



HEALTH QUALITY & SAFETY  
COMMISSION NEW ZEALAND

*Kupu Taurangi Hauora o Aotearoa*

November 2013

# Making health and disability services safer

Serious adverse events reported to the Health Quality & Safety Commission



1 July 2012 to 30 June 2013



This report was prepared by the Health Quality & Safety Commission based on information provided by health and disability service providers.

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# Foreword

This is the fourth report on serious adverse events published by the Health Quality & Safety Commission (the Commission), and the seventh since national reporting began.<sup>1</sup> I would like to thank everyone involved in the Commission's programmes to reduce patient harm, for their hard work.

This report deals with tragic events, many of which should never have happened. These events impact hugely on patients and their families/whānau, and on the health professionals involved, the vast majority of whom are highly motivated and skilled.

Patients attend New Zealand public hospitals nearly 3 million times each year, and are treated as inpatients or outpatients. Many more are seen in the community and at home. Most are helped and receive excellent medical care. The stories recorded here should also have had good outcomes. Reading them leaves no doubt why we must continue our work to improve quality and safety in health care.

For the first time this report includes incidents that have taken place outside district health board (DHB) hospitals. This is an important step towards integrating the wider health and disability sector into the Commission's national programme to prevent harm from serious adverse events.

More serious adverse events were reported in 2012–13 than in previous years. As was the case last year, harm from falls accounted for over half of all events reported. In a parallel process, the Commission is introducing quality and safety markers and indicators to monitor progress in reducing harm in key areas.<sup>2</sup> We expect these will provide a reliable measure of progress over time.



*Professor Alan Merry*

**Increased reporting reflects a willingness to learn from events and to work with the Commission to improve the quality and safety of health care.**

Much of the increase in reported events this year is likely to be due to improved reporting. We expect this to continue in coming years as systems continue to improve. For example, to ensure all serious injuries are reviewed and reported, DHBs are increasingly cross-checking with other sources of information (such as Accident Compensation Corporation (ACC) claims). The increase in the number of events being reviewed and reported is very positive and the Commission strongly encourages it. Increased reporting reflects a willingness to learn from events and to work with the Commission to improve the quality and safety of health care.

This report contributes to a culture of transparency in the health care system. The process of local analysis and reflection within reporting hospitals and organisations is vital for driving improvement. Not all the events were preventable, or associated with error, but much can still be learned from reviewing the cases.

<sup>1</sup> The reports for 2006–07, 2007–08 and 2008–09 were released by the Quality Improvement Committee, a Ministerial committee with a secretariat provided by the Ministry of Health.

<sup>2</sup> <http://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/projects/health-quality-and-safety-indicators/>

In May 2013, the Commission introduced a national patient safety campaign – *Open for better care*. The campaign aims to encourage everyone working in the sector to engage with our programmes of work in four key areas, all of which feature in this report: reducing harm from falls, surgery, healthcare associated infections and medication. The campaign encourages openness to learn from mistakes and the use of simple interventions that can make a big difference to patient safety – for example, the use of surgical safety checklists, hand hygiene practices and falls prevention strategies. The aim is to improve safety for patients, and international evidence shows we can do this, working together.

This report also highlights some very encouraging developments. For example, Mercy Hospital, Dunedin, a private surgical hospital, has agreed to report any serious adverse events that occur there (see page 14). It should be applauded for this, as should the other providers that have agreed to report events to the Commission. These include the member organisations of the New Zealand Home Health Association, who care for many thousands of patients in the community, and the private and public laboratory services across New Zealand (see page 15). This willingness to engage with the Commission shows a mature commitment to safety and quality, and I strongly encourage other providers to follow the lead of these organisations.

It is very difficult to prevent all harm in health care but we must learn from the events described in this report to prevent at least some of them from recurring. We need to build on success, year by year. If we do not, we will fail these patients and their families/whānau a second time.



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

**We need to build on success, year by year. If we do not, we will fail these patients and their families/whānau a second time.**

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# Executive summary

- This is the seventh report on serious adverse events. These events were previously referred to as 'serious and sentinel events'. They are events affecting health and disability consumers that reach the threshold for reporting as Severity Assessment Criteria (SAC) events SAC 1 and 2, that is, events that have resulted in serious harm or death. This is the fourth report by the Commission, and covers events reported between 1 July 2012 and 30 June 2013.
- This is the first report by the Commission that includes events reported by providers other than DHBs.
- In total 489 serious adverse events were reported (437 by DHBs, 52 by other providers).
- The number of events reported by DHBs has increased by 21 percent from 2011–12 (360). This increase is most likely due to changes in the systems used by DHBs to identify, review and report events involving patient harm. The increased vigilance by providers to identify serious adverse events, and the process subsequently followed to review those events, should be welcomed as a significant improvement.
- Falls were the most frequently reported events during 2012–13, with 253 events (52 percent of the total). Of these falls, 106 patients suffered a fractured neck of femur (fractured hip).
- Clinical management events were the next most frequently reported events, with 179 events. These included delays in treatment, concerns about the accuracy of diagnoses, and inadequate patient monitoring in hospital.
- Medication events were the third most frequently reported events, with 24 events. Of these, 11 related to the administration of an incorrectly prescribed drug or drug dose.
- Serious adverse events affecting users of DHB mental health and addictions services were the subject of a separate Commission report published on 26 September 2013,<sup>3</sup> and are not included in this report. In total, DHBs reported 177 events affecting users of mental health and addictions services.

## Summary of events

489 serious adverse events in 2012–13:

- 437 from DHBs
- 52 from other providers

Main types of event:

- 253 serious harm from falls
- 179 clinical management events
- 24 medication events

<sup>3</sup> <http://www.hqsc.govt.nz/our-programmes/reportable-events/publications-and-resources/publication/1124/>

# Introduction

The following context is important for understanding and interpreting the data in this report.

- An adverse event is an incident which results in harm to a consumer. The incidents included in this report are those which have resulted in serious harm or death to consumers of health and disability services. Also reported have been four 'near-miss' events, which were incidents where there was no harm to the consumer, but the incident was considered serious enough by the provider to result in a detailed review, as the incident may have resulted in serious harm.
- The events were reported because the outcome for the patient was serious and unexpected. However this does not necessarily mean that the event was reasonably preventable.
- The Commission's national reportable events policy<sup>4</sup> sets out a process for ensuring that a serious adverse event is reviewed correctly by the provider organisation, and subsequently reported to the Commission. The policy sets out the process by which providers classify the severity of incidents, the requirement to use root cause methodology to review the most serious incidents, and the responsibility of the provider organisation's chief executive to endorse the subsequent review. Reporting of events is encouraged by the Commission, and good reporting is an important step towards preventing recurrence because of the lessons that can be learned from each event.
- DHBs are responsible for publicly releasing a summary of each case. As some cases were still under review at the time this report went to publication, the number of cases subsequently reported by individual DHBs may vary slightly from the number in this report. There is a link on the Commission's website to DHB websites, where there are details of individual cases.<sup>5</sup>
- 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. For example, DHBs reporting the most events may have better local systems for reporting and investigating events, and perhaps a better safety culture, with a lower threshold for performing a detailed review. In addition, the number of events reported by a provider must be read in the context of its workload, and the population it serves. Accordingly, larger DHBs, such as Waitemata and Auckland, are likely to report more events than smaller DHBs, such as Wairarapa and South Canterbury. This is due to the relative size of the local population served, and also the provision of services by larger DHBs to patients outside their immediate locality.
- It is difficult to compare different years' reporting of serious adverse events because DHBs have been continually improving systems to identify and review incidents. While numbers of reported events have increased significantly since reporting began. This is a reflection of improved reporting systems, rather than increased frequency of serious adverse events.

**The increase in events reported since 2006–07 should be seen as a steady improvement in methods used to identify serious adverse events, rather than an increase in the frequency of events.**

<sup>4</sup> <http://www.hqsc.govt.nz/our-programmes/reportable-events/national-reportable-events-policy/>

<sup>5</sup> <http://www.hqsc.govt.nz/our-programmes/reportable-events/serious-and-sentinel-event-reports/>

# Open for better care national patient safety campaign

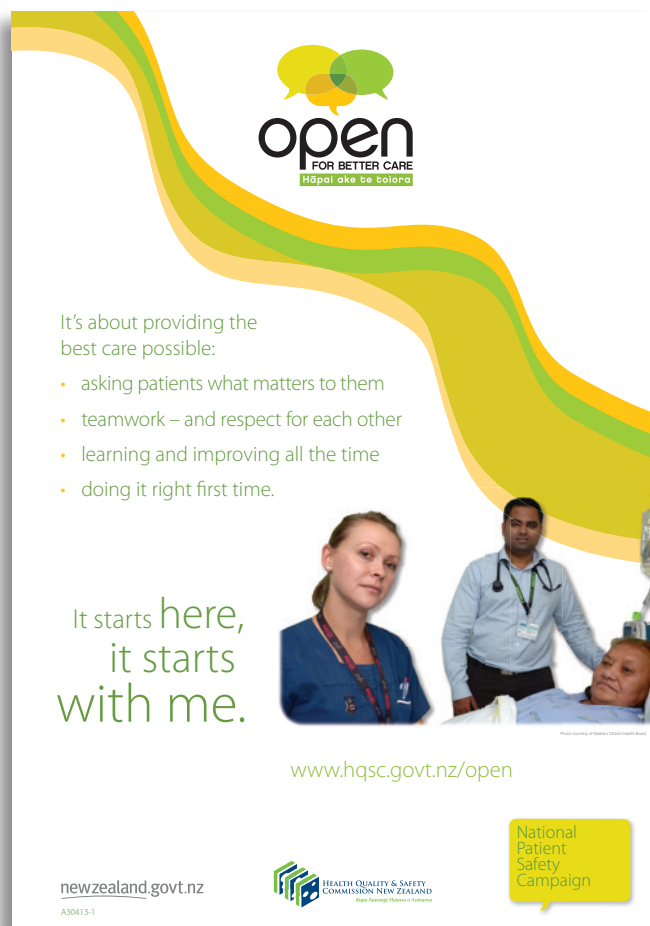
*Open for better care* is the national patient safety campaign launched in May 2013. It focuses on reducing harm from falls, healthcare associated infections (and in particular surgical site infections), perioperative care and medication. All four areas feature in DHBs' reporting of serious adverse events each year. This year 253 falls, 24 medication events, 179 clinical management events (which include harm caused during perioperative care) and four healthcare associated infections were reported.

The campaign goal is to inform and mobilise the New Zealand population to ensure safety and quality improvement in health care by preventing harm, avoiding waste and getting better value from resources.

The *Open* campaign is about:

- change and sustainable innovation
- doing the right thing and doing it right
- first, doing no harm
- supporting an honest, transparent and respectful culture
- listening carefully and communicating clearly
- acknowledging mistakes and learning from them
- working as a team and across teams
- working across hospitals and communities
- sharing learnings and learning from the success of others.

The campaign operates on two levels: communicating with and educating the whole community to improve patient safety, and focusing on specific topics with measurable goals. It is being supported by DHBs, private surgical hospitals and other providers.



The poster features a large, stylized graphic of a person's profile in shades of green and yellow. At the top, the logo consists of three overlapping speech bubbles (yellow, green, and blue) above the word "open" in a bold, lowercase font. Below "open" are the phrases "FOR BETTER CARE" and "Hōpai ake te toiora" in smaller text. The main text on the poster reads: "It's about providing the best care possible:" followed by a bulleted list: "• asking patients what matters to them", "• teamwork – and respect for each other", "• learning and improving all the time", and "• doing it right first time." Below this is the phrase "It starts here, it starts with me." and a photograph of a female nurse, a male doctor, and a patient in a hospital bed. At the bottom, the website "www.hqsc.govt.nz/open" is listed. The footer includes the "newzealand.govt.nz" logo, the "HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND" logo, and a yellow speech bubble containing the text "National Patient Safety Campaign".

open  
FOR BETTER CARE  
Hōpai ake te toiora

It's about providing the best care possible:

- asking patients what matters to them
- teamwork – and respect for each other
- learning and improving all the time
- doing it right first time.

It starts here,  
it starts  
with me.

[www.hqsc.govt.nz/open](http://www.hqsc.govt.nz/open)

newzealand.govt.nz

HEALTH QUALITY & SAFETY  
COMMISSION NEW ZEALAND  
Kaupapa Whakamārama & Whakamārama

National Patient Safety Campaign



# Future of Adverse Events Prevention Programme

Dr David Sage  
Clinical Lead, Adverse Events Prevention Programme

The Commission exists to improve quality and safety for consumers of health and disability services. A key part of the Commission's work is to support providers to identify and review serious adverse events: what happened, why did it happen and how can it be prevented from happening again?



*Dr David Sage*

Since the Commission's inception, the number of events reported (including mental health and addictions services serious adverse events) has more than doubled – from 308 in 2008–09 (the last report by the Quality Improvement Committee) to over 650 in 2012–13. This increase is due to providers improving their systems to identify serious adverse events, and through their willingness to report incidents internally and externally to the Commission. Increased case review, learning and putting prevention measures in place means reduced patient harm.

The Commission is now looking to the future and expanding its role to support the sector in reducing harm from preventable serious adverse events.

**The Commission exists to improve quality and safety for consumers of health and disability services.**

## Whole-sector reporting

In the past, only public hospitals reported serious adverse events to the Commission. This is the first report that includes other providers. Our goal is to have all health and disability service providers voluntarily reporting to the Commission within the next five years.

## Support for the sector

This year the mental health sector has developed case review training that is appropriate to its case mix. The Commission intends to support similar initiatives that increase high-quality case review capacity in the sector.

## Improved reporting by the Commission

It is important the Commission provides accurate analysis and feedback to the sector on the events reported. We are developing ways to share the lessons learned. These include regular newsletters and updates on reported events and working with other agencies such as ACC on case studies.

## 'Never event' reporting

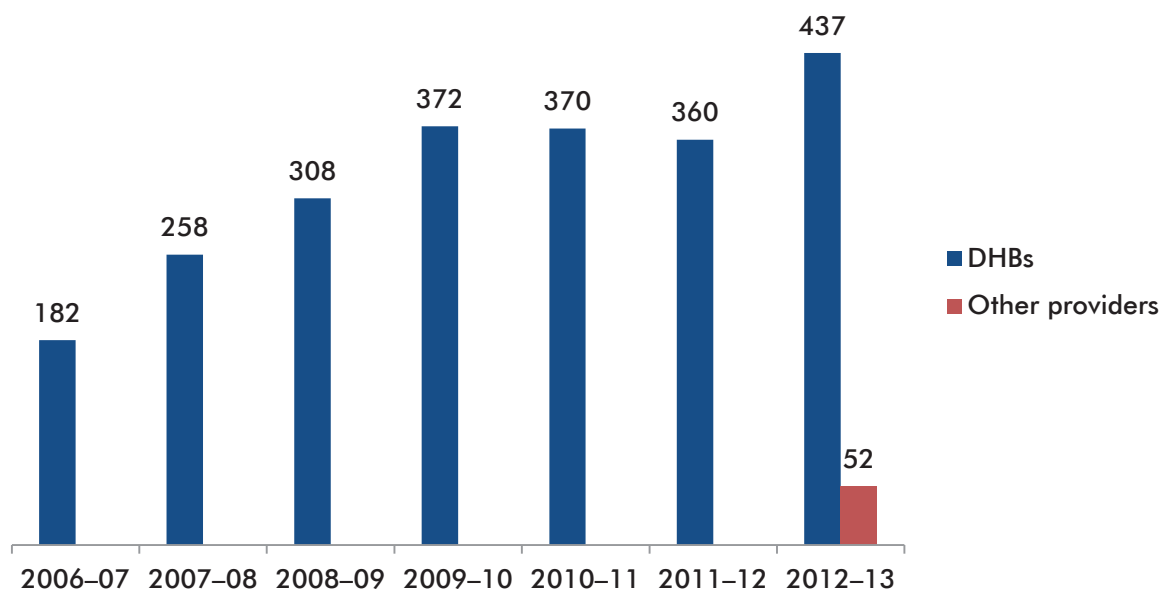
Health commissioners in the UK and insurers in the USA have adopted lists of adverse events that cause serious harm and are generally accepted as being wholly preventable. Colloquially referred to as 'never events', reporting of these events is mandatory, and providers are encouraged to be proactive with preventive measures. In New Zealand the majority of these events already reach the threshold for reporting as serious adverse events, as the criteria require serious harm to have been caused. However, the Commission will look at ways to work with the sector to identify 'never events' that should be reviewed locally and subsequently reported to the Commission, irrespective of the level of patient harm involved.

# Improved reporting

During 2012–13 there was a marked increase in the number of serious adverse events reported by DHBs (see Figure 1). The Commission believes that this is mainly due to DHBs increasingly improving their own systems for identifying and reviewing all serious adverse events.

The goal of preventing serious adverse events can only be reached through reporting and review. The Commission is encouraged by the improved reporting, and in particular the efforts made to ensure that all events involving patient harm are identified by local processes.

**Figure 1: Serious adverse event reporting 2006–07 to 2012–13**



The following changes made since 2010–11 are likely to have increased the reporting of events by DHBs.

## Level of preventability

Since 2011–12, the Commission has encouraged the reporting of all serious adverse events irrespective of whether the subsequent review identified that the event could have been prevented. The result was an increase in the number of incidents reported where the subsequent review showed no avoidable cause, but where there were still lessons that could be learned. Previous Commission reports included few cases of this type, but this year a number of obstetric cases in particular have been included, which may not previously have been reported as serious adverse events.

## Reporting of serious pressure injuries

In previous years only one or two serious pressure injuries were annually reported by DHBs, but nine were reported in 2012–13. This may be due to a specific decision by a number of DHBs that all serious (Grade III and IV) pressure injuries that develop in hospital should be classified as serious adverse events.

Serious pressure injuries remain likely to be under-reported. The number of cases reported to the Commission will increase as reporting continues to improve.

***The Commission believes a serious pressure injury that develops in a health or disability facility reaches the threshold for being considered a serious adverse event, and should be reported and reviewed as such.***

## Definition of a serious adverse event

The precise definition of a 'serious adverse event' has often been difficult to pinpoint, as every case is different. However, some DHBs are reviewing their own threshold for reporting serious adverse events, resulting in more incidents being classified as serious adverse events. For example, DHBs in the Northern Region classify as a serious adverse event any accident or fall that results in the reopening of a surgical wound, requiring further suturing.

***The Commission supports any changes that result in more incidents being identified as benefiting from a detailed review. It is only through such reviews that lessons can be learned that will prevent harm.***

## Cross-referencing of information systems

Many DHBs now cross-reference their own internal information systems with claims submitted to ACC to ensure all events that incur serious harm are identified and subsequently reviewed. Two of New Zealand's largest DHBs reported 40 more serious adverse events during 2012–13 than in 2011–12, and in those DHBs the processes used to identify and review serious falls were improved.

***The Commission endorses cross-referencing as excellent practice and encourages all providers to cross-reference information systems to identify serious adverse events, as no one system is likely to be sensitive enough to capture all events that would benefit from review.***

## Near-miss events

A near miss is an event where there was no harmful consequence for the patient, but where the organisation decided that, due to the potential for harm, the case should be reviewed. The national reportable events policy allows these events to be reported to the Commission, but it is not a specific requirement.

During 2012–13, DHBs reported four near-miss events. For example, in one case a patient was transferred in an inappropriate manner from one facility to another, using a private vehicle rather than an ambulance. In that case, it was concluded that although the patient was not harmed, there was potential to cause serious harm. Accordingly, the incident was reviewed and reported to the Commission.

***The Commission applauds DHBs that report near-miss events that have potential to cause serious harm, and encourages other providers to do the same.***

## Effect of Commission engagement

The partnership between the Commission and DHBs has significantly improved reporting. The Commission has invested in a programme to encourage collaboration with the DHBs. This programme supports reporting of serious adverse events as they occur, and provides a feedback mechanism that encourages a constructive partnership in preventing harm. This investment has resulted in DHBs improving their own systems for identifying and reviewing serious adverse events, and increased reporting to the Commission has been a direct result.

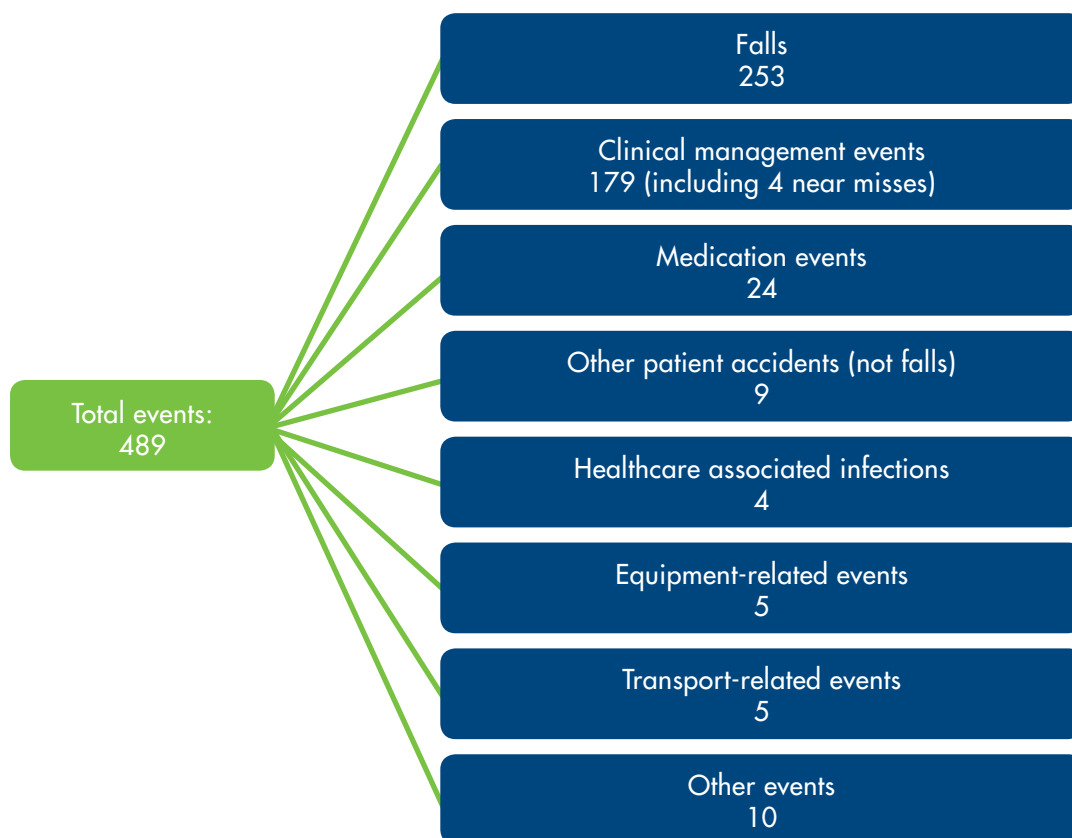
## Improved incident reviews

During the last two years, there has been a significant improvement in the quality of reviews performed by DHBs, evidenced by the amount of detail that is now provided on each incident. The Commission is working with providers to improve the quality of incident reviews still further (see page 7), and is encouraged by the advances made in this area.

# Serious adverse events 2012–13

As in all previous years, the most frequently reported events are falls that resulted in serious harm (see Figure 2). Falls made up 52 percent of the total reported, followed by clinical management events (37 percent) and medication events (5 percent). In nine cases, patients suffered injuries such as wounds and fractures as a result of incidents other than falls. These are shown in Figure 2 as 'Other patient accidents (not falls)'.

**Figure 2: All serious adverse events 2012–13 by event type**

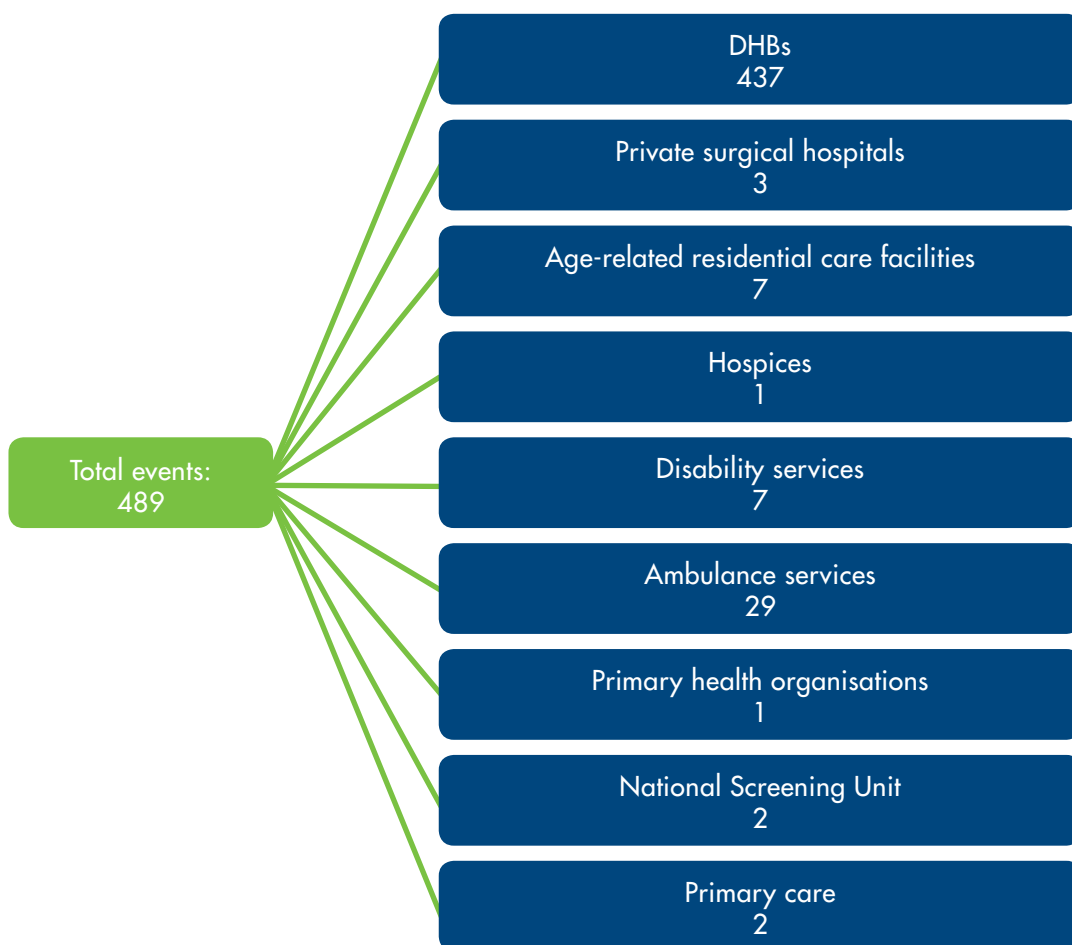


In 2012–13, some non-DHBs providers reported serious adverse events to the Commission for the first time (see Figure 3). While the majority of serious adverse events have come from DHBs (89 percent in 2012–13), it is expected the wider health and disability sector will increasingly report events to the Commission in the coming years.

Actions providers can take to learn from serious adverse events:

- encourage staff to report near misses, and review these events with the same thoroughness as if a patient had suffered harm
- report and review all serious pressure injuries (Grade III and IV) that develop in a health or disability facility
- do not allow the perceived preventability of a serious adverse event to stop you from reporting an incident
- cross-reference events reported in your internal reportable event system with other systems, such as ACC claims, and (for DHB providers) the coding information for each patient's admission.

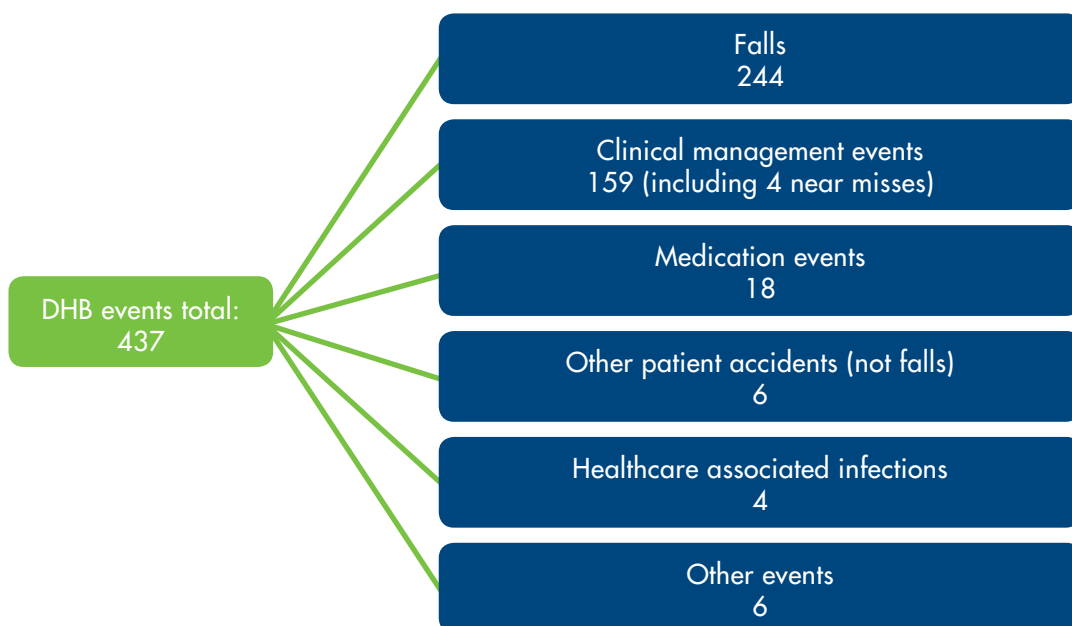
**Figure 3: All serious adverse events 2012–13 by reporting provider**



### DHB reporting

In 2012–13, the number of serious adverse events reported by DHBs was 437 (see Figure 4). This increase is likely to be due to DHBs improving systems for capturing, reviewing and reporting serious adverse events.

**Figure 4: DHB serious adverse events 2012–13**



## Reporting from other providers

The number of events reported by providers other than DHBs is relatively small compared with those reported by DHBs. The Commission is working with the wider health and disability sector to support and encourage reporting with the aim of having all providers appropriately review and subsequently report events to the Commission.

All private and public laboratories recently agreed to report serious adverse events to the Commission as a result of a recommendation from a report into biopsy errors (see page 15).<sup>6</sup>

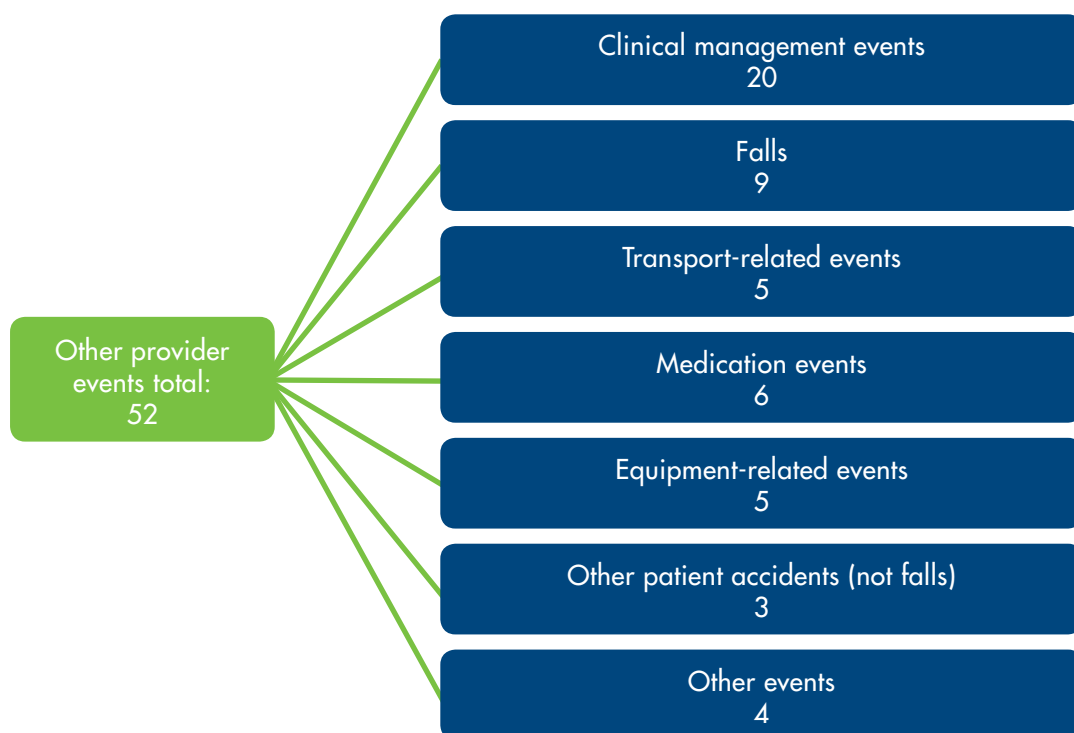
Several other organisations also have formal agreements to work with the Commission, including: Bupa, Compass Health PHO, member organisations of the New Zealand Home Health Association, the Royal District Nursing Service NZ, the New Zealand Association of Pathology Practices and the New Zealand Private Surgical Hospitals Association.

The events reported (Figure 5) include incidents reported by the National Screening Unit, relating to the practice of staff in the Universal Newborn Hearing Screening and Early Intervention Programme, based in a number of DHBs.<sup>7</sup>

We encourage providers to:

- review your adverse event procedures to see how they align with the national reportable events policy
- talk to senior management about how your organisation can engage with the Commission around the reporting of serious adverse events.

**Figure 5: Other provider serious adverse events 2012–13**



<sup>6</sup> <http://www.health.govt.nz/publication/report-national-panel-review-breast-biopsy-errors>

<sup>7</sup> <http://www.health.govt.nz/news-media/news-items/report-newborn-hearing-screening-released>

## ***Openness and safety***

In July 2012 Mercy Hospital, Dunedin, became the first private hospital to agree to report serious adverse events to the Commission. The hospital carries out around 6500 procedures every year.

Management and staff at Mercy Hospital use the Commission's programmes as part of their focus on continually improving patient safety. They see reporting successes and failures as a way of contributing to a wide pool of learning all hospitals can draw on.



Most of all, reporting helps encourage an environment of trust and transparency. It means patients are better informed about what can go wrong and can play an active role in their own safety.

"Patients going into hospital often assume they will be completely safe and there will be no mishaps – but there will always be human error," says Mercy Hospital Director of Clinical Services Philippa Pringle.

"Reporting helps patients understand the complexity of the health system so they are more aware of the dangers in the hospital environment and more likely to work with staff on minimising their potential to be harmed.

"The previous generation of patients was, perhaps, less engaged in their own health care so we're working to empower people to be more proactive contributors during their hospital stay. And the more information people have, the better off they will be."

***"Reporting helps encourage an environment of trust and transparency. It means patients are better informed about what can go wrong and can play an active role in their own safety."***



## **Private laboratories now reporting serious adverse events**

Privately owned medical diagnostic laboratories in New Zealand carry out about 20 million pathology tests every year. These are mainly completed for community health professionals, such as GPs, but some laboratories also manage pathology services for hospitals.



The New Zealand Association of Pathology Practices (NZAPP), to which most private laboratories belong, has firm ethical guidelines for its members that place high value on quality and competence. Each laboratory maintains strict external accreditation by International Accreditation New Zealand. Errors in laboratory procedures resulting in serious consequences are therefore extremely uncommon.

In 2012 the Ministry of Health convened a panel of experts to look into the five serious laboratory-related incidents that occurred over the previous two years in hospital and community laboratories. Four of these involved breast biopsies and one involved oral tissue. In one case, results were misinterpreted. In four cases, results were misattributed, leading to unnecessary surgery for patients (see footnote 6 on page 13).

“Five cases out of roughly 40 million are extremely small odds,” says NZAPP Executive Officer Mike Fitzgerald. “But when unnecessary suffering is caused, just a single incident is one too many.”

The expert panel made a number of recommendations, including that private laboratories should report serious incidents to the Commission, just as DHBs are required to.

Mike says the NZAPP was strongly and ethically in favour of the recommendation.

“Laboratories are very concerned about getting things right, so it makes sense for us that feedback about errors is provided nationally. That way all parties can be better informed, can learn lessons from the experience of others and incidents can be avoided in future.”

The NZAPP approached the Commission and an agreement was put in place for members to report serious incidents according to the Commission’s standard procedures. The reporting system began operating in late February 2013 and, as yet, no serious incidents have been reported.

***“When unnecessary suffering is caused, just a single incident is one too many.”***

## Falls

Incidents resulting in serious harm from falls are the most frequently reported serious adverse events. The number of falls reported has increased from previous years (see Figure 6) to 253 (244 DHB, 9 other providers) but this is probably due to factors affecting reporting, rather than an increase in events.

For example, DHBs are increasingly cross-referencing other forms of data with their reportable event systems. These other forms of data include ACC claims and information from the National Minimum Dataset, the national collection of public and private hospital discharge information, which includes coded clinical data for inpatients and day patients.<sup>8</sup> This cross-referencing has likely resulted in identification of serious adverse events that may otherwise not have been recorded and reviewed.

Some DHBs are also lowering the threshold for reporting serious falls. For example, falls that result in a surgical wound being reopened requiring further care (such as resuturing of a wound, or a return to theatre) are now considered serious adverse events by some DHBs.

Finally, during 2012–13 the Commission has supported the health sector with a comprehensive falls prevention programme, which is also part of the *Open for better care* campaign. It is likely this focus on falls prevention has resulted in more falls being reported.

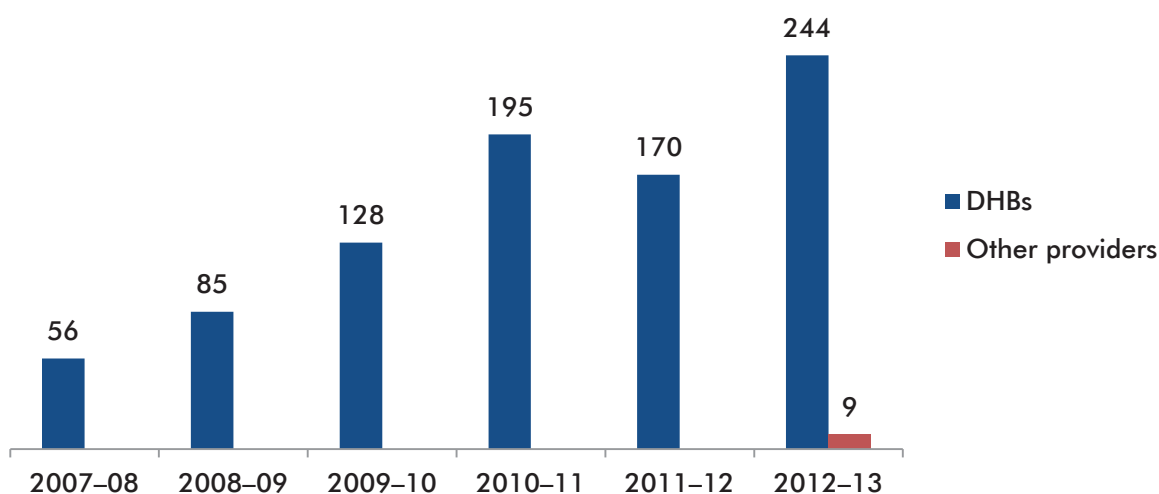
### Assessment of risk of harm from falling

On admission, all patients should be assessed for their risk of falling. This assessment tells staff what actions to take to reduce the chance of the patient falling and harming themselves. There is also an important requirement to review this risk if the patient's condition changes, or they have a fall.

In several reported cases, the review of the fall showed that, while there had been an initial assessment of the patient's risk of falling, there was no subsequent assessment after they had either suffered a minor fall, or their condition had otherwise changed.

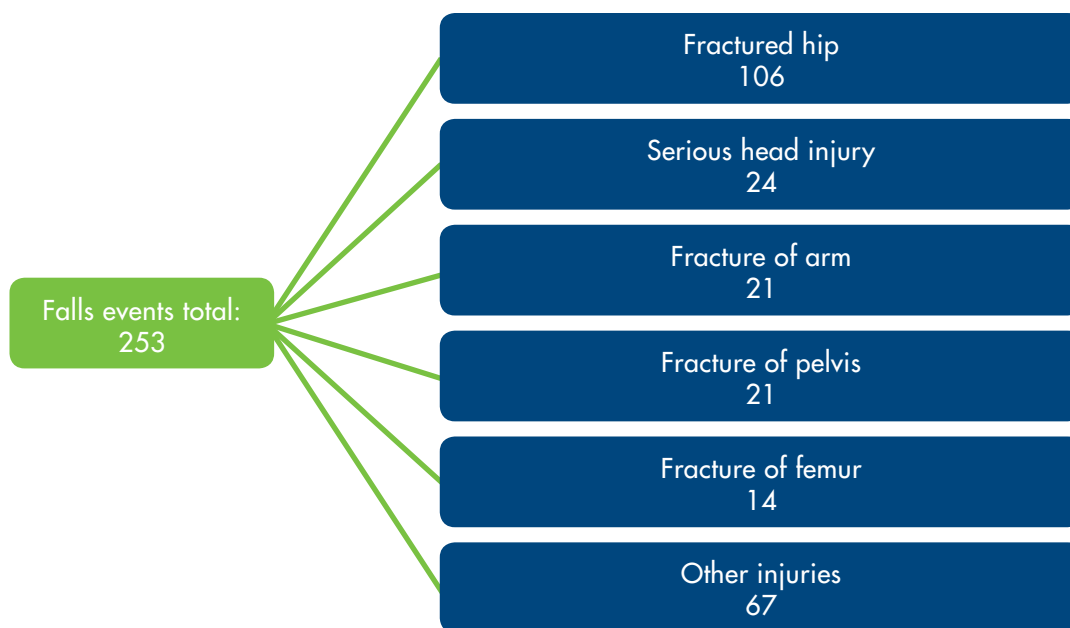
While such a reassessment may not guarantee a patient will not fall, the Commission believes it is an important step that should be emphasised to staff responsible for patient safety.

**Figure 6: Falls serious adverse events 2007–08 to 2012–13**



8 <http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/national-minimum-dataset-hospital-events>

**Figure 7: Falls-related serious adverse events 2012-13**



### **Reducing harm from falls**

Sandy Blake  
Clinical Lead, Reducing Harm from Falls Programme



*Sandy Blake*

This year, 253 falls-related serious adverse events were reported. It is distressing that so many patients and their families/whānau have suffered the consequences of serious harm while in our care. I know evidence tells us it will take time for the falls prevention programme to support DHBs to reduce these numbers.

When I visit hospitals, it is encouraging to see staff working hard to identify and report all serious harm more accurately, and this year's figures reflect that. An increasing number of DHBs are using a combination of data sets to improve reporting accuracy.

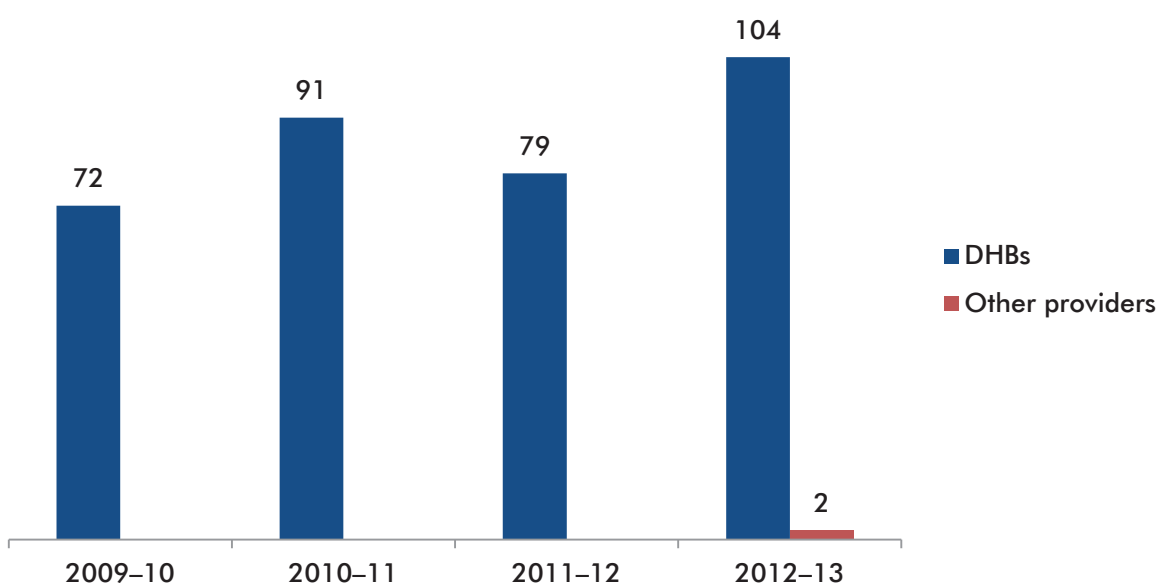
We are all accountable for learning from events that harm patients and for identifying improvements we can make at system and process levels to reduce harm.

The Commission is promoting its falls prevention programme and recognises the importance of health professionals and patients working together in partnership to reduce harm from falling.

Falls prevention is everyone's business and what better way to highlight this than to have 'reducing harm from falls' as the first topic for the Commission's *Open for better care* campaign. Falls prevention is challenging for all health care professionals and providers, especially as our population ages. There is no 'one size fits all' solution to these challenges. The Commission is focused on supporting health professionals to put in place the best evidence-based strategies to help keep patients safe while receiving health care. Our first priority has been the hospital environment, and the focus is extending to the age-related residential care sector and community settings.

I strongly encourage all health care providers to work in partnership with patients and families/whānau so the care provided is right for both parties.

**Figure 8: Fractured hip serious adverse events 2009–10 to 2012–13<sup>9</sup>**



## DHB clinical management events

Clinical management events are, as in all previous reports, the second most frequently reported event, with 179. The increased reporting of pressure injuries is captured within this category (nine events in 2012–13), and the cross-checking of ACC claims is also likely to have increased reporting.

There was also an increase in the reporting of events where, although there was a serious outcome, the subsequent review did not find a deficit in care but lessons could still be learned. The Commission encouraged DHBs to report these cases for the purposes of the 2011–12 report. This change in reporting practice appears to have been embedded during 2012–13, resulting in increased reporting of events that had a serious outcome, but no direct preventable cause.

The Commission has been focusing on reducing perioperative harm to patients, which has possibly resulted in increased vigilance and thereby improved reporting. It is expected reporting will continue to improve, and the number of reported events will not decrease in the short term.

Figure 9 shows all clinical management events for 2012–13. In many cases the reason for the incident being reported was not because of a perceived error, but because the outcome for the patient was not expected.

### Diagnosis incident

A patient repeatedly presented at an emergency department (ED), but a rare condition was not diagnosed.

The review found:

- abnormalities on the CT scan were not fully appreciated
- a senior doctor was not involved in treatment decisions when the patient returned to the ED
- there was a failure to question the diagnosis when the patient returned to the ED.

The review recommended that patients who return to the ED should be seen by a senior doctor, and staff trained on how to use the radiology system after-hours.

<sup>9</sup> Prior to 2009–10, reporting was not detailed enough to identify cases of fractured hips.

There are four main types of reported clinical management events:

*Diagnosis* – 29 percent of reported events related to concerns about the accuracy of a patient's diagnosis. Incidents include delays in diagnosis of a fractured femur, an ectopic pregnancy being missed and an abnormality on an X-ray being missed.

*Adverse outcome* – there was an increase in reported events where the outcome for a patient was serious, and a review was performed to see whether any lessons could be learned (20 percent of all clinical management events). Fourteen cases related to obstetric events that were unlikely to have been reported in previous years, when approximately five obstetric events per year were reported.

*Treatment* – in 16 percent of reported events, there were concerns about treatment or an injury occurred during treatment. These include events such as a patient becoming blind as a result of inadequate postoperative care and guidelines not being followed for a patient with serious trauma.

*Monitoring* – in 11 percent of reported events, there were concerns about the standard of monitoring of a patient in hospital. These included a number of cases where patients deteriorated but alarms were not raised with appropriate staff.

### Treatment incident

A patient attended the ED with constipation a few days after a bowel operation. An enema was administered, but unfortunately this damaged the surgical site, requiring further surgery.

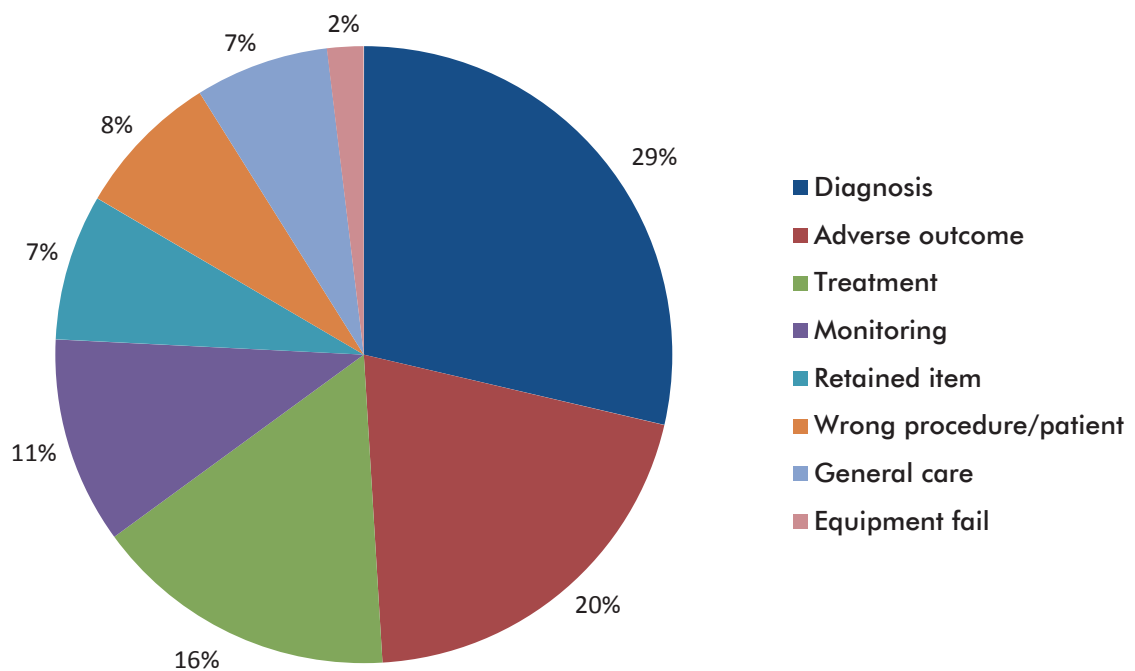
The review found that the original surgery performed had been a different approach than staff in the ED were used to, which resulted in accidental damage. The review recommended that a discussion should take place between the surgeon and the treating team if further treatment needed to be performed within four weeks of the original surgery.

### Monitoring incident

A patient on a ward was being monitored using telemetry – when the heart tracing is sent wirelessly to a central point to be monitored, sometimes on a different ward. In this case, staff were aware at 4am and 5am that the telemetry leads were disconnected from the patient, but no action was taken. The patient was subsequently found dead.

The review found that the process for monitoring the telemetry was “inadequate and inconsistent”, and that “there was a failure to adhere to best practice regarding frequency of observations”. The review recommended a process for monitoring patients on telemetry be developed, and staff be reminded of the importance of monitoring and managing patients whose conditions may deteriorate.

**Figure 9: Clinical management serious adverse events 2012-13**

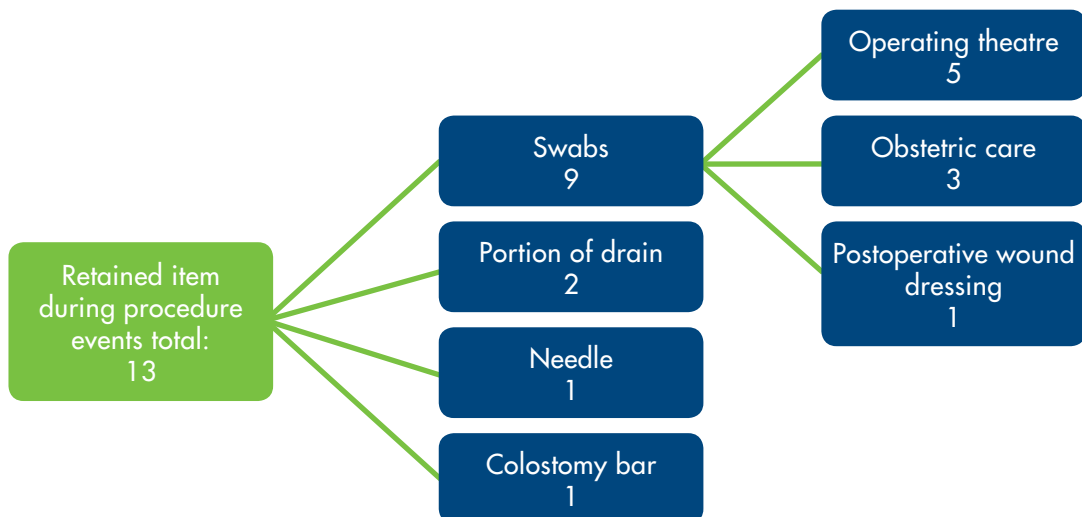


**RETAINED ITEMS**

In operating theatres, great care is taken to ensure the number of swabs, needles and other equipment used are accounted for at the end of a procedure. However, there are still rare occasions when items are left inside a patient. In most of these cases, a further operation or procedure is required to remove the retained item and probably a longer stay in hospital. If a retained item is not discovered immediately, there is also the added risk of infection at the operation site, causing harm to the patient and additional cost to the health system.

During 2012-13, the most frequently reported retained item event (see Figure 10) was of a swab being left inside a patient during an operation. In all cases, the swabs were removed once they were identified (usually by X-ray after the operation).

**Figure 10: Retained item during procedure serious adverse events 2012-13**



## Reducing perioperative harm

Ian Civil and Miranda Pope  
Medical Clinical Lead and Nursing  
Clinical Lead  
Reducing Perioperative Harm Programme

The Commission has a work programme to reduce unintended harm to patients during the perioperative stages of their care. This covers the planning of a procedure, the procedure itself and the time immediately afterwards.



Ian Civil



Miranda Pope

Some of the serious adverse events that occur in this period are:

- the wrong site is operated on
- the wrong procedure takes place
- items such as swabs are not removed during an operation.

Generally speaking, it is accepted that events of this type should never occur. The Commission has been encouraging hospitals to use a key process – the World Health Organization’s Surgical Safety Checklist. The checklist has three parts: before the patient has anaesthetic; just before the operation starts; and just before the patient leaves the operating room. It covers a set of crucial safety checks and helps improve teamwork and communication between members of the operating team, who may not have worked together before.

The example provided by Hutt Hospital (see page 23) shows that by taking simple measures we can dramatically improve our patients’ safety.

## DELAY IN TREATMENT

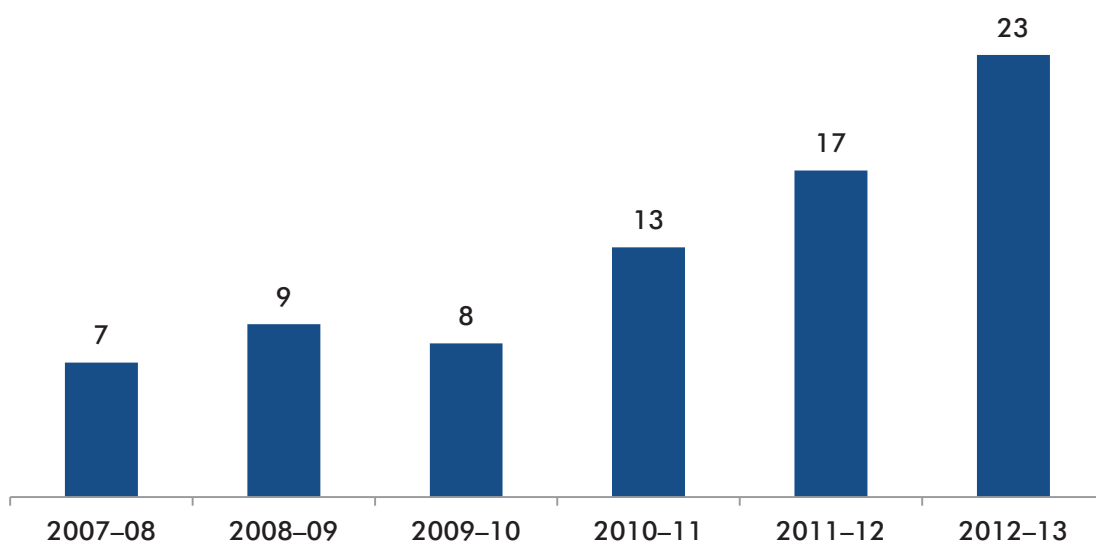
In the 2011–12 report, the Commission raised concerns at the number of cases reported involving patients having delayed treatment because they were failed by hospital systems. The example in that report was of a patient with an identified abnormality on an X-ray. Further tests were recommended by the radiologist reviewing the X-ray, but those tests were not arranged. The patient presented some time later with cancer at the site originally identified as being of concern.

While DHBs have reviewed their systems during 2012–13 to prevent these types of events, 23 cases were reported during the year; 21 involved a subsequent diagnosis of cancer and two resulted in the patient suffering permanent blindness.

From an event reported during 2012–13, where a referral for further treatment was sent, but not received, resulting in a delay in diagnosing breast cancer:

*“A system should be developed whereby there is some form of checklist of all referrals so that an acknowledgement of receipt of each referral is received, these are checked-off. If no receipt is received within a reasonable period of time, then that should be chased up by the referrer.”*

**Figure 11: Delay in treatment serious adverse events 2012-13**



**INCORRECT TREATMENT**

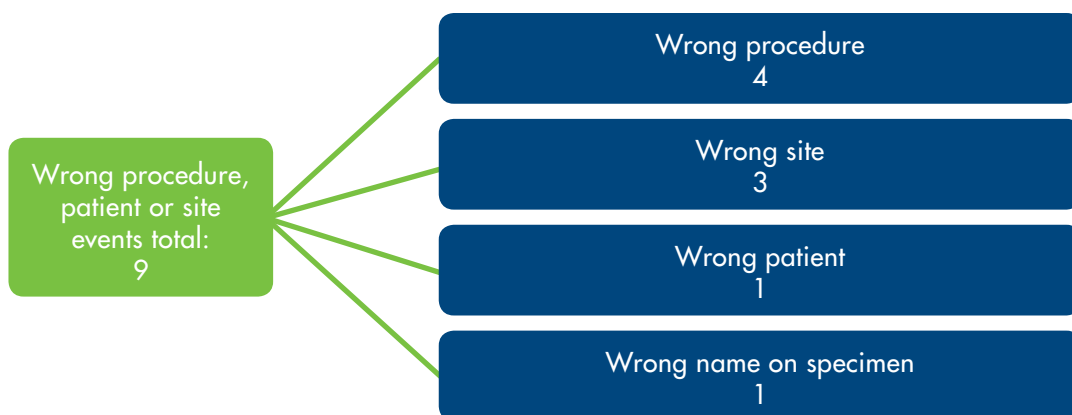
Checks are in place in hospitals to ensure the correct patient gets the correct operation or procedure. However, occasionally these checks fail.

During 2012-13, eight reported events resulted in either the wrong procedure being performed, the wrong site being operated on or – in one case – the wrong patient being operated on. A ninth case involved the wrong patient’s name being written on a specimen, but this was detected before any harm could occur.

A patient in 2012-13 had a cardiac procedure that was meant for another patient. In this case, several staff failed to follow procedures for checking a patient’s identity.

The changes recommended as a result included using the same checks for patients undergoing cardiac procedures as for those having an operation in theatres. The surgical safety checklist was also to be introduced to other areas of the hospital.

**Figure 12: Wrong procedure, patient or site serious adverse events 2012-13**





## **Better teamwork reduces surgical errors**

Despite the diligence and professionalism of New Zealand's hospital staff, there will always be human error. When a person has the wrong operation, or mistakes are made during the surgical process, patient suffering and associated financial costs can increase.

An enhanced approach to teamwork taken by surgical teams at Hutt Hospital has transformed the way team members work together and has made surgery safer.

Hutt Hospital has had just one perioperative serious adverse event in the last four years. While that is still one too many, it is a remarkable achievement.

The hospital has worked hard to improve the efficiency of surgical processes to eliminate mistakes, reduce delays and improve patient recovery.

One initiative was to build on the three steps in the World Health Organization's Surgical Safety Checklist by adding pre-operative briefings and postoperative debriefings for surgical team members.

Briefings are held before the surgical list for the day starts. The team spends a few moments making sure all members know each other and understand each other's roles. They discuss anticipated problems with staffing or equipment, talk about expectations for the day and deal with any questions or concerns. This is to ensure the team provides the safest patient care possible.

Debriefings are held when the surgical list has been completed. Team members discuss what went well, any issues they had, what could be improved and what matters need following up. Process or equipment issues are actioned straight away.

All team members are present at briefings and debriefings including surgeons, registrars, anaesthetists, anaesthetic technicians and nursing staff.

Hutt Valley DHB Acting Clinical Nurse Manager Elisabeth Browne says the meetings may take up to five minutes, but they often identify ways to be more efficient, actually saving time.

"The briefings really help create a team-based approach where everybody is on the same page and everyone knows exactly what is or should be happening. It used to be that perhaps only one person knew the full story and that can lead to problems if he or she isn't always there.

"It's quite a simple concept, but it's had some really positive results. It's much less likely that an operation will be delayed because something hasn't been done or that the wrong person will be operated on. Everyone knows the processes and in what order things need to happen."



**Elisabeth Browne,**  
**Hutt Valley DHB Acting Clinical**  
**Nurse Manager**

*cont. on next page*

Examples of avoidable errors include being ready to begin a procedure and then discovering the patient should have been given a certain medication an hour ago, or not having the patient in the correct position for the operation before they were anaesthetised. When the team has discussed the order of the day and individual patients' needs, these sorts of errors become less frequent.

Elisabeth says a lot of analysis points to the benefits of a more team-based and less hierarchical approach.

"People work better and take more ownership when they feel part of a team; when they know they can speak up about problems they see or make suggestions about better ways of doing things. There are lots of benefits to that, and the most important one is a better, safer outcome for the patient."

### Hutt Hospital's five steps to safer surgery

1. **Briefing:** Discuss expectations for the day
2. **Sign in (WHO):** Complete pre-operative checklist
3. **Time out (WHO):** Pause before surgery to double-check details
4. **Sign out (WHO):** Discuss recovery management
5. **Debriefing:** Discuss and learn from issues of the day

WHO = World Health Organization's Surgical Safety Checklist

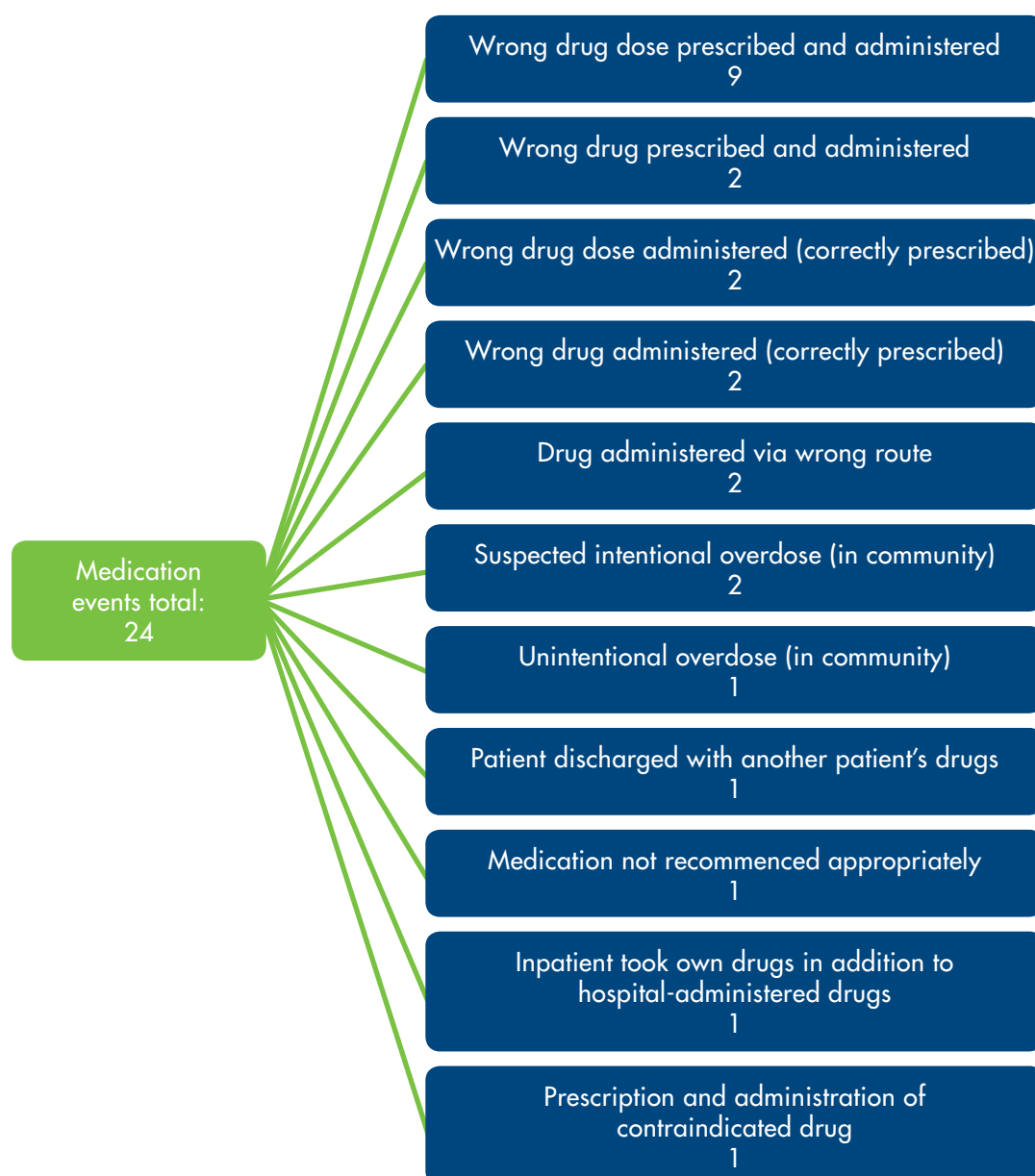
## Medication events

Of the 24 medication serious adverse events reported in 2012–13, the most frequently reported event was the incorrect prescription of a drug dosage resulting in serious harm to the patient; of these nine cases, three involved the use of opiates in the postoperative stage of a patient's care.

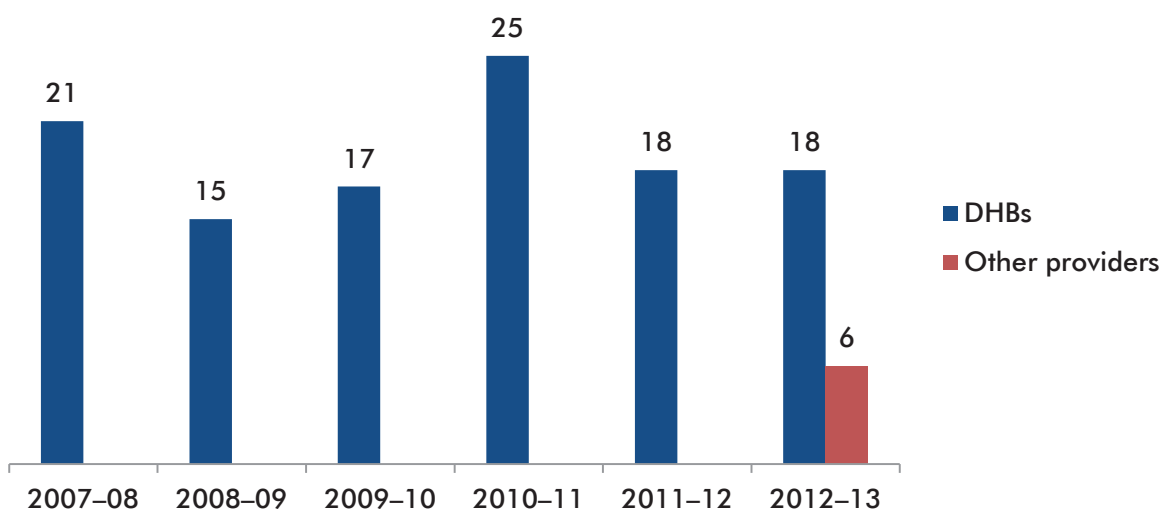
In two events, the cases involved care from community providers; in both cases the local DHBs supported the reviews.

Eleven cases involved either the administration of an incorrectly prescribed drug or drug dose. In only four of those 11 cases was the drug or dose correctly prescribed, and the member of staff incorrectly administered the drug.

**Figure 13: Medication serious adverse events 2012–13**



**Figure 14: Medication serious adverse events 2007-08 to 2012-13**



### **Reducing harm from medication errors**

Dr Mary Seddon  
Clinical Lead, Medication Safety Programme

The most commonly implicated medicines in our serious adverse event reporting are those associated with high-risk medicines. The results of a recently completed adverse drug event trigger tool collaborative in New Zealand identified that up to 50 percent of the medication serious adverse events were attributed to opioids and anticoagulants.



*Dr Mary Seddon*

It is distressing to read of these events. They come at a high personal cost to individuals who are entrusted to our care. We all have a responsibility to learn from reported events and work to identify how we can reduce patient harm.

A key driver for the Medication Safety Programme is to continually identify quality improvement initiatives to ensure the safe and quality use of medicines. The programme has multiple workstreams with the following core objectives:

- reducing harm from high-risk medicines
- improving prescribing and administration of medicines
- improving the transfer of medicine information at transition points of care
- providing expert advice and strategic thinking on medication safety.

The programme is jointly led with the National Health Board and National Health IT Board. We are committed to strengthening our relationships with key stakeholders across the health and disability sector in embedding evidence-based interventions into our practices, and also to addressing evolving technologies that will further improve systems and processes to minimise adverse drug events and reduce patient harm.

## Healthcare associated infections

Four healthcare associated infection events were reported in 2012–13. This number is relatively low compared with other types of event but reporting will probably increase over the next few years as a result of the Commission's national programme to reduce surgical site infections (SSIs). Three of the four events related to SSIs.

### ***Reducing surgical site infections***

Dr Sally Roberts  
Clinical Lead, Surgical Site Infection Programme

Reducing SSIs is a key patient safety priority for the Commission.

The SSI Programme is one component of the Commission's Infection Prevention and Control Programme and the *Open for better care* campaign. It was established to standardise the collection and reporting of SSIs and to encourage practice improvements and culture change among health care workers that will help prevent SSIs.



*Dr Sally Roberts*

Several evidence-based interventions designed to prevent SSIs have been identified and will be implemented in stages by DHBs over the next year. The *Open* campaign will also highlight the appropriate use of prophylactic antibiotics (pre-, intra- and postoperatively): Right drug, right time, right dose, and skin preparation.

During its second year, Hand Hygiene New Zealand has gained real traction and the combined efforts of the national programme and DHBs are beginning to reap rewards. The most obvious evidence for this is the significant improvement in national hand hygiene rates from 62 to 71 percent. There is also a continuing downward trend in *Staphylococcus aureus* bacteraemia rates, which in real terms means fewer patients experience life-threatening infections. However, there is still room for improvement.

## Hand hygiene success at Tairawhiti DHB

“Hand hygiene is one of the simplest and most effective ways to prevent and control healthcare associated infections,” says Dr Debbie Jowitt, Senior Advisor Infection Prevention and Control at the Commission.

The Hand Hygiene New Zealand programme aims to reduce harm from healthcare associated infections by improving hand hygiene practices amongst health care workers.

The programme focuses on the World Health Organization’s internationally recognised ‘Five Moments for Hand Hygiene’, which are stages during procedures where cleaning hands helps reduce the risk of infection. Alcohol-based hand rub available during patient care enables quick and effective hand hygiene practice. An observational audit tool is used to progressively measure local changes in practice over time. The programme has been rolled out across all DHBs and is already producing some impressive results.

Gisborne Hospital (Tairawhiti DHB) was a pilot site for the programme in 2009 and scored just 25 percent in a Five Moments compliance assessment. But after four years of educating staff and stressing the importance of hand hygiene, compliance reached 73 percent in May 2013. The rate of hospital-acquired infections reduced from an average of six per month to just two.

Ray Pickles, Clinical Nurse Specialist, is a member of the Infection Prevention Control Team at Tairawhiti DHB. Ray won Hand Hygiene New Zealand’s Hand Hygiene Co-ordinator of the Quarter award in December 2012 for his dedication to improving Gisborne Hospital’s hand hygiene results.

As co-ordinator, Ray ensures there are alcohol-based hand rub stations at the end of every bed, at the entrance and exit of every ward, at the main entrance to the hospital and outside every elevator. He’s a qualified Hand Hygiene New Zealand trainer and makes sure all staff, from doctors and nurses to cleaners and the IT department, are trained in the Five Moments.



*Clinical Nurse Specialist Ray Pickles with his Commit to Hand Hygiene poster, complete with bacterial agar cultures, World Hand Hygiene Day, 6 May 2013*

Ray will go to almost any length to ensure patients are not harmed by something he says is so easily preventable. On World Hand Hygiene Days he has dressed as a bug to spread awareness and made posters featuring agar cultures grown from the bacteria on the hands of volunteers. Staff viewing the posters are invited to sign up to commit to good hand hygiene practices.

All patients receive a card that explains the programme and encourages them to keep their hands clean. It also tells them it is okay to ask clinical staff to clean their hands. Pink stickers on the floor of every ward remind people, including visitors, about the benefits of hand hygiene.

In May 2012 staff in the hospital's neonatal unit, a compact unit with high potential for cross-contamination, won Hand Hygiene New Zealand's Ward of the Quarter award for achieving over 80 percent compliance by consistently sanitising between every procedure and contact. Mothers and their partners were also encouraged to clean their hands. Ray says hand hygiene is particularly important in Tairāwhiti considering the district's demographics.

"We have some of the poorest living conditions and highest levels of deprivation and illness. We have many patients with diabetes or renal failure which means lots of needles and catheters – all potential infection points. Many of our patients are relatively high risk, even before treatment starts."

Gisborne Hospital measures progress by conducting hand hygiene audits three times a year. These are observational and non-intrusive, and carried out by trained auditors. Five Moments compliance results are collected via smartphones and sent to a central repository held by Hand Hygiene New Zealand to track improvements in practice.

Senior management at Gisborne Hospital have been extremely supportive, but Director of Nursing Sonia Gamblen says there have been challenges to overcome.

"Nobody disagrees with hand hygiene, but it's not always easy to concentrate on the Five Moments when people are busy. It can be hard to introduce new practices when there are established ways of doing things. But hand hygiene saves lives so it is worth persevering to get results."

### The Five Moments for Hand Hygiene

Clean your hands:

1. before patient contact
2. before an aseptic task
3. after body fluid exposure risk
4. after patient contact
5. after contact with patient surroundings.



# Appendix 1: DHB serious adverse events

In general, the number of serious adverse events occurring in each DHB is proportionate to the population each DHB serves.

The table below sets out the serious adverse events reported annually by DHBs since 2006–07. Comparing one year with another is problematic, however, as DHBs have been steadily improving their reporting systems for several years. This does not mean the number of serious adverse events has increased, only that more events are being reported and reviewed each year.

## **DHB serious adverse events 2006–07 to 2012–13**

<b>DHB</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
Northland	6	5	7	4	4	10	9
Waitemata	22	11	20	17	29	29	50
Auckland	26	30	31	32	54	62	67
Counties Manukau	7	23	29	38	35	24	45
Waikato	24	36	60	52	51	26	36
Bay of Plenty	1	5	5	13	14	10	12
Lakes	1	6	3	7	4	7	17
Tairāwhiti	1	3	7	3	5	5	4
Taranaki	5	7	2	7	3	18	5
Whanganui	3	4	7	9	9	4	5
Hawke's Bay	12	7	5	9	7	11	11
MidCentral	4	2	8	18	22	15	20
Hutt Valley	2	7	10	10	4	10	11
Wairarapa	1	2	2	4	2	4	4
Capital & Coast	14	16	22	18	16	19	21 <sup>10</sup>
Nelson Marlborough	7	5	6	1	8	6	9
West Coast	5	11	2	4	4	4	11
Canterbury	22	41	44	69	49	49	47
South Canterbury	3	12	7	9	10	17	17
Otago	3	7	20	39			
Southland	13	18	11	9			
Southern					40	30	36 <sup>10</sup>

<sup>10</sup> Capital & Coast DHB and Southern DHB each included one case where an incident occurred in the community, and the DHBs subsequently supported the provider with the review.





HEALTH QUALITY & SAFETY  
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