A review of the Hand Hygiene New Zealand programme | He arotake o tā Te Horoi Ringa Aotearoa Hōtaka

30 November 2022 | 30 Whiringa-ā-rangi 2022

Contents | Ngā ihirangi

ISBN 978-1-98-859985-4

Published in December 2022 by the Health Quality & Safety Commission,
PO Box 25496, Wellington 6146, New Zealand

Document available online at www.hqsc.govt.nz

Enquiries to: info@hqsc.govt.nz

Te Kāwanatanga o Aotearoa
New Zealand Government

Document purpose | Take o te pukapuka

This document describes the findings of a review of the Health Quality & Safety Commission's (the Commission's) Hand Hygiene New Zealand (HHNZ) programme.

In response to reaching the 10-year milestone for the programme and receiving informal sector feedback about the sustainability of HHNZ, a decision was made to undertake a review of the HHNZ programme. The purpose of the review was to evaluate whether the programme aligns with current best practice evidence and meets the needs of its stakeholders and to inform where future quality improvement (QI) activity would be best targeted.

The review included:

- a national survey of the current delivery of the programme in public and private surgical hospitals (PSHs)
- a literature review of recent international evidence and best practice for hand hygiene programmes
- a horizon scan of similar programmes in Australia.

Executive summary | He kupu whakarāpopoto matua

The HHNZ programme has been overseen by the Commission for 10 years. Programme participants include all 20 Te Whatu Ora districts and 23 PSHs.

This review comprised a national survey of the current delivery of the programme, an external literature review and a horizon scan of comparable programmes in Australia. It was undertaken by the Commission infection prevention and control programme (IPC) team. The external literature review was funded by the Commission.

The survey and literature review highlighted a need for support and engagement for the programme at a senior leadership and governance level. Locally, the programme is predominantly led by IPC teams, but only a quarter of districts have any dedicated full-time equivalent (FTE) resourcing to implement the programme.

The response to the COVID-19 pandemic has challenged local hand hygiene programmes, with redeployment of IPC resources, hospital staff shortages and overall fatigue in the health sector, including in IPC teams. This has impacted compliance auditing, and this effect has been compounded by a loss of gold auditor (GA) trainers, limited GA training sessions and difficulties maintaining a pool of GAs.

The use of observational audits to measure hand hygiene compliance is recognised as the gold standard, but they are time consuming and subject to bias through the Hawthorne effect. Limited engagement from managers, chronic staffing shortages and pandemic-related staff absences have resulted in very little dedicated time being available for GAs to undertake observational audits.

Survey respondents agreed that the programme has been successful; however, for most organisations, the focus remains on auditing and quality assurance rather than on QI.

This limited focus has been exacerbated by the pandemic and resource constraints. An opportunity exists to reengage with stakeholders to refresh the programme with a stronger QI focus.

Key recommendations from the review focused on areas such as increasing GA training by updating resources and improving the GA training process, improving support from management and leadership, reinstating national and regional networks, reviewing data collection requirements and strengthening relationships with senior leadership and management.

Next steps for the programme review include establishing a working group to look at GA training, engaging senior leadership and re-establishing national and regional networks to support hand hygiene leads and GAs.

Background | He kupu whakamārama

HHNZ is a national QI programme that aims to improve and embed consistent and effective hand hygiene practices among health care workers in Aotearoa New Zealand.

The Commission's IPC programme is responsible for HHNZ and regularly reports to the programme's Strategic Infection Prevention and Control Advisory Group. The programme's outcome measure is the rate of healthcare-associated *Staphylococcus aureus* bacteraemia events per 1,000 inpatient days. This is reported quarterly as a Commission quality and safety marker. The process marker for the programme is the percentage of opportunities for hand hygiene taken as per the '5 Moments for Hand Hygiene' (5 moments).

All Te Whatu Ora – Health New Zealand districts (formerly district health boards) have participated in the programme since 2012. In 2017, voluntary participation was opened to PSHs. Participation in the HHNZ programme supports facilities in their efforts to reduce healthcare-associated infections (HAIs) through improving hand hygiene compliance. The Commission provides centralised support and resources for implementing local programmes to enable teams to design a QI programme centred on auditing hand hygiene compliance and the reporting and feedback of results and education. This multimodal approach has proven to be a powerful tool to drive improvements in hand hygiene practice. A national standardised auditing system managed by HHNZ enables interfacility comparisons of hand hygiene performance data.

The HHNZ programme improvements have been well documented over the past 10 years. A rapid evaluation to assess the impact of the programme in 2014 noted improved hand hygiene rates and staff attitudes to hand hygiene. Emphasis was placed on frontline ownership and continuous QI for the programme. In 2015, the Commission undertook a perception survey to provide a snapshot of how well health care workers and districts understood and supported HHNZ. Results indicated that national reports were widely distributed to promote and improve hand hygiene practice and that public reporting of quality and safety markers and the support of senior leadership were integral to the programme's success. In July 2019, the auditing requirements were modified to promote continuous auditing in all clinical areas ('spread') through each audit period. The number of minimum moments required per hospital ward per audit period was also changed. Prior to this 'spread', auditing was undertaken in high-risk clinical areas only.

This year, the Commission celebrated 10 years of participation by all public hospitals in the programme. This milestone, combined with the challenges of sustaining some aspects of the programme during the COVID-19 pandemic and feedback from stakeholders, prompted an internal review of the programme.

The aim of the review was to ensure the HHNZ programme continues to deliver on its aims and meets the needs of its stakeholders. The objectives of the review were to:

- undertake a stocktake of the current implementation, delivery, variation and management of the HHNZ programme at districts and participating PSHs
- check whether the programme aligns with best practice for multimodal improvement strategies for hand hygiene compliance in health care settings
- report on findings and make recommendations for change if needed.

HHNZ programme | Te hōtaka

HHNZ uses the World Health Organization's (WHO's) multimodal hand hygiene improvement strategy to drive culture change and establish best practice.[1] HHNZ has focused on stakeholder engagement to effect culture change among health care workers, ensuring the '5 moments' has become part of business-as-usual practice in Aotearoa New Zealand hospitals.

The programme has sought to achieve the following.

- A high level of leadership from organisation executives for their local hand hygiene programmes, demonstrated by active participation in the HHNZ programme, through consistent collection, submission and reporting of hand hygiene data and the establishment of hand hygiene culture change initiatives.
- Hospital-based health care workers are able to demonstrate a high level of understanding about the importance of hand hygiene to patient safety.
- Hospital-based health care workers can explain when each of the 5 moments for hand hygiene should occur during patient care.
- Consistent collection and submission to HHNZ of healthcare-associated *S. aureus* bacteraemia rates across all health care districts.

HHNZ has a formal agreement with Hand Hygiene Australia (HHA) and pay a fee to use their auditing system, training system, training videos and other resources. The Commission supports organisations to participate in the HHNZ programme by:

- providing an HHNZ programme implementation manual and associated resources[2]
- facilitating online access to the auditing and training systems
- providing technical support for auditing and training systems
- publishing auditing results for three audit periods a year.

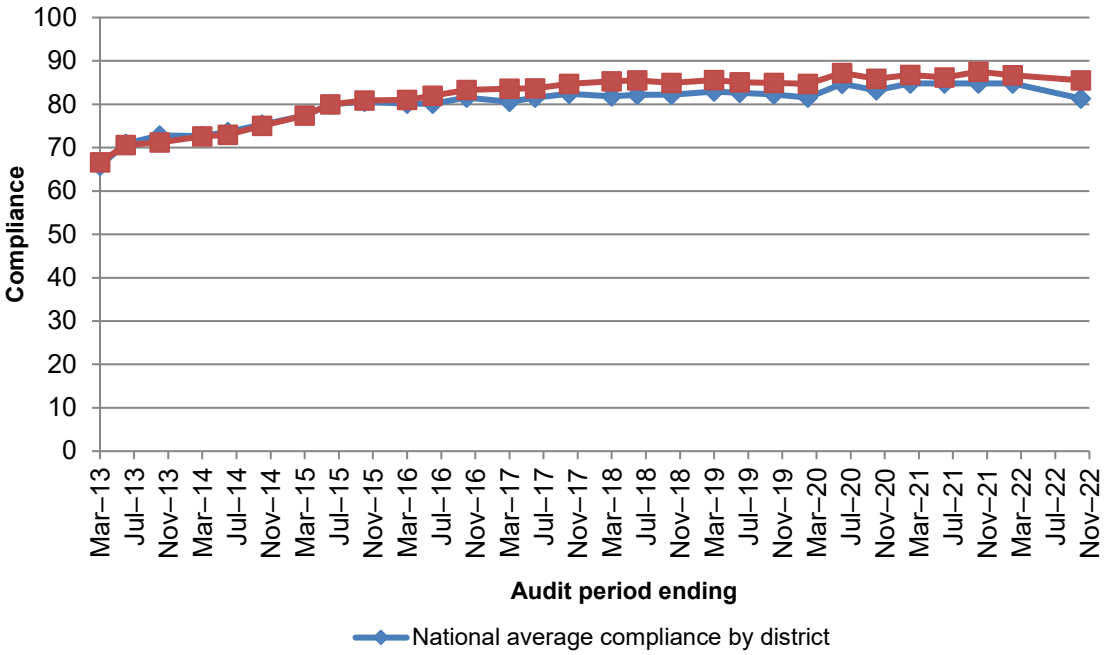
The national hand hygiene compliance target is set at 80 percent, and this has been consistently exceeded in health care districts since 2015 (Figure 1).

---

1 Pittet D, Allegranzi B, Boyce J, World Health Organization World Alliance for Patient Safety First Global Patient Safety Challenge Core Group of Experts. 2009. The World Health Organization guidelines on hand hygiene in health care and their consensus recommendations. *Infection Control & Hospital Epidemiology* 30(7): 611–22.

2 Health Quality & Safety Commission. *Hand hygiene: Guidance*. URL: www.hqsc.govt.nz/our-work/infection-prevention-and-control/our-work/hand-hygiene/guidance.

Figure 1: National hand hygiene compliance by district, March 2013 to November 2022



Source: Health Quality & Safety Commission.[3]

HHNZ recommends that, at a facility level, the programme is governed by a multidisciplinary team, including senior leadership, and that FTE is allocated for a hand hygiene coordinator role.

Observational audits for compliance with the 5 moments are undertaken by GAs in wards and departments. Data is collected at the point of care using a mobile web-based auditing app or paper form, data from which is then uploaded into the auditing system. A GA requires allocated time to undertake observational auditing. HHNZ uses a 'train-the-trainer' model for local GA training with a standardised two-day training course. The numbers of moments required for each clinical area is determined by the size and HAI risk for the clinical area. Larger districts (hospitals with > 400 beds) are required to collect a minimum of 2,450 moments per audit period, but those with well-established programmes have collected between 8,000 and 10,000 per audit period. The number of moments per audit period depends on the number of high-risk and standard-risk beds for that district.[4] Auditing continues throughout the year, with three reporting periods. Each district's hand hygiene lead or coordinator monitors progress towards meeting the required number of moments for each reporting period and is responsible for producing and distributing local hand hygiene compliance reports. The programme promotes local feedback and QI initiatives for areas with low compliance rates.

---

[3] Health Quality & Safety Commission. 2022. *National Hand Hygiene Compliance Report: 1 July to 31 October 2022*. URL: www.hqsc.govt.nz/resources/resource-library/national-hand-hygiene-compliance-report-1-july-to-31-october-2022.

[4] Health Quality & Safety Commission. 2019. *Hand Hygiene New Zealand Auditing Manual*. URL: www.hqsc.govt.nz/resources/resource-library/hand-hygiene-new-zealand-auditing-manual-2019-edition.

Current situation

The pandemic has significantly challenged the sustainability of the HHNZ programme, particularly the ability to audit hand hygiene compliance. During the pandemic, there has been a high turnover of IPC staff and a general shortage of health care workers across all areas, allowing little time for audit activity. Access to GA trainers has been limited, so pools of GAs have not been sustained. The Commission responded by allowing a pause in data collection during the Omicron surge for the March to June 2022 audit period. Despite this pause, auditors across Aotearoa New Zealand still collected a substantial amount of data.

Survey | Te tirohanga whānui

Between June and August 2022, the Commission used a survey to undertake a national stocktake of the current structure and sustainability of the HHNZ programme in the districts and PSHs. Survey participants included IPC practitioners, quality and risk teams in organisations where they were directly involved in the implementation of the programme and – in some cases – GAs.

The survey involved semi-structured interviews administered by the two Commission IPC specialists and the programme coordinator. The interviews were conducted via video conferencing (Zoom). Twenty districts and fourteen PSHs participated in the survey. Representatives from 81 percent of HHNZ participating organisations were interviewed.

Survey questions focused on key areas for implementing the programme: governance, reporting, resourcing, education and training and engagement. Participants were invited to comment on barriers to and enablers of the programme and to suggest improvement strategies.

This section of the report summarises the findings from the survey.

Results

Overall, participants agreed that the programme has been successful in both improving compliance with hand hygiene and enabling hand hygiene to be embedded into organisations. One interviewee stated that ‘the programme has shone a light on hand hygiene’, and another stated, ‘it’s a testament to the programme that it has continued during the pandemic’.

The results of the survey are presented in four sections: governance, GAs, education and QI.

Governance

Of the 20 districts interviewed, 19 hand hygiene programmes were managed by IPC teams, and one was managed by a quality and risk department. Most IPC teams report HHNZ outcomes to quality and risk/patient safety teams, but further input from these departments is limited. Overall, participants felt that IPC oversight of the HHNZ programme was appropriate as hand hygiene is an important component of IPC programmes. Implementation of the hand hygiene programme is frequently listed in the position description for IPC practitioners; however, three-quarters of IPC teams did not have a specific hand hygiene coordinator role or any dedicated FTE allocated to the programme.

Only one district participant indicated that they had a multidisciplinary team in place to oversee the programme. Audit reports are commonly tabled at IPC committee meetings, but discussion on QI strategies is limited. Furthermore, two districts indicated that their local IPC committee meetings had lapsed during the pandemic, and others indicated that the frequency of meetings had decreased. There was a resounding call for more support for and interest in the HHNZ programme from senior leadership and medical staff.

Gold auditors

Sustaining a pool of GAs has been a considerable challenge for many programmes. The pool of GAs comprises predominantly registered nurses. The lack of GA trainers and the time required to hold training sessions were cited as challenges for maintaining the pool of auditors, especially during the pandemic. Other contributing factors included the frequent turnover of staff, disengagement of auditors and the lack of recognition or remuneration for the role.

Many districts and PSHs indicated that auditors were not allocated the time to undertake audits or frequently audited in their own time. As such, they found it difficult to achieve the required number of moments for audits. Moments were often collected at the end of the auditing period, with the IPC team stepping in to collect data shortfalls. The impact of the Hawthorne effect was also noted.

The number of GA trainers in the districts and PSHs varied. Larger districts had two or three GA trainers, whereas most other districts had one. Two districts had no GA trainers at the time of the survey. The Southern Cross Hospital group had two GA trainers in the North Island and one in the South Island. In addition, some districts shared training days with local PSHs. Although it is not a prerequisite for the role, all GA trainers in Aotearoa New Zealand are IPC nurses.

The demands of the pandemic have significantly affected the ability to provide GA training. Training days were cancelled because GA trainers had no capacity and teams could not release participants to attend. Trainers also reported that the training resources are outdated and need refreshing. While there is support for the train-the-trainer approach, there were many requests for elements of GA training to be run centrally.

Education

All districts and PSHs indicated that hand hygiene was included in the orientation of new staff, either as an online e-learning module or in person during induction days. Some districts and PSHs had a mandatory hand hygiene refresher every one or two years, but most organisations seemed to have no formal process to ensure this was completed. The pandemic and staffing shortages were cited as challenges to the delivery of education. Participants cited three main e-learning platforms used for the delivery of education on the 5 moments:

- HHA (access for people in Aotearoa New Zealand is managed by the Commission)
- HealthLearn (https://www.healthlearn.ac.nz)
- Ko Awatea Learn (https://koawatealearn.co.nz).

Some respondents commented that the 5 moments concept is not that easy to teach or understand and that alternative ways of embedding hand hygiene could be explored, such

as using the ‘4 moments’ model or focusing on before and after patient care. Medical staff were identified as the most challenging group to engage in hand hygiene education.

Quality improvement

Although the HHNZ programme is a QI initiative, QI methods are not routinely used to improve compliance in response to poor performance. Only two districts mentioned QI in the interviews. One participant raised concerns that auditing has become a box-ticking exercise with little opportunity for QI. Another district described a QI initiative whereby staff were encouraged to pause and ‘take a moment’ to consider best hand hygiene practice in their clinical practice. Several participants indicated that auditors found it challenging to provide point-of-care feedback for poor hand hygiene compliance.

Results are widely reported, including at the departmental and ward level, but additional engagement with areas showing low compliance rates is limited.

The survey highlighted that involvement of quality and risk departments varied between facilities, with the most common response indicating that more engagement in improvement actions and activities is needed from quality and risk departments.

Key findings

Overall, participants agreed that the programme has been successful and that they were satisfied with the role the Commission plays in its implementation.

Key findings were as follows.

- Senior leadership support across districts is limited.
- District IPC teams have no dedicated FTE to implement the programme.
- Engagement by medical staff, particularly surgeons and anaesthetists, is poor.
- IPC teams took a central role during the COVID-19 pandemic, IPC time and resources were redeployed and both IPC staff and the health sector overall are fatigued.
- There is a high turnover and a nationwide shortage of GAs, which is compounded by the limited, if any, dedicated time being allocated to complete auditing.
- The GA training programme needs refreshing.
- The Hawthorne effect is apparent in auditing rates, and staff need to be shifted away from changing their behaviour during auditing and towards a safety culture mindset.
- The QI skillset for all health care workers involved in hand hygiene programmes needs to be increased.

Opportunities for improvement

Survey participants made the following suggestions for improvements to the programme to ensure its sustainability.

- Encourage senior leadership to support and engage with the programme.
- Update resources for training GAs and make them more relevant to clinical practice in Aotearoa New Zealand.
- Recognise the contribution that GAs make to the programme.
- Recognise and identify ways to overcome the Hawthorne effect.
- Refresh programme messaging with new posters and resources.

- Reinstate national or regional networking and provide an opportunity for hand hygiene leads to meet.
- Invest in marketing, communications and industrial psychology to promote the programme.
- Look at patient satisfaction, focusing on patient experience.
- Develop a toolbox of resources that includes how to give feedback and have difficult conversations.

Literature review | He arotakenga mātātuhi

The aim and scope of the literature review was to identify academic literature, institutional guidance and international, national and subnational programmes on hand hygiene that might help inform the review of the HHNZ programme. The Commission engaged an external contractor, Dr Matt Boyd of Adapt Research, to undertake the literature review.

Methods

The literature review consisted of a non-systematic, time-limited search. The search comprised two parts:

- a review of the academic literature since 2005
- a review of advice published by institutions around the world and examples of programmes at international, national and facility level.

In total, 55 papers, reports and guidelines were included in the review and tabulated in an Excel spreadsheet.

Findings

The review findings were presented in two parts.

1. Academic literature, including high-level academic literature (syntheses of evidence, umbrella reviews, Cochrane reviews, other reviews and optimal hand hygiene intervention bundles [multimodal improvement strategies], education and training, governance structures and monitoring compliance).
2. International programmes and case studies from the WHO, the Australian National Hand Hygiene Initiative (NHHI), Canada, the United Kingdom, the Netherlands, the United States of America and Ireland.

Summary of findings

Multimodal hand hygiene improvement strategies are most effective for increasing compliance and reducing HAIs. Evidence supports bundle strategies that include education, reminders, feedback, administrative support and access to alcohol-based hand rub (ABHR). One meta-analysis found that a multimodal improvement strategy including education, reminders, feedback, administrative support and access to ABHR was likely more effective than education, reminders and feedback alone. Three key components of a multimodal approach are governance, education and monitoring.

Governance

Additional emphasis on leadership and teamwork elements appears to improve programme effectiveness. A WHO survey of hand hygiene in facilities around the world found that the lowest-scoring component of multimodal programmes was organisational safety climate. However, somewhat promisingly, it was also the only domain to improve significantly at facilities that completed both the 2015 and the 2019 survey. Safety climate is also the least studied of the multimodal components, and a lack of understanding of its role might underlie lower self-assessment scores.

The WHO recommends that hand hygiene be nationally coordinated, and several jurisdictions have a national standard regarding hand hygiene. The UK National Institute for Health and Care Excellence recommends that there be a facility board member responsible for hand hygiene. Chief executive officers or general managers of facilities should support a hand hygiene coordinator and multidisciplinary hand hygiene teams or committees and unit-level champions, especially physician role models.

Education

Education on hand hygiene has been found to increase knowledge about and adherence to hand hygiene. The literature favours mixed-modal education over self-directed learning, and multiple continuous education interventions are more effective than single sessions. Train-the-trainer approaches are recommended for consistency. The WHO train-the-trainer approach and framework for education have been incorporated by many hand hygiene programmes globally, including some of the earliest and more comprehensive programmes such as the NHHI.

Education frameworks should teach about HAI and transmission, hand hygiene agents, appropriate technique, the multimodal hand hygiene improvement approach, factors influencing hand hygiene, human factors and hand care. Education sessions should be informed by audit and evaluation data. It is recommended that there be a process to check competence and that all health care workers have completed education.

Education sessions should be mandatory for all staff working in clinical areas and should be informed by audit and evaluation data. The optimal frequency of education is unknown, but annual updates are common. There should be a budget and time allocated for hand hygiene education and training.

Monitoring hand hygiene compliance

Both monitoring hand hygiene compliance and facility audits are important aspects of hand hygiene improvement strategies. Evidence indicates that monitoring can improve hand hygiene compliance. The WHO recommends direct observation of the 5 moments as the ‘gold standard’ for monitoring. However, direct observation is prone to certain biases, including selection bias, the Hawthorne effect and other behavioural modifications as well as issues of validation and reliability. Some evidence has indicated that non-unit-based observers noted lower hand hygiene compliance than unit-based observers. This raises the issue of whether observers should be IPC staff. However, taking this approach might risk deflecting responsibility for hand hygiene away from health care workers and on to IPC teams. At a minimum, regular unit-based observer validation exercises are needed. Despite these issues, direct observation is still needed to observe the 5 moments and to evaluate technique, which is a neglected area of monitoring and reporting. Covert observation has the potential to overcome some of the problems of direct observation, but it needs to be accepted by health care workers.

Other monitoring techniques help compensate for the weaknesses of direct observation. Product consumption can monitor 24/7 hand hygiene activity and uses fewer resources. Electronic monitoring might help overcome some of the gaps and problems of observation, but most electronic systems are yet to be fully validated or proven, and those for which evidence exists were often part of wider improvement programmes. Their potential is noted in high-level reviews, but their effectiveness and cost-effectiveness remain unclear.

Potentially, when hand hygiene compliance is consistently high, product consumption could be monitored as a proxy, and direct observation or electronic methods could be used if consumption decreases. Audit of staff knowledge and perceptions, including those of management, as well as learning completions, can supplement compliance monitoring. The WHO Facility Self-Assessment Framework can help facilities track progress.

The optimal frequency of audit and monitoring is unknown. Continuous audit might be ideal; however, with some kinds of electronic monitoring, it has been proposed that intermittent monitoring might be more acceptable. Regardless of methods, quality control processes should be in place for data validation. Feedback of observational audits and monitoring data is important. This should include all health care workers and management and be linked to a QI programme.

Compliance (when and how), product consumption and HAI data should be reported to a national programme, facility leadership (including the chief executive officer and board), unit leadership, health care workers and the public. Performance measures are tracked on dashboards in some jurisdictions, and reporting is often mandatory as part of accreditation.

There remain many barriers to effective hand hygiene. These include understaffing, overcrowding, workload, product placement, discrepancies between compliance rates within health care worker groups and the false sense of security gained from wearing gloves.

Horizon scan | He mātai pae

In addition to the literature review and survey, the Commission met with similar programme providers in Australia, HHA and the Australian Commission on Safety and Quality in Health Care (ACSQHC). The aim of these meetings was to understand the political landscape of hand hygiene programmes in Australia and the future development plans of each agency.

The HHA has successfully used the WHO approach since 2009.[5] HHNZ has collaborated with HHA and shares the same highly standardised approach to auditing and reporting. Through a formal contractual agreement, HHNZ has access to the HHA audit and training systems, resources and training materials.

The audit system provides the platform for collecting observational audit data, national reporting for three audit periods ending in March, June and October each year and reporting for local teams and improvement projects. The training system provides access to online learning modules, tracking of health care worker learning history and reporting to enable auditor validation to be monitored.

---

[5] Grayson ML, Stewardson AJ, Russo PL, et al. 2018. Effects of the Australian National Hand Hygiene Initiative after 8 years on infection control practices, health-care worker education, and clinical outcomes: a longitudinal study. *The Lancet Infectious Diseases*. 18(11): 1269–77.

In 2019, all responsibility for implementing the national hand hygiene programme in Australian hospitals, including the systems and training materials, transferred to the ACSQHC, which now runs the Australian NHHI programme. The ACSQHC enables access to two online education modules for users in Aotearoa New Zealand.

HHA retained the rights to use the systems and training materials to offer the programme to overseas clients and non-health care facilities. HHNZ's agreement with HHA has continued unchanged.

As part of this review, the IPC team met with both agencies. The main learnings from these meetings are summarised below.

Australian Commission on Safety and Quality in Health Care – National Hand Hygiene Initiative

Members of the Commission's IPC team met with Jan Gralton, senior advisor, infection prevention and control and healthcare-associated infections; Yulina Walker, national hand hygiene initiative coordinating officer; and Serina Liao, senior project officer.

Governance

In Australia, the National Safety and Quality Health Service Standards require each health care organisation to have a hand hygiene programme consistent with the NHHI (Standard 3.1 hand hygiene). The current benchmark for hand hygiene compliance is 80 percent. National audit data is published three times a year and is publicly available.[6]

The governance for the NHHI now sits with the states and territories, and each has a nominated data review person. Engagement at state level varies, with some not running any auditor training sessions currently or providing jurisdictional support for organisations. The ACSQHC operates a help desk to support users of their learning management system and hand hygiene compliance application.

Auditors

There are some differences between NHHI and HHNZ. Gold standard auditors (GSAs) provide hand hygiene auditor training to general auditors. The ACSQHC is in the final stages of consultation with states, territories and the private sector to develop a new auditor training framework for general auditors and GSAs. The new framework and supporting resources will be completed by the end of March 2023, and all training will be undertaken online.

A GSA must meet the following requirements: have completed two years as an auditor, complete a principles of IPC module, complete an adult learning module and engage in a video conference/facilitated discussion. HHNZ does not currently have an agreement with ACSQHC to access their resources, so access to improved online training modules would need to be negotiated if desired.

---

[6] Australian Commission on Safety and Quality in Health Care. National hand hygiene audit data – latest data now available. URL: www.safetyandquality.gov.au/our-work/infection-prevention-and-control/national-hand-hygiene-initiative/national-audits-and-hhcapp/national-hand-hygiene-audit-data-latest-data-now-available.

There is currently a shortage of GSAs throughout Australia. Annual auditor validation is automated and links through to the minimum 100 moments collected annually to meet annual validation requirements.

Other points of interest

- ACSQHC recognises that most data is collected towards the end of each reporting period and that minimal data is collected over weekends or at night.
- ACSQHC is targeting the medical profession and hoping to work with the Australian Medical Association (AMA) to redevelop a suitable module. A recent statement aimed at improving hand hygiene in medical professionals, released in partnership with the AMA, had no impact on compliance rates. The current chief medical officer is a positive advocate for hand hygiene. The ACSQHC hopes to publish case studies of organisations that have successfully engaged with their doctors.
- The hand hygiene system incorporates an automatic validation that is triggered if the compliance rate is greater than 95 percent. As this is an exceptionally high compliance rate, an investigation should be undertaken to ensure correct auditing practices were used.
- Mental health facilities are excluded from observational auditing. In some facilities, hand hygiene is also measured through ABHR volume and patient experience surveys.
- The current system needs work to address issues of duplicate GA profiles, learners not linked to an organisation and invalid email addresses.
- ACSQHC acknowledges that the current module examples for the 5 moments do not translate easily to practice. Although knowledge of the 5 moments is important for GAs and auditing, other education models such as ‘before and after’ would be easier for all health care professionals to understand.

Hand Hygiene Australia

The IPC team met with Kate Ryan, HHA coordinator, Melbourne, and Dr Lindsay Grayson, clinical lead, HHA, in September 2022.

The hand hygiene programme in Australia was transferred to the ACSQHC in 2019. One reason for the transfer was the decision to keep the programme exclusively within Australia. HHA’s role is limited to non-healthcare organisations within Australia.

HHA continues to share all elements of their programme, and HHNZ and other overseas agencies are still able to access the original systems and resources.

Resources and funding for the HHA programme are now limited, with very little FTE resourcing. Revision of learning resources or system development is unlikely in the short term, but they are happy to consider specific requests.

Discussion | He kōrerorero

This was the first comprehensive review of the HHNZ programme since 2014 and was motivated by sector feedback, a 10-year milestone and changes in the IPC climate during the pandemic response. In addition to a review of the international evidence, it was important to hear and get feedback from those who implement the programme locally.

The WHO multimodal approach to improving compliance with hand hygiene remains a fitting approach to use for HHNZ. To date, the Commission's hand hygiene programme has been successful in improving hand hygiene behaviour among health care workers in Aotearoa New Zealand. However, this review has identified some current challenges with the sustainability of the programme. Most stakeholders surveyed identified areas for improvement or change.

HHNZ is in keeping with international best practice for national HH programmes. There is no international precedence for the governance or leadership of local hand hygiene programmes. In Aotearoa New Zealand, the delivery of hand hygiene programmes at a facility level is usually part of an organisation's IPC programme, and – although there is general agreement that the oversight of the programme should sit within the IPC service – very limited FTE is currently allocated to support this.

Participants noted that they would like to see increased support of IPC programmes for the delivery of the HHNZ programme. This would include ownership of the HHNZ programme sitting at the senior leadership level and active engagement from this leadership with the feedback process for poorly performing areas. In addition, more resourcing and FTE to support the programme at a local level are needed. A few hospitals had multidisciplinary committees overseeing local programmes. There is a significant shortfall in FTE resource provided to enable the programme to meet expectations. Respondents suggested that national networking meetings for hand hygiene leads would be beneficial.

Observational auditing continues to be recognised as the gold standard but is time-consuming and subject to bias through the Hawthorne effect. Other monitoring techniques can help compensate for the weaknesses of direct observation, for example covert observation, monitoring product consumption and electronic monitoring. However, most electronic systems are yet to be fully validated or proven, and – as such – their effectiveness and cost-effectiveness remain unclear. Consideration should be given to whether supplemental methods such as use of electronic systems and auditing staff knowledge on hand hygiene will help overcome the bias of observational auditing.

Limited engagement by managers, chronic staffing shortages and pandemic-related staff absences have resulted in very little dedicated time for GAs to undertake audits. The literature review found limited evidence for the number of moments required or the recommended frequency of auditing. HHA has no plans to change this aspect of their programme, although ACSQHC indicated that they are considering reducing the number of moments for collection. They both note difficulties with capturing the required number of moments.

GA training currently faces significant barriers. The pool of GAs has been reduced, and the capacity to train more is minimal. As with the changes in the ACSQHC, participants suggested replacing some face-to-face training time with online learning, and many strongly advocated for updated training videos. At the time of this report, HHA has indicated that they have neither the resource nor the capacity to review the GA training videos, and the Commission does not have access to ACSQHC resources. There were many suggestions for both national and regional GA training days.

GAs play an integral role in the collection of data for the HHNZ programme, yet there is little recognition or reward for this role. Little, if any, protected time is allocated for the collection

of moments. A high turnover of GAs and disengagement of auditors after two to three years is contributing to the challenges of maintaining a pool of GAs.

Hand hygiene education was provided at orientation for new staff, but subsequent follow-up education appeared to be infrequent. The literature supports mandatory multimodal education over self-directed learning for staff working in clinical areas, with regular education proving more effective than single sessions. Education should be informed by audit and evaluation data, and budget and time should be allocated for hand hygiene education and training. Participants from both districts and PSHs reported that World Hand Hygiene Day was a significant hand hygiene education event in the IPC calendar. There were many requests for regular national education events for GAs, GA trainers and hand hygiene coordinators.

Participants agreed that the programme has been successful, but the focus in most organisations remains on auditing and quality assurance rather than QI. This limited focus has been exacerbated by the pandemic and resource constraints. There exists an opportunity to re-engage with stakeholders to refresh and revisit the programme with a stronger QI lens.

Recommendations | Ngā whakatau

This review identified the following key areas for improvement to ensure the sustainability of the programme.

- Encourage senior leadership engagement with local HHNZ programme teams to ensure its sustainability and success.
- Establish a working group to look further into the delivery of GA training and identify current needs, options for delivery, the infrastructure required and costings.
- Reinstate both national and regional networks for hand hygiene leads to provide an opportunity for shared learning, education and support.
- Develop and refresh HHNZ resources, with consideration given to the creation of a toolbox of resources.
- Develop an active partnership with local quality and risk departments and refocus the programme on patient safety.
- Include hand hygiene in the national patient experience survey.
- Address the high attrition rate of GAs, establish education and networking opportunities and recognise their contribution.
- Schedule further discussions with both HHA and ACSQHC to further investigate education platforms and database improvements.
- Engage with medical leadership to address lower rates of compliance and understanding of HHNZ by medical staff.
- Review the current online training modules to ensure they are fit for purpose and meet the needs of health care worker groups.
- Identify ways to moderate the known impact of the Hawthorne effect, for example monitoring product usage or measuring health care worker knowledge of hand hygiene.
- Review future audit requirements for the programme, for example the number of moments collected.

Summary | He kupu whakarāpopoto

The HHNZ programme has been successful in embedding hand hygiene as a ‘business as usual’ practice in the Aotearoa New Zealand health care sector. Over 10 years, compliance rates have increased, but the central role of IPC teams during the COVID-19 pandemic, the redeployment of IPC time and resources and overall fatigue in the IPC and health sector have impacted the programme’s sustainability. The literature review, survey and horizon scan have identified key areas of improvement for the programme to address to ensure its sustainability.

Acknowledgments | He whakamihi

The Commission would like to acknowledge the ongoing commitment and hard work of IPC teams in contributing to patient safety through their hand hygiene programmes. This has been particularly challenging during the current pandemic, when IPC resources have been diverted to COVID-19-related activities.