



# **Recommended Minimum Facilities for Safe Anaesthetic Practice in the Delivery Suite**

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## **1. INTRODUCTION**

Delivery Suites require the presence of certain minimal facilities for safe anaesthesia and effective resuscitation of mother and baby. This document should be read in conjunction with other documents issued by the Hong Kong College of Anaesthesiologists:

*“Recommended Minimum Facilities for Safe Anaesthetic Practice in Operating Suites”* [T2]

*“Guidelines on minimum requirements for an anaesthetic record”* [T6]

*“Guidelines on Minimum Assistance Required for the Safe Conduct of Anaesthesia.”* [T7]

*“Guidelines on Monitoring in Anaesthesia”* [P1]

*“Guidelines on Postanaesthetic Recovery Care”* [P3]

## **2. PRINCIPLES OF ANAESTHETIC CARE**

2.1. Anaesthesia or regional analgesia in obstetrics should only be administered by, or under the supervision of, medical practitioners<sup>1</sup> with appropriate training, ongoing experience, and involvement in continuing professional development in anaesthesiology.

2.2. The same standard of anaesthetic care should be followed as care provided in main operating suite, such as pre-anaesthetic consultation, consent, surgical safety check, proper documentation, post-anaesthetic care, emergency management and quality assurance activities.

2.3. It is understood that thorough pre-anaesthetic assessment and proper time-out procedure may not be feasible before caesarean delivery when there is immediate threat to the life of a woman or foetus, but it must be borne in mind that these are the most error-prone situations.

2.4. Modern practice demands basic staffing, equipment, drugs, and protocols for the safe administration of anaesthesia, maternal regional analgesia, and the resuscitation of the neonate.



### **3. STAFFING**

In addition to nursing staff required for the obstetric procedure, there must also be

3.1 An assistant designated to the anaesthesiologist. Please refer to HKCA document “*Guidelines on Minimum Assistance Required for the Safe Conduct of Anaesthesia.*” [T7]

3.2 A medical practitioner<sup>1</sup> with appropriate training to be solely responsible for the resuscitation and care of the neonate.

3.3 Adequate technical assistance to ensure proper functioning and servicing of all equipment used.

3.4 A midwife trained and competent in obstetric epidural management for epidural blockade in labour.

3.5 Adequate assistance in handling the patient.

### **4. EQUIPMENT**

4.1. When anaesthetics are given in a Delivery Suite, whether in an Operating Theatre or not, equipment which complies with Sections 4.3 to 4.10 inclusive of the HKCA document “*Recommended Minimum Facilities for Safe Anaesthetic Practice in Operating Suites*” [T2] must be provided.

4.2. All delivery suite rooms must have oxygen, suction equipment and access to resuscitation equipment. Monitoring equipment must also be available according to the HKCA document “*Guidelines on Monitoring in Anaesthesia*” [P1]. Blood gas analysis and the facility for rapid estimation of haemoglobin and blood sugar should be available on the delivery suite.

4.3. A difficult intubation trolley with a variety of laryngoscopes including video laryngoscopes, tracheal tubes (size 7 and smaller), second-generation supraglottic airway devices, equipment for emergency front of neck and other aids for difficult airway management should be available.

4.4. In addition, a wedge for tilting the patient prior to and during anaesthesia is required.

4.5. Any apparatus used for administration of inhalational analgesia must deliver



at least 30% O<sub>2</sub>. Delivery suite rooms must have scavenging of waste anaesthetic gas to comply with workplace exposure limits on anaesthetic gas pollution.

4.6. Appropriate equipment conforming to safety guidance should be used to ensure safe delivery of neuraxial analgesia and anaesthesia. Epidural infusion sets should be labelled and conform to safety standards that prevail at the time.

4.7. In addition to intraoperative use, infusion devices must be available for postoperative pain relief as well as for labour pain.

4.8. There should have resources available to manage haemorrhagic emergencies, including a fluid warming device which allows rapid infusion of blood products and intravenous fluid.

4.9. There should have resources to manage maternal cardiac arrest, which require uterine displacement and peri-mortem delivery of the foetus besides standard resuscitative measures.

4.10. Devices such as warming mattresses and forced air warmers should be available to prevent and treat hypothermia.

## **5. DRUGS FOR MATERNAL USE**

5.1. Drugs for the purposes listed in Section 5 of the HKCA document [T2] must be available<sup>2</sup>.

5.2. Consideration should be given to the availability of a lipid emulsion, which may be effective in resuscitation of circulatory collapse due to local anaesthetic toxicity, used in conjunction with advanced cardiac life support.

## **6. FACILITIES FOR NEONATAL RESUSCITATION**

The following facilities specifically and exclusively for neonatal resuscitation must be available:

- 6.1 The means of administering oxygen.
- 6.2 Equipment for intubation and ventilation.
- 6.3 Suction equipment including meconium aspirator.



- 6.4 Equipment for the establishment and administration of fluid and drugs by intravenous or umbilical cannulation.
- 6.5 An appropriate range of drugs<sup>2</sup>.
- 6.6 The means of warming the neonate.
- 6.7 Appropriate means to monitor the neonate.

## **7. ORDERING, CHECKING, CLEANING AND SERVICING EQUIPMENT**

- 7.1. The hospital must designate at least one specialist anaesthesiologist to advise on the choice and maintenance of equipment for anaesthesia and an appropriate medical practitioner to advise on equipment for neonatal resuscitation.
- 7.2. The hospital must also designate one or more staff to organise, supervise and establish regular routines for the cleaning, sterilisation, servicing and maintenance of equipment.
- 7.3. All equipment must be checked, cleansed and serviced in accordance with Section 6 of the HKCA document “*Recommended Minimum Facilities for Safe Anaesthetic Practice in Operating Suites*” [T2]

## **8. RECOVERY**

Recovery from anaesthesia must take place under appropriate supervision, in an area equipped in accordance with the requirements of the HKCA document “*Guidelines on Postanaesthetic Recovery Care*” [P3].

## **9. OTHER CONSIDERATIONS**

- 9.1. Timely access to Haematology and Blood Bank services including specialist haematological consultation must be available. A local policy should be established with the haematology or pathology department to ensure blood and blood products are readily available for the management of major haemorrhage. A supply of O-rhesus positive blood should be available within 5 minutes of request to the delivery suite at all times for emergency use.



9.2. Haematology and biochemistry services must be available to provide rapid analysis of blood and other body fluids. Where these are externally provided services, a policy must be in place that is published and distributed, ready for emergency use.

9.3. There must be rapid availability of diagnostic radiological services. In tertiary referral centres, 24-hour access to interventional radiology services is highly recommended.

9.4. Many delivery suites are not suitable for the ongoing management of serious maternal or neonatal complications. The foregoing recommendations only allow patients suffering from complications to be resuscitated and/or supported while awaiting transfer to a more suitable environment. There should be agreed contingency plans to enable smooth, effective transfer of patients to be accomplished with minimal delay, and under adequate medical supervision to a critical care facility.

## **10. REFERENCE**

- ANZCA PS55(A) Recommendations on Minimum Facilities for Safe Anaesthesia Practice in Operating Suites and Other Anaesthetising Locations 2021
- ANZCA PS03 Guidelines for the Management of Major Regional Analgesia 2014
- Joint RANZCOG/ANZCA Position statement on the provision of Obstetric Anaesthesia and Analgesia Services 2015
- The Royal College of Anaesthetists. Guidelines for the Provision of Anaesthetic Services- Obstetric anaesthesia services 2022. Available at <https://rcoa.ac.uk/node/15761>.
- OAA/AAGBI Guidelines for Obstetric Anaesthetic Services 2013
- Practice Guidelines for Obstetric Anesthesia. An Updated Report by the American Society of Anesthesiologists Task Force on Obstetric Anesthesia and the Society for Obstetric Anesthesia and Perinatology Anesthesiology Feb 2016



## **NOTES**

<sup>1</sup> 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.

<sup>2</sup> The hospital or institution should seek the advice of the appropriate specialists working in the institution on the selection of the drugs required in Section 5 and 6.5.