or lesion is the site of surgical intervention. However, if there are multiple wounds or lesions and only some of them are to be treated and this decision is pre-determined, then these sites must be marked as soon as possible after the decision has been made for surgery

6.3.7 For <u>any</u> sites not marked, the proposed operation/procedure must be reviewed to verify patient and procedure at the 'Time Out' part of the WHO Safety Checklist. This must be undertaken in conjunction with a review of all relevant documentation, including: the patient's notes; appropriate charts; diagnostic imaging (correctly oriented); and a 'double person' check of all information. The procedure must note commence without this review having occurred.

6.4 Specialty Specific instructions (not otherwise covered above)

6.4.1 Spinal Surgery

For spinal surgery the advice is for a 2-stage marking process where, firstly, the general level of the procedure is marked pre-operatively: cervical, thoracic or

lumbar. The surgical site is then marked appropriate to show either an anterior or posterior approach with right or left being highlighted. Secondly, the exact interspace(s) are demonstrated using standard intra-operative radiographic marking technique. This is based on evidence published from surgery being performed in reported cases where the patients intended for cervical procedures had a lumbar procedure started and vice-a-versa.

6.4.2 Ophthalmic Surgery

For single eye surgery a small mark should be made either on the temple, or on the lateral aspect of the eye between the lateral canthus and the ear, pointing to the correct eye for treatment. The exception is for planned bilateral procedures on both eyes (such as bilateral squint surgery), but the laterality of such procedures should be well documented. The marking of a child's head/face must be assessed at the time of pre-assessment by the surgeon as to its psychological appropriateness. If no mark is made, then the procedures referred to at 6.3.7 must be adhered to.

6.4.3 Bilateral Treatment

Whilst this policy focuses on laterality, specific anatomical sites, levels and areas, surgeons must consider that it is possible to perform the wrong bilateral procedure(s). Therefore site marking for bilateral, identical, procedures but not required. If no mark is made, then the procedures referred to at 6.3.7 must be adhered to.

6.4.4 ENT Surgery

There may be occasions where marking the patient's skin to 'point' to the correct site for surgery may be inappropriate e.g. bilateral tonsillectomy/adenoidectomy, laryngectomy. In these cases 6.3.3 / 6.3.4 / 6.3.7 apply. For ENT surgical sites where a skin incision is made on a specific side i.e. surgery on the external pinna and tympanotomy and surgical side/site to take the graft, these should be marked with an arrow accordingly.

6.4.5 Burr Holes

Incidents have been reported to the NPSA of wrong side burr-holes being carried out as a result of and failure to mark the appropriate side for surgery before the patient arrives in theatre. It is now acceptable practice to mark the side of the burr-hole to be carried out in the usual manor as directed by the Royal College of Surgeons, Neuro-anaesthesia Society and the Society of British Neurological Surgeons.

6.4.6 Digital Surgery

Each and every digit to be operated on must have an individual arrow pointing to and as close as possible to the respective digit.

6.4.7 Anaesthetic Local/Block Procedure

The site of the local/block procedure must be marked prior to the patient being given a general anaesthetic (if one is to be given) and/or when the pre-operative assessment is carried out by the anaesthetist carrying out the procedure. The mark must be a circle and central 'dot' within the circle - the dot to indicate the point of entry for the needle - and made using a permanent green marker, to distinguish the mark from that made for the surgical site.

6.5 STERILITY OF MARKING

Research has been carried out to ascertain whether the use of a permanent ink marker to mark a surgical site, affects the sterility of a patient's skin after it has been cleaned with surgical preparation solution.

The results showed that no growth was seen in the cultures of swabs taken on both the control group (un-marked) and on the experimental group (marked). Pre-operative marking of surgical sites in accordance with the Joint Commission protocol did not affect the sterility of the surgical field, therefore providing support for the safety of surgical site marking (Cronen, *et al* . 2005).

7. TRAINING REQUIREMENTS

Training of all surgeons and junior doctors must be carried out at their induction covering the WHO Checklist and the guidelines for surgical site marking. This will be facilitated by the designated clinical teams providing any new employee induction for surgical teams. This will be directed by the specialty Clinical Director.

8. REFERENCES AND ASSOCIATED DOCUMENTATION

Internal

- WHO checklist, as adapted for use in Portsmouth Hospitals NHS Trust

External

- Joint Commission – Sentinel Event Alert, Lesson learned – Wrong Site Surgery (1998)
- Joint Commission – Sentinel Event Alert, Issue 4, (2001)
- National patient safety Agency (NPSA) – Patient safety Alert 06 – Correct site surgery, making your surgery safer (2005)
- National patient safety Agency (NPSA) – New Guidance for Neurosurgical Teams to avoid wrong side Burr-holes (2008)
- Joint Commission – Universal Protocol, procedure site marking (2009)
- World Health Organisation (WHO) – Implementation manual, Surgical Safety Checklist 1st Ed (2009)
- Cronen, G. *et al.* Sterility of Surgical Site Marking. *Journal of Bone & Joint Surgery, 2005; 87: p.2193 – 2195*

9. MONITORING COMPLIANCE WITH, AND THE EFFECTIVENESS OF, PROCEDURAL DOCUMENTS

Key Performance Indicator	Responsible Lead	Evidence	Reviewed by / Frequency	Lead Responsible for any Required Actions
100% if surgical sites will be marked correctly	Lead Clinican	Audit of Theatreman documentation	Theatre Management Team Quarterly	Senior Clinical Manager Clinical Directors
100% compliance in completion of WHO forms	Theatre Link Practitioner	Audit of compliance with WHO checklist	Theatre Management Team Quarterly	Senior Clinical Manager Clinical Directors

- Through on-going daily audit through the WHO checklist process incorporating team brief. (The theatre staff, anaesthetist and surgeon with the theatre practitioners involved in the checklist will monitor/facilitate this. Copies of each patients WHO checklist will be filed in their notes and also will be inputted onto theatrman data base – this all occurs daily)