

# Creating Safer, Better Health Care

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The impact of the  
National Safety and  
Quality Health  
Service Standards





Published by the Australian Commission on Safety and Quality in Health Care  
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ISBN: 978-1-925665-12-3

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# Foreword

## Professor Villis Marshall AC

The successful implementation of the first edition of the National Safety and Quality Health Service (NSQHS) Standards is a significant landmark in our ongoing journey to improve health care in Australia. As this report shows, important advances have been made in the safety and quality of health care since Australian health ministers endorsed the NSQHS Standards in 2011. Many consumers and patients have benefited as a result.

If I think back to when I was training in surgery in the mid-1960s, it is clear that we have come a long way in improving patient care and outcomes. At that time, patients generally did not have the opportunity to give informed consent before undergoing surgical or medical procedures. I recall that surgeons simply told them when their operation would take place, with very little explanation of the potential harms and benefits. In those days, patients who had cancer were not always told of their diagnosis.

Since then, the role of consumers and patients in making decisions about their health care has expanded greatly. I am delighted that the work of the Australian Commission on Safety and Quality in Health Care (the Commission) – and the first edition of the NSQHS Standards, in particular – have contributed to this shift. As this report shows, the NSQHS Standards have also had an important impact in empowering consumers and patients in wider decision-making around the governance, design and delivery of health services.

I am confident that in the years to come the NSQHS Standards will become widely recognised for their pivotal role in helping to transform patients' experiences and outcomes. This report documents significant gains in acute health services across diverse areas – from better use in hospitals of antibiotics and blood products, to reductions in falls and pressure injuries among hospital patients. It is encouraging to see big improvements in the number of hospitals meeting the first edition of the NSQHS Standards since they became part of accreditation processes in 2013.

Of course, the NSQHS Standards in themselves cannot solve all of the challenges facing modern healthcare systems. The Commission's work with the Australian Atlas of Healthcare Variation shows many other factors affect the outcomes of consumers and patients. These include the social determinants of health, fragmentation across systems and services, the distribution of health professionals and health services, and barriers to access, such as geography and cost.

However, there can be no doubt that the NSQHS Standards have made a real difference to the care and outcomes of patients and consumers. One essential factor that has helped to bring this about has been the leadership and commitment to the NSQHS Standards, and to the ideals and values they represent, that has been shown by clinicians of all types and health service executives right across Australia. I also congratulate the Commission and our collaborators for the considerable work in developing, implementing and evaluating the NSQHS Standards. In particular, I acknowledge the extensive consultation with diverse stakeholders that was instrumental in ensuring the NSQHS Standards provided useful levers for change across the health system.

Australia is recognised internationally as having one of the safest health systems in the world. However, there is always room for improvement. As we release this report documenting the impacts of the first edition of the NSQHS Standards, we are also working towards implementation of the second edition of the NSQHS Standards. We hope that health services and accrediting agencies will find the second edition of the NSQHS Standards helps to streamline efforts to improve safety and quality, as well as enhancing accountability through improved governance systems.

Where next? The NSQHS Standards are intended to help hospitals and day procedure services to set up systems and processes that are necessary to underpin safe and high-quality health care. However, the NSQHS Standards cannot by themselves ensure that safe and high-quality care will always be delivered. My hope is that the NSQHS Standards will soon move to the next level, where they infuse everyday clinical and administrative thinking – and inform every step of the delivery of healthcare services, at every level. I would like to see hospitals and other health services continuously involved in rigorous self-assessment against the NSQHS Standards. Ideally, we should be able to walk into hospitals at any time unannounced and find they are meeting the NSQHS Standards. I would also like to see patients being far better informed about the realities of what modern medicine can offer, and the potential harms and benefits of interventions. I am confident the NSQHS Standards will play an important part in our ongoing journey towards safer, better health care and more informed, empowered consumers and patients.

# Summary

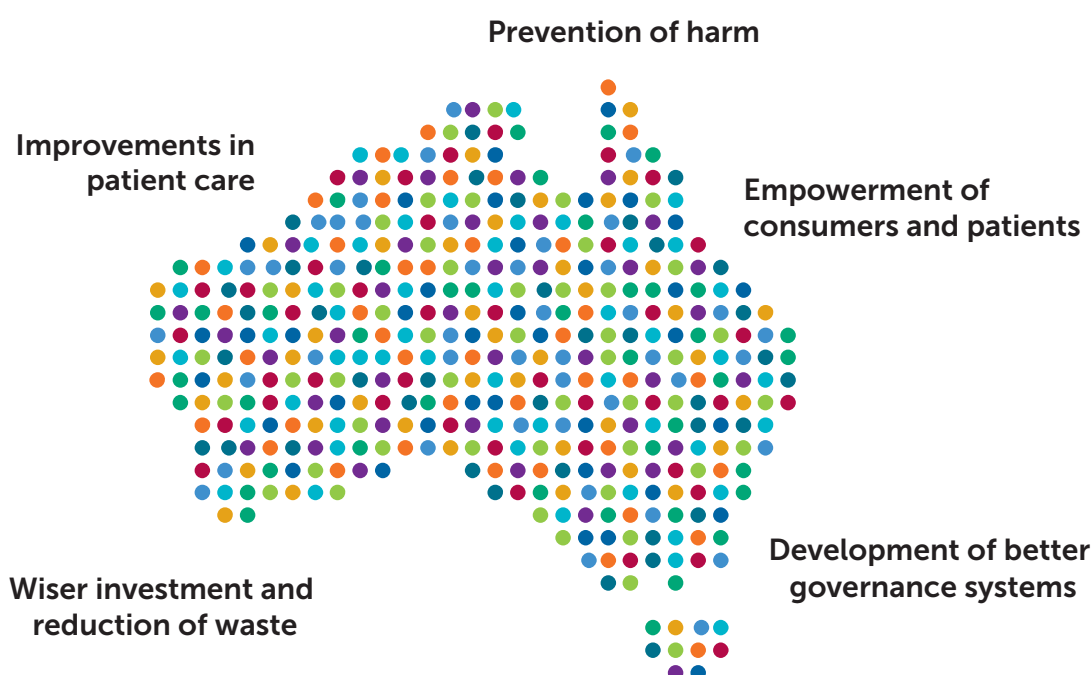
This report gives an overview of changes associated with implementation of the first edition of the NSQHS Standards, a ground-breaking initiative that has improved the safety and quality of health care across Australia. Since 2013, all hospitals and other acute health services have had to show that they have implemented the NSQHS Standards; this is assessed by independent accreditation agencies. Significant improvements in patient safety, patient care outcomes and governance have been documented since the NSQHS Standards were introduced. The NSQHS Standards provide a nationally consistent statement about the standard of care patients can expect. They cannot prevent

all harm occurring but have helped to create more robust checks and balances that make errors and system failures less likely. This report identifies areas where improvements have been made, as well as where further work is needed. It is important to note that the NSQHS Standards have been implemented at a time of many changes in health service delivery as well as other safety and quality initiatives. This report documents associations between the implementation of the NSQHS Standards and improvements in healthcare processes and outcomes, and demonstrates that the scale and range of the associated improvements are significant.

## Key outcomes

Implementation of the first edition of the NSQHS Standards has been associated with several important outcomes. These include:

1. Prevention of harm
2. Improvements in patient care
3. Empowerment of consumers and patients
4. Development of better governance systems
5. Wiser investment and reduction of waste.



### Box 1: Improvement highlights associated with the implementation of the first edition of the NSQHS Standards

- ✓ A decline in the *Staphylococcus aureus* bacteraemia rate per 10,000 patient days under surveillance between 2010 and 2014, from 1.1 to 0.87 cases
- ✓ A drop in the yearly number of methicillin-resistant *Staphylococcus aureus* bacteraemia cases between 2010 and 2014, from 505 to 389
- ✓ A decline of almost one-half in the national rate of central line-associated bloodstream infections between 2012–13 and 2013–14, from 1.02 to 0.6 per 1,000 line days.
- ✓ Greater prioritisation of antimicrobial stewardship activities in health service organisations
- ✓ The number of hospitals with antimicrobial stewardship increased from 36% (2010) to 98% (2015)
- ✓ Formularies restricting use of broad-spectrum antimicrobials increased from 41% (2010) to 86% (2015)
- ✓ Inappropriate use of antibacterials in Australian hospitals reduced by 12.6% from 2010 to 2016.
- ✓ Better documentation of adverse drug reactions and medication history
- ✓ Reduction in yearly red blood cell issues by the National Blood Authority between mid-2010 and mid-2015, from approximately 800,000 units to 667,000 units
- ✓ Declining rates of in-hospital cardiac arrest and intensive care unit admissions following cardiac arrests
- ✓ Early warning or track and trigger tools in 96% of recognition and response systems in 2015, compared with 35% in 2010
- ✓ NSW Between the Flags program report 51.5% decrease in cardiac arrest rates
- ✓ Victorian hospitals report a 20% relative reduction in monthly cardiac arrest rates
- ✓ The majority of hospital boards or their governance equivalent (84%) reported that as a result of the NSQHS Standards the board understood and enacted their roles and responsibilities concerning patient safety and quality.

## 1. Prevention of harm

The complexity of care and the inherent risks of many interventions mean there is a risk of patients being harmed in hospitals. The primary aims of the NSQHS Standards are to protect the public from harm and to improve the quality of health service provision. The NSQHS Standards have strengthened efforts to minimise risks for patients while in hospital, such as the risk of falls, pressure injuries and healthcare-associated infections. Important gains have been reported in many areas as a result of the implementation of systematic, structured approaches to preventing adverse events. As a result of the NSQHS Standards and associated work, patients are far less likely to develop serious healthcare-associated infections, which are one of the most common adverse events in hospitals. Rates of the most serious healthcare-associated bloodstream infections fell between 2010 and 2014 in Australian public hospitals. Significant changes include a 13.5% reduction in *Staphylococcus aureus* bacteraemia (SAB) between 2010 and 2014, while the national rate of central line-associated bloodstream infections (CLABSI) almost halved between 2012–13 and 2013–14. Surgical site infection rates have also fallen for surgical procedures monitored in Western Australia and Victoria. At the same time, initiatives to improve hand hygiene and to reduce infections from invasive devices have been implemented nationwide. The NSQHS Standards have also led to increased awareness across health services of infection control procedures and systems, as well as the prioritisation of antimicrobial stewardship strategies, and improvements in related education and training. Another area of notable improvement has been in the care of deteriorating patients, who now are more likely to be detected and managed early as a result of the NSQHS Standards, reducing the risk of death. Falls have been recorded in the rates of cardiac arrest occurring in hospitals, one of the few widely measured and reported indicators of the success of recognition and response systems.

## 2. Improvements in patient care

The NSQHS Standards have improved the quality of patient care with a specific focus on groups at increased risk of poor outcomes, such as elderly people, and at stages of the patient journey where adverse events are known to be more common. These include clinical handover, when responsibility for a patient transfers from one part of the healthcare system or clinical team to another. When poorly handled, this process can result in serious adverse events, but clinical handover can

be improved using systematic approaches described in the NSQHS Standards. The NSQHS Standards have also led to important gains in how hospitals are monitoring and improving medication safety.

## 3. Empowerment of consumers and patients

Patients, clinicians, health services and the wider health system benefit when healthcare delivery is based on partnerships with patients and their families or carers. As a result of the NSQHS Standards, acute health services are involving consumers and patients in decision-making around the governance, planning, communications, design and delivery of services. The NSQHS Standards support health services to put in place systems for partnering with consumers that are meaningful in their specific setting and situation. They have led to significant changes in organisational cultures and practices. Many services were already providing patient-centred care; however, the NSQHS Standards have helped other services identify gaps in how they partner with consumers and opportunities for improvement. In some places, consumer participation has become part of everyday practice through consumer advisory committees and representatives, dedicated consumer engagement staff and executive leadership.

## 4. Development of better governance systems

The NSQHS Standards have created more effective governance systems by helping to expand and define the roles of governments, executives, boards, clinicians and consumers. As a result, responsibility for improving the safety and quality of health care is no longer seen to rest solely with frontline clinicians. Systems of governance for improving safety and quality are now understood and enacted as ‘everybody’s business’. Hospital boards say the NSQHS Standards have led to better integration of governance and quality improvement systems, and have clarified the roles and responsibilities of boards, with health service leaders and clinicians working together to improve safety and quality.

## 5. Wiser investment and reduction in waste

The personal and financial impact of safety failure is considerable. To the patient and family there can be unexpected extra days in hospital, as well as pain and anxiety. Approximately 12% to 17% of total hospital activity and expenditure is a direct result of adverse events. The most burdensome adverse events are infections, medication complications, delirium and

cardiac complications. Three-quarters of hospital boards believe the NSQHS Standards have improved patient care in their hospitals. Views vary about whether the NSQHS Standards have added to the costs of providing health services. In some areas, the changes required by the NSQHS Standards have largely been made by services reorganising systems or reallocating efforts, rather than with additional funds. In other areas, the NSQHS Standards have led to investment in updating systems and processes that warranted improvement, such as antimicrobial stewardship, consumer engagement and audits to monitor safety outcomes.

## What evidence does this report draw upon?

The Commission sought feedback from a wide range of stakeholders through formal and informal mechanisms throughout the processes of developing, implementing and evaluating the NSQHS Standards. As part of an iterative process of quality improvement, the Commission also conducted several research projects to help inform this work, some of which are outlined in more detail in the Appendix. These include:

- A national self-report survey of hospital board members in 2015, the Safety and Quality Governance Survey
- A survey of 14 specialist medical colleges in June 2014 that examined how their postgraduate training and continuing professional development programs align with the NSQHS Standards
- A survey in 2013 conducted in response to feedback that implementation of NSQHS Standard 2 had been challenging for some health services
- A Consumer Participation Study involving focus groups and interviews with staff and consumer representatives in five health services, to explore the implementation of NSQHS Standard 2 in more depth
- A 2015 survey of 305 infection control practitioners and other staff involved in implementing NSQHS Standard 3 – most respondents had been working in infection control at their service for more than four years and were able to describe the changes brought about by the NSQHS Standards
- Surveys in 2010 and 2015 examining hospitals' recognition and response systems for deteriorating patients

- A comparison of results from the 2011 and 2014 National Inpatient Medication Chart Audits.

This report also draws upon data and research produced by other stakeholders. These include:

- The Queensland Bedside Audit, a safety and quality initiative conducted annually by Queensland Health since 2011 to collect, analyse and provide feedback to hospitals
- The 2014 NSW Adult Admitted Patient Survey and the 2014 Victorian Healthcare Experience survey
- The Australian and New Zealand Intensive Care Society registry of central line-associated bloodstream infection (CLABSI) rates.

This report is informed by the sources outlined above, as well as the experience and knowledge of Commission staff, networks and stakeholders.

## Next steps

Implementation of the first edition of the NSQHS Standards and related activities resulted in improvements in the safety and quality of hospital and other acute healthcare services across Australia.

To ensure that the NSQHS Standards remain current and consistent with best practice and continue to address areas of priority for safety and quality in health care, the Commission updated them, releasing the second edition in November 2017.<sup>1</sup>

The second edition of the NSQHS Standards builds on the substantial achievements of the first edition and will continue to drive better, safer care for patients and consumers in Australia.

The second edition has taken into account new evidence and feedback from across the health sector on how to improve on the first edition. This has resulted in a set of standards that is simplified, reduces duplication, has increased clinical focus and addresses important clinical gaps.

The second edition aims to improve care for patients at risk of poor health outcomes and addresses some of the important safety and quality gaps that were identified by the health sector in the first edition. This includes new content on mental health and cognitive impairment, health literacy, end-of-life care and Aboriginal and Torres Strait Islander health.



# Introduction

This report marks an important milestone in the history of efforts to improve the safety and quality of health care. It provides a detailed account of the implementation and impact of the National Safety and Quality Health Service (NSQHS) Standards, which are a world-leading initiative to improve the safety and quality of health care across Australia.

The primary aims of the NSQHS Standards are to protect the public from harm and to improve the quality of health service provision. The NSQHS Standards were developed by the Australian Commission on Safety and Quality in Health Care (the Commission) in partnership with the Australian, state and territory governments, the private sector, clinicians, patients and carers. The NSQHS Standards provide a nationally consistent statement about the standard of care patients, consumers and carers can expect from their health service.

In 2011 the Australian health ministers mandated that the NSQHS Standards would be implemented in all Australian hospitals and day procedure centres. All 1,440 public and private hospitals and day procedure centres in Australia have been assessed to the NSQHS Standards.

This report gives an overview of how the 10 individual standards in the first edition of the NSQHS Standards have supported improvements in patient safety across hospitals and other acute health services, bringing important benefits for consumers and patients.

It is important to acknowledge that the development, implementation and evaluation of the NSQHS Standards have involved a significant amount of work by many people and organisations. In many areas, the NSQHS Standards have complemented and enhanced related work already under way in individual hospitals, health services, state and territory governments and the Australian government.

This report outlines important improvements in safety and quality and governance of hospital and other acute health care services across Australia. While it shows there is much to commend, this report also provides evidence that more work is needed to continue to improve safety and quality in health services. This is especially important for patients who are at highest risk of poor outcomes. As well, there are limitations to the data currently available to evaluate whether safety and quality outcomes are continuing to improve. Better data are needed

to more fully understand the impact of governance systems and the varying systems and processes implemented by different services. Monitoring by boards, clinicians and hospitals has improved and is being used locally for quality improvement, but these data are not always available more widely. The Commission has undertaken work to strengthen local governance through its guides to boards and the development of a national model clinical governance framework. It is also developing a patient safety and learning model to support robust safety and quality monitoring systems. The NSQHS Standards are also being adapted for other types of health services.

The second edition addresses gaps identified in the first edition and also updates the evidence for actions, consolidates and streamlines standards and actions to make them clearer and easier to implement. The Commission worked closely with partners to review the first edition of the NSQHS Standards and develop the second edition, embedding person-centred care and addressing the needs of people who may be at greater risk of harm. The second edition of the NSQHS Standards sets requirements for providing comprehensive care for all patients, and includes actions related to health literacy, end-of-life care, care for Aboriginal and Torres Strait Islander people, and care for people with lived experience of mental illness or cognitive impairment.

The first edition of the NSQHS Standards has proven to be a landmark development in efforts to improve the safety and quality of health care. However, more work is needed to ensure Australians have access to the safest and highest-quality care possible. The Commission will continue working with the Australian Government, consumers, clinicians, states, territories, health services and the private healthcare sector to improve data collection and surveillance systems for improving the safety and quality of health care.

Evaluation of the second edition of the NSQHS Standards will begin in 2019. In future, consumer partnerships are expected to become more embedded in service development, planning, design and review, while new tools will become available for evaluating people's experience of their care and to assist services in evaluating person-centredness systematically. In helping to identify avenues for future development and improvement, this report can be seen as documenting an important milestone in an ongoing journey of continuous improvement.

# Overview of achievements of the first edition of the NSQHS Standards

## NSQHS Standard 1: Governance for Safety and Quality in Health Service Organisations

Create integrated governance systems that maintain and improve the reliability of patient care.

This Standard provides the safety and quality governance framework for health service organisations. It is expected that this Standard will apply to the implementation of all other Standards in conjunction with Standard 2, 'Partnering with Consumers'.

More than 80% of hospital boards said the NSQHS Standards had resulted in better integration of governance and quality improvement systems, and had clarified the roles and responsibilities of the board regarding safety and quality. They have also provided a common framework and incentives for aligning safety and quality expectations between health services and state and territory health departments. However, it was not possible to assess from this self-report survey how effective the governance systems were, and there was variation in how services were using the systems and processes they have implemented.

## NSQHS Standard 2: Partnering with Consumers

Create a health service that is responsive to patient, carer and consumer input and needs.

This Standard provides the framework for active partnership between patients, consumers, carers and health services. This Standard should apply to the implementation of all other Standards in conjunction with Standard 1, 'Governance for Safety and Quality in Health Service Organisations'.

Health services consistently described this as the most challenging of the NSQHS Standards to implement, and there was considerable variation in its implementation. Nonetheless, NSQHS Standard 2 provided the impetus for significant changes by raising the profile of consumer participation, empowering staff to act, and creating structures and processes to support this. Consumer participation is leading to positive outcomes for health services, including in communications, service design, governance and delivery. Useful mechanisms include: setting up structures where clinicians and consumers could work together; gaining the support of champions who could share positive outcomes of consumer partnerships; providing staff training on the importance of consumer participation and partnerships; and involving staff in recruiting the consumers with whom they partner. NSQHS Standard 2 has also helped services identify gaps in how they partner with consumers, and opportunities for improvement.



## NSQHS Standard 3: Preventing and Controlling Healthcare- Associated Infections

Prevent patients from acquiring preventable healthcare associated infections and effectively manage infections when they occur by using evidence-based strategies.

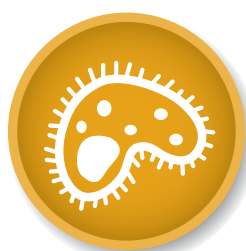
Healthcare-associated infection (HAI) is one of the most common adverse events in hospitals. Around 50% of HAIs are thought to be preventable through infection prevention and control, cleaning, disinfection and sterilisation, and antimicrobial stewardship. Rates of HAIs associated with serious morbidity have fallen between 2010 and 2014.

Significant changes include improvements in hand hygiene, a 7.6% reduction in the use of antimicrobials in hospitals between 2011 and 2015, a 13.5% reduction in *Staphylococcus aureus* bacteraemia (SAB) between 2010 and 2014, while the national rate of central line-associated bloodstream infections (CLABSI) almost halved from 1.02 to 0.64 per 1,000 line days from 2012–13 to 2013–14. Infection control practitioners and other staff implementing NSQHS Standard 3 report that it has had a significant impact in raising the profile of HAIs, and stimulated improvements in education and training, as well as the development of antimicrobial stewardship strategies.

## NSQHS Standard 4: Medication Safety

Ensure competent clinicians safely prescribe, dispense and administer appropriate medicines to informed patients and carers.

Medicine incidents continue to be the second most common type of incident reported in Australian hospitals. Medication errors can be prevented through standardisation and systemisation of processes, particularly by the documentation of medication histories, allergies and changes, and the communication of these when a patient enters, leaves or moves around a hospital. Failure to document a patient's previous drug reactions and medication history can lead to inadvertent prescribing of inappropriate medicines, exposing them to a risk of adverse events. An increasing number of hospitals participate in national audits of the National Inpatient Medication Chart (NIMC), which allow hospitals to monitor their compliance with the NIMC safety features and identify areas for improvement. Between the NIMC National Audits in 2011 and 2014, accredited hospitals showed greater improvements in documentation of adverse drug reactions and of medication history than did unaccredited hospitals. An increase in medication documentation was recorded in Queensland since the NSQHS Standards were implemented. In South Australia, a reduction of almost 75% in serious medication incidents was recorded between 2011 and 2015, from 59 to 16 incidents in that time.



## NSQHS Standard 5: Patient Identification and Procedure Matching

**Correctly identify all patients whenever care is provided and correctly match patients to their intended treatment.**

NSQHS Standard 5 requires that there be an organisation-wide system for identifying consumers and correctly matching them to their care. This entails a set of policies, procedures and protocols designed to ensure consistent and correct identification of a consumer at any point during their admission or course of treatment. Patient identification bands (ID bands) are a critical tool for preventing errors associated with the identification of patients, such as surgery on the wrong patient or body part. NSQHS Standard 5 is addressing concerns about patient safety incidents relating to missing or incorrect ID bands and potential safety risks arising from the proliferation of different coloured alert bands. Anecdotal reports suggest fewer services are using coloured ID bands, while analysis of the Queensland Bedside Audit results showed that use of a single ID band increased from 74% of all patients with ID bands in 2011 to 96% in 2015.



## NSQHS Standard 6: Clinical Handover

**Ensure there is timely, relevant and structured clinical handover that supports safe patient care.**

NSQHS Standard 6 aims to ensure there is timely, relevant and structured clinical handover that supports safe patient care. Clinical handover is a high-risk process when care of a patient is transferred between units, physicians and teams, to home or other health facilities. It forms an important element of clinical communication. When poorly conducted, clinical handover can result in serious adverse events arising from delays in diagnosis or treatment, miscommunication about tests, and the administration of incorrect treatments or medications. The variability of processes for clinical handover presents a safety risk for patients. NSQHS Standard 6 built on wide-ranging work over some years to improve clinical handover, and provides a national framework to support structured clinical handover. However, it was narrowly interpreted and implemented in the context of shift-to-shift handover only. This is one of the reasons why the second edition of the NSQHS Standards incorporates clinical handover into a renamed Communicating for Safety Standard covering clinical communications more broadly.



## NSQHS Standard 7: Blood and Blood Products

Ensure there is timely, relevant and structured clinical handover that supports safe patient care.

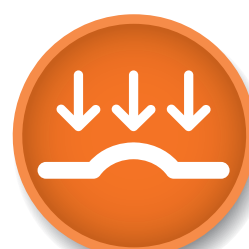
Australia has one of the safest blood supplies in the world. However, the transfusion of blood and blood products is not without risk and can lead to complications and adverse outcomes for patients. Blood and blood products should only be given when clearly indicated and when the expected benefits to the patient are likely to outweigh the potential risks. The National Blood Authority, in partnership with leading clinicians, has promoted evidence-based patient blood management. NSQHS Standard 7 describes the systems and strategies for the safe, effective and appropriate management of blood and blood products, providing an additional incentive for services to apply best practice. It requires organisations to be consistent with national evidence-based guidelines for pre-transfusion practices, prescribing and use of blood and blood products. The implementation of Standard 7 resulted in more appropriate use of blood products with a reduction in yearly red blood cell issues by the National Blood Authority between mid-2010 and mid-2015, from approximately 800,000 units to 667,000 units.



## NSQHS Standard 8: Preventing and Managing Pressure Injuries

Prevent patients from developing pressure injuries and effectively managing pressure injuries when they do occur.

Pressure injuries are a known, preventable and relatively common complication associated with immobility, extended bed rest and other characteristics of acute health care. The risk factors are well understood, and evidence-based guidelines for prevention and management are available. NSQHS Standard 8 requires health services to screen patients for risk of pressure injuries and to conduct comprehensive risk assessments and regular skin assessments for those at risk, as well as preparing and implementing pressure injury management plans and devices. NSQHS Standard 8 has worked hand-in-hand with state-based public sector initiatives in reducing the prevalence of pressure injuries. In the second edition of the NSQHS Standards, the prevention and management of pressure injuries is incorporated in a Comprehensive Care Standard, recognising that vulnerable patients at high risk of acquiring a pressure injury often have other factors that increase their risk of adverse events, such as cognitive impairment. This approach to identifying and managing a patient's overall burden of risk will decrease the likelihood of adverse events such as pressure injuries.





## NSQHS Standard 9: Recognising and Responding to Clinical Deterioration in Acute Health Care

**Ensure a patient's deterioration is recognised promptly, and appropriate action is taken.**

When patients show signs of clinical deterioration, the earlier these are recognised and acted upon, the better the outcomes. Serious adverse events such as unexpected death and cardiac arrest may be avoided altogether, and fewer interventions may be needed to stabilise the patient. Over the past several years, hospitals of all sizes in locations across Australia have improved their systems for recognising and responding to clinical deterioration. In 2015, 93% of respondents to a Commission survey reported that their hospital collected data about the effectiveness of their recognition and response systems, almost double the proportion in a 2010 survey (48%). Recognition and response systems have become better embedded in clinical governance systems, with 86% of respondents in 2015 reporting a governance committee, compared with 72% in 2010, while 84% reported regularly to the executive, compared with 65% in 2010. These improvements reflect the impact of NSQHS Standard 9, as well as work by many states and territories, and initiatives in individual hospitals over more than 20 years. These improvements in systems are associated with improvements in patient outcomes: there was a 50% decrease in cardiac arrest rates in NSW between 2010 and 2016, and Victorian hospitals report a 25% relative reduction in monthly cardiac arrest rates. The focus of Standard 9 in the first edition of the NSQHS Standards was the detection of physical deterioration. In the second edition of the NSQHS Standards the scope is expanded to include the detection of acute deterioration in mental state, including delirium, and emotional and cognitive changes leading to suicide and aggression.



## NSQHS Standard 10: Preventing Falls and Harm from Falls

**Reduce the incidence of patient falls and minimise harm from falls.**

Falls are a significant safety issue, with all age groups being at risk of falls and elderly people at greater risk of serious harm from falls. Proactive detection and implementation of strategies to reduce risk are thought to reduce the harm from falls and have some impact on the rate of falls. Falls have been a long-standing patient safety issue, and programs existed in many states and territories before the introduction of the NSQHS Standards. In Queensland bedside audit data, the proportion of patients audited who were at risk and had a falls prevention plan increased between 2011 and 2015, from 75% of at-risk patients in 2011 to 86% in 2015. In South Australia, the rates of the most serious types of falls reported in the SA Safety Learning System have fallen since 2011–12. As with pressure injuries, implementing the Comprehensive Care Standard in the second edition of the NSQHS Standards will enable better identification and management of all the patient's risk factors, particularly those that can lead to a fall.





# NSQHS Standard 1 – Governance for Safety and Quality in Health Service Organisations

## Intention

To create integrated governance systems that maintain and improve the reliability and quality of patient care as well as improve patient outcomes.

## Introduction

Internationally, patient safety and the quality of care are no longer seen as solely the responsibility of frontline clinicians, and the critical role of governance in driving safety and quality improvements in health care has been recognised.<sup>2-5</sup> NSQHS Standard 1 outlines an integrated approach to governance that includes health service executives, boards, clinicians and consumers, with governance roles and responsibilities expanded and more clearly defined. The responsibilities include planning, reviewing, implementing and maintaining integrated governance systems for patient safety and quality, monitoring of incidents and other data, oversight of the clinical workforce and supporting patient rights and engagement.

NSQHS Standard 1 provides a clear statement of the expectations of those in governance roles, while allowing services to monitor and act on issues in a manner appropriate to their local situation. For some services the changes required to meet these expectations were greater than others; however, surveys conducted in 2015 suggest overall improvements in how safety and quality is managed at a senior level.

“ It is my belief that the Standards have been a catalyst for improvements and that the focus on quality and safety is greater at the board level since the outcomes resulting from the Standards have been made more explicit.”  
(Governance survey)

## What has been achieved?

The Safety and Quality Governance Survey of hospital boards or their equivalent (the governance survey) found a widespread perception that the NSQHS Standards had improved care, with 77% agreeing that they had improved patient safety in their hospital (Figure 2.1). Respondents also said the NSQHS Standards had:

- Resulted in better integration of governance and quality improvement systems (84%)
- Clarified the roles and responsibilities of the board regarding safety and quality (82%)
- Increased engagement with clinicians (72%) and consumers (72%).

Responses reflect progress in achieving the aim of integrated governance. Similar themes emerged in interviews with state and territory safety and quality representatives conducted around the time of the survey.

- “ There is engagement of executive, managers, and staff around a common standard to a level not seen with previous accreditation.”  
(Governance survey)
- “ The real difference is the effort being made to have doctors chair the individual Standards groups, where previously it was more likely to have been an executive director. I think having doctors chair the Standards groups has been easier to achieve with these Standards because they are about, and themed in relation to, clinical issues.”  
(State/territory representative)

From a broader system perspective, the NSQHS Standards have provided a common framework and incentives for aligning safety and quality expectations between health services and state and territory health departments. Just over half (53%) of boards agreed the NSQHS Standards had clarified the expectations of health departments (Figure 2.1), while feedback from health departments suggested the NSQHS Standards had increased visibility of safety and quality matters and improved their ability to monitor and act on issues.

**“ The Standards focused attention and leadership at a local level, and gave safety and quality a driver that did not previously exist. Implementation previously lagged despite state policy.”**

(State/territory department safety and quality manager)

**“ Health service organisations used to undertake accreditation without much departmental involvement – the department was hands off and didn’t require accreditation documentation. The department now sees more information from accreditation reports and is contributing actively to quality improvement.”**

(State/territory representative)

**“ We have shifted from being manager of the service to managing the system, so we are ensuring services have the right processes and systems in place – and the Standards support this.”**

(State/territory representative)

## Increased awareness of safety and quality at board level

One indicator of board engagement is the amount of time spent on safety and quality issues. Most respondents reported that the board spent 20% to 30% of its time on safety and quality issues over a 12-month period; however, responses varied from below 10% to 80% or more.

Responding to a recognised need, the Commission published the *Guide to the National Safety and Quality Health Service Standards for health service organisation boards* in April 2015.<sup>6</sup> This guide offered advice to boards in exercising their governance responsibilities and accountability in the implementation of the Standards. It also provided a tool for boards to undertake a gap analysis to identify potential areas

of vulnerability and opportunities for improvement. In the governance survey, 87% of respondents had seen the *Guide to the National Safety and Quality Health Service Standards for health service organisation boards*, and 95% of them had found it to be useful.

## Monitoring and reporting

Survey respondents agreed that monitoring of safety and quality indicators by boards had improved in response to NSQHS Standard 1, with increases in the frequency and scope of information and data provided to the board (78%), and greater awareness of issues and risks at board level (85%), leading to better management (72%) (Figure 2.1).

**“ As a board member, I appreciate the monitoring and audits required of all health services as they allow me to feel confident that the health service I represent is a safe environment for both patients and staff.”**

(Governance survey, 2015)

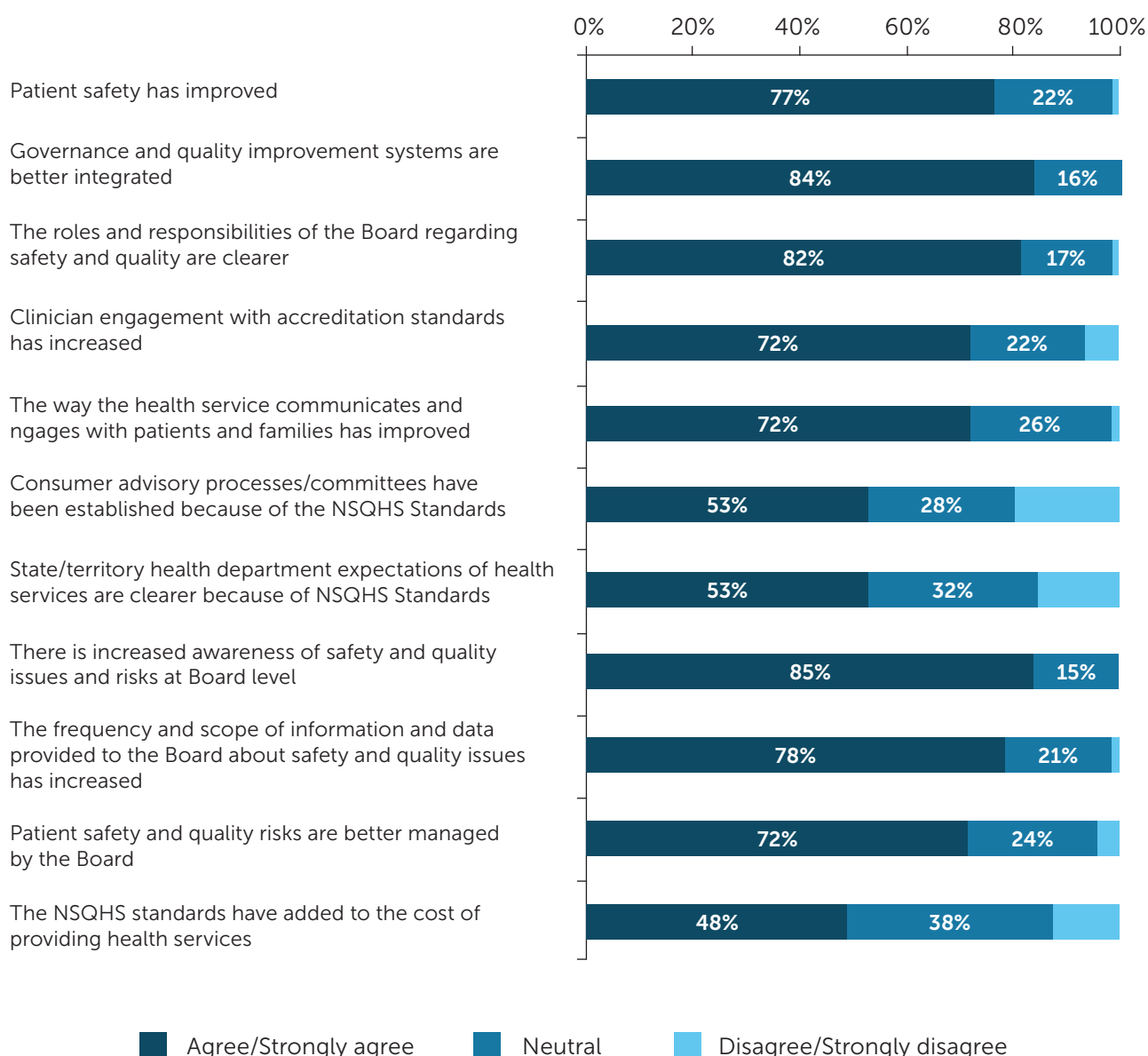
The types of safety and quality data and measures monitored by boards varied substantially. Most respondents said their board monitored serious incidents at every meeting (70%), and 57% monitored a dashboard or scorecard of indicators.

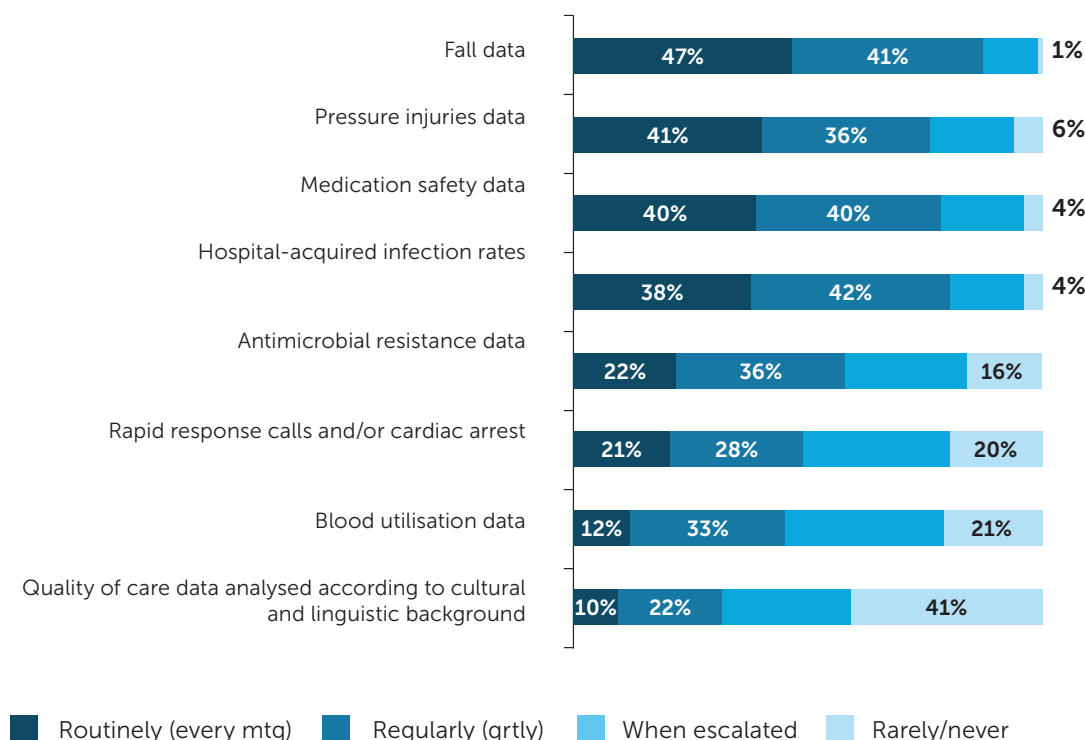
Routine monitoring of safety data in specific areas of the NSQHS Standards was more variable. Monitoring of data at each board meeting was most common for falls (47%), pressure injuries (41%), medication safety (40%) and healthcare-associated infections (39%) (Figure 2.2).

More than three-quarters (77%) of boards received reports on the safety culture of their organisation, and 45% said these reports had been initiated or enhanced while implementing the NSQHS Standards.

Many health services use external benchmarks to compare their own performance with other health services through initiatives such as the Health Roundtable, as well as state or territory reporting and feedback mechanisms where these exist (such as Bureau of Health Information reports in NSW). In some cases, the increased emphasis on monitoring in the NSQHS Standards has encouraged better use of existing quality activities, as with the clinical governance reports on surgical mortality audit outcomes led by the Royal Australasian College of Surgeons (RACS), described in Case Study 1.1.

**Figure 2.1: Changes in governance for safety and quality since the NSQHS Standards were introduced (N=82)**



**Figure 2.2: Which aspects of the NSQHS Standards are boards monitoring? (N=82)**

## Effort and investment

Less than half of respondents agreed there had been an additional cost associated with the NSQHS Standards (Figure 2.1), with NSQHS Standards 1, 2 and 4 described as requiring the greatest additional resources. It is likely, however, that these resources have been invested in updating systems and processes that warranted improvement, with reports suggesting that the NSQHS Standards helped direct resources to areas that previously had not been prioritised (such as antimicrobial stewardship and consumer engagement). Only 11% of respondents believed that the NSQHS Standards had diverted attention away from other important areas. Surveys on implementing NSQHS Standard 3 and recognition and response systems suggest that most changes were made by services reorganising systems or reallocating efforts, rather than with additional funds.

**“ It’s actually been easier for CEOs to be very focused across the system – it’s made it a lot easier to determine priorities.”**  
(State/territory safety and quality representative)

## Training and awareness

Of boards surveyed:

- 60% provided formal safety and quality training for boards at orientation, about half of which (52%) had initiated or enhanced training when implementing the NSQHS Standards
- 42% provided regular (at least annual) safety and quality training for boards, with most of these services (63%) having initiated or enhanced training when implementing the NSQHS Standards.

## Colleges

The implementation of the NSQHS Standards has had a flow-on effect into clinical training, as the focus on a whole-of-organisation responsibility for safety and quality has sharpened around a clearly defined and well-accepted set of actions. The essential overarching governance and leadership for safety and quality, articulated in NSQHS Standard 1, is becoming more prominent in clinical education.



**Table 2.1: Proportion of professional clinical colleges providing patient safety training (N=14)**

Topic area	Postgraduate training	Continuing professional development
	Yes	Yes
Identifying and analysing patient safety risks	93%	71%
How to effectively participate in peer review (e.g. morbidity and mortality reviews)	79%	57%
Correct patient/site/procedure matching	71%	42%
Incident reporting	86%	50%
Undertaking root cause analysis	71%	57%
Standards for clinical documentation	57%	21%
Other patient safety topics not listed above	71%	57%

Source: Commission survey of specialist medical colleges, 2014

In June 2014, the Commission conducted a survey of 14 specialist medical colleges to understand how their postgraduate training and continuing professional development (CPD) programs align with the NSQHS Standards (Table 2.1).

The survey found that:

- Most colleges (64%) include an overview of clinical governance in health service organisations as part of their postgraduate training programs, and 50% include this topic in their CPD curriculum
- Quality of care is commonly covered, especially in postgraduate training programs, and these include the use of clinical indicators for analysing care and providing and receiving feedback on performance and audit results
- Postgraduate training on using clinical guidelines in practice was provided by 93% of colleges; however, only 57% included training on how to assess guideline quality.

Key safety and quality topics (listed in the survey) were compulsory in less than one-third of training programs.

## Where to from here?

Integration of governance and quality improvement systems is improving, according to the governance survey. Clearly the NSQHS Standards have reinforced the importance of monitoring and acting on safety. However, it was not possible to assess from this self-report survey how effective the governance systems were, and there is obviously variation in how services are using the systems and processes they have implemented. For example, 70% of boards reviewed serious incidents at every meeting and 59% reviewed investigations actions made in light of those incidents.

The Commission has undertaken further work to strengthen local governance through its guides for boards and the National Model Clinical Governance Framework, released in November 2017.<sup>5</sup> The National Model Clinical Governance Framework is based on the second edition of the NSQHS Standards, and includes five components: governance, leadership and culture; patient safety and quality improvement systems; clinical performance and effectiveness; safe environment for the delivery of care; and partnering with consumers.

A robust safety and quality monitoring system measures multiple elements of patient safety, and the Commission has been progressing work on a range of measures that can be monitored together to obtain a comprehensive and accurate picture of patient safety. To date, work has focused on some of the individual elements required for this – for example, adherence to the NSQHS Standards, the core hospital-based outcome indicators (CHBOIs), the hospital-acquired complications list (HACs), and the Australian Hospital Patient Experience Question Set. The Commission is currently working to synthesise these elements into an integrated patient safety and learning model.

## Case Study 1.1

### Surgical mortality reports to boards

Many quality improvement initiatives existed before the NSQHS Standards, but were limited in their reach. This example illustrates how the NSQHS Standards have helped to integrate and align efforts towards a common goal of patient safety. The Australian and New Zealand Audit of Surgical Mortality (ANZASM) has always provided reports to surgeons in hospitals with the goal of improving quality. Following introduction of the NSQHS Standards, ANZASM started providing clinical governance reports to senior executives and governing bodies, increasing the visibility of quality issues.

#### How does the surgical mortality audit support quality and safety?

ANZASM collects data from surgical mortality audits conducted in each state and territory, and is coordinated by the Royal Australasian College of Surgeons (RACS). The aim of the audit is to identify system or process errors, which can highlight priorities for improvement. National audit results have been published since 2009. In 2014, 97.5% of surgeons, 100% of public hospitals and 97.5% of private hospitals providing surgical services participated in the audit.

#### Changes made since the NSQHS Standards were introduced

Action 1.2.1 of the NSQHS Standards states that: 'Regular reports on safety and quality indicators and other safety and quality performance data are monitored by the executive level of governance.'

In 2014, the RACS started producing clinical governance reports for individual hospitals, which include:

- Data on surgical mortality
- Potentially preventable deficiencies of care identified by peer review
- Comparisons with state and national data for similar hospitals.

## Case Study 1.1 continued

“ We were collecting all this data for educational purposes, and with the clinical governance reports we are giving the hospitals something they can use practically. The reports were very much influenced by the Standards – we were looking for a way our data could be made more use of, and there is no doubt that hospitals are pursuing ways to satisfy the Standards. Giving them the information in a form that helps hospitals satisfy Standard 1 meant they were more likely to support it and make use of it.”

Professor Guy Maddern, Chair,  
ANZASM Steering Committee

### How are the reports being used?

Clinical governance reports are being delivered to hospital CEOs, directors of surgery, and safety and quality managers.

The reports are also delivered to state and territory health departments, allowing a statewide view of surgical mortality.

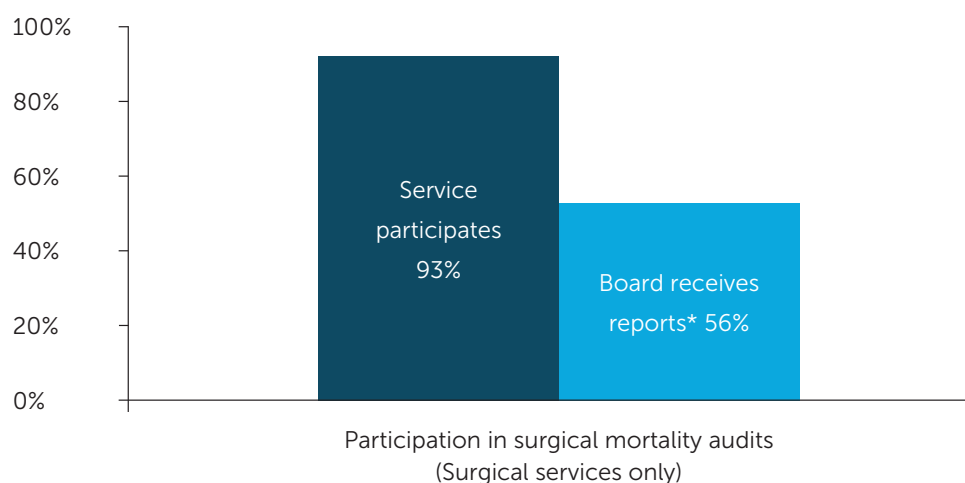
“ We had broad mortality data before this report but not this level of detail. We find it invaluable because now we can see what we should target with quality improvement activities such as grand rounds and webinars. The reports are telling us a story about our care, and this given opportunities for quality improvement rather than blame.”

Ms Michele McKinnon, Director,  
Safety and Quality, SA Health

### How many boards receive surgical mortality audit reports?

While 93% of services in the governance survey participated in the surgical mortality audits, the governing body reviewed reports in only 56% of those services (Figure 2.3).

**Figure 2.3: Services participating in the Surgical Mortality Audit where the board receives mortality reports (N=59)**





# NSQHS Standard 2 – Partnering with Consumers

## Intention

**To create health services that are responsive to patient, carer and consumer needs.**

## Introduction

NSQHS Standard 2 was introduced in the context of a growing international movement towards consumer-centred care. At the time of implementing the NSQHS Standards, some local, state and territory programs to support consumer-centred care existed, but for many this was a new and emerging approach to planning, designing and reviewing health care. Consequently, NSQHS Standard 2 was consistently described as the most challenging for health services to implement. It is clear that the articulation of a standard and the requirement for accreditation in this area has prompted action and strategic thinking to drive implementation of initiatives, beginning a process of cultural change that might otherwise have received in-principle support only.

“ The NSQHS Standards were the first time that the consumer’s role in decision-making in hospital systems had been recognised. It meant that there was legitimacy and a need to devote some support into it.”  
(Executive staff)

## What has been achieved?

In 2013 the Commission conducted a survey in response to feedback that some health services had found implementation of NSQHS Standard 2 challenging. This initial survey found that while some actions were perceived as relatively easy to achieve, others were harder to understand and implement. For example, consulting with consumers to provide feedback on patient publications and incorporating their feedback was easier to implement, while involving consumers and carers in clinical workforce training and in governance was more difficult. Feedback from the survey indicated that some services found it hard to understand the purpose and intent of NSQHS Standard 2, to

obtain executive and management support and to determine strategies for partnering with consumers.

In 2014–15, the Commission initiated a Consumer Participation Study to explore in more detail how NSQHS Standard 2 was being implemented in hospitals. This qualitative research project involving staff and consumer representatives was conducted in five health services and guided by three questions:

1. Have the NSQHS Standards influenced how acute health services engage with consumers (in health service governance, planning, design and delivery), and how?
2. What mechanisms, processes and supports are enabling the implementation of NSQHS Standard 2, and what are the barriers?
3. What are the outcomes of successful consumer participation and partnership activities?

The overall finding of the study was that the NSQHS Standards have provided the impetus for change, a key step in the organisational change process required to implement consumer participation on a broad scale.

“ There were a few things that we needed to achieve that Standard 2, being part of accreditation, really gave us the authority or the mandate to get these things going that, probably, may have taken a bit longer otherwise.”  
(Staff)

“ It gave us permission to do things that a lot of us had wanted to do beforehand but hadn’t really been able to get the traction to do them.”  
(Staff)

There was evidence that consumer participation is leading to positive outcomes for health services, including in communications, service design, governance and delivery. The study suggests the findings are likely to be replicated across the Australian healthcare system over time as the process of change initiated by NSQHS Standard 2 matures.

## How have the NSQHS Standards influenced the way health services partner with consumers?

The health services involved in this research were already partnering with consumers to varying degrees, but the NSQHS Standards raised the profile of consumer participation and empowered staff to act. The need to achieve accreditation against the NSQHS Standards has been instrumental in driving change, and good accreditation results have shown services that their efforts are working.

“ There’s been a long strategic focus on engaging consumers, partnering with consumers in that transformation journey and getting feedback. The difference was it was done out of good intention. It wasn’t necessarily applied with a specific framework or standard in mind...this Standard has given us a bit more structure and enabled us to monitor and report our performance as part of our overall governance framework.”  
(Staff)

The actions outlined in NSQHS Standard 2 have helped services identify gaps in how they partner with consumers and opportunities for improvement. For example:

- Four services spoke about the NSQHS Standards helping them to identify new approaches for engaging with consumers
- One service had developed a philosophy for consumer participation following review of the NSQHS Standards, in consultation with consumer representatives
- One service had ‘freshened up and strengthened’ their relationships with a local university and a Medicare Local based on their review of the NSQHS Standards (Medicare Locals were the predecessors to the current primary health networks).

“ We also did a bit of a gap analysis at that time. People had to actually write down what they did. It identified what we actually were doing – I think some people thought nothing was happening, and actually there were good things going on. But it also identified the gaps and the lack of knowledge in staff, and also I think it identified our champions: where are the people who think it’s a good idea? And that was great.”  
(Staff)

“ I think what we are trying to do in terms of this is frame them [the Standards] in a way that they are positive and constructive. And there’s so much creativity [within the Standards] that you can do that. Just because they are there doesn’t mean that that’s how you are meant to do them, they are not prescribed that way. You put your local identity and flavour to them. And that’s what is exciting about them.”  
(Staff)

## What supports the implementation of NSQHS Standard 2 (and what are the challenges)?

A range of factors were identified in the organisations studied, suggesting that a change process was under way, consistent with the literature on organisational change.<sup>7</sup>

### Clear vision and strategy

Services that had a clear vision and strategy for partnering with consumers, which is communicated effectively across the health service, were most successful in embedding consumer participation in their organisational processes.

“ ...and the empowering of consumers, while they’re sitting in front of a clinician, is the core of what this is all about. Everything we’re doing with consumers in planning and review of statistics, it’s all good stuff, but the nuts and bolts of empowering those people is so when they sit down with a doctor or a clinician or a nurse that they’re informed.”  
(Staff)



All services interviewed had worked to integrate their strategies for partnering with consumers with appropriate business portfolios (such as communications, corporate services, or a dedicated patient experience and consumer participation directorate) to ensure the importance of the strategy was recognised and to facilitate implementation of the strategy. Three health services had developed service-wide policies around consumer participation.

## Leadership and dedicated resources

Strong executive leadership, especially visible actions to demonstrate the importance of partnerships with consumers, was an important factor in implementation. At one service the director of nursing and a quality and safety manager regularly attend ward rounds alongside a consumer consultant; at another service, executives and senior administrators regularly attend their consumer advisory group. A staff member with primary responsibility for managing consumer participation efforts, with the right professional and interpersonal skills, and ‘a strong passion’ for the role, was also critical in ensuring the success of consumer participation efforts.

Some examples of strong and proactive leadership described by participants are listed below:

A CEO facilitated staff training about consumer participation. This was a clear demonstration of the value of consumer participation, highlighting to staff that engaging with consumers is a core workplace responsibility and required for excellent clinical practice.

**The chairman** of one health service board regularly attended meetings of the consumer advisory group to seek direct feedback on strategic issues. A consumer on this group described how this has been successful in lifting the profile of the group and of consumer participation more broadly. Consumers at the service felt there had been a lot more focus on asking consumers to participate on boards and service committees, and one consumer said this had been driven by executive staff within the health service.

**Executives and senior administrators** at one health service had been attending a consumer advisory group over a number of years. They presented data on quality and safety and from patient satisfaction surveys. This created a direct channel of communication to consumers, who could ask questions about the data.

“ This is probably the most enjoyable thing in my career that I’m experiencing at the moment because I’m bringing the patient, doctors, nurses all together. It’s just remarkable. It’s changed so much.  
(Staff)

## Activities to involve health service staff and local partners in consumer participation

Interviewees at all services expressed the belief that all staff needed to engage in partnerships with consumers, to ensure partnerships became embedded within the service culture. Nonetheless services reported that some staff were still hesitant about engaging with consumers because they did not understand the need, were reticent about consumers reviewing their practice, or did not feel they had the time or skills needed to best engage consumers.

- “ I mean it’s always going to risk being a token thing because people see their clinical work as coming first and they haven’t quite made that link that if they do engage the consumers their clinical work will improve.  
(Consultant)
- “ She was telling me, ‘I’m a clinical nurse but I don’t know how to talk to patients in a forum style or to get their feedback’.  
(Management staff)

The five health services reported a number of mechanisms used for encouraging staff to engage in partnerships with consumers. These included:

- Setting up structures in which clinicians and consumers could work together
- Gaining the support of champions who could share positive outcomes of consumer partnerships
- Providing staff training on the importance of consumer participation and partnerships
- Involving staff in recruiting the consumers with whom they partner.

Services were using local partnerships to connect with experts around consumer partnerships and wider networks of consumers. Partnerships had been established with other local health services (including Medicare Locals), universities, external consumer groups and experts in consumer participation.

## Approaches to support consumers to participate meaningfully

Services were using a range of approaches to recruit a broad pool of consumer representatives, including consumers with particular skills and characteristics. This included identifying consumers who reflect the diversity of their consumer population (as suggested in action 2.1.2 within NSQHS Standard 2). Three services had implemented approaches to identify consumer representatives from culturally and linguistically diverse backgrounds and younger consumers, but this remained a challenge.

Services that used a broad range of activities to engage consumers, including activities that involve varied degrees of commitment (in time and skills), found it easier to match consumers with activities that suited them and through which they could best add value to the service.

Some consumers were unsure of what was expected of them in their roles, or felt that they did not have sufficient knowledge (particularly about governance structures and clinical terminology) to contribute effectively. In response, some health services were developing clearer terms of reference for consumer participation activities, and had identified that providing additional training, support and supervision to consumers was important to better support them in their roles.

## Broader influences on consumer participation

Broader influences, such as consumers' desires to be more involved in their health care, and an international movement towards person-centred care have also played a part in enhancing implementation of NSQHS Standard 2.

“ Consumers know exactly what their rights are, when they should have it, how they should have it, what their options are within health. Twenty years ago when I started in health, no-one would have asked the doctor a question.”  
(Staff)

## What are the outcomes of successful consumer participation and partnership activities?

There is significant evidence that engaging consumers in partnerships is valued by health services, is positively influencing service communications, design, planning and governance, and is supporting the delivery of person-centred services. Where consumer participation is working well, consumers act as advocates for the health service and provide information to the local community on behalf of the health service.

“ We have bi-monthly meetings now where I'll ask staff members to come and present to our CAG [consumer advisory group] on contemporary issues. When I first started out, it was me getting on the phone trying to get people to it and now I get people ringing me, asking me if they can come and present to the CAG.”

(Management staff)

Consumer representatives who feel their contribution is valued and useful are providing sustained support to health services over time. Consumer representatives responded well to being given a voice within their health service, and were more likely to continue to participate when they could see the results.

“ If you've got people on committees that are happy to stay in, you know, this committee, they're happy to stay because they're seeing a benefit. They're being involved, they're being valued, they can see that things are changing, they will stay. But if you have something that's not working, you'll have people dropping out.”

(Consumer representative)

## Where to from here?

The NSQHS Standards are helping services to embed consumer partnerships in service development, planning, design and review by describing what should happen, and providing guidance on how to partner with consumers in different settings and situations.

There has been great diversity in how health services have approached partnering with consumers and how it has been adopted within organisations. This has been influenced by organisational culture, leadership, investment and the extent to which meaningful engagement with consumers in these types of partnerships has become usual practice.

The review of the NSQHS Standards provided an opportunity to build on NSQHS Standard 2 and the second edition of the NSQHS Standards expands the requirements for partnerships with consumers to include partnerships between the patient and their clinicians in the patient's own care. These requirements include the need for shared decision making, informed consent, and the use of communication strategies to support more effective partnerships.

The evaluation of person-centeredness is a difficult measurement challenge but proxy measures such as patient-reported experience measures and patient-reported outcome measures can be used to reflect progress in this area. The Commission has released a national set of questions to support measurement of the experience of patients in hospitals, and is currently working on a national approach to the measurement of patient-reported outcome measures. These resources will assist services to evaluate person-centeredness systematically.

### Case Study 2.1

How long will my child be in hospital? Working with consumers to produce materials that support good health outcomes

When children and young people enter hospital, families are faced with a great deal of information and need to make decisions at a complex time. To assist families, staff at one hospital have consulted with consumers to develop and design a welcome pack that contains information about the hospital and information about how long their child is likely to stay as an inpatient. Staff explained that this information is needed because families sometimes believe it is best for children to stay in hospital for as long as possible after surgery, but the evidence is that this is not always the case and recovery can be safe at home.

Staff at this service have also worked with adolescent consumers to co-design a discharge information pack for young people. The pack includes information about how to talk with the doctor about ongoing care, a checklist with a relapse prevention plan, and details about what to do in an emergency. When asked about what kind of input consumers had on this, a manager involved in the co-design explained:

**“ Everything. So consumers designed – they were the ones that said ‘We want an envelope’ because ‘...when I put it in my handbag, if I have all the loose forms they get lost so an envelope is really easy’. An envelope is also subtle. It’s not like a big chunky book where people can [see it].”**  
(Manager)

The hospital planned to run a forum with the young people who had used the discharge information pack, to evaluate how well it was working before implementing it more widely across the health service.

## Case Study 2.2

### Leadership for NSQHS Standard 2

#### Service profile

Gold Coast University Hospital is a large public hospital in regional Queensland that opened in 2013, replacing a nearby service. It is a primary teaching hospital, with 750 overnight beds, an emergency department, a mental health unit and comprehensive cancer care services. The hospital was accredited under the NSQHS Standards in March 2014.

#### What change was needed and what enabled this?

Recent legislative reforms in Queensland set obligations for health service boards to report on consumer engagement at the board level. Introduction of the NSQHS Standard 2 coincided with these reforms and provided opportune guidance to the service on how to effectively engage consumers in governance.

Within the organisation, the delivery of NSQHS Standard 2 has an executive owner, who is the Chief Clinician for the organisation and the Executive Director of Clinical Governance, Education and Research. The role of the Executive Director of People, Systems and Performance is also strongly aligned with the delivery of NSQHS Standard 2, and this director has taken responsibility for ensuring consumer feedback informs the hospital's development, performance and improvement agenda.

Quarterly meetings of the Consumer Advisory Group (CAG) are attended by the Chair of the Gold Coast Hospital and Health Board. Executive staff have asked consumers to be consulted on a recent service redevelopment strategy plan and a multicultural engagement framework. Consumer participation is an agenda item on the Board's Safety, Quality and Engagement sub-committee, with feedback provided monthly to the Board. The hospital has resourced a dedicated full-time Community Engagement Officer, who has supported the delivery of their 2013–2015 Consumer Engagement Strategy. Together, this structure provides multiple layers of leadership, resources and commitment for consumer engagement and participation, across key parts of the organisation.

#### What are the outcomes?

Strong executive leadership for consumer participation has helped develop a service culture where consumer participation is valued and has become part of everyday practice. The importance of consumer participation was evident across the organisation, including executive staff, service managers, service staff and consumers.

- “ Our board chair who owns this Standard is very passionate about this Standard around the consumer engagement. I get an email prior to every board meeting with questions about where we're at, what we need to be doing next.”  
(Executive staff)
- “ Having commitment in the highest rungs of the organisation [is an enabler of implementation of NSQHS Standard 2].”  
(Service manager)
- “ I think over the last few meetings of the consumer advisory group, we're seeing engagement with the board and we're developing stronger communications with the decision makers. ”  
(Consumer representative)

#### What's next?

By November 2014, the service's 2013–2015 Consumer Engagement Strategy had been largely implemented – assisted by the efforts of the Community Engagement Officer. The service was planning its next three-year strategy, and initial consultations with consumers and staff indicated that the focus of this strategy could include: building the community profile of the CAG, especially in culturally and linguistically diverse communities; providing ongoing training for consumers in representative roles; and providing more feedback to consumers who sit on committees about the outcomes of their participation.

## Case Study 2.3

### Fabio the frog - using the National Paediatric Toolkit to ask for paediatric patient feedback

#### Service profile

The Women's and Children's Hospital is a mid-sized public health facility in Adelaide that provides specialist care for children with chronic and acute conditions. The hospital includes an obstetrics unit, intensive care nursery and child and adolescent unit – with approximately 200 beds – as well as a Paediatric Emergency Department. The hospital is part of the wider Women's and Children's Health Network, which includes mental health services and community-based women's and family services across South Australia. The hospital was accredited under the NSQHS Standards in May 2013.

#### What change was needed and what enabled this?

Mechanisms for consumers to give feedback about their experiences as patients or carers have been in place at the hospital for a number of years. These included annual patient satisfaction surveys and ad-hoc surveys on specific issues, such as the redesign of their adolescent ward. While staff felt these surveys have been implemented well, they also highlighted some limitations.

**“ The response rate this year was not as good as we'd had before... And we also understand that while we get some really valuable feedback... it's limited to those people who have high literacy”**  
(Manager, service improvement team)

In view of this and the desire to gather more systematic feedback from the children and young people who use the service, the hospital has recently started using the National Paediatric Toolkit. The toolkit includes a tablet-based touch-screen survey to capture the voices of children and young people receiving care. Roll-out

in the paediatric wards began in 2015 following a successful 12-month trial in some inpatient and community-based services in 2014.

**“ And so in the trial sites, they are really chuffed about it. You can see how with a little bit of success, they really see what it means to have the voices of children present. And so it's really nice.”**

(Executive staff)

The toolkit features an animated character, Fabio the Frog, who guides children through the survey. A nursing unit manager commented on the utility of this approach:

**“ It does not rely on literacy levels, or confidence in speaking, reading or writing English. The youngest child to have completed it in the ward was three years old. The benefit is that it captures the experience of young children, which can be different from adults.”**

(Paediatric nurse unit manager)

Implementation has since been enabled by a partnership with SA Health, allowing the purchase of the licences for devices throughout the network

#### What are the outcomes?

By asking children about a range of their experiences – from how much they enjoy meals to feelings about treatment and discharge – the hospital gets a richer view of the quality of the care it provides. One staff member felt the survey has allowed them to gain a much deeper understanding of children's experiences, which can be quite different to those of parents and carers. For example, the pre-admission experiences of children who are 'having a wonderful time running around



## Case Study 2.3 continued

and playing' can be quite different to their parents or carers, who tend to give negative feedback about waiting times and noise levels. The toolkit also provides the hospital with live and continuous feedback that can be responded to immediately.

**“ ...You eat your meal and then have a survey about the food, the feedback goes straight back and gets implemented in the ward”**  
(Manager, Community Engagement)

### What's next?

Currently, the health service is working to tailor some of the language in the toolkit (which was developed in the UK) so that it better reflects common terms used by local Aboriginal communities and some newly arrived groups of migrants, such as people from West African nations. This will be important to enable more diverse participation and to ensure that culturally appropriate care is given.





# NSQHS Standard 3 – Preventing and Controlling Healthcare-Associated Infections

## Intention

To prevent patients from acquiring preventable healthcare-associated infections (HAIs) and to effectively manage infections when they occur, by using evidence-based strategies.

## Introduction

Healthcare-associated infections are one of the most common adverse events in hospitals and around 50% are thought to be preventable.<sup>8</sup> Bloodstream infections in particular are associated with considerable morbidity, mortality and cost.<sup>8</sup> Although not all HAIs can be prevented, it is possible for an institution to significantly reduce the rate of adverse events through activities such as infection prevention and control, cleaning, disinfection and sterilisation.

Appropriate use of antimicrobials in HAIs and other infections is an important aspect of managing resistance and preserving the effectiveness of these therapeutic agents.

The co-ordination of national action on HAIs was one of the first priority areas identified for the Commission. Work led by the Commission since 2008 – including the National Hand Hygiene Initiative, national surveillance for prevention of HAIs, and the antimicrobial stewardship (AMS) project – laid the groundwork for NSQHS Standard 3. These activities, as well as those led by state and territory health departments and clinical groups, have contributed to the improvements described below.

An important aspect of this work has involved facilitating the consistent measurement and reporting of infections through infections surveillance, which has been ongoing for several years in most states and territories, and has been co-ordinated and led by the Commission. The maturity of this work is reflected in the national

public reporting of rates of *Staphylococcus aureus* bloodstream infections (also known as *Staphylococcus aureus* bacteraemia, or SAB) and hand hygiene data, and the improvements in outcomes for both of these key measures.

As with other areas covered by the NSQHS Standards, the requirements to demonstrate compliance have helped to raise awareness of infection control procedures and systems across the health service, including at the executive level.

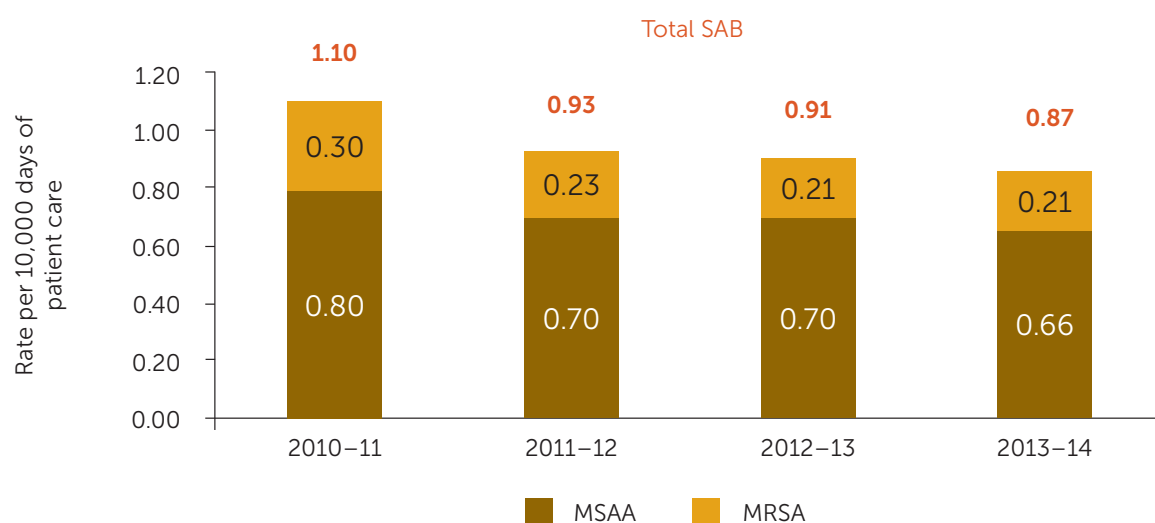
## What has been achieved?

### Reduced infection rates

Rates of HAIs associated with serious morbidity have declined between 2010 and 2014. These include the following:

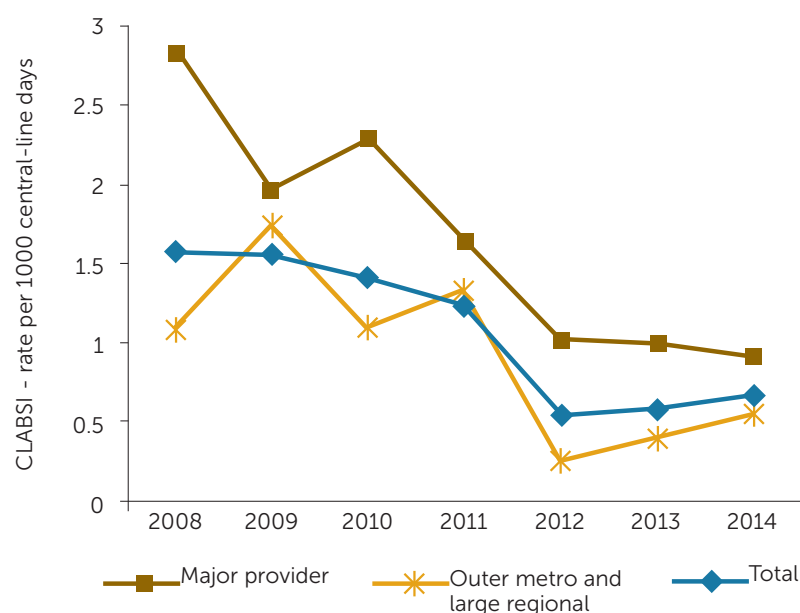
- *Staphylococcus aureus* bacteraemia (SAB) cases decreased by 13.5% from 2010 – from 1,876 to 1,621 cases between 2010 and 2014, a decrease from 1.1 to 0.87 cases per 10,000 patient days under surveillance. (Figure 3.1)
- The yearly number of methicillin-resistant SAB (MRSA) cases decreased from 505 to 389 cases over this period.<sup>9</sup> (Figure 3.1)
- The national rate of central line-associated bloodstream infections (CLABSI) almost halved from 1.02 to 0.64 per 1,000 line days from 2012–13 to 2013–14<sup>10,11</sup>, and similar reductions were reflected in state-based data such as those shown in Figures 3.2 to 3.4
- Surgical site infection rates for surgical procedures monitored in Western Australia and Victoria have declined overall since 2008.

**Figure 3.1: Healthcare-associated SAB rates in Australian public hospitals, per 10,000 days of patient care under SAB surveillance, 2010–2014**



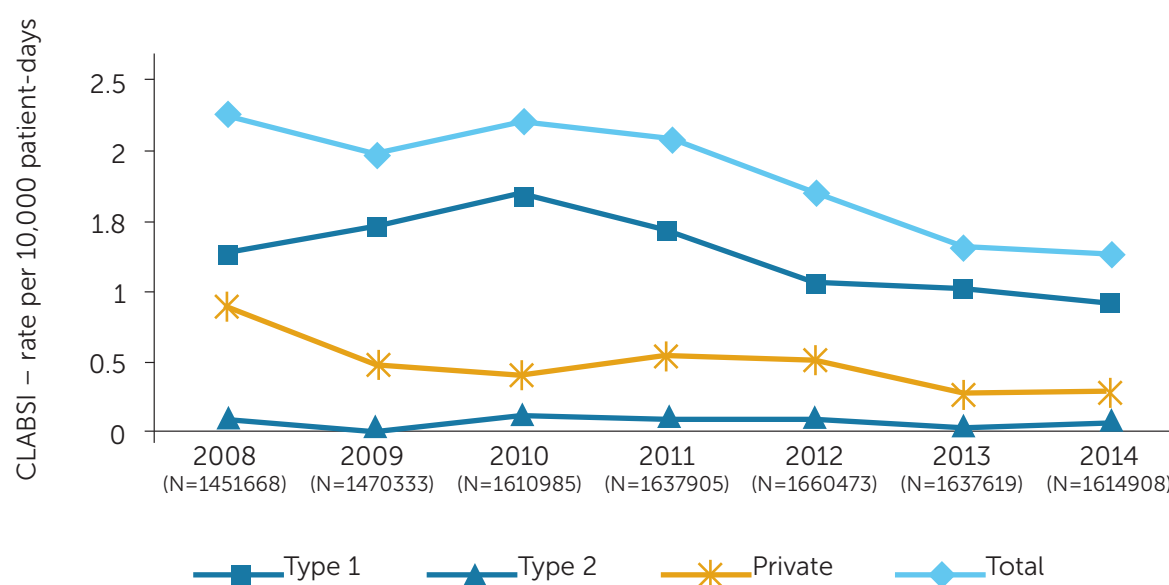
Source: Australian Institute of Health and Welfare. *Staphylococcus aureus* bacteraemia in Australian public hospitals 2013-14: Australian hospital statistics. Canberra: AIHW, 2014

**Figure 3.2: CLABSI rate per 1,000 central-line days, by hospital group, Victoria, 2008–2014**



Source: Victorian Department of Health and Human Services  
Small regional hospitals are included in the total but not charted separately due to small numbers.

**Figure 3.4: Central line-associated bloodstream infections (CLABSI) – rate per 10,000 patient days, SA, 2008–2014**



Source: SA Health

Note: These rates were extracted from SA Health's central surveillance database, which has greater hospital coverage than Australian and New Zealand Intensive Care Society (ANZICS). The rates presented have used patient-days as a denominator, since SA hospitals only began contributing central-line days from July 2012. Type 1 = AIHW peer group A1 (principal referral hospitals and Women's and Children's hospitals).

Type 2 = All other peer groups.

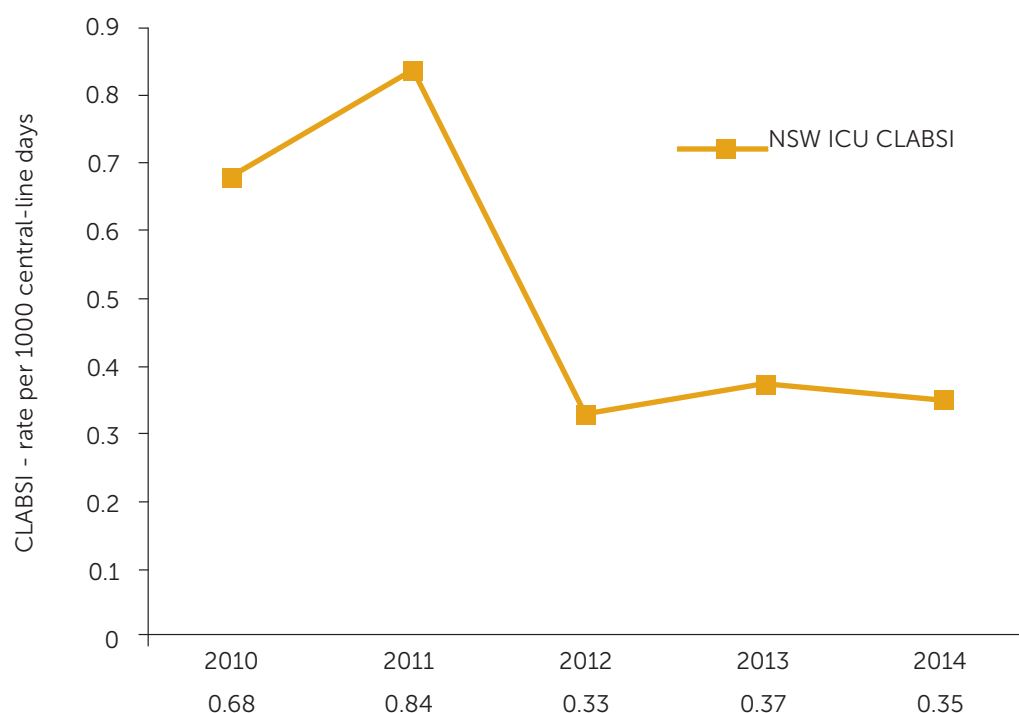
Includes both ICU-associated and non-ICU associated events

Total number of contributors varies between years:

2008–2009: 9 privates and 8 public metropolitan facilities

2010–2014: 9 privates, 8 public metropolitan and 6 major public country facilities.

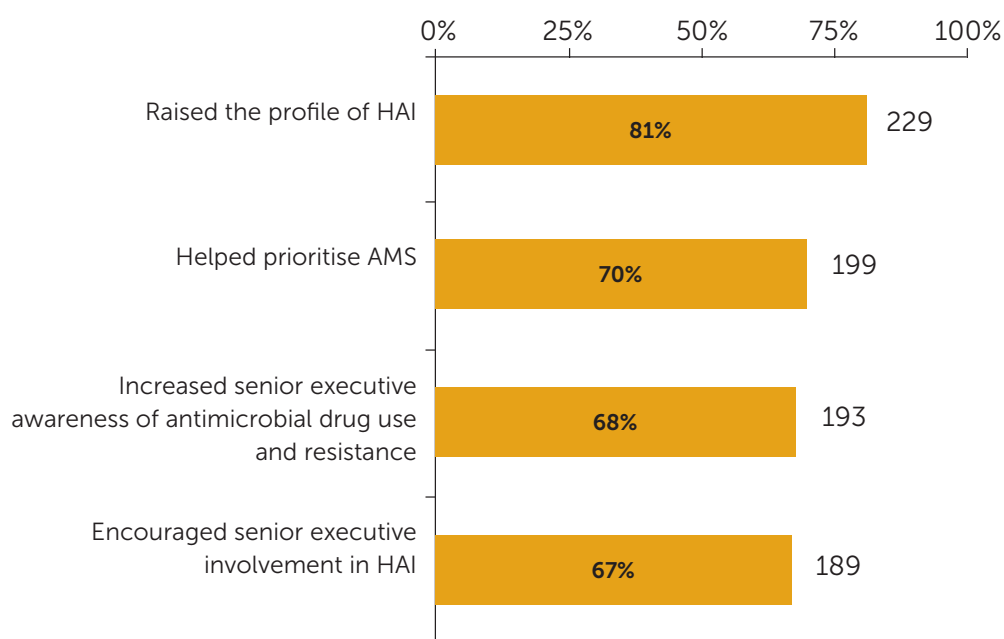
**Figure 3.4: CLABSI rates per 1,000 central-line days in ICU adult patients (public hospitals), NSW, 2010–2015**



Source: NSW Health Healthcare Associated Infections Data Collection, NSW Ministry of Health

Note: In 2007–2009, NSW initiated a CLABSI reduction program, which significantly reduced CLABSIs. A low level has been maintained since 2012.

**Figure 3.5: Overall impact of NSQHS Standard 3: Survey of relevant staff (N=284)**



Note: Missing data removed.



## Improvements in hospital processes and strategies

In 2015, the Commission surveyed infection control practitioners and other staff implementing NSQHS Standard 3. Most of those surveyed had been working in infection control at their service for more than four years and were able to describe the changes brought about by the NSQHS Standards.

Of 305 respondents, 74% agreed that NSQHS Standard 3 had made an overall positive impact on infection control strategies. As shown in Figure 3.5, there was strong agreement that it had:

- Raised the profile of healthcare-associated infections (81%)
- Encouraged senior executive involvement (68%)
- Resulted in the prioritisation of antimicrobial stewardship (AMS) strategies (70%)
- Increased senior executive awareness of antimicrobial drug use and resistance in their services (68%).

From the period before the NSQHS Standards until after their introduction, substantial increases were seen in the provision of education and competency-based training on invasive device protocols (58% to 95% of respondents), clinical workforce training in aseptic technique (32% to 95%), and assessment of compliance with aseptic technique (17% to 84%) (Figure 3.6). A high proportion of all respondents reported that these activities had been initiated or enhanced by the NSQHS Standards (76%, 89% and 88%, respectively).

From the period before the NSQHS Standards until after their introduction, substantial increases were seen in the provision of education and competency-based training on invasive device protocols (58% to 95% of respondents), clinical workforce training in aseptic technique (32% to 95%), and assessment of compliance with aseptic technique (17% to 84%) (Figure 3.6). A high proportion of all respondents reported that these activities had been initiated or enhanced by the NSQHS Standards (76%, 89% and 88%, respectively).

## Advances in antimicrobial stewardship programs because of the NSQHS Standards

Before the NSQHS Standards were implemented, only 36% of respondents reported that their service had any AMS program. This increased three-fold to 98% of respondents after the NSQHS Standards, with 89% saying this change was due to the NSQHS Standards. Specific AMS activities boosted by NSQHS Standard 3 are shown in Table 3.1, and include:

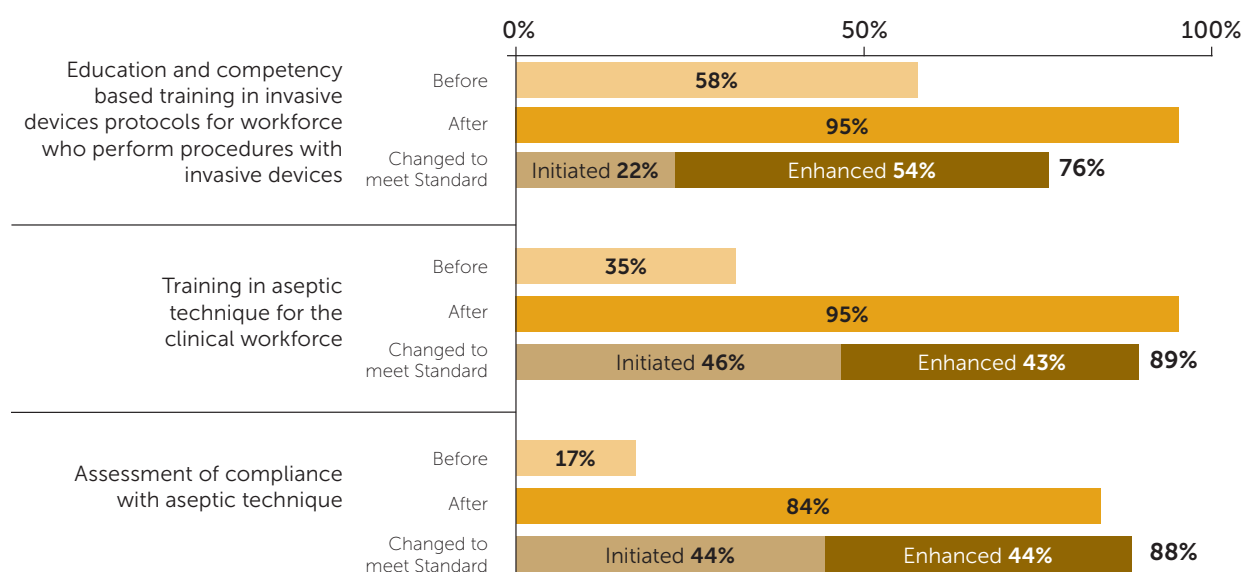
- Regular audits of antimicrobial prescribing (32% before and 97% after)
- Feedback to prescribers on audit results (22% and 88%)
- Review and point-of-care intervention and feedback to prescribers (29% and 86%)
- Formularies restricting use of broad-spectrum antimicrobial drugs (41% and 86%).

Aligned with these improvements in systems for AMS in hospitals, there have also been reductions in the use of antibiotics in hospitals, reducing the risk of antimicrobial resistance. Between 2011 and 2015 the use of antibiotics in hospitals fell by 7.6 percentage points.<sup>12</sup>



**Table 3.1: Improvements in antimicrobial stewardship programs following release of the NSQHS Standards**

Before the standards		After the standards
36%	had any specific AMS program	98%
32%	regular antimicrobial prescribing audits	97%
22%	feedback to prescribers on audit results	88%
29%	review and point-of-care intervention and feedback to prescribers	86%
41%	formularies restricting use of broad-spectrum antimicrobials	86%

**Figure 3.6: Training in invasive devices, aseptic technique, before and after the NSQHS Standards and changes made to meet NSQHS standards (N=264)**

## Where to from here?

Antimicrobial resistance in the management of healthcare-associated infections and more generally remains a major challenge to the delivery of health care. Evidence-based strategies such as audit and feedback, formularies and point-of-prescription reviews are increasingly used by hospitals as part of effective antimicrobial stewardship programs. These strategies are further encouraged in the second edition of the NSQHS Standards.

Surveillance and reporting informs effective prevention and containment strategies, and have been demonstrated to have a positive impact on HAls, as reflected nationally in the decreasing rates of SAB and CLABSI. Considerable progress has been made in surveillance and improving consistency of reporting, most recently through the establishment of the AURA Surveillance System. The Commission will continue to work with states, territories and the private health care sector to improve data collection and surveillance systems and improve the comprehensiveness and frequency of reporting.

HAls have been included in the list of hospital-acquired complications (HACs). This is a national list of complications for which clinical risk mitigation strategies may reduce the risk of that complication occurring. Specifications for monitoring the HACs from the administrative data generated by individual hospitals are available on the Commission's website, and they provide a mechanism for health services to monitor and reduce their own complications.





# NSQHS Standard 4 – Medication Safety

## Intention

To ensure competent clinicians safely prescribe, dispense and administer appropriate medicines to informed patients and carers.

## Introduction

Medicines are the most common treatment used in health care<sup>13</sup>, and medicines-related incidents are a very common type of adverse event that can be costly and are often avoidable.<sup>13,14</sup>

Many solutions to reduce medication errors are found in standardisation and systemisation of processes, in particular for the documentation of medication histories, allergies and changes, and the communication of these when a patient enters, leaves, or moves around a hospital.

NSQHS Standard 4 builds on the existing work of the Commission, such as the introduction of the National Inpatient Medication Chart (NIMC), and complements the achievements of Australian Government-funded Quality Use of Medicines programs in states and territories.

## What has been achieved?

An audit tool for the NIMC has been available to Australian hospitals since 2010. Audits allow hospitals to monitor their compliance with the NIMC safety features over time and identify areas improvement. Hospital participation in nationally coordinated audits (NIMC National Audits) has increased steadily between 2010 and 2014 (**Figure 4.1**), providing some insights into how hospitals are monitoring and improving medication safety.

## Documenting patients' medicines information

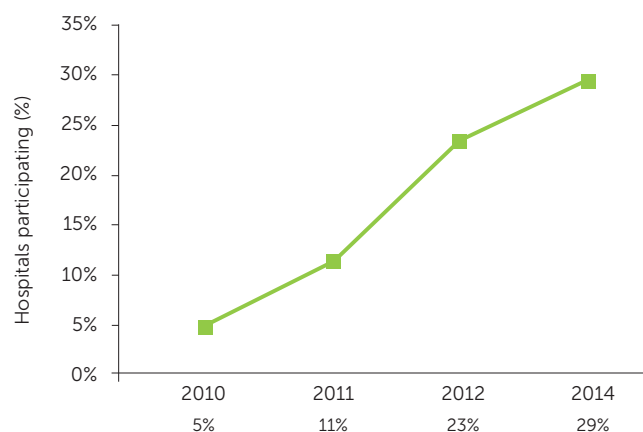
Failure to document a patient's previous drug reactions and medication history can lead to inadvertent prescribing of inappropriate medicines, exposing patients to the risk of adverse events.

Results from the 2011 NIMC National Audit were compared with the 2014 audit results, allowing insights into changes since the NSQHS Standards were implemented. Between the 2011 and 2014 NIMC National Audits, accredited hospitals showed greater improvements in documentation of adverse drug reactions and of medication history than did unaccredited hospitals (**Figure 4.2**).

Data from the Queensland Bedside Audit show an increase in medication documentation (medication history and known adverse reactions) in patient records in Queensland over the period of NSQHS Standards implementation (**Figure 4.3**).

The Queensland Bedside Audit is a safety and quality initiative conducted annually by Queensland Health since 2011 to collect, analyse and provide feedback to hospitals – see Appendix for more information).

**Figure 4.1: Percentage of Australian hospitals participating in the NIMC National Audit, 2010–2014**



Note: Denominator is total number of hospitals in each year, Australian Institute of Health and Welfare.

## Serious medication incidents

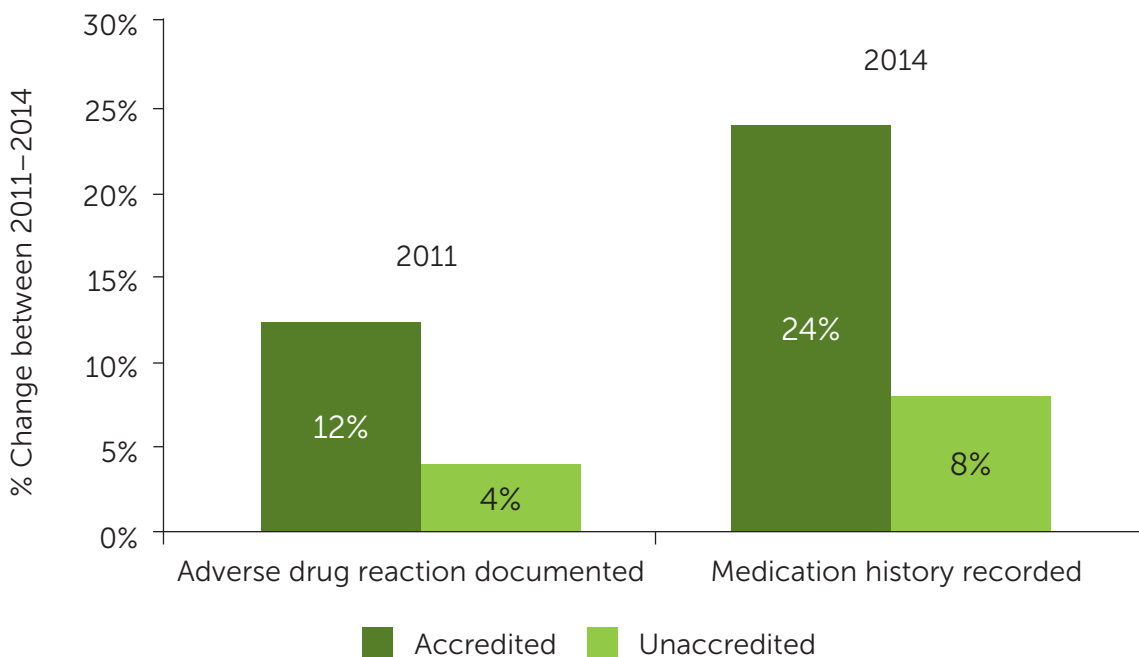
Patient incidents, both near misses and actual events, are reported through incident management systems and are classified according to the level of harm. The most serious categories are of incidents resulting in permanent harm or death.

In South Australia, a substantial reduction in these serious incidents occurred between 2011 and 2015, with a decrease of almost 75%, from 59 to 16 incidents in that time (Figure 4.4). This decrease in serious incidents occurred against a background of increased incident reporting in South Australia, with the total number of reported medication incidents (including near misses) increasing from 7,064 to 12,063 over the same period. (See Appendix for more details of the SA Safety Learning System for incident reporting).

## Where to from here?

The Medication Safety Standard in the second edition of the NSQHS Standards is largely consistent with the first edition of the NSQHS Standards. Medication review processes are incorporated to minimise the risk of medicine-related harm and optimise medicines use. It supports the involvement of patients in discussions and decisions regarding plans for their treatment, and also references best practices for safe use of electronic medication management in health services, where applicable.

**Figure 4.2: Medication safety indicators, improvement between 2011 and 2014 NIMC National Audits, by accreditation status\* (N=100)**

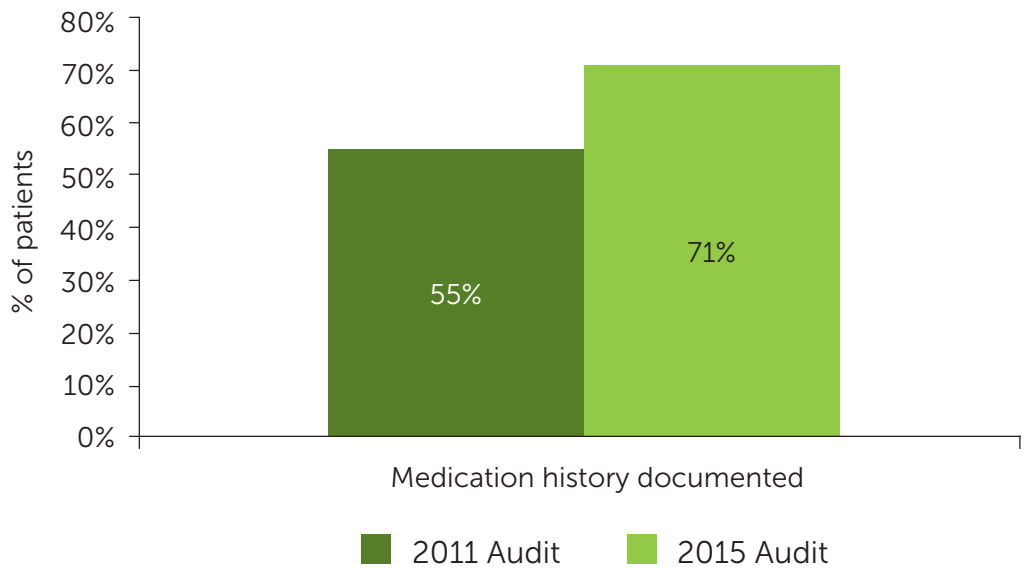


Source: National Inpatient Medication Chart National Audit data

\*Accredited in 2013 or 2014.

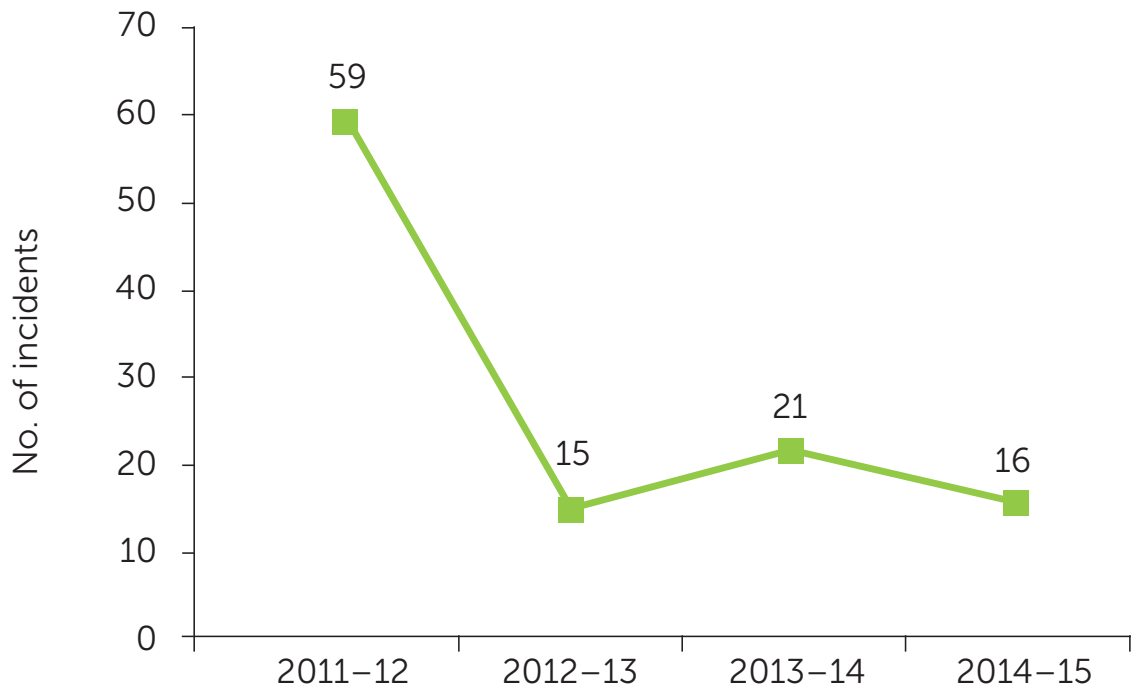


Figure 4.3: Medication history documented, Queensland Bedside Audit, 2011–2015



Source: Queensland Health  
Note: In 2011, a total of 6,618 patients were audited and in 2015, 5,012 patients were audited.  
See Appendix for details.

Figure 4.4: Medication-related incidents – serious harm, 2011–2015\*, SA Safety Learning System



\*SAC1 and SAC2 incidents (see Appendix for details). Data to June 30, 2015



# NSQHS Standard 5 – Patient Identification and Procedure Matching

## Intention

**To correctly identify all patients whenever care is provided, and to correctly match patients to their intended treatment.**

## Introduction

Serious incidents related to patient identification are included in the national sentinel events list. Fortunately such events are rare. For example, fewer than five procedures involving the wrong patient or body part, resulting in death or major permanent loss of function, were reported from Australian public hospitals per year between 2010 and 2013.<sup>15</sup> For less serious events, including those from diagnostic areas such as pathology and radiology, the number of reported events is considerably higher.<sup>16</sup>

Since patient identification is an activity frequently performed, it can often be seen as a relatively unimportant task. Developing safety routines for common tasks (such as patient identification) provides a powerful defence against simple mistakes that may cause harm. Use of explicit processes for matching patients to their care, and for transferring responsibility for care, is central to achieving NSQHS Standard 5.

Patient identification bands (ID bands) are a critical tool for preventing errors associated with mismatching patients with their care. The Commission developed national specifications for a standard ID band (the specifications) in 2007–08, and these were endorsed by Health Ministers in 2008. Action 5.3 of NSQHS Standard 5 requires hospitals to meet the specifications if ID bands are used.

The specifications were developed in response to concerns about patient safety incidents that had been reported relating to missing ID bands or bands with incorrect information, and the proliferation of different coloured alert bands and the potential safety risks due to confusion and error that are associated with them.

## What has been achieved?

The greatest impact of NSQHS Standard 5 appears to have been on the use of patient ID bands. Most hospitals met the requirements of action 5.3.1 related to ID bands. Linked with this finding are anecdotal reports that NSQHS Standard 5 has also reduced the number of services using coloured ID bands.

As shown in Figure 5.1, analysis of the Queensland Bedside Audit 2011 and 2015 results showed:

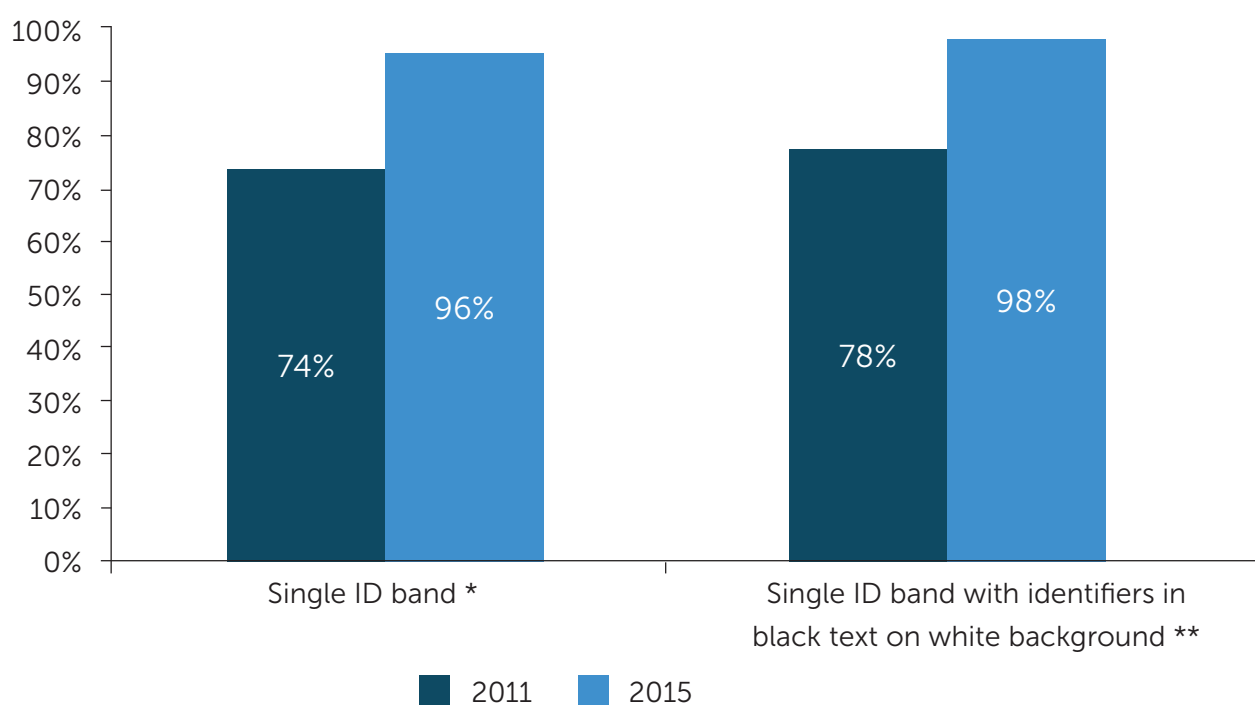
- Use of a single ID band increased from 74% to 96% of all patients with ID bands
- Use of a single ID band with identifiers, black text on white background, increased from 78% to 98% of all patients with a single ID band.

## Where to from here?

Correct patient identification and procedure matching remains an essential patient safety issue and one that health services need to continue to monitor. The essential element of NSQHS Standard 5 is the requirement for an organisation-wide system for identifying consumers and correctly matching them to their care. This is the set of policies, procedures and protocols designed to ensure consistent and correct identification of a consumer at any point during their admission or course of treatment.

In the second edition of the NSQHS Standards, these requirements for patient identification and procedure matching have been incorporated into the Communicating for Safety Standard, rather than remaining as a separate standard. This reflects the importance of identification as a fundamental part of safe communication.

Figure 5.1: Patient identification indicators, Queensland Bedside Audit, 2011–2015



\*denominator: all patients with ID bands

\*\* denominator: all patients with a single ID band

Source: Queensland Health

Note: In 2011, a total of 6,618 patients were audited and in 2015, 5,012 patients were audited.

See Appendix for details.



# NSQHS Standard 6 – Clinical Handover

## Intention

To ensure there is timely, relevant and structured clinical handover that supports safe patient care.

## Introduction

Clinical handover is one aspect of clinical communication and an integral part of patient care. While it is a routine part of care that occurs almost constantly during an acute hospital visit, clinical handover is a high-risk process. If poorly done, it can result in serious adverse events during care.<sup>17</sup> Adverse events are seen to increase during transitions of care, when a patient is transferred between units, physicians and teams.<sup>18</sup> Poor or absent clinical handover, or a failure to transfer responsibility and accountability, can result in delays in diagnosis or treatment, miscommunication about tests and the administration of incorrect treatments or medications.<sup>19</sup>

Effectiveness of clinical handover can be influenced by a number of different factors and can be unreliable at either a local unit level or across a health service organisation.<sup>18,19</sup> Processes for clinical handover are highly variable, partly because they occur in different ways (such as by phone, in writing) and at different points throughout care (such as during a shift change, on discharge) and in different locations (such as the bedside or in a common area). This variability of process can pose a high risk for patient safety.

The past decade has seen a substantial body of work in this area, including many pilot programs and the development of guides and tools. The Commission has supported many initiatives in clinical handover; however, collaborations between states and territories, and clinicians and research groups have been central to advancing this work.

Between 2007 and 2009, the Commission funded 14 public and private organisations to develop a range of handover tools as part of the National Clinical Handover Initiative Pilot Program. In 2010, the OSSIE guide to clinical handover improvement was endorsed by Australian

health ministers as a national guide to clinical handover improvement at shift change in hospitals. However, the principles presented in the OSSIE guide can also be applied to other handover situations, including multidisciplinary, primary care and community handovers.

NSQHS Standard 6 built on these initiatives and the work of the states and territories, providing a national framework to support structured clinical handover and an impetus for change. While poor clinical handover is usually reflected in incident reports, there are few specific system-wide measures. Measurement of effective handover tends to be at the local level to support quality improvement and this is demonstrated in the clinical handover case studies provided.

## What has been achieved?

### Patient experiences of clinical handover

Some state or territory-based patient experience surveys now include questions that reflect aspects of clinical handover. The 2014 NSW Adult Admitted Patient Survey found that 71% of respondents said their doctors 'always' knew enough about their history and 73% said their nurses 'always' knew enough about their care (Figure 6.1).

The same survey found that 68% of respondents had received a copy of a letter from their hospital doctor to their GP; however, a wide variation was seen between Local Health Networks (known as Local Health Districts in New South Wales), with rates ranging from 40% to 85% of respondents (Figure 6.1).

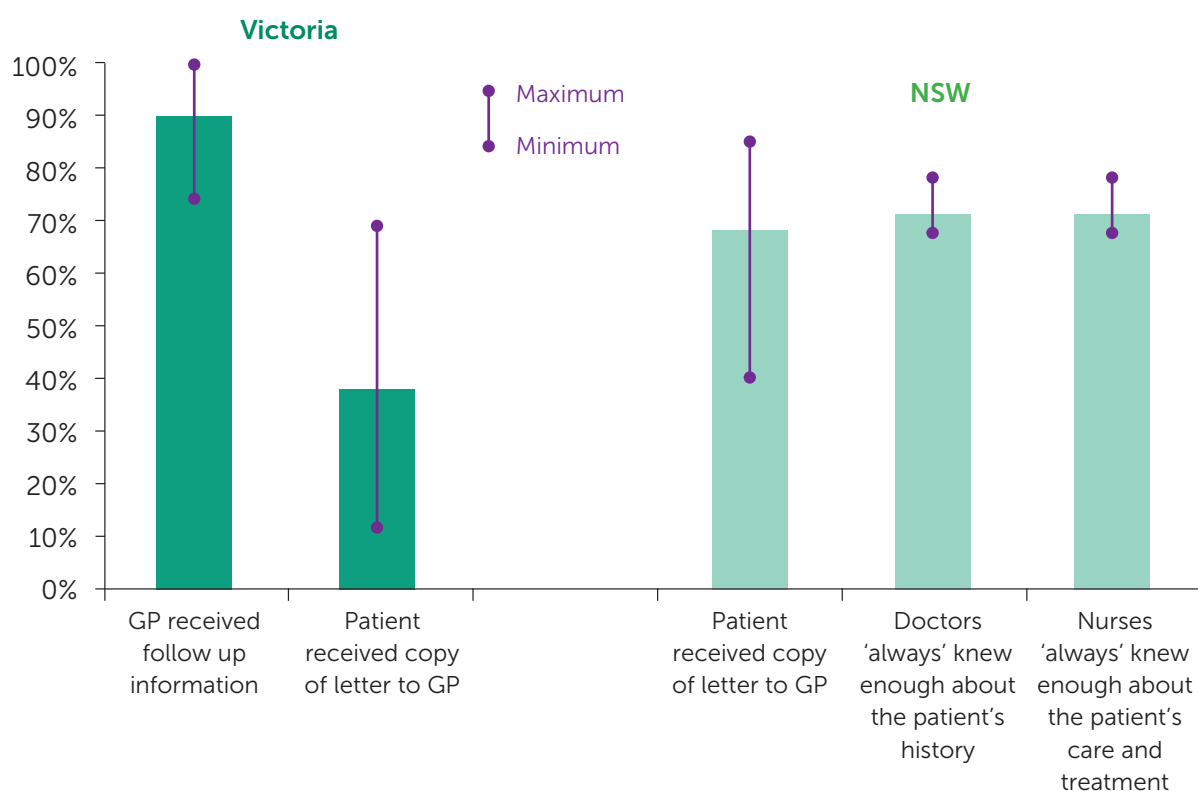
In the Victorian Healthcare Experience Survey (July to December 2014 data), 90% of patients who required follow-up thought their GP had been given all the necessary information about the stay in hospital. Around 38% of said they had received a copy of the communication. For both questions, there was a wide range between health campuses as shown in Figure 6.1.

## Where to from here?

Clinical communication is inherent to patient care and continues to be a key safety and quality issue. The importance of effective clinical communication and its role in supporting continuous, coordinated and safe care is retained in the second edition of the NSQHS Standards.

When reviewing the NSQHS Standards, it was apparent that NSQHS Standard 6 was being narrowly interpreted and implemented in the context of shift-to-shift handover only. However, effective communication is critical at other key times throughout the delivery of health care. This is reflected in changes in the second edition of the NSQHS Standards, with the renamed Communicating for Safety Standard covering clinical communications more broadly.

Figure 6.1: Patient experience survey results, clinical handover, Victoria and NSW



Source: 1. Victorian Healthcare Experience Survey July to December 2014 (Department of Health and Human Services Victoria)

2. NSW Adult Admitted Patient Survey 2014 (Bureau of Health Information NSW)

See Appendix for participation details



## Case Study 6.1

### Changing handover processes in a large, quaternary public hospital

#### Service profile

Royal Brisbane and Women's Hospital (RBWH), Queensland, is a 937-bed quaternary and tertiary referral teaching hospital close to the Brisbane CBD, with approximately 7,500 staff.

#### What changes did the service make and why?

The service introduced an extensive new program for safe clinical handover to achieve NSQHS Standard 6, underpinned by a need to establish awareness that clinical handover was not just from shift to shift but involved the whole transition of care. The RBWH took a phased approach to the rollout, which was led by the Safety and Quality Unit, and included a literature review, piloting, implementation, evaluation and ongoing monitoring and improvement.

“ We piloted the single framework for handover in 10 areas of the hospital to see if we could use this standard, but flexible, approach in a quaternary hospital. This was so staff could target their own gaps and quality improvement needs, and address the silos through a generic framework across the patient journey.”

Training and awareness was a key aspect of the program, with in-services conducted in over 360 areas of the hospital.

#### What were the challenges?

We had pushback from the medical fraternity and from non-clinicians such as ward receptionists. Changing communication involves changing the culture, which is hard.

#### Were changes introduced because of the NSQHS Standards?

Before the introduction of NSQHS Standard 6, there were many multi-disciplinary team bodies of work existing in silos and trying to

improve communication processes at the RBWH in areas such as risk assessment, care record, and observations record criteria. NSQHS Standard 6 assisted in bringing these together, and as a result it became the driving force.

“ The RBWH clinical handover program was completely prompted by Standard 6, and the need to show continual review. It made us take a broad look at our processes... Standardisation across the hospital was really prompted by Standard 6.”

#### What were the outcomes?

The program has resulted in changes in practice, from small to large. For example, pharmacy and oncology departments have changed their forms for handover reports so the most important details for safe handover are clearly shown. Most handover processes within the hospital are now aligned with NSQHS Standard 6.

“ We believe the standardisation of communication in all its various forms and professional groups has improved, and will continue to do so, and this is down to the Standard 6 initiation.”

To embed safe handover in after-hours settings, the hospital identified that some major changes were required, leading to:

- The introduction of new or improved handover tools, including telephone handover
- Formalisation of medical handover at night across the hospital
- Use of the Patient Flow Manager IT system to provide medical staff with a medical handover checklist, and escalation plans that are mainly used by residents
- New processes for identifying high-risk patients in the after-hours setting; for example, senior nurses are using a handover tool and standardising their processes to ensure high-risk patients are identified earlier.

## Case Study 6.1 continued

### How do you monitor effectiveness?

Measuring communication is difficult but the effectiveness of the program has been assessed in a number of ways:

- Audits of staff knowledge at four and six months after training, and follow up if recall is low
- Ward audits, including questions for patients
- Patient experience audits
- Monitoring of incident reports
- Observational audits – for real-time frontline feedback
- Audits conducted by consumers.

Wards conduct observational handover audits every week, which assess patients' awareness and involvement in bedside handover by observing specific core behaviours against specific questions such as:

- Has the patient/carer been given the opportunity to be involved, clarify information or ask questions?
- Has the patient/family/carer identified any variances, and were these escalated?

Questions are also asked in the clinical weekly audit, which is conducted with three to five patients per ward. Managers and staff have access to real-time data for staff feedback and to address any issues. Statewide, clinical handover is also monitored through the Queensland Bedside Audit.

### What helped you succeed?

Having key, experienced people and resources dedicated to improving clinical handover were vital for the program's success.

Having the skills to talk across a number of disciplines, groups and non-clinician teams was important, as was having support from

management to do this. It was also important that the staff guiding the program understood the organisation's culture, were open to new ideas, were practical and could negotiate.

### Advice to other services?

Learnings from the implementation and monitoring of the handover program are provided below:

- Trial everything – this is how engagement grows
- Give real-time feedback to staff on audit results
- Change the focus from always auditing to quality improvements – don't audit for audit's sake
- Empower your consumer representatives by factoring in time and training, and by selecting the right consumers to help you
- Executive support early in implementation is paramount, as is learning to see the communication gaps from different professional groups and helping them come up with the solutions
- You must understand the multidisciplinary teams' local clinical environments first; otherwise the initiatives you recommend may fall over
- Good IT processes help – the platform for the clinical handover tools help ensure 'the right information, the right time, the right patient'
- Where possible, build capacity within existing audit infrastructure to evaluate communication processes more comprehensively and to decrease staff burden and audit fatigue.

In a big hospital, gaining support and understanding from multidisciplinary teams takes time, resources and dedication – value this.

## Case Study 6.2

### Introducing bedside clinical handover in a general private hospital

#### Service profile

The 87-bed hospital is located in NSW and offers a variety of services. The hospital has five operating theatres, a 29-bed surgical ward, and services include obstetrics, mental health care, intensive care unit, day oncology and day surgery. Types of surgery include orthopaedics, gynaecology, neurosurgery, general surgery, ENT, head and neck, colorectal, plastic surgery and urology.

#### What changes did your service make?

The changes we made were for clinical handover to introduce an effective bedside clinical handover to comply with NSQHS Standard 6 and patient-centred care. We introduced an ISOBAR\* handover tool for the shift to shift handover.

Staff attended education sessions on bedside clinical handover and focused on including the patient and family in handover. The bedside handover was introduced slowly starting with the morning to afternoon shift then introducing it to other shifts.

Audits were undertaken and further education given in areas that required improvement. We also introduced a handover form for nursing staff to ward orderlies when they were transferring patients without a nurse escort. The ward orderlies were educated on the importance of handover and ensuring this occurred each time they were transferring a patient off the ward.

#### What were the outcomes?

Before the changes patients were not involved in clinical handover and handover did not cover all aspects of the patient. Once bedside handover was introduced, the first audit results showed 64% compliance by staff. After further education and

introduction of the ISOBAR handover tool, the audit results showed 91% compliance.

In the June 2015 audit, staff achieved 100% compliance. Audit results for ward orderly handover showed 100% compliance.

#### What were the barriers and how did you overcome them?

Staff were very reluctant to conduct handover in the patients' rooms and involve the patients and their families. They were also concerned with patient confidentiality. With leadership from senior staff, they were encouraged to go into the patients' rooms and involve the patients. Staff were educated on how to maintain confidentiality during bedside handover if patients were in a shared room by handing over confidential information outside the patients' rooms.

#### What helped you succeed?

The use of the ISOBAR handover tool gave the staff a structured handover tool to ensure no important information was missed during handover.

The Implementation toolkit for clinical handover improvement by the Commission was used to help implement bedside clinical handover and to educate staff on reducing incidents using effective bedside handover.

#### Advice to other services?

- Introduce in stages
- Educate staff on effective bedside clinical handover and how this will reduce incidents
- Involve patients and families, who often have positive comments with regard to the process, which allays staff fears that patients 'won't like it'.

\* ISOBAR (identify situation, observations, background, agreed plan, read back) is a tool for structured clinical handover.

Source: Australian Public Hospital Association



# NSQHS Standard 7 – Blood and Blood Products

## Intention

To ensure that patients who receive blood and blood products do so appropriately and safely.

## Introduction

Australia has one of the safest blood supplies in the world. Comprehensive national regulations cover all aspects of blood donation and processing of blood and blood products. Blood products are stored and delivered to health services under regulated conditions, and are carefully stored and managed within health services and pathology laboratories.

However, the transfusion of blood and blood products is not without risk and can lead to complications and adverse outcomes for patients. Blood and blood products should only be given when clearly indicated and when the expected benefits to the patient are likely to outweigh the potential risks.

Expectations of health services for the responsible, sustainable and appropriate use of blood and blood products were communicated by Health Ministers in 2010 in the *Statement on National Stewardship Expectations for the Supply of Blood and Blood Products*.<sup>20</sup> In recent years, substantial work has been done by the National Blood Authority (NBA), including supporting and funding the development of evidence-based guidelines and training, and promoting patient blood management. Several patient blood management guideline modules were released between 2010 and 2015. The NBA and these initiatives supported the development and implementation of NSQHS Standard 7, which outlines the safety and quality requirements of health service organisations in management of blood and blood products. As with other individual NSQHS Standards, the implementation of NSQHS Standard 7 appears to have augmented these initiatives, providing an additional incentive to services to apply best practice. Signs of improved blood management are apparent in decreased ordering of red blood cells and reduced wastage since 2010.

## What has been achieved?

### Alignment with evidence-based guidelines – red blood cell issues and use

NSQHS Standard 7 requires organisations to be consistent with national evidence-based guidelines for pre-transfusion practices, prescribing and use of blood and blood products. For example, Patient Blood Management Guidelines promote a more appropriate approach to transfusion to minimise exposure to the associated risks. As well as reducing adverse events, improved blood management should lead to a reduction in the use of red blood cells, for the following reasons:

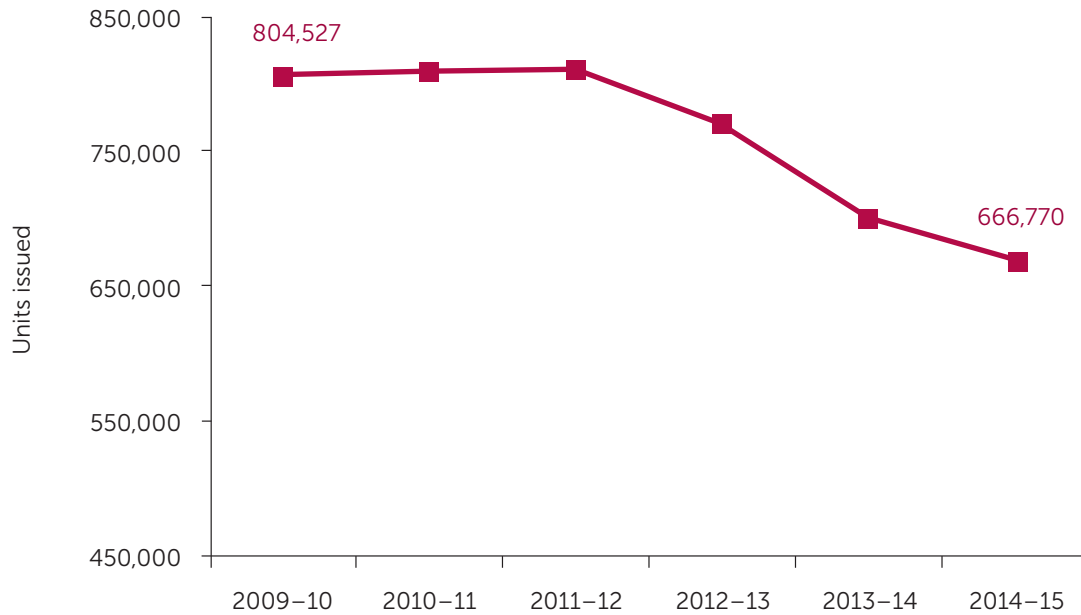
- When transfusion is indicated, transfusing a single unit of red blood cells initially is recommended, followed by clinical reassessment to determine if further transfusion is necessary
- Patient blood management guidelines recommend conserving the patient's own blood to avoid unnecessary exposure to blood products
- Improved inventory control can minimise wastage and total overall use.

This has been reflected in a reduction in total red blood cell issues by the NBA, which fell substantially from mid-2010 to mid-2015, from approximately 800,000 units to 667,000 units (**Figure 7.1**).

### Minimisation of wastage

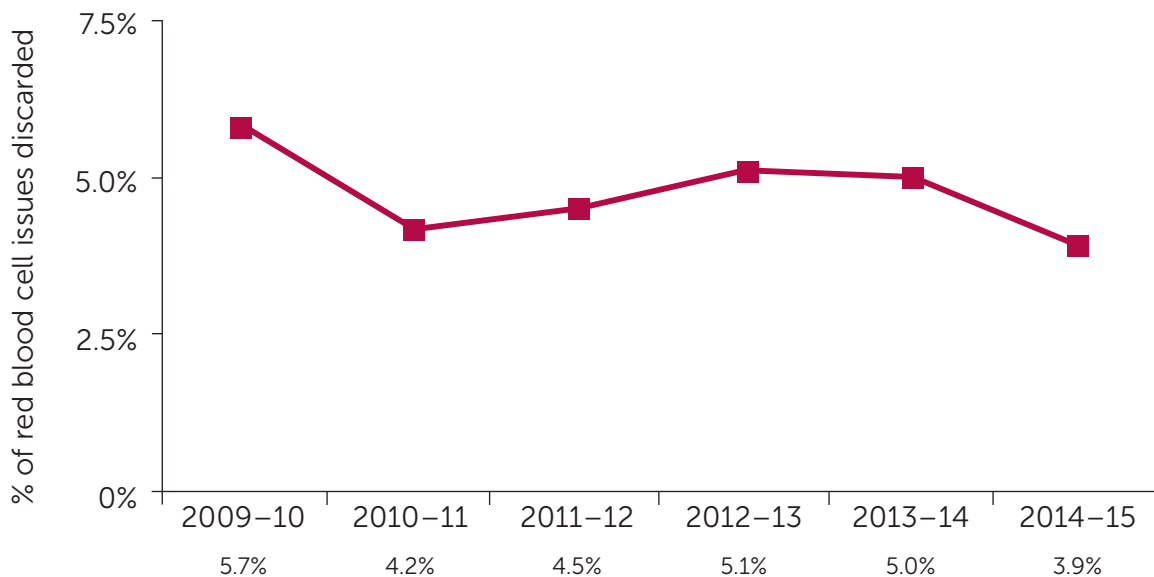
Data also shows a downward trend in wastage of red blood cells in the past five years, in line with NSQHS Standard 7 requirements for health services to minimise wastage of blood and blood products. Discards have fallen overall, from 5.7% in 2009–10, to 3.9% by 2014–15 (**Figure 7.2**). The NBA efforts to promote better inventory control, in combination with NSQHS Standard 7, have most probably contributed to these positive changes.

**Figure 7.1: Red blood cell issues per year, National Blood Authority, 2009–2015**



Source: National Blood Authority

**Figure 7.2: Red blood cell discards, percentage of issues, National Blood Authority, 2009–2015\***



Source: National Blood Authority

\* for volume of RBC where discard data was available. Note that the percentage of health services providing data on red blood cell discards to the NBA doubled between 2010 and 2015, by which time 99.5% were providing data.

See Figure 7.1 for number of issues per year.

## Where to from here?

While significant gains have been made in the effective and efficient management of blood and blood products, more work is needed to prevent situations in which blood and blood products need to be used, and to reduce the likelihood of adverse events occurring from their use.

Changes in the second edition of the NSQHS Standards to the Blood Management Standard have seen the focus shift from management of the product to better management and involvement of patients to reduce their need for blood.

NSQHS Standard 7 is complementary to the work of the NBA, which continues to support national haemovigilance initiatives, best practice clinical guidelines, tools and resources to support implementation, identification of measures and benchmarks and education and training initiatives.





## Case Study 7.1

### A blood management action group and process improvement

#### Service profile

Hospital Q is a 664-bed facility.

#### What changes did your service make?

A number of changes were introduced, including:

- Establishing a Blood Management Action Group with medical leadership
- Developing a massive transfusion protocol and supporting resources, such as:
  - wall charts to assist clinical and blood bank staff in the appropriate ordering and management of blood products
  - a massive transfusion protocol simulation drill using actors and simulated products to train clinical and blood bank staff in managing catastrophic blood loss
  - an illustrated DVD
- Revising the Blood Product Administration form to include:
  - transfusion history
  - reasons for transfusion
  - updated consent requirements for all blood products, fractionated and recombinant
  - updated blood administration guidelines
  - updated transfusion reaction section to include transfusion-associated circulatory overload
  - adding furosemide dose to the prescription section pre/post-transfusion so that it can be ordered and administered from this form, rather than from the National Inpatient Medication Chart, where the entry could be missed

- Purchase of rotational thromboelastometry (ROTEM)
- Revision of the operating theatre register to include colour-coded sections to assist with accurate documentation.

#### What were the outcomes?

- Revising the Blood Product Administration form has increased transfusion consent from 75% to 100%.
- Whole blood (red cell) product usage has decreased by 30% and use of blood components has increased. This is both safer and better use of blood.
- Pre-operative elective surgical patients are risk-rated and those at risk are seen in the pre-admission clinic. This has meant that patients with anaemia are assessed and treated before admission, leading to fewer cancellations on the day of surgery and reduced need for transfusions.

#### What were the barriers and how did you overcome them?

Engagement of clinicians was achieved by multidisciplinary education on managing catastrophic blood loss.

#### What helped you succeed?

Executive support and the fact that a clinical nurse specialist in blood management had been appointed and was responsible for leading the implementation of NSQHS Standard 7.

#### Advice to other services?

Ensure that you have clear objectives and a medical lead.



## Case Study 7.2

### A dedicated transfusion nurse

#### Service profile

Hospital A is a registered 147-bed hospital offering a comprehensive range of surgical, medical, critical care and diagnostic services, including a 24-hour emergency department, day surgery and day chemotherapy units.

#### What changes did your service make?

With the introduction of the NSQHS Standards, the hospital supported the appointment of a transfusion clinical nurse consultant to provide the hospital with a dedicated transfusion resource.

Initially, completion of several audits provided a baseline of the hospital's transfusion practice. Completion of a gap analysis produced an insight into the impact a transfusion nurse could bring to the organisation, by ensuring that all patients receive a high quality of care when having a blood or blood product transfusion.

The appointment was achieved by granting a Victorian Department of Human Services Blood Matters scholarship to one of the hospital's nurse unit managers, allowing her to study and qualify for a graduate certificate in transfusion practice

#### What were the outcomes?

Audits completed before and after the appointment of the transfusion nurse showed improvements in:

- Policy versus practice
- Blood sampling
- Blood fridge register
- Documentation
- Consent being documented.

#### What were the barriers and how did you overcome them?

An ongoing role was needed for sustainability of the program, to meet the requirements to achieve accreditation and to effectively coordinate the various elements, to achieve best practice and to continue ongoing work in this area. A business proposal for the appointment of a full-time transfusion clinical nurse consultant was submitted to the hospital executive and the position appointment was made in December 2013.

#### What helped you succeed?

This role is well supported by external organisations such as Blood Matters Victoria, which allows hospitals to submit data and participate in voluntary auditing where results are benchmarked against Victorian public and private hospitals.

#### Advice to other services?

Support of external organisations for the role of a transfusion clinical nurse consultant can assist with implementing and achieving criteria relating to the NSQHS Standards, in particular NSQHS Standard 7, with documented ongoing improvement in practices and participation in establishing new innovative ideas and projects.



# NSQHS Standard 8 – Preventing and Managing Pressure Injuries

## Intention

To prevent patients from developing pressure injuries and to effectively manage pressure injuries when they do occur.

## Introduction

Pressure injuries are a known, preventable and relatively common complication associated with immobility, extended bed rest and other factors associated with acute health care. The risk factors are well characterised and evidence-based guidelines for prevention and management are available.

Between 2006 and 2011, regular pressure injury point-prevalence surveys were conducted in Queensland, SA, Victoria and WA <sup>21-24</sup>, using a consistent methodology developed in Victoria and pioneered by the Victorian Quality Council.<sup>22</sup> These surveys revealed rates of hospital-acquired pressure injuries ranging from 8% to 17%, depending on the location of the survey and the patient groups included.<sup>21,23,24</sup> These unacceptably high rates prompted action in many states and territories and led to the inclusion of pressure injuries in the NSQHS Standards.

The point-prevalence surveys were also instrumental in identifying the gaps in pressure injury prevention and management, which in turn informed state- and service-based quality improvement initiatives and the NSQHS Standard 8 requirements. NSQHS Standard 8 requires health services to screen patients for risk of pressure injuries, and to conduct comprehensive risk assessments and regular skin assessments for those at risk, as well as preparing and implementing pressure injury management plans and devices.

States implementing statewide public programs – often with associated financial investment for pressure-relieving mattresses and other

devices, or hospital performance targets – have also conducted ongoing measurement, some of which is reported here. These results demonstrate the combined impact of the NSQHS Standards and state-based public sector initiatives.

## What has been achieved?

Recent statewide surveys of pressure injuries conducted in Queensland provide valuable insights (Figure 8.1).

In Queensland, rates of hospital-acquired pressure injuries have been decreasing since 2003, when they were prevalent in 14% of audited patients (Figure 8.2). When Queensland Health began preparing to implement the NSQHS Standards in 2011, the prevalence of pressure injuries was 7.9%, and had decreased to 4.1% in 2015.

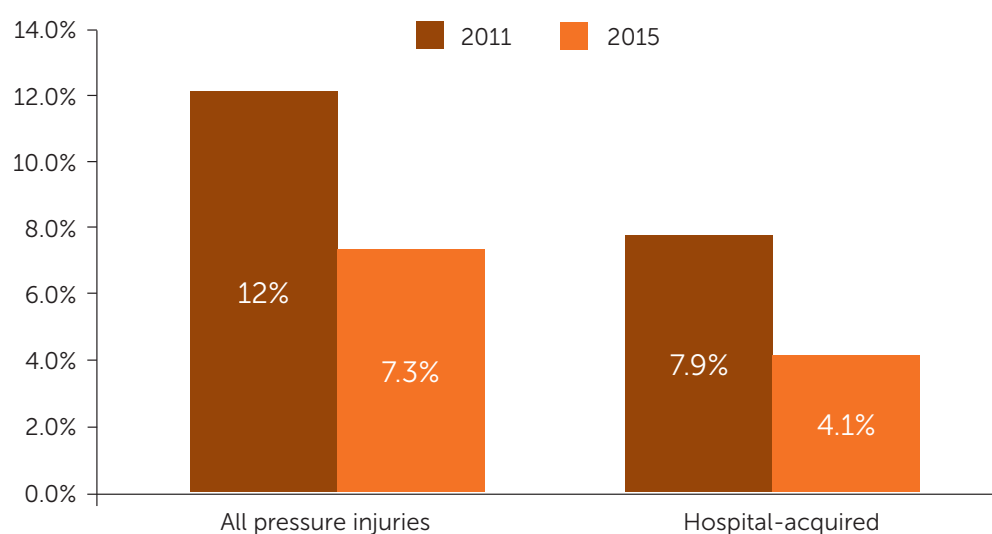
Queensland Health statewide interventions are also indicated in Figure 8.2, including statewide prevalence audits since 2003.

Audit and feedback are known to be an effective quality improvement intervention, and the Queensland statewide audits and feedback and associated activities are likely to have contributed substantially to improved pressure injury prevention.

The NSQHS Standards appear to have worked synergistically with statewide programs. For example, NSQHS Standard 8 prompted the Queensland Health Pressure Injury Prevention Program to develop a statewide pressure injury risk assessment tool, which was trialled in 2013 and is now used widely across Queensland to help hospitals meet the recommended timeframes for risk assessment supported by NSQHS Standard 8 (within eight hours of admission).



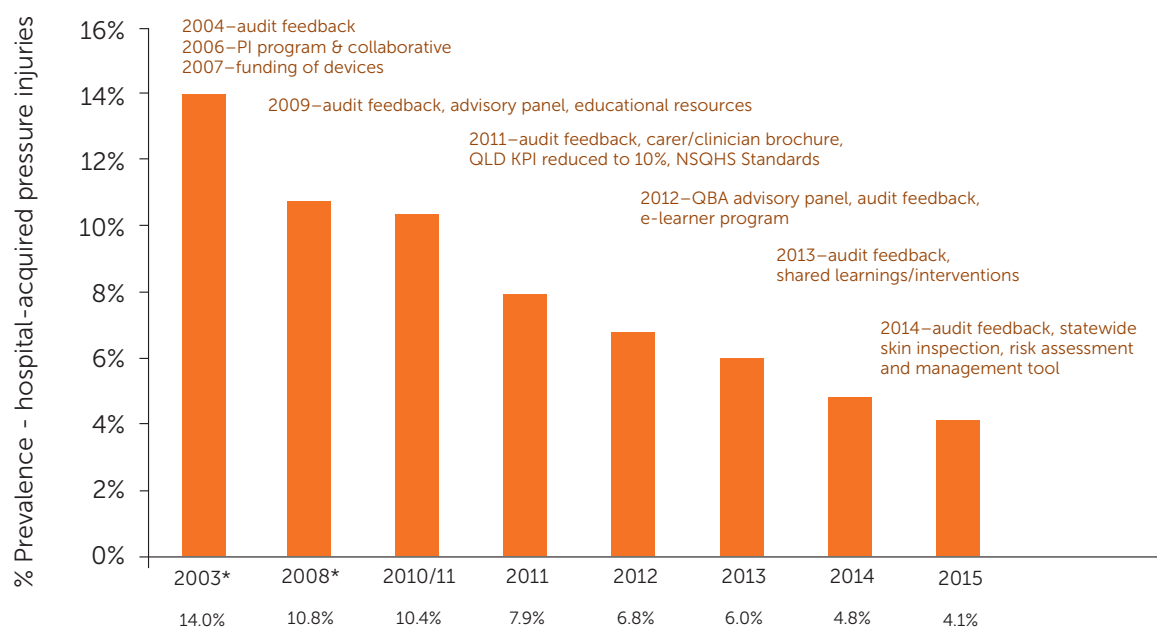
**Figure 8.1: Pressure injury prevalence estimates, 2011 and 2015, Queensland Bedside Audit**



Source: Queensland Health

Note: In 2011, a total of 6,618 patients were audited and in 2015, 5,012 patients were audited. See Appendix for details.

**Figure 8.2: Queensland statewide inpatient hospital-acquired pressure injury prevalence, 2003–2015**



\* Hospital-acquired prevalence for inpatients is estimated from hospital-acquired prevalence reported for total audit population (inpatient and residential aged care facilities). Includes pressure injuries acquired during the current admission, as a proportion of all patients consenting to a skin inspection.

Source:

- 2003: Queensland Wound Care Association 2005, Primary Intention, Vol. 13, No. 3, pp. 126–127
- 2008, 2010/11, 2011: Patient safety bedside audit Health Service District reports
- 2012, 2013, 2014, 2015: 2015 Queensland Bedside Audit statewide inpatient report

## Where to from here?

Because of the increasing complexity and frailty of patients in hospital, pressure injuries remain an important safety concern. This patient group is not only at risk of pressure injuries however; there are also known safety risks in areas such as falls, malnutrition and cognitive impairment. For this reason, the second edition of the NSQHS Standards includes a new standard focusing on comprehensive care. The intent of the Comprehensive Care Standard is to:

“...ensure that patients receive comprehensive care – that is, coordinated delivery of the total health care required or requested by a patient. This care is aligned with the patient’s expressed goals of care and healthcare needs, considers the effect of the patient’s health issues on their life and wellbeing, and is clinically appropriate. To ensure that risks of harm for patients during health care are prevented and managed. Clinicians identify patients at risk of specific harm during health care by applying the screening and assessment processes required in this standard.<sup>1</sup>”

This approach to identifying and managing a patient’s overall level of risk will decrease the likelihood of adverse events such as pressure injuries.

Pressure injuries (stage III ulcers, stage IV ulcers and unspecified decubitus ulcer and pressure area) have also been included in the national HACs list to support local monitoring and prevention of complications.





# NSQHS Standard 9 – Recognising and Responding to Clinical Deterioration in Acute Health Care

## Intention

**To ensure a patient's physical deterioration is recognised promptly, and appropriate action is taken.**

## Introduction

The aim of recognition and response systems is to provide an organisation-wide safety net to detect and intervene in the care of patients whose condition is deteriorating.<sup>25</sup> The earlier that signs of deterioration are identified and acted on, the better the outcome for the patient.<sup>26</sup> Serious adverse events such as unexpected death and cardiac arrest may be avoided altogether and when deterioration is identified early, fewer interventions may be needed to stabilise the patient.<sup>27</sup>

Australia was an early international leader in establishing rapid response systems. By 2007, almost 60% of hospitals with an intensive care unit (ICU) had a medical emergency team (MET).<sup>28</sup> These systems had mostly been introduced by individual clinicians in large acute hospitals, and initially focused on responding to acute deterioration in an urgent situation. Early recognition of deterioration was subsequently identified as being equally important as having the capacity to respond, hence rapid response systems are sometimes called recognition and response systems.

In 2010, the Commission published a National Consensus Statement (the consensus statement) outlining eight essential elements for recognising and responding to clinical deterioration in hospitalised patients.<sup>29</sup> NSQHS Standard 9 arose from this consensus statement and encompasses organisational systems, monitoring and governance elements that go beyond simply having a rapid response team.

There has been substantial change in hospital systems and processes for recognising and responding to clinical deterioration since the consensus statement was released. There is now a greater focus on measuring how well deterioration is recognised and responded to, learning from that performance for improvement and engaging clinicians across the hospital. A broader range of facilities now have systems for recognising and responding to deterioration, using innovative models of care appropriate to the hospital's size, location and patient mix (for example, training nursing staff to provide advanced life support, or using services such as the local ambulance, or using more sensitive triggers so that unwell patients can be identified early enough to be transported to a suitable facility).

Many states and territories have been very active in this area and the following results reflect their work, the initiatives in individual hospitals over more than two decades, as well the impact of the NSQHS Standards and other Commission initiatives.

## What has been achieved?

In 2010, the Commission conducted a survey of recognition and response systems (RRS) in place in Australian hospitals to inform the development of NSQHS Standard 9. A follow-up survey conducted in 2015 helps identify what has changed since the implementation of the NSQHS Standards.

The results suggest that hospitals of all sizes, in locations across Australia, have improved their systems for recognising and responding to clinical deterioration. In addition, hospital staff have reported greater confidence in their service's ability to manage deterioration and to prevent avoidable serious outcomes such as cardiac arrest as a result of NSQHS Standard 9.



## Better recognition of deteriorating patients

Most respondents to the RRS survey (83%) agreed that NSQHS Standard 9 had improved the recognition of and response to deteriorating patients in their health service. Most respondents attributed these improvements to better systems for recognising deterioration, including:

- Improved monitoring of vital signs (69%)
  - More frequent escalation for patients with deteriorating vital signs (66%)
  - Better management of deteriorating patients on the ward (64%).
- “ For our hospital Standard 9 was developed closely following the Standards criteria, and following implementation there was a definite cultural change around the recognition of deteriorating patients, and increased awareness of when to escalate care.”  
(RRS survey)

There has been considerable change in systems for managing the deteriorating patient. In 2015, 85% of respondents had a formal rapid response system (as distinct from a code blue or “cardiac arrest” only team), compared with 66% in 2010. Most of those who did not have a separate system were from small hospitals of less than 50 beds. However, much of the variation between hospitals of different sizes and locations seen in the 2010 survey was no longer apparent, with greater proportions of small, medium-sized and regional hospitals reporting recognition and response systems in 2015.

The characteristics of rapid response systems have also evolved since 2010 (see **Figure 9.1**), with recommended features reported by at least 50% more services in 2015 than in 2010, including the use of:

- Early warning or track and trigger tools in 96% of systems in 2015, compared with 35% in 2010
- Graded response protocols being used by 93%, rather than 45%
- Structured handover present in 95%, rather than 50% of systems.

“ I believe the track and trigger systems now in-built in sites across Australia has been a huge step forward in keeping patients safe, and reducing mortality in hospitals due to lack of recognition for those patients who are showing signs of clinical deterioration.”  
(RRS survey)

“ Use of the track and trigger charts has enabled nursing staff to feel more confident in contacting doctors for reviews particularly out of hours.”  
(RRS survey)

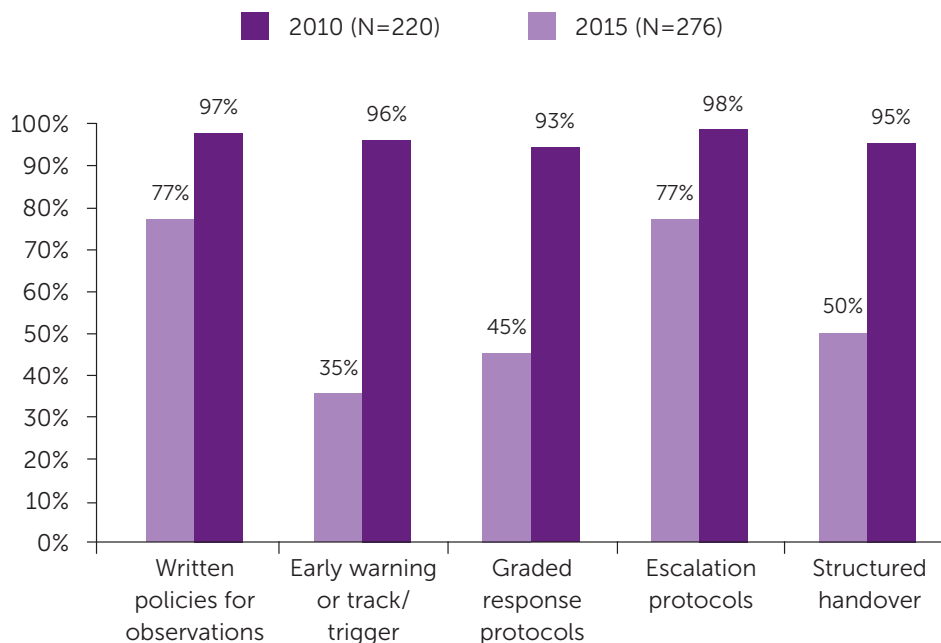
The survey findings are supported by data on individual patients from the Queensland Bedside Audit, which found that 81% of patients had a complete set of core observations recorded in 2014 compared with 53% in 2011.

In 2015, 93% of survey respondents reported that their hospital collected data about the effectiveness of their recognition and response systems, almost double the proportion in the 2010 survey (48%). Recognition and response systems were better embedded in clinical governance systems, with 86% of respondents in 2015 reporting a governance committee, compared with 72% in 2010, while 84% reported regularly to the executive, compared with 65% in 2010 (**Figure 9.2**).

“ A really important Standard to report on. Encourages review of systems in place regularly and the opportunity to highlight patterns or anomalies quickly and act upon same.”  
(RRS survey)

“ [Our service has a] strong governance structure in place that reports up to a high-level committee at the local health district. Current structure ensures that care provided is reviewed and clinicians are provided with feedback and support.”  
(RRS survey)

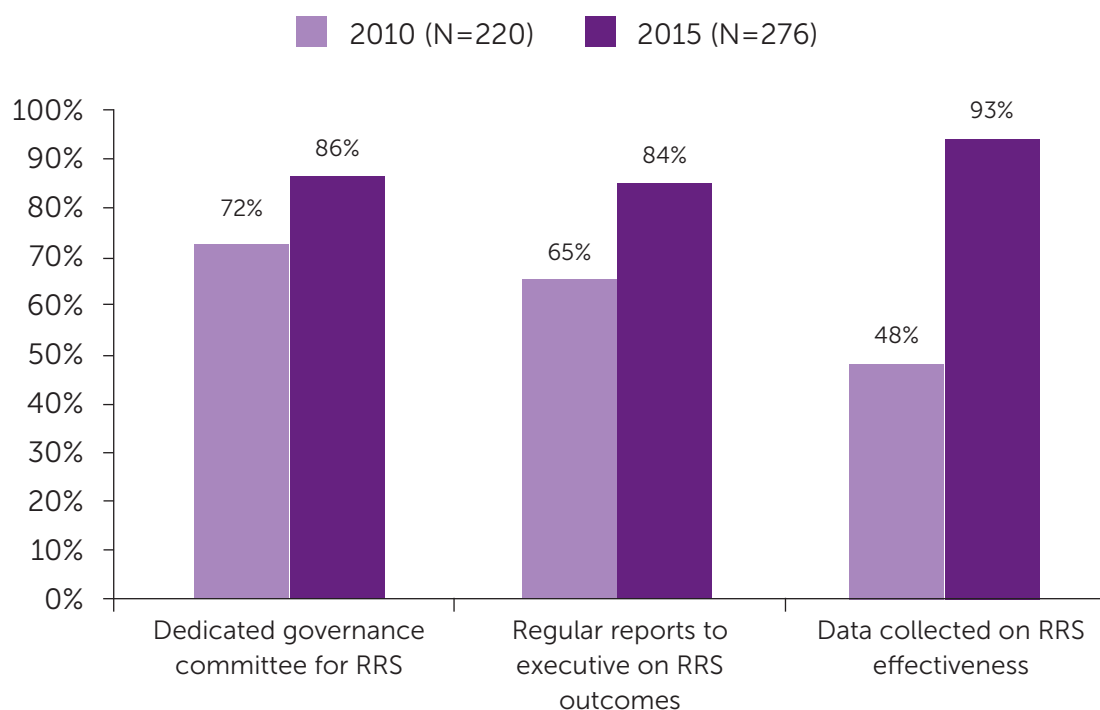
**Figure 9.1: Recognising deterioration – changes in systems between 2010 and 2015**



Source: Recognition and Response Systems Surveys 2010 and 2015

Note: percentages are based on the number of respondents to each question, excluding missing data.

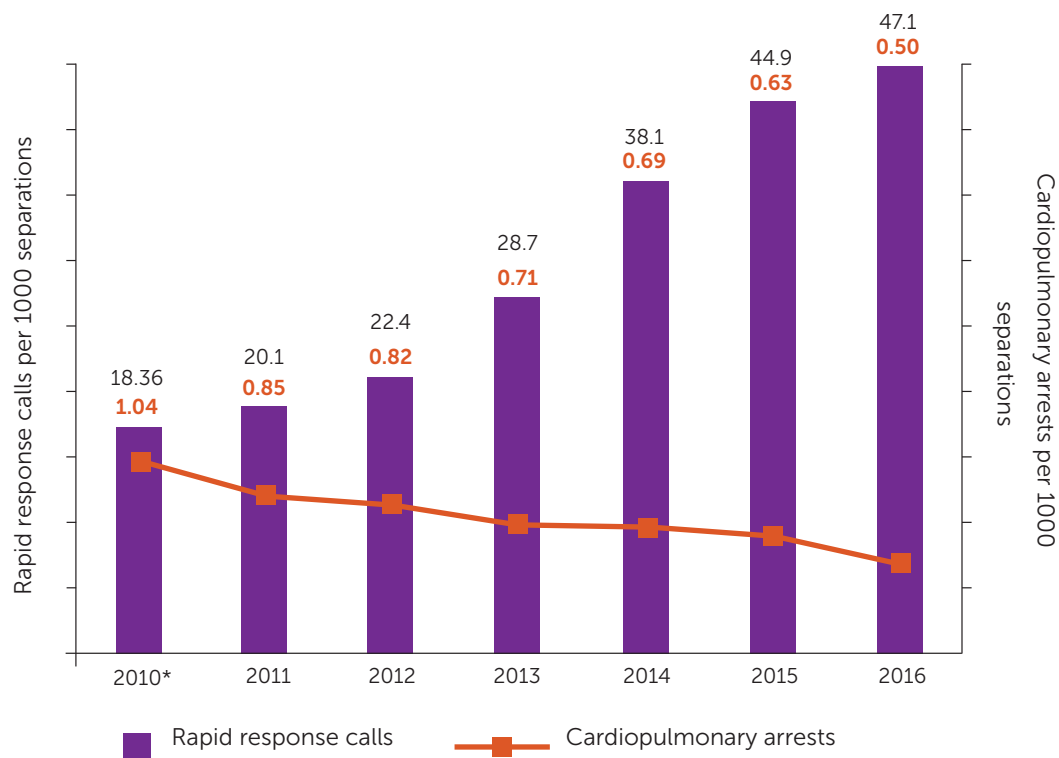
**Figure 9.2: Organisational systems supporting recognition and response**



Source: Recognition and Response Systems Surveys 2010 and 2015

Note: percentages are based on the number of respondents to each question, excluding missing data.

Figure 9.3: Unexpected cardiopulmonary arrest rates and rapid response call rates per 1,000 acute separations – Between the Flags NSW, 2010–2016



\*Data for August to December 2010 only  
Source: NSW Clinical Excellence Commission

## Cardiac arrest rates

The occurrence of cardiac arrests is one of a few widely measured and reported indicators of the success of recognition and response systems.

Findings from the NSW Between the Flags program indicate that from the program's introduction in 2010 to December 2016, the rapid response call rate increased by 156% and the cardiac arrest rate decreased by 51.5 % ( $p < 0.01$ ).

Between the Flags was developed at the same time as the consensus statement, and implemented in NSW public health facilities in January 2010. Key elements of the Between the Flags framework align with NSQHS Standard 9.

In Victorian hospital admitted patients, annual rates of cardiac arrests fell across the whole system between 2007 and 2014.<sup>30</sup> The estimated cardiac arrest event rate at the end of June 2010 was 2.91 per 10,000 bed days, which had reduced to an estimated 2.33 per 10,000 bed days by the end of June 2014 (rate ratio 0.80, 95% CI: 0.72 - 0.89,  $p < 0.001$ ). This represents a 20% relative reduction in the monthly cardiac arrest complication rate over the study period. Time-series analysis suggests the fall was significantly associated with the period of exposure to the NSQHS Standards and their implementation as a requirement for accreditation process.

In a study using ICU data from the Australia and New Zealand Intensive Care Society adult patient database (ANZICS-APD), the proportion of patients admitted to the ICU from the ward after an in-hospital cardiac arrest decreased over the period of implementation of NSQHS Standard 9.<sup>31</sup> Of patients admitted to the ICU from the ward, 5.6%, 4.9% and 4.1% had a recent cardiac arrest in the baseline, roll-out and intervention periods respectively. Interrupted time series analysis revealed a significantly decreasing rate of cardiac arrest admissions in the period June 2010 to December 2014.

## Where to now?

Anecdotally, one reason for the success of NSQHS Standard 9, and associated efforts to put in place recognition and response systems, has been the engagement of clinicians, in particular doctors. NSQHS Standard 9 also includes some developmental items about patient and family escalation systems.

Accreditation results indicate that while most hospitals did not meet these actions in the first year or so of assessments against the NSQHS Standards, by 2015 they were being met more frequently. Patient and family escalation systems are an important way of involving patients and families in care, and there is good evidence that this type of patient-centred care is associated with better outcomes.<sup>32</sup> The requirement for patient and family escalation systems remains in the second edition of the NSQHS Standards.

Another issue to note concerns end-of-life care. NSQHS Standard 9 mostly concerns the needs of patients with reversible deterioration. For many people deterioration is not reversible; nonetheless, it is common for medical emergency teams (METs) to diagnose and manage patients who are dying in hospitals. While good systems are needed to recognise and respond to clinical deterioration, it is also important that people at the end of life, whose deterioration is not reversible, receive safe and high-quality care. Although there has been considerable investment in areas such as palliative care and advance care planning, some persistent gaps remain. To help address these gaps, the Commission released a consensus statement about end-of-life care in 2015<sup>33</sup>, and new items about end-of-life care are included in the second edition of the NSQHS Standards.

The first edition of the NSQHS Standards was limited to the detection of physical deterioration. In the second edition of the NSQHS Standards, the scope includes detection of acute deterioration in mental state, including delirium, and emotional and cognitive changes leading to suicide and aggression. In addition, the Commission has developed a new consensus statement on recognising and responding to deterioration in mental state that will support

## Case Study 9.1

### Introducing a trigger for mandatory rapid response calls

#### Service profile

Nambour General Hospital is a large regional general hospital and a major referral centre on the Queensland's Sunshine Coast, with around 375 beds.

#### What changes did the service make and why?

The Queensland Adult Deterioration Detection System (Q-ADDs), a colour-coded track and trigger, cumulative scoring system for the recognition of patient deterioration, was introduced in 2012.

Following this, several incident reports highlighted that deterioration of patients was not always acted upon appropriately, even when it was detected.

This led to three main changes.

1. An intensive education process for staff. Emergency calls were made mandatory when the trigger zone was reached. Although it was recognised that this made the calling process less discretionary, there was a need to protect both patients and clinical staff (medical and nursing) from the pitfalls of inexperience or misjudgement. This helped change the culture of the hospital, and protected nursing and junior medical staff from being or feeling criticised for calling the rapid response team.
2. A two-tiered response system (less acute versus code blue) to allow safe resource allocation.
3. Home team ownership and ability to de-escalate. ICU responds to all calls but critical care staff can be rapidly de-escalated, with home-team ownership unless critical care input is required.

#### What were the challenges?

Initial widespread resistance was overcome by clear explanations and cases exemplifying the need for change, resulting in widespread buy-in.

The higher rate of rapid response calls

increased the workload for clinical staff significantly, with an increase from 16 to 150 calls per month. However, despite the increased call numbers, the rapid de-escalation reduces the staff time spent out of ICU.

#### What were the outcomes?

A retrospective audit showed that after these changes, the number of patients admitted to ICU with very high severity of illness scores (>50% predicted mortality) reduced by one-third.

The average length of stay for patients admitted to ICU after a MET call also decreased from four to three days, and the number of patients staying in ICU for longer than one week decreased by 30%.

- “ Nambour Hospital has not had a SAC1 case related to missed clinical deterioration since mandating calling.”
- “ Unfortunately, one of the defining events involved a near miss incident with one of our own staff members who had been admitted as a patient. When our colleagues realised that recognising and responding promptly to deteriorating patients could be critical, the support for this initiative increased quickly.”

The introduction of NSQHS Standard 9 helped with gaining support from the hospital executive. This allowed the MET service to employ an extra night medical registrar to assist with the increase in rapid response calls, and to provide institutional support for the widespread implementation of this program.

#### Advice to other services?

Early involvement of the home team is essential if there is no provision for extra staffing.

- “ We realised that involvement of the home team early is a must for ensuring continuity of care, and also so that the rapid response team can 'stand down' early if no ongoing critical care management is required.”
- “ Completing an audit form after each MET call allows a better understanding of our trends and identifies areas for improvement.”



## Case Study 9.2

### Introducing a rapid response system into a regional hospital

#### Service profile

In 2015 Launceston Health Service was a 300-bed regional general hospital in the north of Tasmania.

#### What changes did the service make and why?

A working group led by an intensivist/anesthetist was established to implement a rapid response system at the hospital and across rural inpatient facilities in the north. This was prompted by two factors: the introduction of NSQHS Standard 9 in 2011 and a physician returning from a sabbatical in the UK having experienced a medical emergency warning system.

We adapted the Commission's tiered calling criteria. We also worked with the small hospitals in the area that had an escalation process in place, but no formal observation chart to support that process.

#### What were the challenges?

Initially the project officer was responsible for reviewing every call. While this was essential to provide feedback to the wards, when the calls increased up to 130 a month, it was unsustainable, resource intensive and saw delays in timely feedback to wards and staff. In consultation with the nursing executive and senior nurses, the system for reviewing emergency calls was changed. Accountability for ensuring that all emergency calls were reviewed was shifted to the nurse unit managers of each ward, with key staff trained and supported to undertake the review process. This saw a significant improvement in the timeliness of feedback and action taken to improve compliance with the system at a ward level.

Another outcome was a dramatic increase in emergency call rate over a period of 6 months, up to 130 calls a month. This has now stabilised at about 80 calls a month (in 2015).

#### What were the outcomes?

The Code Blue call rate for cardiac arrests has remained static. However, the number of patients transferred to ICU at the time of rapid response

calls has reduced (from eight to three per month), possibly as a result of earlier home team management prior to the rapid response call.

The escalation pathway also allowed nursing staff to get earlier involvement of senior doctors, which had been difficult in the past.

Auditing of the calls was essential to identify a few issues. In the first 12 months there were missed opportunities to call for rapid response and patients were ending up in ICU. The governance committee for the rapid response system worked closely with key stakeholders to address this and improve compliance with the system. However, we were still missing the opportunity to call for urgent home team review. A recent snapshot audit of charts showed no missed opportunities for rapid response, and a dramatic reduction in the failed calls for urgent ward review – which is down to almost zero.

#### What helped you succeed?

NSQHS Standard 9 acted as an impetus to review the hospital's rapid response processes and to gain executive support for a new system.

- “ The Standard drove us to implement improvements to our system; we shifted our focus to what was happening pre-arrest and address this. The Standard provided direction on improving our observation charts to support this process, especially as the charts visualise trends.”
- “ NSQHS Standard 9 and the consensus statement helped place recognition and response systems as a priority for the executive and this assisted in improving the engagement of staff towards other safety and quality initiatives and NSQHS Standards work. The expansion of safety and quality resources over the last few years reflects the organisation's commitment to improving safety and quality.”

#### Advice to other services?

- “ Be patient – it took two and a half years to get to this point. Also, constant feedback and monitoring of the process really helps change the culture.”



## Case Study 9.3

### Developing the Victorian Children's Tool for Observation and Response (ViCTOR)

health services to meet these new requirements.<sup>34</sup>

#### Network profile

Facilitated by the Department of Health and Human Services, Victoria, the Victorian Paediatric Clinical Network (VPCN) is a collaborative of clinicians and others with an interest in paediatrics.

#### What changes were made and why?

In 2013 the Royal Children's Hospital and Monash Children's Hospital, with funding and support from the VPCN, developed and implemented a set of statewide paediatric observation and response charts. In Victoria, there were no standardised paediatric observation charts and where they did exist, there was a large variation in the thresholds used to identify sick children. This was confusing for the paediatric workforce, who regularly rotate through different hospitals.

The Victorian Children's Tool for Observation and Response (ViCTOR) was designed in accordance with Standard 9, and the Standard helped act as a driver to move the project forward.

#### What were the challenges?

Some Victorian hospitals had developed paediatric charts using different chart designs and vital sign ranges. Some hospitals were using adult charts for paediatric patients. All hospitals were trying to meet the NSQHS Standards.

For some services, a lack of paediatric experience or dedicated paediatric education sessions was a barrier for recognising paediatric clinical deterioration.

Due to the decentralised approach to provision of health care in Victoria, additional project requirements included coordination

of statewide printing, website development, liaison with Health Information Services for standardised barcoding and development of bedside folders to store the observation charts.

#### What were the outcomes?

A set of five age-specific charts were developed, utilising recent evidence that had established respiratory rate and heart rate percentiles for hospitalised children.

Chart audits across all pilot sites showed that the percentage of hospitalised children with vital signs consistent with clinical deterioration reflected expectations based on the percentile ranges.

A survey of clinicians in a pilot study of 12 Victorian hospitals found 93% preferred the ViCTOR charts compared to their previous hospital charts. Focus groups conducted with medical and nursing staff identified key changes to the design of the chart, which were incorporated into the revised charts.

A set of short videos outlining how to conduct paediatric observations has since been produced.

#### What helped you succeed?

Engagement from across the paediatric sector was essential to the project's success.

The engagement from clinicians and nurses working across sites was integral to the success of this project.

At the time of starting the project, there was no hard evidence to support the different charts already in use. So we took a collaborative approach to assess the evidence and the design of charts before undertaking a pilot project.

Initial piloting of the charts in 12 hospitals gave an opportunity to gather important information and refine the charts before launching the project more widely.





# NSQHS Standard 10 – Falls

## Intention

To reduce the incidence of patient falls and minimise harm from falls, primarily during an episode of care.

## Introduction

Falls are a significant safety issue, with risk of falls present in all age groups but particularly in the elderly, who are at greater risk of serious harm from falls. Proactive detection and implementation of strategies to reduce risk are thought to reduce the harm from falls and have some impact on the rate of falls. Falls have been a long-standing patient safety issue, with programs existing in many states and territories before the introduction of the NSQHS Standards. In 2012–13, for public hospitals a national rate of 4.0 falls per 1,000 separations where the place of occurrence was a health service area was reported.<sup>15</sup>

## What has been achieved?

In Queensland Bedside Audit data, the proportion of patients audited who were at risk and had a falls prevention plan increased between 2011 and 2015, from 75% of at-risk patients in 2011 to 86% in 2015. Of those patients present during the audit, 92% had a nurse call system in reach in 2015, an increase since 2011 (see **Figure 10.1**).

## Falls incidents and serious harm

In South Australia, rates of the most serious types of falls reported in the SA Safety Learning System have fallen since 2011–12, with the most extreme harm (SAC1) incidents less than half as frequently reported in 2014–15 compared with 2011–12 (**Figure 10.2**).

## Where to from here?

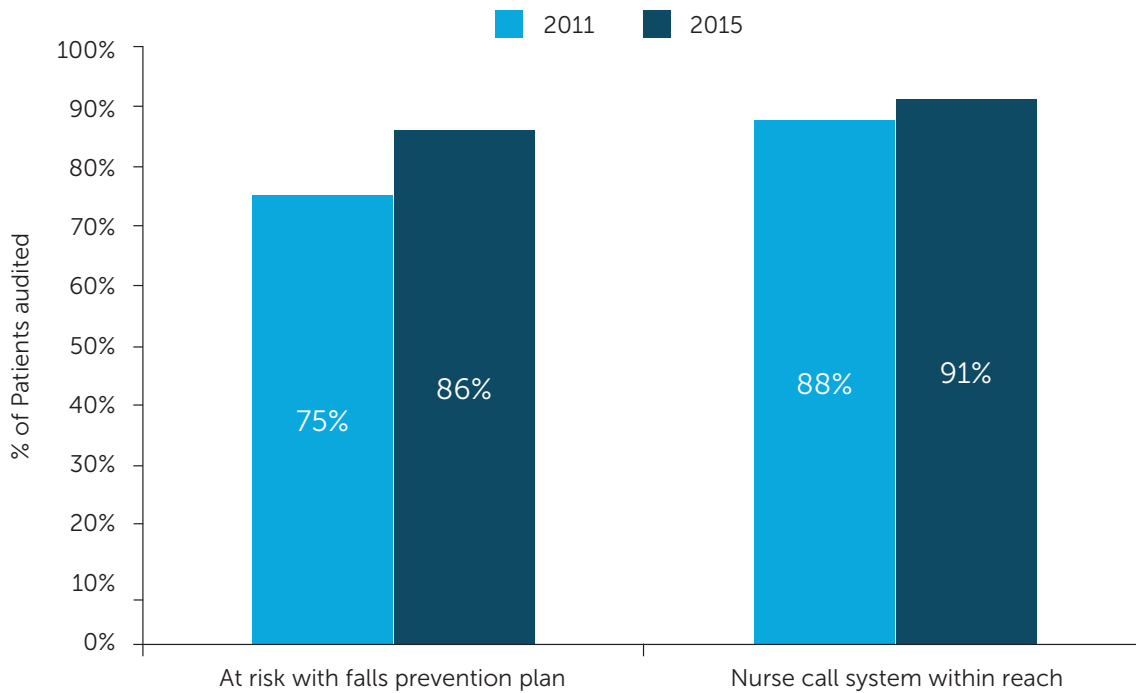
Falls remain an important focus of patient safety efforts and a multifactorial approach remains necessary.

The Commission has reviewed the available evidence and updated the 2009 falls prevention guidelines.<sup>35</sup>

As described for pressure injuries, implementing the Comprehensive Care Standard in the second edition of the NSQHS Standards will enable better identification and management of all the patient's risk factors, particularly those that can lead to a fall.

Monitoring of harm from falls will continue to occur as a national health performance indicator.<sup>15</sup> For local hospital use, the Commission's list of hospital-acquired complications includes indicators relating to falls, while other forms of local monitoring are necessary to identify local issues and solutions which can vary according to the setting and patient mix.

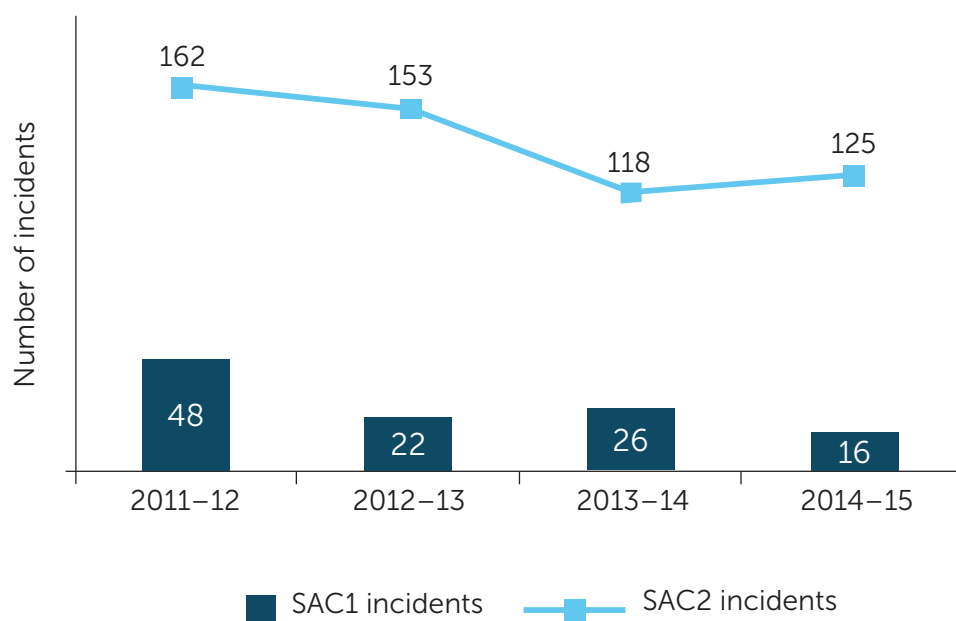
Figure 10.1: Falls prevention indicators – Queensland Bedside audit 2011 and 2015



Source: Queensland Health

Note: In 2011, a total of 6,618 patients were audited and in 2015, 5,012 patients were audited. See Appendix for details.

Figure 10.2: Falls incidents associated with serious harm, SA Safety Learning System



Source: SA Safety Learning System, SA Health

## Case Study 10.1

### Hourly rounding\* helping to decrease falls

#### Service profile

Hospital F is a 52-bed acute private medical surgical hospital. It caters for all types of medical patients. Increasingly, medical patients are older, presenting many issues with the risk of falling and harm from falls.

#### What changes did your service make?

The hospital introduced hourly rounding in September 2014. This included the introduction of an hourly rounding chart, education of staff and continued monitoring of compliance with the chart.

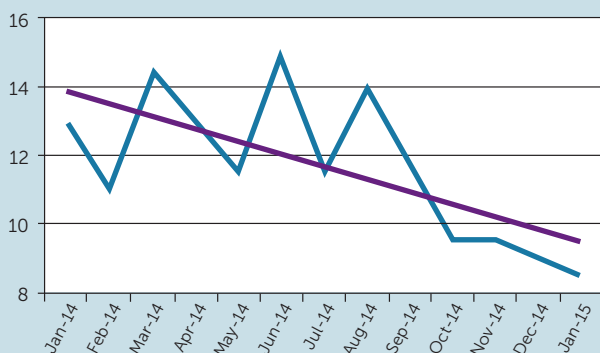
#### What were the outcomes?

A significant reduction in the falls rate was immediately evident (see Table and Figure 10.3).

#### What were the barriers and how did you overcome them?

We continue to struggle with nurse compliance of hourly rounding, with some nurses embracing the change while others struggle with changing their nursing practice. We have continued to audit compliance with the hourly rounding charts and educate nurses on the importance of hourly rounding.

**Figure 10.3: Falls Rate in Hospital F by month 2014**



#### What helped you succeed?

Using other hospitals that had already introduced hourly rounding as models for the change of practice. Tools such as the hourly rounding chart already existed within our corporate group, so there was no need to develop our own tools, which can be time consuming.

#### Advice for other services?

Be prepared for some resistance from nursing staff.

Source: Provided by the Australian Private Hospitals Association

\*Hourly rounding refers to a process where nurses routinely check a patient's needs each hour, usually referring to a checklist of standard questions – for example, relating to pain, toileting needs, positioning, availability of call device etc.

	Nov-14	Apr-15
Was the hourly rounding form present in the patients file?	90%	95%
Is a patient identification label attached?	90%	95%
Was the nurse name printed on the hourly rounding form?	74%	80%
Was the form dated?	68%	80%
Was the form fully completed by staff throughout all shifts?	63%	70%
Number of hourly timeslots patient admitted	281	437
Number of hourly slots completed	269	329
Percentage completed	93%	75%
Overall compliance	80%	83%

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# Appendix

The body of the report refers to a number of data sources. Further details of the data collections' sources and methods are provided below, in order of their appearance in the report.

## NSQHS Standard 1

### 1. Commission's Safety and Quality Governance Survey

Between July and August 2015, the Commission conducted a survey of governing bodies responsible for safety and quality across Australia. The survey aimed to find out how safety and quality was being managed by governing bodies in Australian hospitals and whether the NSQHS Standards had influenced healthcare governance.

#### Methods

The Commission's Inter-Jurisdictional Committee (IJC), which is made up of safety and quality representatives from state and territory health departments, coordinated the invitation to individual hospitals to participate in the survey and distributed the survey through their contact lists in July and August 2015.

The survey was directed at the governing body of the organisation, usually referred to as the board. The intended participants were board members with assigned responsibility for safety and quality of patient care, most commonly chairs of quality committees. In Western Australia, health services do not have a board or governing council. Hence a slightly modified survey was sent to the chief executives of the four WA health services. Responses were received from three WA health services. The responses have been included with those of the other states and territories; however, WA responses relate to the executive of the area health service rather than the board or Governing Council. Some states and territories distributed the survey to individual hospitals, while others sent the survey for completion at the local health district level.

#### Responses

There were 82 responses to the survey (60% response rate). Most respondents (90%) were from public hospital services and 40% were from hospitals with more than 500 beds. Respondents' geographic distribution was representative of the distribution of health services nationally. Although

51% of respondents were from Victoria, this reflects the governance arrangements in different states and territories and the fact that Victoria has a large number of health services, some of them consisting of individual hospitals; in contrast, WA has only four local health services. Eighty responses (98%) were from hospitals or health services with a quality committee or similar formal structure that reports directly to the board

## NSQHS Standard 3

### 2. Commission NSQHS Standard 3 survey

The Commission's NSQHS Standard 3 survey aimed to identify the perceived impact of NSQHS Standard 3 on infection control practice and antimicrobial stewardship in hospitals, from the point of view of infection control practitioners and those implementing the standard. A specific aim was to identify to what extent systems had been in place prior to the NSQHS Standards, and if so, whether the NSQHS Standards had made any difference to care.

#### Method

The survey was developed in conjunction with infection control experts through the Commission's expert committees. It was pilot tested, reviewed and revised, prior to distribution to three groups:

- The Australasian College for Infection Prevention and Control (with a membership of 1,400)
- 357 health service staff who had participated in the Commission's NSQHS Standard 3 implementation and training workshops
- 200 health service staff who had called the Commission's Standards advice centre telephone line.

The survey was conducted electronically using Survey Monkey between April and June 2015.

## Responses

A total of 305 responses were received. Most (59%) respondents were infection control practitioners and 67% had more than 4 years' experience in their health service; 90% were responsible for overseeing their service's accreditation to NSQHS Standard 3, and 88% of services had been through accreditation, organisation-wide or mid-cycle (**Table 12.6**).

About three-quarters (74%) of respondents were in public hospitals, with a reasonable distribution from different states and territories, except for NT and ACT where there were no respondents (Figure 12.6).

Similar proportions were based in major cities and regional areas (45%) (**Figure 12.7**).

Participants responded as individuals and a small number worked at more than one facility.

## 3. Central line-associated bloodstream infection rates (CLABSI)

National CLABSI rates are reported from the Australian and New Zealand Intensive Care Society (ANZICS) CLABSI registry. In June 2010, the Commission funded ANZICS to undertake a national CLABSI prevention project in Australian intensive care units. The aims of the national project were to reduce Australian ICU CLABSI to less than 1 infection per 1,000 line days, and to facilitate accurate and consistent CLABSI measurement with timely reporting to clinicians and benchmarking opportunities.<sup>32</sup> The Commission also funded ANZICS CORE to develop a national CLABSI database and reporting system allowing ICUs to compare their CLABSI rate against peer units throughout Australia. The CLABSI registry was launched on 1st July 2012.

Some states and territories also conduct surveillance of CLABSI and these are reported here for NSW and SA.

CLABSI data from NSW and SA are provided courtesy of NSW Health and SA Health.

## NSQHS Standard 4

### 4. SA Safety Learning System

Data from the SA Safety Learning System are provided courtesy of the SA Health Safety and Quality Unit.

#### Background

An incident reporting system has been in place in SA since the 1990s and was first protected under legislation in 1996. The original Advanced Incident

Management System was replaced by the Safety Learning System in 2011, which combines incident reports, complaints, coronial reports and medical malpractice notifications in one place. The SA Safety Learning System has been specifically aligned to the NSQHS Standards, allowing reporting of incidents relevant to each of the standards.

Primarily designed for safety and quality improvement and monitoring, SA Health has actively promoted incident reporting since the system was introduced and monitors completion rates and timing of reporting, follow-up and closure of reports. Reports can be monitored by levels of management from unit level upwards at the health service network level, as well as by the SA Health Safety and Quality Unit. Each incident is assigned a Safety Assessment Code (SAC) rating on the basis of the severity of its actual consequences and probable frequency. SAC1 and SAC2 are the ratings assigned to incidents associated with serious harm.

The Safety Learning System is administered and maintained by the SA Health Safety and Quality Unit.

#### Data collection method

SA Health staff report directly into the Safety Learning System using the intranet. Incidents logged in the Safety Learning System prompt an email to the manager of the location where the incident occurred. Managers then log into the Safety Learning System to complete the details of the investigation undertaken as a result of the incident. Managers can also run reports to analyse and show trends on incidents within their location.

All incidents reports in the system are verified; duplicate or otherwise incorrect records are amended or rejected. Action is taken appropriate to the incident type and severity and recorded in the system. SAC1 incidents must be reported and initiate a detailed and thorough investigation/review, where the incident meets certain legislative requirements, a root cause analysis may be done. More information is available on the SA Health web site: [www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au).

## Interpreting incident data

The volume of overall incident reporting is an indicator of a positive safety culture in which incidents involving actual and potential harm are monitored and a systematic approach is taken to learning and preventing future incidents. It could be expected, however, that a sustained high volume of severely harmful incidents of a consistent type would indicate a need for investigation and action. The volume of severe harm incidents may also be used to indicate the safety of care, although are not necessarily accurate measures of the true number of events. An important assumption of this interpretation of changes in SAC1 and SAC2 events is that reporting of incidents occurs consistently and is relatively complete for the whole period of time.

This assumption is reasonable for the SA Safety Learning System for the following reasons. As well as a higher level of scrutiny of the SAC1 and SAC2 incidents by clinical managers, Local Health Networks Safety and Quality teams, there is additional review/quality control undertaken by the Safety and Quality Unit to review classification, SAC rating and appropriateness of actions. The biggest risk to data completeness is if incidents are initially rated too low and the Local Health Networks Safety and Quality teams do not reclassify at that point.

## 5. National Inpatient Medication Chart National Audit

The NIMC comprises a suite of national standard medication charts that aim to convey information consistently between healthcare professionals on the use of medicines for individual patients. The NIMC was introduced in Australian states and territories in 2006 and 2007. The Commission conducted a post-implementation pilot audit in 2006 and national audits in 2009, 2010, 2011, 2012 and 2014.

A total of 394 hospitals participated in the 2014 NIMC National Audit. All eight states and territories were represented in the 2012 and 2014 audits, all except NSW in the 2010 audit, and all except Tasmania in the 2011 audit.

Objectives of this analysis of the NIMC National Audit data were to:

- Determine whether participation in the NIMC National Audit increased from 2010 to 2014
- Determine whether there were improvements in the aspects of NSQHS Standard 4 measurable within the NIMC criteria from 2010 to 2014

- Explore whether a greater improvement is seen between 2010 and 2014 in hospitals that underwent accreditation before the 2014 national audit, compared with those that did not.

The NIMC National Audit includes data collected before and after states and territories and health services were exposed to the NSQHS Standards in their current form (2011), and from a range of hospital types. Participation in the NIMC National Audit can be used by hospitals as evidence of meeting several actions in NSQHS Standard 4.

## Method

All Australian public and private hospitals using the NIMC are invited to participate in the NIMC National Audit, which is conducted by the Commission between August 1 and September 30 each year. Participation is voluntary. Hospitals are advised to have two people collect the data: a nurse and a pharmacist, if available. Auditing teams collect data using the NIMC Audit Form and provide it to the Commission using the NIMC Audit System.

Hospitals that participated in both the 2011 and 2014 NIMC National Audits were identified to analyse pre- and post-Standards results in a stable cohort. Results were also analysed according to accreditation status to explore whether this was associated with better performance.

## NSQHS Standard 5

### 6. Queensland Bedside Audit

Data from the Queensland Bedside Audit are provided courtesy of Queensland Health.

The Queensland Bedside Audit is a safety and quality initiative conducted annually by Queensland Health since 2011 to collect, analyse and provide feedback to hospitals. The Queensland Bedside Audit collects information relevant to several Standards and other safety and quality areas.

The Queensland Bedside Audit results can be used by Queensland hospitals in their accreditation assessments against the NSQHS Standards, and include information relating to:

- NSQHS Standard 1: Governance for Safety and Quality in Health Service Organisations
- NSQHS Standard 2: Partnering with Consumers
- NSQHS Standard 4: Medication Safety
- NSQHS Standard 5: Patient Identification and Procedure Matching

- NSQHS Standard 8: Preventing and Managing Pressure Injuries
- NSQHS Standard 9: Recognising and Responding to Clinical Deterioration in Acute Health Care
- NSQHS Standard 10: Preventing Falls and Harm from Falls.

Only results for indicators that can be compared between 2011 and 2015 audits are presented in this report.

## Methods

The Queensland Bedside Audit collects data from hospitals using a standardised method each year. All overnight admitted adult (including acute mental health) and paediatric (including newborns admitted to special care units) patients are audited.

The name changed from the Patient Safety Bedside Audit to the Queensland Bedside Audit in 2012. Patient experience questions were added at this time, and existing sections had questions added or amended to align them with the NSQHS Standards.

The audit involves:

- A review of clinical documentation for all eligible patients
- A physical examination of consenting patients
- Observation of patients' surroundings
- Asking patient questions about elements of their health care.

The 2011 Patient Safety Bedside Audit was conducted in 122 inpatient hospitals and multipurpose health services from 12 October to 12 December 2011, over one or more days. A total of 6,618 overnight admitted adult and paediatric patients (including newborns admitted into special care units) were audited in 2011.

The 2015 Queensland Bedside Audit was conducted in 117 inpatient hospitals and multipurpose health services across public hospital and health services between 1 October and 30 October 2015, over one or more days. A total of 5,012 overnight admitted adult and paediatric patients (including newborns admitted into special care units) were audited in 2015. Data were collected using either a scannable hard copy form or an online form (collected using the online Measurement Analysis and Reporting System).

The selection and number of auditors involved at each facility was determined locally. Training on how to complete the audit form was provided to auditors by either statewide videoconferences

conducted by Queensland Health's Patient Safety and Quality Improvement Service or through local training. Auditors were also required to complete the pressure injury inter-rater reliability test to ensure correct staging of pressure injuries.

## Analysis

Data and analysis was provided by Queensland Health's Patient Safety Unit as a percentage change in indicators that allowed comparison of 2011 and 2015 results. The baseline of 2011 was chosen as it predates the mandatory accreditation to the NSQHS Standards.

## Limitations

The Queensland Bedside Audit is undertaken at the patient's bedside and does not involve checking the patient's medical record chart. Data is self-reported by participating facilities and indicator results may be impacted by auditor variability, human error and inconsistency in the interpretation of audit questions.

In addition:

- Only 2015 Queensland Bedside Audit indicators that could be compared to 2011 indicators are presented, and only indicators that measure compliance are reported
- Percentages have been rounded to zero decimal places
- The number of facilities participating in the 2011 and 2015 audit differed, and number of wards audited per facility also varied between 2011 and 2015
- The total number of patients eligible for inclusion in results varies based on indicator definitions and inclusion/exclusion criteria
- The audit questions related to 'Identification completed' and 'Allergies/ADRs documented' were modified from the 2011 to 2015 audit to include more specific requirements
- Patients in mental health units are excluded from all pressure injury prevalence indicators.



## NSQHS Standard 6

### 7. NSW Adult Admitted Patient Survey

Data from the NSW adult admitted patient survey are provided courtesy of the Bureau of Health Information (BHI) and NSW Health.

BHI manages the NSW Patient Survey Program on behalf of NSW Health. BHI sends the Adult Admitted Patient Survey to people selected by stratified sampling who were admitted to a NSW public hospital, approximately three months after their discharge. BHI provided the results in response to a request from the Commission. The results are from patients admitted to NSW public hospitals between January and December 2014, inclusive. Results are weighted to the demographic composition of each hospital and Local Health District by respondent age, stay type (overnight vs. same day) and cancer status (in facilities being oversampled from September to December).

### 8. Victorian Healthcare Experience Survey

Data from the Victorian Healthcare Experience Survey are provided courtesy of the Victorian Department of Health and Human Services.

The Victorian Healthcare Experience Survey is a statewide survey of people's public healthcare experiences. These questionnaires are distributed to a randomly selected group of eligible people from each health service in the month following hospital discharge or emergency department attendance.

Results for adult inpatients, July to December, 2014, were requested from the Victorian Department of Health and Human Services. Results for VHES are usually reported quarterly. As the Commission requested six months of data, results were merged across two quarters (July-September 2014 and October-December 2014), taking into account differing sample sizes for each quarter. However, as the VHES is set-up for quarterly reporting, these results do not take into account potential (small) differences in the weights applied for each quarter.

Results provided in this report represent a broad range of campus types, as described below:

- 14 local rural campuses
- 8 major campuses
- 12 other metro campuses
- 6 regional campuses
- 62 small rural campuses
- 6 specialist campuses
- 10 sub-acute campuses
- 10 sub-regional campuses
- 5 tertiary campuses.

In total, 39,867 surveys were sent to adults who had an inpatient experience between July and December 2014 and 15,119 survey returns were received at a participation rate of 38%. The following key demographic characteristics describe the participants who took part in the survey:

- 49% were male and 51% were female
- The average age of participants was 63
- 11% mainly spoke a language other than English at home

## NSQHS Standard 9

### 9. Commission survey of recognition and response systems in Australia – 2015 follow-up survey

In 2010, to help inform the development of the NSQHS Standards, the Commission conducted a survey of recognition and response systems in place in Australian hospitals. A follow-up survey was conducted between April and June 2015 to identify what had changed since the implementation of the NSQHS Standards.

#### Methods

A number of questions were repeated from the 2010 survey while others were added to better understand the impact of NSQHS Standard 9. The invitation to individual hospitals to participate was coordinated through the Commission's Inter-Jurisdictional Committee (IJC) and the Private Hospital Sector Committee, which distributed the survey link. Intended participants were hospital staff who had been involved with implementing recognition and response systems in their facility. The Commission

followed up with each participating state and territory regarding distribution of the survey to hospitals to ensure the best possible response rate.

The survey was conducted using a web-based SurveyMonkey platform, over a 3-week period in June 2015. The Commission asked those distributing the survey to remind participants one week before the survey closed.

### Data analysis

Results of the 2010 and 2015 national surveys were compared using descriptive statistics. Significance testing was not performed.

### Limitations of the data

There are several limitations to the analysis provided. First, in 2010 public hospitals in NSW did not participate in the survey. Second, since not all the information is available about the participating hospitals in each survey, it is not possible to know whether the two samples are equivalent. While the sample of hospitals that completed the survey was different in 2015 from 2010, it was possible to identify 37 hospitals that completed both surveys. A separate comparison was conducted for this sub-sample to check for consistency with the full sample.

### Results

After excluding duplicate responses and day procedure services, there were 276 responses to the survey. Not all 276 participants answered all survey questions. Demographic information was provided by 208 respondents. Of these 208 participants, there were 147 public services, 54 private services and seven public hospitals under private contract. Private hospitals appear to be under-represented in the 2015 survey relative to public services.

The nature of the survey distribution means that the number and characteristics of invitees who received the survey link could not be identified. In addition, respondents could answer for either a single hospital or multi-campus service, depending on whether the same responses applied to all sites. For these reasons, a response rate could not be calculated.

The positions of individuals who completed the survey varied considerably and included safety and quality professionals, clinical managers, clinical educators, medical and nursing professionals and executives.

### State and territory participation

All states and territories were invited to participate in the 2015 survey. However, NSW did not participate in the 2010 survey (due to parallel evaluation processes being undertaken with the implementation of the NSW Between the Flags program in that year). To determine whether NSW's participation might account for differences between the 2015 and 2010 results, analyses of the 2015 dataset were repeated without NSW data. There were no differences of note between analyses using the full 2015 data and excluding NSW.

## 10. Victorian hospital data from the Victorian Admitted Episodes Dataset

Data from the Victorian Admitted Episodes Dataset (VAED) are provided courtesy of the Victorian Department of Health and Human Services.

### Background

All Australian hospitals collect a range of data about each patient encounter. Patient records are interrogated by clinical coders, and the data submitted within a number of frameworks – the Admitted Patient Care National Minimum Data Set (APC NMDS), the Non-Admitted National Minimum Data Set and others. These data sets are commonly described as administrative data sets and at this point only the APC NMDS is considered for evaluation purposes. The Victorian Admitted Episodes Dataset is the Victorian data set for the APC NMDS.

### The condition onset flag

The APC NMDS separates clinical conditions into primary and secondary conditions, or diagnoses. A primary condition is the condition that is the reason for the patient's admission. Secondary conditions are all other clinical conditions identified on admission or during the patient stay.

Since 1 July 2008, hospital coders nationally have been asked to allocate a condition onset flag (COF) to secondary clinical conditions to identify whether the condition was acquired before or during admission.



This flag was introduced in Victoria in 2000 as the 'c-prefix'. The COF indicates whether a secondary (additional) patient diagnosis was present on, or acquired during, the admitted episode of care (i.e. whether it is a co-morbidity or a result of care received). The COF must be assigned a value of 1 or 2.

- COF 1 indicates that the diagnosis arose during the episode of care
- COF 2 indicates that the diagnosis was present before admission

There is interest in using the COF and the existence of a secondary diagnosis or condition to monitor complications of care and iatrogenic harm.

### Draft national set of hospital-acquired complications

In 2013, the Commission, assisted by KPMG and advised by a clinical reference group, developed a draft national set of hospital-acquired complications identifiable from administrative hospital data using the COF.<sup>34</sup> The nationally agreed set of hospital-acquired complications was published in 2017 and is available on the Commission's web site: <https://www.safetyandquality.gov.au/our-work/indicators/hospital-acquired-complications/>. Casemix funding was introduced in Victorian hospitals in 1993 and the COF has been used in Victoria for over a decade.

### Methods

The analysis is based on analytical time-series models that aim to identify whether there were any changes in complication rates during the intervention period (Jan 2011 to December 2014), compared to any baseline trends (2008 to 2010).

### Limitations of this approach

The purpose of developing the set of hospital-acquired complications was to support local monitoring and review for quality improvement in hospitals. The analysis of Victorian data was not able to investigate either the accuracy or utility of the data, only the frequency of complications on the draft list of hospital-acquired complications. Any inference regarding the impact of the NSQHS Standards made from these analyses would therefore need to assume that of coding and documentation were both accurate and stable.





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