

9.1.4.2.4

If the functional program includes delivery of nourishment to patients, food preparation space and routes of travel shall be designed to support proper food safety practices.

9.1.4.2.5

The provision of fixed wall-mounted and ceiling-mounted equipment such as televisions and other building services should be coordinated with the placement of key medical equipment.

9.1.4.2.6

Ceiling design should be taken into account, particularly in areas such as procedure rooms and recovery areas where patients are on their backs for long periods of time.

9.1.4.2.7

Examination rooms shall be designed in accordance with Table 9.1 and Clause 11.

9.1.4.2.8

Functional and storage space shall be provided for chemicals used in the unit. Eyewash facilities shall be provided when chemicals are being used.

9.1.4.3 Furniture, fittings, and equipment

Furniture, fittings, and equipment shall be selected to support operational efficiency, safety, and infection prevention and control principles.

9.1.4.4 Lighting

Lighting in examination/treatment rooms shall be in accordance with Clause 11.

9.1.5 Space requirements

Table 9.1
Key space requirements and recommendations —
Diagnosis and treatment, including ambulatory care — General
 (See Clause 9.2.4.)

This Table provides a comprehensive list of rooms or spaces that could be needed in a HCF providing diagnosis and treatment services, and sets out minimum areas and other requirements and recommendations for each room or space. Inclusion in this Table does not imply that these rooms or spaces are required in a HCF. That decision is normally a part of discussions around the functional program, funding availability, and the defined role of the HCF in the community (e.g., whether or not it has a designated function in regional disaster plans).

The “Requirements and recommendations” column in this Table provides both mandatory requirements and advisory recommendations. If a HCF is not able to comply with the mandatory requirements, it could be asked by its funding agency (e.g., the provincial/territorial government) to provide a description why the requirement cannot be met and the alternative measures to achieve the intent of the room’s functions and design requirement.

(Continued)

Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
1	<p>Examination room — standard</p> <p>Small (can accommodate an exam table)</p> <p>Medium (can accommodate an exam table with 3-sided access)</p> <p>Large (can accommodate a stretcher)</p>	<p>9.5</p> <p>11.0</p> <p>13.0</p>	<p>Mandatory:</p> <ul style="list-style-type: none"> a) A wall-mounted, dedicated hand hygiene sink shall be located in the room to support hand hygiene best practice. b) Exam table shall be sized and located to suit the function of the room. c) A waterless hand hygiene station shall be mounted to support best practice point-of-care treatment. d) A container for garbage and/or soiled materials shall be provided. e) The minimum door width shall meet applicable requirements. <p><i>Note: Provincial/territorial building codes can apply.</i></p> <ul style="list-style-type: none"> f) Where necessary to support the patient profiles and accessibility needs, a wheelchair-turning circle shall be provided. g) Multiple wall receptacles shall be provided to allow flexibility. h) Sharps disposal shall be provided in a safe location and near the point of use, in accordance with applicable requirements. <p><i>Note: Applicable requirements can include provincial/territorial occupational health and safety regulations.</i></p> <ul style="list-style-type: none"> i) Necessary components shall be included to enable telehealth capability and flexibility. j) An exam light shall be provided over the therapy area. k) Clearance shall be provided for a scooter-turning circle. <p>Advisory:</p> <ul style="list-style-type: none"> a) The number and size of generic exam rooms should be based on the patient profile and volume of visits. b) Rooms that could be used for pelvic exams should be designed to allow for the foot of the examination table to face away from the door. c) Where renovation work is undertaken, every effort should be made to meet these minimum standards. d) Subject to Item e) above, the minimum door width should be 900 mm and wide enough to support the HCF's accessibility plan and patient profile, for example, for access to examination rooms by wheelchairs, other mobility devices, bariatric patients, and those who require other mobility support. Doors, in keeping with Clause 7.8.8, may be considered.

(Continued)

Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>Note: The 900 mm minimum width allows for the use of a standard 36 in door.</p> <ul style="list-style-type: none"> e) Rooms should be laid out in similar configuration. f) Each room should contain a work counter that can accommodate writing, staff-accessible supply storage facilities, and a computer. g) A vision panel adjacent to or in the door may be considered. h) Additional space should be considered when the room is intended for bariatric patients, or could need to accommodate families or groups, or where space is needed for scooter or mobility device access. i) Depending on the clinical model and space availability, consideration may be given to two points of entry/exit: from a patient corridor/waiting zone and from a staff/clinical work zone and/or for mental health patients.
2	Examination area — open	11.0	<p>Mandatory: Patient chairs and supply carts shall be provided, with one waterless hand hygiene station per area and a hand hygiene sink located for convenient access at a ratio of at least one sink for every three patient spaces.</p>
3	<p>Examination room — airborne isolation examination room (AIER)</p> <ul style="list-style-type: none"> • Examination room • Anteroom 	<p>11.2 5.0</p>	<p>Note: This section of this Table provides dimensions and requirements for an examination room that is also an airborne isolation room, if provided. See Clause 9.2.3.10 for requirements and guidance on determining whether such a room is needed.</p> <p>Mandatory: The following requirements apply in addition to those for the standard examination room as specified in Table 9.1, Item 1:</p> <ul style="list-style-type: none"> a) Ventilation shall meet the requirements of CAN/CSA-Z317.2 for HVAC requirements (in addition to enhanced ventilation for the clinical area). b) Layout and service requirements shall conform to current infection prevention and control guidelines. <p>Advisory: Depending on the functional program, a two-piece accessible washroom, directly accessible from within the examination room and for the exclusive use of the AIER and its patients, may be considered.</p>
4	Interview room/counselling (for 2-4 people)	11.2	<p>Mandatory:</p> <ul style="list-style-type: none"> a) Furniture shall be arranged so that the practitioner has direct access to the door for safety. b) The room shall include hand hygiene station.

(Continued)

Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>c) Room lighting shall be dimmable.</p> <p>Advisory:</p> <ul style="list-style-type: none"> a) The room should be furnished to meet the needs of the patient type. The required furnishings and arrangements to support the patient care needs and ensure staff safety should be determined by the functional program. b) Provision should be made for telehealth (e.g., through room colour, lighting, acoustics, the selection and placement of furniture, and adequate space for telehealth equipment). c) Increasing size of room to 12.0 m² to match exam room size (for flexibility in use) should be considered.
5	Physiotherapy/recreational/occupational therapy office with combined treatment area	14.0	<p>Note: <i>The room is intended for examinations/assessments and treatment, with sufficient storage for demonstration equipment and educational material.</i></p> <p>Mandatory: The room shall be equipped with a hand hygiene sink and ABHR.</p>
6	Physiotherapy/occupational/therapy activity room	23.0 4.6	<p>Note: <i>This room would be included in situations where the functional program specifies separate spaces for the office and treatment areas.</i></p> <p>Mandatory: The room shall be equipped with a hand hygiene sink and ABHR.</p> <p>Advisory: For administrative functions, desktop space should be available within the room.</p>
7	Lab — phlebotomy/other lab procedures (such as specimen collection)	7.5	<p>Mandatory:</p> <ul style="list-style-type: none"> a) The size shall be as determined by the functional program and shall be in accordance with Table 9.11, Item 3. b) The room shall be equipped with a hand hygiene sink and ABHR. c) Space shall be provided for storage. <p>Advisory:</p> <ul style="list-style-type: none"> a) Room design should be equipped for appropriate disposal of biowaste (such as urine).
8	Health practitioner/student/visiting specialist/volunteer workstation (open)	4.6	<p>Mandatory: Counselling or care-related functions shall be assigned space to suit the function (i.e., a part-time counsellor might require access to an enclosed interview/counselling room).</p>

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>Advisory:</p> <ul style="list-style-type: none"> a) There should be one workstation to each part-time practitioner/staff member for administrative functions. b) If the area is designed as a collaborative, “open workstation” model, access to a “swing office” should be included for privacy-related work (telephone calls, small group staff consultations). c) An additional workstation should be provided as a flexible work area for occasional administrative tasks for visiting specialists and/or volunteers.
9	Administrative or counselling offices <ul style="list-style-type: none"> • Type 0: workstation (administrative assistants) • Type 1: one desk, no meeting space • Type 2: one desk, small meeting area • Type 3: Shared office (2 FTEs) 	4.0 – 6.0 9.0 11.0 15.0	<p>Mandatory:</p> <p>Private office space shall be provided for HCF administrators and for health care practitioners who do not have access to an examination room (such as allied health workers), or require an enclosed office to conduct combined administration and counselling functions. Assignment of private offices shall align with the organization's administrative space allocation policy.</p> <p>Note: Offices not used for treatment are not required to be located within the clinical zone; however, locating them adjacent to and within the ventilation zone of the clinical area can facilitate future flexibility.</p> <p>Advisory:</p> <ul style="list-style-type: none"> a) If possible, the office should have an exterior view. b) All offices should be acoustically insulated for confidentiality. c) The entry door should have a vision panel with blinds. d) Office users should have a sightline to the door when seated at their workstations. e) Administrative assistants should be assigned one workstation; a rationale for an enclosed office will be required with the functional program.
10	Patient washroom single, 2-piece, accessible Refer to applicable requirements <p>Note: Applicable requirements can include provincial/territorial building codes.</p>	4.6	<p>Mandatory:</p> <ul style="list-style-type: none"> a) Each clinical area or zone (depending on the size) shall have one patient-dedicated washroom within the clinical area for gowned patients who might need access to a washroom. A second washroom may be considered as determined by the functional program and number of examination rooms. b) The toilet and sink shall be hands-free operation. c) Dispensers for paper towels shall be hands-free (i.e., the hands only touch the towel). d) A mirror and coat hooks shall be provided. e) Toilets with tanks shall not be used due to the risk of condensation. f) If urine specimens are being provided in the HCF, procedures for pick-up/transport shall ensure that

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>no cross-contamination occurs into the general clinic area.</p> <p>g) The door shall be easily accessible by staff, while allowing privacy.</p> <p>h) There shall be sufficient space for a 1500 mm (5 ft, 0 in) wheelchair-turning radius.</p> <p>i) The washroom shall be accessible and meet all building code requirements for accessibility.</p> <p>j) The toilet, sink, and grab bars shall be capable of supporting 250 kg (500 lb).</p> <p>k) If bariatric patients are included in the demographic, washroom fixtures capable of supporting bariatric needs shall be included.</p>
11	Medication/medical storage	4.5 – 9.5	<p>Mandatory:</p> <p>a) A scientific refrigerator/freezer shall be provided, as determined by the functional program. Alarms and emergency power needs for refrigeration shall also be determined by the functional program.</p> <p>b) The room/area shall be secure with access restricted to clinical staff.</p> <p><i>Note: Depending on the amount of medication held/administered in the HCF, a locked cupboard may be sufficient, as determined by the functional program.</i></p> <p>c) A hand-hygiene sink shall be mounted on the wall adjacent to the door. If medication is being prepared, the sink shall be mounted away from the medication area due to risk of splashing and aerosolization.</p> <p>d) Ease of access and observation of the area should be considered.</p> <p>e) The medication room shall accommodate the necessary area and clearances for access for refrigerator(s).</p>
12	Clean storage/supplies	11.0 min	<p>Mandatory:</p> <p>a) Clean and soiled utility rooms shall be separated spaces.</p> <p>b) Decontamination of or cleaning up supplies shall not be permitted in the clean utility room.</p> <p>c) Clean utility rooms shall not include a hand hygiene sink in the room. Consideration should be given to providing a hand hygiene station outside the room.</p> <p>d) The room or area shall be secure with access limited to clinical and support staff.</p> <p>e) Shelving units or cart surfaces shall have cleanable, smooth, and non-porous surfaces tolerant of hospital-grade disinfectants.</p> <p>f) Storage of equipment and supplies shall not be exposed to direct airflow from the HVAC system in</p>

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>accordance with CAN/CSA-Z314. Storage should be away from the window, due to the risk of condensation.</p> <p>g) Flooring shall be of seamless impermeable, slip-resistant material, appropriate for a location that is subject to moisture. See Clause 12.2.5.2.</p> <p>h) The principles of ergonomics shall be addressed when designing the storage space and locations of supplies.</p> <p>i) Shelving for clean and sterile supplies shall be at least</p> <ul style="list-style-type: none"> i) 230 mm off the floor; ii) 450 mm from the ceiling; and iii) 50 mm from outside walls. <p>Advisory:</p> <p>a) The size of the room is a planning guideline. If supplies are stored in exam rooms/on carts, the room may be smaller or shared with a sterilizer area. An alcove with double doors might be sufficient, as determined by the functional program.</p> <p>b) If reprocessing will be taking place, space should be included for an 11 m² sterilizer zone in the clean utility room.</p>
13	Soiled utility/holding • Small (minimum)	5.6	<p>Mandatory:</p> <p>a) Clean and soiled utility rooms shall be separated spaces.</p> <p>b) Soiled utility rooms shall only be used for temporary storage or supplies and equipment that will be removed for cleaning, reprocessing, or destruction.</p> <p>c) The room shall be located and arranged to provide easy access for staff to deposit soiled supplies.</p> <p>d) Soiled utility rooms shall be designed and equipped to minimize/contain the aerosolization of waste.</p> <p>e) A hand hygiene sink shall be provided. If a utility cleaning sink is required by the FP, it shall be separate from the hand hygiene sink.</p> <p>f) Space shall be provided at the point of use for rinsing of gross soil or debris from reusable devices.</p> <p>g) Easy access shall be provided for closed human waste container cleaning devices or disposable human waste container devices.</p> <p>h) Flooring shall be of seamless impermeable, non-slip material. Flooring shall comply with Clauses 7.2.2.4 and 12.2.5.2.</p> <p>i) Splash protection shall be provided on walls near water supply, sinks, or human waste management systems.</p>

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>j) Countertops shall be of non-porous material, free from seams and tolerant of routine daily cleaning with hospital grade disinfectants.</p> <p>k) The room shall be secure with access restricted to clinical and support staff.</p> <p>l) Doors shall be kept closed and not propped open.</p> <p>m) The room shall have the capacity to address waste management best practices, as determined by the functional program, such as</p> <ul style="list-style-type: none"> i) segregating wastes into HCF approved containers; ii) holding soiled linen and items for return to outsource service; iii) containing a human waste management system — if required/detailed by need in the functional program; iv) containing supplies associated with waste management systems; and v) providing for cleaning soiled patient equipment that is not returned to outsourcing for sterilization. <p>n) Spray wands shall not be used for rinsing of items. Equipment used for removal of gross soiling shall minimize aerosolization of particulates.</p> <p>o) Space shall be provided for separate mobile containers for soiled linen, general waste, medical/hazardous waste, confidential waste, recycling, etc.</p> <p>p) A washer/disinfector shall be provided in the soiled utility in accordance with the functional program.</p> <p>q) Hoppers, if used, shall be designed to contain any splash and the controls located so as not to expose staff to contaminants.</p> <p>Advisory:</p> <p>a) The room should be designed to minimize exposure of patients, staff, and visitors to odour, noise, and the visual impact of medical waste operations.</p> <p>b) A human waste management system is not required in a primary care setting. Need shall be determined through the functional program.</p>
14	Waiting area <ul style="list-style-type: none"> • General seating • Wheelchair/scooter/ bariatric • Up to 10 people 	1.4 per seat 2.8 per chair 15.0	<p>Mandatory:</p> <p>a) For early planning purposes of the total number of seats, the waiting area shall include space for wheelchairs as required by applicable requirements and the functional program.</p> <p>Note: P/T building codes can apply.</p> <p>b) If the HCF includes a dental program, it shall include dental patients within the clinic waiting area.</p> <p>c) Waiting rooms for patients and accompanying persons shall be located close to the entrance.</p>

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>d) Public washrooms shall be provided in close proximity.</p> <p>e) Waiting areas shall be sized to accommodate wheelchairs, scooters, and/or baby carriages.</p> <p>f) Different seating types that include chairs with arms, armless chairs, and bariatric seating shall be provided as appropriate to the expected patient population.</p> <p>Advisory:</p> <p>a) For early planning purposes, two seats should be allocated per treatment space (exam room and/or counselling).</p> <p>b) Waiting rooms should be so located that they can be observed by the reception/appropriate staff at all times.</p> <p>c) Consideration should be given to creating zones so that more infectious persons can be directed to a separate area, such as an L-shape or seating arrangements.</p> <p>d) A public telephone should be considered in HCFs providing Category II services.</p> <p>e) A charging station should be considered for scooters if not accommodated elsewhere.</p>
15	Visitors' coat area	0.6 up to 2.0	<p>Mandatory:</p> <p>a) An open coat hook area shall be assumed to contain 20 coats; space is in addition to the waiting area seat calculations.</p> <p>b) The coat area shall be designed to keep the waiting area free from clutter and congestion.</p> <p>Advisory:</p> <p>a) The coat storage area should be visible from the reception area. Alternatively, the coat room may be located within conference rooms or other group rooms.</p>
16	<p>Reception/control desk</p> <ul style="list-style-type: none"> • Provide an additional 30% of total FTE area for reception area storage • Provide an additional 4.5 m² for a small triage/interview area for confidentiality that provides accessibility 	4.6 per FTE	<p>Mandatory:</p> <p>a) The workstation space shall be calculated using full time equivalents (FTE) as opposed to occupants, as multiple receptionists may share workstation(s) depending on scheduling/work planning. The functional program shall demonstrate utilization of workstations and FTE/staff assignments.</p> <p>b) The reception/control desk shall be positioned so that there is security control and staff can easily provide information.</p> <p>c) The area shall be designed according to accessibility, ergonomic, and occupational health and safety principles and applicable requirements.</p> <p>Note: Applicable requirements can include provincial/territorial building codes.</p>

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>d) The station shall be designed to ensure personal security for staff. Security can be achieved through engineering controls such as</p> <ul style="list-style-type: none"> i) desk height; and ii) a transparent screen. <p>e) A screen shall be erected at the reception desk to provide protection for staff during the triage function from patients who may be, or are, infectious. The screen also provides separation of contact from surface materials (i.e., shared pens, other materials). Provision of a screen is a key component of the ICRA and shall be reviewed with the HCF, infection control practitioner (ICP), and architect during the design phase. The screen can be made of a transparent material that can sustain regular cleaning with cleaners and disinfectants. The patient intake process and planning of the desk and screen area shall consider confidentiality and privacy needs.</p> <p>f) If a screen is not provided, the HCF shall provide a rationale for its omission, and what alternative screening measures will be implemented. The HCF shall document the alternative IPC and staff safety/security measures that are in place.</p> <p>Notes:</p> <ol style="list-style-type: none"> 1) <i>A screen might not be appropriate for community-based mental health programs that are based on a model of integration, in which case the documentation requirement in Item d) would apply.</i> 2) <i>Exemptions could be allowed by funding agencies, provided that a valid rationale is given.</i> <p>g) The reception area shall be planned to accommodate a patient screening process that enables staff to determine if patients are infectious and are required to be seated, where possible, in a separate area of the waiting area. Refer to Item 14, "Waiting area".</p> <p>h) Staff shall have easy access to a hand-washing station. This can be a wall-hung sink in the area or an alcohol-based sanitizer.</p> <p>i) An alcohol-based sanitizer shall be easily accessible to patients at the counter.</p> <p>Advisory:</p> <ol style="list-style-type: none"> a) For Category II, reception and triage should be co-located. b) Entry to the clinical area beyond the reception desk should be controlled. c) A counter should be provided at the back of the workstation for storage of paper and other

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>procedural material. This material should not be laying on the front counter that is approached by patients.</p> <p>d) Consideration should be given to creating a secondary entry for the movement of supplies and garbage.</p> <p>e) The placement of the computer should be convenient to allow for easy input, but not obstruct visual connection between the staff and patient, nor be visible by the patient.</p> <p>f) Planning of the desk and workflow process should decrease patient movement and address confidentiality and privacy.</p> <p>g) Space should be considered for charting, as determined by the workflow model.</p>
17	Medical records/file room <ul style="list-style-type: none"> • May be replaced by IT room for file server to support electronic medical records management 	4.5	<p>Mandatory:</p> <p>a) For protection of patient records and privacy, the area shall be secure and accessible only to staff and other designated personnel, as determined by the functional program.</p> <p>b) The principles of ergonomics shall be addressed when designing the storage and filing spaces and equipment selection.</p>
18	Photocopy/workroom — part of file room or reception <ul style="list-style-type: none"> • Space should accommodate one photocopy machine with worktable 		<p>Mandatory:</p> <p>a) If integrated with the medical records/file room, access to the photocopy area shall prevent unauthorized access to the medical records/file room.</p> <p>b) For protection of patient records and privacy, the area shall be secure and accessible only to staff and other designated personnel, as determined through the functional program.</p> <p>c) The principles of ergonomics shall be addressed when planning the work area.</p> <p>d) Adequate ventilation for office machines shall be ensured.</p> <p>Advisory: The plan should be for one room only, if needed. It can be a separate room or integrated with the file room; however, overall space should not be increased.</p>
19	Staff lunchroom/lounge	<ul style="list-style-type: none"> • 2.0 m² per person 11.0 for six people 	<p>Mandatory:</p> <p>a) The room shall have controlled access by staff and authorized persons only.</p> <p>b) The room shall accommodate a storage area for students on placement and volunteers, if those persons are related to direct delivery of a program/service.</p>

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>c) The room shall accommodate lockers for staff if required.</p> <p>Notes:</p> <ul style="list-style-type: none"> 1) Staff that use this space can include primary and allied care program staff and students. 2) Volunteers can have access to the staff lounge, as defined per user group. <p>Advisory:</p> <ul style="list-style-type: none"> a) A kitchenette may be provided; a stove or oven should not be provided. b) Natural light should be considered. c) The room should accommodate hanging coats and boot storage.
20	Storage/locker area for staff in addition to staff lunchroom/lounge space <ul style="list-style-type: none"> • Storage/locker area for students on placement and volunteers to be 10% in addition to staff lunchroom/lounge space 	0.15/purse locker 0.40/half locker	<p>Mandatory: The size of locker shall be determined by use, as demonstrated by the functional program.</p> <p>Note: Lockers are intended for staff who do not have access to a dedicated workstation or enclosed office space to store personal belongings.</p>
21	Staff washroom — 2-piece accessible <ul style="list-style-type: none"> • Up to two staff washrooms 	4.6	<p>Mandatory:</p> <ul style="list-style-type: none"> a) Up to two staff washrooms shall be provided within, or convenient to, the clinical care area. The number of washrooms required shall be in accordance with applicable requirements. b) All washrooms shall be accessible as per applicable requirements. At least one staff washroom shall accommodate a 1500 mm (5 ft, 0 in) wheelchair-turning radius. <p>Note: Applicable requirements can include provincial/territorial building codes.</p>
22	Patient refreshment station	2.5	<p>Mandatory: Access to a refreshment station shall be provided for patients.</p> <p>Advisory: The location of the station is dependent on the patient population and functional program.</p>
23	Hand hygiene sink		<p>Mandatory: Hand hygiene sinks shall be constructed and installed in accordance with Table 11.1, Item 19.</p>
24	Hand drying		<p>Mandatory: Hand drying space and equipment shall comply with Table 11.1.</p>

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
25	Waterless hand hygiene station (alcohol-based or other waterless hand hygiene dispenser)		<p>Mandatory:</p> <ul style="list-style-type: none"> a) Hand hygiene stations shall be installed at the point of care to improve adherence to infection prevention and control principles. b) A hand hygiene station shall also be installed outside treatment rooms at the entrance. <p>Advisory: The number of stations should be reviewed with the applicable authorities.</p> <p>Note: Applicable authorities can include the provincial/territorial fire marshal or chief building inspector.</p>
26	Meeting rooms Notes: 1) <i>Meeting room for up to eight people.</i> 2) <i>If a quiet room is needed, a meeting room or office or exam room should be designated.</i>	18.6	<p>Mandatory:</p> <ul style="list-style-type: none"> a) For conference-style seating, one meeting table and non-fixed chairs shall be provided. b) Space shall include a table, seating, circulation, and cupboard storage. c) A minimum 1.5 m linear cabinet shall be included along one wall for equipment and material storage and display. d) One or two whiteboards shall be included. e) Voice and data and cabling shall be included. f) If the facility is approved for telenetworking capabilities for the region or province/territory, a telenetworking infrastructure shall be in place. g) Doors shall have a glazed insert. h) An interview room for counselling purposes shall include the following: <ul style="list-style-type: none"> i) Furniture shall be arranged so that the practitioner has direct access to the door for safety. ii) It shall include a hand hygiene station. iii) It shall include dimmable lighting controls. i) Rooms shall be designed for acoustic privacy. j) Furniture shall be arranged so that the practitioner has direct access to the door for safety. k) It shall include a hand hygiene station. <p>Advisory:</p> <ul style="list-style-type: none"> a) An interview room for counselling purposes may include the following: <ul style="list-style-type: none"> i) It may be furnished with more comfortable, lounge furniture. ii) A low-mounted mirror to be used by the patient in a sitting position should be considered. b) Shelving for communal reference material should be considered.
27	Multi-purpose room		<p>Notes:</p> <ul style="list-style-type: none"> 1) <i>Multi-purpose rooms are typically used for educational sessions, presentations, or group</i>

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Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
	<ul style="list-style-type: none"> • Group room/large meeting room/multi-purpose 	Minimum 11.0; may be increased in accordance with program needs (suggest allocation of 1.5 to 2.0 m ² per person)	<p><i>activities. Multi-purpose rooms are intended for the internal use of the HCF for the direct delivery of its programs and services.</i></p> <p>2) <i>For flexible room/furniture configurations, the design will likely include non-fixed seating and movable tables.</i></p> <p>Mandatory:</p> <p>a) An ABHR station shall be included, in accordance with applicable requirements.</p> <p><i>Note: Public health guidelines can apply.</i></p> <p>Advisory:</p> <p>a) Storage for materials, equipment, and movable furniture should be considered. Consideration should be given to which items can be stored in general storage and which require convenient storage within or near the room.</p> <p>b) Consideration should be given to the information technology and audio-visual needs of the facility.</p> <p>c) Movable partitions/dividers should be considered for larger rooms to improve flexibility and utilization.</p>
28	Child play area <p>Note: A children's play area can be for pediatric patients or it can be a designated space for child care for patients with small children who need supervision while the parent is at a health care appointment or meeting.</p>		<p>Mandatory:</p> <p>a) Space provided shall be determined based on patient profile (i.e., age, size, and possible presence of physical, mental, or emotional factors that could necessitate more room).</p> <p>b) Surfaces shall be non-porous, wipeable, and withstand disinfection.</p> <p>c) The HCF shall comply with applicable requirements regarding the provision of dedicated child care.</p> <p><i>Note: Provincial/territorial or local regulations can apply.</i></p> <p>d) All technical building/facility support spaces shall have secured/controlled access.</p> <p>e) If toys will be offered in the area, storage space appropriate to the size, type, and number of toys shall be provided. For toys that will be reused, a separate storage place shall be provided for items awaiting cleaning. If toys will be cleaned in the unit, the design shall also include the necessary equipment and workspace for this activity.</p> <p><i>Note: Planning activities should also consider toys used in therapy.</i></p> <p>Advisory:</p> <p>Provision should be made for the charging of electronic toys.</p>

(Continued)

Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
29	Housekeeping/janitorial room Note: Size is dependent on facility.	7.0	<p>Mandatory: See Table 11.1.</p> <p>a) A housekeeping closet shall be provided in the clinical area.</p> <p>b) Every housekeeping room shall have a floor-based sink with a minimum inside dimension of 600 mm × 600 mm (24 in x 24 in). This sink shall be protected by an easily cleanable wall surface up to 1200 mm (3 ft, 11 in) from the finished floor.</p> <p>c) The housekeeping room shall be large enough to store at least one housekeeping cart, as determined by the functional program.</p> <p>d) Wall protection shall be provided to prevent damage by the carts to a height of 1200 mm (3 ft, 11 in).</p> <p>e) The room shall include</p> <ul style="list-style-type: none"> i) a floor sink for dumping of dirty water from pails, etc.; ii) a fresh water source (hot and cold) for filling pails, etc.; iii) a hand hygiene sink with paper towel dispenser and waste container; iv) a non-fixed shelving unit for storage of supplies (i.e., paper towels, toilet paper); and v) fixed shelving for storage of small quantities of cleaning products. <p>f) The room shall be secure with access restricted to clinical and support staff.</p> <p>Advisory: None.</p>
30	Waste holding/garbage room <ul style="list-style-type: none"> • Regular garbage, biowaste, recycling, shredding. • Size dependent on facility. 		<p>Mandatory:</p> <p>a) In a leasehold facility, garbage rooms are the responsibility of the landlord as part of the tenant common space. The HCF shall ensure that terms for access and maintenance are included in the lease.</p> <p>b) Secure and controlled access shall be ensured.</p> <p>c) The garbage room shall be located close to the facility's service entrance. Transport of waste shall not occur through clinical program areas.</p> <p>d) Ample space shall be ensured to permit required separation and storage of waste.</p> <p>e) Ventilation shall be provided in accordance with applicable requirements.</p> <p>Note: Applicable requirements can include provincial/territorial codes and regulations.</p>
31	Mechanical/electrical room	4.5	<p>Mandatory: For early planning purposes, 4.5 m² shall be allocated.</p>

(Continued)

Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
			<p>Final size shall be determined through engineering design to meet function and applicable requirements.</p> <p>Note: Applicable requirements can include provincial/territorial codes and regulations.</p> <p>Advisory: If facility is located in an existing HCF, there may be existing access to service rooms.</p>
32	Voice and data server room if included	10.2	<p>Mandatory: Adequate ventilation/cooling shall be provided.</p> <p>Advisory: If facility is located in an existing HCF, there may be existing access to service rooms.</p>
33	Elevator machine room, if included	4.5	<p>Mandatory: None.</p> <p>Advisory:</p> <ul style="list-style-type: none"> a) As required, adequate ventilation cooling and acoustic control to adjacent rooms should be provided. b) If facility is located in an existing HCF, there may be existing access to service rooms.
34	General storage		<p>Mandatory: None.</p> <p>Advisory: General storage may be provided as determined through the functional program. It does not include medical supply storage or storage associated within the multi-purpose room.</p>
35	Laundry (within soiled room)	2.0	<p>Mandatory: None.</p> <p>Advisory: Laundry facilities may be provided, as determined by the functional program and the ICRA.</p>
36	Baby carriage/stroller storage	Varies – allow 2.5 m ² per stroller Typically, 5 spaces would be needed.	<p>Mandatory: None.</p> <p>Advisory: Consideration should be given to holding areas for strollers, as determined by the functional program and clinic/facility type, to prevent obstruction of corridors and other circulation/waiting areas. The HCF should determine an average number of strollers that would require parking/storage.</p>

(Continued)

Table 9.1 (Continued)

	Room name	Net area, m²	Requirements and recommendations
37	Chiropody assessment/therapy/treatment room	13.0	<p>Mandatory:</p> <ul style="list-style-type: none"> a) The room shall comply with common requirements and recommendations for a generic examination room. b) Space within the room shall be adequate to permit the foot treatment chair to be reclined. c) Cleaning and disinfection shall not occur in the treatment space. If cleaning and disinfection will take place in the clean utility room, sterilization tasks shall be located in a dedicated, physically separated space. <p>Advisory: A combined assessment, examination, and procedure room for foot care is usually associated with a diabetes program. The functional program should describe the extent of foot care procedures of the program and the room should be sized accordingly.</p>
38	Dental operatory suite <ul style="list-style-type: none"> • Workstation • One desk, no meeting space • Dental records area/storage • Dental exam room/operatory • Dental laboratory/“clean” area • Dental mechanical as required 	4.0 6.0 4.6 11.2 4.6	<p>Mandatory:</p> <ul style="list-style-type: none"> a) If paper records are to be maintained, plans shall comply with all guidelines and applicable requirements for medical records storage. b) The rooms shall be organized as a suite of rooms, adjacent to each other for good patient wayfinding and workflow. c) As part of a clinic, dental supplies shall be stored in the clinic's clean utility room. d) Cleaning and disinfection shall not occur in the treatment space. If cleaning and disinfection will take place in the clean utility room, sterilization tasks shall be located in a dedicated, physically separated space. <p>Note: Clinical dental programs are often included within a community health clinic and receive operational funding from municipal public health or other provincial/territorial-funded programs. Office space is provided for storage.</p> <p>Advisory: If sterilization area is necessary, a portion of the space in the clean utility room should be used.</p>
39	Examination room, ophthalmology	13.0	<p>See Clause 11 for common requirements and recommendations for an examination/procedure/treatment room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) Clearances and access to specialty equipment shall be in accordance with the manufacturer's recommendations.

(Continued)

Table 9.1 (Concluded)

	Room name	Net area, m²	Requirements and recommendations
			<p>b) Minimum clearances of 800 mm at the sides and 600 mm behind the patient chair, when in fully reclined position, shall be provided.</p> <p>c) Control of room lighting shall be provided at the physician work area.</p> <p>d) If the room is to be used for multiple testing, space shall be provided for related testing equipment.</p> <p>Advisory: The physician work area should include storage for lenses and supplies.</p>
40	Ophthalmology, laser room	14.8	<p>Mandatory:</p> <p>a) Clearances and access to specialty equipment shall be in accordance with the manufacturer's recommendations.</p> <p>b) Control of room lighting shall be provided at the physician work area.</p> <p>Advisory:</p> <p>a) A stretcher may be provided as an alternative to the chair treatment space.</p> <p>b) Guest chairs are not required, but sub-waiting for a patient's companion should be provided nearby.</p>
41	Ophthalmology, visual fields room	12.0	<p>Mandatory: Clearances and access to specialty equipment shall be in accordance with the manufacturer's recommendations.</p>

9.2 Ambulatory care facilities

Notes:

- 1) Clause 9.2 covers general ambulatory care facilities (e.g. facilities supporting Category I and II diagnostic and treatment services, including community-based providers, physician offices, clinics, medical services/procedures, and support areas).
- 2) Clause 9.3 covers inpatient and outpatient operative and non-operative procedures.
- 3) For facilities that provide medical imaging, see provincial/territorial requirements, Clause 9.11, or specific diagnostic imaging modalities. For facilities with lab functions, see provincial regulatory requirements and Clause 9.12.

9.2.1 General

Ambulatory care facilities generally provide the health services described in Category I and II diagnostic and treatment services. This may include health promotion, illness prevention, and general and specialized services. The care is provided as day treatment or on an outpatient basis, and is not designed to accommodate inpatients overnight. Ambulatory care facilities can provide services on a scheduled or unscheduled basis.

Note: In general, the level of risk is predictable and manageable within an ambulatory care facility, particularly for ambulatory care services located within a hospital. However, as standalone ambulatory care facilities become more popular and increasingly perform procedures that were once limited to hospitals or only provided to inpatients, the potential for injury and infection can also increase. The requirements of Clause 9.3 are intended to help safeguard against these risks.

9.2.2 Functional requirements

9.2.2.1

The following factors should be considered when planning an ambulatory facility:

- a) the risk categories of the services that will be provided, and the highest risk category that will be accommodated within the facility;
- b) the anticipated volume of activity;
- c) clear and direct access to reception and registration;
- d) compatibility with other services (e.g., within a rental/commercial office space);
- e) the ability to maintain the necessary distances and separations for infection control in outbreak/pandemic situations to ensure continued operations; and
- f) universal access.

9.2.2.2

Ambulatory clinics shall be designed to accommodate the needs of the anticipated number of users, the patient profile, the risk categories for the services provided, the frequency of visits, and the typical duration for each visit. The spaces provided for each service, and the adjacencies between services and related services or support functions shall be consistent with the approved functional program.

9.2.2.3

Planning shall meet applicable requirements.

Note: Provincial/territorial and local regulations and bylaws can apply.

9.2.2.4

Furniture, fittings, and equipment in the ambulatory care clinic setting shall be selected to support the model of care and shall be composed of non-permeable, cleanable materials and be able to withstand repeated disinfection.

9.2.3 Infection prevention and control recommendations

Note: As ambulatory care facilities can vary widely, specific recommendations depend on the scope of services provided and demographics of patient population to be served. The recommendations provided in Clause 9.2.3 are general recommendations for ambulatory care facilities.

9.2.3.1 Mechanical requirements for proper ventilation

CAN/CSA-Z317.2 shall be followed with respect to air change rates, minimum outdoor air changes, relative pressurization, temperature, humidity, and exhaust requirements.

9.2.3.2 Plumbing requirements

All plumbing shall be in accordance with CSA Z317.1.

9.2.3.3 General layout

If the facility is designated within the municipality or region's emergency plan or authority having jurisdiction for pandemics, the layout could consider configuration of the space to support this (e.g., an L-shaped waiting area to separate patients).

9.2.3.4 Washrooms

Staff and patient washroom facilities should be separated.

9.2.3.5 Soiled utility rooms

The soiled utility room is for disposing of biohazardous waste containers, garbage disposal, and soiled holding. If required by the functional program, the soiled utility room should include provisions for instrument rinsing/decontamination. Such provisions shall comply with CAN/CSA-Z314. See Table 9.1. See key space requirements in Table 9.1.

9.2.3.6 Clean utility room/supply storage room

Separate clean and soiled utility rooms are supported. The clean utility room should only function as a clean supply room. The clean and soiled utility rooms should be designed to support the utilization and model of care being offered at the facility.

9.2.3.7 Medication room

9.2.3.7.1

A separate room should be provided for medication preparation and storage. If tasks are very minimal, these functions may take place in the clean utility room, however the layout shall be carefully considered, and medication tasks physically separated from clean storage.

9.2.3.7.2

A hand hygiene sink shall be provided in the medication room unless a documented decision has been made to omit the sink based on an assessment of the risks (e.g., if the room is only for low-risk functions such as vaccine storage). The decision shall be consistent with the functional program, and it shall be made in consultation with the person or HCF designate responsible for infection prevention and control.

9.2.3.7.3

Countertops for medication preparation shall be of non-porous materials, free from seams and able to withstand daily disinfection. Stainless steel or solid surface counters should be used.

9.2.3.8 Sterile medical device reprocessing

A separate, dedicated two-room reprocessing suite should be used for reprocessing tasks in accordance with CAN/CSA-Z314. For very low volumes, an alternative approach may be used (e.g., utilizing the soiled utility room for rinsing/decontamination activities and the clean utility room for sterilization activities). Such a decision shall be made in consultation with the person or HCF component responsible for infection prevention and control. The clean room shall be in close proximity to the soiled utility and a clear process for transporting items from one room to another shall be established. CAN/CSA-Z314 shall be adhered to for any/all reprocessing requirements.

9.2.3.9 Hand hygiene sinks

Hand hygiene sinks shall be provided in any space in which care is provided (i.e., exam, treatment, procedure rooms/spaces). The only exception would be consult rooms where no physical touching of the patient occurs. Facilities for washing hands (i.e., a sink or a waterless hand hygiene station) should be available in or near the room.

9.2.3.10 AIRs and AIERs

The HCF shall determine through its functional programming, ICRA, and planning processes whether an AIR or AIER is needed.

Notes:

- 1) *The need for an AIR or AIER depends on the services provided, the demographics of patient population served (i.e., pediatrics, recent immigrants, dialysis patients, immunocompromised patients), and the presence within the community of other HCFs that can provide airborne isolation space if an infectious patient needs to be accommodated while they are waiting for transport, or in the event of an outbreak.*
- 2) *For ambulatory facilities where the potential need for routine isolation is low, alternatives may be considered. For example, patients with respiratory infections can be managed through management measures such as the use of separate waiting areas, masking and gowning, and protection of health care workers through correct use of PPE.*
- 3) *See Clauses 5.1.2.1 to 5.1.2.3 and 7.9.9.4 for requirements on the master plan and managing infectious patients.*

9.2.4 Space details

Table 9.1 presents the standard requirements for key spaces that could be planned for ambulatory care facilities. It includes the following rooms, which may be included in such a facility:

- a) examination rooms (standard and open type, as well as an airborne isolation exam room);
- b) interview rooms/counselling;
- c) physiotherapy/recreational/occupational therapy — offices, treatment areas, activity rooms;
- d) labs — phlebotomy/other lab procedures;
- e) health practitioner/student/visiting specialist/volunteer workstations;
- f) administrative or counselling offices;
- g) reception/control desks;
- h) waiting areas, visitors' coat areas, and baby carriage/stroller storage;
- i) child play areas;
- j) patient refreshment stations;
- k) washrooms for patients and staff;
- l) medication/medical storage;
- m) general storage, clean storage, and supplies;
- n) medical records, file rooms, photocopy, and workrooms;
- o) staff lunchrooms, lounges, and storage/locker areas;
- p) hand hygiene sinks;
- q) waterless hand hygiene stations;
- r) meeting rooms and multi-purpose rooms;
- s) housekeeping/janitorial rooms;
- t) soiled utility/holding and laundry;
- u) waste holding/garbage rooms;
- v) mechanical/electrical rooms and elevator machine rooms;
- w) voice and data server rooms;
- x) dental facilities; and
- y) ophthalmological facilities.

Note: Care should be taken to appropriately name rooms so that care providers use rooms with the appropriate infection prevention and control design to support direct, hands-on patient care. For example, a "Consult Room" that is not equipped with a sink and storage for sterile supplies should not be used for patient examinations.

9.3 Procedures

9.3.1 Description

Clause 9.3 provides requirements for the design and construction of environments for the conduct of a range of inpatient and outpatient operative and non-operative procedures conducted under local, conscious sedation, regional or general anaesthesia requiring medical and/or nursing support, and the pre- and post-procedural management of patients undergoing procedures.

The range of procedures provided can include

- a) endoscopy;
- b) cystoscopy;
- c) bronchoscopy;
- d) minor surgical procedures under local or heavy sedation or general anaesthesia (e.g., plastics, orthopaedics, ENT, gynaecology, general surgery, and ophthalmology);
- e) major surgical procedures requiring general or regional anaesthesia, such as plastics, orthopaedics, cardiac surgery, neurosurgery, ENT, gynaecology, general surgery, urology, and ophthalmology;
- f) interventional medical imaging;
- g) interventional cardiology (cardiac catheterization/electrophysiology);
- h) pacemakers/ICD;
- i) lithotripsy;
- j) pain management procedures, diagnostic and regional blocks, implantable spinal stimulators;
- k) urodynamics;
- l) manometry; and
- m) medical day care procedures (e.g., infusions, IV therapy, PICC lines, etc.).

Note: Clause 9.3 is intended to provide the appropriate level of precautions and supports for a range of clinical environments, depending on the risks associated with the intended use.

Facilities supporting these procedural services can include ambulatory care centres, free-standing surgery centres, and acute and long-term care HCFs. Within HCFs, the services that perform operative procedures may be centralized (which can improve flexibility and operational efficiency), or they can be decentralized to specialized areas (e.g., emergency care, cardiac catheterization labs, interventional imaging suites, etc.). The requirements in Clause 9.3 apply regardless of where the services are provided, i.e., located within a HCF (of any type), free-standing surgery centre, or in an outpatient/ambulatory centre (standalone or combined with other clinical services).

9.3.2 Functional requirements

9.3.2.1 Patient management

9.3.2.1.1

All aspects of care should be consistent with the principles of family-centred care. Pre- and post-operative spaces and systems should be designed to accommodate the patient's and family's needs for privacy and confidentiality and family participation in care, while maintaining the staff's ability to provide efficient and effective nursing care.

9.3.2.1.2

Provisions shall be made for privacy and confidentiality during the initial processing for consultation/discussion with families, etc.

9.3.2.1.3

A private and secure area shall be provided for patient's belongings.

9.3.2.1.4

The pre-procedure care and second stage recovery area should be designed to ensure flexibility in use between the two areas and should consider patient privacy and confidentiality yet allow observation by nursing staff.

9.3.2.1.5

Where volumes permit, consideration should be given to organizing the pre-procedure care and second stage bays in clusters. The number and type of clusters should consider efficient staffing and, where applicable, may be organized to support pre-procedure care cluster(s) and post-procedure care cluster(s) or to support specific sub-specialties.

9.3.2.1.6

Where possible, the design of the procedure area should minimize the interface between the patient/family and the support services/technical areas (supporting the concept of an "on stage/off stage" design).

9.3.2.1.7

An electronic OR scheduling/booking system should be provided, especially to address wait times and urgent/emergent procedures.

9.3.2.1.8

The number of patient transfers from place to place and from staff to staff should be minimized.

9.3.2.1.9

Travel distances from the operating rooms to the area where the patient will undergo first stage recovery, including the PACU, should be minimized.

9.3.2.1.10

Patient care, services, and facilities shall support the management of infectious diseases and reduce the risk of nosocomial infections. The number and type of isolation rooms required depends on the volume and scope of service and an ICRA of individual HCFs. See Clause 9.3.7.2.

9.3.2.1.11

The design should allow the option of isolation during the pre-procedure and recovery periods.

9.3.2.1.12

Options to provide isolation during the operative period should be considered and may include vestibules at the entrances to the operating room(s).

9.3.2.1.13

If the unit treats pediatric patients, it shall have the appropriate accommodations to meet the particular needs of this patient group, including space in all rooms to allow for families to accompany the child.

9.3.2.1.14

If there is sufficient volume, a separate pediatric area for day surgery and recovery should be considered. Consideration should be given to providing an enclosed room for use by pediatric patients even if volumes are low. See Clause 9.3.2.4.

9.3.2.1.15

Special consideration should be made to ensure patient-centred care and infection prevention and control and the accommodation of families or caregivers, as it relates to the process for patient changing, storage of clothing, and access to washroom facilities.

9.3.2.2 Workflow

9.3.2.2.1

The following services shall be provided with direct connections to operating rooms through access-restricted corridors:

- a) operating room control and communications office;
- b) pre-operative inpatient holding area;
- c) stage one recovery area (PACU);
- d) regional anaesthesia block area;
- e) perfusionists' workroom, preferably adjacent to cardiac operating rooms;
- f) anaesthesia equipment and respiratory services satellite workroom;
- g) equipment storage;
- h) sterile supply storage;
- i) housekeeping closets;
- j) orthopedic implant storage;
- k) alcoves for medical imaging C-arm storage; and
- l) staff change facilities.

Notes:

- 1) *The connections specified in this Clause are intended to promote efficient workflow, maintain patient privacy, and support infection prevention and control and security measures. Other services may be similarly connected if doing so would help to achieve these goals.*
- 2) *Policies for restricted access should be consistent with the overall policies for the HCF (e.g., public not allowed, staff have to be in uniform, ID badge visible, card access, direct connection between spaces).*

9.3.2.2.2

Services requiring a convenient connection to operating rooms through semi-restricted corridors include

- a) pre-operative/procedure preparation areas/stage two recovery areas;
- b) family/supporter waiting areas;
- c) cardiac catheterization laboratories; and
- d) staff change facilities.

Staff change facilities should be conveniently connected to operating rooms through semi-restricted corridors and should also provide access to the restricted corridor.

9.3.2.2.3

Services requiring a direct connection to stage one recovery (PACU) through restricted corridors include

- a) operating rooms;
- b) stage two recovery areas; and
- c) endoscopy rooms.

9.3.2.2.4

Services requiring a convenient connection to stage one recovery (PACU) through semi-restricted corridors include

- a) interventional cardiology; and
- b) interventional medical imaging.

Note: Large facilities may have dedicated recovery areas for these services.

9.3.2.2.5

Services requiring a convenient connection to the pre-operative/procedure preparation/stage two recovery area include

- a) patient washrooms; and
- b) family/supporter waiting areas.

9.3.2.3 Support service delivery**9.3.2.3.1**

The design shall ensure separate traffic flows for clean/sterile and soiled materials and separate storage areas for supplies and equipment.

9.3.2.3.2

All reprocessing of medical devices should be done in a central MDRD.

9.3.2.3.3

There shall be direct access to the MDRD with provisions to ensure separation of clean, sterile, and soiled materials.

9.3.2.3.4

The holding of soiled materials shall be minimized and direct/easy access should be provided to remove/transfer material to the MDRD.

9.3.2.3.5

Provision shall be made for adequate equipment storage. The size and type will vary by HCF, but the requirements for dispersed equipment, centralized equipment, and some decentralized area outside and/or shared between operating and procedure rooms should be considered.

9.3.2.3.6

The design shall provide for the flow and safe storage of all medications, including locked storage for controlled drugs. Consideration should be given to a satellite pharmacy.

9.3.2.3.7

The design shall provide for the safe and efficient transfer of specimens, especially blood samples, to and from the laboratory.

9.3.2.3.8

Respiratory/anaesthetic services shall be provided within the restricted area and shall be easily accessible.

9.3.2.3.9

Biomedical services should be provided, either within or adjacent, and be easily accessible.

9.3.2.4 Pediatric operating rooms**9.3.2.4.1**

Procedure rooms in pediatric facilities shall have a pre-procedure waiting area for parents and families.

9.3.2.4.2

The pre-procedure waiting area shall be large enough to accommodate the number of families that could be waiting and accommodate the differing age groups that will be there.

9.3.2.4.3

The waiting area should be comfortable and non-clinical, with AV equipment and toys appropriate to the expected patient population and families. There should be a play area with the necessary storage spaces and electrical services. The play area may be separate from the general waiting area.

9.3.2.4.4

Space shall be provided in pre-op to accommodate family members accompanying the child.

9.3.2.4.5

Additional space shall be provided for the donning and removal of cover gowns by parents/guardians who will accompany their child into the operating theatre.

Note: *Gown removal should be in a separate area from the waiting room. This arrangement can provide privacy for emotional parents and families leaving the OR, and can also help those in the waiting area by not adding to their anxiety.*

9.3.2.4.6

Provisions for pediatric surgical services in non-hospital facilities should be adapted to the expected patient load and procedures that are expected in the facility.

9.3.2.4.7

Depending on the size of the OR, there should be a washroom for the children, parents, and families if needed.

9.3.2.4.8

Space shall be provided to allow for medical staff to demonstrate the procedure to the child and transition the patient through the system (to reduce stress for patient and parents).

9.3.2.4.9

Provisions shall be made to allow the parents to leave the waiting area and be called back by means of a communication system (e.g., intercom).

9.3.2.4.10

Provisions shall be made to allow the parents to be able to track the progress of the patient through the system.

9.3.2.4.11

A quiet room shall be provided adjacent to the waiting room (including a second exit) for private conversations, counselling, or grieving.

9.3.3 Technical requirements for procedure rooms

Note: This Clause sets requirements for all types of procedure rooms. Clause 9.3.3.1 addresses common requirements for procedure rooms and Clause 9.3.3.2 sets additional requirements for procedure rooms where Category III services are provided.

9.3.3.1 General**9.3.3.1.1**

Provisions shall be made for examinations, interviews, preparation, testing, and obtaining vital signs of patients for outpatient surgery or other non-surgical procedures.

9.3.3.1.2

An area for preparation and examination of frozen sections (i.e., cryosection) may be part of the general laboratory if immediate results are obtainable without unnecessary delay in the completion of surgery.

9.3.3.1.3

Appropriate, convenient, and easily accessible locations shall be provided for supplies and cleaned equipment.

9.3.3.1.4

Appropriate holding space shall be provided for soiled equipment that requires cleaning.

9.3.3.1.5

A staff lounge in either a team room or shared in a central area shall be provided.

9.3.3.1.6

Provision should be made for education (i.e., adequate space and audio-visual facilities).

9.3.3.1.7

Consideration should be given to providing a layout where staff workstations and support areas are separated from reception, waiting, and patient care areas.

9.3.3.1.8

Positive distractions (e.g., acoustic, visual, entertainment, or daylight) should be considered, particularly for lengthy procedures or recovery and pain management.

9.3.3.1.9

The ceiling design should be taken into account, especially for areas such as procedure rooms and recovery areas where patients are on their backs for long periods of time.

9.3.3.2 Procedure rooms — Common requirements

9.3.3.2.1

The following requirements shall apply to all procedure rooms (Category II and Category III):

- a) Each room shall have a system for emergency communication with the main communication and control station.
- b) X-ray film viewers for handling at least four films simultaneously or a PACS workstation (digital image viewers) shall be provided.
- c) Perimeter walls, ceiling, and floors, including penetrations, shall be sealed.
- d) Medical gas terminal units shall be provided in accordance with Annex F of CSA Z7396.1.
- e) A scavenging system for medical gases should be provided, according to the services used.
- f) A surgical plume scavenging system shall be provided if electrocautery or laser procedures will be used. See CSA Z305.13.
- g) The need to maintain patient warmth shall be considered in the design (e.g., by providing temperature controls) and provision shall be made for patient warming systems.
- h) Direct access to a Stage 2 recovery area shall be provided.

9.3.3.2.2

Lighting shall be adaptable for minimally invasive surgery use, with dimmable spotlights and zoned switching of fluorescent fixtures.

9.3.3.2.3

Procedure rooms shall be designed for visual and acoustical privacy for the patient.

9.3.3.2.4

Station outlets for oxygen and medical vacuum shall be available in the procedure room. See Annex F of CSA Z7396.1.

9.3.3.2.5

A dedicated hand hygiene sink shall be available in the room.

9.3.3.2.6

A system for emergency communication shall be provided.

9.3.3.2.7

Floor covering in the procedure suite shall be monolithic.

9.3.3.3 Procedure rooms — Operative procedure rooms

9.3.3.3.1 General

The following requirements shall apply to all operating rooms where Category III services are provided:

- a) Each room shall have a system for emergency communication with the surgical suite control station.
- b) X-ray film viewers for handling at least four films simultaneously or a PACS workstation (digital image viewers) shall be provided.
- c) Operating room perimeter walls, ceiling, and floors, including penetrations, shall be sealed.
- d) Medical gas terminal units shall be provided in accordance with Annex F of CSA Z7396.1.

- e) A scavenging system for medical gases shall be provided.
- f) A surgical plume scavenging system shall be provided if electrocautery or laser procedures will be used. See CSA Z305.13.
- g) Provision shall be made for patient warming systems.
Note: See CAN/CSA-Z317.2 for requirements regarding temperature controls. Operating rooms are Type I areas in the area classification system used in CAN/CSA-Z317.2.
- h) A central music system shall be provided for each operating and procedure room.
Note: Patient confidentiality and acoustics are especially important in day surgery and PACU patient areas.

9.3.3.3.2 Special operating room(s)

Note: Special operating rooms can be needed for certain types of procedures that require larger or more complex equipment, for surgery on persons when airborne isolation is needed, or for operative birthing.

9.3.3.3.2.1

For rooms that will be used for cardiovascular, orthopaedic, neurological, and other special procedures that require additional personnel and/or large equipment, the following shall apply in addition to the requirements in Clause 9.3.3.3.1:

- a) Where open-heart surgery is performed, an additional room in the restricted area of the surgical suite, preferably adjoining the operating room, shall be designated as a pump (perfusion) room where extra corporeal pump(s), supplies, and accessories are stored and serviced.
- b) Where complex orthopaedic and neurosurgical surgery is performed, additional rooms shall be in the restricted area of the surgical suite, preferably adjoining the specialty operating rooms, which shall be designated as equipment storage rooms for the large equipment used to support these procedures.
- c) Appropriate plumbing and electrical connections shall be provided in the cardiovascular, orthopaedic, neurosurgical, pump, and storage rooms.
- d) Rooms for orthopaedic surgery shall have enclosed storage space for splints and traction equipment. Storage may be outside the operating room, but shall be conveniently located. If a sink is used for the disposal of plaster of Paris, a plaster trap shall be provided.

9.3.3.3.2.2

In addition to the requirements in Clause 9.3.3.3.1, a special operating room that is intended for use with patients under airborne isolation shall be provided with an anteroom.

9.3.3.3.2.3

In addition to the requirements in Clause 9.3.3.3.1, a special operating room that is intended for operative birthing shall also comply with the relevant requirements in Table 8.3. Each airborne isolation room shall have a dedicated anteroom.

9.3.3.4 Pre- and post-operative/procedure holding area

9.3.3.4.1 General

In facilities with two or more operating rooms, areas shall be provided to accommodate stretcher patients as well as seating space for ambulatory patients. These areas shall be located under the direct visual control of the staff and may be part of the recovery area to achieve maximum flexibility in managing surgical/procedural caseloads. Additional requirements for these areas are as follows:

- a) Provisions shall be made for patient privacy (e.g., cubicle partitions).
- b) Medical gas terminal units shall be provided in accordance with Annex F of CSA Z7396.1.

- c) Provision shall be made for the isolation of infectious patients.
- d) An ICRA shall be performed to determine the need for additional provisions for the recovery of a potentially infectious patient with an airborne infection.

Note: *An AIR is not required in a pre-operative/procedure holding area.*

9.3.3.4.2 Stage one recovery/PACUs

At least one door to the recovery room shall provide access directly from the surgical suite without crossing public HCF corridors. The requirements for stage one recovery or PACUs shall be as follows:

- a) The unit shall contain
 - i) a medication station;
 - ii) waterless hand hygiene stations;
 - iii) a nurse station with charting facilities;
 - iv) a clinical service disposal unit;
 - v) provisions for bedpan cleaning and human waste disposal;
 - vi) storage space for stretchers, supplies, and equipment; and
 - vii) a PACS workstation for digital image viewing.
- b) Medical gas terminal units shall be provided in accordance with Annex F of CSA Z7396.1.
- c) Provisions for patient privacy such as cubicle partitions shall be made.
- d) Hand hygiene sink(s) shall be provided in a location designed as
 - i) one sink in a location designed for one patient to be present at a time [e.g., one sink to one patient (1:1)]; or
 - ii) one sink in a location designed to accommodate two or more patients at a time [e.g., one sink to two patients (1:2) or one sink to three patients (1:3)] with no more than 6 m distance between any patient station and the nearest sink.
- e) A staff toilet shall be located within the working area to maintain staff availability to patients.
- f) Provisions shall be made for the isolation of infectious patients.
- g) Provisions for the recovery of a potentially infectious patient with an airborne infection shall be determined by an ICRA.

9.3.3.4.3 Stage two recovery

Where outpatient surgeries are to be part of the surgical environment, and where outpatients receive sedation or simply require observation following a procedure, a separate stage two or step-down recovery room shall be provided. The requirements for this room shall be as follows:

- a) Where the PACU is provided on-site, at least one door shall access the PACU without crossing unrestricted corridors of the HCF.
- b) Provisions for patient privacy such as cubicle curtains shall be made.
- c) Medical gas terminal units shall be provided in accordance with Annex F of CSA Z7396.1.
- d) The room shall contain
 - i) a medication station;
 - ii) waterless hand hygiene stations;
 - iii) a nurse station with charting facilities;
 - iv) a utility sink;
 - v) provision for bedpan cleaning and human waste disposal; and
 - vi) storage space for supplies and equipment.
- e) Hand hygiene sinks shall be provided in a location designed
 - i) for one patient to be present at a time (i.e., one sink); or

- ii) to accommodate four or more patients at a time — a minimum of one sink for every four patients, uniformly distributed to provide equal access from each location (i.e., recovery chair/lounge or bed).
- f) A staff toilet(s) shall be provided with direct access to the working area to maintain staff availability to patients.
- g) A patient toilet(s) shall be provided with direct access to the stage two recovery unit for the exclusive use of patients.
- h) Provisions shall be made for the isolation of infectious patients.
- i) Provisions for the recovery of a potentially infectious patient with an airborne infection shall be determined by an ICRA.

Note: An AIR is not required in a stage two recovery area.

9.3.4 Technical requirements for support areas

9.3.4.1 General

9.3.4.1.1

A control station shall be located to permit visual observation of all traffic into the suite.

9.3.4.1.2

The number of offices, stations, and teaching areas shall be determined based on the functional program.

9.3.4.1.3

A dictation and report preparation area should be accessible from the lounge area.

9.3.4.1.4

Two scrub positions (i.e., scrub sinks) shall be provided near the entrance to each operating room:

- a) Two scrub positions may serve two operating rooms if both positions are adjacent to the entrance of each operating room.
- b) Means shall be provided for visual or audio communication between the scrub sinks and the operating room.
- c) The scrub positions shall be located as follows:
 - i) if located in the restricted outside corridor, the scrub positions shall be recessed into an alcove out of main traffic areas; or
 - ii) if located in the centre clean core, the scrub positions shall be beside the entrance door to the OR and be separated by a barrier/wall to minimize incidental splatter on nearby personnel, medical equipment, or supply carts in the clean core.

9.3.4.1.5

Provision shall be made for storage and distribution of drugs and routine medications.

9.3.4.1.6

A dispensing type ice machine shall be provided. An ice machine with an open bin shall not be used.

9.3.4.1.7

In facilities with two or more operating rooms, an area shall be provided to accommodate stretcher patients waiting for surgery. This holding area shall be under the visual control of the staff.

9.3.4.1.8

A sub-sterile service area shall be provided. This area may serve one or more operating or procedure rooms. The sub-sterile service area shall be equipped with

- a) a warming cabinet;
- b) a sterile supply storage area; and
- c) a hand hygiene sink.

9.3.4.1.9

For medical devices needing immediate-use sterilization, there should direct adjacency or a dedicated corridor between the procedure room and the MDR service or department. Alternatively, a restricted-access area may be provided outside of the operating room. This area shall have the necessary utilities for the sterilization equipment and shall be designed and located in accordance with CAN/CSA-Z314. The emergency sterilization area may be arranged to service more than one procedure room. The design for this area shall be developed in consultation with medical device reprocessing and infection prevention and control staff.

9.3.4.1.10

Soiled and clean workrooms or holding rooms shall be separated. Storage space for sterile and clean supplies shall be sized to meet the requirements of the functional program. The following shall apply:

- a) The storage space shall be moisture and temperature controlled and free from cross-traffic. This space shall be separate from the clean and soiled workrooms.
- b) The clean workroom shall contain a work counter, a hand hygiene sink, and storage facilities for clean supplies.
- c) The clean workroom, soiled workroom, and supply room shall not be used for food preparation.
- d) If the clean supply room is used only for storage and holding as part of a system for distribution of clean and sterile supply materials, the work counter and hand hygiene sink may be omitted.

9.3.4.1.11

An enclosed soiled workroom (or soiled holding room that is part of a system for the collection and disposal of soiled material) shall be provided for the exclusive use of the surgical suite. Requirements for soiled workrooms or holding rooms shall be as follows:

- a) The room shall be located in the restricted area.
- b) The soiled workroom shall contain a utility sink, a human waste management system, a hand hygiene sink, a work counter, and space for waste receptacles and soiled linen receptacles. Rooms used only for temporary holding of soiled material may omit the human waste management system and work counters.
- c) The room shall have a counter and set of sinks used to prepare devices for transport to decontamination in MDRD.
- d) Storage space shall be provided for medical equipment that is cleaned/decontaminated and stays in the unit.
- e) The room shall not have direct connection with operating rooms or other sterile activity rooms.
- f) The soiled workroom shall include a fume hood for the handling and use of noxious cleaning and sterilizing agents.

- g) If a case cart system will be used, there shall be sufficient space to hold carts with soiled items before they are moved to the MDRD.

9.3.4.1.12

An anaesthesia workroom for cleaning, testing, and storing anaesthesia equipment shall be provided and shall include

- a) a work counter and sink and racks for cylinders;
- b) a fume hood for the handling and use of noxious cleaning and sterilizing agents;
- c) provisions for separate storage of clean and soiled items; and
- d) depending on the functional and space programs, the anaesthesia workroom shall provide space for anaesthesia case carts and other anaesthesia equipment.

9.3.4.1.13

Provisions for refrigerated blood bank storage that meets CAN/CSA-Z902 shall be provided. Where applicable, refrigeration facilities for harvested organs shall be provided.

9.3.4.1.14

Provisions for storage of specimens prior to transfer to pathology section shall be provided.

9.3.4.1.15

Storage room(s) shall be provided for equipment and supplies. Each surgical suite shall provide sufficient storage area to keep its required corridor width free of equipment and supplies, but not less than 13.94 m² or 4.65 m² per operating room, whichever is greater.

Storage areas shall be provided for portable X-ray equipment, stretchers, fracture tables, warming devices, auxiliary lamps, etc. These areas shall be out of corridors and traffic.

Main storage of medical gases may be outside or inside the facility in accordance with CSA Z7396.1. Provision shall be made for additional separate storage of reserve gas cylinders necessary to complete at least one day's procedures in accordance with CSA Z305.12.

9.3.4.1.16

Housekeeping facilities shall be provided for the exclusive use of the procedures area. They shall be directly accessible and shall contain a service sink or floor receptor and provisions for storage of supplies and housekeeping equipment.

9.3.4.2 Support areas for staff

9.3.4.2.1

Separate or combined lounges shall be provided for staff. Lounge(s) shall be designed to

- a) minimize the need to leave the suite; and
- b) provide convenient access to the stage one recovery/post-anaesthetic care units (PACUs).

9.3.4.2.2

Appropriate areas shall be provided for personnel (orderlies, technicians, nurses, and doctors) working within the surgical suite, as follows:

- a) The areas shall contain lockers, showers, toilets, hand hygiene stations, and space for donning surgical attire.

- b) These areas shall be arranged to encourage a one-way traffic pattern so that personnel entering from outside the surgical suite can change and move directly into the surgical suite.
- c) Toilets and hand hygiene stations shall be convenient to the work areas in the OR and there shall be a sufficient number to serve the expected staff population.
- d) Lockers shall be large enough to contain staff clothing through all seasons (e.g., winter coats and boots) and secure against unauthorized access. Additional lockers should be available for visiting physicians, staff, and students.

9.3.4.2.3

Appropriate areas shall be provided for administrative, reference, and educational activities (e.g., teaching, library, office, support, education, conference).

9.3.4.2.4

Offices for active on-call staff and physicians (e.g., anaesthesiologists) shall be located to allow quick and convenient access to procedure rooms and first stage recovery rooms.

9.3.4.3 Support areas for patients

If the functional program defines outpatient surgery as part of the surgical suite, a separate area shall be provided where outpatients and same-day admission patients can change from street clothing into HCF gowns and be prepared for surgery. It shall include a waiting room, locker(s), toilet(s), and clothing change or gowning area.

Note: Where private holding room(s) or cubicle(s) are provided, a separate change area is not required.

9.3.4.4 Medical device reprocessing

9.3.4.4.1 Processing rooms

If reprocessing of medical devices will be performed in or near a procedures area rather than a centralized MDRD, dedicated processing room(s) shall be provided and these shall comply with CAN/CSA-Z314. A physical barrier shall be provided to prevent droplet contamination on the clean side. Clean equipment rooms shall protect the clean equipment from contamination. Clean and sterile medical devices shall be stored in a sterile storage area complying with CAN/CSA-Z314. A fume hood for the use of noxious cleaning and sterilizing chemicals shall be provided.

9.3.4.4.2 Decontamination

The decontamination area shall comply with CAN/CSA-Z314 and be equipped with the following:

- a) utility sinks as appropriate to the method of decontamination used;
- b) one freestanding hand hygiene sink;
- c) work counter space(s);
- d) space and utility connections for automatic endoscopic reprocessor, sonic cleaner, and sterilizers (where required by the functional program);
- e) ventilation system in accordance with CAN/CSA-Z317.2;
- f) provision for medical vacuum and instrument air, as appropriate to cleaning methods used; and
- g) a monolithic floor covering with an integral cove base at least 150 mm high.

9.3.4.5 Support areas — Cardiac catheterization lab (cardiology)

9.3.4.5.1

If electrophysiology labs are also provided in accordance with the approved functional program, these labs may be located within and integral to the catheterization suite or located in a separate functional area proximate to the cardiac care unit.

9.3.4.5.2

The following support areas shall be provided for the cardiac catheterization lab:

- a) scrub facilities with hands-free operable controls adjacent to the entrance of procedure rooms and arranged to minimize incidental splatter on nearby personnel, medical equipment, or supplies;
- b) a patient preparation, holding, and recovery area or room, arranged to provide visual observation before and after the procedure;
- c) a control room or area large enough to contain and provide for the efficient functioning of the X-ray and image recording equipment. It shall include a view window permitting full view of the patient from the control console;
- d) an equipment room or enclosure large enough to contain X-ray transformers, power modules, and associated electronics and electrical gear; and
- e) a viewing room for use by the cardiac catheterization suite.

9.3.5 Telehealth

If telehealth services are incorporated, the necessary support and services for telehealth shall be provided. Relevant factors include room area, lighting, camera position, service requirements, acoustic characteristics, wall colour, and furniture layout, including the following:

- a) proper illumination levels shall be attained to ensure accurate skin colour. Standard fluorescent fixtures (usually 600 mm × 1200 mm) with colour corrected fluorescent tubes (Kelvin 4100 should be used) and clear acrylic prismatic diffusers should be used. Egg-crate diffusers should not be used as these concentrate the light, creating hot spots;
- b) all four walls should be painted in a medium blue in order to provide accuracy in skin tone. An eggshell or matte finish should be used, provided it can be cleaned to OR standards;
- c) rooms used for telehealth should be located away from sources of internal and external noise and vibration (e.g., fans, air conditioners, or plumbing) as some videoconferencing microphones can be very sensitive to noise. Microphones should be placed in front of and close to the individuals speaking, but at least 1200 mm away from the videoconferencing unit. Consideration should be given to the provision of wireless microphones; and
- d) if telehealth services or procedures requiring full room darkening are incorporated, black-out shades shall be provided.

9.3.6 Lighting

9.3.6.1

The nature of lighting and lighting control should be reviewed to establish level requirements, number and type of sources, and the method and location of controls for convenient and easy operation.

9.3.6.2

Lighting shall be adaptable for minimally invasive surgery use, with dimmable spotlights and zoned switching of fluorescent fixtures.

9.3.6.3

For surgical suite/interventional procedure rooms,

- a) lighting shall be adaptable for minimally invasive surgery use, with dimmable pot lights and zoned switching of all lighting fixtures;
- b) high level windows into operating rooms and the PACU from a corridor where natural light is available should be considered. Blinds may be used for patient privacy and to control light, provided the design is consistent with infection prevention and control considerations; and
Note: To maintain infection prevention and control, blinds may be a roll shutter with the motor control in the OR, or enclosed between two panes of glass.
- c) natural light, if available, should be provided with effective shading controls.

9.3.6.4

Natural light should be provided in corridors wherever possible.

9.3.6.5

Laser protection shall be provided at windows.

9.3.6.6

Warning lights shall be provided for lasers and X-rays.

Note: The need for an external view from the operating room is often a prime requirement. The implications for this concept are as follows:

- a) vision from the operating room could be through a corridor, set-up area, or directly to the external environment;
- b) many procedures require black-out and there are additional costs associated with external heat shields and cleaning blinds within the clean zone of the suite. If the windows to the suite are located on the outside of the building, there are often heating and cooling implications that will have a considerable impact on the recurrent costs of managing the suite;
- c) viewing windows from a corridor to the operating room can be useful for supervision and training purposes; and
- d) given that only a limited number of windows can be achieved within a suite, it might be preferable to provide the staff amenities and the patients in recovery and day surgery with the windows rather than the staff working in the operating rooms.

9.3.7 Infection prevention and control

9.3.7.1 General

Provisions for infection prevention and control in operating rooms and procedure rooms shall include the following:

- a) There shall be no floor drains.
- b) Laminar flow diffusers shall be provided over the patient, with low level exhaust in corners of the OR.
- c) Laminar flow systems in arthroplasty joint replacement surgery operating rooms shall be provided.
- d) The design shall specify the flow of supplies and maintain separation between clean and contaminated equipment.
- e) Hygiene sinks and supplies shall be immediately outside of an operating room or procedure room.
- f) Scrub facilities (scrub sinks) with hands-free operable controls shall be provided adjacent to the entrance of procedure rooms and shall be arranged to minimize incidental splatter on nearby personnel, medical equipment, or supplies.

- g) Management of soiled scopes and storage for clean scopes and other equipment shall be in accordance with CAN/CSA-Z314 and infection prevention and control guidelines.

9.3.7.2 AIRs and airborne isolation operating rooms

The HCF shall determine through its functional programming, ICRA, and planning processes whether an AIR or an airborne isolation operating room are needed.

Notes:

- 1) *The need for airborne isolation rooms and procedure spaces depends on the services provided, the demographics of the patient population served (i.e., pediatrics, recent immigrants, dialysis patients, immunocompromised patients), and the presence within the community of other HCFs that can provide airborne isolation space if an infectious patient needs to be accommodated while they are waiting for transport, or in the event of an outbreak.*
- 2) *The number and type of isolation rooms required depend on the volume and scope of service and are based on an ICRA for each HCF.*
- 3) *In facilities with an isolation operating room, the entire patient management process should be reviewed and evaluated to ensure isolation of infectious patients from the general population.*
- 4) *Options to provide isolation during the preoperative and recovery periods should be considered. These may include the use of the isolation room as a regular patient place when not required for isolation.*
- 5) *Options to provide isolation during the preoperative period should be considered and may include specific vestibules at the entrances to the operating room(s) or specific spots within the preoperative holding area.*

9.3.8 Occupational health and safety

Provisions for occupational health and safety shall include the following:

- a) Local thermostat controls, for measurement and control within a specific range, should be located in the OR.
- b) Patient sliders shall be provided for the transfer of patients to the surgical table from a bed or stretcher. Sliders should be located in each room.
- c) No electrical receptacles shall be placed in the OR floors.
- d) Redundancy shall be provided in electrical plugs for normal and emergency power.
- e) Electrical receptacles shall be located within medical supply units (e.g., articulating arms) as well as distributed around the room on the walls.
- f) Functional and storage space shall be provided for
 - i) chemicals used in the unit;
 - ii) patient handling devices;
 - iii) medical gas cylinders in compliance with CSA Z7396.1; and
 - iv) sharps disposal containers.
- g) Anaesthetic gas scavenging shall comply with CSA Z7396.1.
- h) Surgical plume scavenging shall comply with CSA Z305.13.
- i) Functional space shall be provided for adjustable computer workstations.
- j) The layout of writing surfaces shall be designed according to ergonomic principles (i.e., proper height for staff without sharp edges against the wrist).
- k) Ergonomics of medical equipment should comply with IEC 62366.
- l) Slip-resistant flooring shall be provided. Flooring shall comply with Clauses [7.2.2.4](#) and [12.2.5.2](#).
- m) Local exhaust ventilation of the space used for cleaning equipment should be considered in order to reduce exposure to chemicals.
- n) If clean supply spaces are used for setting up for procedures, those spaces shall be equipped with hand hygiene facilities.
- o) Eyewash facilities shall be provided when chemicals are being used.

9.3.9 Technology considerations

In addition to the common set of technology and communication requirements for HCFs, the following provisions shall be made:

- a) Adequate information technology and communications connections shall be provided for internal communications to the surgical suite as well as external communications.
- b) Secure space with UPS and generator backup shall be provided for network switches at a minimum area of 6 m².
- c) Multiple access points to the local area network shall be provided on the anaesthesia and surgical articulating arms.
- d) An OR tracking system may be provided, with cameras in operating rooms and a review station in the OR control centre. There shall be means to disable the camera.
Note: The use of cameras in the operating room is subject to facility privacy policies and might require patient consent.
- e) Local overhead paging shall be provided in the corridors, not in the operating rooms. Alternative communications systems may be used.
- f) A locating system for staff, with communication devices or intercom systems, shall be provided.
- g) There shall be separate telephones at the nurses' desk and shall be at a location convenient to anaesthesiologists from where they can see their monitoring equipment. A computer for the surgeon should be provided. Consideration should be given to wireless VoIP phones for highly mobile staff.
- h) Asset tracking systems should be considered.
- i) A patient tracking system should be considered [e.g., radio frequency identification (RFID) or other technology].
- j) A local cardiac arrest/staff assist call system, to include PACU, shall be provided in addition to the HCF-wide code blue system.
- k) Picture archiving and communication systems (PACS) shall be provided in each operating room, the PACU, and the preoperative preparation area.
- l) Videoconferencing capabilities shall be provided.
- m) Remote alarms shall be provided for the blood fridge, bone freezer, and pharmacy dispensing unit to the OR control desk, blood bank lab, and a centrally monitored location (HCF switchboard).
- n) Workstations shall be sufficiently sized for electronic documentation and accessing digital images and information. There shall be at least a workstation for the nursing documentation, a workstation for the anaesthesia information system, and one for the diagnostic imaging PACS system in each OR.
- o) If machines are used for OR greens distribution, HCF network access shall be provided with these dispensing machines.
- p) A system using mobile operating room tables with integrated wireless monitoring systems may be used in the preparation area to minimize patient transfers.
- q) Patient physiological monitoring systems (ECG, NIBP, SpO₂, and temperature) should be compatible and networked to allow easy transfer of patient between areas.
- r) Consideration shall be given for the provision of wireless telephone coverage by repeaters in the operating rooms.

9.3.10 Safety and security

Some of the ambulatory care procedure areas are used 24 h/day. The following safety and security measures should be included in the design of such units:

- a) security cameras;
- b) ability to lock down the unit after hours;
- c) provision for secure medical dispensing located in the unit or within a satellite pharmacy; and

- d) adequate storage systems for routine supplies and special materials such as implants.

9.3.11 Space details

Table 9.2 presents the standard requirements for key spaces in the procedures area. Common areas are detailed in Clause 11.

Table 9.2
Key space requirements and recommendations — Operative procedures
(See Clauses 9.3.4 and 12.2.2.1.)

Item no.	Room names	Net area, m ²	Requirements and recommendations
1	Operating room, general	55.0	<p>Mandatory:</p> <ul style="list-style-type: none"> a) The minimum ceiling height shall be 3.0 m. Higher ceiling heights could be required to suit specialty equipment or user requirements. b) Ceiling void space shall be sufficient for to allow for ceiling-mounted equipment and supports. These dimensions shall be determined in cooperation with the HCF's building services department. c) Slip-resistant flooring shall be provided. Flooring shall comply with Clauses 7.2.2.4 and 12.2.5.2. d) The minimum shall be 3000 mm from the sides of the operating table and any wall or any other fixed obstruction, and minimum of 2400 mm from the head and 3000 mm from the foot of the operating table, exclusive of fixed casework. e) The anaesthetic medical gases shall be positioned so that they are on the opposite side of the OR table from the patient entry door into the room. f) Patient access door openings shall be at least 1800 mm wide. g) Access doors to central core shall be at least 1200 mm wide. <p>Advisory:</p> <ul style="list-style-type: none"> a) Standardization of room configurations should be considered to allow for flexibility in use over time as services evolve to more technologically advanced robotic/telesurgery and minimally invasive surgery or to accommodate a change in the surgical specialties offered. b) Room configuration should be close to square. c) The integration of ceiling-mounted articulating surgical and anaesthesia arms should be considered to add future flexibility. d) Consideration should be given to sizing and locating a storage room to OR size and location standards to allow for future use as an OR.
2	Operating room, special	60.0	<p>Mandatory:</p> <ul style="list-style-type: none"> a) The minimum ceiling height shall be 3.0 m. Higher ceiling heights could be required to suit specialty equipment or user requirements.

(Continued)

Table 9.2 (Continued)

Item no.	Room names	Net area, m²	Requirements and recommendations
			<ul style="list-style-type: none"> b) Ceiling void space shall be sufficient for to allow for ceiling-mounted equipment and supports. These dimensions shall be determined in cooperation with the HCF's building services department. c) Slip-resistant flooring shall be provided. Flooring shall comply with Clauses 7.2.2.4 and 12.2.5.2. d) The minimum shall be 2400 mm from the head and 3600 mm from the foot of the operating table, exclusive of fixed casework. e) The anaesthetic medical gases shall be positioned so that they are on the opposite side of the OR table from the patient entry door into the room. f) If an anteroom is provided for an isolation OR, the following shall apply: <ul style="list-style-type: none"> i) if the anteroom is designed as an air-lock for stretchers, the internal length shall be 2.4 m minimum; ii) the anteroom shall be negatively pressurized relative to the operating room so that air flows from the OR into the anteroom; iii) the anteroom shall be negatively pressurized relative to the corridor so that air flows into the anteroom and not out into the corridor; and iv) at the patient access location, the anteroom shall be sized adequately so that the patient can be moved from the OR into the anteroom with both doors closed. The room pressurization shall be rebalanced before the corridor door is opened. g) Operative birthing rooms shall also comply with the relevant requirements in Table 8.3. <p>Advisory:</p> <ul style="list-style-type: none"> a) Room configuration should be close to square. b) If OR is used for isolation, an anteroom should be added at each entrance (5.0 m² for staff access and 10.0 m² for stretcher/air-lock).
3	Operating room, hybrid	Varies 80.0 (minimum) plus control and equipment rooms	<p>Mandatory:</p> <ul style="list-style-type: none"> a) Ceiling heights shall be coordinated with hybrid imaging equipment and other ceiling mounted equipment. Higher or lower ceiling heights could be required to suit specific floor or ceiling hybrid equipment in combination with other ceiling-mounted equipment. b) The position of lighting fixtures, air diffusers, and other ceiling-mounted services shall be planned in such a way that they meet user requirements and do not conflict with the mountings or operational requirements of the hybrid equipment. c) Ceiling void space shall be sufficient for to allow for ceiling-mounted equipment and supports. These dimensions shall be determined in cooperation with the HCF's building services department.

(Continued)

Table 9.2 (Continued)

Item no.	Room names	Net area, m²	Requirements and recommendations
			<p>d) Slip-resistant flooring shall be provided. Flooring shall comply with Clauses 7.2.2.4 and 12.2.5.2.</p> <p>e) If it is a hybrid imaging room, it shall also have a control room for an X-ray console and an equipment room for electrical equipment.</p> <p>f) The anaesthetic medical gases shall be positioned so that they are on the opposite side of the OR table from the patient entry door into the room.</p> <p>Advisory:</p> <p>a) Room configuration should be close to square.</p> <p>b) Depending on equipment type, storage or garage space could be needed.</p>
4	Scrub sink alcove	0.8/sink	<p>See Table 11.1, Item 19 for common requirements and recommendations for a hand hygiene sink.</p> <p>Mandatory:</p> <p>a) Alcoves shall be provided in corridors, beyond the minimum 2440 mm corridor width, for storage of supplies.</p> <p>b) Provision shall be made to protect adjacent wall and floor surfaces from stains or damage by scrub chemicals (e.g., through sink design, choice of surface materials, or protective shielding).</p>
5	Stage one recovery (open curtained)	9.5	<p>See Table 11.1, Item 14 for common requirements and recommendations for an examination/procedure/treatment room.</p> <p>Mandatory:</p> <p>The minimum distances around and between beds shall be in accordance with Table 7.1.</p>
6	Stage one recovery (partial walls)	11.0	<p>See Table 11.1, Item 24 for common requirements and recommendations for an examination/procedure/treatment room.</p> <p>Mandatory:</p> <p>The minimum distances around and between beds shall be in accordance with Table 7.1.</p>
7	Stage one recovery (private/separation)	13.0	<p>Mandatory:</p> <p>The minimum distances around and between beds shall be in accordance with Table 7.1.</p> <p>Advisory:</p> <p>Adding family space (2.0 m²) should be considered.</p>
8	Stage one recovery (isolation room)	13.0	<p>See Table 11.1, Item 15 for common requirements and recommendations for an examination/procedure/treatment room.</p>
	Anteroom	5.0	<p>Mandatory:</p>
	2-piece washroom	4.6	<p>a) Glass shall be provided between the recovery room and nursing area of the non-isolation recovery room.</p>

(Continued)

Table 9.2 (Continued)

Item no.	Room names	Net area, m²	Requirements and recommendations
	Preparation alcove	2.0	<ul style="list-style-type: none"> b) A clean area for staff to put on PPE before entering the procedure room shall be provided. c) A contained area outside the procedure room shall be provided for staff to wash up and remove PPE before entering public corridors. d) Door width shall be a minimum 1800 mm. e) The minimum distances around and between beds shall be in accordance with Table 7.1. f) An alcove shall be provided outside the room for PPE and a hand sink. <p>Advisory: Adding family space (2.0 m²) should be considered.</p>
9	Sterile core supply area	Varies	<p>Mandatory:</p> <ul style="list-style-type: none"> a) Direct access to central MDRD shall be provided. b) Adequate space shall be provided for <ul style="list-style-type: none"> i) two case carts per operating room; ii) back-up supplies; iii) anaesthetic supplies; iv) emergency carts and supplies; v) a blood fridge; and vi) medication dispensing systems. c) At least one workstation with a computer, network printer, and phone shall be provided. <p>Note: These items and associated storage space may be shared between ORs in a pod arrangement.</p> <p>Advisory: There should be a minimum width of 5500 mm (allows for two 1.5 m carts and 2400 mm to move them), as well as the following:</p> <ul style="list-style-type: none"> a) There should be a staging area/marshalling area for case carts. b) Depending on the program, space for an immediate use sterilizer could be needed. <p>Note: An alternative arrangement would be to have an immediate use sterilizer in the MDRD and use the dedicated elevator, lift, or corridor to transport the item. If an immediate use sterilizer is located in the sterile core area, the requirements for reprocessing areas will apply.</p>
10	Pre-operative care/level two recovery	7.5	See Table 11.1, Item 14 for common requirements and recommendations for an examination/procedure/treatment room.
	Chair (open/curtained)	9.5	<p>Mandatory:</p> <ul style="list-style-type: none"> a) Door width on fully-enclosed/private rooms shall be a minimum 1500 mm. b) The minimum distances around and between beds shall be in accordance with Table 7.1.

(Continued)

Table 9.2 (Continued)

Item no.	Room names	Net area, m²	Requirements and recommendations
	Stretcher (open/curtained) Stretcher (3-sided/partial wall) Private/fully enclosed	11.0 13.0	<p>Advisory:</p> <ul style="list-style-type: none"> a) An anteroom should be provided for a private room that will be used as an isolation room. b) A two-piece washroom should be provided when a private room is used as an isolation room (4.6 m² or 5.6 m²).
11	Decentralized equipment storage (within the services)	Varies	<p>See Table 11.1, Item 9 for common requirements and recommendations for a storage room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) Storage room(s) shall be not less than 14.0 m² per surgical suite or 4.6 m² per OR, whichever is greater. b) Storage areas shall be provided for portable X-ray equipment, stretchers, fracture tables, warming devices, auxiliary lamps, etc. These areas shall be out of corridors and traffic. c) For piped medical gases, the primary storage may be outside or inside the facility in accordance with CSA Z7396.1. Provision shall be made for additional separate storage of reserve gas cylinders necessary to complete at least one day's procedures. d) Emphasis shall be placed on decentralizing storage so that materials are close to the OR. e) Linen alcoves shall be located outside operating rooms. f) Orthopaedic storage shall be provided directly beside the OR. g) Storage space shall be sized, to be converted to an OR in the future, at 55.0 m². <p>Advisory:</p> <ul style="list-style-type: none"> a) Direct access into the OR for orthopaedic storage should be considered. This includes storage for implants, special OR tables, image guidance systems, C-arms, and arthroscopy equipment.
12	Surgical suite control desk	Varies, 4.6 for each workstation and additional circulation space	<p>See Table 11.1, Item 37 for common requirements and recommendations for a reception/control desk.</p> <p>Mandatory:</p> <p>To control access to and provide organization of the operating rooms,</p> <ul style="list-style-type: none"> a) the desk shall be located on the perimeter of the operating rooms to have direct access to the restricted and semi-restricted areas, as well as an ability to receive and control access from outside the operating room core; and

(Continued)

Table 9.2 (Continued)

Item no.	Room names	Net area, m²	Requirements and recommendations
			<p>b) OR communication systems shall be located at the desk, including</p> <ul style="list-style-type: none"> i) an OR tracking system — video systems shall comply with applicable requirements; <p><i>Note: Applicable requirements can include patient privacy legislation.</i></p> <ul style="list-style-type: none"> ii) a local cardiac arrest/staff assist communication system; iii) a pneumatic tube system; iv) telephones; v) computers with ergonomic workstations; and vi) an intercom system or similar wireless staff communication system.
13	Physician/ image workstation	Varies, 4.6 for each workstation and additional circulation space	<p>Mandatory:</p> <ul style="list-style-type: none"> a) At least one workstation shall be provided for every four operating rooms. b) A 1220 mm desk shall be provided. c) A telephone shall be provided. d) Access to the HCF dictation system shall be provided. e) The workstation shall have a HCF system computer. f) PACS shall be provided. g) Acoustic separation shall be provided. <p>Advisory: The workstation should be positioned in a convenient location, such as</p> <ul style="list-style-type: none"> a) between operating rooms and the PACU; b) near the OR control desk; c) near the staff lounge; or d) an alcove off the OR corridor.
14	Imaging/ equipment alcove	Varies, 4.6 for each alcove space	<p>Mandatory:</p> <p>For mobile C-arms and mobile X-rays,</p> <ul style="list-style-type: none"> a) equipment shall not be stored in operating rooms; and b) space for lead (Pb) apron rack(s) on wheels shall be provided (at least 1400 mm × 900 mm).
15	RT/anaesthesia satellite	Varies	<p>Mandatory:</p> <ul style="list-style-type: none"> a) See Clause 9.10. b) The door width shall be a minimum 1500 mm.
16	All procedure rooms and recovery bays	N/A	<p>See Table 11.1, Item 15 for common requirements and recommendations for an examination/treatment room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) Provision shall be made within the room for electronic charting and access to health records. b) Provisions shall be made in the room for storing common procedure supplies. c) Sharps disposal shall be provided in a safe location and near the point of use.

(Continued)

Table 9.2 (Continued)

Item no.	Room names	Net area, m²	Requirements and recommendations
			<p>Advisory:</p> <ul style="list-style-type: none"> a) Provisions for telehealth should be considered, in particular, room colour, lighting, acoustics, and the selection and placement of furniture and telehealth equipment. b) Standardization of room configuration should be considered. c) Ceiling-mounted or portable patient lifts in procedure rooms should be considered.
17	Procedure room, isolation (excluding anteroom)	23.0 for four-sided access	<p>See Table 11.1, Item 15 for common requirements and recommendations for an examination/procedure/treatment room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) Means of visibility shall be provided between the procedure room and the corridor in order that staff can observe the patient. b) A clean area for staff to put on PPE before entering the procedure room shall be provided. c) A contained area outside the procedure room shall be provided for staff to wash up and remove PPE before entering public corridors. d) All fixed elements in the room (including keyboards if a computer workstation is provided) shall be easy to clean. <p>Advisory:</p> <p>An anteroom (5 m²), supply alcove (2 m²), and two-piece washroom (4.6 m²) should be provided. Where provided, an anteroom shall have means of visibility between the procedure room and anteroom in order that staff can observe the patient.</p>
18	Procedure room (four-side patient access without imaging)	23.0 for four-sided access	<p>See Table 11.1, Item 24 for common requirements and recommendations for an examination/procedure/treatment room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) Procedure-related equipment shall be incorporated into planning. b) Room lighting control shall be provided at the physician work area. c) Storage shall be consistent with the organization's infection prevention and control strategy and guidelines. <p>Advisory:</p> <ul style="list-style-type: none"> a) Consideration should be given to the arrangement of medical services and equipment management, e.g., ceiling-mounted or wall-mounted articulating arms. b) Where portable imaging and ultrasound is anticipated, the room size should be increased.
19	Procedure room (three-side	16.5 for three-sided access	See Table 11.1, Item 24 for common requirements and recommendations for an examination/procedure/treatment room.

(Continued)

Table 9.2 (Concluded)

Item no.	Room names	Net area, m²	Requirements and recommendations
	patient access without imaging)		<p>Mandatory:</p> <ul style="list-style-type: none"> a) Procedure-related equipment shall be incorporated into planning. b) Room lighting control shall be provided at the physician work area. c) Storage shall be consistent with the organization's infection prevention and control strategy and guidelines. <p>Advisory:</p> <ul style="list-style-type: none"> a) Consideration should be given to the arrangement of medical services and equipment management, e.g., ceiling-mounted or wall-mounted articulating arms. b) Where portable imaging and ultrasound is anticipated, the room size should be increased.
20	Procedure room (four-side patient access with fixed imaging, including control)	38.0	<p>See Table 11.1, Item 24 for common requirements and recommendations for an examination/procedure/treatment room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) See Item 23. b) Room lighting control shall be provided at the control station. <p>Advisory:</p> <ul style="list-style-type: none"> a) See Item 23. b) There should be convenient access to patient washrooms.
21	Procedure room (ophthalmology)	38.0	<p>See Table 11.1, Item 24 for common requirements and recommendations for an examination/procedure/treatment room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) Provisions shall be made for cataract and other ophthalmic procedures (except retinal procedures and procedures requiring general anaesthesia). b) A separate clean supply room shall be provided in close proximity to the procedure room for storage of ophthalmic procedure supplies. c) Provisions for procedure lighting and microscopy shall be made. d) Clearances around the operating table shall be minimum 1200 mm. e) A scrub sink shall be located in an alcove in the corridor adjacent to room entry. f) Door entry into the room from the scrub area shall have hands-free operation. g) Ventilation (air changes and air flow) shall meet OR standards. h) The patient door into procedure room shall have at least a 1.5 m width.

(Continued)

Table 9.2 (Continued)

Item no.	Room names	Net area, m²	Requirements and recommendations
22	Procedure room, catheterization/PCI lab	60.0 Size can depend on type of equipment used.	<p>See Table 11.1, Item 24 common requirements and recommendations for an examination/procedure/treatment room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) The suite shall be designed to suit the equipment layout. b) A scrub sink shall be located in an alcove in the corridor adjacent to the room entry. c) Door entry into the room from the scrub area shall have hands-free operation. d) Ventilation (air changes and air flow) shall meet OR standards. e) Patient door openings into the procedure room shall have at least a 1500 mm width. f) Medical gases shall be available for provision of general anaesthesia. g) Anaesthetic medical gases shall be located on the opposite side of the OR from the patient entry door into the room. h) The control room size shall be as per Item 23 of this Table. <p>Advisory: Convenient voice communication between the procedure area and control area should be provided.</p>
23	Control room	14.0	<p>Mandatory:</p> <ul style="list-style-type: none"> a) The room shall accommodate two seats; additional space shall be added if teaching requirements are to be accommodated. b) Non-static flooring shall be used. <p>Advisory: The control room may be positioned between two cardiac catheterization rooms and shared by the two rooms.</p>
24	Computer room (cardiac catheterization)	10.0	<p>Mandatory:</p> <ul style="list-style-type: none"> a) The room shall be designed to suit the equipment layout. b) Cooling capacity to suit the equipment shall be provided. <p>Advisory: The computer room may be positioned between two cardiac catheterization rooms and shared by the two rooms (room size shall be 20.0 m² if positioned between two rooms).</p>
25	Viewing/dictation (cardiac catheterization)	Varies, 4.6 for each alcove space	<p>See Table 11.1, Item 12 for common requirements and recommendations for a dictation/review station.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) A telephone shall be provided. b) Access to the HCF dictation system shall be provided. c) The workstation shall have a HCF system computer. d) PACS shall be provided. e) Acoustic separation shall be provided.

(Continued)

Table 9.2 (Concluded)

Item no.	Room names	Net area, m²	Requirements and recommendations
26	Soiled wash-up and work area	Varies	<p>See Table 11.1, Item 40 for common requirements and recommendations for a soiled holding room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) Ventilation (air changes and pressure) shall be in conformance with CAN/CSA-Z317.2. b) Usage and storage for hazardous chemicals shall be in conformance with SDS criteria and occupational health and safety requirements. c) Eyewash stations shall be located to meet occupational health and safety requirements.
27	Sub-sterile supply/ case cart holding area	1.2 per cart	

9.4 Ambulatory care — Dialysis

9.4.1 Description and application

9.4.1.1

Renal dialysis programs are used by persons requiring haemodialysis and peritoneal dialysis services. The programs can be located in an outpatient clinic building, a satellite centre, or within a HCF. The following requirements apply equally to all facilities (unless otherwise noted). These programs provide evaluation, treatment, follow-up, and support for individuals with kidney disease. Renal dialysis programs are also known as chronic kidney disease programs, sometimes referred to just as “dialysis programs”.

The role of the renal dialysis program is to provide an easily accessible, safe, and serviced environment in which people can undertake haemodialysis on a regular basis, and training and education for patients treated using peritoneal dialysis (and their families).

9.4.1.2

All HCFs that provide renal dialysis services shall comply with Clauses 9.1 and 9.4. Ambulatory facilities shall also comply with Clause 9.2.

9.4.2 Functional requirements

9.4.2.1

The service should be located for convenient and frequent access by patients. If the service is on a hospital site, it should have easy access to other relevant HCF services such as inpatient programs and clinical support services.

Note: *To facilitate access for patients and visitors, and for better management of supplies and waste, the unit should be on the ground floor. If this is not feasible, direct vertical access from the main floor should be provided and a traffic flow study should be undertaken to confirm that the elevator system can handle the amount of traffic. Vehicular access should also be facilitated (e.g., through the provision of low-cost parking for patients who drive)*

themselves, temporary parking for people dropping off patients, and a drop off/pick-up area suitable for wheelchair and stretcher patients being transported by wheeltrans or taxi).

9.4.2.2

Dialysis services may be provided to inpatients

- a) in critical care programs; and
- b) designated areas in the HCF with appropriate utilities.

9.4.2.3

Dialysis service shall be designed to provide clear sight lines for staff.

Note: *The design should allow supervisory personnel (e.g., the charge nurse) to see each pod, and staff in the pods should be able to see and communicate with each other so that assistance can be provided if needed.*

9.4.2.4

The configuration of the renal dialysis program shall provide capacity to flexibly use training rooms (when required to fulfill the program's role) for both peritoneal dialysis and home haemodialysis training, and for haemodialysis treatment over time.

9.4.2.5

The needs of bariatric patients shall be accommodated in treatment spaces, the weigh scale area, and exam and procedure spaces.

9.4.2.6

An alcove shall be provided within each pod of treatment stations for storing and recharging patient mobility devices in order to provide accessibility and preserve circulation.

9.4.2.7

The reverse osmosis (RO) water loop shall be installed in accordance with the following requirements:

- a) The layout shall minimize the length of the RO water loop.
- b) The RO water loop shall be installed by the RO water treatment system vendor or under their direct supervision.
- c) The RO water loop shall be accessible to allow modification or to replace the loop in the event of contamination or failure.
- d) A method shall be provided to contain floods within the RO water treatment room.
- e) Structural support requirements for bulk supply shall be provided as needed.

Note: See CAN/CSA-ISO 26722.

9.4.3 Technical requirements

9.4.3.1 Water treatment and management plan

9.4.3.1.1

A key component of the renal dialysis program is the need to treat the water that will be used in the haemodialysis process to remove any contaminants. Different commercial water treatment systems undertake the water treatment activities in slightly different ways.

9.4.3.1.2

The plant room for water treatment should be located adjacent to or within the renal dialysis program.

9.4.3.1.3

Program design should ensure that tubing runs are short and make it easy for staff to monitor and service the water treatment systems.

9.4.3.1.4

All dialysis system piping shall be readily accessible for inspection and maintenance.

9.4.3.1.5

Water treatment system and dialysis machine connections to the emergency power system shall be in accordance with CSA Z32.

9.4.3.2 Drainage system**9.4.3.2.1**

Millwork or enclosures used for the drainage of fluids from haemodialysis machines shall be ventilated to prevent condensation and the subsequent growth of mould.

Covers or screens for the drainage systems shall be compatible with ventilation requirements.

9.4.3.2.2

Systems for the disposal of liquid waste from the dialyzing process shall be designed to prevent odour and backflow and shall be in compliance with CSA Z317.1. All sinks and drains, including in the soiled utility room, shall have corrosion-resistant drains.

9.4.3.2.3

Positive floor drainage with corrosion-resistant drains shall be provided.

9.4.3.3 Water treatment plant room**9.4.3.3.1**

A reverse osmosis (RO) water treatment alarm panel shall be provided.

9.4.3.3.2

Noise attenuation is important to prevent any sound disturbance to treatment and other areas.

9.4.3.3.3

This room shall be located with easy access to the external perimeter of the program while being adjacent to the treatment area and shall have the following specific attributes:

- a) space for water treatment components, which can include booster pumps (usually two that alternate), particle filters (approximately two), water softener, carbon filter, and reverse osmosis system, as well as products to keep equipment operational;
- b) workable space around all sides of the equipment (at least 0.5 m) to enable routine calibration, servicing, and maintenance;
- c) sufficient space to have soft curving of tubing to prevent right angle bends; and

- d) adequate ventilation, air-conditioning, and/or exhaust to remove the heat load generated by the equipment.

9.4.3.4 Waste management plan

9.4.3.4.1

Waste management practices shall include

- a) conformance with CSA Z317.10;
- b) provision of suitable receptacles for all waste categories, that are convenient to use, service, and move;
- c) provision of adequate storage areas (see Clause 11); and
- d) a disposal room on the external perimeter of the service to enable collection of used laundry and waste without intruding into the service.

9.4.3.4.2

A means shall be provided to dispose of waste chemicals in the soiled utility room.

Note: Substantial quantities of waste (both general and contaminated) are generated by the program.

9.4.3.5 Infection prevention and control

9.4.3.5.1

In areas where haemodialysis or haemoperfusion are routinely performed, hand hygiene sinks shall have a separate water supply and drainage facility that does not interfere with haemodialysis piping.

9.4.3.5.2

Preservation of access to the space shall be maintained in the event of an infectious disease outbreak.

9.4.3.5.3

Capacity shall be provided to separate infectious patients in delivering treatment and support services.

9.4.3.5.4

The single-use supply model shall be adopted.

9.4.3.5.5

Hand hygiene sinks shall be directly accessible and distributed uniformly as follows:

- a) within treatment areas at a ratio of at least one sink to every three treatment stations;
- b) within all enclosed treatment, exam, and procedure rooms;
- c) convenient to/from medication cart space; and
- d) within clean supply rooms.

9.4.3.5.6

Hand hygiene stations shall be at the entrance of each treatment room. There shall be one hand hygiene station for each chair or bed.

At least one hand hygiene station shall be located in each treatment pod.

9.4.3.5.7

Each outpatient care service for dialysis shall have a minimum of one inpatient bedroom with a self-closing door.

9.4.3.5.8

A personal protective equipment (PPE) alcove shall be located immediately outside the precaution room to hold gloves, goggles, face shields, masks, respirators, gowns, and a waterless hand hygiene station.

9.4.3.5.9

The PPE alcove may be shared between two single rooms used for patients on precautions.

9.4.3.5.10

The alcove shall accommodate a supply cart. A hand hygiene sink is not required in the alcove.

9.4.3.5.11

A means for providing patient privacy that can be cleaned between patient (e.g., between-glass blinds) shall be used in precaution rooms and AIRs in lieu of cubicle curtains.

9.4.3.5.12

A separate single room to provide for separation of a patient on airborne isolation precautions should be provided at the rate of one room to every five treatment bays (in HCF-based and satellite programs), giving a cluster of six treatment spaces. The number and configuration of these rooms shall be consistent with the functional program. The separate single room may be an AIR, but this is not required unless the functional program warrants it.

If an AIR is provided, it shall be as specified in Clause 7.5.5.1.

Note: In determining the number of separation rooms, consideration should be given to turnaround time (i.e., the time required to prepare the room for the next patient).

9.4.3.5.13

Precaution rooms should be located close to open treatment bays.

9.4.3.6 Occupational health and safety**9.4.3.6.1**

Functional and storage space shall be provided for chemicals used in the unit.

9.4.3.6.2

Functional and storage space shall be provided for sharps disposal containers and biohazard containers.

9.4.3.6.3

Eyewash facilities and showers shall be provided.

9.4.3.7 Safety and security**9.4.3.7.1**

Patient files shall be kept in a secure environment that prevents access by unauthorized persons.

9.4.3.7.2

A drug safe shall be placed in the medication room (if present) or the clean utility room.

9.4.3.7.3

The program shall be accessible for persons using wheelchairs or on a patient trolley or bed.

9.4.3.7.4

If pallet lifters will be used to deliver supplies to the storeroom, the facility design shall allow sufficient space for manoeuvring them in and out. Floor materials and structure shall be appropriate to the loads that will be applied by a fully loaded pallet lifter.

9.4.3.7.5

Provision shall be made for safety and security for evening and weekend services to prevent theft and to provide a safe environment of care for staff, patients, and family.

9.4.4 Space details

Table 9.3 presents the standard requirements for key spaces in the dialysis ambulatory care area.

Common areas are detailed in Clause 11.

Table 9.3
Key space requirements and recommendations —
Ambulatory care — Dialysis
(See Clause 9.4.4.)

Item no.	Room name	Net area, m ²	Requirements and recommendations
1	Treatment station		See Table 11.1, Item 14 for common requirements and recommendations for an examination/procedure/treatment room. Open (chair) 7.5 Open (bed-stretcher) 9.5 Partial walls 11.0 Enclosed (chair) 8.4 Enclosed (bed-stretcher) 13.0 Mandatory: a) An alcove for wheelchair/scooter access shall be provided nearby. b) Acid-resistant drains shall be provided. c) Rooms used for separation/precaution shall be enclosed and allow for observation (e.g., a glass door). Directional air flow shall be considered. d) Clearance between stations shall be at least 1500 mm. e) The distance from centre to centre of beds, chairs, or bed-stretchers shall be at least 2400 mm.
2	Isolation treatment room	Room area: 13.0 Anteroom: 5.0 Washroom: 4.6 Preparation alcove: 2.0	See Table 11.1, Item 15 for common requirements and recommendations for an isolation room. Mandatory: a) An alcove for wheelchair/scooter access shall be provided nearby. b) Acid-resistant drains shall be provided. c) An alcove shall be provided outside the room for PPE. d) The means used for providing patient privacy shall allow for terminal cleaning between patients when needed (e.g., between-glass blinds).

(Continued)

Table 9.3 (Continued)

Item no.	Room name	Net area, m²	Requirements and recommendations
			<p>e) A washroom shall be provided for isolated patients.</p> <p>Note: The room area excludes space for a washroom, anteroom, and PPE alcove.</p> <p>Advisory: An anteroom should be provided outside treatment room area to improve separation.</p>
3	Procedure room	16.5 for three-sided access 23.0 for four-sided access	<p>See Table 11.1, Item 14 for common requirements and recommendations for an examination/procedure/treatment room.</p> <p>Mandatory:</p> <ul style="list-style-type: none"> a) Provision shall be made for portable X-ray and ultrasound equipment. b) Haemodialysis services shall be provided.
4	Training room	14.0	<p>See Table 11.1, Item 7 for common requirements and recommendations for an classroom/meeting room.</p> <p>Mandatory: Acid-resistant drains shall be provided.</p> <p>Advisory:</p> <ul style="list-style-type: none"> a) The room should be laid out to accommodate training in either peritoneal dialysis or home dialysis. b) The room should be outfitted with services to accommodate haemodialysis. c) A dialysis box should be provided for teaching.
5	Technical workshop: Repair workstation (maintenance laboratory)	6–12 stations 30.0 12–24 stations 45.0 24–36 stations 70.0	<p>Mandatory:</p> <ul style="list-style-type: none"> a) An RO water treatment alarm panel shall be provided. b) Space shall be provided for chemical storage (sodium metabisulphite). c) Only non-cellulose building materials shall be used. d) Positive floor drainage shall be provided. e) An extra-wide door shall be provided for equipment access. The door shall be able to provide a minimum clear opening of 1525 mm. This may be accomplished through the use of a side leaf. The maximum dimensions of the dialysis equipment to be used shall be considered when designing doors. f) Flooring shall comply with Clauses 7.2.2.4 and 12.2.5.2. g) Provision shall be made for wet and dry work zones. h) An eyewash and deluge shower shall be provided. i) A floor drain shall be provided. j) Additional workshop space shall be provided for servicing portable RO equipment if supporting a home dialysis program. k) Additional technical space shall be provided if a home dialysis program is being supported. l) Additional technical space shall be provided if haemodialysis is provided in acute care areas (e.g., critical care, acute care inpatient programs, emergency department). m) Additional part storage space shall be provided if more than one make/type of dialysis machine is used.

(Continued)

Table 9.3 (Concluded)

Item no.	Room name	Net area, m²	Requirements and recommendations
			Advisory: Providing space for an incubator for testing bacteria levels should be considered.
6	Equipment storage room	6–12 stations 30.0	See Table 11.1, Item 45 for common requirements and recommendations for a storage room.
		12–24 stations 45.0	Mandatory: Multiple electrical receptacles shall be provided for charging equipment.
		24–36 stations 70.0	Advisory: a) Additional space should be provided if storing for home dialysis. b) Additional space should be provided if supporting a satellite dialysis centre.
7	Water treatment room	6–12 stations 20.0	Mandatory: a) Alarm equipment shall be provided to the technical room, staff station, and building automation system. b) Back-up for the RO system shall be provided. c) Space shall be provided for salt storage. d) Space shall be provided for chemical storage (sodium metabisulphite). e) Only non-cellulose building materials shall be used. f) Positive floor drainage shall be provided. g) Necessary clearances (e.g., 3000 mm high ceilings) shall be provided for replacing/adding carbon tanks and other equipment. h) An extra-wide door shall be provided for equipment access. The door shall be able to provide a minimum opening of 1525 mm. This may be accomplished through the use of a side leaf. i) Slip-resistant flooring suitable to the intended use shall be provided. Note: Some chemicals can corrode flooring. j) Room security shall be provided. k) The room shall be located close to treatment areas and the technical workshop. l) Effective insulation shall be provided to minimize sound transmission.
		12–24 stations 25.0	
		24–36 stations 30.0	
			Notes: 1) Room area is dependent on program size and equipment. 2) Equipment generates noise. 3) There is a high risk of water leakage.
8	Weigh scale		Mandatory:
	Wheelchair	2.4	a) The scale shall be located near reception and the staff station.
	Stretcher	3.7	b) In-floor mounted scales shall be mounted to be flush with the surrounding floor to minimize trip hazards. c) There shall be a hand hygiene sink.
			Note: Patient confidentiality should be considered.

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