Supporting patient safety

2017–18 Sentinel events annual report
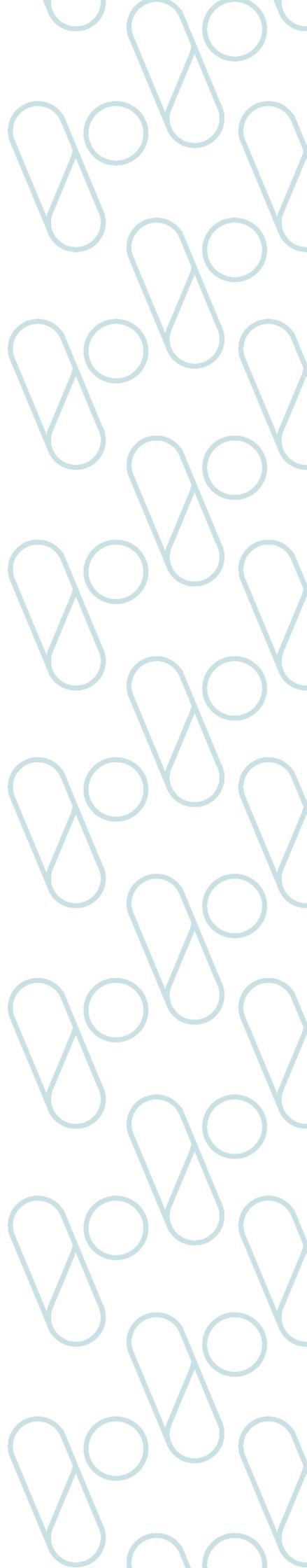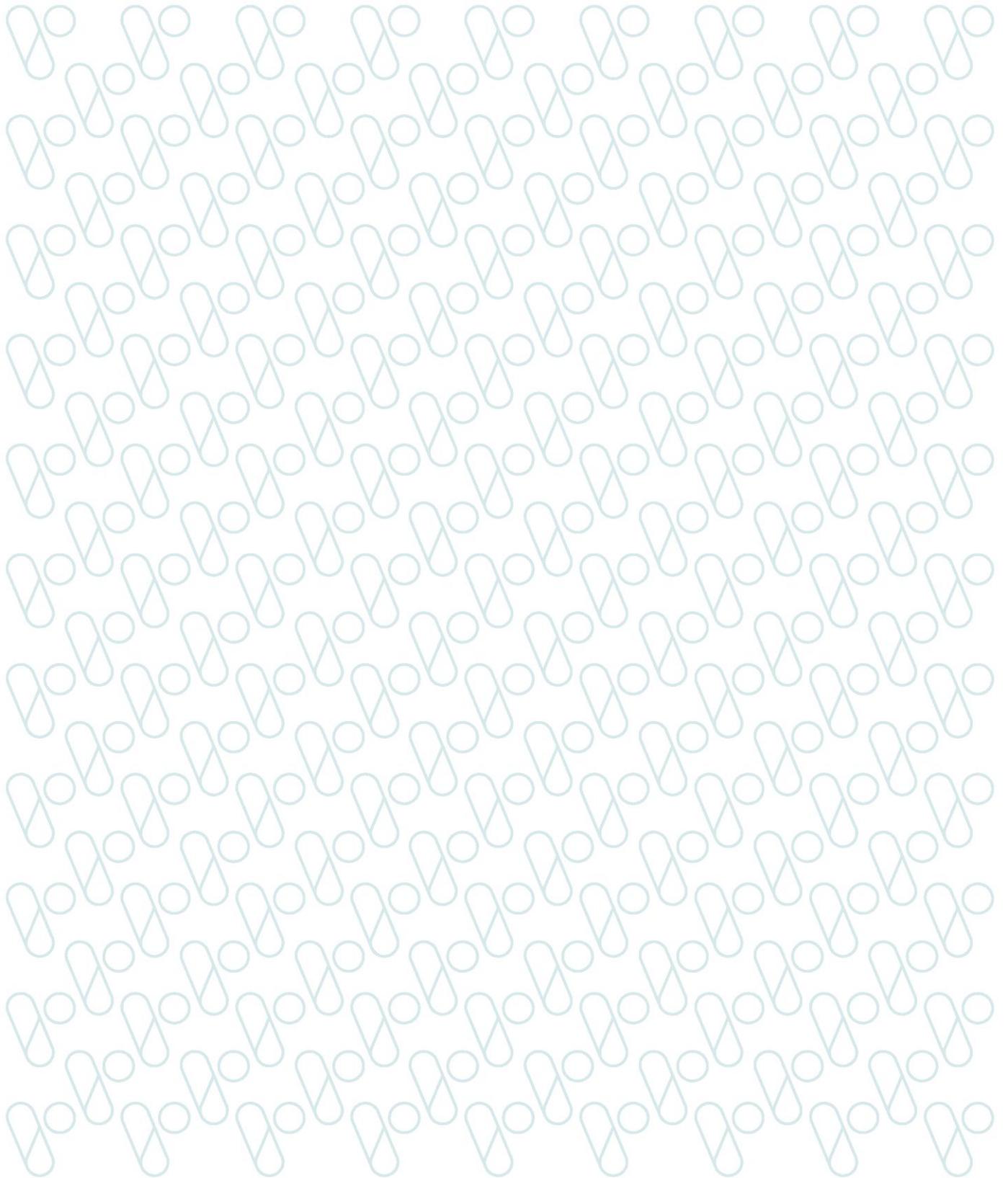
When things go wrong, Victorian health services look to learn and improve from them, and do their best to prevent them from happening again. In the midst of this, sometimes we lose sight of the real impact these events have on patients, their families and carers. That's why we're starting this report with a personal story.

Dolores' story

In December 2016, Dolores died in a hospital in Victoria. She was 67 years old; physically disabled, a wife, a mother of three, a grandmother, a great grandmother, a sister, a daughter and a friend. She lived at home with her beloved little dog. Failures in our health system contributed to her death.

In October 2016 Dolores had a fall. Investigations in hospital showed that her hip bone had crumpled and caused her to fall. Cancer was queried but no further investigations were done to find out why the hip bone had degenerated. Dolores had surgery and while recovering at home suffered terrible pain in her hip. The pain became so bad she couldn't walk more than five steps.

"My mother was readmitted to hospital for pain management and investigations. The hospital called me to inform me they were going to undertake a biopsy of her liver as scan results showed abnormalities in the liver. Quite confused, I answered, 'Okay. This was not why she was in hospital, but okay'."

Just hours later, Dolores' daughter was contacted and asked to go to the hospital immediately. Something had gone wrong during the biopsy procedure and Dolores hadn't stopped bleeding.

"Mum refused to go back to surgery to have it repaired. Not knowing the situation, I supported her choice and decision. On arrival, I found mum in the intensive care unit, with the curtains open for all to see. There was no patient-centred care at all. She was refused any compassion or comfort, just left by herself."

Dolores' daughter stayed by her bedside and talked to her until she passed. She was told Dolores' body would be taken to the Coroner as she died as a result of a medical procedure. The coming days and weeks were very sad and challenging.

"I started to relive the events of that day and I needed answers. On reading my mother's medical record, I was alarmed at what I read. The documents contradicted everything I had been told. There was nothing to explain why the biopsy was done in such haste after mum was told less than half an hour prior of the possibility of liver cancer."

"I couldn't find any information to show my mother was properly informed of the risks or was in a fit state to understand. From what I could see, the procedure could have waited until the next day to allow her time to grasp the fact she may have cancer."

Since Dolores' death, her daughter and grandson have relocated to a new town wanting to avoid the constant reminder. A year after Dolores' death her daughter met with the hospital to discuss the events.

"They were very sympathetic and agreed the hasty decision for the biopsy was not necessary. I was told they would use my mother's situation as a learning tool for all junior doctors.

"I requested they use my mother's name, not a case number."

About this report

This report provides the Victorian community and the health sector with information on the most serious adverse events reported in Victorian public/private hospitals, and ambulance services between 1 July 2017 and 30 June 2018. Safer Care Victoria (SCV) publishes this information every year to help Victorians understand what sentinel events have occurred, what has been learned and how we have improved as a result.

> An **adverse event** is an incident in which a person receiving healthcare was harmed.
>
> **Sentinel events** are the most serious adverse events that result in a patient dying or being seriously harmed.

How to read this report

This report includes an overview of the sentinel events notified, recommendations for improvement arising from root cause analysis (RCA) reviews and case studies from Victorian health services.

It is structured around three main chapters that reflect the way we investigate sentinel events:

1. Notify	2. Review	3. Improve
Public and private health services are required to notify sentinel events.	Health services must conduct a formal and thorough review using RCA methodology.	Health services must submit a risk reduction action plan (RRAP) feedback report **three months** after the RCA report was submitted.
Health services must report all sentinel events within **three working days** of being aware the incident has occurred.	Following the review, services must submit a RCA report to SCV within **30 working days** of the initial notification.	This shows the progress made in implementing the recommendations from the RCA report.

What's new in this report?

- **Additional notification detail** Due to improved notification requirements, we can now share age, location of the sentinel event and the time it took health services to notify SCV.
- **Timeliness of learning and improving** The timeframe for RCA report submission was reduced to 30 calendar days in 2017–18. We now report on how many health services meet this timeframe.
- **RCA team membership** We are now able to report on whether external experts or consumers are included in sentinel event review teams.
- **Feedback on RCA reports** We can now share how many RCA reports we reviewed through our new quality assurance processes.

Contents

At a glance 2017–18

69% more sentinel events notified **122**

26% sentinel events **reported within 3 days**

RCA review panel membership:

80% had an **external member**

17% had a **consumer member**

150⁺people trained in RCA methods
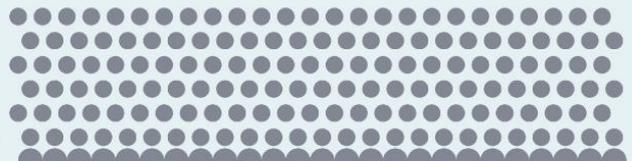
RCA reports:

Number with zero recommendations **halved**

Almost **1/3** had **at least one strong recommendation**

For the first time we gave feedback on RCA reports: **95%** given quality assurance feedback

More health services shared their progress: **42** RRAP feedback reports **submitted** up from 3 in 2016-17

CEO foreword

Every week our health services improve the lives of patients and their families. Despite our best efforts, systems can fail and result in a small number of patients being harmed – or worse die. The 2017–18 sentinel event annual report shares how this small percentage of patients were harmed.

We have deliberately opened this year's report with a personal story of a patient who was harmed and later died in our health system. It is an important reminder that we do not lose sight of what is central to patient safety – the patient voice. Several of our health services included this voice in their review of sentinel events by including a consumer representative on their panel. This is best practice. We are hopeful more services do this.

In 2017–18 we have challenged health services to further improve their commitment to and practices in managing serious adverse events. We shortened the RCA report submission time and requested all review teams include an external member. These are big asks, and we're glad to see Victoria's health services have responded well. We are now seeing health services review and submit their RCA reports much more quickly, and this translates to swifter improvements and safer systems of care.

Sometimes sentinel events happen during care provided by more than one health service. There are great benefits when health services review these events together, sharing information and placing the patient at the centre of the review. Included in the report is an account of two health services reviewing a sentinel event together. They overcame the perceived barriers and from their accounts have developed not only a safer system, but a stronger relationship and better understanding of how they can closely work together to provide outstanding care to their patients.

I am pleased to see signs our Victorian health system is becoming even more open and transparent, with many health services including sentinel events in their annual reports. This reflects a state that is fostering a culture of patient safety and responding to adverse events more effectively.

That said we are still on a path of learning. We have made great steps forward in recognising and notifying sentinel events, although I feel hospital associated infections is an area in which we have some progress to make. In 2017–18 we had only one sentinel event notified to us relating to hospital associated infections. In the six-month period to 30 June 2018, more than 150 infections were reported to the Department of Health and Human Services. I am sure a number of these would fit the criteria for sentinel event notification and are missed opportunities to learn. Just as importantly, I wonder what the experience of the patients who suffered these infections was like? And that of their families and carers?

With this at the forefront of our minds, let's be relentless in our pursuit of learning, providing even safer care for our patients and provide them with a better healthcare experience.

Professor Euan Wallace AM
Chief Executive Officer

1. Notifying

For the third year in a row, we've seen an increase in the number of sentinel events notified. This is not a sign that our healthcare is any less safe. In fact, it shows our health services are effectively turning around a history of under-reporting. Thanks to improved notification, we know a lot more about these sentinel events, which can help you identify areas of greatest risk.

Public and private health services, including services under their governance, must notify sentinel events to SCV within **three days** of becoming aware of them.

The eight nationally agreed sentinel events are detailed in the table below. Victorian health services are also required to notify an additional category – **Category 9. Other catastrophic: Incident Severity Rating (ISR) 1.**

If you are unsure if you need to report an event, please contact our incident response team at sentinel.events@safercare.vic.gov.au or 03 9096 1546.

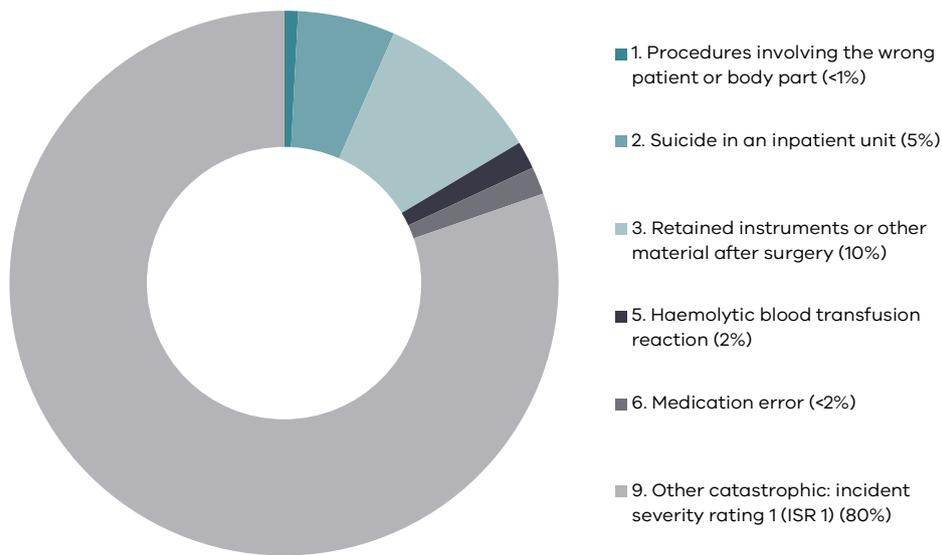## WHAT HEALTH SERVICES REPORTED

Between 1 July 2017 and 30 June 2018, 48 health services notified 122 sentinel events.

This is a 56 per cent increase on the 72 sentinel events notified in 2016–17. An additional six notifications were made, but later withdrawn as they did not meet sentinel event criteria.

Table 1: Category of sentinel events notified

	Category	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
1	Procedures involving the wrong patient or body part resulting in death or major permanent loss of function	1	1	0	0	0	0	1	1
2	Suicide of a patient in an inpatient unit	9	8	9	8	4	7	7	7
3	Retained (un-retrieved) instruments or other material after surgery requiring re-operation or further surgical procedure	5	7	6	6	6	7	7	12
4	Intravascular gas embolism resulting in death or neurological damage	1	0	0	1	0	1	2	0
5	Haemolytic blood transfusion reaction resulting from ABO incompatibility	1	0	0	0	0	0	0	2
6	Medication error leading to the death of a patient reasonably believed to be due to incorrect administration of drugs	2	4	1	3	7	1	3	2
7	Maternal death associated with pregnancy, birth and the puerperium	2	0	1	3	2	0	3	0
8	Infant discharged to the wrong family	0	0	0	0	0	0	0	0
9	Other catastrophic: incident severity rating 1 (ISR 1)	37	21	17	33	23	31	49	98
	Total	**58**	**41**	**34**	**54**	**42**	**47**	**72**	**122**

Figure 1: Category of sentinel events notified 2017–18

- 1. Procedures involving the wrong patient or body part (<1%)
- 2. Suicide in an inpatient unit (5%)
- 3. Retained instruments or other material after surgery (10%)
- 5. Haemolytic blood transfusion reaction (2%)
- 6. Medication error (<2%)
- 9. Other catastrophic: incident severity rating 1 (ISR 1) (80%)

What the numbers show

- The number of notifications involving a **Category 3: Retained (un-retrieved) instrument or other material after surgery requiring re-operation or further surgical procedure** increased, from seven to 12.
- For the first time since 2010–11, a notification of a death under a **Category 5: Haemolytic blood transfusion reaction resulting from ABO incompatibility** was made.
- There were no notifications under **Category 4: Intravascular gas resulting in death or neurological damage** or **Category 7: Maternal death associated with pregnancy, birth and the puerperium** compared to a combined five notifications in 2016–17.

THE NOTIFICATION RATE

The 122 notifications in 2017–18 is the highest in the history of the program, equal to the 122 in 2004–05.

During 2017–18, private hospitals were invited, but not required, to report sentinel events to SCV. We received eight notifications from five private health services, representing seven per cent of all notifications.

We commend those services on their commitment to improving patient safety. We acknowledge that there is further progress to be made in terms of a transparent reporting culture in health services and are actively working with the sector to encourage notification of all sentinel events to improve patient safety.

Figure 2: Trend in sentinel event notifications in Victoria

Figure 3: Timeliness of reporting of sentinel events 2017–18

- Within 3 days (26%)
- Within 14 days (46%)
- Within 28 days (14%)
- Over 28 days (14%)
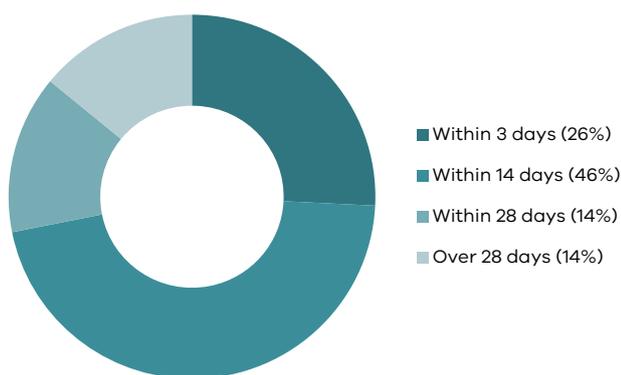
Only one quarter (26%) of notifications were submitted within the required three working days. The longest delay to notification was 594 days.

Figure 4: Age of patient affected by sentinel events 2017–18

- 0-10 years (11%)
- 11-20 years (8%)
- 21-30 years (7%)
- 31-40 years (7%)
- 41-50 years (10%)
- 51-60 years (12%)
- 61-70 years (10%)
- 71-80 years (11%)
- 81-90 years (19%)
- 91-100 years (3%)
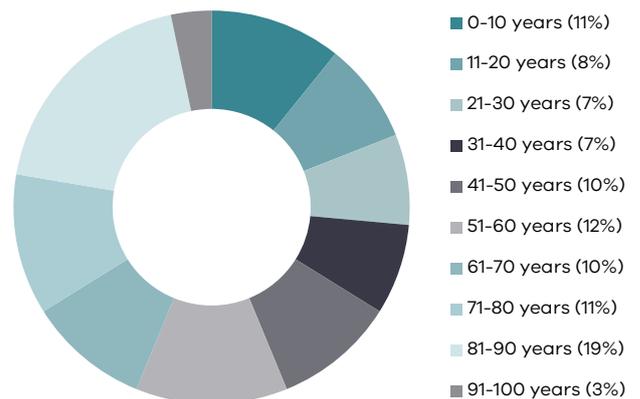
Sentinel events were reported for all age categories. The highest percentages were in the 81 to 90 years group (19%) and 51 to 60 (12%).

OUTCOME OF SENTINEL EVENTS

Of the 122 sentinel events notified in Victoria during 2017–18, 92 (76%) resulted in death of the patient.

Figure 5: Degree of impact 2017–18

- ■ Harm - death (76%)
- ■ Harm - permanent loss of functioning (4%)
- ■ Harm - permanent reduction in functioning (7%)
- ■ Harm - temporary reduction in functioning (7%)
- ■ Harm - but no loss/reduction in functioning (3%)
- ■ Harm - significantly inconvenienced (3%)
- ■ Unknown (<1%)
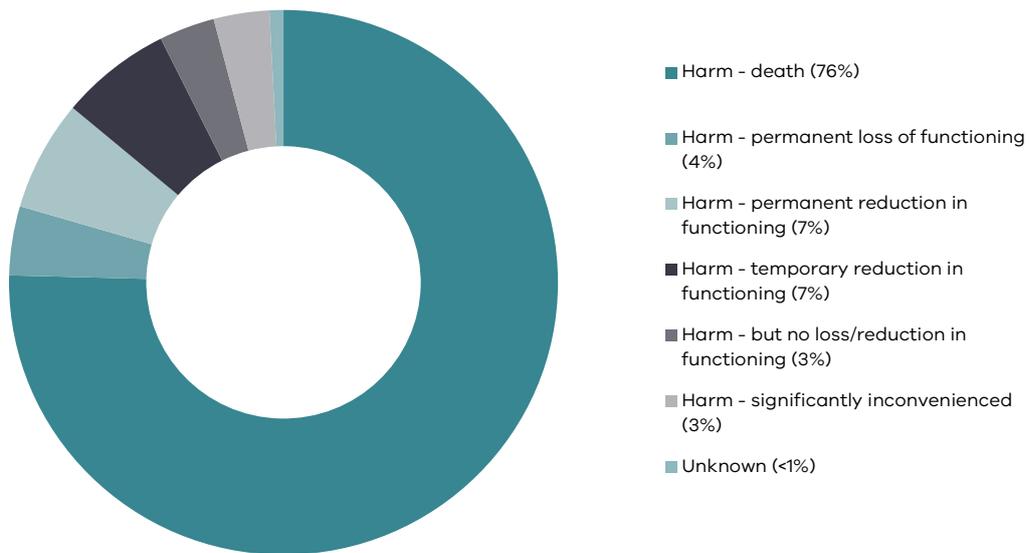
CATEGORY DISTRIBUTION

The distribution of sentinel event notifications across the nine categories remains largely consistent with previous years. There has been an increase in the number of events reported in Category 3: Retained (un-retrieved) instruments or other material after surgery requiring re-operation or further surgical procedure.

Examples of notifications from each of the eight national sentinel event categories are detailed below.

There were no notifications for Category 4: Intravascular gas embolism resulting in death or neurological damage, Category 7: Maternal death associated with pregnancy, birth and the puerperium or Category 8: Infant discharged to the wrong family.

Category 1: Procedures involving the wrong patient or body part resulting in death or major permanent loss of function

One event was notified where a surgical procedure was performed on the wrong side of the patient's body. Please note: No RCA report had been submitted for this event at the time of this report.

Category 2: Suicide of a patient in an inpatient unit

There were seven events reported by mental health facilities (6) and a rehabilitation facility (1). Locations included:

- a patient's room (mental health facility) – 4
- a patient's room (rehabilitation facility) – 1
- a patient's bathroom – 1
- in the community after a patient absconded from the mental health facility – 1.

Patient suicides in other healthcare settings are also reported as Category 9: Other catastrophic: ISR 1 (see page 12).

Category 3: Retained (un-retrieved) instruments or other material after surgery requiring re-operation or further surgical procedure

Of the 12 events, un-retrieved instruments or other material included guidewires, dressings, drains, operation packs and catheters.

The length of time to detect the un-retrieved instruments or other material varied.

In most cases (8), the problem was recognised while still in surgery, however the product was unable to be retrieved immediately. For example, a patient's wound being sutured closed when the surgical team realised the 'count' was wrong and that they had left gauze inside the patient. The patient had to have their wound reopened and closed again. This error resulted in longer operation time and the patient receiving more sutures than they should have.

In another case, a retained product was identified more than two years after initial surgery.

Category 5: Haemolytic blood transfusion reaction resulting from ABO incompatibility

Two events occurred where the incorrect blood product was given to a patient. One event occurred in an emergency department where the patient died as a result and the other on the ward of a hospital and the patient suffered permanent harm.

Category 6: Medication error leading to the death of a patient reasonably believed to be due to incorrect administration of drugs

There were two events that occurred where a medication error resulted in the death of a patient. One involved the incorrect prescription of a benzodiazepine (10 times the required dose) which was then administered, and the second involved insufficient monitoring of therapeutic drug levels.

CATEGORY 9: OTHER CATASTROPHIC: ISR 1

The proportion of notifications made under **Category 9: Other catastrophic: ISR 1** has increased – up 47 per cent in the past year to a total of 98 events. These events resulted in death or permanent harm to patients and could not be classified in one of the eight national sentinel event categories.

These events are further categorised using the International Classification for Patient Safety[1] (ICPS) incident types. These include:

- clinical process or procedure
- falls
- delay recognition or response to patient deterioration
- behaviour
- clinical administration
- medical device/equipment
- medication/Intravenous fluids
- nutrition
- healthcare associated infection.

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

Figure 6: Other catastrophic: ISR 1 sentinel events reported 2017–18

- Clinical process/procedure (26%)
- Falls (26%)
- Deteriorating patient (23%)
- Behaviour (14%)
- Medication/intravenous fluids (6%)
- Nutrition (1%)
- Clinical administration (1%)
- Healthcare associated infection (1%)
- Medical device/equipment (1%)
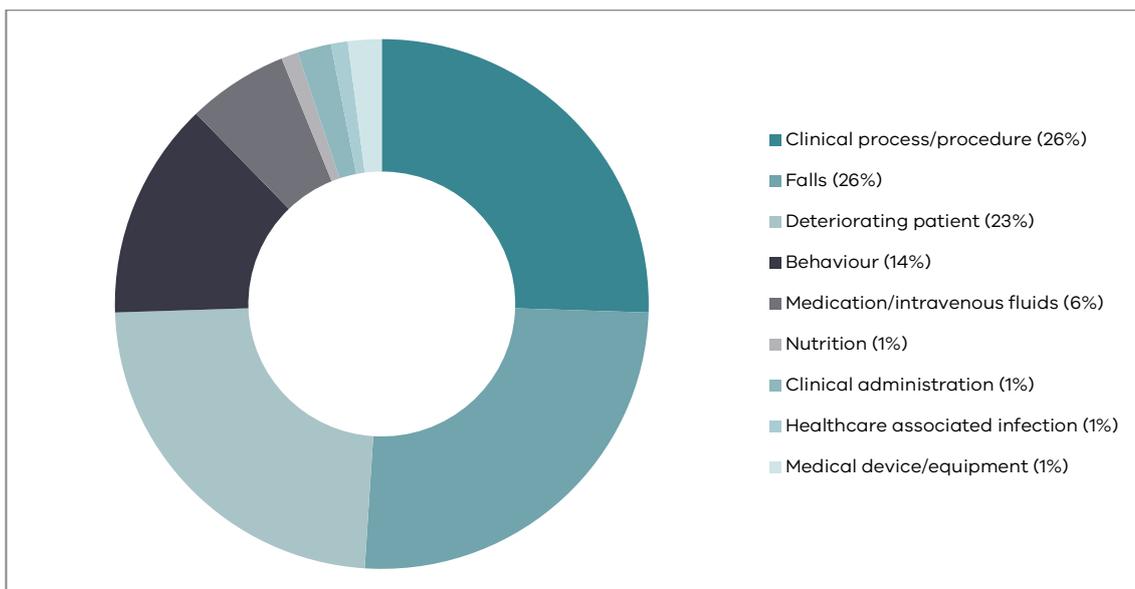
There were no notifications relating to resources/organisational management, documentation or patient accidents in 2017–18.

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[1] http://www.who.int/patientsafety/taxonomy/icps_full_report.pdf

Falls

Twenty-five patients were harmed as a result of a fall while under the care of a health service – 23 patents died, and two patients suffered permanent harm.

Of those who fell:

- 64 per cent (16) were 81 to 90 years of age
- 20 per cent (5) were 91 to 100 years of age
- 12 per cent (3) were 71 to 80 years of age
- one patient was aged 51 to 60 years of age.

Fourteen (56%) of the falls occurred in the patient's room, with three (12%) occurring in their bathroom, two (8%) occurred while the patient was on the ward but not in their room, and three (12%) were categorised as occurring in an 'other' location.

Eighteen patients had a documented acute confusion (delirium) before their fall.

Clinical process/procedure

Twenty-five patients were harmed as a result of failures in clinical processes.

Twelve patients were harmed due to procedures, treatments or interventions not being performed when they were needed or were incompletely or inadequately performed. Events included the management of labour (4), complications post-surgery (4), failure to insert an artificial breathing tube (intubate) (2) and an inappropriate intervention (1).

One patient suffered permanent harm when a skin biopsy was not performed when it was needed.

Errors involving specimens or results occurred twice. One involved the destruction of a specimen prior to testing (1) and one incorrect diagnosis of a patient's specimen sample (1).

Ten patients experienced inadequate assessments that were not performed when they were needed leading to a missed diagnosis.

Delays in recognising or responding to patient deterioration

There were 24 sentinel events where the patient's condition had become life threatening but was not recognised early enough or treated quickly enough. Twenty-two patients died, and two patients suffered permanent harm.

For 16 patients, the worsening of their condition was not recognised quickly enough. For another four patients, even though the worsening of their condition was recognised, there were significant delays in communicating the problem to the right people. And four patients did not get the treatment they needed quickly enough, even though their needs were recognised and communicated.

Please note: One RCA report has not been submitted for one of these events at the time of this report.

Behaviour

Thirteen sentinel events involved patients who died from self harm while in the care of health services. Of these, three patients left a health service before they were well enough to go home and without the staff knowing about it at the time. Three patients were on approved leave from a health service. Another three died from self harm within 24 to 48 hours of being assessed by a health service and four patients died from self harm while they were receiving treatment in hospital for medical problems other than mental health.

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

Clinical administration

Two patients were harmed from events involving significant administrative errors.

Follow-up tests for one of these patients did not occur as planned, leading to a substantial delay in a crucial diagnosis.

For the second patient, abnormal test results weren't communicated to the right specialist medical staff, which meant that the patient didn't get the urgent care they needed soon enough.

Medication

Six medication errors resulted in permanent or serious harm, these included:

- three cases that involved the administration of an anaesthetic medication in the operating theatre
- a delay in the administration of asthma medication
- a prescription error involving blood pressure medication
- mis-labelling of medication used during childbirth.

Please note: These sentinel events differ to **Medication error leading to the death of a patient** (see page 10).

Medical device/equipment

During a procedure to re-open the blood supply to the heart, a miniature wire frame (cardiac stent) that is routinely used opened unexpectedly and at the wrong time during the procedure. It couldn't be re-positioned or retrieved and is thought to have contributed to the patient's death a short time later.

Nutrition

One residential aged care patient who had known swallowing difficulties and needed specially prepared food was given the wrong meal and died as a result of choking.

Healthcare associated infection

One patient died from an overwhelming bacterial infection that was contracted from a central venous catheter; a device used to administer medications and monitor unwell patients.

THE YEAR AHEAD

New sentinel event categories

During 2018–19, the Australian Commission on Safety and Quality in Healthcare will release the revised national sentinel event categories. It is expected these categories will come into effect from 1 July 2019.

Focusing on sentinel events involving mothers and babies

The 12 sentinel events that resulted in the deaths of unborn or newborn babies related to:

- unsuccessful medical assistance during childbirth using forceps or other similar methods. This led to significant delays in starting the procedure that was needed, an emergency operation to deliver the baby (caesarean)

- misinterpretation of a cardiotocograph (CTG) including failure to recognise that an unborn baby was in distress during labour and failure to let the right people know when this occurs

- mothers reporting their unborn babies weren't moving as much as they should be. After being examined and reassured that everything was okay, they were discharged home from hospital

- a medication error

- delayed recognition in an unexpectedly unwell baby

- delay in escalating a pregnant woman's abnormal blood test to the right specialist in a timely manner.

Improving maternity services

SCV is leading several projects to improve the quality and safety of Victorian maternity services. In particular, we are involved in national partnerships to reduce the number of stillborn babies by 20 per cent, and the number of babies who are born too early by 10 per cent. To achieve this, we will:

- support the #MovementsMatter public and clinical education campaign to improve awareness, assessment and management of decreased movements of unborn babies, a risk factor for stillbirth

- coordinate clinical workshops to improve identification of fetal growth restriction (when an unborn baby is smaller than it should be because it is not growing at a normal rate)

- publish 20 new maternity and newborn clinical practice guidelines

- introduce a maternity services user guide to provide maternity services with service specific tools and resources

- assist maternity services to monitor their own real-time performance data and clinical performance through a statewide maternity dashboard

- work with 10 Victorian health services and with interstate colleagues to reduce third and fourth degree perineal tears (torn muscles of the anus, or close to it, occurring during childbirth and usually needing an operation to repair them) by 20 per cent

- partner with a national alliance to reduce smoking in pregnant women, with a view to reducing the number of babies who are born too early.

2. Reviewing

Even with a shorter timeframe of 30 working days to conduct a review and submit a report, health service timeliness has improved over the past year. Review teams are also benefiting from involving external members and consumer representatives on their review teams. These reviews result in recommendations that aim to prevent harm from recurring, making our systems of care safer.

Health services must:

- use the RCA methodology to review sentinel events

- submit RCA reports to SCV within 30 working days (six weeks) from the time of notification

- include a member from outside of their health service on their review team to provide a level of independence and diversity in thinking.
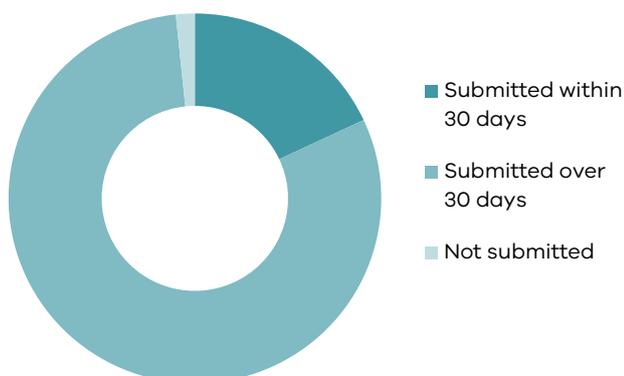
We encouraged health services to also include a consumer representative on the review team. Consumer representation is an important step in health services gaining a patient and family perspective throughout the review process.

TIMELINESS OF REPORT SUBMISSION

In 2017–18, we received 120 RCA reports from the 122 sentinel event notifications.

Of these, 22 RCA reports were submitted within the required 30 working days. Two reports remain outstanding (at 28 and 36 weeks after they were notified).

Figure 7: Timeframe of submitted RCA reports

- Submitted within 30 days
- Submitted over 30 days
- Not submitted

Figure 8: Reasons for extensions granted

- Internal team member (35%)
- Clinical governance (33%)
- Other (18%)
- External team member (10%)
- Organisation workload (1%)

SCV approved 78 extensions beyond the 30 working day due date. This represents 64 per cent of all sentinel events.
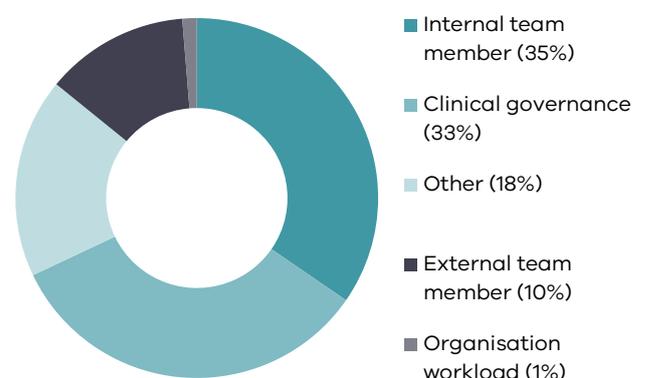
Health services requested extensions for a variety of reasons – mostly due to an inability to secure a team member internal to the health service (35%) and clinical governance processes (33%).

REVIEW TEAM MEMBERSHIP

Providing 'fresh eyes' to a sentinel event review, 96 review teams (80%) included an independent external member who did not work with the health service.

Offering a different perspective and an ability to challenge the norm, 17 per cent of RCA teams included consumer representation.

Figure 9: External independent and consumer representation on review teams
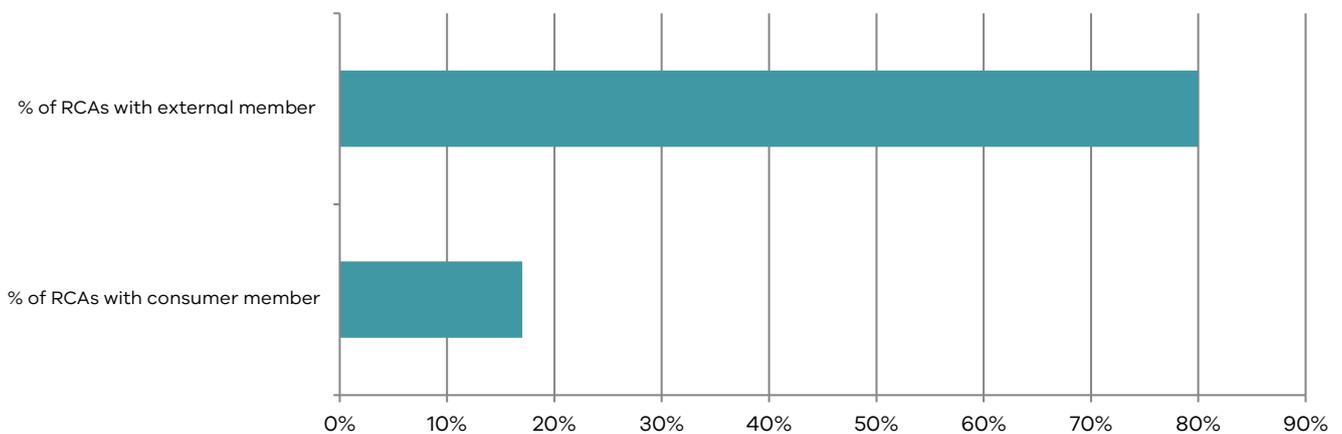
RECOMMENDATIONS

Based on the findings of the reviews, health services form recommendations for improvement as a key part of the RCA process. In total, health services developed 466 recommendations on how they can make their systems of care safer.

Some improvements are considered to be more effective than others in making healthcare safer. See **Appendix 2** for the approach SCV uses to assess the effectiveness of recommendations.

Of the 466 recommendations:

- 203 were assessed as weak
- 213 as moderate
- 50 as strong.

While the detail of recommendations varied greatly, common themes were found across sentinel event categories. Changing or developing new policies, procedures and guidelines were the most common (22%), closely followed by education and training (16%).

Three RCA reports did not have any recommendations. This is an improvement on 2016–17 when six RCA reports were submitted without recommendations.

Table 2: Breakdown of recommendation categories

Recommendation category	Number	Percentage
Policy, procedure or guidelines	101	22%
Education and training	73	16%
Technology	25	5%
Communication	52	11%
Risk assessment	33	7%
Clinical process	29	6%
Staffing and workforce	21	5%
Decision making support	21	5%
Equipment	20	4%
Documentation	16	3%
Environment	14	3%
Clinical governance	12	3%

THE YEAR AHEAD

Finding external review team members

SCV will be introducing a new online platform to help health services meet the requirement for an external independent panel member on all sentinel event review panels. The PEER platform allows health services to search via location, discipline and clinical specialty to find an independent member for their RCA review team.

Supporting review documentation

SCV supports the principles of an open and transparent approach to incident management review and records maintenance. We will be issuing guidance to help health services navigate what review documents must be retained and how they should be maintained. This will include:

- an overview of the type of information that can be considered incident review documentation
- best practice approaches to creating, sharing and storing review documents securely
- tips for good document management when undertaking incident reviews.

Increasing consumer representation

SCV is working to support increased consumer participation through:

- the development of new guidelines for health services to inform consumer representative recruitment, training and support
- the statewide Partnering in healthcare framework, which will support greater consumer participation
- establishing a statewide consumer senate to support consumer representatives in their functions.

Strengthening health partnerships and patient pathways

A patient with a complicated obstetric history underwent a surgical procedure at a private specialist health service. When complications arose the patient needed to be transferred to a public hospital. The complexities of the case combined with the subsequent complications meant that this was defined as a sentinel event.

Events that involve more than one agency can be complex to review. But the National Quality, Safety and Risk Manager at the private specialist health service says sharing the review built a stronger relationship and formed wider reaching learning opportunities with the public health service.

"We already have a strong culture of learning which is supported by our internal processes around. clinical incidents. These are reviewed regularly in order for us to deliver appropriate care, which is in line with best practice," she said.

To better understand what happened to this patient and why, both services first did their own review, then met to share and discuss their findings and draft recommendations. The shared review involved several representatives from each service, along with an independent expert.

"The multi-site review gave us an opportunity to share our best practice procedures and demonstrate a willingness to openly disclose our processes and the care provided for our patients. In the end I think both parties found the whole process quite rewarding."

The review resulted in five final recommendations, including a best practice pathway for high-risk patients to higher levels of care. This aims to provide better outcomes for women at risk of complications, safer patient journeys and a better healthcare experience.

The private specialist health service's Medical Director believes there were several key factors to conducting an effective and positive multi-agency review.

"Firstly, you need to be open to having your processes and procedures evaluated by external people. It's also important to establish clear terms of references at the outset," he said.

"The organisations undertaking the review must also see this as a shared partnership and ensure that there is an independent, external consultant involved."

The private specialist health service's National Quality, Safety and Risk Manager said those involved found the support from SCV led to a positive experience and outcome.

"They have really been great to work with and have provided lots of good advice. The whole process has really helped break down barriers and improve the patient journey from the private specialist service into the public health system."

3. Improving

In previous years, there has been minimal formal follow-up with health services to check if they are implementing sentinel event recommendations. It is inexcusable to not learn from a sentinel event and make the changes needed to help prevent it from happening again. SCV has reviewed the way we work with health services to track how they are progressing after a sentinel event review. After setting clear expectations, SCV has received a much higher number of Risk Reduction Action Plan (RRAP) feedback reports. However, there is a long way to go.

Health services must submit a RRAP feedback report to SCV **three to six months** after the RCA report has been submitted.

This report includes:

- progress in implementing the recommendations made in RCA reports

- evaluation of their impact on quality and safety.

This is referred to as 'closing the loop' and is an important opportunity for health services to share how they are providing safer, better healthcare as a result of an adverse event.

To help health services through the sentinel event process, SCV provides both informal and formal guidance on the quality of reports and recommendations. We also provide training to improve incident response and analysis.

HOW HEALTH SERVICES IMPROVED

During 2016–17 SCV received just two RRAP feedback reports (3%). In 2017–18 that has now increased to 42 feedback reports (35%). We will continue to work with health services to improve this number.

Unfortunately, this is still 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 and share with other health services what works (and what doesn't work). It also means we have fewer opportunities to support health services improve and share patient safety initiatives with other health services.

Improving the quality of reviews and reports

Of 120 RCA reports submitted, we completed a quality assurance review on 115 (96%) to ensure they met a minimum standard. A small number of reports (15) required further review and analysis as they did not meet the minimum standard.

This is a new process that gives us the opportunity to provide feedback to health services about their strengths and how they could improve future reviews. We provided this feedback within an average of eight weeks after services submitted their RCA reports.

Reviewing sentinel events in mental health

During 2017–18, SCV worked closely with the Office of the Chief Psychiatrist (OCP) to review RCA reports submitted from health services relating to mental health. A subcommittee from the OCP along with a team member from SCV meets every six weeks to jointly review the recommendations submitted from health services. Combined feedback is then sent to health services with the objective of further strengthening the review and recommendations submitted.

Incident analysis training

Conducting a sentinel event review can be a challenging process. SCV continues to build capability in the sector by providing incident analysis training.

In 2017–18, we offered training in Melbourne and regional Victoria to health service staff. The one-day course focuses on human factors systems thinking theory, as well as RCA methodology and how to complete an RCA from start to finish. Participants work in groups to complete sections of the report throughout the day, gaining hands-on, practical experience.

"Loved the group approach to developing a timeline, identifying critical events, developing causal statements and making recommendations, along with sharing the thoughts of other groups."

Human factors is an applied science focusing on complex interactions between humans and in the contexts in which they work. Systems thinking helps us understand incidents and the contexts in which they occur are rarely simple, but usually complex and involve many interactions and contributing factors.

Participants are strongly encouraged to adopt these principles when undertaking a review. Training content can also be applied to a range of incident reviews, not just sentinel events, and other quality improvement efforts.

Nine training sessions were held throughout the year, reaching more than 150 health service staff. Participants ranged from quality and safety staff, managers, executives and clinicians from various disciplines. Several different health service organisations were represented, including both public and private hospitals and Ambulance Victoria.

The training also provided great networking opportunities for participants. This has resulted in one regional area taking a more collaborative approach to support each other through the RCA review process.

"It was all very beneficial, loved the networking opportunity and feel very confident knowing that I can call for help when I need it. Well done!"

Interest and demand in incident analysis training remains consistently high and will continue to be offered throughout 2018–19.

THE YEAR AHEAD

Clinical governance training

SCV is aiming to deliver clinical governance training to all 85 of Victoria's public health service boards. This supports board directors to:

- better understand and be accountable for patient quality and safety in their health service
- feel equipped to contribute to clinical governance discussions at board meetings.

By strengthening the clinical governance at this level, we believe there will be an even stronger focus and drive to continually improve the quality and safety of healthcare provided to patients, carers and their families.

Learning from the Coroners Court of Victoria

SCV now receives findings from the Coroners Court of Victoria where the Coroner has identified that a quality or safety issue contributed to a death, or there are learnings relevant to the wider health system.

Where appropriate, SCV is now able to cross check the findings received from the Coroner with sentinel event review reports. SCV is working to improve how we respond to the recommendations from the Coroner and share learnings to create positive change across the system.

Promoting medication safety

Avoidable harm from prescription errors and inappropriate use of medicines is substantial and increasing across Victoria. Between 2013 and 2018, 13 deaths due to medication error were reported to us, along with six instances of catastrophic harm.

SCV is working to establish the state's first comprehensive medicines program to reduce medication error and hospital costs, and to advise on key medication safety and quality issues.

Focus on a rural review

A small rural hospital had two sentinel events in a short time, both of which occurred to aged care residents. The events were different and occurred at different facilities.

"No one wants a sentinel event and we've had two in a short space of time. But rather than pretend they didn't happen, we've reported them, so we can determine what we can learn from them," Director of Clinical Services said.

"We have a good reporting culture here, which enables us to apply a reflective lens on our practices. Our staff understand we offer a supportive, learning environment. It's not a punitive process, but about learning and improving our patient outcomes."

One of the key challenges for rural hospitals undertaking reviews is they don't have the same resources as larger hospitals. That means reviews are often allocated to personnel who may not have experience.

"The first time we submitted the review, we got a few things wrong. However, SCV guided us through the process and supported us while we learned the correct way to conduct a review. This made it much easier to undertake our second one," said the Director.

"SCV has been a great support and really understand that being a rural hospital, we have certain challenges that other hospitals don't have."

Another challenge is finding an external review member not associated with the health service, to be involved. In a smaller community, not everyone has the skills required to take part in a review. There is also a very good chance any local experts also know the person and the family involved in the sentinel event, and therefore can't be considered truly impartial.

While the review process isn't complete yet, this rural hospital has already identified a number of opportunities for improvement, including understanding the importance of the various referral pathways in the rural setting.

"Understanding referral and communication pathways is important in providing great care. The review process has provided an opportunity for us to understand rural pathways, and how we identify a clinical need, and communicate it within the system," said the Director.

Sentinel events can be devastating to a smaller rural community. However, this rural hospital believes that if they're reported and reviewed well, they can provide great opportunities for learning and improved outcomes.

"It's important to change our mindset about reporting sentinel events. We're acknowledging that something didn't go the way it was intended and asking ourselves how we can improve our systems and processes, so we can provide the best care possible every single time.

"The best review outcomes happen when organisations understand the intended outcome of these reviews is learning, and not just tick a box and say, 'the review is done'."

Appendix 1 International Classification for Patient Safety (ICPS) incident types

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/equipment	An error associated with a medical device/equipment or property,
	i.e. dislodgement or misconnection of a device, equipment this inappropriate for the task
Medication	An error with the process of delivering a medication to a patient that causes harm
	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 associated infection	An infection acquired in the Healthcare setting
	i.e. bacterial blood stream infection, surgical site infection, intravascular device
Patient accidents	Patient harmed in care by accident
	i.e. bed entrapment, drowning

Appendix 2 Recommendation hierarchy

Recommendation strength	Recommendation category	Example
Strong actions	Architectural/physical changes in surroundings	Replace revolving doors at the main entrance into the building with powered sliding or swinging doors to reduce patient falls.
Strong actions	New devices with usability testing	Perform pre-purchase testing of blood glucose monitors and test strips to select the most appropriate for the patient population.
Strong actions	Engineering control (forcing functions which force the user to complete the action)	Eliminate the use of universal adapters and peripheral devices for medical equipment; use tubing/fittings that can only be connected the correct way.
Strong actions	Simplify process and remove unnecessary steps	Remove unnecessary steps in a process; standardise the make and model of medication pumps used throughout the organisation; use barcoding for medication administration.
Strong actions	Tangible involvement by leadership	Participate in unit patient safety evaluations and interact with staff; support the RCA process; purchase needed equipment; ensure staffing and workload is balanced.
Moderate actions	Redundancy	Use two registered nurses to independently calculate high-risk medication dosages.
Moderate actions	Increase in staffing/decrease in workload	Make float staff available to assist when workloads peak during the day.
Moderate actions	Software enhancements or modifications	Use computer alerts for drug–drug interactions.
Moderate actions	Eliminate/reduce distractions	Provide quiet rooms for programming patient controlled analgesia pumps; remove distractions for nurses when programming medication pumps.
Moderate actions	Education using simulation-based training with periodic refresher sessions/ observations	Conduct patient handover in a simulation lab environment, with after-action critiques and debriefing.
Moderate actions	Checklist/cognitive aids	Use pre-induction and pre-incision checklists in operating rooms; use a checklist when reprocessing flexible fibre optic endoscopes.
Moderate actions	Eliminate look- and sound-alikes	Do not store look-alikes next to one another in the medication room.
Moderate actions	Standardised communication tools	Use read-back for all critical lab values; use read-back or repeat-back for all verbal medication orders; use a standardised patient handover format.
Weak actions	Double checks	One person calculates dosage, another person reviews their calculation.
Weak actions	Warnings	Add audible alarms or caution labels.
Weak actions	New procedure/memorandum/policy	Remember to check IV sites every two hours.
Weak actions	Training	Demonstrate the defibrillator during an in-service training.

Terminology used

Adverse event is an incident in which a person receiving healthcare was harmed.

Australian Commission on Safety and Quality in Health Care (ACSQHC) Leads national improvements in safety and quality in healthcare.

Cardiotocography (CTG) Electronic device used to assess the wellbeing of unborn babies.

Consumers Patients and potential patients, carers and organisations representing consumer interests.

Delirium A sudden onset of fluctuating consciousness, attention, cognition and perception in a person.

Department of Health and Human Services Leads policy development, service and funding design, and system management in Victoria.

Emergency department An area of a hospital that provides emergency care for the community.

Governance The system by which an organisation is controlled and operates, and the mechanisms by which it, and its people, are held to account.

Haemolytic blood transfusion reaction A complication that occurs when blood given during a transfusion are destroyed by the patient's immune system.

Human factors A science focused on the interaction between humans and systems in complex environments (like healthcare).

Incident severity rating (ISR) The severity of impact to a patient when an incident occurs. ISR is measured on a scale of 1 to 4 (with 1 being catastrophic).

International Classification for Patient Safety (ICPS) A World Health Organization (WHO) approach to grouping patient safety information.

Intravascular gas embolism A situation in which air or gas bubbles enter a blood vessel.

Office of the Chief Psychiatrist (OCP) The section of the Department of Health and Human Services that provides clinical leadership and promotes continuous improvement in the quality and safety of mental health services in Victoria.

PEER (Panel of external expert reviewers) An online platform to connect Victorian health services with independent experts that can participate in RCA reviews.

Quality assurance Part of quality management focused on providing confidence that quality requirements will be fulfilled.

Root cause analysis (RCA) A method of problem solving that can be used to review serious events.

Risk reduction action plan (RRAP) feedback report A report health services submit to SCV that monitors the implementation of RCA recommendations.

Sentinel events A national list of eight adverse events that result in death or serious harm to a patient. The Australian sentinel events list was endorsed by Australian health ministers in 2002. Victoria also follows a ninth category.

#MovementsMatter A Twitter hashtag that promotes education to pregnant women and families on monitoring the movements of their baby.

More information

As the state's lead agency for healthcare quality and safety, SCV assumed responsibility for the Victorian sentinel events program when it was established in January 2017.

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

Support and advice

For advice on sentinel event notification, review and improving systems of healthcare, please contact the incident response team at **sentinel.events@safercare.vic.gov.au.**

Subscribe for updates

We share sentinel event case studies, resources, examples of high-quality reviews and procedural tips and advice through our SCV enews and website.

Subscribe at **bettersafercare.vic.gov.au/newsletters.**