



Auditing environmental cleanliness

An update on the auditing and reporting of cleaning standards in Victorian health facilities, June 2017

Cleaning standards and auditing requirements for health facilities in Victoria are governed by the [Cleaning Standards for Victorian health facilities 2011](#). From July 1 2017, there will be some changes to the auditing and reporting of cleaning standards and these are outlined below.

What you need to know

1. Environmental cleanliness will be measured through accreditation to the *National Safety and Quality Health Service (NSQHS) Standards* and patient-reported cleanliness through the [Victorian healthcare experience survey](#).
2. The cleaning standards key performance indicator will be discontinued as a performance measure for Victorian health facilities.
3. Health facilities may adopt alternative auditing methods, in addition to, or in the place of visual inspections.
4. Health facilities will no longer be required to report cleaning audit results to the Department of Health and Human Services.
5. Health facilities will be able to utilise internal or external auditors, for auditing of environmental cleanliness.

1. Environmental cleanliness will be measured through patient-reported cleanliness and accreditation to the NSQHS standards

National Safety and Quality Health Service (NSQHS) Standards

As of 1 July 2017, accreditation to the *NSQHS Standards* will be used by the Department of Health and Human Services as a measure of environmental cleanliness in Victorian health facilities.

Standard 3.15.3 of the *NSQHS Standards* requires that:

3.15.3 An established environmental cleaning schedule is in place and environmental cleaning audits are undertaken regularly¹

It is expected that in Victoria, health facilities will continue to meet this standard through application of the [Cleaning Standards for Victorian health facilities 2011](#).

Patient-reported cleanliness of Victorian health facilities

As of 1 July 2017, patient-reported cleanliness data from the [Victorian healthcare experience survey](#), will be used by the Department of Health and Human Services as a measure of environmental cleanliness in Victorian health facilities. This action supports recommendation 3.5.2 of *Targeting Zero, the Report into the Review of Hospital*

¹ <https://www.safetyandquality.gov.au/wp-content/uploads/2011/09/NSQHS-Standards-Sept-2012.pdf>



Safety and Quality Assurance in Victoria, and places value on the experience of the patient over that of the auditor.²

The *Victorian health experience survey* collects data from a range of healthcare users about their experience of care in Victorian public health facilities. The survey asks participants to score the cleanliness of the environment and facilities based on the admission or attendance type, and patient type.

2. The cleaning standards key performance indicator will be discontinued

As per recommendation 3.5.2 of *Targeting Zero, the Report into the Review of Hospital Safety and Quality Assurance in Victoria*,³ from July 1 2017, the cleaning standards key performance indicator⁴, currently in health services' Statements of Priorities (SoP), will be discontinued as a performance measure for monitoring of infection prevention and control in Victorian health facilities.

There are several other mechanisms in place for evaluating environmental cleanliness, including patient-reported cleanliness from the *Victorian healthcare experience survey* and accreditation to the *National Safety and Quality Health Service (NSQHS) Standards*. Going forward, the Department of Health and Human Services will use these mechanisms in lieu of the cleaning standards key performance indicator, eliminating duplication in reporting and reducing the reporting burden for Victorian health facilities.

3. Health facilities may incorporate alternative auditing methods

The *Cleaning Standards for Victorian health facilities 2011*, prescribes the use of visual inspections in conducting cleaning audits. Though visual inspection is commonly used in healthcare, it is recognised that this method alone may no longer be appropriate for many health facilities, and an alternative approach may be of benefit.

Alternative auditing methods

From 1 July 2017, Victorian health facilities may adopt alternative auditing methods, in addition to, or in the place of, visual inspections when auditing environmental cleanliness.

Alternative auditing methods, such as fluorescent markers, have already been adopted by some Victorian health facilities. Health facilities are directed to consider the evidence for alternative auditing methods and assess their own auditing requirements, their capacity for undertaking audits and their local infection control requirements, to determine the most suitable approach.

For health facilities that choose to continue using visual inspections for cleaning audits, the process outlined in the *Cleaning Standards for Victorian health facilities 2011* will still apply.

Whatever auditing method a health facility chooses, the frequency of cleaning audits and the acceptable quality level measures outlined in the *Cleaning Standards for Victorian health facilities 2011* should be maintained.

Evidence for alternative auditing methods

In 2012, the Tasmanian Infection Prevention and Control Unit published the report *Evaluating environmental cleanliness in hospitals and other healthcare settings*.⁵ The report considered the advantages and disadvantages of

² <https://www2.health.vic.gov.au/hospitals-and-health-services/quality-safety-service/hospital-safety-and-quality-review>

³ <https://www2.health.vic.gov.au/hospitals-and-health-services/quality-safety-service/hospital-safety-and-quality-review>

⁴ <https://www2.health.vic.gov.au/about/publications/policiesandguidelines/victorian-health-agency-monitoring-and-intervention-2016-17>

⁵ https://www.dhhs.tas.gov.au/__data/assets/pdf_file/0006/92481/TIPCU_Environmental_Hygiene_Assessment_Report_2012.pdf



four alternative methods of evaluating or auditing environmental cleanliness: visual inspection, fluorescent gel, Adenosine triphosphate (ATP) bioluminescence and microbial methods.

VICNISS, the Victorian Healthcare Associated Infection Surveillance System, at the request of Safer Care Victoria, have undertaken a literature review to examine evidence and best practice examples in cleaning audit methods. VICNISS found that the assessment of auditing methods presented in *Evaluating environmental cleanliness in hospitals and other healthcare settings*,⁶ is supported by current evidence. VICNISS found no evidence or practice contrary to, or not included in the report from the Tasmanian Infection Prevention and Control Unit.

Resources

Evaluating environmental cleanliness in hospitals and other healthcare settings, Tasmanian Infection Prevention and Control Unit

Evaluating hospital cleanliness in Victoria, VICNISS

4. Health facilities will not be required to report cleaning audit results

From 1 July 2017, Victorian health facilities will not be required to report cleaning audit results to the Department of Health and Human Services.

It is important that health facilities continue to schedule and audit environmental cleanliness and it is expected that this will be done in line with the *Cleaning Standards for Victorian health facilities 2011*. Health facilities will still need to provide evidence of cleaning schedules and audits when being assessed against the *NSQHS Standards* and should use audit outcomes to support local continuous improvement activities.

5. Health facilities will be able to utilise internal or external auditors, for auditing of environmental cleanliness

From July 1 2017, Victorian health facilities will be able to utilise internal auditors or external auditors to undertake cleaning audits.

Cleaning audits should be undertaken by a qualified or suitably experienced auditor, but it is at the health facilities' discretion whether that person is internal or external.

Though health facilities will no longer be required to engage external auditors, external audits are still advisable and should be considered by health facilities as a matter of good practice. Whether conducted routinely or on an ad hoc basis, external audits provide an impartial assessment of environmental cleanliness and allow health facilities to test and scrutinise internal auditing practices.

⁶ https://www.dhhs.tas.gov.au/__data/assets/pdf_file/0006/92481/TIPCU_Environmental_Hygiene_Assessment_Report_2012.pdf



Frequently asked questions

Do health facilities still need to audit environmental cleanliness?

Yes, health facilities in Victoria still need to audit environmental cleanliness. Standard 3.15.3 of the National Quality and Safety Health Service (NSQHS) Standards, requires health facilities to have an established environmental cleaning schedule and undertake regular cleaning audits. Cleaning audit reports will not be collected by the Department of Health and Human Services, but health facilities will need to supply reports to surveyors when being assessed to standard 3.15.3 of the NSQHS Standards.

Do health facilities still need to comply with the Cleaning Standards for Victorian health facilities?

Compliance with the *Cleaning Standards for Victorian health facilities* will not be enforced from 1 July 2017. The *Cleaning Standards for Victorian health facilities* will however remain a valuable resource for health facilities and should be utilised by health facilities as a resource to assist in meeting the requirements of standard 3.15.3 of the NSQHS Standards.

Will the Cleaning Standards for Victorian health facilities be updated with alternative auditing methods?

There are no immediate plans to update the *Cleaning Standards for Victorian health facilities*. Health facilities seeking to update auditing methods, are directed to the report from the Tasmanian Infection Prevention and Control Unit, [*Evaluating environmental cleanliness in hospitals and other healthcare settings*](#) and the paper from VICNISS, [*Evaluating hospital cleanliness in Victoria*](#), for information and guidance.

Do health facilities need to engage external auditors?

No, health facilities do not need to engage external auditors. Cleaning audits should be undertaken by a qualified or suitably experienced auditor, but it is at the health facilities' discretion whether that person is internal or external. If audits are undertaken by internal personnel, the health facility may need to demonstrate for accreditation purposes that the audit was conducted impartially. This may be achieved through adopting an alternative auditing method such as fluorescent markers or adenosine triphosphate bioluminescence (ATP), where the results are less subjective than for visual inspection alone.

What alternative auditing methods may be used?

Health facilities are directed to the report from the Tasmanian Infection Prevention and Control Unit, [*Evaluating environmental cleanliness in hospitals and other healthcare settings*](#) and the paper from VICNISS, [*Evaluating hospital cleanliness in Victoria*](#), for information and guidance on alternative auditing methods. Health facilities are directed to consider the evidence in these documents, assess their own auditing requirements, their capacity for undertaking audits and their local infection control requirements, and then determine the most suitable approach. Health facilities may adopt alternative auditing methods, in addition to, or in the place of, visual inspections.

If the Department of Health and Human Services no longer collects cleaning audit reports, how will the environmental cleanliness of Victorian health facilities be monitored?

Cleaning audit reports are only one mechanism by which environmental cleanliness in Victorian health facilities is monitored and measured. Other mechanisms are the [*Victorian health experience survey*](#) and accreditation to the *NSQHS Standards*. The department will use these mechanisms in lieu of cleaning audit reports, reducing the burden on health facilities caused by duplicate reporting. This action is in line with recommendation 3.5.2 of *Targeting Zero, the Report into the Review of Hospital Safety and Quality Assurance in Victoria*.⁷

⁷ <https://www2.health.vic.gov.au/hospitals-and-health-services/quality-safety-service/hospital-safety-and-quality-review>



Appendix 1: Evaluating hospital cleanliness in Victoria

By Jennifer Bradford and Ann Bull, VICNISS Coordinating Centre December 2016

Background

The environment can play an important role in the transmission of healthcare associated infections and assessing environmental cleanliness is an integral part of any infection prevention and control program. The National Safety and Quality Health Service Standard 3, Preventing and Controlling Healthcare Associated Infections (3.15.3) require that an established environmental cleaning schedule is in place and environmental cleaning audits are undertaken regularly.

There are numerous studies in the literature discussing methodologies that assess both the extent of environmental contamination in the hospital environment and efficacy of cleaning. Common methods of assessing cleaning processes include visual inspection or application of fluorescent gel markers and testing for removal following cleaning. Methods of assessing efficacy of cleanliness include measurement of the biological marker adenosine triphosphate (ATP) or microbial cultures.

In 2012 the Tasmanian Infection Prevention & Control Unit (TIPCU) undertook a literature review and interviewed key stakeholders in Australia to establish and evaluate current methods used to assess environmental cleanliness. This resulted in a consensus to develop a standardised way of evaluating environmental cleanliness in Tasmanian healthcare facilities. The methods chosen to assess environmental cleanliness were visual inspection and the use of fluorescent gel marker and accompanying ultraviolet (UV) light and a protocol was developed to implement a standard way of evaluating environmental cleanliness in Tasmanian hospitals. The protocol included which sites should be assessed, when to assess, who can assess and data entry requirements. The program also included a standardised online education training program for assessors, an online data entry tool, online resources and a FAQ brochure¹. Evaluation of the data from the first twelve months of this process found a higher baseline level of cleanliness using the fluorescent light than previously documented in the literature and that objects were frequently deemed to be visually acceptable but may not have been cleaned².

Literature Review

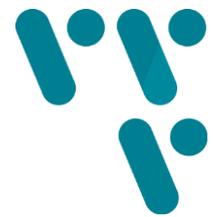
The Victorian Healthcare Associated Infection Surveillance Coordinating Centre (VICNISS) was recently requested to review the literature and provide a short summary of any further evidence/information that is relevant to this topic and has come about since the Tasmanian document was published. Medline (Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R)) and Embase were searched using subject headings and text words, divided into four elements: method of evaluation, environmental cleaning, evaluation or comparison, and setting. Limits used were English language, publication date from 2012 onwards, and in Embase – restrict to Embase records only (Embase includes Medline records).

The search did not identify any further evidence/information contrary to the Tasmanian document.

There are four main methods that can be used to objectively monitor environmental cleaning practices:

- Direct practice observation
- Swab cultures
- Fluorescent markers
- Adenosine triphosphate (ATP) bioluminescence

All have advantages and disadvantages with regard to ease of use, ability to identify pathogens, accuracy, usefulness for teaching and use in programmatic monitoring. The fluorescent marker system being the only one



found to be appropriate for use in programmatic monitoring with ATP bioluminescence being regarded as 'possible' for this purpose but noting that it measures cleanliness at that moment but not the process of cleaning³.

While Carling (2013), promotes the use of ongoing interventions that objectively evaluate and improve the thoroughness of health care environmental cleaning, he also states "there is a need to clearly understand the value and limitations of various environmental cleaning monitoring approaches to ensure the favourable impact of such activities". He also advises that the benefits of an environmental monitoring program including tools, reporting systems, educational resources and personnel resources will only be realized once the program has been running for 6-12 months and there is solid buy-in from all involved parties. The Centers for Disease Control (2010) also recommend that each hospital carefully considers the advantages and limitations of all thoroughness of cleaning monitoring approaches prior to deciding which system/s is right for them⁴.

Gillespie et al (2015) suggested that cleaning standards measuring compliance using visual auditing alone can be misleading as visually clean surfaces may not be cleaned of pathogens and recommended adopting a combined monitoring process using visual auditing with ultraviolet marker (UVM) audits to enhance cleaning and reduce the risk of healthcare associated infections⁵.

In a comparison study of the 4 methods to assess cleaning (visual inspection, microbiologic methods, fluorescent markers and adenosine triphosphate assays) Rutala et al (2016), preferred ATP bioluminescence and fluorescent markers to aerobic plate counts because they provide an immediate assessment of cleaning effectiveness. However, although ATP is a quick and objective monitoring method it is poorly standardised with low specificity and sensitivity in detecting bacteria and the fluorescent marker was the most useful because it mimicked the microbiological data better than ATP⁶. In Sweden the ATP method is used to complement visual assessment of hospital cleanliness but a study by Knape et al 2015, found that while this method of assessing cleanliness of frequently touched hospital surfaces could serve as an educational tool for staff it was not suitable to assess hospital cleanliness in general as taking random ATP samples from surfaces in order to decide whether a ward was 'clean' or 'dirty' could be misleading as only a limited part of a large area could be covered⁷.

Summary of cleaning assessment methods

Visual assessment is the most commonly used method to evaluate the cleanliness of healthcare environments however there are severe limitations to using this method alone. It does not reliably assess either cleanliness of the environment or the infection risk to patients as results can be subjective and surfaces can appear visually clean when in fact they have not been cleaned at all.

The ATP method appears to be increasing in popularity however it does have limitations such as cost, variations in performance between systems, variability of results depending on surface properties, variations in benchmarks chosen as clean cut-off limits and the absence of sufficient correlation between this technique and microbiological controls.

Multiple studies have reported the use of fluorescent markers as a cheap, simple and effective visual aid to assess cleaning performance and educate staff on proper cleaning techniques. In order to be most effective it should be used in combination with regular, real-time feedback and education of cleaning staff.