

PROCEDURE-SPECIFIC STANDARDS FOR DAY PROCEDURE CENTRES

HAEMODIALYSIS

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Preface

This document is developed by the Project Steering Committee on Standards for Ambulatory Facilities (PSC), set up by the Department of Health and the Hong Kong Academy of Medicine (HKAM), and the Task Force on Haemodialysis formed under the PSC.

In preparation for the new regulatory regime, the PSC was formed in April 2015 to develop regulatory standards for ambulatory facilities, co-opting members from the medical faculties of local universities, private hospitals and practitioners' associations. Seven Task Forces were formed under the PSC by nomination from the HKAM and its constituent Colleges, comprising members practising in hospital and/or ambulatory settings and from both the public and private sectors. The PSC is tasked to develop a set of basic standards for all day procedure centres ("Core Standards") and additional standards for specific classes of medical procedures ("Procedure-specific Standards").

This document sets out the basic standards for the operation and management of day procedure centres where haemodialysis is performed. The Procedure-specific Standards should be read with the Core Standards promulgated by the HKAM.

The Core Standards and Procedure-specific Standards serve to provide guidance to the operators of the day procedure centres in anticipation of a new licensing system and to provide a framework for the medical and dental professionals within which they plan and organize their private practices. The Standards are subject to review as and when necessary and will be adopted as part of the regulatory standards when the statutory licensing system is implemented.

Procedure-specific Standards for Day Procedure Centres
(Haemodialysis)

1. Management/Governance

1.1. Staff requirement and training

- 1.1.1. A specialist in nephrology is appointed to take charge of the haemodialysis service. Alternatively, a specialist in nephrology should be appointed as an advisor to review regularly the facilities, equipment and staff training of the service.
- 1.1.2. For each patient attending the facility, there is a specialist in nephrology in charge of his or her dialysis treatment.
- 1.1.3. At all times the facility is in operation, a medical practitioner should be contactable to render medical care and advice when needed and in emergency.
- 1.1.4. At all times the facility is in operation, a registered nurse who has completed one of the renal specialty courses recommended by the Hong Kong College of Physicians is assigned as the duty nurse-in-charge to supervise nursing care of the service. The nurse to patient ratio shall be at least 1:5.
- 1.1.5. All staff are trained in the provision of renal dialysis service. At least half of the nursing staff have completed one of the renal specialty courses recommended by the Hong Kong College of Physicians.

2. Physical Conditions

2.1. Facility management

- 2.1.1. There is sufficient circulating space around each bed or chair for nursing care to take place.

2.1.2. There are designated clean areas for the preparation, handling, and storage of medications, supplies, and equipment. Clean areas are separated from areas where contaminated or used supplies and equipment are handled or stored.

2.1.3. The clinical areas have immediate access to hand washing facilities.

2.2. Equipment and stores

2.2.1. The dialysis machines and water treatment systems are kept in good functional order. There is proper documentation of testing, repair and maintenance of dialysis machines and water treatment system.

3. Service Delivery and Care Process

3.1. General

3.1.1. The person-in-charge develops and implements written policies and procedures relating to the safe conduct of haemodialysis procedures in the facility, including but not limited to:

- (a) admission of patients to haemodialysis centre;
- (b) management of patients with blood-borne infections;
- (c) immunisation for susceptible patients and staff against infections;
- (d) staffing arrangements for haemodialysis procedures;
- (e) informed consent;
- (f) initiation and termination of haemodialysis procedures;
- (g) monitoring of patient conditions during dialysis;
- (h) care of vascular access;
- (i) operation of the haemodialysis machines and water treatment systems; and
- (j) disinfection and rinsing of equipment.

3.1.2. Haemodialysis procedures must not be performed during disinfection procedures, and during maintenance and repair of relevant machines and systems.

3.2. Water quality

- 3.2.1. There are written policies and procedures for testing of water quality at haemodialysis machines and at water treatment systems at regular intervals.
- 3.2.2. Testing of water quality should be performed and documented at regular intervals to ensure that the water quality meets internationally acceptable standards. The testing should include, but not limited to:
 - (a) microbiological contaminants (at least monthly for reverse osmosis water from the water treatment system; and monthly, rotating among machines so that each haemodialysis machine is tested at least annually, for dialysis fluid);
 - (b) endotoxin contaminants (at least monthly for reverse osmosis water from the water treatment system; and monthly, rotating among machines so that each haemodialysis machine is tested at least annually, for dialysis fluid); and
 - (c) inorganic contaminants (at least annually for reverse osmosis water from the water treatment system).
- 3.2.3. Alarm system is in place to monitor operation of water treatment system such as water level.

3.3. Disinfection

- 3.3.1. There are written policies and procedures on regular disinfection of water treatment and distribution systems, haemodialysis machines and equipment. Disinfection procedures are carried out in accordance with the recommendations of manufacturers.
- 3.3.2. If chemical disinfection is performed, appropriate measures should be in place to test and document the absence of residual disinfectants in the system.

3.4. Prevention of blood-borne infections

- 3.4.1. There are protocols for serological testing of blood-borne viruses for patients. Testing are conducted prior to commencing haemodialysis, at regular intervals thereafter, and when clinically indicated, with results documented.

- 3.4.2. There are dedicated facilities and equipment for patients with hepatitis B or C. Patients with hepatitis B are dialysed with dedicated facilities and equipment in segregated area away from patients without hepatitis B.
- 3.4.3. If dialyser is reused, there are protocols on the cleaning and preparation before reuse. The dialyser should only be reused for the same patient.
- 3.4.4. Dialyser should not be reused in patients with hepatitis B or C.

3.5. Medical records

- 3.5.1. The following medical records are kept:
 - (a) haemodialysis orders;
 - (b) records of individual haemodialysis treatment, including treatment time and clinical observations;
 - (c) drug prescriptions;
 - (d) relevant investigation reports; and
 - (e) consent forms.

4. Infection Control

4.1. Infection control policies and procedures

- 4.1.1. There are written policies and procedures on infection control, including but not limited to:
 - (a) standard and transmission based precautions;
 - (b) supply and use of personal protective equipment;
 - (c) environmental cleansing and disinfection;
 - (d) cleaning, disinfection and reprocessing of equipment;
 - (e) management of blood and body fluid spillage; and
 - (f) staff training.

Reference is taken from guidelines issued by relevant health and professional authorities, e.g. *Infection Control Guidelines on Nephrology Services in Hong Kong*.

- 4.1.2. There are policies and procedures for ensuring injection safety, proper sharps handling and disposal, and post-exposure management.

5. Resuscitation and Contingency

5.1. Risk management

- 5.1.1. There are patient-to-staff call systems or devices (e.g. call bells) for emergency in the haemodialysis area and where a patient may be left alone temporarily (e.g. patient changing room in the facility).
- 5.1.2. There are written policies and procedures for handling emergencies within the service, including fire hazard and sudden interruption of electricity supply or water supply. Contingency plan is in place to allow for return of blood from dialysis machines during emergencies.
- 5.1.3. Written policies are in place for the arrangement for interruption of services, e.g., during adverse weather conditions.
- 5.1.4. There are clinical guidelines in place for management of disinfectant toxicity.

5.2. Resuscitation of patients

- 5.2.1. There are adequate and appropriate resuscitation equipment including but not limited to:
 - (a) device that can ventilate the lungs;
 - (b) oxygen supply;
 - (c) suction;
 - (d) basic intravenous setup; and
 - (e) defibrillator.
- 5.2.2. Emergency medications are stored in a designated and easily accessible area in the facility. Regular checks on their viability are conducted and documented.

5.3. Emergency transfer

- 5.3.1. There are policies and procedures in place for emergency transfer of patient to hospital for management of urgent adverse outcome.
- 5.3.2. Drills for emergency transfer are conducted at regular intervals and documented.

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Project Steering Committee on Standards for Ambulatory Facilities

Terms of reference

The terms of reference of the Project Steering Committee on Standards for Ambulatory Facilities are:

- to steer the development and promulgation of standards for ambulatory facilities providing high-risk medical procedures;
- to make recommendations on the procedure-specific standards and, where appropriate, on the essential core standards for ambulatory facilities for the legislative review; and
- to steer the conduct of impact assessment survey for regulatory control of ambulatory facilities.

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