



International Federation of Infection Control

# IFIC e-News

<http://www.theifc.org/>

## Chair Update



Terrie Lee  
Chair, 2014  
IFIC Board

Greetings from the IFIC Board!

As I recently assumed the leadership of the IFIC Board, I have continued to be grateful for this opportunity to serve the IFIC membership. Each of you, as individuals and as societies of experts in the field of infection prevention and control, are carrying out some of health care's most important work. Preventing and controlling infections improves the quality of our communities, and saves patients' lives. Today's global attention to the outbreak of Ebola in West Africa illustrates this once again. I applaud you and your colleagues for assisting in on-site care, and for helping to share accurate information with healthcare workers, officials, and communities across the world, so that we can also work to stem the tide of fear that has emerged. We know that through sharing, learning, and collaboration, we are able to attain goals that may have seemed difficult or out of reach.

The IFIC Board will be awarding two Mentor Exchange Scholarships, after careful review of several worthy applications. Reports of those scholarships and activities will be reported to the membership soon. The updated IFIC website has nearly completed its transformation, and will be available soon, providing you with improved navigation and information.

Much work has already gone into the planning of our next Congress, to be held at the JW Marriott Aerocity, New Delhi, India. This conference is being presented in collaboration with the Hospital Infection Society-India, and will be held 22-24 March 2015. An excellent scientific program is being planned, and IFIC will also hold its annual meeting at that time. We look forward to seeing you there!

I want to take this time to recognize our retiring board members.

Walter Popp, one of the representatives of Region A, was supported by the German Hospital Hygiene Society, and was a member of IFIC's Board from 2007 to 2014. His time on the Board was spent working on many projects. He was leader of the Construction Special Interest Group, and has been instrumental in conducting a recent global survey of the management of faeces and urine in healthcare settings. Walter

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## NEXT IFIC CONFERENCE

Mark your calendars for the 15th IFIC Congress in New Delhi, India, 22-24 March 2015. It will be held along with the 13th HISICON as a joint event in the field of infection prevention and control in India.

The Hospital Infection Society - India is an association of medical professionals with a special interest in the prevention and control of hospital infections. Founded in 1991, the society presently has more than 700 members. [See the preliminary program on page 8!](#)



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## Chair Update continued

also serves on the editorial board of IFIC's journal, IJIC. We appreciate all the work that Walter did on behalf of IFIC, and look forward to seeing him in future international activities.

Carol Goldman, one of the representatives from Region B, is retiring from the IFIC Board after 8 years of service. She was supported by Infection Prevention and Control Canada. Until recently, Carol shared her skills as IFIC's Secretary, and as such, has been the hub of communication coming from the IFIC Board. Not only has she ensured accurate documentation of IFIC activities, and planning and organizing many IFIC functions, she also developed policies for ongoing IFIC operations. Carol is serving as the chair of the IFIC Education Committee for the remainder of 2014, and is helping to manage the process for the Mentor Exchange Scholarship program. We thank Carol for her years of tireless and devoted service to IFIC!

Judith Richards, while not leaving the IFIC Board, has now begun to serve as IFIC's Immediate Past Chair. After four years on the Board, Judith served an additional four years as IFIC's Chair. Her leadership has helped to move IFIC forward in many respects. She helped to coordinate translations for IFIC's Basic Concepts, making this resource more available to our members. She organized work on IFIC's website, including a "members only" section. Judith's vision for sustaining a strong IFIC Board led to development of a succession plan for leadership positions, and under her guidance, the recently conducted membership survey was analyzed for determining future actions. She also helped to improve and increase awards and scholarship programs for IFIC members, and continues to serve on IJIC's editorial board. Judith has been a mentor to many and a source of inspiration and encouragement to her colleagues from around the world.

It has been my personal pleasure to work with Judith, Carol, and Walter, and on behalf of the IFIC Board and membership, I thank them for sharing their gifts with us!

If you have issues or concerns that you wish to bring to the Board, please let me know. I look forward to a productive future for us all. Best wishes as you continue in your work to improve safety for all patients.

Terrie Lee  
IFIC Chair

## World Health Organization

### [WHO convenes industry leaders and key partners to discuss trials and production of Ebola vaccine](#)

24 October 2014 -- WHO convened a high-level emergency meeting on 23 October to look at the many complex policy issues that surround access to Ebola vaccines. Ways to ensure the fair distribution and financing of these vaccines were discussed, as well as plans for the different phases of clinical trials to be performed concurrently rather than consecutively, partnerships for expediting clinical trials, and proposals for getting all development partners moving in tandem and at the same accelerated pace. The meeting report is at <http://www.who.int/mediacentre/news/ebola/23-october-2014/en/>



It takes just  
**5 Moments**  
to change  
the world

Clean your  
hands, stop  
the spread of  
drug-resistant  
germs!

## APPLICATIONS FOR SCHOLARSHIPS TO ATTEND IFIC-HISICON 2015

IFIC invites applications for scholarships to the Fifteenth Congress of the International Federation of Infection Control (IFIC2015) to be held in conjunction with HISICON in New Delhi India from the 21 - 24 March 2015. At least one main award will be granted, consisting of:

- free registration to the conference
- travel expenses (against receipts), based on the cheapest economy itinerary to New Delhi (up till a maximum of \$1200) subsistence allowance of \$500.

A number of smaller bursaries will also be awarded, covering: free conference registration, with or without a subsistence allowance of \$500.

Following their congress participation, all scholarship recipients will have the possibility of presenting a write-up of their paper/poster (at least 1500 words in English) to the International Journal of Infection Control ([www.ijic.info](http://www.ijic.info)). If it is deemed to be satisfactory for publication, an additional award of \$200 will be made once the paper has been published in the journal.

The abstract must be directly related to infection prevention & control (IPC) rather than infectious diseases / therapeutics / diagnostic microbiology and would ideally be equally applicable to both high income countries as well as those with limited resources. Successful applications invariably present information that other delegates will find useful to improve their own IPC practice. Abstracts can either be of the conventional "Research" style or alternatively follow a "How we did it" format, describing how infection control practitioners or teams tackled a specific IPC challenge or brought about improvement in the prevention or control of healthcare associated infections in their institution or country.

By mid-December 2014, the presenting author of each application will be informed by email whether his/her application has been accepted. This will be sent to the email address indicated for correspondence. The decision of the Scholarship Committee will be final.

**Abstracts can only be submitted on the official application which can be downloaded from: <http://theifc.org/scholarship2015.asp>**

**THE CLOSING DATE FOR SUBMISSIONS IS 15 NOVEMBER 2014 at 23:00 (CET).**

Submissions after this date will not be accepted. Applicants will receive, at the email address of the primary applicant, an acknowledgement for every submission. If this is not received, please inform the organisers on [scholarships@theifc.org](mailto:scholarships@theifc.org).

## International Journal of Infection Control

Prof. Smilja Kalenic, from Croatia, is the Journal Editor. She is supported by Elizabeth Scicluna as Journal Administrator and an excellent Board of Assistant Editors (Walter Popp, and Judith Richards). Thank you to all those who submit their papers to IJIC and please keep them coming! Contact Ms Elizabeth Anne Scicluna at [elizabeth.scicluna@theific.org](mailto:elizabeth.scicluna@theific.org)

International Journal of Infection Control recently published its latest issue at <http://www.ijic.info/>. We invite you to review the Table of Contents here and then visit our web site to review articles and items of interest. Thanks for the continuing interest in our work,

International Journal of Infection Control Vol 10, No 3 (2014) Table of Contents

[Editorial](#) Judith Richards

[Infection control personnel and implementation of infection control measures in Hungarian long-term care facilities: national results from a European-wide survey.](#) Rita Szabó

[Healthcare associated infections by multidrug resistant in pediatric intensive care: Analysis of four years.](#) André Ricardo Araujo da Silva, Cristiane Henriques Teixeira, Lúcia Santos Werneck

[Predictors of occupational exposure to HIV infection among healthcare workers in southern Ethiopia](#) Tadewos Beyene, Sebsibe Tadesse

[Evaluation of practice of cross infection control for dental impressions among laboratory technicians and prosthodontists in KSA](#) Nabila Ahmed Sedky

[Introduction of infection control module for undergraduate medical students: experience at a rural medical college in India.](#) Suman Praveen Singh, Chirag Modi, Chirag Patel, Purvi Shah

[Antibiotic resistance patterns amongst clinical Vibrio cholerae O1 isolates from Accra, Ghana](#) George Khumalo Kuma, Japheth A Opintan, Samuel Sackey, Kofi M Nyarko, David Opare, Esther Aryee, Anthony Z Dongdem, Lorreta Antwi, Lawrence H Ofosu-Appiah, Godfred Owusu-Okyere, Richard H Asmah

[Knowledge and attitude towards antiretroviral therapy and adherence pattern of HIV patients in southwest Nigeria](#) Latifat Kasumu, Mobolanle Balogun

### INVITATION TO SUBMIT MANUSCRIPTS

We invite you to submit your manuscripts to be considered for publication in the International Journal of Infection Control (IJIC). The aim of the journal is to provide a forum for infection control (IC) professionals to disseminate research and practice information and encourage IC initiatives on an international level.

The journal is fully electronic and can be accessed at <http://www.ijic.info>. The submission is performed online and you can keep track of the whole process in the authors' section of the IJIC website. Submissions can be:

Review articles: 5000 words maximum; comprehensive references; 5-10 key words; unstructured abstract up to 250 words.

Original articles: 5000 words maximum; comprehensive references; 5-10 key words; unstructured abstract up to 250 words.

Short reports: Case reports can be submitted if they illustrate some exceptional point in the field of infection prevention and control. 1000 words maximum; up to 10 references.

Practice Forum: Submissions of a more descriptive account of how IC practitioners or teams tackled a specific challenge or brought about improvement in the prevention or control of healthcare-associated infections in their institution or country. 2000 words maximum; unstructured format.

Letters to the editor: Correspondence to the Editor may refer to material published recently in IJIC or alternatively describe brief accounts of new observations or on other matters of interest. 500 words maximum; unstructured format.

Looking forward to your submissions.

## BASIC CONCEPTS

IFIC continues with its aim to provide up-to-date, scientifically sound tools and educational materials that can be used by professionals the world over. This new edition of IFIC Basic Concepts of Infection Control builds on its predecessors, enhancing and updating in a scientific way the knowledge required as a foundation on which local policies and procedures can be developed. Most chapters have been reviewed and brought up-to-date by an international panel of experts, and new ones have been added to ensure this new edition provides a sound comprehensive knowledge base. IFIC Basic Concepts of Infection Control is available at [http://www.theific.org/basic\\_concepts/index.htm](http://www.theific.org/basic_concepts/index.htm).



Helping all people  
live healthy lives

The publication and dissemination of this book in English was made possible through an unrestricted educational grant from BD. The International Federation of Infection Control is extremely grateful for their support.

**Basic Concepts is available in languages other than English thanks to BD, Meiko, Board members, and our member societies.** A 2012-3 addition is the Spanish translation—with thanks to BD. Chapters 1—6, 10 and 12 of the French version are also available—with thanks to Meiko. Hungarian chapters 1-3, 6-9, 11, 20, 22 and 28 thanks to the Hungarian Society of Infection Control Practitioners [Magyar Infekciókontroll Társaság]. Chapters translated into Arabic include 1-14. Simpios provided the Italian translation. **Check the web site for updates as chapters are added!**



## NEW IFIC MEMBER

**Libyan Society of Infection Control** ([www.lsoic.com](http://www.lsoic.com))

Chairperson/President	Dr Abdelrzak Bousefi
Secretary	Mrs Salma Mohamed
Treasurer	Mr Abdelbaset Amer
Office bearer	Dr Abdelbast abu zwaida
Office bearer	Dr Mohamed grefa



**Want our infection prevention and control resources on your smartphone, tablet or e-reader? It's easy to do—just download the PDF file from IFIC's web site & save it to your book app—it will be available whenever you want to view it!**



## IFIC Board Election 2014

Earlier this year, IFIC announced the vacancies of Board positions for Groups A, B (two positions) and F. An elections committee was formed to carry out the duty of Board elections according to IFIC policy. Members were:

Smilija Kalenic, Candace Friedman, Pola Brenner

The voting process was extended to the Board meeting in October 2014. Final results of voting:

- ⇒ **Birgit Ross**, from German Society for Hospital Hygiene, for Group A.
- ⇒ **Jeanne Pfeiffer**, from Association for Professionals in Infection Control and Epidemiology (APIC), for Group B.
- ⇒ **Donna Moralejo**, from Infection Prevention and Control Canada (IPAC Canada), for Group B.

IFIC thanks the other nominees for their willingness to join the Board. The position for Group F remains vacant for now, because there was no successful candidate application received. There will be another round of nominations and election for Group F next year; in the meantime, the Board may be using its prerogative under the bylaws to perform an internal interim nomination, and co-opt an Associate Member for one year.

Welcome to Birgit, Jeanne and Donna as new IFIC Board Members, starting on the first of January 2015 to 31 December 2018!

Nagwa Khamis, MD  
Secretary of IFIC

**WANT TO JOIN IFIC AS AN ASSOCIATE MEMBER? GO TO**  
[http:// www.theifc.org/reg1b.asp](http://www.theifc.org/reg1b.asp)—75£ for a 3-year membership  
 (£15/three years or £5/year fee for individuals from low income countries)

### IFIC BOARD REGIONAL COORDINATORS

IFIC Board members are appointed as regional coordinators to channel regional queries and to have that person a liaison between member societies in that region and the board. The membership secretary is the link and coordinator for these regional coordinators. The regional coordinators are as follows:

America 1*:	Terrie Lee
America 2**:	Carolina Giuffré
Europe:	Biljana Carevic/Anni Juhl-Jørgensen
Asia:	Patricia Ching Tai-Yin
EMRO:	Nagwa Khamis
Africa:	Abimbola Sowande

\*USA, Canada, Japan, Israel, Australia & New Zealand

\*\* South & Central America, Mexico & West Indies



**SAVE THE DATES!**

<p><b>Fifteenth International Congress of the International Federation of Infection Control</b>                  New Delhi, India                  21-24 March, 2015</p> 	<p><b>9th Healthcare Infection Society International Conference (with French Society for Hospital Hygiene)</b>                  Lyon, France                  16-18 November 2014</p> 
<p><b>7th International Congress of the Asia Pacific Society of Infection Control</b>                  Taipei, Taiwan                  26-29 March, 2015</p> 	<p><b>Infection Prevention and Control Canada (IPAC Canada)/ Prévention et contrôle des infections Canada (PCI Canada) 2015 National Education Conference</b>                  Victoria, British Columbia                  14-17 June</p> 
<p><b>3rd International Conference on Prevention &amp; Infection Control</b>                  Geneva, Switzerland                  16-19 June, 2015</p>	<p><b>APIC Annual Conference 2015</b>                  Nashville, Tennessee, USA                  27-29 June</p> 
<p><b>Infection Prevention Society</b>                  Liverpool, England                  28-30 September, 2015</p> 	<p><b>Infection Prevention &amp; Control Nurses College</b>                  2-4 September, 2015                  Napier, New Zealand</p> 

See <http://www.ipac-canada.org/ific/ific.php> for more information.

*We would like to acknowledge and thank our Corporate Partners for their support and assistance in the fulfillment of our projects and initiatives*



Time	DAY 1 (22 March 2015)	DAY 2 (23 March 2015)	DAY 3 (24 March 2015)
	<b>Meet the Experts</b> (interactive panel discussion with active audience participation)		
09:00 – 10:00	From SARS to MERS to Ebola	Applying IPC strategies in ambulatory care	Surgical Site Infections
	HCAI and Tuberculosis	HCAI and Design & Construction in Health Care units	Reviewing Biomedical Waste management
10:00 – 10:30	Coffee break	Coffee break	Coffee break
10:30 – 11:15	<b>IFIC keynote</b> Changing behaviour to improve IPC compliance	<b>HISI keynote</b> IPC – Indicator of Quality in Health Care	<b>Joint HISI-IFIC symposium</b> Challenges of multi-resistant infections - different perspectives
11:15 – 12:00	<b>Minimum standards for prevention and control of HAI in healthcare facilities</b> – tertiary, secondary and primary	<b>Keynote lecture</b> IFIC Favero awardee	
12:00 – 13:30	Lunch & poster viewing	Lunch & IFIC AGM	Lunch, poster viewing
	<b>Parallel symposia:</b> 3 simultaneous sessions with 4 lectures of 15 minutes with 2 speakers each from IFIC and HISI; 30 minutes discussion		
13:30 – 15:00	Occupational risks of HCW	Environmental Decontamination - Blending New and Old	<b>Best papers of 2014/5</b>
	IPC in special units	Emerging and reemerging threats in Health Care	Closing ceremony (prizes & awards)
	Finance and HCAI	Pillars of infection prevention	
15:00 – 15:30		Tea Break	Day 3 ends at 3pm
15:30 – 17:00	Industry sponsorship Automation and rapid molecular methods	IFIC topic	
	Free papers	Mycological aspects of HCAI	
17:00 – 18:00		HISI AGM	
19:00 – 21:00	Inauguration (oration and presidential addresses)	Evening symposium	
		Device associated infections	
		Antibiotic stewardship	



## Construction of Water Supplies in Health Care Facilities

IFIC Construction, Design and Renovation Interest Group, 2014

Authors: Birgitta Lytsy, Leif P Andersen, Walfer Popp, Ulrika Ransjö, Shaheen Methar

### Introduction

The primary aim of this document is to provide practical, evidence based (when appropriate) written materials about construction, design and renovation in health care facilities, that can be used in the co-operation between infection control personnel, building planners and engineers.

### Risks of waterborne infections in health care facilities

Water in health-care premises are used for consumption, decontamination and production. Transmission of micro-organisms or their products from water may occur through drinking, inhalation of water droplets from showers, water tanks, cooling towers and hydrotherapy and by contamination of equipment.

### Biofilm formation

In water systems, microbial cells are found as both "planktonic" (floating) cells and "sessile" (attached) cells on surfaces. Sessile cells grow more slowly and are less sensitive to antibiotics and disinfectants than are planktonic cells. Pathogens may be sloughed from the biofilm into the water column due to changes in the water flow rate

Examples of **faecal contaminants** in water are multi-resistant Gram-negatives, (*E. coli*, *Salmonella spp*) and viruses (Norovirus, Hepatitis A and E). Endotoxins from Gram-negative bacteria may also be present in water.

**Environmental micro-organisms** that proliferate in clean water include *Pseudomonas* species and other non-fermentative Gram-negative bacteria, *Legionella* species and fungi (*Aspergillus*, *Fusarium* and *Exophiala* species). A water distribution system biofilm is a rich mixture of micro-organisms, debris and corrosion products that adhere to the inner surface of the water pipes and fixtures. Biofilms are held together by sugary molecular strands, collectively termed "extracellular polymeric substances" or "EPS." The cells produce EPS and are held together by these strands. Biofilm EPS is also referred to as slime.

Some pipe materials (polymers, rubber) can be used as carbon sources for the biofilm. Uneven surfaces in the pipe will cause eddies. In stagnant water, a biofilm forms within days and is difficult to remove with physical methods such as heat or scrubbing.

### Risk management

Healthcare water systems need active and continuous risk management. All healthcare facilities should have water safety plans as part of their infection control programme that define roles and responsibilities, design and maintenance, monitoring and action plans.

Biofilm formation and water contamination should primarily be controlled and prevented through physical and structural interventions such as maintaining adequate water temperatures, eliminating dead ends that cause water stagnation and selecting pipe materials that do not favour growth of micro-organisms.

Chemical disinfection of water should be considered when physical and structural interventions are insufficient.

### Common principles

Cold water is transported from water plants in large diameter pipes that become narrower closer to the building entrance, thus allowing water to stagnate. Water systems in healthcare buildings are often complex with possibly corroded inner surfaces and many dead ends. Stagnated, tepid water poses an ideal environment for the formation of biofilm.

Water in hospitals should aim at being of drinking water quality as defined by national regulations.

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### Water source

Water for health-care premises can be derived from water plants or wells of all sizes. In countries with limited water resources rain water can be collected in roof tanks.

The water system should be isolated from the environment as far as possible.

A point of entrance water treatment system (chemical dosing plant, UV-light, reverse osmosis etc.) should be considered for each building depending on influent water quality.

### Water temperature

Water should be kept at temperatures that limit growth of micro-organisms which means below 20°C for cool water and above 50°C for warm water at return. This is particularly important but could be hard to achieve when cool and hot pipe work systems are shared within the same duct.

### Pipes

Dead ends favour water stagnation and should be prevented by a systematic walk-through of the water system, pipe by pipe. Dead ends should be removed and unused water outlets should be plugged.

Construction materials which contribute to growth of micro-organisms and biofilm formation should be avoided.

Pipes for hot and cold water should be well separated and insulated in order to prevent heat exchange.

### Water filters

Water filters for particulate contamination are often used in water plants. Such filters are made from e.g. sand, and need to be maintained and flushed/changed at regular intervals in order to preserve their function.

Point-of-use micro-filters against biofilm and chemical contamination can be mounted on single faucets for washbasins and showers. They need frequent changing and are costly, but are used in ideal facilities for immuno-compromised patients to prevent risk of legionella and pseudomonas infections.

Special filters to deionize water are used in laboratories and haemodialysis units, but also for e.g. washer-disinfectors and steam sterilizers.

### Taps / faucets

Water taps in clean areas should have long handles for turning with the elbow. In mixers, the hot and cold water should be kept separate as much as possible. Photocell faucets should be avoided, as they prevent flushing of the taps and promote the growth of Legionella spp and Pseudomonas spp and other bacteria.

### Showers

Flexible shower hoses should not be longer than 1.5 meters, and be mounted so high that they can drain hanging between uses. The hose should be mounted so that the nozzle cannot reach the urogenital tract of the person using the shower.

The hose should be of light-proof material since light stimulates the formation of algae, which favour the growth of other micro-organisms. Hoses may be cleaned and disinfected in a washer-disinfector.

Spray nozzles should have large holes to prevent aerosol formation.

Rigid pipe showers should have an open drain.

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### Bathtubs

Bathtubs and whirlpools should be avoided in health-care facilities due to risk of surface contamination and biofilm formation on surfaces and piping.

### Sinks

Every room where patient care procedures are performed must have a sink/washbasin in order to facilitate hand hygiene. For adequate hand hygiene, alcohol hand disinfectant is always needed, and with the washbasin paper towels. Sinks must have a size and design that allows washing of hands and forearms without spillage on floor. Sinks should be fitted with a mixer tap.

Sinks for hand washing should not have drain plugs and should not be used as slop basins.

Sinks for dishwashing and disposal of liquids pose a great risk of contaminated water splashes and should not be used for hand washing. They should be separated from clean preparation areas e.g. by a screen or at a distance of at least 2 m.

### Drains

Drains pose a great risk of contaminated water splashes and should be located at a safe distance from equipment. The floor drain should be easy to clean and have removable grilles. It should be managed so that the water seal does not dry out. Floors should slope slightly towards the drain often with accentuated fall at the well.

### Terms of definitions

Washbasin = a bathroom or lavatory sink that is permanently installed and supplied with water and have a size that prevents spill of water on the floor.

En-suite hygiene room with toilet = a room equipped with washing and toilet facilities

Toilet = a plumbing fixture for defecation and urination

Flush toilet = a toilet equipped with a sudden rapid flow of water

Flusher disinfectant = a machine which destroy microorganisms by cleansing equipped with a drain.

Washer disinfectant = a machine which destroy microorganisms by cleansing without a drain

Dishwasher = a machine for washing dishes

### Some literature

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SIG recommendations are given in three levels:

**Basic** - Even with severely limited resources, this is what you should do as a minimum

**Standard** – this is what you should aim for in less wealthy countries

**Ideal** – if you have the resources, this is what you could do

For special needs and departments such as intensive care, laboratories, neonatal unit, operating suite and central sterilization unit additional planning is necessary. See also <http://theific.org/sigs3.asp>

### Recommendations<sup>1</sup>

Room/facility	Basic	Standard	Ideal
Water temperature at the tap			Hot water >50 °C Cold water <20 °C
Patients' rooms/bays	Washbasin.	Washbasin	Washbasin
Isolation rooms for infectious and for immunocompromised patients	Washbasin	Designated hygiene room with toilet, washbasin	En-suite hygiene room with toilet, washbasin, shower and flusher-disinfector. Point-of-use filters
Patients' toilets	Washbasin Toilet	Washbasin Flush toilet	Washbasin Flush toilet
Wash/shower/ bathroom	Washbasin Shower	Washbasin Shower Flush toilet	Washbasin Shower Flush toilet
Other toilets <sup>2</sup>	Washbasin Toilet	Washbasin Flush toilet	Washbasin Flush toilet
Nurses' workrooms (preparing care) for clean and for dirty work	Washbasin Sink	Washbasin Sink Flusher-disinfector	Washbasin Flusher disinfector Washer disinfector
Nurses' rooms		Washbasin	Washbasin
Doctors' treatment/examination rooms	Washbasin	Washbasin	Washbasin
Waste room	Washbasin	Washbasin	Washbasin
Kitchen <sup>3</sup>	Washbasin Sink	Washbasin Sink Dishwasher	Washbasin Sink Dishwasher
Storage of clean equipment and products	No water or drain	No water or drain	No water or drain
Changing room for staff	Washbasin	Washbasin Shower	Washbasin Shower
Housekeeping room	Washbasin	Washbasin	Washbasin
Operating room	No water or drain	No water or drain	No water or drain
Laundry	Washbasin	Washbasin	Washbasin