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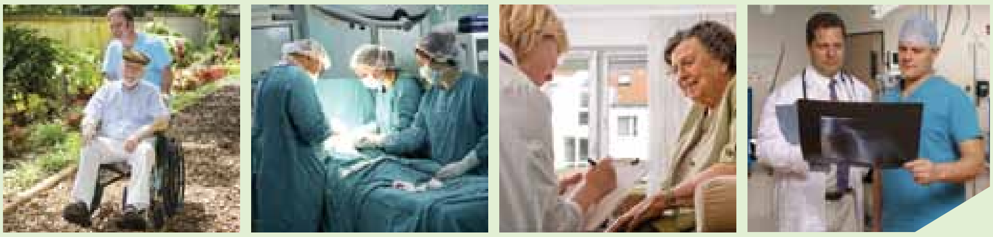
HEALTH QUALITY & SAFETY
COMMISSION NEW ZEALAND
Kupu Taurangi Hauora o Aotearoa

Making Our Hospitals Safer

Serious and Sentinel Events 2009/2010



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Thanks go to those in DHBs and the Ministry of Health who have collectively contributed to the development of this report.

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HEALTH QUALITY & SAFETY
COMMISSION NEW ZEALAND

Foreword

Quality and safety are the cornerstones of a trusted, effective and efficient health and disability system. The Government has created an independent Health Quality & Safety Commission to provide an appropriate focus on quality and safety. An interim Board has been established to allow this important work to begin, and the Commission will be formally established as a Crown entity in legislation by the end of 2010.

The Commission is responsible for assisting providers across the health and disability sector (public and private) to improve service safety and quality and therefore outcomes for all who use these services in New Zealand.

One responsibility of the Commission is to report on serious and sentinel events. These events are traumatic, and indeed often tragic, for the patients involved and their families, distressing for clinical staff, and costly for the health care system and society as a whole. The human cost of these events is too high and they divert resources from other pressing health needs.

While we cannot go back in time and prevent particular events described in this report, we can – and must – learn from them and reduce the likelihood of this kind of avoidable harm in the future.

This is the fourth year in which District Health Boards (DHBs) have publicly reported events of this type. The number of events reported depends primarily on the completeness of reporting: encouragingly, this appears to be improving. The trends within the reported events are clear and consistent – each year the largest categories are falls, and failures in clinical management. Also, a significant number of events relate to medication errors and suicides.

In a very few cases a discipline process is called for. Such cases can be identified and addressed in a range of ways including by our Health and Disability Commissioner or through the internal procedures of our hospitals.

However, the occurrence of the same types of event over and over again strongly suggests problems that lie primarily in the systems and processes used in providing health care. The vast majority of the incidents reported here do not have a single cause and are not the fault of one individual. It follows that a focus on simply punishing people not only would be unjust in many cases, but more importantly would do little to improve safety in the future.

In particular, we depend on open disclosure, both for learning and for the sake of the patients and families who rightly want to know what went wrong, as well as what will be done to prevent recurrences and reduce the risk of harm to patients in the future.

> “The occurrence of the same types of event over and over again strongly suggests problems that lie primarily in the systems and processes used in providing health care”

Willingness to disclose is enhanced by a just culture in which the public can know that genuinely blameworthy behaviour will be subject to appropriate sanction, but health care workers can be confident that simple human error, honestly admitted by people who have been trying their best, will not be treated as blameworthy. The purpose of events reporting is to learn from these events and avoid them in the future.

This report includes a section on changes that have been made as a result of the lessons learnt from events reported over the last two years. There have been a number of

> “It is pleasing to note some DHBs and private hospitals are introducing specific programmes and changes to make real improvements in patient safety”

pleasing improvements. The uptake of the World Health Organization’s Safe Surgery Checklist is very gratifying: events related to the wrong patient, site or procedure are substantially lower this year than in previous reports. Incident reporting itself has also improved, with more extensive follow-up, reporting of findings, and efforts to identify root causes for action.

It is also pleasing to note some DHBs and private hospitals are introducing specific programmes and changes to make real improvements in patient safety. Next year the Commission will acknowledge the most effective responses to this year’s reported incidents through an awards process, to be announced in more detail soon.

The health care system in New Zealand is already relatively safe and efficient in a world context, but we can and must make it better. Improving its safety and efficiency will require action and engagement at all levels. Although this report focuses on events that occurred in our DHB hospitals, the private sector is another essential part of our health services, so we have mentioned positive actions private providers have taken recently to improve safety. We believe that every New Zealand health care worker, whether in a hospital or in primary care and whether in the public or the private sector, wants safe, effective and efficient care for every patient.

The Government has clearly signalled its commitment to the importance of quality and safety in health care by establishing the new Commission. It has also invested in ongoing programmes to improve medication management, surgical site infection surveillance and other initiatives to improve our health care system.

However, this report clearly indicates there is no room for complacency. The onus is on every one of us who serves New Zealand’s patients to redouble our efforts to ensure safe and effective patient care. Reading this report is obviously part of that responsibility. Unless they see the data and read the stories behind this report, it is easy for health care workers to be lulled into a false sense of security. These events (or accidents like them) could happen to any health care worker, so we are making sure all know about this report and receive the key messages in a short and focused format.

Reading the full report and reviewing the full list of adverse events (available at www.hqsc.govt.nz) is highly motivating. I believe that, after reading these moving stories, every health care worker will be even more determined to do his or her utmost to reduce avoidable patient harm in 2011.

I welcome feedback on the report and the matters discussed in it. Feedback can be emailed to info@hqsc.govt.nz.

Alan Merry

Professor Alan Merry, ONZM
Chair
Interim Board, Health Quality & Safety Commission

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Executive Summary

This report presents the fourth release of the serious and sentinel events information provided by District Health Boards (DHBs). Each year DHBs report on events that are actually or potentially preventable.

> **“New Zealand has an excellent health system by international standards and the vast majority of patients are treated safely and effectively”**

A **serious adverse event** is one that requires significant additional treatment, but is not life threatening and has not resulted in a major loss of function. A **sentinel adverse event** is life threatening or has led to an unanticipated death or major loss of function.

New Zealand has an excellent health system by international standards and the vast majority of patients are treated safely and effectively. However, for a small number of people, events happen that cause harm, or have the potential to cause harm. Any serious harm that does occur is a personal tragedy for a patient and his or her loved ones. Learning from these incidents is essential if we are to continually improve the safety and quality of care provided by our hospital services.

FINDINGS

For the 2009/2010 fiscal year DHBs reported that 374 people treated in their hospitals were involved in a serious or sentinel event that was actually or potentially preventable.

Of this total, 127 people died during admission or shortly afterwards, though not necessarily as a result of the event. Half (64) of these deaths occurred through suicide.

Over the same period, 998,390 people were treated and discharged by hospital staff – 391,265 day patients and 607,125 inpatients. There were also over 1.7 million outpatient discharges.

Falls (34%), clinical management problems (33%) and suicides (17%) were the three most commonly reported serious and sentinel events for 2009/10. These were also the biggest categories for serious and sentinel events reported for 2008/09.

LEARNING FROM REPORTING

DHBs and other providers have undertaken a number of excellent initiatives in response to reporting in previous years. The level and detail of incident reporting has improved, reflecting real engagement by our hospitals in the importance of working openly to reduce patient harm. Other positive changes include:

- most DHBs (and a number of private hospitals) have adopted the World Health Organization’s Safe Surgery Checklist
- many DHBs have instituted or improved comprehensive falls prevention programmes
- clinical management has been improved in a number of ways, including through the adoption of early warning systems to detect deterioration in a patient’s condition in time to begin treatment
- booking and referral processes have been improved
- a standardised medication chart is about to be introduced throughout New Zealand to reduce medication errors with regard to adult inpatients
- a standardised process to reconcile medicines and reduce medication errors at the point of handover of patient care is planned for all DHBs and has already been adopted by some (and by some private hospitals).

This report includes examples of how DHBs have introduced such changes to make real improvements in patient safety. Next year’s report will increase the emphasis on those providers who have responded to the challenge of making our health care safer.

Introduction

For the past three years an annual summary of the serious and sentinel events that have occurred in our hospitals has been released. This is the fourth such report. The information contained in these reports is provided by District Health Boards (DHBs) on a voluntary basis. This report covers events that occurred between 1 July 2009 and 30 June 2010.

A serious adverse event is one that requires significant additional treatment, but is not life threatening and has not resulted in a major loss of function. A sentinel adverse event is life threatening or has led to an unanticipated death or major loss of function. A list of definitions used in this report can be found in Appendix I.

International experience with event reporting shows that the process of increasing awareness often results in a rise in the number of events reported. For this reason, the number of events reported in New Zealand has risen since this process began and may well continue to rise over the next few years. That experience also tells us that patterns of reporting may change over time and will differ between organisations, reflecting a range of local factors. Thus the total number of incidents is not the focus of this report; rather, it is changes in patterns, and how we might learn to prevent similar incidents in the future.

For the 2009/10 fiscal year, DHBs reported that 374 people treated in their hospitals were involved in a serious or sentinel event that was actually or potentially preventable. Of this total, 127 people died during admission or shortly afterwards, though not necessarily as a result of the event. Almost half (64) of these deaths were due to suicide.

Falls (34%), clinical management problems (33%) and suicide (17%) were the three most commonly reported serious and sentinel events for 2009/10. These proportions are broadly similar to previous years: in 2008/09, for example, 39% of events reported were clinical management problems, 27% were falls and 12% were suicide.

This year we report for the first time on events in a new category – health care acquired infection. Infections that have been contracted in the health care system are a significant problem worldwide, and reducing these infections has been identified as a priority internationally.

The Quality Improvement Committee began a programme to address health care acquired infections and the Commission will continue with this work.

Contained within the findings of events reported by DHBs are several recurring themes. These themes include, but are not confined to:

- failure to recognise clinical deterioration in patients, underestimating the severity of a patient's condition, and a lack of supervision of junior staff, or less experienced staff, by senior colleagues
- medication errors, including mistakes arising from illegible prescriptions and from failures to question incorrect doses, even when these seem exceptionally high or low, and the dispensing of medication by inexperienced staff
- poor communication, including inadequate handover processes, unclear processes and guidelines, and lack of proper orientation for new staff
- failures in referral and recall processes, resulting in delayed diagnosis and delayed treatment, leading to increased patient morbidity or death
- inadequate staff knowledge of and adherence to written policies and treatment guidelines, highlighting the need for more effective staff education, clearer documentation and more effective supervision
- inappropriate staff mix on 'acute' wards and units.

> “The total number of incidents is not the focus of this report; rather, it is changes in patterns, and how we might learn to prevent similar incidents in the future”

> “This increase in the number of reported events was expected and, as noted in last year’s report, this trend is likely to continue as reporting systems continue to improve”

UNDERSTANDING THE REPORT

The following context is crucial to understanding and interpreting the data in this report.

- The increase in reported events compared with last year suggests the systems for capturing and reporting events are improving. It does not necessarily mean the number of events is increasing.
- This increase in the number of reported events was expected and, as noted in last year’s report, this trend is likely to continue as reporting systems continue to improve. This increase is consistent with international experience and research, and is in fact an important outcome of event reporting systems.
- The international literature does not support the use of the number or rate of reported events as a way of judging a hospital’s safety as there is considerable variation in the rates of reporting, not just in the rate of events.
- The number of events in some hospitals is very small, so an increase by one event can have a large statistical impact.
- The report does not capture all events in hospitals, only those considered serious or sentinel.
- Information on the events documented in the DHB reports is provided through a voluntary reporting process. DHBs reporting the most events in the greatest detail may have better local systems for reporting and investigating events, and perhaps a superior safety culture. A low rate of events reported by a DHB may indicate under-reporting and under-investigation of matters that go wrong; conversely, it may reflect the outcome of a very successful risk management programme – or a combination of both.

> “The international literature does not support the use of the number or rate of reported events as a way of judging a hospital’s safety”

Serious and Sentinel Events 2009/2010

Table 1 shows each DHB's serious and sentinel events from the past three years of reporting. It should be noted that the increase in the number of reported events was expected and that the trend is likely to continue as reporting systems improve.

TABLE 1: SENTINEL OR SERIOUS EVENTS, BY DHB, 2007 TO 2010*

DHB	Number of reported serious or sentinel events		
	2007/08	**2008/09**	**2009/10**
Northland	5	7	4
Waitemata	11	20	17
Auckland	30	31	32
Counties Manukau	23	29	38
Waikato	36	60	52
Bay of Plenty	5	5	13
Lakes	6	3	7
Tairawhiti	3	7	3
Taranaki	7	2	7
Whanganui	4	7	9
Hawke's Bay	7	5	9
MidCentral	2	8	18
Hutt Valley	7	10	12
Wairarapa	2	2	4
Capital & Coast	16	22	18
Nelson Marlborough	5	6	1
West Coast	11	2	4
Canterbury	41	44	69
South Canterbury	12	7	9
Otago	7	20	39
Southland	18	11	9
Total	**258**	**308**	**374**

*Reporting years are July 2007 to June 2008, July 2008 to June 2009, and July 2009 to June 2010.

TYPES OF EVENTS

Tables 2 and 3 and Figures 1 and 2 summarise the nature and type of events recorded. As DHBs are still making the transition to recording information using a standardised national approach, there remains some variability in the data collected. These data should therefore be regarded as an indication of the most significant categories of events. They show that the most common events are in the categories of falls, clinical management and suicide.

TABLE 2: SUMMARY OF EVENT TYPES REPORTED BY DHBs

Category	2007/08	2008/09	2009/10
Wrong patient, site, procedure	19	11	5
Retained instruments or swabs	6	4	9
Clinical management problems, made up of:	107	123	126
4a – diagnosis	19	31	14
4b – treatment	27	36	23
4c – monitoring	8	18	13
4d – procedure	24	16	31
4e – investigation	5	1	5
4f – discharge	2	10	2
4g – other	11	6	13
Multiple categories within clinical management	11	5	25
Medication error	21	15	17
Falls	56	85	130
AWOL patient	8	2	3
Physical assault on patient	1	2	1
Delays in transfer	3	2	0
Hospital-acquired infection	Category not in use	Category not in use	8*
Other	21	27	15
Serious and sentinel events subtotal excluding suicides	242	271	314
Suicide of an inpatient/outpatient	16	37	64
Total**	**258**	**308**	**378**

* With increased emphasis on surveillance, this number is likely to increase substantially next year.
** Several events fall into two categories.

TABLE 3: PERCENTAGE OF EVENT TYPES

	Category	% All events	% Deaths
🟦	Wrong patient, site, procedure	1	0
🟧	Retained instruments or swabs	2	0
🟦	Physical assault on patient	1	0
🟪	Clinical management problems	33	41
🟨	Medication error	5	1
🟦	Falls	34	3
🟪	AWOL patient	1	0
🟩	Hospital-acquired infection	2	3
🟦	Other	4	2
🟩	Suicide of an inpatient/outpatient	17	50
	Total	**100**	**100**

FIGURE 1: PERCENTAGE OF ALL EVENT TYPES

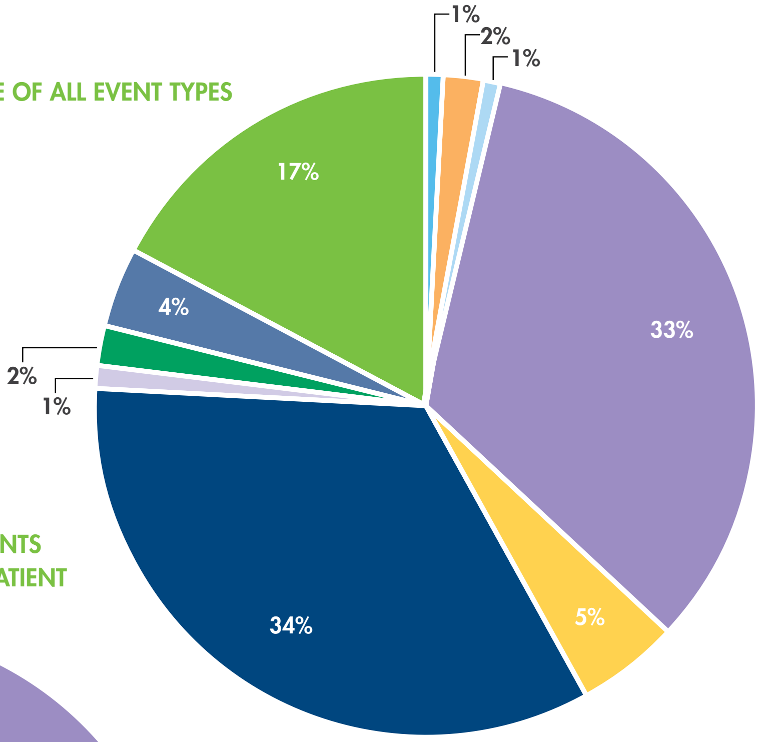
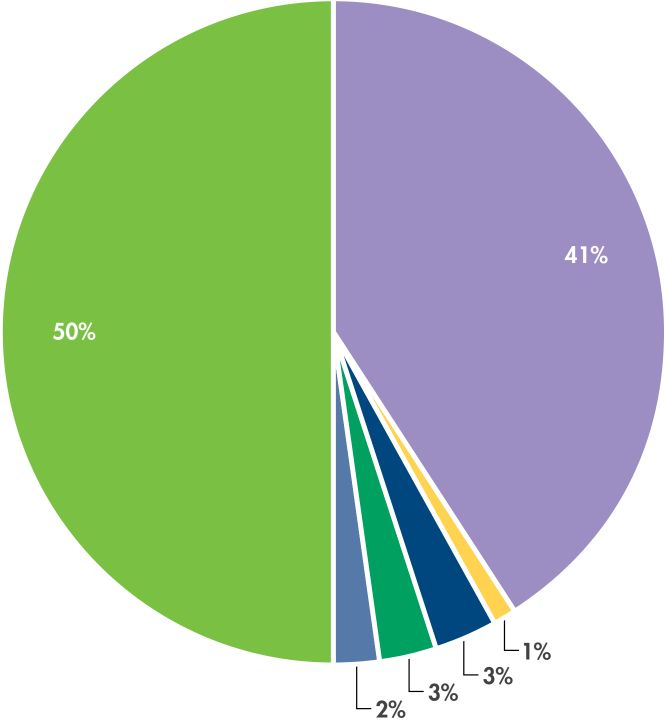


FIGURE 2: PERCENTAGE OF EVENTS ASSOCIATED WITH DEATH OF A PATIENT



MAIN EVENT CATEGORIES

Falls, clinical management problems and suicide were the three most commonly reported events for 2009/10. In this section, more detail on each of these categories is provided.

FALLS

DHBs reported 130 patient falls in the 2009/10 fiscal year. This figure represents 34 percent of the total number of serious and sentinel events reported. Many DHBs have introduced or improved programmes to reduce falls and harm from falls. These initiatives reflect a heightened awareness of falls, and the need to learn from them, and probably explain the increase in falls reported this year.

Many falls in hospital occur from or near the patient's bed or when the patient is moving from one place to another such as in the corridor, when going to the toilet, or walking, or when he or she is sitting in a chair, commode or wheelchair.

Those at increased risk of falls in hospitals include older adults, as well as people who are confused or disoriented, are taking certain types of medicine, are physically weak or have poor co-ordination, and have a history of falling.

Falls prevention programmes introduced by DHBs typically include an inpatient falls risk assessment to identify patients at increased risk, and different actions to reduce falls. Staff education is particularly important.

CLINICAL MANAGEMENT

Thirty-three percent of the serious or sentinel events were in the clinical management category. Table 4 breaks down the events in this category into more specific subcategories.

TABLE 4: CLASSIFICATION OF SERIOUS AND SENTINEL EVENTS IN THE CLINICAL MANAGEMENT CATEGORY 2009/10

Classification	2009/10	
	Number of events	% Events
Diagnosis (including delayed and misdiagnosis)	14	11
Treatment (including delayed and inadequate treatment)	23	18
Monitoring/observations (not performed and/or actioned)	13	10
Procedure-associated event or complication	31	25
Investigations (delayed, not ordered or actioned)	5	4
Discharge and transfer	2	2
Other	13	10
Multiple categories	25	20
Total	**126**	**100**

SUICIDE

The suicide of a loved one has a devastating impact on friends, family and communities. New Zealand has a high rate of suicide in international terms, although there has been a general downward trend over the past decade.

Of the 64 deaths by suicide identified in this report, 60 involved outpatients and four involved inpatients. It might be thought it would be easy to keep 'at risk' people in hospital for longer. In practice, the number of people at risk of suicide is very large and suicide is hard to assess in any individual. Resources, and indeed the interests of the vast majority (ie, of those people who are perhaps at some risk but do not in the end take their own lives), make it impossible to keep everyone thought to be at risk in hospital indefinitely. Furthermore, it is not possible to ensure that the risk is completely alleviated, even in hospital.

Reducing the incidence of suicide requires a comprehensive approach at a number of levels and across a range of sectors. Many (not all) of these events reflect underlying mental illness, and initiatives aimed at preventing and treating depression (and other mental health problems) within the population are particularly important.

The increase from last year probably reflects more rigorous investigation and reporting, rather than a real increase in the number of suicides meeting the definition for serious and sentinel events reporting.

To help prevent the suicide of inpatients or patients with recent hospital contact, DHBs are taking a number of actions, including:

- reviewing assessment and observation procedures
- reviewing the environment to increase safety and reduce the chance of self-harm
- undertaking workforce development
- clarifying responsibilities around follow-up including 'relapse prevention'
- reviewing access to support and psychological services and improved communications with these services
- reviewing discharge planning processes.

At a national level, the Ministry of Health has developed the *New Zealand Suicide Prevention Action Plan 2008–2012,* through which a number of initiatives are under way.

A key initiative that has proven successful is the Self-harm and Suicide Prevention Collaborative, or Whakawhānaungatanga. The initiative has involved the implementation of a new clinical guideline in DHBs, aimed at improving the management of people who make a suicide attempt and are therefore known to be at a high risk of making another attempt. The guideline is designed to improve crisis care in three areas:

1. emergency departments
2. Māori health services
3. mental health services.

This project is in its final year and the clinical guideline has now been implemented in 14 DHBs across the country. Outcomes so far include:

- increased collaboration between emergency departments, mental health and Māori mental health services
- decreased waiting times
- an increase in the number of initial risk assessments from 47 percent to 72 percent
- an increase in the provision of discharge plans to patients from 3 percent to 35 percent.

The New Zealand Guidelines Group is working with the DHBs to develop a community of practice to maintain the gains made by the implementation of the guideline.

More information about the initiatives in the Government's Action Plan and progress in implementing them can be found at the Ministry of Health website:

www.moh.govt.nz/moh.nsf/indexmh/mentalhealth-resources-publications

Learning from Reporting

The national quality improvement programme includes a standard method for assessing the severity, the consequences and the likelihood of occurrence of an adverse event. DHBs are using this risk management matrix to identify events that require a detailed Root Cause Analysis (RCA). An RCA is a thorough method of investigating incidents to determine the underlying, and often not obvious, causes of adverse outcomes. Its purpose is to correct these causes through actions to reduce the likelihood of the event's recurrence.

Over 1700 health care workers have been trained in RCA. The benefits of using this tool can be seen in the improved analysis of incidents reported this year, and in some local initiatives to make our health care safer.

A number of recent initiatives to address the serious and sentinel events reported in previous years are described in this section.

PREVENTING FALLS

- A patient slipped on a wet hospital floor and fractured her hip. She required surgery and a longer stay in hospital for rehabilitation.[1]
- A patient was found on a hospital floor with a fractured ankle, following a fall. Surgery was not required, but he needed a longer stay in hospital.

Falls are the largest category of serious and sentinel events reported by hospitals in 2009/10. The increased number reported this year appears to reflect increased awareness of this problem rather than any suggestion that more patients have actually fallen relative to previous years. Gratifyingly, many DHBs are now putting considerable resource into reducing the number of falls in their hospitals.

There will always be a risk of falls in hospitals because patients fall for many reasons and excessive restrictions on their freedom to move about would be unreasonable as well as often inhibiting their recovery from surgery or illness.

However, there are many actions that can be taken to reduce the risk of falls. Many DHBs have now implemented or improved falls prevention programmes.

CLINICAL PRACTICE POINTS

A greater awareness of the following simple measures to reduce falls could make a big difference.

- Ensure patients know how to use the call bell and can reach one easily from the bed.
- Ensure there are clear signs showing where toilets are.
- Ensure patients are regularly offered the opportunity to toilet.
- Ensure there is adequate night lighting between patients' beds and toilets.
- Help patients move to and from toilets and showers and remain with high-risk patients while they are toileting or showering.
- Check patients' footwear for good fit, non-slip soles and safe laces.
- Set beds at a lower height, to enable easy movement to and from the bed.
- Ensure staff are aware of patients' mobility issues.
- Ensure patients can easily reach mobility aids such as walking frames and sticks.
- Check that appropriate pain management is in place for each patient.
- When patients leave hospital, ensure caregivers and family know how to prevent falls.
- Ensure equipment is properly maintained and working well (eg, brakes on beds).

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[1] These examples are based on a compilation of events that have occurred in our hospitals. Certain identifying details may have been altered.

DHB EXAMPLES

Canterbury DHB is determined to reduce the harm to its patients from falls in its hospitals, and is moving towards 'zero harm' – a whole-of-system approach to patient falls.

The DHB is also taking responsibility for reducing falls in its community by forming partnerships with providers. As part of reducing emergency department presentations for falls in the frail elderly, the DHB is establishing sustainable community falls prevention programmes across the region.

'Patient safety and falls reduction strategies, in particular, are a central focus for the Clinical Board,' says Jan Nicholson, Corporate Quality and Risk Manager.

'The Clinical Board has been reviewing current practices and considering best practice falls prevention pathways based upon local experience and international best practice guidelines.'

Clinical Board members, in leading this patient safety agenda, are supporting the efforts of frontline staff who are already engaged in and rising to the challenge of reducing the harm from falls, she says.

'An important leadership initiative is the introduction of patient safety walk rounds to enable staff to discuss what they are doing to reduce the harm from falls.'

As part of improving the collection of information about falls, all falls that occur in Canterbury DHB hospitals are reviewed, and the lessons learnt incorporated into falls prevention programmes.

'Patient safety crosses and falls location maps are used to raise the awareness of the impact of falls amongst staff. These are displayed in wards to align with existing approaches to improving the patient journey,' says Jan Nicholson.

'The patient safety crosses mark how many days it has been since the last patient fall. The location maps show where falls are occurring, identifying higher-risk areas that can be made safer. These strategies increase staff vigilance around high-risk ward environments.'

Jan Nicholson says it has been inspiring to see the efforts made by staff to reduce patient falls and to manage environmental hazards in a range of hospital settings.

'It is apparent that frontline staff are engaged and ready to rise to the challenge of reducing harm from falls.'

South Canterbury DHB recently launched a falls prevention management programme. The programme includes some simple but effective steps for reducing patient falls at Timaru Hospital.

Sam Powell, Director of Nursing, Midwifery and Allied Health at the DHB, says the programme includes a falls risk assessment tool, an action plan for patients identified as being at risk of falls, and staff education.

'When a person is admitted to an inpatient bed, their falls risk is assessed and a falls prevention action plan is developed for at-risk patients. This plan includes things like an eyesight assessment, a check of footwear, provision of easy access to call bells and reduction of bed height,' she says.

'The person is identified as a falls risk on the patient board, and at-risk patients are offered a green band so they can be easily identified by staff.'

Sam Powell says the motivation behind the programme was to identify the problem and do something about it.

'We wanted to put in place practical steps that would make an immediate impact on the number of falls occurring in hospital.'

MORE INFORMATION ABOUT PREVENTING FALLS

- The Institute for Healthcare Improvement (IHI) website: www.ihi.org
- The Premier website: www.premierinc.com
- The Australian Government HealthInsite website: www.healthinsite.gov.au
- The Slips, Trips and Falls in Hospitals Report: The third report from the Patient Safety Observatory on the NHS National Patient Safety Agency website: www.nrls.npsa.nhs.uk/resources/?entryid45=59821

CANTERBURY DHB: Alison Gallant, Charge Nurse Manager, Ward 31, (medical ward) fills in one of the patient falls safety crosses.

SAFER SURGERY

- An intravenous line was inserted in the wrong patient. He suffered no lasting physical harm, but there was potential for harm had the confusion continued and wrong fluids and medications been administered through this line.[2]
- A patient had the wrong size hip implant inserted during surgery. He required further surgery to replace the implant.
- A patient undergoing cervical spine surgery had the wrong level fused.
- In a day surgical hospital, the wrong patient was taken to theatre through a failure in the checking process, but the procedure undertaken happened to be the correct one.
- A swab was left in a patient after surgery because of an incorrect count: a second operation was needed to remove it.

An estimated 274,300 operations are performed in New Zealand every year. Surgical complications are inevitable in a proportion of patients, and about half these complications are considered preventable. Among the serious and sentinel events reported that relate to surgery are those in the categories of wrong patient, site or procedure and retained instruments or swabs. In the period 2007 to 2008, there were 19 reports involving the wrong patient, site or procedure; this year the number is five. Even five wrong patient, site or procedure events is five too many – but the improvement is encouraging.

The number of events in the wrong site and retained instruments categories is similar to the number of claims agreed by the Accident Compensation Corporation (ACC) for this period. There is a role for the Commission and ACC to work together to combine information from different reporting processes to provide a fuller picture of these types of events.

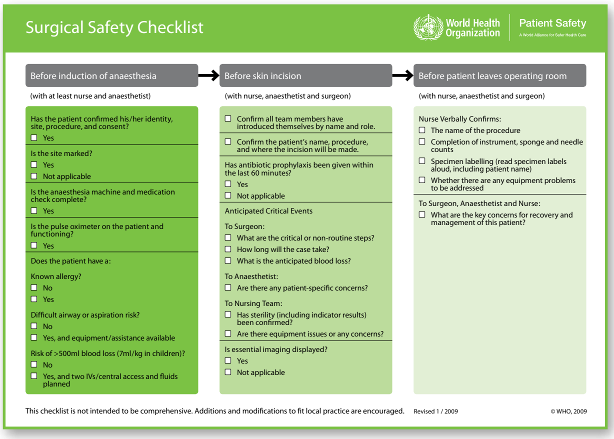
One of the major responses to the annual serious and sentinel event reporting has been the wide adoption and implementation of the World Health Organization (WHO) Safe Surgery Checklist to reduce these and other sources of patient harm during surgery. Auckland City Hospital, working with the University of Auckland, was one of eight international pilot sites that evaluated and refined the checklist. The efficacy of the checklist was confirmed by a study published in the *New England Journal of Medicine.*[3]

Auckland City Hospital was the first hospital to adopt the Safe Surgery Checklist in New Zealand, and now uses it routinely. Other hospitals in New Zealand have followed. (See Appendix II for a list of DHBs using the checklist.)

Checks include (among other items) patient identity, operation side and site, availability of special equipment and relevant images, surgical and anaesthetic procedures and labelling of specimens for testing. Each safety check is based on clinical evidence or expert opinion that its inclusion will reduce the likelihood of serious, avoidable surgical harm and that adherence to it is unlikely to introduce injury or unmanageable cost.

The checklist was designed for simplicity and brevity. Some of these checks were carried out on patients undergoing surgery in New Zealand before the introduction of the checklist. However, the checklist adds to these established safety procedures and is also designed to promote communication and teamwork in the operating room – there is substantial international evidence to demonstrate the importance of these factors in promoting safe and effective practice.

Of course it is still possible to make a mistake even using the checklist; wrong patient, site and procedure events will not disappear entirely. Notably it is concerning to see nine reports of retained swabs or instruments this year even though counting swabs and instruments has been routine for many years.



Surgical Safety Checklist

World Health Organization | Patient Safety
A World Alliance for Safer Health Care

Before induction of anaesthesia
(with at least nurse and anaesthetist)

Has the patient confirmed his/her identity, site, procedure, and consent?
☐ Yes

Is the site marked?
☐ Yes
☐ Not applicable

Is the anaesthesia machine and medication check complete?
☐ Yes

Is the pulse oximeter on the patient and functioning?
☐ Yes

Does the patient have a:

Known allergy?
☐ No
☐ Yes

Difficult airway or aspiration risk?
☐ No
☐ Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?
☐ No
☐ Yes, and two IVs/central access and fluids planned

Before skin incision
(with nurse, anaesthetist and surgeon)

☐ Confirm all team members have introduced themselves by name and role.
☐ Confirm the patient's name, procedure, and where the incision will be made.

Has antibiotic prophylaxis been given within the last 60 minutes?
☐ Yes
☐ Not applicable

Anticipated Critical Events

To Surgeon:
☐ What are the critical or non-routine steps?
☐ How long will the case take?
☐ What is the anticipated blood loss?

To Anaesthetist:
☐ Are there any patient-specific concerns?

To Nursing Team:
☐ Has sterility (including indicator results) been confirmed?
☐ Are there equipment issues or any concerns?

Is essential imaging displayed?
☐ Yes
☐ Not applicable

Before patient leaves operating room
(with nurse, anaesthetist and surgeon)

Nurse Verbally Confirms:
☐ The name of the procedure
☐ Completion of instrument, sponge and needle counts
☐ Specimen labelling (read specimen labels aloud, including patient name)
☐ Whether there are any equipment problems to be addressed

To Surgeon, Anaesthetist and Nurse:
☐ What are the key concerns for recovery and management of this patient?

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged. Revised 1 / 2009 © WHO, 2009

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[2] These examples are based on a compilation of events that have occurred in our hospitals. Certain identifying details may have been altered.

[3] Haynes AB, Weiser TG et al. 2009. A surgical safety checklist to reduce morbidity and mortality in a global population. *New England Journal of Medicine* 360(5): 491–9.

> **“The WHO Safe Surgery Checklist has been shown to save lives and the aim is to ensure that it is used for every procedure in New Zealand”**

CLINICAL PRACTICE POINTS

All DHBs are encouraged to use the WHO Safe Surgery Checklist, and to modify it to suit their local practice.

The checklist is a very simple process tool that is well established in high-reliability activities such as aviation. It has the potential to significantly increase the effectiveness of a medical team’s efforts to prevent mishaps and complications.

The WHO Safe Surgery Checklist is used in three phases: before a patient is anaesthetised; before the first incision is made; and before the patient is taken from the operating theatre.

A key difference from traditional approaches is that the first phase checks are done in the operating room, not in the holding area. It recognises, therefore, that mistakes do happen on transfer from one to the other.

A second advance is the integrated ‘time out’ before the operation starts – the last chance to ‘catch a mistake’, as it were. Some hospitals already included this component before adopting the checklist, but others, including most operating rooms in Auckland City Hospital, had not yet adopted a formal time out.

The third key aspect of the checklist is that it is designed to improve communication and teamwork. Ideally the members of the operating room team should know each other’s names, and the checklist includes introductions. This process of introducing people has also been shown to ‘activate’ people: for example, it considerably increases the chance that a junior staff member will speak up if he or she notices a mistake. In addition, in a crisis, knowing people’s names makes co-ordination easier and improves teamwork substantially.

The WHO Safe Surgery Checklist has been shown to save lives, and the aim is to ensure that it is used for every procedure in New Zealand. It is now reasonable for patients to expect the checklist to be used as the standard of care.

USING THE WHO SAFE SURGERY CHECKLIST: DHB EXAMPLE

Most DHBs are using the WHO Safe Surgery Checklist in some or all of their operating theatres. The private sector has also got behind this initiative. Southern Cross Hospitals have been an early and active adopter, as have Mercy Ascot Hospital in Auckland and the Wakefield group of hospitals in Wellington.

Southern DHB uses the WHO Safe Surgery Checklist in main theatre, obstetric theatre and for day surgery. Michael Dodds, Service Manager, says staff strongly support the use of the checklist, and there have been no major surgical safety-related incidents since its introduction.

‘The checklist is a prompt for good patient management,’ he says. ‘It picks up issues that may otherwise have been missed, but which might have made a big difference to the outcome of the surgery.

‘It has improved communication between staff, especially in places like Queen Mary Obstetric Theatre where there are staff who do not work together regularly.’

Clinical staff from Dunedin Hospital and Mercy Hospital together modified the WHO Safe Surgery Checklist for local use (as recommended by the WHO). Their modified checklist includes all the components of the WHO Safe Surgery Checklist, with the addition of local components.

MORE INFORMATION ABOUT THE SAFE SURGERY CHECKLIST

- World Health Organization website: www.who.int/patientsafety/safesurgery/en/

IMPROVING CLINICAL MANAGEMENT

- A patient with pneumonia needed prolonged care after a delay in recognition of her deteriorating condition.[4]
- There was a delay in escalation of treatment for a patient whose breathing was deteriorating, with the result that he required admission to the intensive care unit.
- A patient suffered eye damage after a delay in surgery due to a lost follow-up appointment to a laser eye clinic.
- A patient's condition was not monitored, as recommended, due to a breakdown in the recall system. She had cancer when she was seen some years later.

Serious and sentinel events related to errors in clinical management involve failures in specific phases of the care process, such as in:

- diagnosis
- patient monitoring
- treatment (including investigations ordered)
- complications arising from treatment
- discharge.

Unfortunately failures continue to occur on occasion in all of these phases of patient management. A number of events were due to the delayed recognition of patients' deteriorating clinical condition and breakdowns in recall and referral processes. These breakdowns resulted in delayed treatment both for patients referred between DHBs and for those referred between services within the same DHB.

CLINICAL PRACTICE POINTS

Actions to reduce events related to errors in clinical management include introducing early warning systems, and improving handover and referral processes.

Early warning systems

The purpose of an early warning system is to ensure regular monitoring of a patient's vital signs and to prompt quick action in the case of clinical deterioration. It is a well-defined, robust and effective means of informing senior clinical staff of a patient's deterioration and prompting appropriate action.

In obstetric cases the early warning system involves the use of the Modified Early Obstetric Warning Score (MEOW) tool.

Handover

Clinical management can be improved with a formal process (including a weekend plan) for regular medical staff (consultants and house officers) to hand over patients to the on-coming medical staff.

Referrals and bookings

Elements of a good referral and booking process were identified at a multi-DHB workshop set up specifically in response to a report by the Health and Disability Commissioner in 2008 that highlighted this recurring problem. That workshop made the following recommendations.

- The referring DHB should have a system in place to check that referrals have been received.
- All clinical, appointment and referral letters should be copied to the patient.
- DHBs should have a system in place to ensure each stage of the appointment process has been completed.
- Each DHB should have a single point of entry for referrals.
- All referrals should be logged within 24 hours of receipt and before being sent for prioritisation.
- DHBs' leave guidelines should require six weeks' notification of leave to ensure patients are booked with the clinician they need to see. No clinics should be booked outside the leave notification period.
- No appointments should be made without the agreement and participation of the patient.
- There should be no prioritisation of urgent referrals before they are processed and appointments made.
- There should be processes in place to review multiple follow-up appointments.
- Services should develop guidelines for discharge from follow-up clinics.
- Patients with forthcoming appointments should have a clear point of contact, in case of questions or queries.

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[4] These examples are based on a compilation of events that have occurred in our hospitals. Certain identifying details may have been altered.

DHB EXAMPLES

Early warning systems

Several DHBs have introduced an early warning system which enables deteriorating patients to be recognised early enough to retrieve the situation, thus saving lives and/or preventing intensive care admissions or prolonged hospital stays.

At **Lakes DHB** a scoring system is used for a patient's vital signs (including blood pressure, heart rate and respiratory rate), all of which are routinely recorded on a chart. Colour coding on the basis of the score is then used to direct care:

- green means 'increase vital sign monitoring to two hourly'
- yellow means 'increase vital sign monitoring to one hourly and review by a doctor within one hour'
- orange means 'increase vital sign monitoring to every 30 minutes and review by a doctor within 20 minutes'.

With these triggers, patients who are deteriorating are identified quickly so that appropriate treatment can begin promptly.

The early warning system chart is commenced in the emergency department once the decision is made to admit a patient. It is used for all inpatients except children under the age of 15 years and in locations where specialised vital sign charts are in use – namely the intensive care unit, coronary care unit, theatre and recovery.

The early warning system chart has been regularly evaluated through clinical audits. Improved versions were released last year and in October this year, as a direct result of feedback from staff, case reviews and clinical audits.

These changes have seen compliance with the chart jump from 25 percent after its introduction in July 2008 to 83 percent in September 2009. It is hoped the latest version will further improve compliance, which will be measured in the first quarter of 2011. This initiative is a great example of the Plan, Do, Study, Act (PDSA) continuous improvement cycle in action.

Waikato DHB Adult Deterioration Detection System (ADDS) aims to identify deterioration in the condition of adult patients early, so they can be treated before situations become irretrievable.

Waikato DHB Nurse Co-ordinator David Drower says the system includes a visual representation of a patient's progress captured by a new adult 'vital signs' chart.

'This includes an early warning scoring tool linked to an escalation process,' he explains. 'Staff can see at a glance if there has been any deterioration in a patient's condition, and if there has been, what steps they need to take.'

This development is part of a new rapid response system for the DHB, primarily aimed at supporting adult patient management in general hospital wards and reducing the incidence of cardiac arrest in these areas.

An evaluation of the ADDS system at the end of a trial showed that the new chart and process support improved identification of deterioration and early escalation for medical review. Anne Ellison, Clinical Nurse Manager of Ward 12 at Waikato Hospital, says staff find the tool empowering, and that it supports early or more timely treatment for patients.

Of particular interest, says David Drower, is the impact it has on the hospital cardiac arrest rate.

'During the trial, although we saw an increase in medical emergency calls, we did achieve a reduction in actual cardiac arrests as well as a reduction in deaths as a result of cardiac arrest.'

Plans are under way to roll out ADDS to the rest of the organisation.

DETECTING DETERIORATION: Waikato Hospital staff pictured with the new Adult Deterioration Detection System chart. (From left) Rapid Response System Project Nurse Co-ordinator David Drower, Ward 12 Clinical Nurse Manager Anne Ellison and Nurse Educator John Bell.

> **The referring DHB should have a system in place to check that referrals have been received**

DHB EXAMPLES

Referrals and monitoring

A database has been developed on which all elective referrals sent from **MidCentral DHB** to another DHB are recorded, and unacknowledged referrals flagged. Referrals from the DHB to the regional cancer treatment service are also entered into the database.

Elective Services Manager Robyn Shaw says medical secretaries copy referrals from MidCentral to the DHB's Elective Services Department for entry into the external referrals database.

The Elective Services Administrator faxes the referral to the central referral office of the appropriate DHB, along with a fax cover sheet requesting acknowledgement of the receipt of the referral.

'If the DHB receiving the referral does not acknowledge its receipt within five days, the system provides us with an alert,' explains Robyn Shaw. 'When an alert is received, we follow up with the DHB in question until they acknowledge receipt of the referral. Each call made to the DHB to ascertain the confirmation of receipt is tracked in the database.

'Referral acknowledgements are entered into the database. This can either be manually typed in or if electronic acknowledgement is received this can be scanned into the database. This captures both the date of receipt of referral and who acknowledged it, enabling the process to be tracked if necessary. The relevant documentation is then filed with the patent's records.'

Robyn Shaw says the new system has streamlined the referrals process and greatly reduced the likelihood of delaying or mislaying referrals between DHBs.

'Assessment and treatment are being provided in a timely way, and patients and their families are able to be informed of details about the referral progress and status, if required.'

Whanganui DHB has implemented a process for notifying urgent after-hours laboratory results for patients who are not in hospital – that is, those patients who have been to the emergency department, had day surgery, or are outpatients.

Because these patients have left the hospital by the time their lab results come through, previously it was not always clear who should contact them in the case of abnormal results. Where quick action or treatment was required, this lack of follow-up could put patients at significant risk.

The new process ensures all results go to the consultant who is responsible for the patient's care, and it is the consultant who is responsible for taking follow-up action.

The fax form notifying results has also been modified to make abnormal results very clear, so urgent action can be taken if required.

REDUCING MEDICATION ERRORS

- A patient was given too much insulin, causing her to have severely low blood sugar levels.[5]
- After a medication error, a patient developed a slow heart rhythm and low blood pressure. He suffered a cardiac arrest, but responded to emergency treatment.
- A patient had a severe anaphylactic reaction to an antibiotic, despite having a previously documented allergy. No long-term physical harm resulted.

Medication errors are an ongoing and potentially serious cause of patient harm.

Two major initiatives are expected to roll out over the next year to address at least some underlying causes of these mistakes: the standardised medication chart and the reconciliation of drugs process.

Standardised medication chart

Beth Loe, National Co-ordinator on the **District Health Boards New Zealand Safe and Quality Use of Medicines Group**, is co-ordinating the design of a standardised medication chart for adult medication and surgical inpatients, which is to be introduced nationally. This chart is another process tool of the sort well-established in other industries. It will be a simple, inexpensive but effective way of reducing medication errors.

The standard medication chart will enable:

- easy identification of signatures
- clear documentation of a patient's adverse drug reactions and allergies
- the separation of regular and non-regular medicines
- the facilitation of standard training and education for all health professionals using the chart.

One simple design feature that may in itself save lives is a pre-printed decimal point to avoid 'classic' ten- or hundred-fold errors in dose due to illegible prescribing and misunderstandings about dosage.

The introduction of the standardised chart will begin in early December 2010 and be complete by December 2011. If adopted by all DHBs, it will ensure every person involved in prescribing, dispensing, administering and reviewing medicines for adult inpatients will use the same chart throughout New Zealand. Paediatric patients and psychiatric patients are excepted because special considerations apply to them.

As Beth Loe says, 'The new chart will significantly reduce the risk of adverse events and patient harm that can result when clinicians are unfamiliar with a chart, or with a hospital's unique practices and systems.'

Reconciliation of drugs process

The introduction of the standardised chart is part of a wider safe medication management programme. A parallel initiative, which is already under way, is to introduce reconciliation of drugs when patients are admitted and discharged from hospital. The reconciliation process systematically checks the medications at critical 'handover' times, to identify and correct any errors – making patients' transfer in and out of hospital safer.

While a patient is in hospital, changes to his or her drug regime may be appropriate; for example, after cardiac surgery, some cardiac drugs may no longer be necessary. On discharge it is essential to ensure the patient and his or her GP know the new regime. However, medication errors are common at this important point of handover, so a formal process of reconciliation is being instituted.

Early adopters of reconciliation include Counties Manukau, Whanganui, Wairarapa, Taranaki, Capital & Coast, Northland, MidCentral, Hawke's Bay, Auckland and Waitemata DHBs, and Mercy Ascot Hospital in Auckland.

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[5] These examples are based on a compilation of events that have occurred in our hospitals. Certain identifying details may have been altered.

> **“Two major initiatives are expected to roll out over the next year: the standardised medication chart and the reconciliation of drugs process”**

DHB EXAMPLES

Following a medication error reported in the previous year, which involved potassium chloride, **Capital & Coast DHB** introduced a number of changes to control the storage, supply and administration of intravenous potassium.

Potassium chloride is used to prevent or treat low blood levels of potassium, and is critical for optimal cardiac function. Potassium di-hygdrogen phosphate is used to treat low blood levels of phosphate which is essential in cell function. However, intravenous forms of these medications can cause cardiac arrest if administered by rapid direct intravenous injection.

The DHB reviewed the event to understand what had happened and to improve and strengthen safety systems with the aim of preventing any similar events in the future.

Patient Safety Officer Kate MacIntyre says the review identified that the main reason for the error was that two medications, which look very similar, were stored next to each other in the main drug cupboard, and the wrong one was selected.

Subsequently Capital & Coast DHB introduced an organisation-wide policy on the storage, supply and administration of intravenous potassium.

The policy includes guidance on prescribing potassium and specifies clear labelling, storage and checking requirements.

Kate MacIntyre says the concentrated version of the medication, which comes in sealed plastic ampoules, must now be stored in labelled containers in either controlled drug safes or computerised medication stations.

‘Wherever possible, intravenous bags premixed with the right amount of potassium are the first choice of treatment and we only use the concentrated ampoules where there is no other option,’ she says.

’This has meant we now only stock the ampoules in a few specialist clinical areas whereas before they were available in most clinical areas. Just by using more premixed IV fluids, having fewer ampoules stored in wards and having them more securely stored, we have reduced the risk.’

She says, as with all change, the DHB has had to evaluate how well it is working and in one area had to reintroduce the ampoules because the right premix is not available in New Zealand at the moment.

‘However, these ampoules are now stored in the ward controlled drug safe and not in the ward medication cupboard.’

In intensive care, where large volumes of potassium chloride are stored, it is not practical to store the ampoules in the locked safe. However, they are separated from other medications in labelled containers in the wider controlled drug cupboard.

Kate MacIntyre says the policy has been widely publicised to staff by teaching sessions, a newsletter and emails to all staff, posters in all areas and walk-around audits.

TARANAKI DHB: Clinical Pharmacist Tess James, holding a green medication bag, with Jessie Munro of Stratford.

'We also sent a learning report to every DHB so they could understand what happened and apply what we learned and changed here to their DHB if it was relevant.'

Since the introduction of the new policy, no serious adverse events involving potassium have occurred.

Taranaki DHB has taken a systems-wide approach to the process of medication reconciliation when patients arrive and leave Taranaki Base Hospital. The project is set to reduce medication errors, and ensure safer transfer of information relating to medication.

Chief Pharmacist Elizabeth Plant says 'green bags' and a new electronic medication summary service are two tools of the new system.

'Patients are asked to bring their existing medication into hospital with them, and the green bags are for the storage of this medication. The bags are widely used, including by ambulances when they transfer patients to hospital, and by rest homes – which ensure residents' medication is stored in the bags as they are transferred into hospital.'

She says the bags enable clinicians to clearly identify the medication a patient is taking at the time he or she arrives, and to keep this medication separate from hospital-prescribed medication.

'It is vital people bring their medications with them – whether to the emergency department or the wards – and be willing to discuss what they are taking with the doctors,' says Elizabeth Plant.

'The doctors need to accurately know what medications people are taking prior to admission to ensure assessments and treatment can be thorough and accurate.'

The electronic service for medication reconciliation summaries will be introduced in the future. It will involve sending a summary to a patient's GP, highlighting the changes to medication made while the patient is in hospital, the reasons for any change, and any follow-up actions required.

MORE INFORMATION ABOUT REDUCING MEDICATION ERRORS

- Safe and Quality Use of Medicines Group: www.safeuseofmedicines.co.nz
- Safe Medication Management Programme: www.safemedication.org.nz

Appendix I

DEFINITIONS

An **adverse event** is a health care event causing patient harm that is not related to the natural course of the patient's illness or underlying condition.

A **serious adverse event** requires significant additional treatment but is not life threatening and has not resulted in major loss of function.

A **sentinel adverse event** is life threatening, or has led to an unanticipated death or major loss of function.

Open disclosure is the open discussion of adverse events with the affected parties and the associated investigation and recommendations for improvement.

Preventable describes an event that could have been anticipated and prepared for, but that occurs because of an error or some other system failure.

Root cause analysis is a method used to investigate and analyse a serious or sentinel event to identify causes and contributing factors, and to recommend actions to prevent a recurrence.

Appendix II

DHBS USING THE WORLD HEALTH ORGANIZATION SAFE SURGERY CHECKLIST IN SOME OR ALL HOSPITALS

Northland DHB
Waitemata DHB
Auckland DHB
Counties Manukau DHB
Waikato DHB
Bay of Plenty DHB
Lakes DHB
Tairawhiti DHB
MidCentral DHB
Taranaki DHB
Whanganui DHB
Hutt Valley DHB
Wairarapa DHB
Capital & Coast DHB
Nelson Marlborough DHB
West Coast DHB
Canterbury DHB
South Canterbury DHB
Southern DHB

Appendix III

MEMBERS OF THE HEALTH QUALITY & SAFETY COMMISSION

PROFESSOR ALAN MERRY (CHAIR)

Professor Alan Merry is the Head of Department for Anaesthesiology at the University of Auckland's School of Medicine. He is a practising cardiac anaesthetist and chronic pain specialist, and works with patients in routine surgical settings (in public and in private), in life-threatening medical emergencies and in managing chronic illness.

He currently chairs the Quality and Safety Committee of the World Federation of Societies of Anaesthesiologists, and has worked with the World Health Organization as the anaesthesia lead of the Safe Surgery Saves Lives initiative. He is involved with a follow-up project with these (and other) organisations to improve the safety of anaesthesia worldwide through enhanced standards, technology and education.

Professor Merry has a long-standing interest in safety and quality in health care: he co-chaired the New Zealand Medical Law Reform Group in the 1990s, and has conducted research into various aspects of safety in anaesthesia and surgery. He co-authored the book *Safety and Ethics in Healthcare: A guide to getting it right.*

DR PETER FOLEY (DEPUTY CHAIR)

Dr Peter Foley brings a valuable mix of experience to this role. He has dealt with health systems extensively at a 'big picture' level, while also continuing to work as a GP, based in Hawke's Bay.

Dr Foley is the current chair of the New Zealand Medical Association – a role that requires high-level abilities in planning and managing systems, while working in close affiliation and alignment with other key medical organisations such as the Royal New Zealand College of General Practitioners and the New Zealand Council of Medical Colleges.

MRS SHELLEY FROST

A registered nurse with significant experience in primary health care, Shelley Frost is the current deputy chair and Executive Director (Nursing) of General Practice New Zealand, and also a member of the General Practice Leaders' Forum, and the Canterbury General Practice Group.

Her involvement in those roles builds on her strong clinical governance and leadership skills. She is the Director of Nursing at Pegasus Health, an executive role with responsibility for the provision of professional and clinical nursing leadership. She is also deputy chair of the Canterbury DHB's Clinical Board, and a trustee of Partnership Health Canterbury Primary Health Organisation.

DR DAVID GALLER

Dr David Galler is an intensive care specialist at Middlemore Hospital in Manukau City. Prior to this he was principal medical advisor to the Minister of Health at the Ministry of Health, and Clinical Director of Acute Care at Middlemore Hospital.

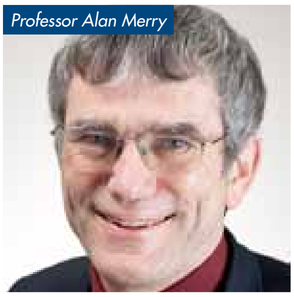
A past President of the Association of Salaried Medical Specialists, Dr Galler has worked extensively on quality and safety issues in recent years through a close involvement in the Ministry of Health's Quality Improvement Committee – the predecessor of the current Health Quality & Safety Commission.

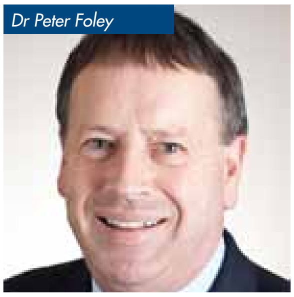
DR PETER JANSEN

Dr Peter Jansen, of Ngāti Raukawa descent, is a senior medical advisor to ACC. He has extensive experience as a teacher, researcher and health management advisor for Mauri Ora Associates, experience as a GP in Papakura and Whangamata, and is a former medical director of Boehringer Ingelheim (NZ) Limited, a multinational pharmaceutical company.

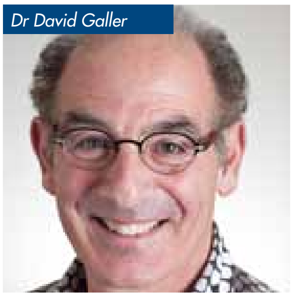
He has published a number of papers relating to cultural competence in health care, and led the development of guidelines on cultural competence for health related organisations in New Zealand. He received the award of Distinguished Fellow of the Royal New Zealand College of General Practitioners for his work in this area.

Dr Jansen's previous appointments have included being deputy chairperson of Counties Manukau DHB and a board member of MidCentral Health. He was also an inaugural director of ProCare IPA, a director of Quality Health NZ (formerly the NZ Council of Healthcare Standards) and clinical director of Te Kupenga o Hoturoa Primary Health Organisation.


Professor Alan Merry


Dr Peter Foley

Mrs Shelley Frost


Dr David Galler

Dr Peter Jansen

Mr Geraint Martin

Mrs Anthea Penny

MR GERAINT MARTIN

Geraint Martin has more than two decades of experience in health management, and is the current chief executive officer of Counties Manukau DHB, a role he has held since 2006.

He has extensive experience in key health governance roles – and has held posts as Director of Health and Social Care Strategy for the Welsh Assembly Government and Chief Executive of Kettering General Hospital in Northamptonshire.

Mr Martin has developed and implemented clinical quality improvement programmes in both the United Kingdom and New Zealand. At Counties Manukau DHB he leads the Clinical Leadership Team which is developing whole-of-system changes to the way hospitals work. He has established a Centre for Health Services Innovation led by New Zealand's first chair in Health Innovation and Improvement. He also helped lay the foundations of the 'Saving 100 lives' campaign in Wales, which used clinical quality improvement across an entire national health care system to drive patient safety.

MRS ANTHEA PENNY

Anthea Penny is a qualified health professional, an experienced chief executive in the New Zealand health sector and a management consultant. She is director of R H Penny Ltd, Australasia and, as the Australasian agent for the NHS Institute of Innovation and Improvement (Service Transformation), she is responsible for the Institute's commercial affairs and relationships in New Zealand and Australia. She is also the inaugural recipient of the 2004 New Zealand Institute of Health Management Silver Fern Award for Excellence in Health Service Management.

Since 1993 Mrs Penny has worked as a management consultant, with national and regional funders and service providers of health care, aged care and rehabilitation in New Zealand and Australia. Her main role has been to review and improve organisational performance and to develop health policy and strategy across the service delivery spectrum.

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