



Recommended Minimum Facilities for Safe Anaesthetic Practice in Organ Imaging Units

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1. INTRODUCTION

Organ imaging units are usually isolated from the main theatre complex and are not commonly designed for anaesthetic care. There are also specific environmental hazards to patients and staff, e.g. radiation, magnetic field, dark and cold environment; together with often limited access to patients, all pose additional challenge to anaesthetic care provision in these areas.

This document should be read in conjunction with the Hong Kong College of Anaesthesiologists (HKCA) document:

"Recommended Minimum Facilities for Safe Anaesthetic Practice in Operating Suites" [T2].

Reference should also be made to the following documents of the HKCA:

"Recommendations on checking of Anaesthesia Delivery Systems" [T1]

"Minimum Assistance Required for the Safe Conduct of Anaesthesia." [T7]

"Guidelines on Monitoring in Anaesthesia" [P1]

"Guidelines for Postanaesthetic Recovery Care" [P3]

2. PRINCIPLES OF ANAESTHETIC CARE

2.1 Anaesthesia should be administered only by registered medical practitioners¹ with appropriate training in anaesthesia, who are experienced enough to handle all eventualities in an isolated environment.

2.2 Every patient presenting for anaesthesia should have a preanaesthetic consultation by an anaesthesiologist.

2.3 The risk associated with anaesthesia in the non-theatre environment should be minimized by careful planning and anaesthetic service provision.

2.4 Modern practice demands certain basic facilities, equipment and staff for the safe administration of anaesthesia.

2.5 Ideally, anaesthetic equipment should be standardized throughout the hospital. Putting old equipment not in use elsewhere in remote area such as the imaging suite must be avoided.



3. STAFFING

In addition to the staff required by the person carrying out the imaging procedure, there must be:

- 3.1 A trained assistant available exclusively for the anaesthetic procedure. Please refer to HKCA document “*Minimum Assistance Required for the Safe Conduct of Anaesthesia.*” [T7]
- 3.2 Adequate assistance in handling the patient.
- 3.3 Adequate technical/nursing assistance as required.

4. EQUIPMENT

- 4.1 Each hospital must designate:
 - 4.1.1 At least one specialist anaesthesiologist to advise on the choice and maintenance of anaesthetic equipment.
 - 4.1.2 One or more of its staff to organise and supervise the cleaning, servicing and maintenance of anaesthetic equipment.
- 4.2 Equipment, which complies with section 4.3 to 4.7 of the HKCA document “*Recommended Minimum Facilities for Safe Anaesthetic Practice in Operating Suites*” [T2], must be provided.
- 4.3 A manual self-inflating resuscitator bag capable of delivering up to 100% oxygen (e.g. Laerdal, Ambu bags) must also be available.
- 4.4 Special problems are encountered with magnetic resonance imaging due to the effects on ferromagnetic objects (which include most conventional monitoring and anaesthetic equipment). Alternative arrangements by the individual department/hospital will be required for anaesthesia and monitoring in these areas. A specialist anaesthesiologist should be responsible for supervising these arrangements.
- 4.5 There must be access to:
 - 4.5.1 a defibrillator,
 - 4.5.2 central venous pressure sets,



4.5.3 means of infusing intravenous fluids under pressure,

4.5.4 blood warming apparatus,

4.5.5 means of insulating the patient against heat loss,

4.5.6 intercostal catheter drainage sets.

4.6 Other requirements are:

4.6.1 adequate lighting for general observation and for the detection of cyanosis,

4.6.2 sufficient electrical outlets to satisfy the anaesthetic machine and monitoring equipment requirements,

4.6.3 emergency electrical power and lighting,

4.6.4 a means of communicating with persons outside the area in an emergency,

4.6.5 a refrigerator for the correct storage of certain drugs,

4.6.6 a tilting trolley or bed,

4.6.7 adequate equipment for radiation protection of staff.

5. DRUGS

5.1 In addition to the drugs commonly used in anaesthesia, drugs necessary for the management of the following conditions which may complicate or co-exist with anaesthesia must be available:

Adrenal dysfunction,

Anaphylaxis,

Bronchospasm,

Cardiac arrest,

Cardiac arrhythmias,

Hyperglycaemia,

Hypoglycemia,



Hypertension,
Hypotension,
Increased intracranial pressure,
Malignant hyperpyrexia,
Opioid and benzodiazepine overdose,
Pulmonary oedema,
Status epilepticus

5.2 The hospital or institution should seek the advice of the specialist anaesthesiologist designated in 4.1.1 on the selection of drugs for the above purpose.

5.3 An appropriate protocol should exist for the regular replacement of all drugs. Emergency drug stores and drugs retained for rare events should have the expiry date checked regularly.

6. CHECKING, CLEANSING AND SERVICING

All anaesthetic equipment must be checked and maintained in accordance with section 6 of the HKCA document "*Recommended Minimum Facilities for Safe Anaesthetic Practice in Operating Suites*" [T2]

7. RECOVERY FACILITIES

Recovery from anaesthesia must take place under appropriate supervision, in an area designated for the purpose and conforming to the HKCA document "*Guidelines for Postanaesthetic Recovery Care*" [P3].

Facilities must exist which enable transfer in an emergency to be accomplished smoothly and efficiently, with minimal delay and under adequate medical supervision.

¹ Medical Registration Ordinance (Cap 161): "registered medical practitioner" means a



person who is registered, or is deemed to be so registered under the provisions of section 29.

8. REFERENCE

- “Guidance on the provision of anaesthetic care in the non-theatre environment” by the Royal College of Anaesthetists 2010
- ASA Statement on non-operating room anaesthetizing locations 2008