



**Summary of Substantive Changes
Between the 2011 and 2018 Editions of
CSA Z8000, “Canadian health care facilities”**

Presented to the IAPMO Standards Review Committee on March 11, 2019

General: The scope of this review is limited to sinks, lavatories and Section 12.4.3 Plumbing Systems. The changes reviewed may have an impact on currently listed products. The substantive changes are:

- Added requirements for hand hygiene sinks to comply with CSA Z317.1 and added a requirement for prevent the propagation and transmission of infectious micro-organisms from sink drains (see Section 7.5.12.2.2 and 7.5.12.2.3).
- Added requirements for non-clinical sinks (see Table 11.1).

Section 7.5.12.2.2: Added requirements for hand hygiene sinks to comply with CSA Z317.1 and added a requirement for prevent the propagation and transmission of infectious micro-organisms from sink drains as follows:

7.5.12.2.2

The design and installation of hand hygiene sinks and their surroundings shall be in compliance with ~~clause 11~~ Table 11.1, Item 19. The sinks themselves shall comply with the relevant requirements in CSA Z317.1 as

follows:

a) general requirements for sinks and lavatories (CSA Z317.1, Clause 8.4.1); and

b) additional requirements for hand hygiene sinks (CSA Z317.1, Clause 8.4.2).

7.5.12.2.3

Measures shall be taken to prevent the propagation and transmission of infectious micro-organisms from sink drains.

Table 11.1, Common area requirements

Item 19, Hand hygiene sink: Added requirements for non-clinical sinks as follows:

Mandatory:

Hand hygiene sinks shall be constructed and installed as follows:

(a) Materials:

(i) Materials shall be non-porous, e.g., porcelain, enamel, vitreous china, or 18 gauge (or thicker) stainless steel.

(ii) Granite or marble shall not be used.

(b) Size:

(i) Hand hygiene sink size shall be sufficient to prevent recontamination (from splashing) during use.

Minimum inside dimension should be 350 x 250 mm and a minimum depth of 225 mm.

Non-clinical sinks (i.e., vanity sinks, sinks in staff lounges, change/locker rooms, kitchens, housekeeping rooms, public areas) may be smaller if deemed appropriate by the IDT based on a risk assessment with input from infection prevention and control. The fundamental characteristics of sink construction as laid



out in Item c) below shall be followed (i.e., shape of sink, off-set sink and spout, etc.) to prevent splashing. The establishment of mock-ups should be considered to ensure the suitability of selected sinks.

(ii) Cup or bar sinks shall not be used for hand hygiene.

Note: Common requirements for the minimum depth of hand hygiene sinks range from 190 to 225 mm. The current recommendation is based on the CHICA-Canada Healthcare Facility Design Position Statement.

(c) Construction:

(i) Hand hygiene sinks shall be shaped to prevent splashing and with a collar directing runoff into the sink basin.

(ii) Sink shall not be capable of taking a sink plug.

(iii) Sink and spout shall be designed such that splashing and aerosolization is minimized. The spout shall not direct water directly into drain but should hit the basin surface in front of the drain.

(iv) Spouts shall be free of aerators/modulators/rose sprays and shall not swivel.

(v) Strainers and anti-splash fittings at outlets shall not be used.

Note: These can easily become contaminated with bacteria.

(vi) The outside rim shall be of minimal width and have the surface angled down towards the inside to prevent pooling of water and placement of objects on the rim.

(vii) Traps shall be metal. Gaskets at the skin/drain connection shall be plastic or neoprene. Rubber gaskets shall not be used.

(viii) Trap size shall be 40 mm diameter.

Note: Trap size relates to drainage time and water flow time.

(ix) Overflows shall not be used.

Note: Overflows are difficult to clean and become contaminated very quickly, serving as reservoirs of bacteria.

(x) Adequate flow rate shall be provided to ensure the removal of soap residue.

Note: The effectiveness of rinsing is a function of the flow rate, the pressure, and time.

xi) Eyewash stations shall not be attached to hand hygiene sinks.

(d) Location:

(i) Sinks shall be wall-mounted and at least 1 m away from any fixed work surface or separated by a splash barrier. Sinks shall not be inserted into or immediately adjacent to a counter.

(ii) Hand hygiene sinks shall be installed at least 865 mm above the floor and shall not have storage underneath (due to proximity to sanitary sewer connections and risk of leaks or water damage).

(e) Controls:

(i) Taps and controllers shall be hands free. Electric eye, foot pedal, or faucet blade controls may be used. Electric eye operation shall be triggered by hand, not body, placement. A means shall be provided to control the temperature.

(ii) Automatic temperature control shall not be used.

(iii) Electric eye technology shall have a backup that allows for operation during power interruptions and shall have a means for users to adjust water temperature adjacent to the sink.

(f) Backsplash:

(i) Adjacent wall surfaces shall be protected from splashes with impermeable back/side splashes.

Backsplashes shall be seam free. All edges shall be sealed with a waterproof barrier. Backsplashes shall include the area under the paper towel dispenser and soap dispenser.



(ii) Backsplashes shall extend a minimum 600 mm above sink level and a minimum of 250 mm below sink level.

(g) Soap and lotion dispensers:

(i) Liquid soap and lotion dispensers shall have hands free operation and mounted to permit unobstructed access and minimize splashing or dripping onto adjacent wall and floor surfaces.

(ii) Liquid dispensers (soap or lotion) shall use non-refillable bottles and shall be placed to prevent splash-up contamination.

iii) Soap, lotion and hand sanitizer dispenser locations shall be physically separated to prevent confusion of products. Thought should be given to the strategic location of lotion dispensers away from direct patient-care areas (i.e. staff lounge) to prevent cross-contamination.

The following shall apply for Hand drying:

(a) Single-use paper towels shall be provided. Cloth drying towels shall not be used.

Note: Paper hand-towels dry hands rapidly and dispensers can be used by several people at once. They are considered to be the lowest risk of cross-infection and are the preferred option in clinical practice areas. The World Health Organization recommends drying hands with single-use paper towels and does not recommend electric air dryers due to length of time to dry and risk of aerosolization.

(b) Air hand driers may be permitted in strictly public washrooms outside of patient-care areas (i.e., main lobbies, food court areas). Consideration should be given to the design/layout of the washroom space related to access/egress as well as location of drier(s) to minimize contamination issues. Drier selection should support the area where the unit is installed (i.e., high velocity verses low velocity) and, whatever system is chosen, the materials and finishes of the washroom shall take into account potential water contamination from dispersal of water droplets.

(c) Towel dispensers shall be mounted to permit unobstructed access and minimize splashing or dripping onto adjacent wall and floor surfaces.

(d) Towel dispenser design shall be such that towels are dispensed singly. They shall either be hands-free or designed so that only the towel is touched during removal of towel for use.

(e) Hot-air dryers shall not be used for hand hygiene sinks.

(f) Paper waste receptacles shall be a corrosion free material and wide mouth design.

(g) Space shall be allowed for the placement of waste bins in close proximity to the hand hygiene sink.

(h) To avoid recontamination of the hands, paper towels should be available to use on the exit door hardware and a trash container for used towels should be located near the exit door.

(i) Bins, with a waste bag, shall be provided in close proximity to each hand hygiene sink. If bins are lidded the bin shall be foot-pedal operated.

Accessible sinks:

(a) Hand hygiene sinks shall be located at a level where they can be used by people in wheelchairs and shall be available as per HCF requirements. These are in addition to hand hygiene sinks used by staff.

~~(b) Hand hygiene sinks should be in accordance with ASME A 112.19.2/CSA B45.1. Wheelchair accessible sinks should be wall mounted, made of vitreous china, 510 mm long by 685 mm wide, slab type provided with combination centre set faucets, gooseneck spout, open drain with perforated strainer, and 32 mm cast brass adjustable P-trap with tailpiece.~~

Section 12.4.3, Plumbing Systems: No changes were made to this Section:

12.4.3 Plumbing systems



12.4.3.1

Design of plumbing systems shall meet the requirements of CSA Z3 I 7 .1 and applicable building requirements.

Note: The National Plumbing Code or other codes can apply.

12.4.3.2

Potable water supply and distribution systems shall be protected from backflow contamination in accordance with CAN/CSA-864 Series.