Safer Care Victoria

February 2021

Supporting patient safety: learning from sentinel events

Annual report 2019–20

Safer Care Victoria thanks the authors and contributors who helped to produce this report.

Acknowledgement
Our office is based on the land of the Traditional Owners, the Wurundjeri people of the Kulin Nation. We acknowledge and pay respect to their history, culture and Elders past and present.

To receive this publication in an accessible format phone 03 9096 1384, using the National Relay Service 13 36 77 if required, or email info@safercare.vic.gov.au

Authorised and published by the Victorian Government, 1 Treasury Place, Melbourne.

ISSN 2206–3625 (online)

Available at www.safercare.vic.gov.au

VICTORIA State Government

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Foreword

Despite the challenges of the past year, I am proud to say that Victorian health services have continued to prioritise patient safety. As we learn from our experiences through the coronavirus (COVID-19) pandemic and adapt to new ways of working, it is vital that patient safety remains at the forefront of healthcare, and that we work together with our community to achieve the best quality healthcare outcomes and patient experiences.

All health service staff – including clinicians, administrative and support staff – have an important role to play in providing safe care, as do we in government. While most healthcare in Victoria leads to good outcomes, there are times when things go wrong, and patients are harmed as a result. These sentinel events have a devastating impact on patients, their families and carers, and the healthcare staff involved.

As a healthcare system we have a shared responsibility to learn from these events.

By reviewing adverse patient safety events, health services can identify and implement strategies to prevent them from happening again. Safer Care Victoria (SCV) enables this process by strengthening the review capability of health services, facilitating targeted improvement projects to increase patient safety, and monitoring system performance.

Between July 2019 and June 2020, **186** sentinel events were reported to us – an increase of more than **50 per cent** from the year before. We have also seen increased consumer representation on review teams, providing the important patient, family and carer voice when reviewing events.

We believe these improvements demonstrate a growing culture of transparency and increasing willingness to learn from patient harm, supported by new SCV resources such as:

- a guide to sentinel event reporting which supported health services to notify an event under new national and Victoria-only categories
- guides for health services and consumers to support consumer representatives on review teams.

Over the coming year, we look forward to introducing a reinvigorated review training program, which we had paused during the pandemic. And of course, supporting health services and consumers as we continue our work to learn from serious patient harm and strive for outstanding healthcare for Victorians, always.

Adjunct Associate Professor Ann Maree Keenan

Acting Chief Executive Officer

How to use this report

This report informs the Victorian community about the most serious adverse patient safety events in health services that were reported as sentinel events in 2019–20.

This report is a great resource for health service boards, leaders, quality and safety staff and adverse event review teams. There is a lot to learn from, as the underlying systems issues that contribute to adverse patient safety events are rarely isolated to one health service.

This year we have presented the sentinel event data in a new way.

We hope to provide a clearer picture of what we are notified about, what has contributed to these events occurring, and share what we have learned. We unpack the work being done to prevent patient harm, and provide examples from some Victorian health services that are leading the way in these areas.

What's new?

To maximise learning and improvement opportunities, we are focusing on three sentinel event themes that are frequently reported:

- maternity and newborn
- patient falls
- medication safety.

We have included case summaries of real events with each of these themes, including lessons and service level changes that made a difference. You can use these to model and inspire local improvement activities.

We have also provided key insights from the data, including the root causes, critical events and recommendations identified by health services during root cause analysis (RCA) reviews. We have themed data using the London Protocol[1] to explore what issues health services identify in reviews.

New sentinel event categories

This is the first annual report since the Australian Commission on Safety and Quality in Health Care (ACSQHC) revised its sentinel event categories in July 2019. As well as the 10 national categories, Victorian health services must notify all other adverse patient safety events resulting in serious harm or death (**Category 11**).

For the first time, we can report on a full year of data in line with these revised sentinel event categories.

[1] The London Protocol is a methodology for incident analysis that considers contributing factors in a dynamic environment. It focuses on what has influenced an event on a systems level rather than focusing on individual actions (Taylor-Adams & Vincent, 1999, 2nd ed).

Terminology

ACSQHC	Australian Commission on Safety and Quality in Health Care
Adverse patient safety event/ adverse event	An incident in which a person receiving healthcare is harmed
APINCHS	Antimicrobials, Potassium and other electrolytes, Insulin, Narcotics (opioids) and other sedatives, Chemotherapeutic agents, Heparin and other anticoagulants, Systems
BHS	Beechworth Health Service
Critical event	Identified when reviewing an adverse event, it is the point at which a different action would have altered the subsequent sequence of events
CTG	Cardiotocography is an electronic recording of the fetal heart rate and is useful for indicating the health of the fetus during labour
EMR	Electronic medical record
Healthcare consumer	A patient, their family or carer/s
ICPS	International classification for patient safety
IHI	Institute for Healthcare Improvement
ISR	Incident Severity Rating is a scale of one to four, one being most severe, of clinical incidents. Public health services categorise incidents by ISR when reporting them as part of the Victorian Health Incident Management System (VHIMS) dataset
MET	Medical emergency team
Neonate	A baby younger than 28 days old
PPMC	Partnered Pharmacist Medication Charting
RCA	Root cause analysis is a method of reviewing events to find out what happened, why it happened and what can be done to improve
Root cause	The underlying cause for the occurrence of an event
SCV	Safer Care Victoria
Sentinel events	The most serious adverse events, which result in a patient dying or being seriously harmed
Systems thinking approach	Considers how factors at different levels of the health system interact with each other and how this impacts patient care. Systems factors go beyond the individual and include team-based, environmental and management factors
VAHI	Victorian Agency for Health Information
VHIMS	Victorian Health Incident Management System
VicTAG	Victorian Therapeutic Advisory Group
VTE	Venous thromboembolism

Florence's story

Following an adverse event, health services have a responsibility to the affected consumers to be transparent in sharing information.

Florence, a 75-year-old woman, was admitted to a large hospital for a surgical procedure, one hour a way from the aged care facility where she lived. Florence lived with dementia, had a history of falls, and spoke limited English.

The day after her surgery, Florence fell out of bed. Scans showed she suffered a fractured skull due to hitting her head. Her son Harry was very concerned for his mother's wellbeing, and confused about how the fall could have occurred. Florence's treating doctor at the hospital invited Harry to meet and discuss what happened.

In this meeting, the doctor and hospital quality manager:

- apologised to Harry for the harm his mother had suffered
- explained, to the best of their knowledge, how the fall happened
- discussed how they could best manage Florence's future care
- assured Harry they would conduct a thorough review into contributing factors leading to the fall.

Florence sadly passed away the day after her fall, with Harry and other family members present.

Over the next few weeks, the health service conducted a RCA review. They interviewed Harry as part of this process, where he provided important medical information about Florence.

Through the review process, the health service identified:

- the falls risk assessment undertaken when Florence was admitted to hospital was incomplete. The nurse completing the assessment was new to the ward, and had received minimal orientation and training
- Florence was mistakenly administered extra sedative after her surgery. The additional prescription was not alerted in the electronic medical record (EMR) system
- there was no mechanism to alert staff of the fall, and they became aware only after Florence called out. This delayed their response.

Harry requested a copy of the RCA report, which the health service provided once it was finalised.

A transparent and honest approach to patient harm

No one went to work intending to harm Florence. Her story is an example of how patient harm can occur despite good intentions.

The steps taken after Florence's fall – the recognition, response and review – indicate transparent and honest safety culture in the hospital. The steps taken, such as timely open disclosure and including Harry in the review process, are examples of applying good safety principles.

The health service was able to implement recommendations based on their findings. They strengthened their falls prevention, and lessened the likelihood that what happened to Florence will happen to somebody else.

Summary of findings

Number of notifications **186**

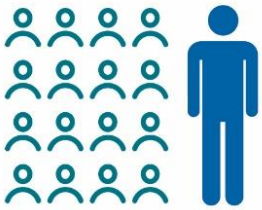
54% increase in 2019-20
compared to 2018-19

2018-19 → 2019-20

Consumer representatives

51% of review teams
had a consumer representative compared to 33% in 2018-19

External independent team members

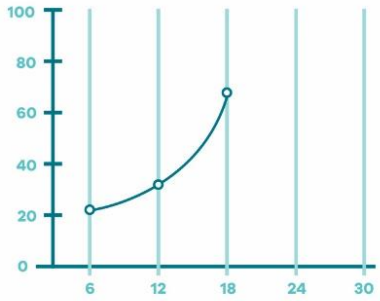


85% of review teams
had an external independent team member

Unchanged compared to last financial year

Only 13% of RCAS
included a consumer rep, external member and involved the affected consumer

RCA report part a and b: received within 30 days



67% increase in reports
submitted within 30 days

RCA report part c (recommendations)

72% of reports
were received on time

Reporting: requests for extensions

Decrease in the percentage
of health services requesting an extension on their RCA
from 60% to 57%

600
root causes identified

890
recommendations developed

Victoria had its highest ever notification rate of sentinel events in 2019–20. The intent of the program is to learn from patient harm by improving the safety of healthcare. To do this, health services must recognise, notify and review all sentinel events. Improved notification is a sign that safety culture is evolving. However, there is still work to do to realise the full benefits of reviewing adverse events.

SENTINEL EVENTS ARE A SNAPSHOT OF PATIENT HARM

We know most severe incidents (categorised as Incident Severity Rating (ISR) 1 in most health services) are not notified as sentinel events, although many would likely meet the criteria.

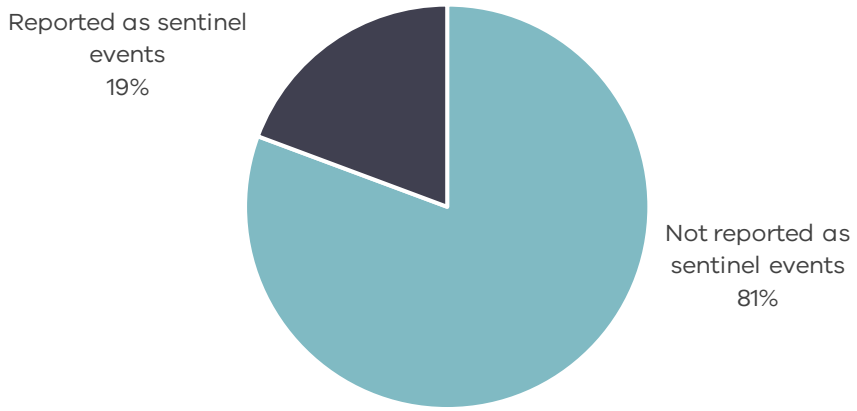
Reasons for not notifying may include:

- fear of reputational risk
- poor incident reporting culture
- insufficient understanding of sentinel event criteria.

Of **859** ISR 1 incidents reported in public hospitals, **166** were notified as sentinel events. There has been an increase in the overall proportion of ISR 1 incidents notified as sentinel events compared to the past two years. See the **Data supplement** for further information.

Notably, not all patient safety incidents are captured on organisations' incident management systems therefore are not allocated a severity rating. But it provides a good indication that significant under-reporting is occurring.

Sentinel events as a proportion of ISR 1 notifications from public hospitals, 2019–20



Frequently notified events

Of **186** sentinel events:

- 19 per cent were related to women and babies during pregnancy, labour or the post-natal period
- 13 per cent were patient falls
- 11 per cent were medication safety incidents.

Sentinel event notifications by category, 2019–20

Category		Number of notifications
1	Surgery or other invasive procedure performed on the wrong site resulting in serious harm or death	0
2	Surgery or other invasive procedure performed on the wrong patient resulting in serious harm or death	2
3	Wrong surgical or other invasive procedure performed on a patient resulting in serious harm or death	0
4	Unintended retention of a foreign object in a patient after surgery or other invasive procedure resulting in serious harm or death	0
5	Haemolytic blood transfusion reaction resulting from ABO incompatibility resulting in serious harm or death	0
6	Suspected suicide of a patient in an acute psychiatric unit or acute psychiatric ward	8
7	Medication error resulting in serious harm or death	12
8	Use of physical or mechanical restraint resulting in serious harm or death	1
9	Discharge or release of an infant or child to an unauthorised person	0
10	Use of an incorrectly positioned or- or naso- gastric tube resulting in serious harm or death	0
11	All other adverse patient safety events resulting in serious harm or death	163
	Total	**186**

CATEGORY 11: ALL OTHER ADVERSE PATIENT SAFETY EVENTS RESULTING IN SERIOUS HARM OR DEATH

We use sub-categories based on the World Health Organization's International Classification for Patient Safety (ICPS) for events notified under this category (**Appendix 1**).

Sentinel event notifications, Category 11: All other adverse patient safety events r esulting in serious harm or death, 2019–20

Sub-category	Number of notifications
Clinical process or procedure	66
Deteriorating patient	40
Falls	25
Self-harm (behaviour)	13
Communication of clinical information	9
Medical device or equipment	5
Nutrition	2
Healthcare acquired infection	2
Patient accidents	1
Total	**163**

TIMELINESS OF REPORTING

In response to health service feedback, we adjusted sentinel event reporting timeframes. For the first time in 2019–20, health services provided their RCA reports in two parts:

1. **RCA part a and b** – describes the event and outlines the analysis, including critical events and root cause statements.
2. **RCA part c** – outlines recommendations to address the findings of RCA part a and b.

Timeframes were extended to give health services more time to develop recommendations. This has led to fewer extension requests.

Reporting timeliness has remained similar to last year, with **85 per cent** of RCA reports part a and b, and **71 per cent** of RCA reports part c, submitted on time. There has been an increase in the overall percentage of reports submitted without an extension and within the 30-day reporting timeframe.

TRANSPARENCY WITH CONSUMERS

Open disclosure must occur after an adverse event. But in nearly **10 per cent** of 2019–20 sentinel events, open disclosure had not occurred when the event was notified.

This conversation between health service staff and affected consumers should include an apology, an explanation of what happened, and a description of steps being taken to improve (i.e. to prevent a similar event in future). Communication should always occur as soon as possible and is an ongoing process. New information should be shared as it comes to light. For more information refer to the ACSQHC's **Australian Open Disclosure Framework**.

AN OPPORTUNITY TO LOOK BEYOND HUMAN ERROR

Many review teams identified that human behaviour contributed to the sentinel event, without enough analysis of how the system influenced the actions of those involved.

Out of **600** findings (root causes) identified by reviews, **18 per cent** focused on human error.

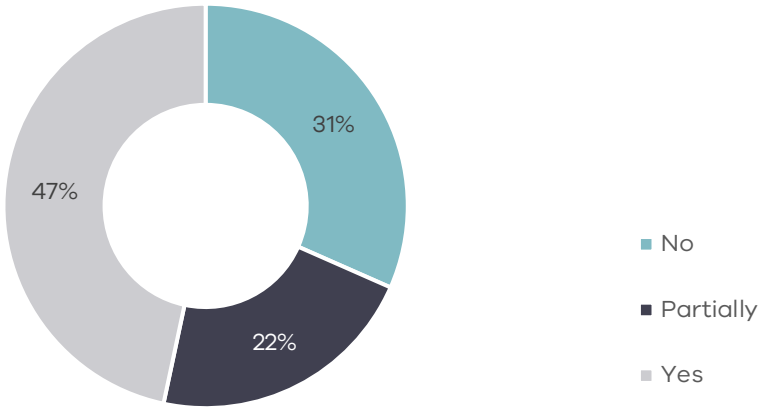
Findings that identify human error have not investigated contributing factors in enough depth. The RCA process requires review teams to investigate **why** – what existed in the working conditions and environment that contributed to the human error.

DIVING DEEPER INTO CAUSE AND EFFECT

When adverse events are reviewed, RCA methodology outlines that a cause and effect relationship should be established.

From reviewing finding statements, we can see that **47 per cent** followed the RCA method. This shows room for improvement in clearly establishing this cause and effect link.

Did finding statements follow RCA methodology (cause and effect) in 2019–20?



How health services can further improve adverse event reviews

- Are reviews focusing on system factors rather than human error? Look beyond the human and ask what systems, tasks and processes led to the error occurring.
- Are finding (root cause) statements based on your cause and effect diagram? Are they logical if read in isolation?
- When reviewing events, who is in the room? Are different perspectives represented and welcomed?

Women and babies impacted by sentinel events during pregnancy, labour and the postnatal period

Of 186 sentinel events, **35** affected women and babies during pregnancy, labour and the postnatal period. All events were notified under **Category 11: All other adverse patient safety events resulting in serious harm or death**.

Fifteen events impacted women and 20 events impacted babies (including neonates and fetuses).

Sub-category breakdown

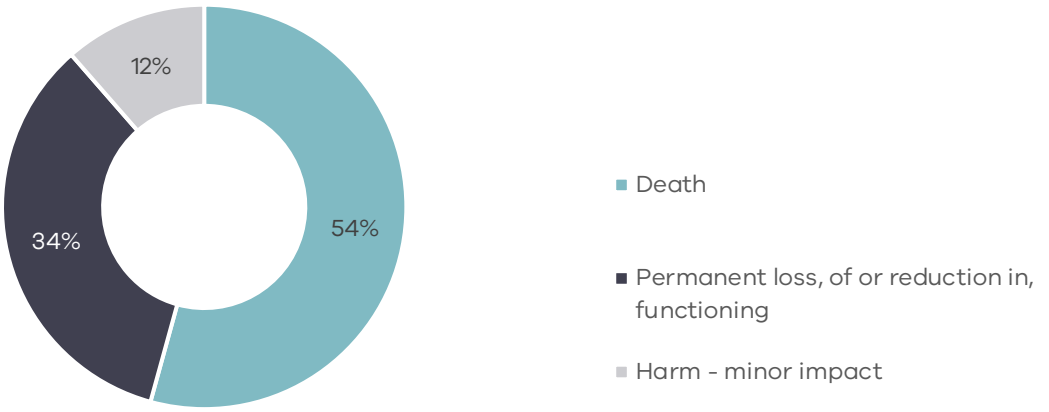
Category	Number
Clinical process or procedure	21
Deteriorating patient	11
Communication of critical information	1
Healthcare acquired infection	1
Patient accidents	1

PATIENT OUTCOME

Health services must notify death, or the degree of patient harm, as a result of the event.

Nineteen events resulted in death of a patient (including three mothers and 16 babies).

Patient outcome for sentinel events (maternity), 2019–20



Note – the degree of harm is categorised by the health service when the sentinel event is notified. It does not reflect the consumer's perspective of the harm they experienced.

LOCATION

Most events occurred in the birth suite (13), followed by the ward (6), operating theatre (5) and intensive care unit (3). Other locations included the patient room and anaesthetic bay.

PUBLIC AND PRIVATE HEALTH SERVICE NOTIFICATIONS

The majority of events were notified by public health services – **91 per cent** (32) compared to **nine per cent** (3) by private health services.

This is reflective of the overall sentinel event notification rate by these health service types.

COMPARISON TO PREVIOUS YEARS

Notifications about incidents related to pregnancy, labour and the postnatal period have increased compared to previous financial years.

Sentinel events (maternity), 2017–2020

2017–2018		2017–2018		2019–20	
Number	Percentage	Number	Percentage	Number	Percentage
14	11%	12	10%	35	19%

We believe this increase is due to a higher notification rate, rather than an increase in incidents. This reflects the overall increase in sentinel event notifications in 2019–20, which is **54 per cent** higher than 2018–19.

Published in 2019, the **Victorian sentinel events guide** may also have contributed to increased notifications. The guide outlines criteria and reporting requirements for all events within **Category 11: All other adverse patient safety events resulting in serious harm or death**.

INSIGHTS FROM RCA REVIEWS PART A AND B

RCA review teams

- RCA review teams had an average of eight team members.
- **Half** of all review teams included a consumer representative.
- Almost **95 per cent** included an external, independent team member.

RCAs reviewing maternity related sentinel events were the least likely of all event types to involve the affected consumer (17 per cent). Reasons for this are not captured in the data, but may include the consumer declining to be involved, and the health service not having processes to enable their involvement.

Findings (root causes)

RCA reviews identified **148** findings across 35 events.

There is still a focus by some review teams on individual actions, rather than considering systems-based causes – **17 per cent** of findings highlighted human error with no preceding contributing factor identified.

RCA reviews should use the cause and effect review process to look beyond human errors to identify what system components drove them.

Most common finding (root cause) themes in sentinel events (maternity) RCA part a and b, 2019–20

Main theme	Sub-theme	Example from RCA reports part a and b
Staff factors	Knowledge and skills	Staff involved had limited exposure to an abnormal antenatal cardiotocography (CTG) and therefore did not recognise the significance of the antenatal CTG result.
Human error	Slip, lapse or mistake	Misinterpretation of the CTG.
Procedures and guidelines	Missing critical information	No defined process for signing off results. This resulted in limited review of the result slip and led to no identification of hypoglycaemia (low blood sugar).
Teamwork factors	Insufficient senior specialist support	A consultant (senior medical staff) was not on site, contributing to a lack of clear senior leadership, resulting in a delay to get the patient to theatre.

Within finding (root cause) statements the **critical event** should be identified. This is the point at which a different action or intervention would have altered the subsequent sequence of events.

Health services identified **49** critical events, with overlap in some categories.

Overall, **51 per cent** (18) of incidents were directly or indirectly related to the labour period, and eight of these cited CTG misinterpretation as a critical event.

Seventeen findings did not clearly identify the critical event, highlighting a need for clearer cause and effect relationships to be established.

Frequently identified critical events in findings (maternity) RCA part a and b, 2019–20

Critical event	Number
Missed or delayed diagnosis	15
Recognising and responding to a deteriorating patient	13
CTG misinterpreted abnormal fetal heart rate not recognised or responded to appropriately	12
Delayed caesarean	9
Lack of clinical experience and/or training	8
Delay or failure to escalate by clinical staff	7

When communication breaks down

Clara was past her due date for delivery, so her treating hospital took steps to induce her labour.

The labour progressed more slowly than expected. Her treating obstetrician (obstetrician 1) at the time decided Clara should have a caesarean delivery within one hour. Shortly after this decision their shift ended, and they provided handover to obstetrician 2 via phone.

Obstetrician 2 was unable to view Clara's medical information remotely. The handover process was not very detailed, and obstetrician 1 did not discuss the plan for caesarean delivery within one hour.

After one hour passed, Clara asked nursing staff why the caesarean had been delayed and was not given a clear answer.

Later in the evening, obstetrician 2 became concerned about the baby's heart rate and conducted an emergency caesarean. By that time over two hours had passed.

The baby was born in poor condition and experienced subtle seizures from lack of oxygen to the brain.

INSIGHTS FROM RCA REVIEWS PART C – RECOMMENDATIONS

A total of **241** recommendations were developed to address the 35 events:

- **54 per cent** of recommendations were written according to SMART principles (Specific, Measurable, Achievable, Realistic, Timely).
- **31 per cent** (76) of recommendations focused on further reviewing protocols, workplans or other functions. These are not recognised as strong control actions.

It is vital that health services focus on timely prevention of risks. Planning to undertake further reviews of protocols and guidelines could delay making the necessary improvements in time to prevent further events occurring.

Type and number of recommendations for sentinel events (maternity) RCA part c, 2019–20

Type of recommendation	Number of recommendations
Further review/develop action plan	76
New procedure/memorandum/policy	65
Training	30
Standardise process	21
Share outcomes/educational reference	15
Checklist/cognitive aids	10
Standardised communication tools	10
Software enhancements or modifications	5
New devices with usability testing	4
Not applicable	3
Architectural/physical changes in surroundings	1
Double checks	1
Total	**241**

Note – 'not applicable' refers to recommendations included in RCA reports that were not related to root causes or learnings.

Examples of recommendations by category and strength, sentinel events (maternity), 2019–20

Recommendation category	Example	Recommendation strength
Training	Provide education regarding diagnosis and management.	Weak
Standardise process	For all high-risk patients, the specialist obstetrician is to lead the maternity care provided.	Moderate
New devices with usability testing	Procure CTG monitor for operating suites/theatre which can trace maternal heart rate to assist in visually distinguishing maternal heart rate from fetal heart rate.	Strong

Recommendation strength

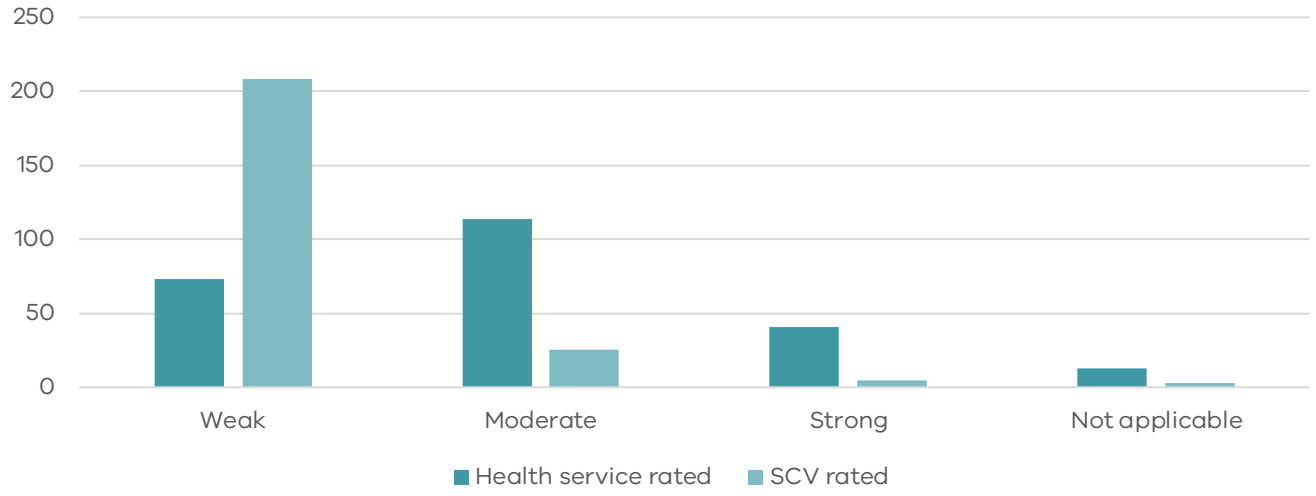
We base recommendation strength on a hierarchy of actions outlined for RCA reports (**Appendix 2**).

Health services tended to overestimate the strength of their recommendations. For example, policies and procedures alone are considered weak actions, because the working environment needs to enable staff to put the procedure into practice.

When including recommendations regarding procedures, consider how they will be implemented, how you will ensure new staff are made aware of them, and if there is anything that can be put in place to ensure key points are followed – for example, a decision support tool or safety checklist.

For further guidance refer to our recommendation template.

Recommendation strength, sentinel events (maternity), 2019–20



Example of a strong recommendation

'Within one month the wall oxygen will be permanently attached to the procedure cot and the equipment checklist updated to include this.

This will be communicated to staff via their monthly newsletter, ward meetings and ward-based educator.

Monthly audits will be completed for three months to monitor compliance. Audit results will be communicated to staff and included as evidence for our next accreditation under Standard 1 - Clinical Governance.'

OUR WORK TO IMPROVE OUTCOMES FOR WOMEN, BABIES AND FAMILIES

We partnered with the Institute for Healthcare Improvement (IHI), clinicians, consumers and health service leaders to deliver the following initiatives:

Safer Baby Collaborative

Nineteen health services across Victoria took part in this work to reduce the rate of stillbirth after 28 weeks' gestation. This approach used improvement science to:

- introduce or increase the reliability and consistency of evidence-based care during pregnancy
- identify, monitor and care for women at risk of experiencing stillbirth.

By April 2020, participating sites had collectively reduced the rate of stillbirth by **27 per cent**.

Better Births for Women Collaborative

Fourteen health services across Victoria took part in this quality improvement work to reduce the number of severe perineal tears (third- or fourth-degree) experienced by women giving birth vaginally.

By April 2020, participating sites had collectively reduced the rate of third- and fourth-degree tears by **25 per cent**.

Third- and fourth-degree tears may be considered sentinel events under **Category 11**, depending on the circumstances in which they occurred, and the degree of harm to the patient.

Refer to the **Victorian guide to sentinel events** or contact us at sentinel.events@safercare.vic.gov.au.

IMPLEMENTING CHANGES AFTER ADVERSE EVENT REVIEWS

The adverse event review process enables health services to identify and act on improvement opportunities, in order to prevent patient harm.

This was the experience of Monash Health which made significant changes to their maternity and newborn program as a result of reviewing both sentinel and serious adverse events. The changes they put in place have improved how care is delivered to, and received by, consumers and have directly avoided patient harm.

'If we can understand what went wrong, we can address the issues to prevent them from happening again.'

The health service ensured review teams were multidisciplinary, and included a consumer representative and an independent, specialist external team member. All review team members had an important role to play and provided integral perspectives that informed the review findings and recommendations.

Once recommendations were endorsed, they were prioritised and health service leadership at all levels discussed them at monthly meetings to ensure they remained on track for delivery. The recommendations arising from reviews were diverse and related to several system domains such as workforce, processes and procedures and teamwork.

Some of the changes made based on recommendations are listed below:

- **Increase in staffing**: the health service changed their roster so consultants (senior medical staff) were onsite more, particularly at night. This meant patients and staff had more onsite support from a senior medical decision maker.
- **Targeted care**: antenatal patients were allocated to cohorts when admitted to the maternity ward and midwives were assigned to care for a cohort in alignment with their clinical skills. This meant women were receiving more targeted care.
- **Modifying procedure**: the procedure of escalation to senior medical staff members was updated to be more specific, including which clinical scenarios required senior medical staff notification and when they were required to immediately attend.
- **Improving the process of clinical handover**: the health service implemented direct consultant to consultant handover whereby the multidisciplinary team reviewed patient records and fetal heart rate tracings for women in labour virtually. Care management plans were then updated and documented for each patient.
- **Simulation-based training**: increased simulation exercises for complex pregnancies were undertaken by staff at multiple sites in the hospital setting, including birth suites, emergency department and intensive care. A comprehensive education program has been developed to facilitate ongoing education.
- **Checklist/cognitive aid**: a pregnancy assessment triage tool was developed and used by staff, leading to a decrease of delay to treatment events to zero.
- **Architectural changes:** a business case to physically increase capacity of the service and to allow contemporary models of care for high-risk pregnancy was lodged to the Department of Health and Human Services and was successful.

The health service experienced some challenges implementing these changes, many of which were overcome by consistent listening to and communicating with staff, especially those impacted directly. So far, these changes have resulted in positive outcomes such as improved patient experience, evidenced by patient satisfaction data. There has also been an increase in incident reporting by staff, demonstrating they are speaking up for safety. Most significantly, adverse patient safety events have been avoided and the service has seen excellent quality and safety results.

Key messages for other health services to consider

- **Have the right people on the review team and be transparent**: this will ensure your recommendations are strong, practical and valid.
- **Communication is key**: actively meet with, listen to and communicate with staff about changes you are implementing. Identify the leaders at all levels who can promote a speaking up for safety culture and encourage them. Continually reinforce why the changes are important, how they will improve patient safety and why it is so important they always identify and report incidents, so we can always improve.

> *'We have made significant changes as a result of sentinel events or serious incidents that have had an impact on how we provide care today. This is rewarding for clinical teams but most importantly, the women and their babies benefit the most.'*

Patient falls

Patient falls are common incidents across health services, and are the most reported incident in the Victorian Health Services Information Management System (VHIMS).[2]

In 2019–20, **25** falls were notified as sentinel events under **Category 11: All other adverse patient safety events resulting in serious harm or death**, within the sub-category 'falls'. This is more than in 2018–19.

Sentinel events (falls), 2017–20

2017–18	2018–19	2019–20
25	17	25

Not all falls result in serious harm or death. Therefore, the number of falls entered into VHIMS is higher than the number of falls reported to us as sentinel events. Differences in reporting culture may also contribute to this difference.

CONSUMER OUTCOME

Sentinel events are adverse events that result in serious harm or death for patients/residents. For this reason, most falls notified resulted in the death of the patient/resident (**92 per cent**) and two events resulted in loss or reduction in functioning.

It is also important to note that all of the patients or residents had several significant co-morbidities. This contributed to decisions to limit further intervention or treatment following the fall.

CONSUMER AGE

Most falls – **92 per cent** – occur in older population groups (65 years and older):

- 64 per cent (16) were aged 85 years or above
- 28 per cent (7) were aged 65–84 years
- eight per cent (2) were aged 30–64 years.

LOCATION

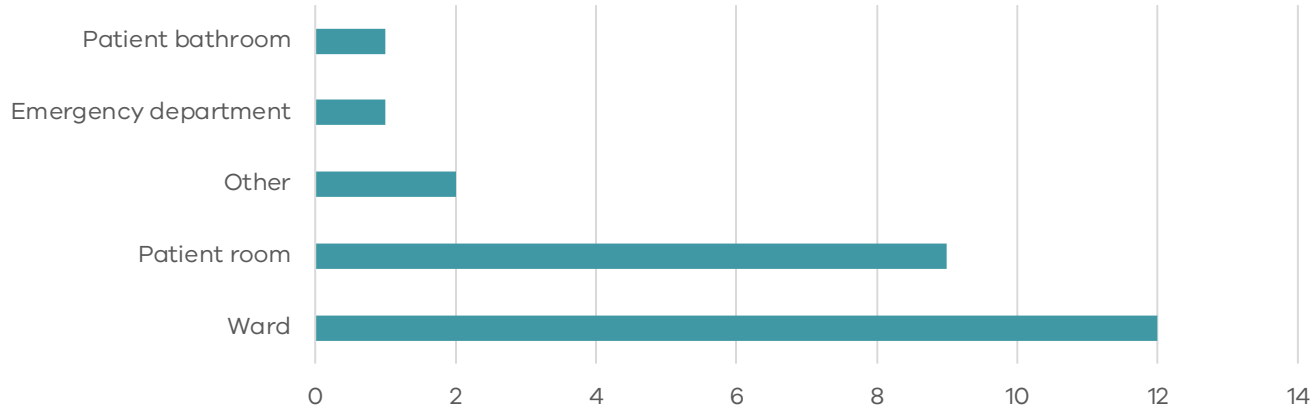
Just over three quarters (**76 per cent** (19)) of events were notified by public health services and 24 per cent (6) were notified by private health services.

Twenty per cent (5) of reported falls occurred in public residential aged care.

Many falls occurred on a ward or in the room of the patient/resident.

[2] Victorian Agency for Health Information, 2020

Sentinel event location (falls), 2019–20



INSIGHTS FROM RCA REVIEWS PART A AND B

RCA review teams

- Review teams had an average of seven people.
- **36 per cent** (9) had consumer representation.
- **80 per cent** (20) had an external, independent team member.
- **40 per cent** (10) of reviews sought the input of the affected patient, their family or carer.

Compared to other areas of sentinel event reporting, falls RCA teams had the lowest consumer and external independent representation. This is an area for improvement when reviewing patient falls.

Findings (root causes)

A total of **82** findings were identified across 25 RCA reports.

Frequently occurring finding (root cause) themes, (falls) RCA part a and b, 2019–20

Theme	Number	Percentage
Documentation and assessment tools, e.g. incomplete falls assessment	16	20%
Patient factors, e.g. comorbidities	11	13%
Workforce factors, e.g. inadequate skill mix	10	12%
Teamwork factors, e.g. lack of clear handover between teams	9	11%

Seventeen findings showed an incomplete cause and effect review as they ended with human error. Several findings noted something was not done or used by staff, without further investigation into the reasons why. This highlights room to improve in taking a systems thinking approach to reviews.

Patient comorbidities were noted in **10** findings without further exploring why these were not identified or sufficiently managed.

Critical events

For **26** findings, no critical event was identifiable as the statement did not clearly identify a cause and effect relationship.

Frequently identified critical events in findings (falls) RCA part a and b, 2019–20

Critical event	Example from RCA parts a and b
Recognising and responding to a deteriorating patient	No onsite medical staff to respond to and visually assess deterioration immediately.
Patient standing or walking without enough assistance	Nursing staff implemented an ambulation (patient standing or walking) plan based on their own assessment, which resulted in the patient being ambulated without the assistance of a second staff member.
Incomplete patient handover	The clinical handover from the acute ward to the subacute ward did not include the inpatient falls history.
No standard process	There is no decision and escalation process to assist staff to make decisions about room allocation in the context of competing priorities for high visibility rooms.

INSIGHTS FROM RCA REVIEWS PART C – RECOMMENDATIONS

A total of **94** recommendations were developed by health services to address 25 falls.

Type and number of recommendations for sentinel events (falls) RCA part c, 2019–20

Recommendation category	Number of recommendations
Further review/develop action plan	29
Training	17
New procedure/memorandum/policy	16
Checklist/cognitive aids	11
Standardise process	6
Share outcomes/educational reference	5
Standardised communication tools	3
Tangible involvement by leadership	3
Eliminate/reduce distractions	1
Increase in staffing/decrease in workload	1
Simplify process and remove unnecessary steps	1
Software enhancements or modifications	1
Total	**94**

Examples of recommendations by category and strength, sentinel events (falls), 2019–20

Recommendation category	Example	Recommendation strength
Further review/develop action plan	Revise education processes for deteriorating patient training.	Weak
Checklist/cognitive aids	Include patient room allocation in the ward huddle template that guides the daily morning huddle meeting.	Moderate
Tangible involvement by leadership	Executive Director of Clinical Services to oversee a rostering change, ensuring presence of medical staff onsite overnight.	Strong

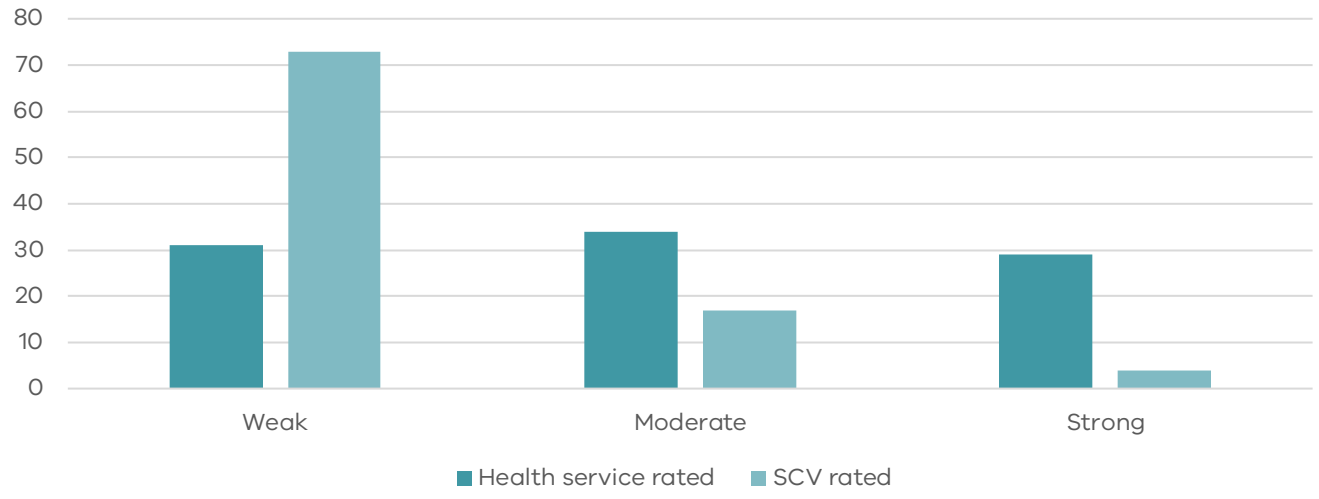
Recommendation strength

There was discrepancy between the health service and SCV rated strength of recommendations, with health services tending to overestimate their recommendation strength.

An example of a SMART recommendation

'Director of Nursing to oversee the development and implementation of a medical and nursing post-fall assessment and checklist, including consultation with staff, within three months. Audit the checklist use at six and 12 months.'

Recommendation strength, sentinel events (falls), 2019–20



OUR WORK TO REDUCE PATIENT FALLS

Preventing functional decline

For older people in hospital, unnecessary bed rest can result in functional decline, impacting their ability to mobilise independently.

The **End PJ paralysis: Preventing functional decline in inpatients** project looked to increase the number of older people who were assisted to sit out of bed and stand or walk each day. High performing services that implemented the changes saw reduced rates of falls.

Guidance for the use of bed rails

Released in September 2019, this guidance helps health services use bed rails safely, minimising risk for patients who attempt to climb out of bed.

Our guidance, supporting flowchart and consumer fact sheet help health services temporarily use bed rails safely, under supervision, to prevent patient harm. They provide practical advice on conducting assessments, considering alternatives, gaining consent, minimising risk, and reviewing the decision to use bed rails.

Notably, of the 25 falls notified as sentinel events this financial year, only **one** was associated with use of bedrails (on an emergency room trolley).

Delirium collaborative

Delirium is a serious medical condition where people experience changes in their thinking, attention and memory, causing them to become confused, agitated or drowsy. Disorientation associated with delirium can increase the risk of a person falling in an unfamiliar environment such as hospital.

This is supported by sentinel event notifications received this year, with **64 per cent** (16) citing impulsivity, cognitive decline or (in three cases) delirium specifically.

Older patients can be susceptible to developing delirium in hospital. However, it is often misdiagnosed or not detected. We partnered with the IHI and 21 health services to improve care for older patients experiencing hospital-acquired delirium, including improved screening, diagnosis and management.

The collaborative is continuing, with early results showing effective management of delirium can reduce falls by improving the overall wellbeing of older patients during their hospital stay.

PREVENTING FALLS AT BEECHWORTH HEALTH SERVICE

Beechworth Health Service (BHS), like many other health services across Victoria, experienced patient falls as one of their most frequently occurring preventable patient safety incidents. This led to falls prevention in residential aged care and throughout the hospital becoming one of their major priority areas for strategic improvement.

BHS has taken a creative and innovative approach to achieve falls prevention from multiple angles. A deep-dive of 10 years of falls data provided important information – like when were falls occurring, who the at-risk patients were and identified the common denominators across falls incidents.

Creating a novel partnership with Life Saving Victoria to reduce patient falls

One of the key insights from the data analysis by BHS was that **most falls occur when people are alone** (over 70 per cent). BHS reached out to Life Saving Victoria (LSV) which identifies similar risks in their working environments – people get into trouble in the water when they are alone. BHS used the 'outsider' perspective of LSV to introduce effective falls prevention strategies such as a 'gaze refresh' for staff, scanning for hazards and minimising time spent alone for at-risk patients. These were introduced in combination with related initiatives, some of which included:

- training and education for staff on the new approach and opportunity to be involved
- purchasing additional falls monitoring equipment including a new alert system to contact staff quickly
- technology improvements enabling clinicians to view and document patient information at their bedside rather than leaving the room to access a computer
- mobility improvement for elderly residents including intergenerational activities with local young school students (paused due to the coronavirus (COVID-19) pandemic)
- safety huddles implemented for every shift in every unit. All staff – including service and catering staff –participate in the huddle to discuss emerging safety issues. Involving non-clinical staff has been instrumental in identifying hazards that may have otherwise been overlooked, as well as reinforcing that safety is everyone's responsibility.

BHS also considered falls awareness in the wider community and introduced a Health Heroes program (based on LSV Nippers principles) as a school holiday activity. This included falls risk and awareness for intergenerational family and friends.

Celebrating 'falls-free'

BHS sends daily email updates to all staff acknowledging achievements and 'falls-free' intervals, such as a falls-free shift, day, week or month. This focus on achievement and celebrating when things are going right is a simple yet effective recognition of staff efforts and encourages people to sustain their good work.

Achieving positive outcomes

BHS observed a significant reduction in falls as prevention strategies were implemented. In 2019–20 there was a **30 per cent** reduction in the number of falls compared to the previous financial year, and the lowest it had been in 10 years. Overall fall severity has reduced to mostly minor or no harm.

Numerous benefits can be drawn from this, most importantly less harm and increased wellbeing for patients and their families. As the low falls environment continues, there is an increased awareness and commitment by all staff to actively prevent falls.

Incident reporting has also increased, including in areas outside of patient falls, demonstrating the positive impact on safety culture, transparency and reporting throughout the health service. BHS will continue to expose its thinking and its practice to improvement and is committed to a safety culture that best represents what matters to its residents, patients and clients.

Medication safety

Medication safety incidents are the second most common type of clinical incident recorded in VHIMS. However, most are reported as near misses or causing no harm.[3]

In 2019–20 they were the third most common type of sentinel event (20), notified across two categories:

- **Category 7: Medication error resulting in serious harm or death** (10)
- **Category 11: All other adverse patient safety events resulting in serious harm or death** (10).

Based on comparison to VHIMS data, there may be under-reporting of medication safety incidents as sentinel events, particularly those that result in harm to, but not death of, a patient.

Patient outcome

Outcome	Number
Death	12
Permanent loss of functioning	3
Temporary loss of, or reduction in, functioning	4
Unknown at time of notification	1

Ninety-five per cent (19) of events were reported by public health services and five per cent (1) were reported by a private health service.

Location

Location	Number
Ward	8
Patient room	3
Intensive care unit	2
Operating theatre	2
Recovery	2
Emergency department	1
Medical imaging	1
Other	1

[3] Victorian Agency for Health Information, 2020

COMPARISON TO PREVIOUS YEARS

Prior to 2019–20, sentinel events related to medication safety were captured under the previous **Category 6: Medication error leading to the death of a patient due to incorrect administration of drugs**. Notification under this category peaked in 2014–15 at seven events.

We have themed our data in a new way this year, identifying similar types of events across sentinel event categories. This provides a clearer picture of events related to the issue of medication safety.

When systems fail

Kai was an elderly man who was in hospital with pneumonia. As part of his treatment, the respiratory registrar (a doctor) prescribed an anticoagulant drug (blood thinning medication) using an electronic system. The registrar immediately realised the medication was clinically inappropriate for Kai. She attempted to cancel the drug but did so on a discharge (release) medication list rather than on the inpatient (hospital) medication list. The order for the drug remained active in the system.

As Kai's health deteriorated due to pneumonia and other health issues, his treating doctors decided a surgical procedure was necessary. Prior to the procedure, a doctor administered an anticoagulant drug to Kai, followed by another dose of the anticoagulant drug the registrar had tried to cancel. Kai experienced a series of complications during surgery and ultimately died, in part because of the medication error – a dual dose of anticoagulant drugs.

When reviewing the event, the health service found the EMR showed both the inpatient and discharge medication list on the same screen which made it more difficult for a supervising doctor to realise that a drug cancellation had not occurred on the right list.

As a result, the hospital customised the EMR so that inpatient and discharge medication lists were on different screens and icons would be larger and more visible to users.

INSIGHTS FROM RCA REVIEWS PART A AND B

RCA review teams

- Review teams had an average of 10 members.
- **75 per cent** (15) of reviews had a consumer representative.
- **95 per cent** (19) included an external team member.

Thirty-five per cent of reviews included the perspectives of the affected patient, their family or carer. At the time of notification, open disclosure had not occurred for four incidents.

Review themes

Examples of frequently occurring scenarios in the 20 reviews involved the following:

- **Unsafe prescribing:** for example, anticoagulant and antiplatelet medication (drugs prescribed to affect platelets in the blood) were administered in unsafe combinations, not given to patients at the right time, or given to patients for longer than they should have been.
- **Inaccurate transfer of patient information:** when patients were transferred to a different area in the hospital or discharged home, their health information regarding medication wasn't fully or accurately documented or relayed between clinical teams.
- **Information incorrectly documented:** input into EMRs allowed for human error through actions such as copy and paste, without providing feedback to the user.

Findings (root causes)

Eighty-four findings were developed across 20 RCA reviews.

Frequently occurring common finding themes in sentinel events (medication safety) RCA parts a and b, 2019–20

Main theme	Amount	Example from RCA parts a and b
Human error	15	Medical registrar was not aware of intracranial bleed.
Procedures and guidelines	13	The medication profile for newborn calcium gluconate (a mineral supplement and medication) on the organisational procedure platform provided guidance on administration over four hours only, with no guidance on rapid administration in acute deterioration settings.
Workforce or work environment	11	The need to handover 17 new admissions in 30 minutes increased the likelihood that information about the need to restart the apixaban (anticoagulant medication used to treat and prevent blood clots) was overlooked. This resulted in the apixaban not being restarted and the patient suffering a stroke.
Systems and processes	11	There is no function to dose check olanzapine (antipsychotic medication) dosage for patients over 65 years in the EMR at the point of prescribing.

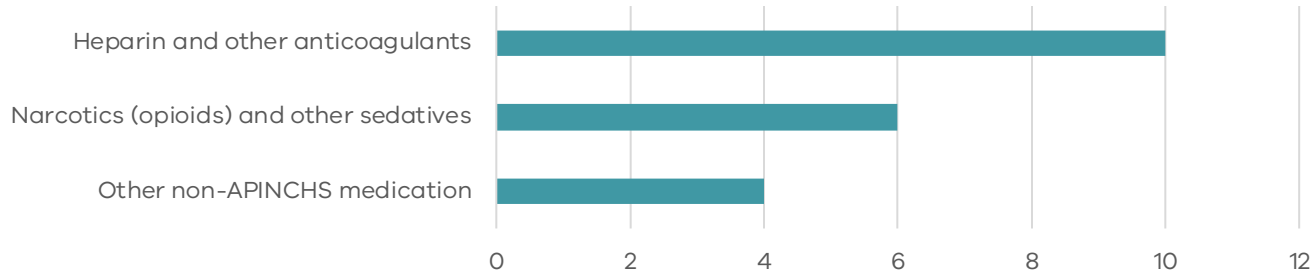
Critical events identified within the finding statements included:

- anticoagulant medication was not restarted (for example, after it was ceased for a biopsy procedure) – 27 per cent (24)
- multiple doses of sedation administered – 11 per cent (10)
- treatment for venous thromboembolism (VTE) (blood clots in the veins) not prescribed – seven per cent (6)
- infusion set to the wrong rate – six per cent (5).

Medications involved

The medication types were classified according to the 'APINCHS' acronym – a group of medications acknowledged to have high potential for patient harm[4]. Anticoagulants came out as the leading medication class associated with sentinel events.

Medication type, sentinel events (medication safety), 2019–20



INSIGHTS FROM RCA REVIEWS PART C – RECOMMENDATIONS

A total of **113** recommendations were developed to address 21 events.

Type and number of recommendations for sentinel events (medication safety) RCA part c, 2019–20

Recommendation category	Number of recommendations
Further review/develop action plan	37
Software enhancements or modifications	15
Training	14
New procedure/memorandum/policy	13
Share outcomes/educational reference	13
Not applicable	7
Standardise process	6
Standardised communication tools	2
Checklist/cognitive aids	2
Tangible involvement by leadership	1
Simplify process and remove unnecessary steps	1
Eliminate look- and sound-alikes	1
Increase in staffing/decrease in workload	1
Total	**113**

Note – not applicable refers to recommendations included in RCA reports that were not related to root causes or learnings.

[4] For more information visit www.safetyandquality.gov.au/our-work/medication-safety/high-risk-medicines/apinchs-classification-high-risk-medicines

As for maternity related sentinel event reviews, recommendations to conduct a further review or develop an action plan were common (**33 per cent** of recommendations).

Examples of recommendations by category and strength, sentinel events (medication safety), 2019–20

Recommendation category	Example	Recommendation strength
New procedure/memorandum/ policy	Develop minor head injury protocol with specific reference to: • neurological observations • management of anti-thrombotic medication • red flags for intracranial haemorrhage and indications for escalation.	Weak
Software enhancements or modifications	EMR optimisation team to review and implement a system for managing alerts for contraindicated medications.	Moderate
Simplify process and remove unnecessary steps	Identify key forms for documentation of adverse reactions and remove others to mitigate transcription error risk.	Strong

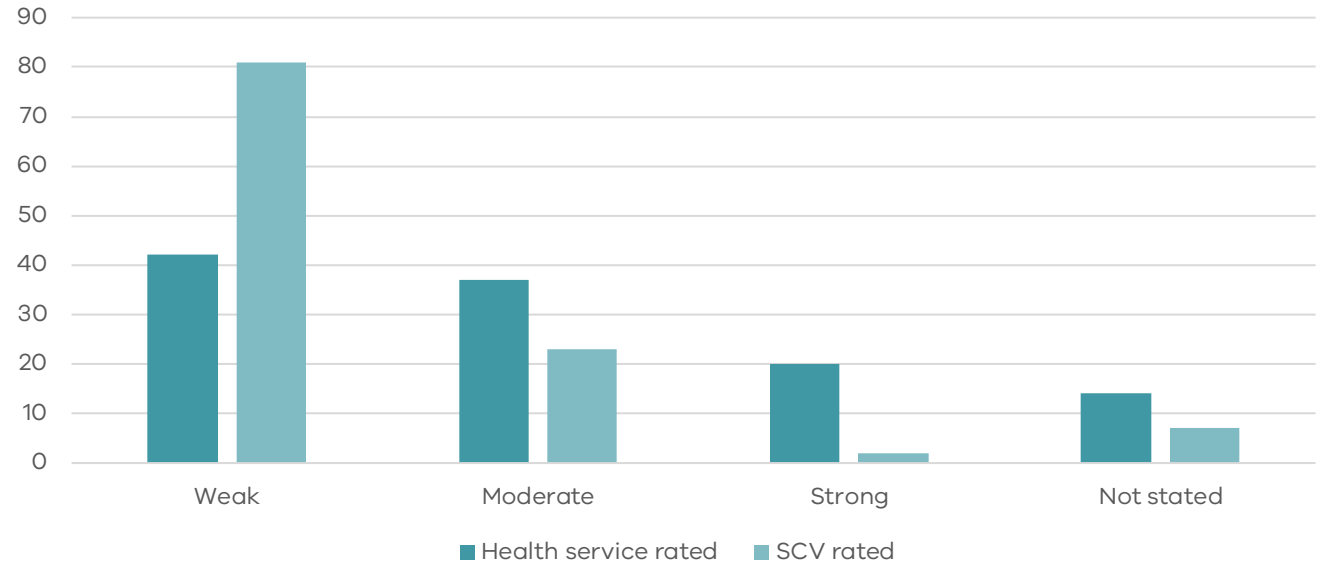
Limited capability of EMR systems was raised in several reviews as a systems issue contributing to adverse events and is highlighted in Kai's story (page 26).

Many EMR systems have no feedback loop to validate that a task has been completed. This allows referrals to go unprocessed, or results to remain unchecked, without staff being alerted.

Thirteen per cent of recommendations focused on software enhancements or modifications, including to:

- enable alerts for drug/class duplication and contraindicated medications
- alert clinicians to conduct VTE risk assessments
- allow pharmacists to see VTE care pathways
- standardise the EMR order screen view to differentiate between 'inpatient' and 'discharge' medication
- refine the reconciliation process for medications when patients are discharged.

Recommendation strength, sentinel events (medication safety), 2019–20



An example of a strong recommendation

'Chief Medical Information Officer to work with all programs to implement and document a process that ensures designated persons in all treating units review all diagnostic imaging results and anatomical pathology results daily or prior to the patient's discharge.'

Further reading

For more information on medication safety incidents, head to the latest VAHI report *Medication incidents: an analysis of Victorian Health Incident Management System data 2020*. Available to the health services who contribute data, please contact your Quality and Safety unit for a copy.

Online resources on high-risk medications, including training modules available to Victorian clinicians, are available on the ACQSHC website.

OUR WORK TO IMPROVE MEDICATION SAFETY

Partnered Pharmacist Medication Charting (PPMC)

We have signed up 16 general medicine units and three oncology units to the second round of this program that is proven to reduce medication errors. The PPMC project allows credentialed pharmacists to work closely with doctors on medication reviews, and nursing staff to administer medications.

Following outstanding success at Alfred Health, we have already scaled the project to five more health services, resulting in:

- reduced proportion of patients with a medication error from 19.2 to **0.5 per cent**
- reduced average length of stay from 6.5 days to **5.8 days**
- estimated savings of $726 per patient, totalling nearly **$2 million** in hospital cost savings.

A further four oncology units are lined up to join the project. While delayed due to the coronavirus (COVID-19) pandemic, we intend to resume this project in 2021.

Victorian Medicines Roundtable

This educational forum for clinicians with an interest in medication safety was delivered in partnership with the Victorian Therapeutic Advisory Group (VicTAG) in 2018 and 2019.

It was an opportunity to share initiatives on managing high-risk medications, identify hazards and share lessons learned from medication errors.

All other sentinel events

Of 186 sentinel events, **106** were notified under the following categories:

- **Category 4: Unintended retention of a foreign object in a patient after surgery or other invasive procedure resulting in serious harm or death** – two events.
- **Category 6: Suspected suicide of a patient in an acute psychiatric unit or acute psychiatric ward** - eight events.
- **Category 8: Use of physical or mechanical restraint resulting in serious harm or death** – one event.
- **Category 11: All other adverse patient safety events resulting in serious harm or death** – 95 events.

INSIGHTS FROM RCA REVIEWS PART A AND B

RCA review teams

- Review teams had an average of eight people.
- **51 per cent** included a consumer representative.
- **82 per cent** included an external, independent member.

Findings (root causes)

A total of **291** findings were identified across 106 sentinel events.

Systems level issues identified in finding statements included working beyond skill level, policies, procedures or guidelines were not available or did not exist, unclear accountabilities between teams and lack of alerts. For example:

- no central coordination of complex patient care
- no trigger to escalate clinical diagnosis disagreements between two teams for resolution
- abnormal blood test result was not alerted to in the system so was not reviewed.

Human error was identified in **20 per cent** of finding statements as contributing to the event. This was mirrored in critical events where many review teams stated something was 'not done.' It is important for review teams to consider why that behaviour made sense to the staff member at the time, to maintain a focus on systems improvements.

Example: finding statement focusing on human error	The nursing staff did not follow the current medication management policy regarding own patients' medications brought into hospital.
Example: finding statement focusing on systems	The incomplete process for the roll out of new procedures contributed to the staff not being aware of the updated paediatric/neonatal clinical deterioration procedure and resulted in incomplete observation of a child presenting with medical emergency team (MET) call criteria.

INSIGHTS FROM RCA REVIEWS PART C – RECOMMENDATIONS

Some **437** recommendations were developed across 106 sentinel events.

Several focused on further reviews or action plans, new procedures or policies, training, and sharing outcomes to provide an educational reference.

Examples of strong recommendations:

- **Standardisation:** Synchronise clocks across the organisation. Operating suite and the endoscopy/ cardiac catheterisation lab, emergency department, critical care unit and recovery clocks are all different which compromises accuracy of documentation and scribe notes.
- **Architectural changes:** Remove and replace internal door hinges in seclusion rooms (ligature point).
- **Forcing functions:** Ensure the criteria for procuring ventilators clearly outlines the requirement for ventilators to have a fail-safe mechanism that activates when respiratory effort is sensed.
- **Tangible involvement by leadership:** Chief Medical Officer to work with other program and unit senior leaders to develop an organisational strategy to recognise and manage cognitive bias in clinical care.

Further resources

Failure to recognise and respond to patient deterioration is a recurring theme identified in RCA reviews across multiple sentinel event categories. We recently published resources to assist health services strengthen their recognition and response systems to deteriorating patients. The package of resources includes a step-by-step guide, quality improvement tools and case studies, to help your health service successfully achieve improvement.

REPORTED IMPACTS OF CORONAVIRUS (COVID-19)

Of 600 findings identified by health services, a small number (**4**) highlighted coronavirus (COVID-19) related impacts as a contributing factor.

This included lack of connection and communication with families and carers due to visitor restrictions, staff being unfamiliar with changes to ward function and updated procedures due to the pandemic.

Building capability for improved review outcomes

Strong sentinel event reviews are enabled in organisations that prioritise and promote safety. All staff play a role in safety culture, especially leadership. For example, supporting employees to speak up about safety concerns, acting on these promptly, and making incident reporting as easy as possible, contribute to a positive safety culture.

AREAS OF ACHIEVEMENT BY HEALTH SERVICES IN 2019–20

Increased notification rate

More adverse events are being recognised and notified as sentinel events. In 2019–20 the highest number of sentinel events were notified since the program began – 186. This represents a greater percentage of all incidents reported in VHIMS being notified as sentinel events.

This reflects an increase in transparency and willingness of health service to report and review incidents, rather than an increase in incidents themselves.

More consumer representation on review teams

The number of RCA teams with a consumer representative increased to **51 per cent**, compared to 33 per cent in 2018–19.

At least one consumer representative should be a part of each RCA review team, in addition to involving the affected patient, family or carer. A consumer representative on the review team was not involved in the event, but provides a consumer voice to re-focus the analysis of the RCA team on the issues that matter most in healthcare – patient experience and patient-defined outcomes.

For more information refer to our **guide for health services** or **guide for consumers**.

> 'It's important to have consumer representatives as part of the review process to have the consumer voice heard... to have the focus back on the patient and their experience, and to improve the patient experience in the long run.' - Consumer representative

AREAS FOR IMPROVEMENT

Involving the patient, family or carer

The consumer/s affected by the event (the patient, family or carer) should have the opportunity to contribute to the review process if they wish – for example in an interview or in writing. Participation can be beneficial for the consumer who is able to share their perspective and can provide the review team with information about the event that they would not otherwise have known.

- Nearly **67 per cent** of RCAs did not involve an affected consumer.
- The reasons for this are not fully captured in the data, but include the consumer declining to be involved, and lack of organisational processes to facilitate affected consumer involvement.

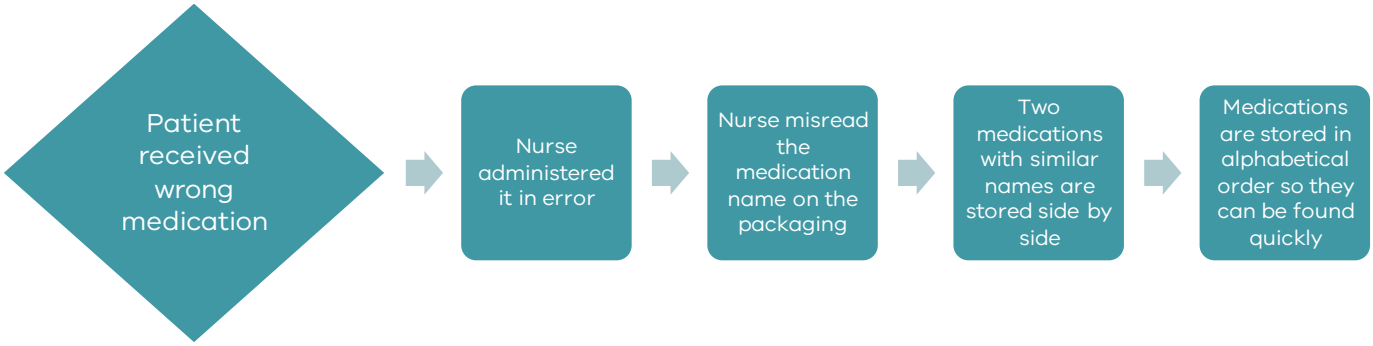
Read Florence's story (page 5) for an example of a health service involving the affected consumer in the review process.

Using review methodology to dive deeper in why something happened

Many reviews stopped their analysis at the point of non-compliance or human error and could have looked further into the reasons why this occurred. Ensuring you look at why an error was made helps to develop more targeted and actionable recommendations.

Using the RCA method, deeper analysis involves the 'five whys' approach, and is demonstrated through a cause and effect diagram.

Example cause and effect diagram



Making stronger recommendations

Strengthening recommendations to focus on systems issues will result from review processes that focus on systems rather than human error.

Improving review team membership

Including at least one RCA team member who is independent of the health service is vital to ensure sentinel event reviews are robust, fair and unbiased. An independent team member can bring relevant experience from the discipline/s involved in the sentinel event, ideas about different ways of addressing situations, or management and quality and safety experience.

This year, the proportion of RCAs with an external team member remained unchanged at **85 per cent**.

Launched in October 2018 the PEER platform allows review teams to search for an independent member by discipline, speciality, and location. The number of PEER platform members has grown to 18, and we continue to recruit experts. There were more than 1100 visits to the website in 2019–20, and 19 RCAs included an independent expert from PEER.

Look out for training and resources in 2021

RCA training workshops provide an overview of the sentinel events program, an introduction to human factors and a hands-on approach to completing an RCA review in a group setting.

We provided RCA training to almost 280 health professionals and consumers in 2019–20. We are excited to recommence refreshed offerings in 2021, after pausing workshops due to coronavirus (COVID-19) restrictions. We encourage health services to register staff and consumer representatives to attend.

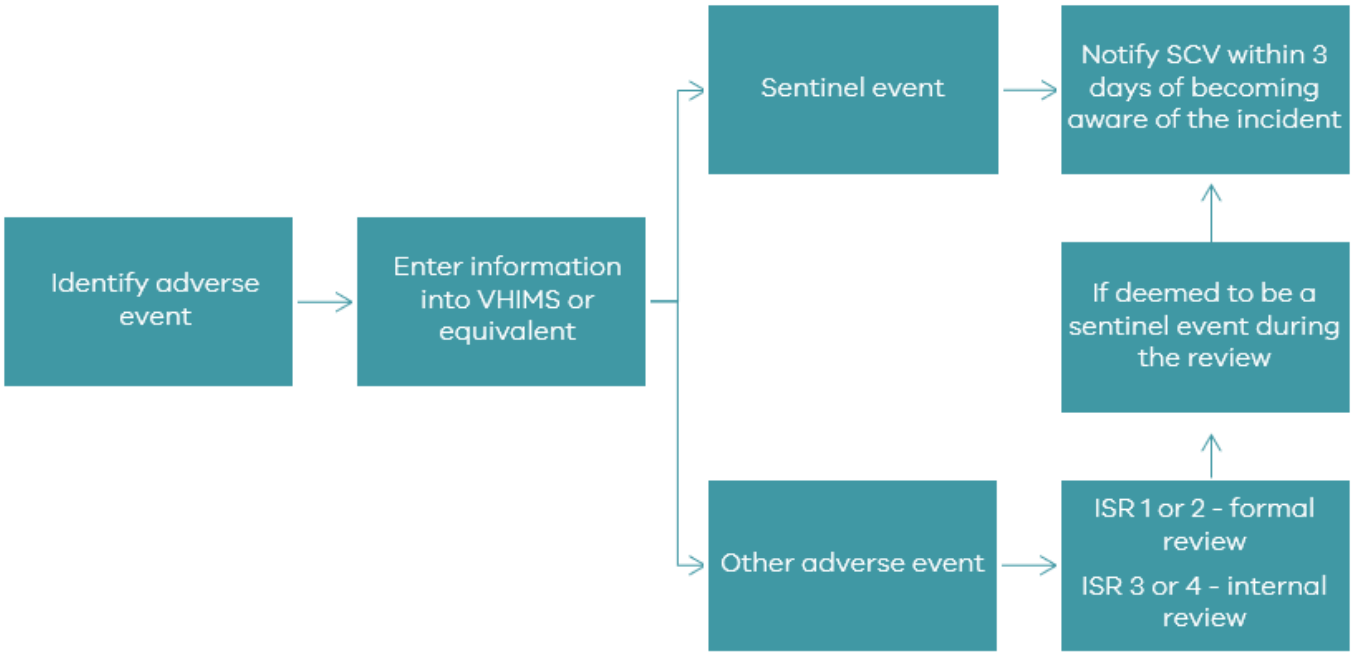
We are releasing a suite of resources designed to support health services to manage adverse patient safety events and strengthen safety culture. Topics include open disclosure, leadership and safety culture and review methodology.

We are also revising our quality assurance, feedback and support mechanisms for health services undertaking RCA reviews to provide more targeted and meaningful guidance.

SENTINEL EVENT REPORTING AND REVIEW OBLIGATIONS

In June 2019 we released the **adverse patient safety event policy** outlining the roles and responsibilities of health services when responding to an adverse event. All adverse events that meet the criteria for ISR 1, ISR 2 or equivalent should be formally reviewed, and recommendations developed. The health service process for notifying and reviewing adverse events is outlined below.

Adverse event reporting and review obligations based on the SCV adverse patient safety event policy



How to report a sentinel event

In Victoria, all public and private health services, and all services under their governance structure, are required to report sentinel events. This includes private day surgery facilities, public sector residential aged care facilities, Ambulance Victoria, and bush nursing centres.

Under Victoria's sentinel events program, health services are required to:

- notify SCV **within three business days** of becoming aware of the event by submitting a notification form to sentinel.events@safercare.vic.gov.au
- convene a team to review and analyse the sentinel event using RCA methodology
- submit RCA reports (part a and b) **within 30 business days** of the notification
- submit recommendations from the RCA (part c) **within 50 business days** of the notification
- submit a recommendation monitoring report **within 120 days** of the notification. This provides assurance that work is being done to improve patient safety.

If you are not sure if an event meets sentinel event criteria, refer to the **Victorian sentinel event guide** or contact us at sentinel.events@safercare.vic.gov.au.

Data supplement

SENTINEL EVENT NOTIFICATIONS OVER A 10-YEAR PERIOD

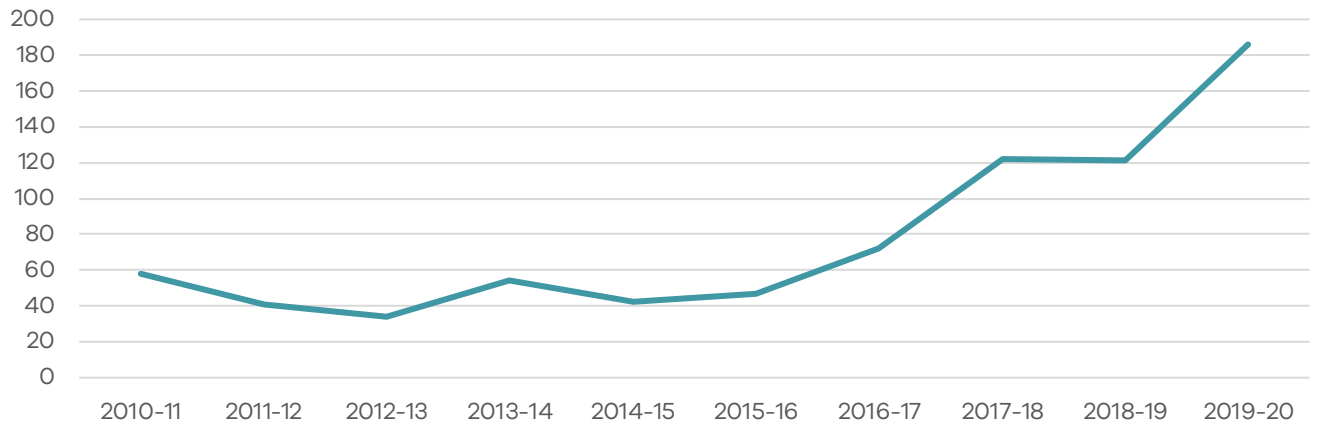
Sentinel event program key dates

- 2016–2017: SCV commenced oversight and management of the sentinel events program. Templates and guidance documents released.
- 2017–2018: SCV rolled out RCA training to health services and strengthened coaching and mentoring of individual health services.
- 2018–2019: sentinel event reporting became mandatory for private hospitals.
- 2019–2020: revised national sentinel event categories published. Updated guidance published by SCV on reporting and consumer inclusion.

Number of sentinel events notified per financial year, 2010–2020

							SCV overseeing sentinel events			
Year	10–11	11–12	12–13	13–14	14–15	15–16	16–17	17–18	18–19	19–20
Sentinel events	58	41	34	54	42	47	72	122	121	186

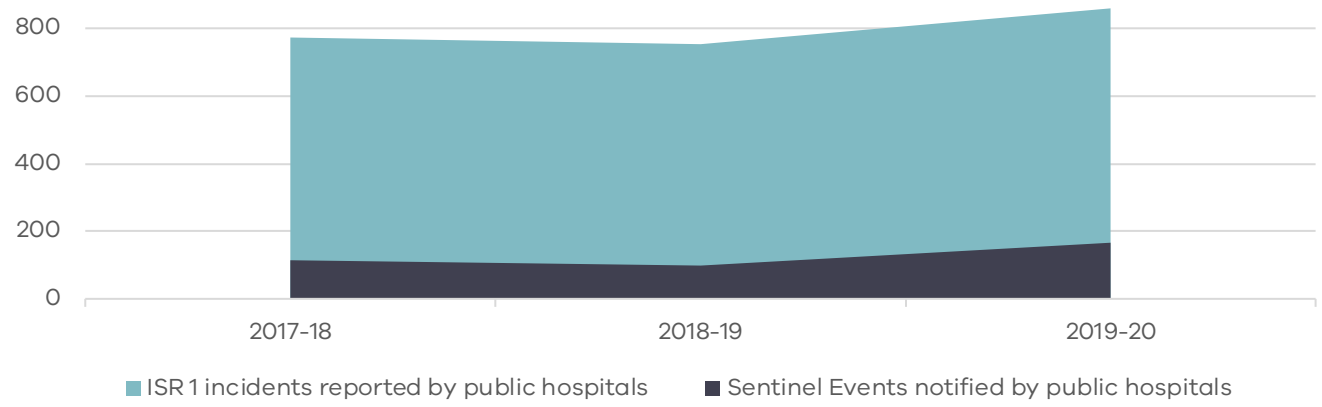
Sentinel event notification rate over 10 years, 2010–2020



Between 2018–19 and 2019–20, the percentage of ISR 1 incidents reported in public hospitals that were also notified as sentinel events increased from 13 per cent to 19 per cent. While this is the first increase in the past three years, the gap between the number of ISR 1 incidents and sentinel events notified by public hospitals should be considerably less. We hope to see this gap continue to close over the next few years.

Notably, ISR 1 data is not a complete capture of notifiable clinical incidents in Victoria. Some ISR 2 incidents should also be reported as sentinel events. Private health services do not centrally report incident data.

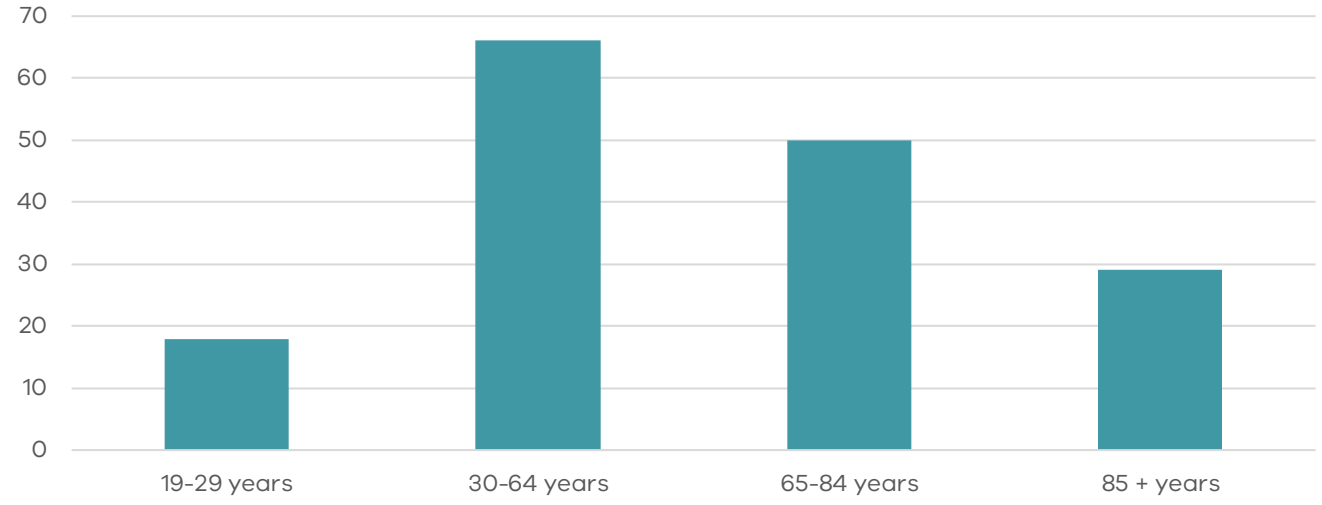
Public hospital reported sentinel events compared to reported ISR 1 incidents (VAHI data extract), 2017–2020



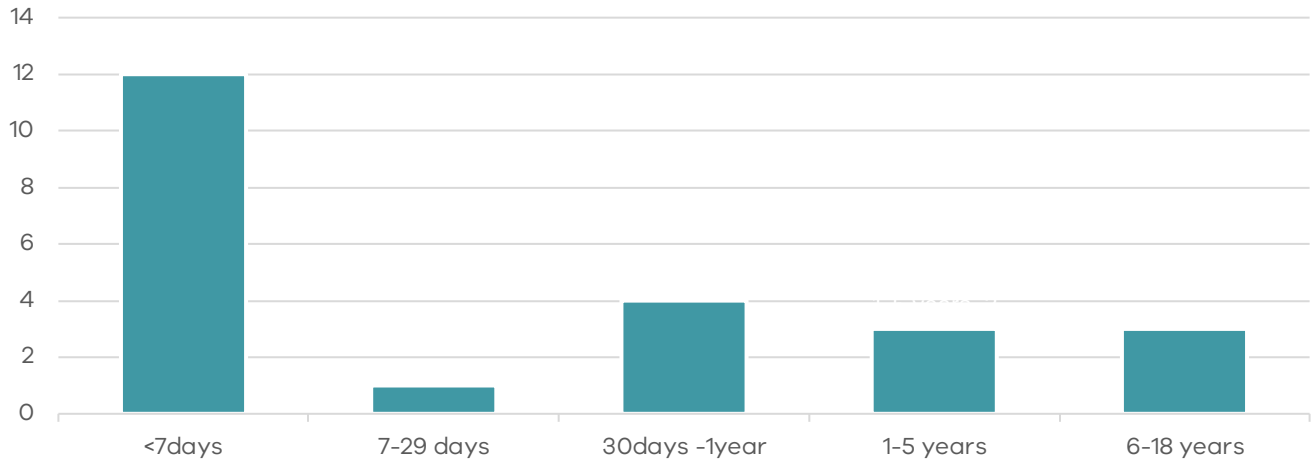
Age of affected patient 2019–20

Sentinel events affect patients across the lifespan. In 2019–20, 163 affected adults and 23 events affected babies, children and adolescents.

Age (years) of adults affected by sentinel events, 2019–20



Age (years/days) of babies, children and adolescents affected by sentinel events, 2019–20

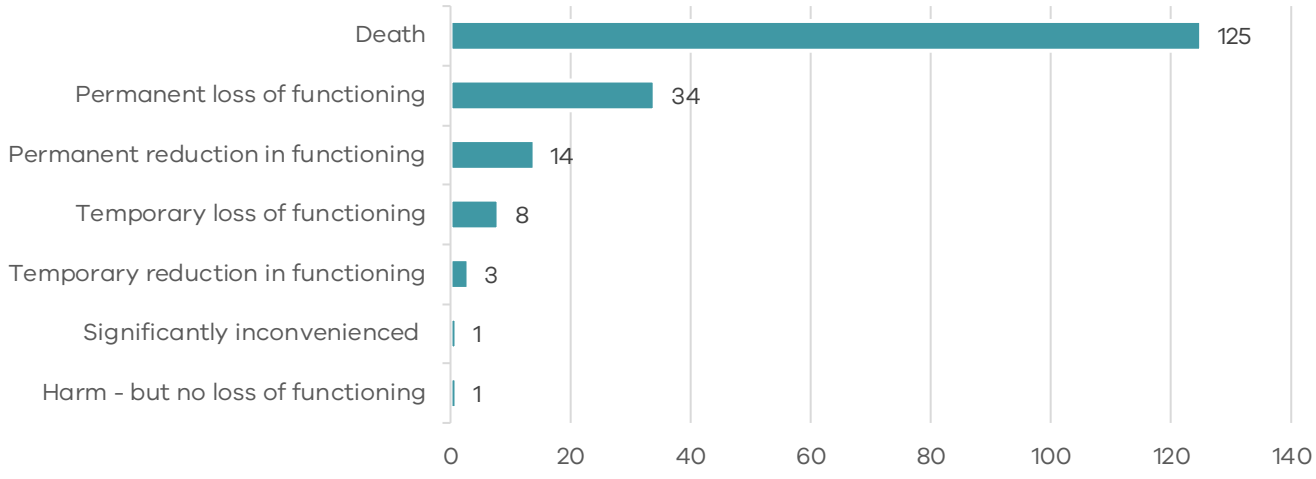


Patient outcome

Two thirds of sentinel events in 2019–20 (67 per cent) resulted in the patient's death, noting also that sentinel events are adverse events that result in serious harm or death for patients.

Health services must indicate the degree of harm to the patient when they notify sentinel events. This categorisation does not always reflect the degree of harm from the consumer's perspective.

Patient outcome of sentinel events, 2019–20



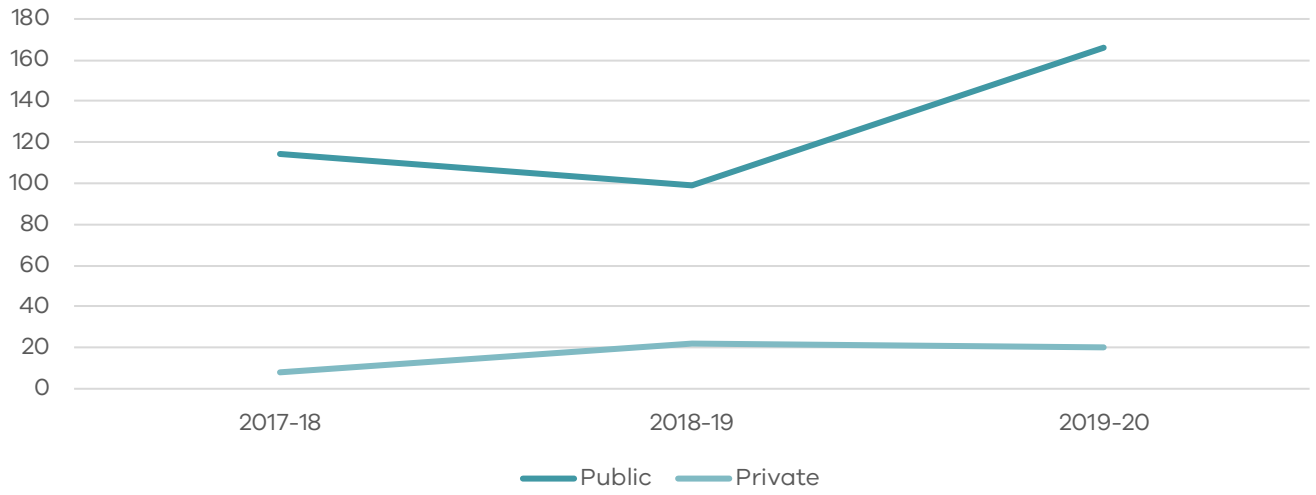
Sentinel event location

Public and private hospital notification

Public health services notify most sentinel events (89 per cent in 2019–20) and were the source of the increase in event notifications this year.

Mandatory sentinel event reporting was introduced for private hospitals in 2019. However, notification rates remained unchanged from the previous year, indicating an opportunity to improve reporting culture.

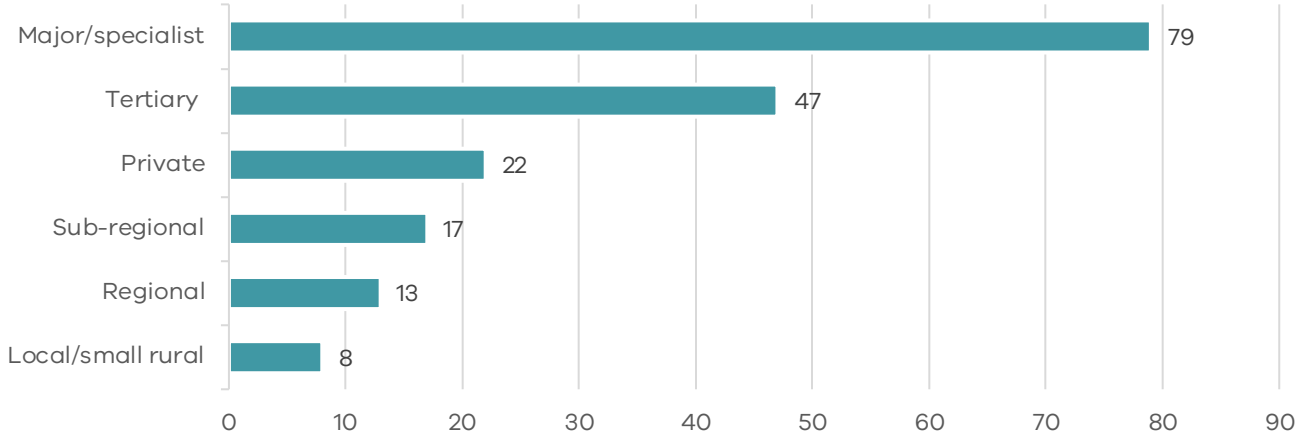
Public and private hospital reporting rate, 2017–2020



Sentinel events occurred within health services of various sizes and capabilities:

- Major/specialist – 43 per cent (79)
- Tertiary – 25 per cent (47)
- Private health services – 12 per cent (22)
- Sub-regional – 9 per cent (17)
- Regional – 7 per cent (13)
- Local/small rural – 4 per cent (8)

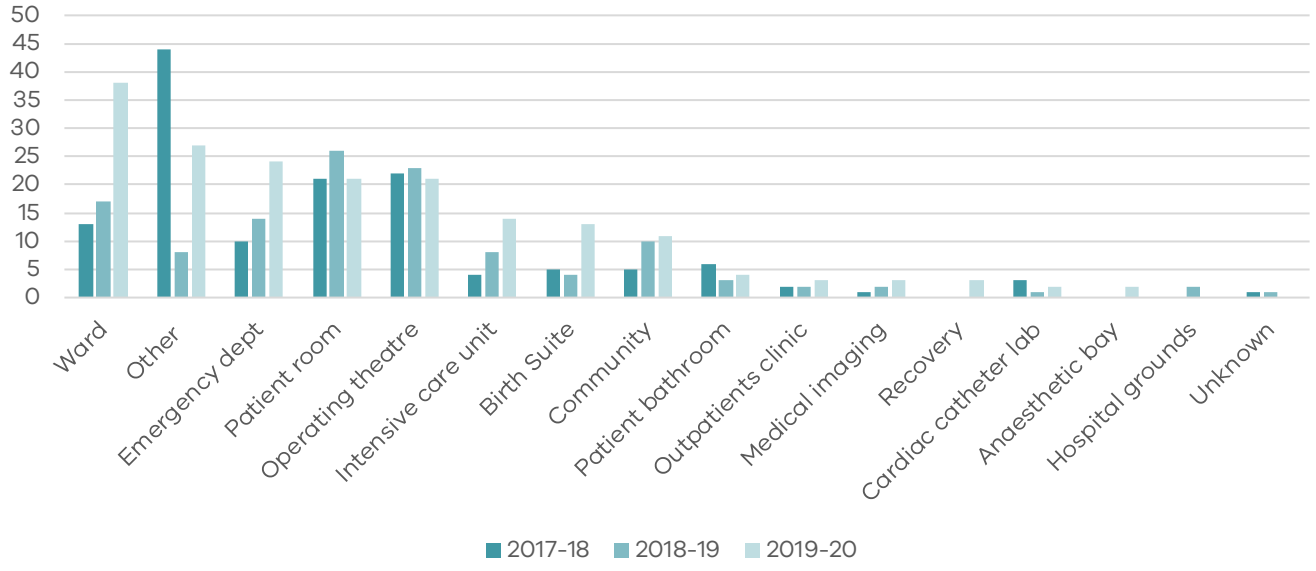
Number of sentinel events by health service type 2019–20



Health service location

The location of sentinel events occurring within hospitals remained relatively steady across the three years, with wards, emergency departments, operating theatres and patient rooms representing a significant number of reports each year. This reflects areas where patients spend a lot of time (i.e. wards and patient rooms) or where complex, high-risk situations unfold (i.e. emergency departments and operating theatres).

Sentinel events by location, 2017–2020



Note – event location is categorised at the time of health service notification. 'Other' may be selected when health services are not yet aware of where the event took place, or if it took place across more than one location.

Timeliness of notifications

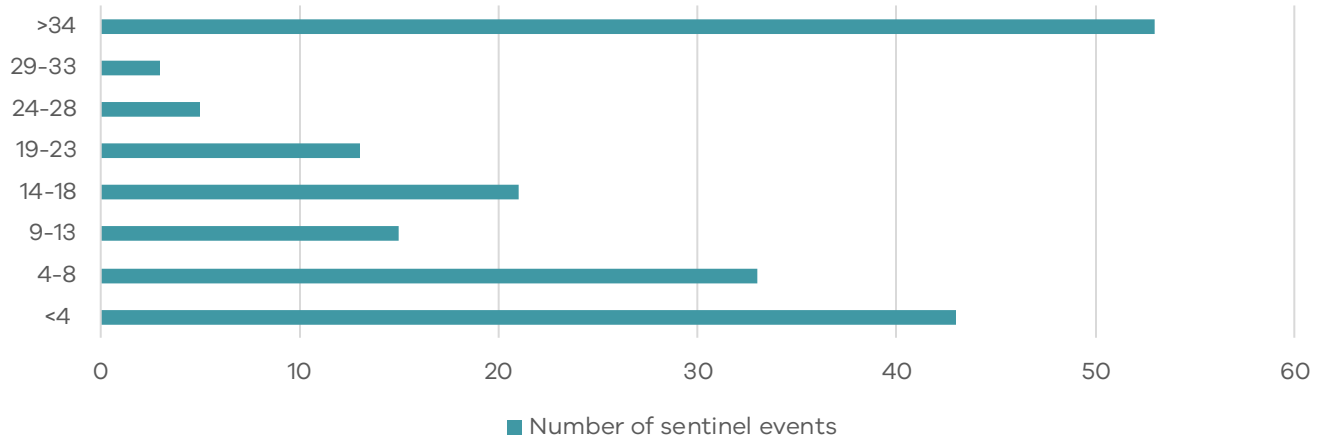
Health services must notify sentinel events within three days of becoming aware of them.

In 2019–20, **23 per cent** of sentinel events were notified within three days of the incident occurring. Sometimes, health services do not become aware of an incident in the three days after it occurred, which may explain some notification delays.

Health services should have internal processes that enable incidents to be identified and notified promptly. This is important so the review process can provide timely information to the affected consumer, avoid memory degradation among those who may provide evidence, and facilitate prompt action on patient safety risks.

Some health services have identified awaiting a medical examiners report as a reason for delay. Events should be notified based on the information available at the time, to ensure timely review. If services are unsure if an event meets the criteria for notification, they should contact the sentinel event program for advice, rather than delay the notification.

Days to notify sentinel event 2019–20



Timeliness of reviews

In 2019–20 the review process was revised to provide health services with more time to complete the full RCA. Health services submit RCA reports in two sections:

- RCA part a and b outline the details and findings of the adverse event analysis.
- RCA part c is submitted later and outlines the recommendations that health services have developed to address the findings of their RCA analysis part a and b.

RCA reports part a and b

For the first time health services provided part a and b as a separate report.

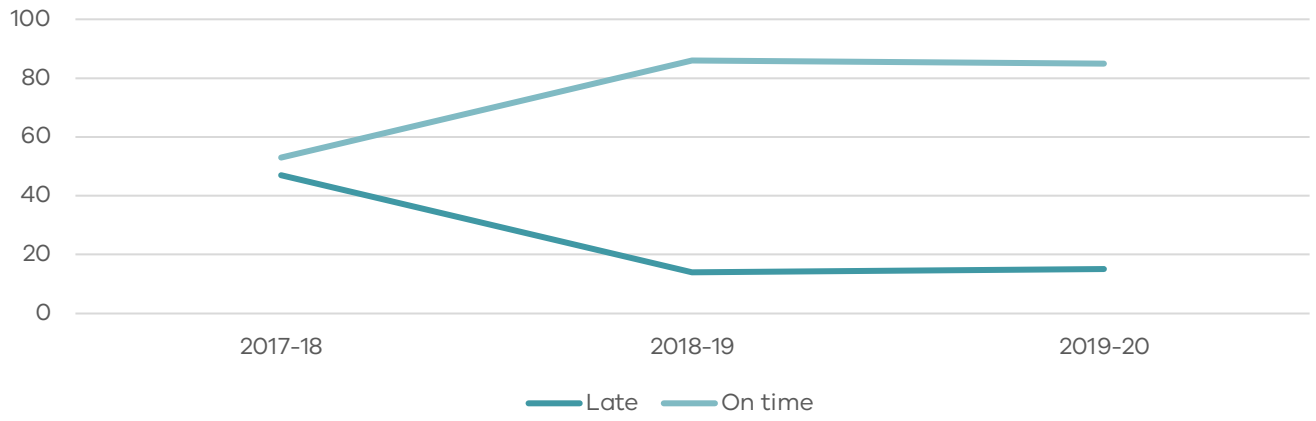
Reports with submission date extensions

Timeliness of RCA part a and b submission decreased slightly to 85 per cent in 2019–20, compared with 86 per cent in 2018–19. This rate largely maintains a previous improvement in reporting timeliness compared to 2017–18.

Report submission within 30 days

The number of reports submitted within the 30-day timeframe has increased, in line with a decrease in extension requests. In 2019–20 nearly 40 per cent (72) of RCA part a and b reports were submitted within 30 days of notification, compared to 36 per cent (43) in 2018–19.

Timeliness of RCA part a and b reporting, 2017–2020



*Reports are categorised as 'on time' if they were submitted on or before the usual 30-day deadline, or in the event an extension was granted, within the timeframe of that extension.

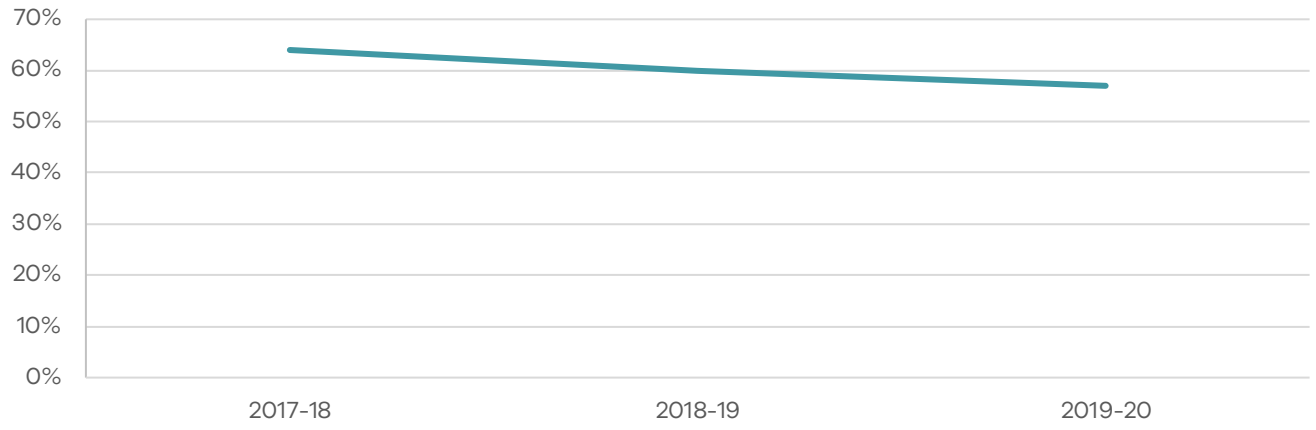
Extension requests

Health services can request an extension for RCA reports part a and b, if they are unable to meet the due date.

In 2019–20, the percentage of RCA reports with a due date extension decreased slightly to 57 per cent compared to 60 per cent last year. This may reflect revised reporting timelines, which give health services more time to complete RCAs. This reduced rate is commendable considering the competing priorities of health services during the coronavirus (COVID-19) pandemic in 2019–20.

Health services that notified and reported more sentinel events made fewer extension requests. This may indicate more strongly embedded review processes. Health services who reported between three and seven sentinel events requested extensions on 72 per cent of reports. The top eight most frequently reporting health services requested extensions on 58 per cent of reports. The health service that reported the highest number of sentinel events completed all reviews within the 30-day timeframe without extensions.

Percentage of RCA reports part a and b with a due date extension, 2017–2020



Reasons for extension requests

The most common reason for requesting an extension was internal staff member unavailability to participate in the review process. This is consistent with data from 2018–19. All review teams should have an executive sponsor that can help to address barriers such as lack of available resources.

Organisations should prioritise adverse event reviews, and alternative staff members considered if staff availability is delaying the review process.

Reasons for RCA extension requests, 2019–20

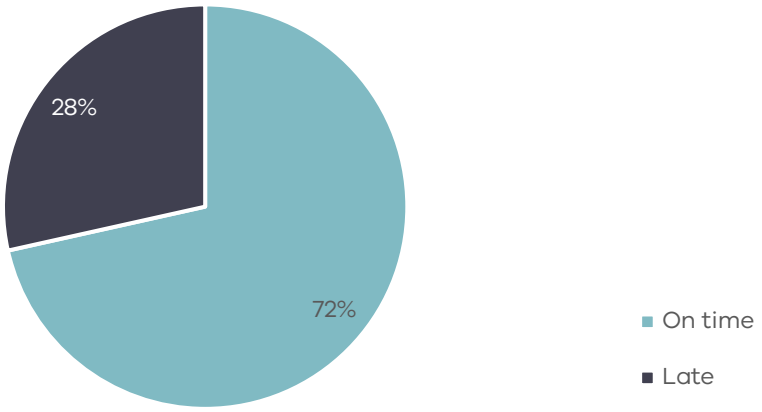
Reason provided by health service	Number of RCA reports
Internal review team member not available	43
Other	27
Delay to secure an external review team member	14
Internal health service governance process	12
Review not commenced	6
Awaiting legal review	1
Organisational workload	1

RCA reports part c

For the first time health services provided recommendations in a separate report – RCA part c.

- 72 per cent of part c reports were received on time.
- 28 per cent were received late.
- 14 RCA part c reports were due for submission after our data collection closed on 30 September 2020.

Timeliness of RCA part c reporting, 2019–20



Further reading and resources

Resource	Author/year	Link
Adverse patient safety events policy	Safer Care Victoria 2019	www.bettersafercare.vic.gov.au/publications/policy-adverse-patient-safety-events
A guide to consumer remuneration	Safer Care Victoria 2019	www.bettersafercare.vic.gov.au/sites/default/files/2019-01/A%20guide%20to%20consumer%20remuneration.pdf
Australian Open Disclosure Framework	Australian Commission on Safety and Quality in Health Care 2013	www.safetyandquality.gov.au/sites/default/files/migrated/Australian-Open-Disclosure-Framework-Feb-2014.pdf
Australian sentinel events list – revised	Australian Commission on Safety and Quality in Health Care 2019	www.safetyandquality.gov.au/our-work/indicators/australian-sentinel-events-list
Consumer representatives on review teams: guides for health services and consumers	Safer Care Victoria 2019	www.bettersafercare.vic.gov.au/publications/consumer-representatives-on-review-teams
Health Complaints Commissioner		www.hcc.vic.gov.au
Health issues centre		www.hic.org.au
Incident review documentation	Safer Care Victoria 2019	www.bettersafercare.vic.gov.au/support-and-training/review-and-response/review-documentation
Medication incidents: an analysis of Victorian Health Incident Management System data	Victorian Agency for Health Information 2020	Reports available only to those services who contributed data. Applicable health service CEOs have been sent the report. Please contact your service's quality unit if you have any questions.
Partnering in healthcare framework	Safer Care Victoria 2019	www.bettersafercare.vic.gov.au/resources/tools/partnering-in-healthcare
PEER platform	Safer Care Victoria	www.bettersafercare.vic.gov.au/support-and-training/review-and-response/peer
Recognition and response systems guidance	Safer Care Victoria 2020	www.bettersafercare.vic.gov.au/clinical-guidance/critical/recognition-and-response-systems

Resource	Author/year	Link
Targeting Zero	The Department of Health and Human Services	www.dhhs.vic.gov.au/publications/targeting-zero-review-hospital-safety-and-quality-assurance-victoria
The London Protocol	Institute for Healthcare Improvement	www.ihi.org/resources/Pages/Tools/SystemsAnalysisofClinicalIncidentsTheLondonProtocol.aspx
Victorian sentinel event guide	Safer Care Victoria 2019	www.bettersafercare.vic.gov.au/publications/sentinel-events-guide

Appendices

APPENDIX 1 – ICPS INCIDENT TYPES

Sub-theme	Description
Clinical process or 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 patients	Recognition, escalation or response to patient deterioration
Self-harm (behaviour)	Behaviour that is associated with temporary or permanent harm, i.e. intended self-harm or suicide
Communication of clinical information	Incident involving a process or problems with the administration of clinical information, i.e. waitlist delay, handover, patient information
Medical device or equipment	An error associated with a medical device/equipment or property, i.e. dislodgement or misconnection of a device, equipment that is inappropriate for the task
Nutrition	Related to an error with a process involving nutrition, i.e. choking, incorrect diet ordered or delivered
Resource or organisational management	Events where lack of resources and deficiencies in organisational management contribute to error, i.e. workload mismanagement, staff availability, bed availability
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 – GUIDE TO STRENGTH OF RECOMMENDATIONS

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, 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

Recommendation strength	Recommendation category	Example
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	New procedure/memorandum/ policy	Remember to check intravenous sites every two hours
Weak actions	Training	Demonstrate the defibrillator during an in-service training

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