Safer Care Victoria

Sentinel events annual report

2016–17

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CEO's foreword

Victorian health services continue to provide a high standard of care to patients and their families. However, from time to time patients are harmed. This 2016–17 annual report details the sentinel events notified to us and the improvements made as a result.

By reporting and sharing serious adverse events and outcomes of root cause analysis (RCA) reviews, we are giving health services the opportunity to learn from each other and to create safer systems for both clinicians and patients. It also gives us valuable insight to develop initiatives we hope will impact safer care. To this end, we encourage all health services to help make our health system safer by reporting all actual or potential sentinel events to us.

It is right and proper that we first acknowledge the patients and their families who have experienced harm while under our care. To them, I say sorry. The purpose of the analyses and reflections in this report is to learn from your harm and to share those learnings so that others may avoid harm in the future. I hope this report gives you some assurance that we are getting better at learning from sentinel events. You should have confidence in the Victorian public hospital system. It is one of the world's best. But there are always opportunities to be better. That is what this report hopes to achieve.

To clinicians, this report comes at an important transition in the Victorian health system following the formation of Safer Care Victoria (SCV) in January 2017. Our establishment has elevated attention to quality and safety across all Victorian health services. Building on the work of our predecessors, a further key development for patient safety was the establishment of our incident response team. This skilled team oversees the sentinel event program for Victoria. Over the past year, the team has worked to strengthen and revitalise the program – focusing on how we can help health services manage, review and learn from sentinel events to deliver the best care to patients and their families.

Continuing our work in 2017–18, we are:

- establishing the panel of external expert reviewers (PEER) to support health services to review serious adverse events
- easing the notification process by introducing new templates and introducing feedback on the quality of the RCA reports submitted
- developing guidelines that support consumer participation in serious adverse event reviews
- using a range of communication modes to share learnings from serious adverse events.

It is an exciting period in the history of Victoria's healthcare as we work to increase system transparency, embed consumer participation and support health services to build their review capacity and capability.

We will continue to forge a new era of increased transparency around sentinel events. One where clinicians are encouraged, enabled and rewarded to speak up and recognise our shortcomings, and where we have the capability to respond to and manage incidents more effectively. And one where we learn from our mistakes, embracing the opportunity to improve care and reduce the risk of future harm. We will do this together, in partnership with health service leaders, clinicians and consumers. As Sir Liam Donaldson said '…to fail to learn [from error] is inexcusable'. Here's to lots of learning.

Professor Euan Wallace AM
Chief Executive Officer

ABOUT THIS REPORT

This report provides the Victorian community and the health sector with information on the most serious adverse events, so called sentinel events, reported in Victorian public hospitals and ambulance services between 1 July 2016 and 30 June 2017.

It includes:

- an overview of the sentinel events reported
- recommendations for improvement arising from RCA reviews
- de-identified case studies of health services' experiences with reporting, reviewing, and identifying and implementing recommendations.

This report is published annually as part of our commitment to sharing information about serious adverse events relating to patient care and what is being done about them.

How to read this report

This report is structured around three main chapters that reflect the process health services must follow in responding to sentinel events: 1. Reporting, 2. Reviewing, and 3. Improving.

Each chapter includes:

- sentinel event data and insights
- ambitions for health services to strengthen patient safety in Victoria
- how we intend to improve the process of responding to sentinel events in 2017–18.

Summary

1. REPORTING

We are getting better at reporting

The number of sentinel events reported increased by 53 per cent to 72 notifications in 2016–17.

This is not a sign that our hospitals are any less safe. Rather, evidence of an increasing appreciation of the importance and value of reporting serious adverse events. This is encouraging. Thank you.

With a reporting rate of four in every 100,000 patients, our sense is that we are still significantly under-reporting in Victoria.

Unfortunately in this reporting period, we do not know how many reports were made within the required timeframe of three days. We are now asking health services to report the date on which the sentinel event occurred so we can better track reporting timelines.

Ambitions

1. Health services report all sentinel events to SCV.

2. Health services report sentinel events within three working days of becoming aware of the incident.

2. REVIEWING

Sentinel event reviews should be prompt

Just 41 per cent of RCA reports were submitted within the 60-day timeframe. In one case we received a RCA report eight months after the initial notification was submitted.

Recognising that timely review enhances learning, we have shortened the 60-day timeframe to 30 working days. We know that some may consider this unnecessary or unreasonable, or both. However, if we cannot investigate the most serious patient harm events in our hospital within six working weeks, we have a problem. And the problem is us. To support health services to meet this new timeframe we will be monitoring why RCA reports are submitted late, gaining a better understanding of the barriers to timely submission and creating solutions to those barriers.

From this year's 72 RCA reviews, health services made 238 recommendations. We are working with health services to improve the quality of those recommendations by broadening representation on the RCA teams and by providing feedback on draft recommendations. We know a few services have found this challenging. Some staff have even been a little offended. No offence is intended. We simply wish to work with you so opportunities for improvement are better identified and shared across services.

Ambitions

3. All RCA reviews commence as soon as practicable and resources are allocated to ensure a timely review report.

4. All RCA review teams include an independent external team member.

5. All RCA review teams include a consumer representative.

6. Each RCA report includes at least one finding and one strong recommendation.

3. IMPROVING

We will be monitoring recommendations

In 2016–17, we received just two risk reduction action plan (RRAP) feedback reports. This represents less than three per cent of all RCA reports.

This does not mean that recommendations from RCA reports aren't being implemented. It simply means we are not getting the important follow-up information that can help us understand if recommendations are being implemented and outcomes evaluated. RRAP feedback reports also help us identify where implementation of improvements has been difficult or impossible – again such important lessons for everyone. Over the next year we will increasingly monitor RRAP feedback reports and the implementations of recommendations more broadly.

Ambitions

7. All RRAP feedback reports are provided three months after RCA report submission.

8. SCV and health services share the learnings and improvements from sentinel events.

Victoria's sentinel event program

Sentinel events are relatively infrequent serious adverse events that result in harm to patients and typically occur as a result of system or process issues. Established in 2001–02, the sentinel event program aims to highlight serious adverse events that are important opportunities to learn from and improve the quality and safety of our healthcare system. In Victoria, health services are required to review sentinel events thoroughly using RCA methodology. Such reviews aim to produce recommendations that will make our systems of care safer so it is less likely such an event will recur.

WHAT EVENTS MUST BE REPORTED?

Sentinel events in Victoria comprise a list of nine categories of adverse events that result in death or serious harm to patients. Eight of these are defined by the Australian Commission on Safety and Quality in Health Care (ACSQHC).[1] The ninth category is specific to Victoria.[2]

Categories

1. Procedures involving the wrong patient or body part (resulting in death or major permanent loss of function).
2. Suicide in an inpatient unit.
3. Retained instruments or other material after surgery requiring re-operation or further surgical procedure.
4. Intravascular gas embolism resulting in death or neurological damage.
5. Haemolytic blood transfusion reaction resulting from ABO incompatibility.
6. Medication error leading to the death of a patient reasonably believed to be due to incorrect administration of drugs.
7. Maternal death associated with pregnancy, birth or the puerperium.
8. Infant discharged to the wrong family.
9. Other catastrophic: Incident severity rating one (ISR 1).

[1] www.safetyandquality.gov.au/our-work/indicators/australian-sentinel-events-list/

[2] www2.health.vic.gov.au/hospitals-and-health-services/quality-safety-service/clinical-risk-management/sentinel-event-program

HOW ARE SENTINEL EVENTS REPORTED AND REVIEWED?

1. Reporting

Health services should report all sentinel events within three working days of becoming aware the incident has occurred. In 2016–17 this reporting requirement applied to public health services. Private health services were encouraged to voluntarily report sentinel events using the same process.

2. Reviewing

Each sentinel event requires the health service to conduct a formal and thorough review. The current methodology required for these reviews is RCA. A review team is convened and the process started as soon as practicable after the event. Following the review, a RCA report is submitted to SCV within 30 working days of the initial notification.

3. Improving

Health services are required to submit a RRAP feedback report three months after the RCA report was submitted. The RRAP feedback report shows the progress in implementing the recommendations from the RCA report and offers further opportunity to learn about which patient safety improvements are effective and which ones are not.

ABOUT SAFER CARE VICTORIA

SCV was established in January 2017 in response to the discovery of a cluster of preventable stillbirths at a Victorian health service that occurred in 2013 and 2014. This was one of the key structural reforms recommended by *Targeting Zero*, the final report of the review that investigated what needed to be done to prevent such tragedies from occurring again in our state.

Our mission

Outstanding healthcare for all Victorians. Always.

Our purpose

To enable all health services to deliver safe, high-quality care and experiences for patients, carers and staff.

More information

For more information, please go to **safercare.vic.gov.au.**

For support with sentinel event reporting please contact the Incident response team at **sentinel.events@safercare.vic.gov.au.**

1. Reporting

Public health services are required to report all sentinel events to SCV within three working days of becoming aware the event has occurred. This helps services to promptly identify any emerging risks to patient safety. SCV supports health services through the process from notification to closure. We also monitor sentinel event data to help identify systemic issues.

WHAT HEALTH SERVICES REPORTED

In total, 72 sentinel events were reported between 1 July 2016 and 30 June 2017. This represents a 53 per cent increase on the 47 events reported in 2015–16 (Table 1).

These reports were from Victoria's public health services. No private health services voluntarily reported to the sentinel event program in 2016–17.

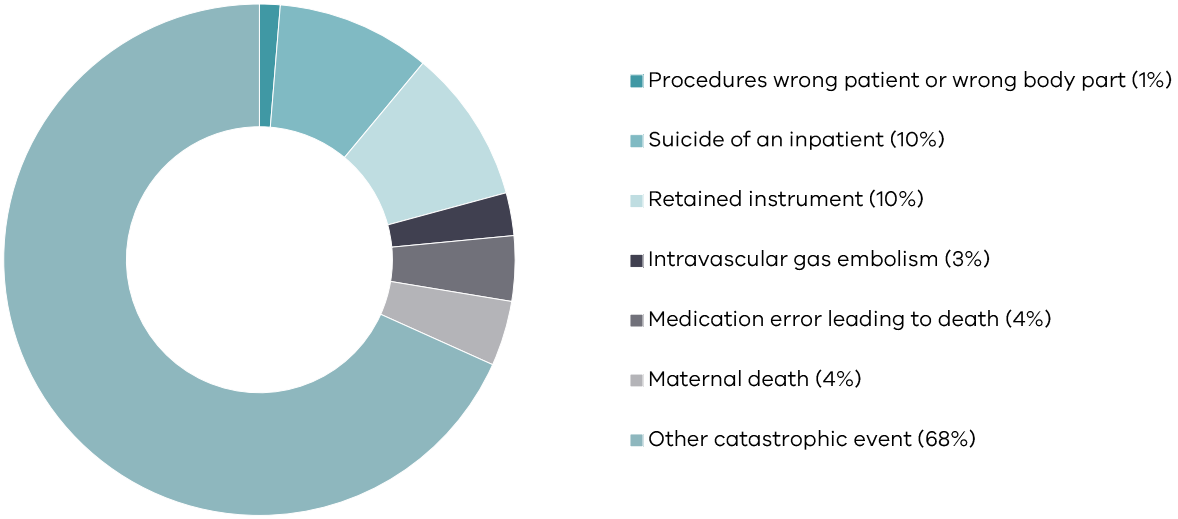
Table 1: Category of sentinel events reported 2012–13 to 2016–17

Category		2012–13	2013–14	2014–15	2015–16	2016–17
1	Procedures involving the wrong patient or body part resulting in death or major permanent loss of function	0	0	0	0	1 (1.3%)
2	Suicide of a patient in an inpatient unit	9 (26%)	8 (15%)	4 (9.5%)	7 (15%)	7 (9.7%)
3	Retained instruments or other material after surgery requiring re-operation or further surgical procedure	6 (18%)	6 (11%)	6 (14%)	7 (15%)	7 (9.7%)
4	Intravascular gas embolism resulting in death or neurological damage	0	1 (1.8%)	0	1 (2.1%)	2 (2.7%)
5	Haemolytic blood transfusion reaction resulting from ABO incompatibility	0	0	0	0	0
6	Medication error leading to the death of a patient reasonably believed to be due to incorrect administration of drugs	1 (2.9%)	3 (5.5%)	7 (17%)	1 (2.1%)	3 (4.1%)
7	Maternal death associated with pregnancy, birth and the puerperium	1 (2.9%)	3 (5.5%)	2 (4.7%)	0	3 (4.1%)
8	Infant discharged to the wrong family	0	0	0	0	0
9	Other catastrophic: ISR 1	17 (50%)	33 (61%)	23 (55%)	31 (66%)	49 (68%)
	Total	34	54	42	47	72

The majority (49 reports) were reported under **Other catastrophic: ISR 1.**

For the first time in four years we received a report for **Procedures involving the wrong patient or body part**. For five consecutive years we have not received any reports for **Haemolytic blood transfusion reactions resulting from ABO (blood type) incompatibility**, or an **Infant discharged to the wrong family**.

Figure 1: Category of sentinel events reported 2016–17



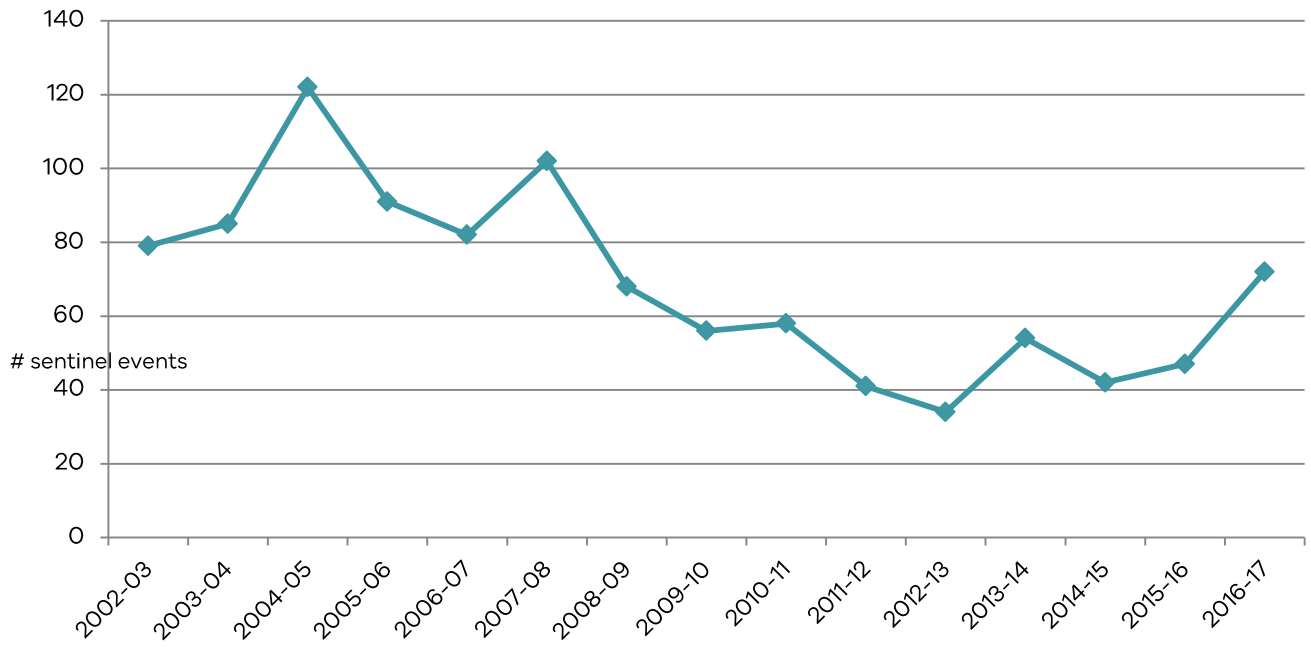
THE REPORTING RATE

The number of sentinel events reported each year has varied since the sentinel event program commenced in 2001–02. This does not necessarily reflect the true incidence of sentinel events in Victorian health services. Nor does it indicate whether they are safe or not. Rather, it more likely reflects changes in reporting culture. Reporting culture is one element of the overall culture of safety in any organisation.

When considered in the context of the number of patients cared for in the healthcare system, in 2016–17, four patients in every 100,000 were impacted by a sentinel event. On average, health services that reported a high number of sentinel events also saw a high volume of patients.

At the time of this report, national sentinel event notifications for 2016–17 were not available. However, historically, reporting rates in Victoria have been lower than other states.

Figure 2: Trend in sentinel events reporting in Victoria



BREAK DOWN OF CATEGORIES

The distribution of sentinel event notifications across categories has remained stable over the past five years (Table 1).

Examples of notifications from each category of sentinel events are detailed below.

Procedures involving the wrong patient or body part resulting in death or major permanent loss of function

A single event involved an ureteric stent being inserted into the wrong ureter.

However, we are aware of episodes of care where wrong site surgery has occurred and a sentinel event hasn't been reported because death or major harm hasn't happened. Our view is that any wrong site surgery is a serious adverse event that merits formal RCA review.

Suicide of a patient in an inpatient unit

Suicides of inpatients were reported by hospitals and mental health facilities. Under this category four patients suicided in a hospital ward/room, one patient within a room in a mental health facility, one patient on ground leave at an inpatient mental health facility and one patient on leave from an inpatient mental health facility.

Please note: patient suicides in other healthcare settings are also reported as **Other catastrophic: ISR 1** (page 13).

Retained instruments or other material after surgery requiring re-operation or further surgical procedure

Retained instruments or other materials that required re-operation to remove them included dressings, needles or wires, pieces of orthopaedic equipment and a stent (or catheter). The timeframe in which the retained materials were detected varied. In some cases the instrument or material was detected before the patient left the operating theatre area while in one case detection was nine months after surgery.

Intravascular gas embolism resulting in death or neurological damage

There were two sentinel events related to intravascular gas embolism. One resulted in the death of a patient and the other resulted in the patient sustaining permanent neurological harm.

Haemolytic blood transfusion reaction resulting from ABO incompatibility

There were no reports under this category. However, we are aware of two patients who received the wrong blood, but did not develop an adverse transfusion reaction. We believe that any ABO (blood type) incompatible transfusions merit full RCA review, irrespective of whether there was a haemolytic reaction or not.

Giving the wrong blood to a patient is a major error and potentially life threatening. Understanding why it happened and preventing it happening again should be a goal.

Medication error leading to the death of a patient reasonably believed to be due to incorrect administration of drugs

Medication errors are among the most common causes of patient harm. Sentinel events represent the most serious of these.

In this report, examples of such error causing patient death included a dose ten times the amount prescribed being administered, one medication was contraindicated for the patient but was administered and one related to the insufficient monitoring of a medication post administration. The types of medications involved in these incidents were cardiac (heart) medication, sedation agents and thrombolytics (blood thinning medications).

Maternal death associated with pregnancy, birth and the puerperium

Maternal death is a very rare event. Three maternal deaths were reported as sentinel events in 2016–17. One was related to unrecognised eclampsia (convulsions in the pregnant woman related to high blood pressure), one was the result of an amniotic fluid embolism (the fluid that surrounds the baby entering the mothers blood stream) and one due to severe bleeding following birth. In all three cases the babies survived.

Infant discharged to the wrong family

Since the sentinel event program commenced in Victoria in 2001–02, there have been no sentinel event reports of infants being discharged to the wrong family.

OTHER CATASTROPHIC: ISR 1

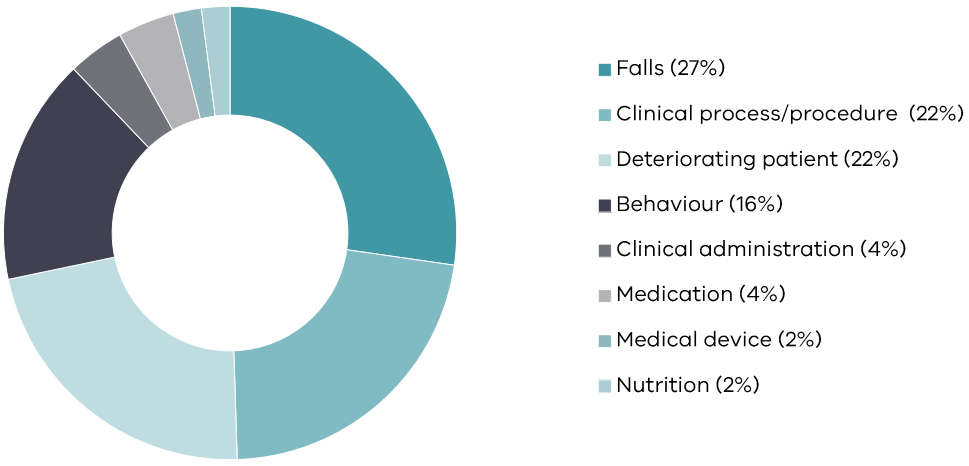
There were 49 other catastrophic events (resulting in death or permanent harm) reported that did not meet the definition of any of the other eight sentinel event categories. These have been further categorised using the International Classification for Patient Safety (ICPS)[3] incident types (Figure 3).

See Appendix 1 for a detailed description of the ICPS incident types.

These incident types include:

- Falls
- Clinical process or procedure
- Deteriorating patient
- Behaviour
- Clinical administration
- Medication
- Medical device
- Nutrition
- Documentation
- Healthcare acquired infection
- Patient accidents

Figure 3: Other catastrophic: ISR 1 sentinel events reported 2016–17



We did not receive any sentinel event reports relating to harm due to documentation errors, healthcare acquired infection, or patient accidents in 2016–17.

[3] www.who.int/patientsafety/taxonomy/icps_full_report.pdf

Falls

Thirteen patients were affected by a fall: 12 patients died after a fall while in care and one patient sustained serious injuries with permanent harm.

Clinical process/procedure

Procedures, treatments or interventions that were not performed when indicated or were incompletely or inadequately performed involved eight patients. Six patients encountered complications during or following surgical procedures, and two patients had oesophageal intubations that contributed to their death.

Diagnosis or assessments not performed when indicated or were incompletely or inadequately performed involved four patients. Three patients died post discharge from a health service and one patient had an incomplete assessment of a life-threatening cardiac rhythm.

Delayed recognition or response to patient deterioration

There were six incidents in which patients were permanently harmed or died as a result of a delay in recognition of deterioration (failure to recognise signs that the patient's condition was getting worse). Three events were related to a delay or lack of escalation of recognised deterioration – these cases each involved a lack of escalation of abnormal results in fetal monitoring (cardiotocography). Three events reflected a delay or no immediate/timely response to deterioration once it was escalated.

Behaviour

Events included eight patients who died as a result of self harm. Of the eight cases, three patients were on ground leave within a mental health facility, two were on leave from a mental health facility, two patients absconded from a hospital ward and one patient absconded from an emergency department.

Note: Sentinel events may also be reported as **Suicide in an inpatient unit** (see page 10).

Clinical administration

Events involving errors in clinical administration included three cases in which delayed scheduling of urgent colonoscopy procedures resulted in delayed cancer diagnosis and therefore significant progression of the disease before treatment was commenced.

Note: one sentinel event notification had two incidents reported within it.

Medication error

Medication errors that resulted in permanent or serious harm included the administration of a blood pressure medication 20 times higher than the prescribed dose and a prescribing error that led to overdose of a blood thinning medication.

Note: These sentinel events differ to medication error leading to the death of a patient (page 11).

Medical device

A single event related to the equipment selection process in the management of a patient on a heart and lung bypass machine (extra-corporeal membrane oxygenation) which contributed to the death of the critically ill patient.

Nutrition

One patient who had a known swallowing problem died as a result of choking on food after being delivered an inappropriate meal.

Focusing on falls

Of the 13 permanent injuries or deaths resulting from a fall that were reported:

- eight were of elderly patients, aged 80 to 87 years, two were aged 65 to 68 years and one was in their 20s. The ages of two patients were unknown as the information was not provided to SCV
- six patients fell during their admission to hospital, three fell in a mental health aged care facility, three in other aged care facilities and one patient fell at home while a hospital-in-the-home patient
- seven patients had cognitive impairment – four had dementia, and three had confused thinking (delirium)
- risk assessments had been conducted on eight patients with six being assessed at high risk of having a fall
- there were two incidents where falls prevention strategies were removed and reallocated to a patient who was assessed as having a greater need (e.g. low-low bed, falls alarm)
- three patients had been receiving sedative medication (benzodiazepines) as a supporting management strategy for behaviours of concern.

Targeting delirium to reduce falls

SCV has commissioned a major project to improve how patients are screened and treated for hospital-acquired delirium. This work will help to inform falls prevention efforts in public hospitals.

As part of the first phase, we are conducting a statewide point prevalence survey to estimate the current burden of delirium in the inpatient population. From there we can measure any improvements as a result of the initiatives undertaken by health services.

Delirium, characterised by a sudden onset of fluctuating consciousness, attention, cognition and perception, has significant implications for patients and the health system. It is associated with several adverse outcomes including falls, pressure injuries, longer inpatient admissions, increased risk of hospital readmissions, increased post-discharge institutionalisation, accelerated functional and cognitive decline and increased risk of death.

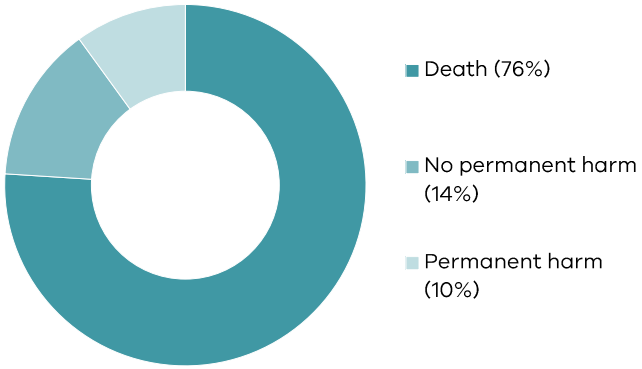
Primary prevention is the foundation of delirium management and has the best evidence for success. About 30 to 40 per cent of in-hospital delirium is preventable.[4] Early identification of patients most at risk can enable targeted prevention. Despite overwhelming evidence for the clinical importance of recognising and preventing delirium it remains poorly detected and therefore inadequately managed. Better risk assessment and prevention provides the best chance of reducing adverse outcomes and improving patient safety.

[4] Inouye, SK, Westendorp, RGJ and Saczynski, JS (2014). Delirium in elderly people. *The Lancet, 383*(9920), 911–922

OUTCOME OF SENTINEL EVENTS

Three of every four sentinel events reported in 2016–17 involved the death of the patient.

Figure 4: Severity of event 2016–17



Ambitions

1. Health services report all sentinel events to SCV.

2. Health services report sentinel events within three working days of becoming aware of the incident.

Ensuring timely reporting

SCV is unable to review the timeliness of reporting in the 2016–17 year as the data collected does not include the date of the incident. Since 1 July 2017, we required all sentinel event reports to include the date of the incident. This will be detailed in subsequent annual reports.

Making event reporting easier

In 2017–18 we are focusing on making processes for reporting and reviewing events easier to do and understand. This work specifically includes:

- the formation of the incident response team to offer advice and support
- working with the ACSQHC on the review of the national sentinel event categories
- introducing new templates for event notifications.

Reviewing sentinel event categories

The ACSQHC commenced a review of the Australian sentinel events list in 2017. This was the first comprehensive review of the list since its development and adoption in 2002.

A Sentinel Events Review Steering Committee comprising a consumer representative and state, territory and Commonwealth patient safety experts was convened to guide the review. The review comprised of an environmental scan, a literature review, drafting of a revised Australian sentinel event list and a comprehensive consultation strategy.

It is expected the revised ACSQHC sentinel event list will be implemented in 2018–19.

Notifying a sentinel event

The following case study outlines the journey of one health service in which a RCA review led to the identification of similar serious adverse events and more opportunities to learn.

Reporting and reviewing

A patient was referred by their general practitioner to our specialist outpatient clinic for further investigation of a medical condition. Following consultation with the patient, the consultant medical specialist requested an urgent (within 30 days) investigative procedure be scheduled. Although this request was entered onto the booking system, there was a subsequent delay of more than 600 days before the patient received their procedure. The result was a delayed diagnosis and treatment which may have contributed to significant progression of the patient's disease. Once discovered, we escalated this serious adverse event to the relevant senior clinicians, managers and the risk management team. This was categorised as an Incident Severity Rating (ISR) 1 event and was reported to SCV as a sentinel event.

An initial review of the incident gave us a greater understanding of the event and circumstances involved. It provided greater clarity that informed discussions between the risk management team, the executive and senior clinicians. In our experience, this engagement tends to allay any anxiety that may be present within the organisation that a review is in progress. The ability to perform open disclosure with the patient and family in a timely manner can occur at this time. We also rang the staff at SCV to discuss the circumstances and get advice.

During the RCA review process, we identified similar cases involving significant delays to performing urgent investigative procedures. An initial review of these cases highlighted a range of system issues. After discussions within our health service and SCV, formal notifications were made of the similar sentinel events and a cluster RCA review was undertaken.

Benefits of reporting a sentinel event

At a local level, there is a greater awareness within the organisation of this type of adverse event and the RCA review process. There are also opportunities to share what we have learned more broadly across the health service. Our health service felt strongly that formally notifying the similar cases was an important safety step to ensure the system improvements from these sentinel events can be shared across the Victorian health system.

Advice for other health services in regard to notifying a sentinel event

The adage of erring on the side of caution is very relevant here. Early review and clarification of circumstance surrounding the adverse event ensures appropriate actions to mitigate immediate risks are implemented. It is important to be very clear on the reasons why the event is being reported and the justification for a Category 9 (Other ISR 1) notification, seeking clarity from SCV when necessary. In getting the RCA review done on time, is it also important to use resources available within the organisation and seek advice from SCV.

2. Reviewing

After reporting a sentinel event, health services should form a review team of six to eight members and undertake a RCA to establish how and why it occurred. In 2016–17, the required timeframe for submitting the report from the RCA to SCV was 60 days from the time of the sentinel event notification. Commencing a RCA review as soon as possible minimises the risk of information loss. It also offers the opportunity to implement recommendations promptly, helping to prevent similar events occurring.

The key principles of a RCA review are to:

- focus on systems and process failures rather than individual performance
- be thorough, fair, efficient and independent
- use recognised analytical methods
- develop recommendations to reduce the likelihood of recurrence.

It is important for at least two members of the review team, including the team leader, to have received formal training in RCA review methodology. RCA training provides the background knowledge and skills required to ensure the focus of the review is on systems and processes. This is achieved through introducing key concepts in human factors and systems thinking as well as the practical skills in applying RCA methodology to analysing a sentinel event (or other serious adverse events).

For more information and to book a place in a RCA training course, visit **bettersafercare.vic.gov.au/events.**

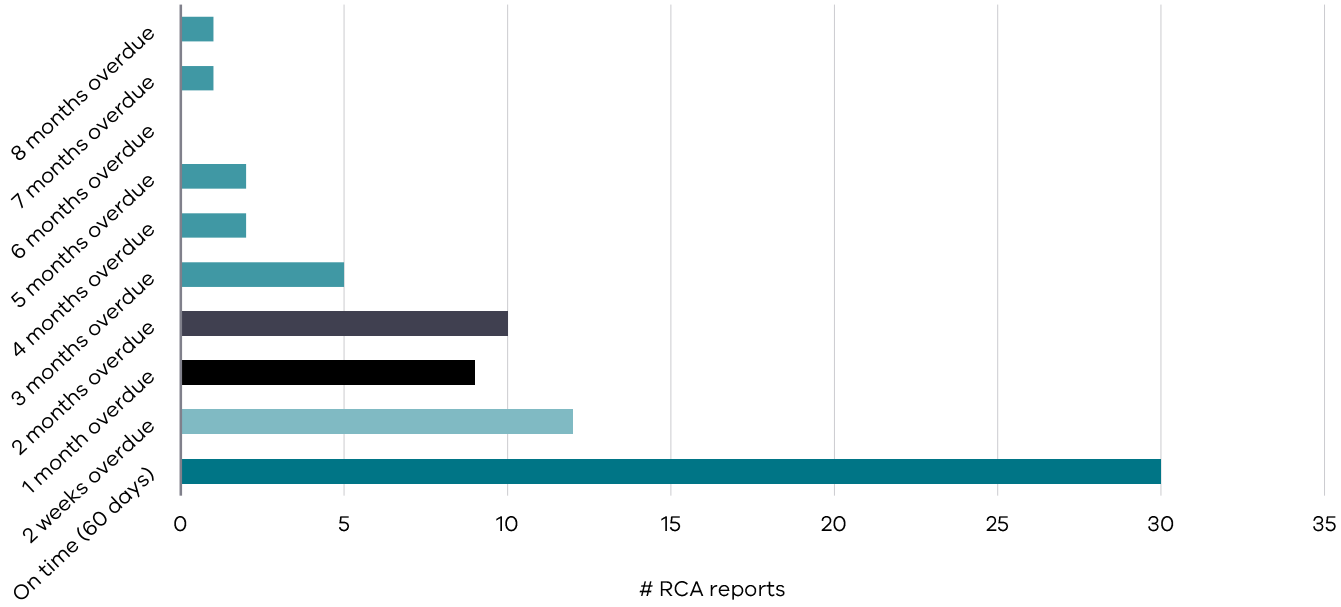
HOW HEALTH SERVICES REVIEWED SENTINEL EVENTS

Of the 72 notifications in 2016–17, less than half (41%) of RCA reports were submitted within 60 days. Submission times ranged from 30 days to 240 days, with an average submission time of 101 days. The longer submission times reflect poor practice and a lack of attention to patient safety.

During 2017–18, SCV reduced the required submission time for RCA reports from 60 days to 30 working days (six weeks) to encourage more timely review and formation of better, more meaningful recommendations. We will be monitoring the reasons why RCA reports are delayed.

Anecdotally, we understand reviews are often delayed due to clinical work load or staff leave. This suggests that reducing patient harm is not a priority for those services and reflects a poor patient safety culture. We encourage health services to allocate adequate resources to the review of these most serious events of patient harm. We look forward to working with services to support them to undertake RCAs in a timely manner and to a high standard.

Figure 5: Duration of RCA reports submitted 2016–17



RECOMMENDATIONS

The 72 RCA reports submitted to SCV contained a total of 228 recommendations for implementation. Six RCA reports were submitted with no recommendations regarding how the permanent harm or death of a patient could be prevented in the future.

While it can sometimes be difficult to identify root causes of sentinel events, RCA reports that result in no recommendations represent missed opportunities to learn and improve. To address this, we have included a new section in the revised 2017–18 RCA report template to record incidental learnings that have arisen through the RCA review process. Incidental learnings can also be used as a basis of recommendations to improve patient safety and quality of care.

Table 2: Number of recommendations (recs) provided in RCA reports submitted 2016–17

	Category	# reports	# recs
1.	Wrong patient or body part	1	5
2.	Suicide in an inpatient unit	* 7	24
3.	Retained instrument	7	25
4.	Intravascular gas embolism	* 2	3
6.	Medication error	3	10
7.	Maternal death	3	12
9.	Other catastrophic: ISR 1	** 49	159
Total		72	238

* 1 report with nil recommendations

** 4 reports with nil recommendations

COMMON TYPES OF RECOMMENDATIONS

A large percentage of recommendations suggested:

- updating a procedure, guideline or policy
- conducting education and training
- introducing a risk assessment tool
- improving communication (with a focus on clinical handover).

Although training and education and policies, procedures and guidelines are important aspects of providing safer systems of care, these recommendations are considered to be weak in their effect on improving patient safety.[5] Where possible, it is important that moderate and strong recommendations are also made to get the most of the RCA review process and ensure our systems of care are safer as a result.

The following information looks at common themes of recommendations made in the top four most frequently reported types of sentinel events. All are sub-categories of **Other catastrophic: ISR 1** sentinel events.

Falls

Almost a third (29%) of falls-related recommendations focused on reviewing procedures and guidelines, followed by improving falls risk assessments. Another 19 per cent were a diverse set of recommendations, including staffing allocations, access to allied health practitioners and culture.

The following recommendations were considered strong:

- Redesign the falls risk assessment tool in line with human factor design principles.
- Implement a shoe bank and link it to the falls risk assessment tool.
- Implement a tracking system to locate low–low beds.

Clinical process/procedure

The majority of the 41 recommendations in this sub category were weak in nature, including reviewing procedures and guidelines and educating staff, each accounting for 22 per cent of all the recommendations. One third of the recommendations were classified as 'Other' and included recommendations such as review of environment and staffing levels.

The following recommendations were considered strong:

- Use of a forced function to prevent the over-riding of life threatening alarms on a cardiac (heart) monitor.
- Implement new clear sterile drapes to allow visualisation of the procedural site.
- Conduct an expert review of the theatre environment to ensure appropriate set up for safe surgery.
- Develop an escalation process to empower staff to stop surgeries when surgical preadmission documentation is illegible, incomplete or inadequate.

[5] Recommendations hierarchy and examples are based on *Root Cause Analysis Tools*, VA National Centre for Patient Safety. Retrieved from: www.patientsafety.va.gov/professionals/onthejob/rca.asp

Recognition, escalation or response to clinical deterioration

Approximately one third (34%) of the 35 recommendations involved changes to procedures, such as the process for escalation and assessment. A further one third fell into the 'Other' category and included cultural change with health services in regard to escalation and response to patient deterioration and compliance audits.

Behaviour

Twenty-six recommendations were made as a result of behaviour-related sentinel events such as suicide of a mental health patient in a community setting. These recommendations were evenly split between the categories of risk assessment, education, communication and 'Other' (including referral pathways).

Multiple recommendations focused on a 'log book' system for patients/clients on day leave to ensure that duration of leave is clear.

Environmental recommendations included securing all furniture and/or other items to the ground to prevent them from being moved.

Some recommendations also focused on third party interactions such as development of a process for ensuring all external service providers notify the health service when they have had a change of procedure. Changes in the procedures of third party providers can have an impact on patient safety. For example, if a company providing sanitary bins to a health service changes their procedures to include bins that have plastic bin liners, this represents a risk for mental health patients who have thoughts of self harm.

Ambitions

3. All reviews commence as soon as practicable and resources are allocated to ensure a timely review report.

4. All RCA review teams include an independent external team member.

5. All RCA review teams include a consumer representative.

6. Each RCA review report includes at least one finding and one strong recommendation.

Continuing strong interest in RCA training

In 2016–17, more than 230 people undertook training and refresher courses to enhance their knowledge and skills in RCA methodology. More than 170 people attended the 'Fundamentals of RCA' training and a further 60 people logged into the online webinars.

Over the next year, we will be working to further improve the existing RCA training program to ensure it is tailored specifically to meet the needs of the health services and targeted towards staff who will be reviewing serious adverse events and forming recommendations. We will also work towards developing more training options that will include an introduction to the fundamental concepts of serious adverse event review, how to facilitate and coordinate these reviews, as well as an introduction to human factors and safety systems thinking. The new SCV website, the introduction of online registrations for training events and the planned implementation of an online learning platform will also make training more flexible and accessible.

Introducing independent, external members

During 2017–18, we will support health services to include an external member in their review teams. By providing a different perspective, external members can help identify more opportunities to learn, improve and share learnings across services.

SCV will be forming a panel of external expert reviewers (PEER), allowing health services to search an online database for relevant and independent expertise. Clinicians, healthcare managers and consumers will be encouraged to self-nominate to become members of the PEER platform.

Involving consumers in reviews

There are a number of ways consumers can contribute to improved patient safety through participating in RCA review processes. At present, consumers and families involved in sentinel events are not routinely interviewed to inform RCA reviews. This is a missed opportunity to better understand what went wrong and how it can be avoided in future. It is also increasingly recognised that consumer representatives (who have not been involved in the sentinel event) bring a unique perspective to RCA teams and help create strong, patient-focused recommendations.

Over the next year, SCV will be partnering with consumers, families, carers and health services to produce guiding principles for health services on how to include the consumer voice in the review of sentinel events. We will also be looking at the best ways of supporting the role of consumer representatives in RCA review teams.

Improving the quality of recommendations

Conducting RCAs requires substantial resources to be applied to the process and it is rare that, after a full review, there are no lessons to be learned or opportunities for improvement identified. The review process is in place for learning and system improvement purposes, even if the lessons learned are incidental and not directly related to root causes identified.

Under our revitalised sentinel events program, we will provide expert feedback on RCA reports, including recommendations. This feedback will assist health services in strengthening the recommendations arising from RCA reviews and help ensure they are practical, impactful, sustainable and reflect contemporary practice in patient safety.

The benefit of consumers on the RCA team

A multi-facility health service introduced consumers to RCA and in-depth case review teams to enable patients and carers to be actively involved in all aspects of healthcare improvement. Here the health service describes how they introduced the initiative, and the benefits they are seeing.

Implementing change

In 2005, our Community Advisory Committee requested consumers have representation on our RCA teams. After strong support from our Board, we now typically have a consumer or carer involved in RCA reviews and some in-depth case reviews.

The benefits of involving consumers

Initially, staff raised concerns about the impact of including consumer or carers in RCA teams including maintaining confidentiality of the RCA process and the potential impact on the consumers and carers themselves. To address some of these concerns we provided formal training to better support consumers through the RCA. We found this also reduced staff time in explaining the process. Confidentiality and conflict of interest requirements are addressed at the start of each review.

The presence of a consumer or carer adds an additional dimension to the considerations undertaken by a RCA review team. They provide insights into issues and possible solutions that may not otherwise be identified by clinicians. Their presence also fosters greater openness and transparency during the analysis. We believe this also demonstrates our genuine commitment to consumer and carer participation in sensitive and complex governance matters.

There are potential educational benefits for all concerned. Within the process, clinicians are asked to genuinely consider service user views of what can be learned from serious adverse events and opportunities to improve. Ultimately this kind of exposure may lead to change in attitudes and practices. By its very nature, the RCA process informs and educates consumers and carers about the operations of clinical services. This can broaden capacity for engagement and thinking about the complexity of delivering care and ensuring services are safe and of consistently high quality.

Recruiting and supporting consumer RCA team members

Successful participation of consumers has been supported by formal training, board and executive leadership and consumer/carer commitment. Other factors contributing to success include:

- establishing a formal process for inviting consumers to participate in the RCA process
- recruiting consumers with prior exposure to key health service committees
- establishing a relationship of respect and trust between the consumer/carer, clinicians and quality and safety professionals in the RCA team
- providing consumers/carers with translations of medical terms and acronyms
- ensuring consumers/carers are informed of the RCA outcome at the end of the process.

3. Improving

Three months after a RCA report has been submitted, health services are required to provide SCV with a risk reduction action plan (RRAP) feedback report. These reports enable health services to track their progress in implementing the recommendations made in RCA reports (often referred to as 'closing the loop'). They also allow us to share recommendations that work (and those that do not work) with other health services. Importantly, this final step in the review process gives Victorians the assurance the health sector is learning and acting on identified service and system weaknesses.

HOW HEALTH SERVICES IMPROVED

In 2016–17 we received two RRAP feedback reports, which represent less than three per cent of all RCA reports submitted.

Unfortunately, this was an insufficient number to monitor the implementation and outcomes of recommendations across health services. This is not to say these improvements did not happen, but we were unable to review the progress of recommendations. It also means that SCV has fewer opportunities to support health services in overcoming barriers to implementing recommendations and share patient safety initiatives that are effective with other health services.

Ambitions

7. All RRAP feedback reports are provided three months after RCA report submission.
8. SCV and health services share the learnings and improvements from sentinel events.

Sharing the lessons learned

Over the next year, we will increasingly encourage submission of RRAP feedback reports. We will also improve how we share the learnings from sentinel events across the system, including case studies, resources, examples of high-quality reviews and procedural tips and advice. With a new and improved SCV website and introduction of new enewsletters and alerts/notifications, we will have a greater ability to share important content.

Targeting retained materials in surgery

While surgical outcomes in Victoria are of a very high standard, retained materials in surgery continue to be a serious issue in surgical safety. The number of reports is largely unchanged over the past 10 years (seven reported events in 2016–17).

Supported by SCV, the Victorian Surgical Consultative Council is seeking to raise awareness of the patient safety risk through a safety bulletin. This will encourage adherence to surgical count procedures ensuring that all instruments, materials and accountable items used during surgery or procedures are retrieved, accounted for and appropriately documented at the completion of the surgical procedure.

Working to halve the state's suicide rate

With 15 suicides reported as sentinel events in 2016–17, SCV continues to support statewide efforts to halve Victoria's suicide rates by 2025. We are working with the Office of the Chief Psychiatrist on a wide variety of work, and Primary Health Networks to support place-based approaches to suicide prevention.

In collaboration with health services, the Victorian Government will trial assertive outreach support for people leaving hospital following a suicide attempt. The Hospital Outreach Post-suicidal Engagement trial will provide tailored, person-centred support that is responsive to the unique needs and circumstances of the individual.

Promoting medication safety

Although medicines are used to treat patients, they can also cause patient harm when inappropriately administered. Of particular concern are high risk medicines (HRMs), which have a greater chance of causing injury or harm if they are misused or used in error. HRMs were associated with three of the sentinel events reported in 2016–17.

In 2018, we will:

- support ACSQHC to improve clinician knowledge of HRMs by making South Australian developed online education modules on medication safety available to Victorian health services
- make better use of statewide medicines-related incident data and promote learning from errors
- host a medicines roundtable to identify key medication safety priorities for SCV and ensure that medicines resources and efforts are appropriately targeted.

Improving maternity care and outcomes

Maternal and perinatal deaths are rare in Australia. SCV and the Consultative Council on Obstetric and Paediatric Mortality and Morbidity (CCOPMM) remain committed to identifying factors that contribute to maternal deaths and improve the safety of maternity care.

With administrative support provided by SCV, CCOPMM reviews all maternal deaths and (more recently) severe acute maternal morbidity, an important additional measure of the quality and safety of maternity care. CCOPMM's recommendations inform how health services can better respond to the needs of expectant mothers and implement preventative strategies that improve the quality and safety of maternity care.

SCV's Maternity and Newborn Clinical Network has also implemented a number of strategies to improve care of Victorian mothers and their babies and to prevent adverse outcomes such as maternal death and severe maternal illness. Some key examples are:

- **Building on the Maternity eHandbook**, an online resource providing current, evidence-based pathways of care for maternity services.
- **Introducing a maternity dashboard** to give maternity services access to their own data and clinical performance and use it to immediately identify, escalate and respond to performance issues or clinical concerns.

Abbreviations

ACSQHC	Australian Council for Safety and Quality in Health Care
CCOPMM	Consultative Council on Obstetric and Paediatric Mortality and Morbidity
HRM	High risk medications
ICPS	International Classification for Patient Safety
ISR	Incident Severity Rating
PEER	Panel of external expert reviewers
RCA	Root cause analysis
RRAP	Risk reduction action plan
SCV	Safer Care Victoria

Appendix 1

ICPS SUB-THEMES

Sub-theme	Description
Clinical process/procedure	Diagnosis/Assessment (not performed when indicated, incomplete/inadequate, other) Procedure/treatment/intervention (not performed when indicated, incomplete/inadequate, wrong body part/side/site, other) Tests/investigations (not performed when indicated, wrong patient) Specimens/results (wrong patient, mislabelling)
Falls	Mortality or permanent harm relating to a fall i.e. slip with head strike resulting in death
Deteriorating patient	Recognition, escalation or response to patient deterioration
Behaviour	Behaviour that is associated with temporary or permanent harm, i.e. intended self-harm or suicide
Clinical administration	Incident involving a process or problems with the administration of clinical information, i.e. waitlist delay, inter hospital transfer delay, delay to ultrasound, delay to referral
Medical device	An error associated with a medical device/equipment or property, i.e. dislodgement or misconnection of a device, equipment is inappropriate for the task
Medication	An error with the process of delivering a medication to a patient that causes harm to a patient, i.e. incorrect prescription, dispensing, administration, packing or monitoring of a medication
Nutrition	Related to an error with a process involving nutrition, i.e. choking, incorrect diet ordered or delivered
Resources/organisational management	Events where lack of resources and deficiencies in organisational management contribute to error, i.e. workload mismanagement, staff availability, bed availability
Documentation	Error associated with documentation, i.e. incorrect labelling, diagnostic reports, procedures/guidelines, ambiguous or illegible information
Healthcare infection	An infection acquired in the Healthcare setting, i.e. bacterial blood stream infection, surgical site infection, intravascular device
Patient accidents	Patients who are harmed in care by accident, i.e. bed entrapment, drowning

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