

## Use and handling of surgical instruments

### STANDARD

There is a safe and consistent process in place that ensures the safe use and handling of surgical instruments.

The following is an extract from **Clinical Guidelines, Section 8.8**, of the **NEW edition of Standards and Recommendations for Safe Perioperative Practice** published by the Association for Perioperative Practice (*new edition coming soon, keep checking our social media platforms for news*).

All perioperative staff should be trained in the use and handling of surgical instruments. They must be familiar with the use of instruments in different specialties (Radford et al 2004).

New surgical instruments will go through local procurement policy and should not be introduced into the operating department unless compliant with this. Instruments should not be used until staff are familiar in their use. This is particularly relevant to loan surgical instruments. Training must be undertaken in controlled settings and not at the time when the instruments are first in use during a procedure. In the case of loan instruments, training should take place prior to the instruments being processed for the specific case for which they have been acquired. If there has been no time allotted for training with the instrumentation a representative from the company must be present in theatre to support

the operating surgeon and the scrub and circulating practitioners.

Training needs must be met and addressed as soon as possible to ensure that all staff are able to comply with the requirements of relevant professional bodies including, but not limited to, the Health Professions Council *Standards of Conduct, Performance and Ethics* (HCPC 2016) and the Nursing and Midwifery Council *The Code: Professional Standards of Practice and Behaviour for nurses, midwives and nursing associates* (NMC 2018). Care should be taken to ensure that staff who may not be resident in the operating department are included in training sessions.

### RECOMMENDATIONS FOR LOCAL POLICY

#### General safeguards

**8.8.1** Surgical instruments and powered equipment should be used and handled in accordance with the manufacturer's instructions.

In order to prevent damage, instruments must be used only for the purpose for which they are designed. Appropriate selection requires an understanding of surgical procedures and knowledge of anatomy for the procedure that they are intended to be used for. Appropriate use of instruments prevents damage and facilitates surgery



which promotes patient safety and may prolong the life of the instruments.

Prior to use, all instruments should be visually inspected for contamination and/or damage. Hinges and ratchets should be checked and tested.

Instruments with removable parts should be checked for completeness before use. These should be documented as part of the swab and instrument count in line with local protocol (see Section 8.1). >>

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**8.8.2** To prevent damage, delicate instruments should be handled with care and separated from other instruments during use, cleaning and storage. Protection mats and tips can be used to protect particularly fine instruments.

**8.8.3** Equipment such as telescopes (rigid and flexible) should be tested in line with the manufacturer's instructions prior to each use.

**8.8.4** Specialised instruments should be regularly checked by appropriately trained personnel. Specialist test equipment should be made available to check the integrity of instruments such as diathermy equipment and fiberoptic cables.

Accurate records of the number of uses of each individual item should be maintained in order to comply with the manufacturer's recommendations, where required.

**8.8.5** In order to maintain asepsis, instruments found to be contaminated with dried blood or body tissue prior to surgery must be discarded. If any such items are found on a tray of instruments, the whole tray must be discarded, the scrub practitioner should change gloves and the incident reported to the appropriate person. This constitutes a patient safety incident and should therefore be reported using the organisation's reporting system.

**8.8.6** Each tray of instruments should contain an instrument checklist. The instruments on each set should be checked against this list, in accordance with guidance on the count given in Section 8.1: Accountable items, swab, instrument and needle count.

**8.8.7** Instrument trays should be standardised with the minimum variety and number of instruments needed for the procedure (AORN 2019). Instruments that are no longer routinely used during procedures should be removed from the instrument/trays and made available as separate items. This reduces the risk of a retained item and may also lengthen the life of the instrument due to a reduction in processing.

**8.8.8** Any discrepancies noted in the instrument count should be recorded on the instrument checklist in addition to any other documentation in which discrepancies with the count will be recorded, e.g. patient record, incident reporting system (see Section 8.1).

**8.8.9** Instruments must be accounted for at all times during a surgical procedure (see section 8.1).

**8.8.10** The scrub practitioner should ensure that instruments are handled in such a manner as to avoid injury to the patient, other members of the surgical team and personal injury.

**8.8.11** Special care should be taken with sharp instruments (e.g. scalpels and loaded needle holders). It is strongly recommended that all sharp instruments are transferred between staff in a receiver (kidney dish).

**8.8.12** Instruments must not be allowed to rest directly on the patient as this could cause injury to the patient or damage to the

drapes, which results in a breach of asepsis. Consideration should be given to the use of appropriate additional sterile surfaces (e.g. Mayo tables, magnetic pads).

**8.8.13** It is recommended that all instruments should be processed in a sterile services unit in accordance with decontamination guidance.

**8.8.14** There are no recommended guidelines for how long a sterile instrument tray can be left open before the contamination risk becomes unacceptable. However, a study by Dalstrom et al (2008) reported culture positivity correlated directly with the duration of exposure. Sterile trays should therefore not be opened until they are specifically needed during a procedure (Dalstrom et al 2008).

**8.8.15** If a tray is opened but is not immediately used (e.g. a delayed start to a procedure or multiple procedures performed in the same setting) coverage of open trays with a sterile towel is recommended to minimise exposure to environmental contaminants (Dalstrom et al 2008). There is no current evidence to suggest how long an opened sterile tray can remain covered; however the potential for contamination increases with time (AST 2018).

**8.8.16** Light traffic in the operating theatre has little impact on the contamination risk of opened instrument trays, but traffic should be kept to a minimum (Dalstrom et al 2008). ■

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