

Office-based surgery – why it is important

Office-based surgery can contain costs and improve outcomes for the patient.

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Ambulatory surgery seeks to offer improved patient outcomes and cost-containment benefits. Three organisational models have evolved: hospital-associated ambulatory surgery programmes, freestanding ambulatory surgery centres (ASC) and office-based surgery (OBS).

Surgery and anaesthesia have become much safer in the modern era. The changing scope of practice brings with it the refinement of skills and practices, development of new procedures and technologies and a paradigm shift of surgery to the office setting. This move promotes continuity of care, with a familiar patient, cost containment and improved outcomes for the patient and doctor.

In the USA, office surgery has grown rapidly, with some 10 million office procedures performed in 2005. However, the rapid growth of outpatient surgical centres coupled with poor regulation and some bad outcomes may have detracted from the ostensible advantages.

Definitions

Office or outpatient surgery/procedure: An operation or procedure carried out in a medical practitioner's office or outpatient department, other than a service normally included in a consultation, which does not require treatment or observation in a day surgery or procedure centre (facility) or unit, or as a hospital inpatient.

Day surgery/procedure: An operation or procedure, excluding an office or outpatient operation or procedure, where the patient would normally be admitted and discharged on the same day.

Ambulatory surgical centre (ASC): A facility primarily organised or established for the purpose of performing surgery

for outpatients ... and maintenance of a dedicated operating room. American accrediting agencies recognise centres for cosmetic and facial surgery, endoscopy, ophthalmology, laser eye surgery, oral and maxillofacial surgery, orthopaedic surgery, plastic surgery, podiatry clinics and multi-specialty surgery centres.

Day surgery/procedure – extended recovery: A patient treated in a registered day surgery or procedure centre (facility) or unit, free-standing or hospital-based, who requires extended recovery including overnight stay, before discharge.

Limited care accommodation: Hotel or hostel accommodation for day surgery or procedure patients where professional health care is available on a call basis.

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Scope of practice

- Surgery – skin, soft-tissue and muscle biopsy, minor breast surgery, liver biopsy, anorectal conditions, laparoscopy, orthopaedic manipulations and minor procedures
- Endoscopy

- Plastic and reconstructive surgery – (see more about ... article on p. 414 of this issue)
- ENT, ophthalmology
- Gynaecology and infertility
- Dental and maxillofacial procedures.



Competency

The skills for the performance and management of OBS are not adequately taught in state undergraduate or residency programmes in South Africa. Additional private mentorship and training is mandatory and often acquired abroad, e.g. in the USA. It is emphasised that the choice of patient, procedure and type of anaesthetic must remain the responsibility of the surgeon and/or anaesthetist.

History, clinical examination, pre-existing illnesses (e.g. diabetes, coronary artery disease, epilepsy, immunocompromised patient), active skin infections, allergies, bleeding disorders and current medications must be considered before performing a surgical procedure. Anticoagulants, salicylates, NSAIDs, clopidogrel and over-the-counter products (Procydin and the herb *Ginkgo biloba*) can complicate surgical procedures by increasing clotting time and forming haematomas even after a seemingly simple procedure.

The practitioner must have adequate knowledge and experience of a procedure, the equipment needed as well as indications, contraindications and complications before attempting any surgery. Informed consent, including the risks and benefits, must be confirmed.

Standard (universal) precautions

Due to the potential spread of HIV, standard infection control procedures such as hand washing, gloves and protective barriers to protect health care workers from blood-borne and body fluid-borne diseases are mandatory. The risk of developing hepatitis B virus (HBV) after blood and body fluid exposure is much greater than that of HIV. All health care providers not currently immunised against HBV should strongly consider hepatitis B immunisation. All staff should be familiar with procedures to be followed in the event of a needle-stick injury, which should be carefully documented.

Facilities and equipment

There are three levels of OBS depending on the complexity of anaesthesia and surgical procedures performed.

- Level I includes minor surgery performed under topical or local anaesthesia not involving drug-induced alteration of consciousness other than minimal preoperative anti-anxiety medications. This article deals only with level I office surgery, which requires training and equipment, but no accreditation.
- Level II procedures require mild-to-moderate sedation anaesthesia with postoperative monitoring.
- Level III procedures require deep sedation and analgesia. These issues are dealt with in subsequent articles.

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Procedure room

Office surgery can be performed in individual examination rooms using mobile equipment, but is best performed in a designated procedure room large enough to allow easy access to the patient and storage for supplies and other equipment. The procedure room should be situated in an area away from the flow of heavy traffic to contain contaminated areas and ensure privacy. A sink with antiseptic soap for scrubbing, sterile and non-sterile gloves and

sharps container help maintain universal precautions.

The operating table, overhead lighting and procedure trays are the most basic and important items in the procedure room. The room should be designed and equipped to accommodate the physician performing the procedure and to handle many office emergency problems. Fixed mounted overhead lighting and other light sources such as gooseneck lamps and headlamps should be used. Additional equipment for the procedure room includes a suction device with tubing, catheters and tips and waste receptacles. For an open procedure, proper provision for haemostasis should be available (e.g. electro-surgical unit).

The procedure room should be situated in an area away from the flow of heavy traffic to contain contaminated areas and ensure privacy.

Most procedure rooms are designed to maintain a high level of antisepsis, not complete sterility. The level of antisepsis is based on the maintenance capabilities of the staff rather than absolute sterility such as that found in a hospital operating suite.

Surgical instruments and equipment can be kept in sterile surgical packs for efficiency. Accuracy and security are paramount in choosing surgical instruments. Although cost is becoming an important factor in their selection, high-quality instruments should be chosen for the surgeon's comfort. Most cutaneous procedures can be performed with basic instruments.

Surgical instruments should be cleaned and disinfected after the procedure. Hinged instruments such as scissors, haemostats and needle holders may be cleaned with an ultrasonic cleaner. The instruments are dried and placed back in the surgical tray along with new supplies to complete the surgical pack. The pack is then wrapped with surgical towels or autoclave paper, secured with autoclavable tape and autoclaved or sent to a sterile supply facility.

Single-use disposable items of equipment should be used wherever possible. These include syringes, needles and ampoules for injection, as well as a wide array of biopsy devices. Any single-use article or instrument

Importance of OBS

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that has penetrated the skin, mucous membrane or tissue must be appropriately disposed of immediately after use or at the end of the procedure.

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Resuscitation equipment should be located either in the room or nearby to allow basic cardiopulmonary resuscitation. While there is some medico-legal responsibility, the major concern should be patient safety. All staff should be trained in basic cardiopulmonary resuscitation procedures, checking of equipment and emergency

drugs used for resuscitation purposes. All staff must be conversant with a protocol for the management of a patient who has collapsed. An arrangement should exist with a nearby hospital for the transfer of patients in the event of unexpected serious or potentially serious developments.



An adequate anaesthetic and surgical record must be maintained. Separate documentation of each procedure and scheduled drugs should be kept in a log book, including date, time, duration, personnel involved in the procedure and any associated problems or complications. Follow-up arrangements and postoperative wound care must be clearly outlined to the patient, with written instructions when appropriate.

Disposal of biomedical contaminated waste, including sharps, should be properly managed via an arrangement with a licensed contractor.

Occupational health and safety guidelines for an operating theatre should be readily

available and respected. This should include electrical, fire safety and evacuation procedures.

Summary

Office-based surgery is on the rise. Training, development of national standards and accreditation are essential.

Recommended reading

Australian Day Surgery Council, Royal Australasian College of Surgeons, Australian New Zealand College of Anaesthetists and the Australian Society of Anaesthetists. *Report and Recommendations on Office-based Surgery Development in Australia. Guidelines for Office-Based Surgery*. Revised 2004. http://www.surgeons.org/AM/Template.cfm?Section=Australia_Day_Surgery_Council&Template=/CM/ContentDisplay.cfm&ContentID=3431.

Chavez MC, Maker VK. Office surgery. In: Raker RE, ed. *Textbook of Family Medicine*, 7th ed. Philadelphia Saunders Elsevier, 2007: 34.

Committee on Ambulatory Surgical Care, American College of Surgeons. *Guidelines for Optimal Ambulatory Surgical Care and Office-based Surgery*, 3rd ed. www.facs.org/ahp/kyOBSguide12-03.pdf

Committee on Quality Assurance in Office-Based Surgery. *A Report to: New York State Public Health Council and New York State Department of Health 2007*. http://www.health.state.ny.us/professionals/office-based_surgery/reports/docs/committee_on_quality_assurance.pdf

Department of Health Professions Quality Assurance Division Washington State. *Medical Quality Assurance Commission Policy/Procedure*. http://www.doh.wa.gov/hsqa/Professions/Medical/documents/OBS_guidelines.pdf

In a nutshell

- There has been a paradigm shift of surgery to the office setting.
- Additional mentorship and training are recommended.
- Anticoagulants can complicate seemingly simple procedures.
- Standard (universal) precautions are essential.
- A designated procedure room is preferred.
- Proper provision for haemostasis should be available.
- Surgical instruments must be cleaned and disinfected after the procedure.
- Single-use disposable items are recommended.
- There should be equipment and staff for cardiopulmonary resuscitation.
- Keep adequate records.
- Disposal of biomedical contaminated waste, including sharps, should be properly managed.
- Occupational health and safety guidelines must be respected.