Government of **Western Australia**
Department of **Health**

Your safety in our hands in hospital

An Integrated Approach to Patient Safety Surveillance in WA Hospitals, Health Services and the Community: 2016

better health • better care • better value

This publication has been produced by the:

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The PSSU would like to thank and acknowledge the contribution of all clinical and administrative staff who have devoted their time and effort to notify, report, investigate and evaluate clinical incidents and consumer feedback with the goal to improve health care delivery. We would also like to acknowledge the patients and their families who have experienced unintended harm whilst receiving care in our health system. By reporting, investigating, implementing change and sharing the lessons learned, we aim to reduce error and improve patients' safety.

Foreword

In a constantly evolving health system, the objective of safety for every patient, every time, everywhere is a continuous pursuit. New consumers, new staff, new treatments and procedures, new facilities, and new systems all introduce new opportunities for gaps in patient safety to occur. Our health system needs to be equipped to identify and act on these areas of risk in the context of the competing demands of the clinical environment, supporting our clinicians to provide high quality and safe health care to the Western Australian public.

The Western Australian Strategic Plan for Safety and Quality in Health Care 2013-2017 outlines a vision for WA Health that includes 'working in a culture of continuous improvement'. WA Health has been working to this goal for a number of years, reporting and investigating shortfalls in patient safety and implementing interventions to eliminate these shortfalls. The next step in this process is for WA Health to learn what is effective and alter our actions based on these learnings.

The recently launched Closing the Loop Program, endorsed by State Health Executive Forum (SHEF), focuses on the evaluation of effectiveness of recommendations implemented following the investigation of serious clinical incidents. This program is an integral part of ensuring that lessons are learnt from clinical incidents and that these learnings lead to effective improvements in health care delivery and patient care. It is important that through this program WA Health learns from the evaluation of all interventions, successful or not, so that the organisation learns from the shortcomings of the past in order to implement stronger interventions in the future.

While the Closing the Loop Program has commenced, it is not yet fully embedded within WA Health and is a critical component for future focus. Ideally, evidence of WA Health learning through quality improvement activities will be included in future editions of this report, promoting system-wide learning from these activities.

This is the fifth report in the WA Health Patient Safety series providing an integrated review of patient safety and clinical incidents across WA Health. The aim of this report is to provide evidence of the types of patient safety issues that require greater focus that will support WA Health staff to determine appropriate solutions to further improve our health care delivery.

All WA Health staff are responsible for ensuring patient safety improvements are a core component of WA Health culture. Delivering safe care is in our hands.

Karen Lennon
Assistant Director
Patient Safety Surveillance Unit

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Common Acronyms

ACSQHC	Australian Commission on Safety and Quality in Health Care
ANZASM	Australian and New Zealand Audit of Surgical Mortality
CFM	Consumer Feedback Module (complaint database)
CHADx	Classification of Hospital Acquired Diagnoses
CIM	Clinical Incident Management
CIMS	Clinical Incident Management System database
CIMS BAG	Clinical Incident Management System Business Advisory Group
CLU	Coronial Liaison Unit
COPD	Chronic Obstructive Pulmonary Disease
DOH/WA	Department of Health, Western Australia
DVT	Deep Vein Thrombosis
GP	General Practitioner
HMDC	Hospital Morbidity Data Collection
HS	Health Services
ICD-10-AM	International Classification of Diseases 10th Revision-Australian Modification
ICU	Intensive Care Unit
NSQHS	National Safety and Quality Health Service (Standards)
PSSU	Patient Safety Surveillance Unit
QI	Quality Improvement
RACS	Royal Australasian College of Surgeons
ROD	Review of Death
SAC	Severity Assessment Codes
SAMM	Severe Acute Maternal Morbidity
WAASM	Western Australian Audit of Surgical Mortality
WA Health	Western Australian Health

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Patient Safety Process

Western Australian Health (WA Health) is committed to delivering safe and high quality health care which is achieved through the provision of health care that is:

- evidence based
- governed by sound clinical practice
- efficient and focussed on preventing and reducing the impact of clinical incidents.

While prevention is always the best strategy, it is also important to investigate and address clinical incidents when they occur. The reporting and investigation of a clinical incident enables strategies to be put into place to improve the safety of health care delivery and prevent another patient being harmed. To further enhance the clinical incident process, Severity Assessment Codes (SAC; see Figure 1), are used to guide incident analysis, action and escalation. Clinical incidents are categorised according to the harm caused to the patient by the delivery of health care and not the patient's underlying condition/illness.

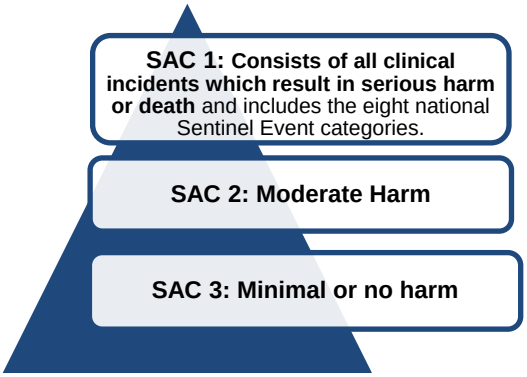
SAC 1 rating refers to clinical incidents resulting in serious harm/death/near miss, and includes the eight nationally reported clinical incidents known as sentinel events:

1. Procedure involving wrong patient or body part resulting in death or major permanent loss of function.
2. Suicide of a patient in an inpatient unit (or whilst on leave).
3. Retained instruments or other material after surgery requiring return to theatre.
4. Intravascular gas embolism resulting in death or neurological damage.
5. Haemolytic blood transfusion reaction resulting from ABO incompatibility.
6. Medication error resulting in death of a patient.
7. Maternal death associated with pregnancy, birth and the puerperium or occurring within 42 days post-delivery.
8. Infant discharged to wrong family or infant abduction.

SAC 2 rating refers to clinical incidents resulting in moderate harm/near miss and

SAC 3 rating refers to clinical incidents resulting in minimal/no harm/near miss.

Figure 1: **Clinical Incidents by SAC**



When a clinical incident is identified, immediate action is taken to provide care to the patient involved. Once this has occurred a clinical incident form is completed to notify senior staff and enable an appropriate investigation to take place. The clinical incident is then assigned a SAC rating that guides the type of investigation method used (see Figure 2). Clinical incidents resulting in serious harm or death (SAC 1) require a detailed and rigorous investigation to be undertaken.

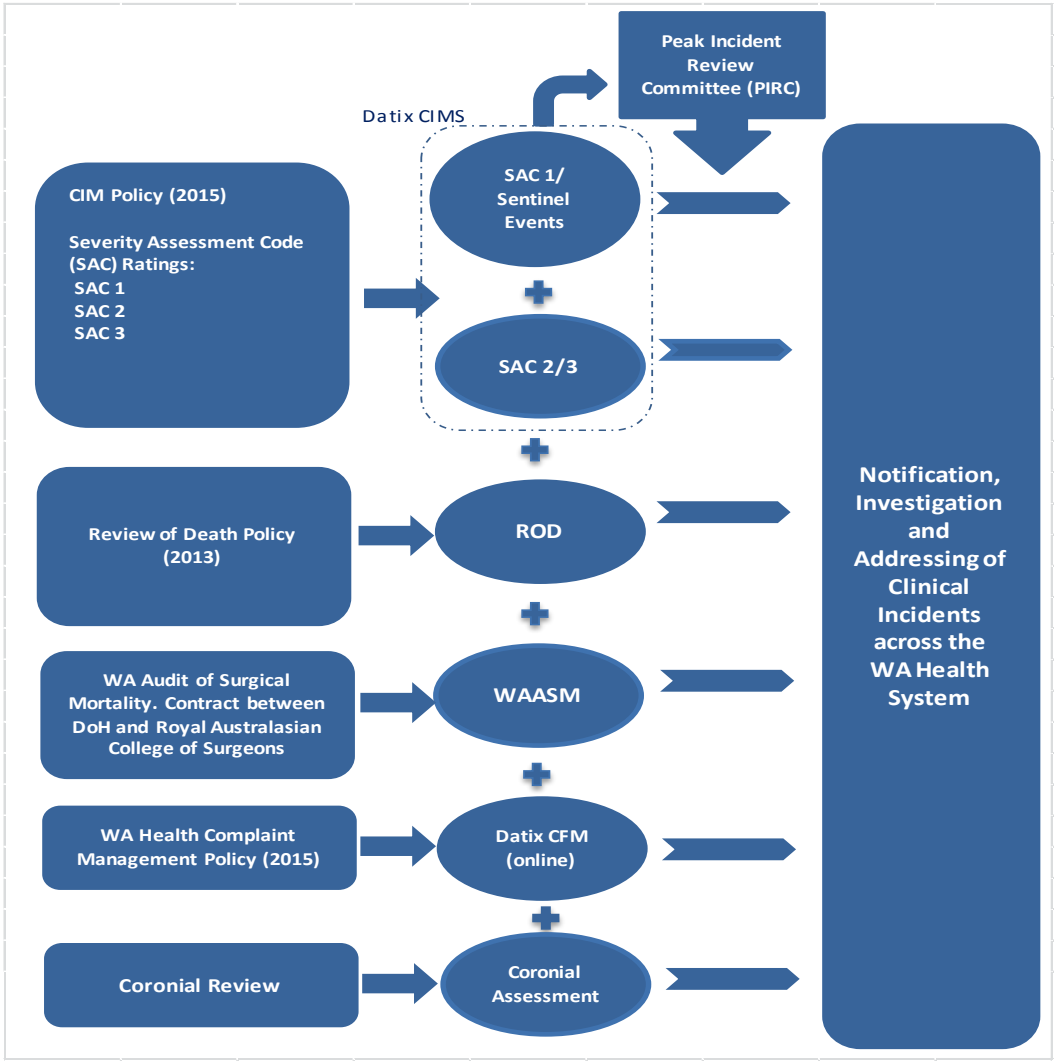
Analysis of the clinical incident is then undertaken which results in the implementation of recommendations to prevent the clinical incident from recurring. Furthermore, all recommendations must be evaluated to ensure that the quality improvement strategies are effective in making health care delivery safer. This clinical incident data is then used at a local and state-wide level to review trends and identify areas where practice improvements can be achieved. Complementing this annual report is the internal release of the Datix CIM Quarterly Report and the quarterly Check-Up Report which is a one page poster report that focuses on specific state-wide clinical incident trends. These reports are available at: http://intranet.health.wa.gov.au/osqh/reports/

Additional strategies to further strengthen the clinical incident management process include the WA Review of Death (ROD) Policy[1] and the WA Audit of Surgical Mortality (WAASM). The purpose of ROD and WAASM is to systematically review patient deaths to identify those that may have been preventable so that lessons can be learnt. These separate state-wide review processes (SAC 1 clinical incident management, ROD and WAASM) ensure that clinical incidents resulting in a patient's death are captured, notified and investigated. All health related findings from coronial inquests are reviewed and assessed, with recommendations considered by Health Services (HS) and implemented

[1] The WA Review of Death Policy (2013) available at: http://www.health.wa.gov.au/circularsnew/attachments/767.pdf

where appropriate. Consumer feedback is also an integral component of CIM as it informs the provision of patient centred care.

Figure 2: **Clinical Incident Management Processes**



Considerable initiatives and resources have been invested to improve patient safety within WA Health. The overarching goal is to address clinical incidents at the local and system level, analyse contributory factors, and raise awareness/undertake education to prevent the recurrence of clinical incidents. Resources to guide clinical incident management include the CIM Policy[2] and CIM Toolkit, which are regularly updated to keep abreast with state and national changes.

[2] Clinical Incident Management Policy (2015) available at: http://ww2.health.wa.gov.au/Corporate/Articles/A_E/Clinical-incident-management-system

Executive Summary

This report provides to the WA public, information and data on how WA Health manages and resolves clinical incidents, consumer feedback and coronial recommendations resulting from health care delivery. During 2015/16 there were 30,356 clinical incidents notified and 27,469 clinical incidents were confirmed. The majority of clinical incidents (n=24,248; 80%) reported in 2015/16 were classified as SAC 3 and resulted in minimal or no harm to the patient.

There were 519 SAC 1 clinical incidents notified and investigated during 2015/16, of which 85 were declassified by 30 June 2016, resulting in 434 confirmed SAC 1 clinical incidents reported by public hospitals, private licensed healthcare facilities, and other contracted non-government organisations at the time of this report. At 30 June 2016 the investigation of 116 of these incidents remained ongoing.

While there has been an increase in the notification of SAC 1 clinical incidents compared to previous reporting periods (407 notifications in 2013/14 and 441 in 2014/15), this should not be taken as a direct indication that the WA health system is becoming less safe. It is recognised that systems of patient care that are proactive in notifying potential clinical incidents and undertaking in-depth investigations to identify contributory factors and improvement strategies are more likely to reduce avoidable harm to patients in the future.

WA Health's Clinical Incident Management (CIM) Policy encourages the notification and investigation of both clinical incidents and near miss events (those that did not result in actual harm to the patient). In 2015/16 of the 434 confirmed SAC 1 incidents 69 (15.8%) described a patient outcome of no harm. This increase in the number of SAC 1 incidents notified during 2015/16 may therefore be due, at least in part, to a maturation of the patient safety culture in the WA health system. It is also noteworthy that during 2015/16 there was reconfiguration of WA's metropolitan health services which may have influenced the number clinical incidents notified as SAC 1.

Fourteen confirmed SAC 1 clinical incidents comprised one of the eight national sentinel event incident categories, with suicide of an inpatient the most frequently reported sentinel event (n=8, with one incident being a near miss). The most frequently reported categories of confirmed Other SAC 1 clinical incidents included missing or absent without leave of any high risk mental health patient/consumer (n=61), hospital process issues (n=57) and complications of an inpatient fall (n=54).

The rate of SAC 1 inpatient clinical incidents continues to remain low and was calculated at two clinical incidents per 10,000 bed days and five clinical incidents per 10,000 separations.[3] Communication factors and issues in relation to policies, procedures and guidelines continue to be the major contributory factors related to the provision of health care identified in the investigation of SAC 1 clinical incidents, and therefore warrant continued focus if improvements in patient safety are to be achieved.

This year data on clinical incidents have been reported for eight of the Australian Commission on Safety and Quality in Health Care's (ACSQHC) National Standards and include all clinical incidents categorised as hospital acquired infections, medication, patient identification, clinical handover, blood and blood products, pressure injuries, clinical deterioration and falls clinical incidents. Confirmed medication (n=6,146; 22.4%) and falls (n=5,304 n=19.1%) clinical incidents remain the most frequent national standards categories reported for 2015/16.

Standard 2, 'Partnering with Consumers' of the National Safety and Quality Health Service Standards (NSQHS) highlights the importance of patient centred care which is responsive to consumer input as an element of high quality health care. Engaging with the consumer in the feedback process enables health services to recognise and understand areas for improvement from a consumer's perspective. The capacity for feedback records in the Datix CFM to link with clinical incident records from the Datix CIMS enables health services to review clinical incidents from the consumer's perspective.

A total of 16,901 feedback items[4] were reported across WA Health throughout 2015/16, of which 46% (7,843) were compliments followed by 4,573 (27%) complaints and 4,485 (27%) contacts. Issues reported across the top four complaint categories of 'Quality of Clinical Care', 'Communication', 'Access' and 'Rights, Respect and Dignity' constituted 82% of the total 7,154 complaint issues reported across WA Health.

The Coronial Liaison Unit (CLU) continues to work effectively with the Office of the State Coroner to share lessons learned from inquested cases to improve future patient care. In comparison to the 2014/15 year, there has been a considerable increase in the number of inquest findings released in 2015/16 relevant to WA Health (16 and 28 respectively).

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[3] The numerator for the SAC 1 clinical incident rate excludes SAC 1 incidents that have not been confirmed, were notified by community health services or private licensed health care facilities and contracted non-government organisations while the denominator includes either separation or bed days data from WA Health hospitals' inpatient activity. Bed day data have been introduced as it is more sensitive than separation data.

[4] It is mandatory for all complaints received by WA Health hospitals and health services to be entered in Datix CFM, and all complaints relating to public patients at public private partnerships (JHC, PHC and SJOG Midland) to be reported to PSSU. Recording of compliments and contacts in Datix CFM is optional. Public private partnerships do not have access to Datix CFM and do not provide PSSU with compliments and contacts data. Contacts are items of feedback regarding a minor aspect of service where the individual is seeking information or assistance, or does not wish to lodge a formal complaint, or is satisfied that the feedback has been adequately addressed at the point of contact, negating the need for any follow up actions.

There were two hearings investigating the deaths of eight persons (Alma Street Centre and Prescription Shopping). One inquest finding was released by a Queensland coroner and made recommendations relevant to all State Health Departments and Paediatric Hospitals. The 28 inquest findings resulted in a total of 21 health-related recommendations that have been considered by the Coronial Review Committee.

All deaths that occur whilst the patient is under the care of a surgeon are notified to the WAASM office during each calendar year, with 586 deaths notified in 2015. The WAASM identified 13 adverse events that caused death in 2014 (four were considered definitely preventable) and eight adverse events that caused death in 2015[5] (one of these was considered definitely preventable).

Patient safety is only one component in the delivery of high quality health care, with WA Health using many different methods to identify, investigate and improve clinical and service outcomes. This annual report will also present data captured from administrative data sources to provide insight into appropriate care delivery and hospital acquired diagnoses. Finally, patient safety is a critically important component of health care delivery. In 2015/16, WA Health provided 561,524 episodes of care to inpatients who accumulated 1,773,638 bed days. Inpatient clinical incidents accounted for 1.5% (n=25,857) of hospital bed days and were associated with 4.6% (n=25,857) of hospital separations. With confirmed inpatient SAC 1 clinical incidents accounting for 1.2% (n=307) of all inpatient incidents.

More work in enhancing communication and engaging staff in adopting safer practices is still required if further advancements in patient safety are to be achieved. Staff need to see that their reporting of clinical incidents is supported by WA Health management who is committed to addressing system factors that can prevent the occurrence of clinical incidents.

While the introduction of online clinical incident reporting within WA Health has been a positive step, it is only through the investigation of clinical incidents and the implementation of sustainable actions to improve health care delivery that risks resulting in patient harm can be identified, addressed and lessons learnt.

The investigation process identifies the factors that contribute to incidents occurring and the actions that can be taken in order to minimise the risk of similar incidents in the future and the harm that may result, however these components alone will not necessarily lead to safer patient care. Without monitoring of the implementation of the actions taken and evaluation of their effectiveness in reducing risks to patient safety the health system cannot truly know whether the changes it has made in response to clinical incidents have led to sustainable improvements in health care delivery.

[5] 2015 data includes that for which the audit process was complete at 27 July 2016.

About this Report

This comprehensive patient safety report for 2015/16 is the fifth WA Health report of this kind to integrate data captured from the:

- Datix CIMS (online)
- Hospital Morbidity Data Collection (HMDC)
- Review of Death (ROD)
- Western Australian Audit of Surgical Mortality (WAASM)
- Coronial review process
- Datix Consumer Feedback Module (CFM) (online) database and other complaints management systems (used by public private partners).

Data for 2015/16 are presented with the following caveats:

- There is a two to three month HMDC data coding/reporting lag.
- There is also a time lag in Datix CIMS for the confirmation of SAC which will cause figures to change over time.
- Datix CIMS is an online electronic clinical incident management system and contains a full 12 months of financial year data.
- Datix CFM is an online electronic complaint management system and contains a full 12 months of financial year data.
- The Coronial data includes a full 12 months of financial year data.
- The ROD data reflects the calendar year 1 January – 31 December 2015.
- The WAASM data are captured by calendar year.
- Classification of Hospital Acquired Diagnoses (CHADx) system includes data for the financial years (2014/15 and 2015/16 (YTD March).
- Hospital Acquired Complications includes data for the financial years (2014/15 and 2015/16 (YTD March).
- Serious Acute Maternal Morbidity (SAMM) incidents data were captured for a two year period from March 2013 to February 2015 for all public hospitals and public patients at Joondalup and Peel Health Campus.

Care should be taken when comparing data from previous reports as the data summarised here are taken from dynamic systems and the numbers will vary over time. This year clinical incident rates have been further refined to only include inpatient data as the numerator over inpatient separation or bed day data as the denominator. This provides a more accurate rate of clinical incidents and therefore rates results cannot be compared to previous years' rates calculations which included clinical incidents reported by community health services or private licensed health care facilities and contracted non-government organisations for which no denominator data is readily available.

This year the report presents data which focus on eight clinical and one consumer National Safety and Quality in Health Care Standards. This report includes sections on partnering with consumers, health care associated infections, clinical handover, blood and blood products, medication, falls, pressure injuries, clinical deterioration, and patient identification clinical incidents.

Declassification of a reported SAC 1 clinical incident may occur following thorough investigation if it is identified that no healthcare causative factors contributed to the incident. Declassification requests are reviewed by two Department of Health senior clinicians with extensive experience in the area of safety and quality in health care. Declassification means that the event is no longer considered to be a clinical incident.

Consumer feedback provides health services with an indication of current areas of concern to consumers and thereby highlights potential areas for service improvements. Implementation of these service improvements is likely to improve the safety of a health service, potentially preventing the occurrence of a future clinical incident. Indeed some clinical incidents are only identified during the review of a consumer feedback item. Although not all consumer feedback items and resultant improvements will directly relate to the quality of clinical care provided, improvements in the quality of a service leading to increased consumer satisfaction are equally valuable and data related to the top four complaint categories has been included in the report.

This report is further strengthened by the inclusion of administrative data from the Hospital Morbidity Data Collection (HMDC) which captures inpatient activity and discharge data, which may include hospital acquired conditions captured by the condition onset flag code.

The HMDC data was also used to extract data for the following code sets:

- Classification of Hospital Acquired Diagnoses (CHADx) system which enables the monitoring of hospital acquired diagnoses. CHADx data have been used in previous annual reports and allows routine administrative inpatient data to be used to assist clinicians in improving the health care delivery.
- The national list of high priority HAC which consists of 16 complications that have been deemed to possibly respond to clinical risk mitigation strategies utilised the HMDC data based on clinical codes provided by the ACSQHC.
- The ACSQHC specified code combinations which addressed Serious Acute Maternal Morbidity (SAMM) incidents.

Clinical Incident Management: Overall Notifications

WA Health uses the Datix CIMS for the notification, investigation, analysis and evaluation of practice improvements of clinical incidents that occur within all public hospitals in Western Australia. Severity Assessment Code (SAC) 1 is used to identify clinical incidents that result in serious harm/death or near miss. It is a mandatory requirement for all public hospitals/health services as well as all private licensed health care facilities and contracted non-government organisations to notify and investigate SAC 1 clinical incidents.[6]

Between 1 July 2015 and 30 June 2016 there were 561,524 separations with inpatients accumulating a total of 1,773,638 bed days from public hospitals and public patients attending Peel Health Campus, Joondalup Health Campus and St John of God Midland.

During 2015/16 there were 30,356 clinical incidents notified of which 25,857 clinical incidents occurred during a hospital stay, with the remainder of clinical incidents reported by emergency departments, outpatient departments, community health services, private licensed healthcare facilities and other contracted non-government organisations. Reported inpatient clinical incidents were associated with 4.6% (n=25,857) of hospital separations. The rate[7] of inpatient clinical incidents observed between July 2015 and June 2016 was calculated at:

- 5 SAC 1 clinical incidents per 10,000 separations
- 40 SAC 2 clinical incidents per 10,000 separations
- 370 SAC 3 clinical incidents per 10,000 separations.

Reported inpatient clinical incidents were associated with 1.5% (n=25,857) of hospital bed days. Findings showed that there were:

- 2 SAC 1 clinical incidents per 10,000 bed days
- 13 SAC 2 clinical incidents per 10,000 bed days
- 117 SAC 3 clinical incidents per 10,000 bed days.

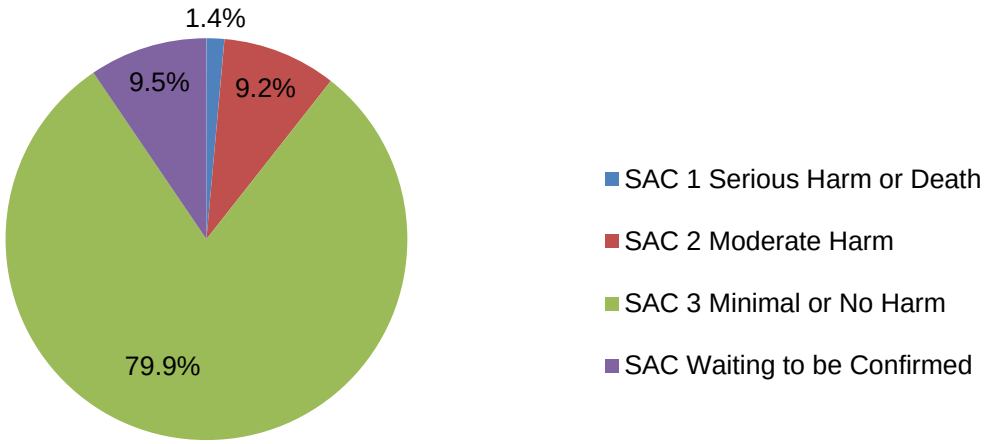
[6] Further information on the licensing of private healthcare facilities can be found at: http://www.public.health.wa.gov.au/2/1350/2/licensing_of_private_healthcare_facilities.pm

[7] Please note that the numerator for the SAC clinical incident rate excludes SAC incidents that have not been confirmed, were notified by emergency or outpatient departments, community health services or private licensed health care facilities and contracted non-government organisations while the denominator only includes either separation or bed day data from WA Health hospitals' in-patient activity.

Findings revealed that 464 mental health clinical incidents were notified that occurred in the community, with 889,930 occasions of service provided to community mental health patients. A rate of 5 clinical incidents per 10,000 occasions of community mental health service (across all SAC ratings) was calculated for the 2015/16 period.

Clinical incidents categorised as SAC 3 (n=24,248; 79.9%), referring to minimal or no harm, were the most frequently reported category of clinical incidents (see Figure 3). The next most frequently reported incident category was SAC 2 clinical incidents (n=2,787; 9.2%) followed by SAC 1 clinical incidents (n=434; 1.4%).

Figure 3: **Percentage of Clinical Incidents by SAC (2015/16)**



SAC 1 clinical incidents include clinical incidents from public and private hospitals and contracted non-government organisations in accordance with their license or contract with WA Health.
Please note that at the time of data extract there were 2,887 clinical incidents that had yet to have a confirmed SAC rating.

The five most frequently reported confirmed SAC 1 clinical incident categories representing 58.5% (n=254) of confirmed SAC 1 incidents are presented in Table 1. Mental health patients who were missing or absent without leave were the most frequently (n=61; 14.1%) reported confirmed SAC 1 clinical incident in 2015/16. Of the 37 incidents that were classified as 'any other clinical incident resulting in serious harm or death', self-harming behaviour accounted for 30% (n=11) of clinical incidents.

Table 1: **Frequency and Percentage of the Top Five Confirmed SAC 1 Clinical Incident Categories (2015/16)**

SAC 1 Category	(n)	(%)
Missing or absent without leave of any high risk mental health patient/consumer	61	14.1
Hospital process issues	57	13.1
Complications of an inpatient fall	54	12.4
The unexpected death of a mental health client	45*	10.4
Any other clinical incident resulting in serious harm or death	37	8.5
Total	**254**	**58.5**

* Includes near miss not resulting in the death of the patient.

The most frequent SAC 1 clinical incident category, and the most frequent involving mental health patients, was 'missing or absent without leave of any high risk mental health patient/consumer' which accounted for 61 SAC 1 clinical incidents, however it should be noted that 37 of these incidents resulted in no harm to the patient and a further 9 incidents resulted in only minor harm. In total there were 51 clinical incidents where the outcome was the death of a mental health patient, comprising 44 incidents categorised as the unexpected death of a mental health client and 7 sentinel events in the category suicide of a patient in an inpatient unit (or whilst on leave).

Table 2: **Frequency of Confirmed SAC 1 Clinical Incident Categories related to Mental Health Care (2015/16)**

SAC 1 Category	(n)	%
Missing or absent without leave of any high risk mental health patient/consumer	61	14.1
The unexpected death of a mental health client	45*	10.4
Mental health clinical deterioration resulting in serious harm**	11	2.5
Suicide of a patient in an inpatient unit (or whilst on leave)	8*	1.8
Total	**125**	**28.8**

* Includes near miss not resulting in the death of the patient.
** This is a new category added during 2015/16. Data for 2015/16 represents incidents notified from September 2015 to June 2016.

The five most frequently reported Tier One incident types represent 67.6% (n=18,277) of all confirmed SAC 2 and 3 clinical incidents reported during the 2015/16 period (see Table 3). Medication incidents (n=6,131; 22.7%) and behaviour (n=4,170; 15.4%) were the most frequently reported SAC 2/3 clinical incidents notified in 2015/16.

Table 3: **Frequency and Percentage of the Top Five Tier One Incident Types for Confirmed SAC 2 and 3 Clinical Incidents (2015/16)**

Tier One Incident Categories SAC 2/3	(n)	(%)
Medication	6,131	22.7
Behaviour	4,170	15.4
Falls*	3,547	13.1
Documentation	2,631	9.7
Therapeutic Processes/Procedures	1,798	6.7
Total	**18,277**	**67.6**

Remaining incident types included: administrative processes, anaesthesia care, blood/plasma products, diagnostic processes/procedures, environmental hazards, health care associated infections, maternity care, medical devices/equipment, medical gases/oxygen, neonatal care, nutrition, personal property/data/information, and pressure injuries.
*Tier One category is actually titled patient accidents/falls with patient accidents excluded from this figure.

Data presented in Table 4 are based on the top five Tier One categories of which the top five Tier Three incidents types accounted for 22.6% (n=6,105) of all confirmed SAC 2 and SAC 3 clinical incidents. Findings revealed that physical aggression had the highest frequency with 1,812 behaviour incidents citing this category. In 1,546 clinical incidents, documentation was found to be ambiguous, incorrect or incomplete.

Table 4: **Frequency and Percentage of the Top Five Tier Three Incident Types for Confirmed SAC 2 and 3 Clinical Incidents (2015/16)**

Tier Three Incident Type SAC 2/3	(n)	(%)
Behaviour: Physical aggression	1,812	6.7
Documentation: Ambiguous/incorrect/incomplete	1,546	5.7
Falls: When standing up/sitting down	1,246	4.6
Medication: Dose omitted	1,109	4.1
Therapeutic Processes/Procedures: Treatment/procedure was incomplete/incorrectly performed	392	1.5
Total	**6,105**	**22.6**

Data on eight of the ACSQHC's National Standard Categories accounted for 71.1% (n=19,511) of all confirmed clinical incidents (see Table 5). Results show that medication (n=6,146) and falls (n=5,250) clinical incidents were the most frequently captured of the eight National Standards.

Table 5: **Frequency and Percentage of Confirmed Eight National Standard Indicators (2015/16)**

Eight National Standards		(n)	(%)
Standard 3:	Preventing and Controlling Healthcare Associated Infections	548	2.0
Standard 4:	Medication Safety	6,146	22.4
Standard 5:	Patient Identification and Procedure Matching	3,265	11.9
Standard 6:	Clinical Handover	2,489	9.1
Standard 7:	Blood and Blood Products	140	0.5
Standard 8:	Preventing and Managing Pressure Injuries	1,147	4.2
Standard 9:	Recognising/Responding to Clinical Deterioration	526	1.9
Standard 10:	Preventing Falls and Harm from Falls	5,250	19.1
Total		**19,511**	**71.1**

SAC 1 Clinical Incidents

The reporting of SAC 1 clinical incidents is mandatory for WA public hospitals, all private licensed health care facilities and contracted non-government organisations (in accordance with their license or contract with WA Health). The 2015/16 reporting period is the second complete period Health Services have reported SAC 1 clinical incidents via the web-based Datix CIMS.

In 2015/16, 519 SAC 1 clinical incidents were notified by WA public hospitals, private licensed health care facilities, and contracted non-government organisations. At the time of this report, the investigation of 403 of these incidents had been completed and 85 SAC 1 clinical incidents had been declassified, resulting in 434 confirmed SAC 1 clinical incidents (based on data as of 30 June). The investigation of 116 SAC 1 clinical incidents notified during 2015/16 remained ongoing at 30 June 2016.

Of these, fourteen incidents (3.2%) were identified as sentinel events with the remainder of SAC 1 clinical incidents captured as 'Other SAC 1 incidents' (n=420; 96.8%; see Figure 4).

Figure 4: **Percentage of Confirmed SAC 1 Clinical Incidents by Category (2015/16)**

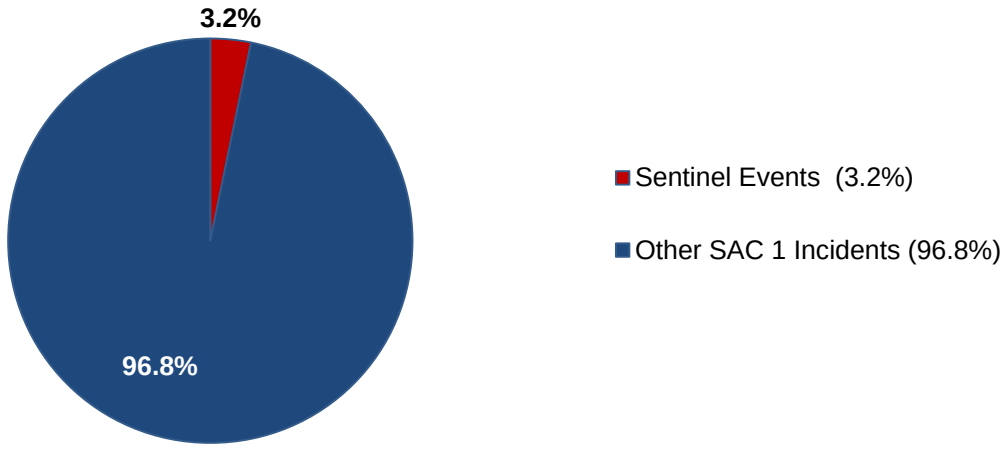


Table 6 illustrates the frequency of confirmed SAC 1 clinical incidents over a five year period. Findings show that there has been an increase in confirmed SAC 1 clinical incidents during 2015/16 compared with the previous two years, however it should be noted that there are 116 SAC 1 incidents for which the investigation has not yet been completed. The increased notification of SAC 1 clinical incidents during 2015/16 may also be due in part to maturation of the patient safety culture in the WA health system, further embedding of the Datix CIMS in its second full year of use, and restructure of the WA health system, which included the opening of a new facility with an inpatient mental health unit.

Table 6: **Frequency of Confirmed SAC 1 Clinical Incidents by National Sentinel Event and Other SAC 1 Clinical Incident Types (2011 to 2016)**

SAC 1 Categories	2011/12	2012/13	2013/14	2014/15	2015/16
Sentinel Events	15	17	10	10	14
Other SAC 1 Incidents	158	257	305	323	420
Total	**173**	**274**	**315**	**333**	**434**

Note that data reflects confirmed SAC 1 clinical incidents and excludes declassified clinical incidents.

Death was noted as the patient outcome in 142 (32.7%) of confirmed SAC 1 clinical incidents. Of these deaths, 51 (35.9%) clinical incidents were either the unexpected death of a mental health client (n=44) or the suicide of a patient in an inpatient unit or whilst on leave (n=7).

Sentinel Event Notifications

Sentinel events represent eight specific types of clinical incident that were endorsed by Australian Health Ministers in 2004 (see Appendix One). Western Australian public hospitals (and later licensed private healthcare facilities) have provided notification of their occurrence since 2004. In addition to the annual reporting of sentinel events within this report, sentinel event notifications by WA Public Hospitals are included in the Australian Government Productivity Commission Report on Government Services (ROGS) annual report.[8]

It should be noted that the Australian Health Ministers' Advisory Council approved a change to the national sentinel event definition regarding maternal death in 2014. Specifically, the new definition regarding maternal death is "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes". This change came into effect on 1 July 2015 with the release of the revised CIM Policy and applies to clinical incidents notified from this date.

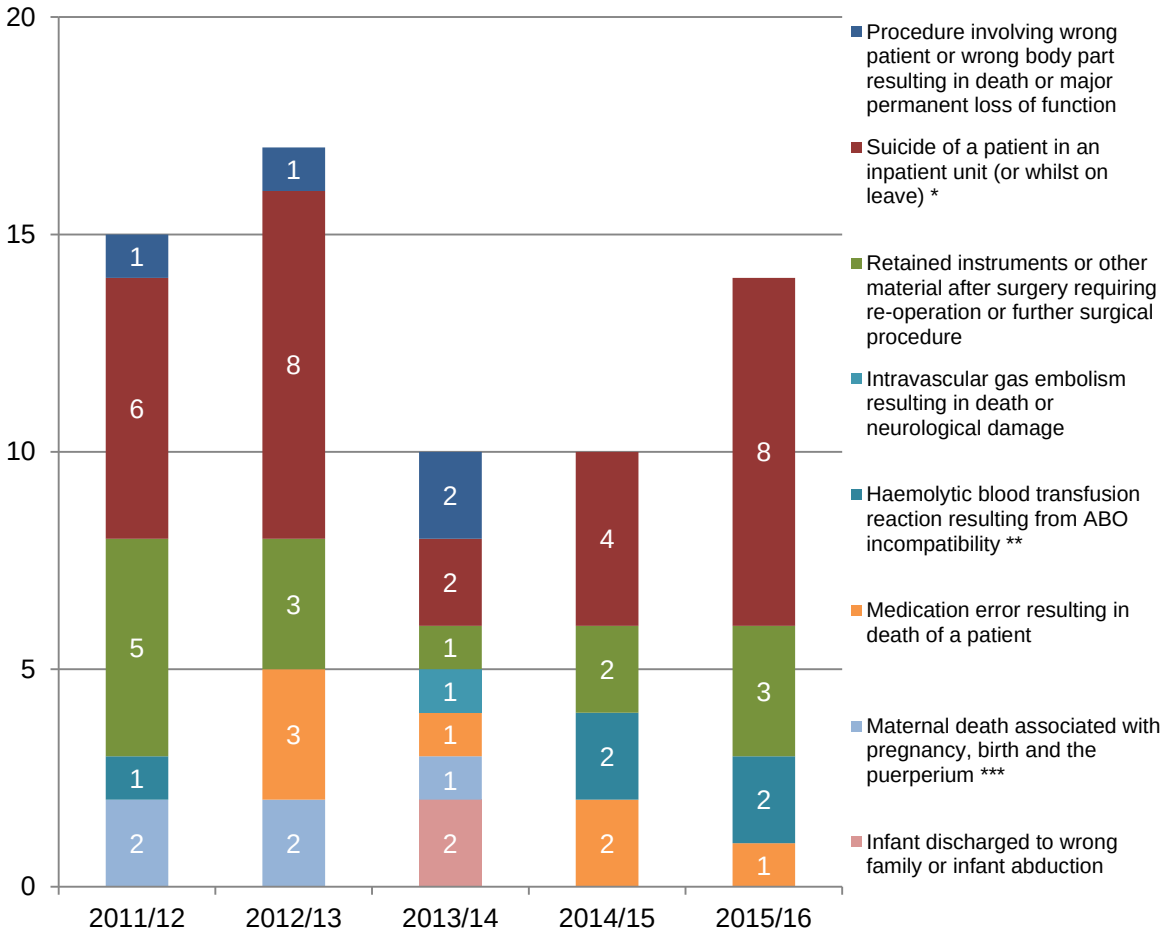
Data relating to the maternal sentinel event category for periods prior to 2015/16 has not been realigned to the new definition, and therefore reflects the previous definition and may include incidents with a patient outcome of either death or serious harm. Furthermore, the change to the maternal death sentinel event definition has resulted in

[8] Productivity Commission Report on Government Services Reports can be accessed at: http://www.pc.gov.au/gsp/rogs

WA Health working with key stakeholders within WA and nationally to address issues with regard to severe acute maternal morbidity (SAMM). Specifically, WA Health investigated SAMM codes within the WA Health HMDC dataset to provide feedback to the ACSQHC, please refer to the Quality of Care Section in this report for further details.

Figure 5 identifies the sentinel events notified from 2011/12 to 2015/16 by category. The most frequently reported Sentinel Event category in 2015/16 was the suicide of a patient in an inpatient unit (or whilst on leave; n=8), however it should be noted that one of these incidents was a near miss that resulted in only minor harm to the patient. There were two notifications of haemolytic blood transfusion reactions resulting from ABO incompatibility however these were also near miss events with no actual harm resulting to the patients concerned.

Figure 5: **Frequency of Sentinel Event by Category (2011/12 to 2015/16)**

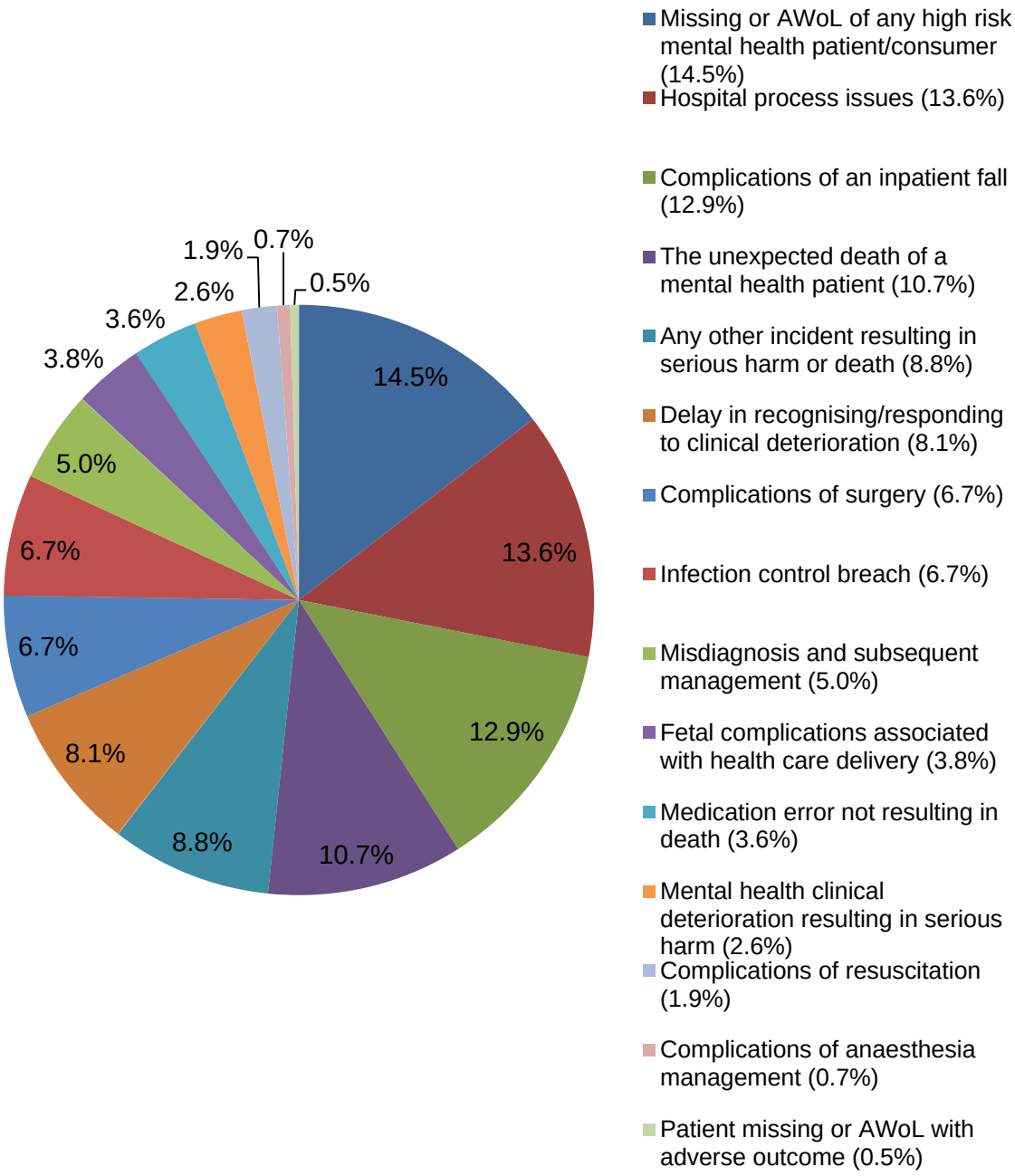


* In 2015/16 one sentinel event notified in the category suicide of a patient in an inpatient unit (or whilst on leave) was a near miss that resulted in only minor harm to the patient.
** In both 2014/15 and 2015/16 all sentinel events notified in the category haemolytic blood transfusion reaction resulting from ABO incompatibility were near misses that resulted in no harm to the patient.
*** The national sentinel event definition regarding maternal death was changed in 2014 and applied in WA from 1 July 2015. Data from July 2015 reflects the updated definition however data for prior periods has not been revised and therefore reflects the previous definition of this sentinel event category (i.e. maternal death or serious morbidity associated with labour or delivery).

Other Confirmed SAC 1 Clinical Incidents

In 2015/16, there were 420 SAC 1 clinical incidents other than sentinel events confirmed (see Figure 6). Missing or absent without leave of any high risk mental health patient/consumer (n=61; 14.5%) was the most frequently reported category of SAC 1 clinical incident, followed by hospital process issues (n=57; 13.6%) and complications of an inpatient fall (n=54; 12.9%).

Figure 6: **Percentage of Other Confirmed SAC 1 Clinical Incidents by Category (2015/16)**



In 2011 the introduction of the SAC rating in the CIM Policy and new categories of incident has shown a substantial increase in Other SAC 1 Clinical incidents notified by HS, which has increased from 158 clinical incidents in 2011/12 to 420 clinical incidents in 2015/16 (see Table 7). Over this period 'complications of an inpatient fall' continues to be one of the most frequently reported SAC 1 incident categories, although encouragingly the frequency of these incidents has declined in 2015/16.

Table 7: **Frequency of Confirmed SAC 1 Clinical Incidents Other than Sentinel Events (2011/12 to 2015/16)**

SAC 1 Categories	2011/12	2012/13	2013/14	2014/15	2015/16
Missing or absent without leave of any high risk mental health patient/consumer (i)	4	26	64	34	61
Hospital process issues	11	20	29	33	57
Complications of an inpatient fall	33	72	55	69	54
The unexpected death of a mental health client	30	31	36	38	45(v)
Any other incident resulting in serious harm or death	13	29	36	50	37
Delay in recognising/responding to clinical deterioration	10	15	27	24	34
Complications of surgery	18	18	17	13	28
Infection control breach	2	2	7	5	28
Misdiagnosis and subsequent management	6	23	8	14	21
Fetal complications associated with health care delivery	4	5	9	18	16
Medication error (not resulting in death)	17	12	14	19	15
Mental health clinical deterioration resulting in serious harm (ii)	-	-	-	-	11
Complications of resuscitation	3	4	1	2	8
Complications of anaesthesia management	2	-	1	2	3
Patient missing or absent without leave with adverse outcome (iii)	5	-	1	1	2
Wrong route administration of oral/enteral treatment (iv)	-	-	-	1	-
Total	**158**	**257**	**305**	**323**	**420**

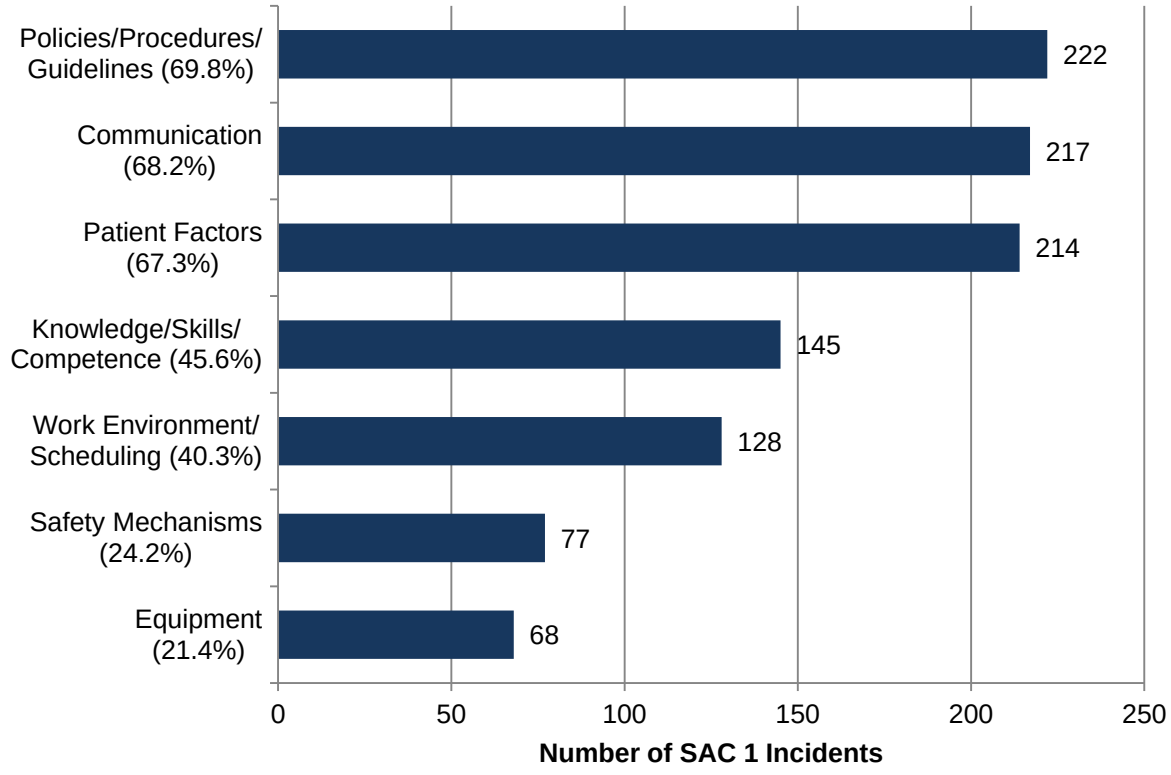
Note: Data reflects confirmed SAC 1 clinical incidents and excludes declassified SAC 1 clinical incidents. The Datix CIMS and SAC 1 databases are cumulative databases, with data changing over time as events are investigated retrospectively. The addition of new incident categories to these databases may have resulted in reclassification of events to different incident categories. Data prior to 2011/12 can be found in previous editions of this report.
(i) Category redefined 1 July 2015. Data for 2015/16 reflects the stated definition. Data for prior periods reflects the previous definition "Absconding of any mental health patient". (ii) New category first included 2015/16 with data representing incidents notified from Sept 2015 to June 2016. (iii) Category redefined 1 July 2015. Data for 2015/16 reflects the stated definition. Data for prior periods reflects the previous definition "Patient absconding with adverse outcome". (iv) New category first included 2014/15. (v) One incident notified during 2015/16 in the category "the unexpected death of a mental health client" was a near miss and resulted in no harm to the patient.

SAC 1 Contributory Factors

Figure 7 shows the contributory factors identified following the investigation of 318 SAC 1 clinical incidents (including sentinel events) by public hospitals, private licensed health care facilities and contracted non-government organisations (representing 73.3% of all confirmed incidents in 2015/16). At the time of reporting, 116 SAC 1 clinical incident investigations were being progressed by hospitals/health services.

The most frequently identified contributory factors related to issues with policies, procedures and guidelines (n=222; 69.8% of investigated clinical incidents). This was followed by communication issues (n=217; 68.2%), and issues related to patient factors (n=214; 67.3%).

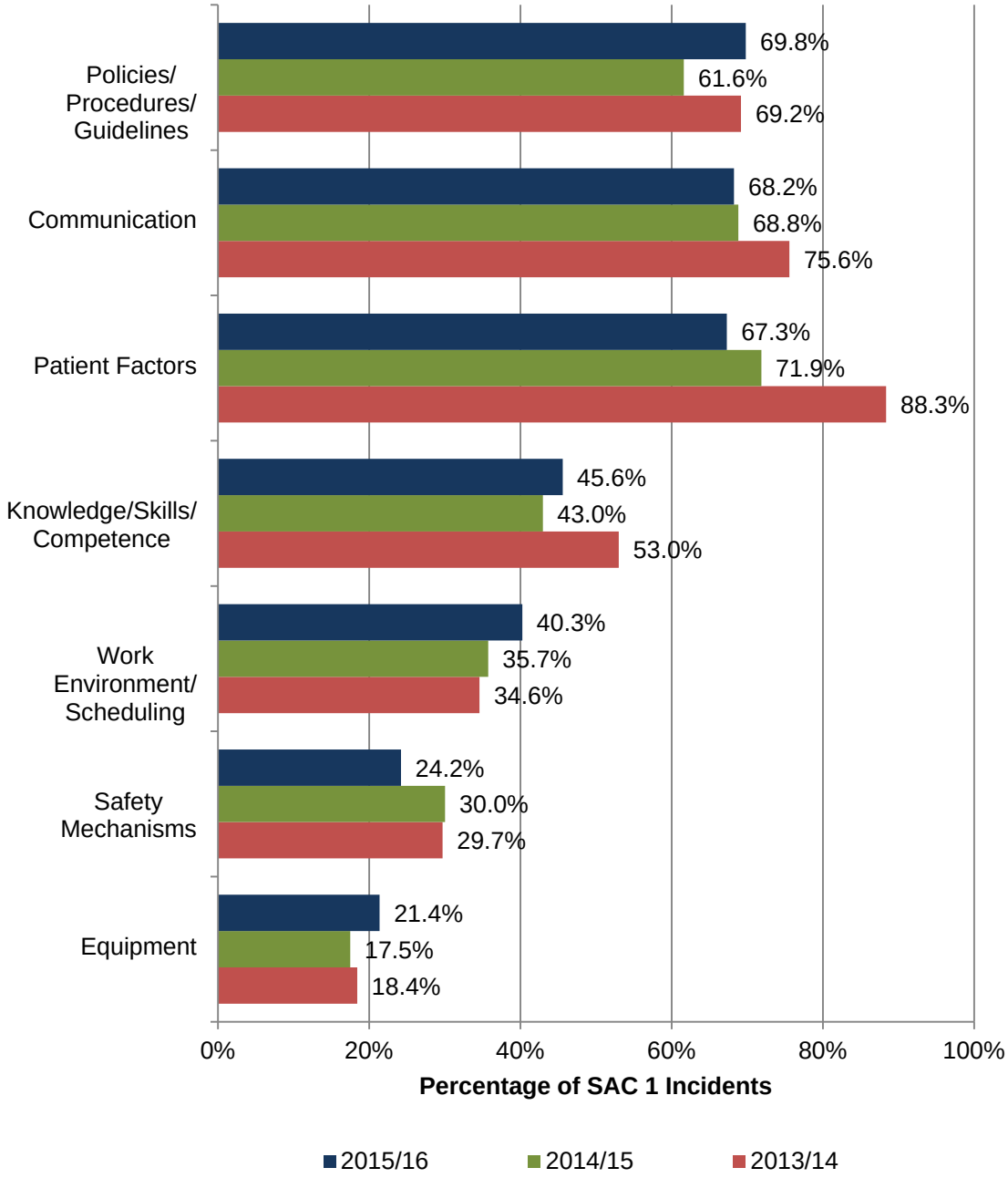
Figure 7: **Frequency and Percentage of Contributory Factors Identified for SAC 1 Clinical Incidents (2015/16)**



Please note that one clinical incident may have more than one contributory factor.

Contributory factors identified in 2015/16 were compared with those identified in the two previous reporting periods (see Figure 8). Over the last three years patient factors, communication issues and policy/procedure/guideline issues were consistently reported as the most frequent contributory factors to SAC 1 clinical incidents.

Figure 8: **Percentage of Contributory Factors Identified for SAC 1 Clinical Incidents (2013/14 to 2015/16)**



Please note that one clinical incident may have more than one contributory factor.

Sentinel Events and Lessons Learnt

Of the fourteen sentinel events reported during the 2015/16 period, 13 investigation reports (93%) had been received at the time of reporting. Contributory factors identified through the investigation of selected sentinel events in 2015/16 are described in Table 8. The main themes revolved around refreshing staff training/education, enhancing communication between staff, and strengthening or establishing policies and procedures to assist in improving patient safety.

Table 8: **Sentinel Events Identified Contributory Factors (2015/16)**

Identified Issues	Hospital/ Health Service Improvements/ Initiatives
Haemolytic blood transfusion reaction resulting from ABO incompatibility (all incidents were near misses with no harm caused to the patient)	
The hospital's Transfusion Policy was not followed leading to the patient's blood sample to be incorrectly labelled with another patient's details.	▪ Regular education regarding safe blood collection procedures is provided at intern teaching sessions.
The hospital's Transfusion Policy was not followed leading to the wrong patient being bled.	▪ Mandatory completion of an E-Learning module for all phlebotomists as part of their annual competency assessment has been implemented. ▪ A hospital-wide poster program regarding patient identification has been developed to cover all inpatient beds.
Suicide of a patient in an inpatient unit (or whilst on authorised leave)	
The patient was in possession of items that could be used to self-harm.	▪ The admission policy for the mental health unit was reviewed and amended and patients are informed of the policy prior to admission. ▪ Policies regarding the searching of patients and removal of property that may cause harm were reviewed and updated.
The absence of a relevant policy, procedure or guideline to outline communication processes between staff when patients do not attend scheduled group therapy sessions.	▪ A procedure to cover communication between staff in these circumstances was developed and a subsequent audit showed a high level of staff compliance with the procedure.

Suicide of a patient in an inpatient unit (or whilst on authorised leave)	
The presence of a ligature point in the patient's room facilitated their ability to self-harm.	▪ An audit of ligature points has been completed.
The patient was being cared for in a non-psychiatric clinical area limiting the ability of staff to maintain frequent observations, particularly after hours.	▪ A procedure was developed to facilitate the timely transfer of patient care to the appropriate specialty once physical health issues are no longer a concern.
Staff did not adequately complete risk assessments and initial assessments in accordance with Health Service policies.	▪ Staff were educated on the State-wide Standardised Clinical Documentation requirements for mental health patients.
The patient was not reported as a missing person until several hours after they left the ward.	▪ Staff were educated on the need to involve police at the earliest possible opportunity when high risk mental health patients go missing.
Retained instruments or other material after surgery requiring re-operation or further surgical procedure	
The complexity of the case was not fully understood at the time of admission leading to acceptance of an emergency surgical case on a pre-scheduled list with limited operating time.	▪ The operating suite on-call policy was revised to include the booking process and case classification, and staff educated on the revised policy.
On-call staff were working outside the intent of the after-hours on-call service leading to staff fatigue due to the length of the procedure.	▪ The operating suite on-call policy was revised to include human factors such as fatigue, and staff educated on the revised policy.
Radiological investigation was not undertaken to check the surgical field when the missing surgical equipment could not be located at the completion of surgery.	▪ The accountable items policy and procedure was revised to strengthen the requirement for radiological investigation where missing equipment cannot be located at the completion of surgery, ▪ Staff were educated on the revised policy.

Key SAC 1 Clinical Incident Messages

Clinical incidents resulting in serious harm or death are of paramount concern to WA Health staff as demonstrated by the increased reporting of SAC 1 clinical incidents for 2015/16. Increased reporting translates to a health care system that is mature enough to address clinical incidents in an open and transparent way by being proactive in making patient safety an inherent component of health care delivery.

While these principles are admirable the fact is that some of our patients are seriously harmed and in some cases die as a result of this harm. Therefore we have an obligation to those patients and their families to learn from our mistakes and put in place mechanisms that prevent those clinical incidents from reoccurring.

Fourteen sentinel events were reported in 2015/16, representing four of the eight nationally reported sentinel event categories. While the two sentinel events notified in the category 'haemolytic blood transfusion reaction resulting from ABO incompatibility' and one notified as the 'suicide of a patient in an inpatient unit (or whilst on leave)' were near miss events, the three sentinel events pertaining to the retention of a foreign object post procedure are examples of serious events that are recognised as being preventable through the implementation of patient safety system processes.

The investigation of one of the incidents which arose from a piece of surgical equipment being retained highlighted several causal factors that commenced with the booking process for a complex emergency surgical case. The strategies implemented to minimise the chance of this happening again included strengthening current policies and procedures to ensure that the complexity and duration of after-hours surgical cases is properly considered during the admission and booking process, and that when surgical equipment cannot be found at the end of surgery all possible methods of locating the missing item are used.

Investigation of incidents where an inpatient completed suicide highlighted the ongoing need to ensure that all aspects of care provided to at-risk mental health patients meet the standards of best practice for admission and risk assessment, throughout their inpatient stay (including periods of leave), and at the point of their discharge from inpatient care.

While sentinel event numbers remain relatively low and similar to previous years the numbers of Other SAC 1 clinical incidents notified continues to increase. Going missing or absent without leave is a major safety issue for patients with a mental health illness because of the risk of increased harm when unwell patients take unauthorised leave from a health care facility. From 1 July 2015 the SAC 1 incident category 'absconding of any mental health patient' was updated to 'missing or absent without leave of any high risk mental health patient/consumer' to assist staff in understanding the use of clinical risk assessments and judgement when reporting mental health patients who abscond, and to allow clinicians to focus on investigating those incidents that result in serious harm or the death of a patient. Notwithstanding this refinement of the CIM Policy there was a substantial increase in the number of confirmed SAC 1 incidents in this category (n=61) during 2015/16, although it should be noted that during this time reconfiguration of Perth metropolitan health services occurred, including the opening of a new facility with an

inpatient mental health unit. Furthermore, none of the incidents in this category resulted in the death of the patient and 37 incidents (60.7%) resulted in no harm to the patient.

In 2015/16 there were 51 confirmed SAC 1 clinical incidents involving the death of a mental health patient (7 suicide of a patient in an inpatient unit (or whilst on leave) and 44 incidents of unexpected death of a mental health client). Many of these deaths related to patients being managed in the community, and the causes of death were attributed to both physical and mental health issues.

In August 2016, at the request of the Department of Health's Peak Incident Review Committee, the PSSU undertook a more detailed review of the contributory factors in 39 confirmed SAC 1 clinical incidents notified as the unexpected death of a mental health client where the investigation into the incident had been completed. Findings of this review showed that the frequencies of contributory factors identified in these incidents is similar to those for SAC 1 clinical incidents generally, with the most frequent being patient factors (identified in 79% of confirmed incidents), communication issues (77%) and issues with policies, procedures and guidelines (also 77%).

Review of the patient factors identified by the investigation of these incidents identified several themes within the patient group including pre-existing mental health condition(s), concurrent medical conditions such as chronic pain, history of suicide attempt or ideation, family history of suicide, alcohol and substance abuse and homelessness. Review of the health care related contributory factors showed the most common themes were:

- Inadequate clinical documentation, including variable adoption of the State-wide Standardised Clinical Documentation for Mental Health Services.
- Risk assessments not being performed, not being performed correctly or not being reviewed in response to clinical deterioration leading to underestimation of the patient's level of risk to themselves.
- Issues around discharge including a lack of or inadequate management plan, lack of communication with family members, delays in sending discharge documentation and referrals to other care providers (e.g. general practitioner, drug and alcohol services) and lack of follow-up post-discharge.
- Communication issues between the multi-disciplinary team (MDT) treating the patient, including lack of discussion at the point of discharge, unstructured clinical handovers and handover policies not being followed.
- Lack of appropriate clinical care or care facility.
- Difficulties communicating with other agencies involved in the care of the patient (e.g. Child Protection and Family Services, Corrective Services).

While it is acknowledged that mentally unwell patients may cause harm to themselves, this review has highlighted the need for all clinicians concerned to manage this vulnerable patient group to the best of their abilities, and in accordance with established standards of best practice, to ensure their ongoing physical and mental wellbeing.

In 2015/16 the SAC 1 incident category 'mental health clinical deterioration resulting in serious harm' was added to the CIM Policy and over this period 11 SAC 1 incidents were

confirmed in this category. Prior to 2015/16 these incidents were most frequently reported as other incidents resulting in serious harm or death.

In 2015/16 there were 57 confirmed SAC 1 clinical incidents categorised as relating to hospital process issues. This is a broad category of incidents that includes events where hospital and health service processes such as referral, transport and transfer (within and between sites), triage, admission, assessment, planning (including discharge planning) and the delivery of care contributed to a poorer than expected outcome for the patient. The increase in clinical incidents confirmed in this category during 2015/16 serves as a timely reminder for all WA Health staff to ensure that the processes used to manage all aspects of patient care are robust and include safety mechanisms to minimise the potential for patients to 'fall through the cracks'.

The number of confirmed SAC 1 clinical incidents categorised as relating to complications of surgery has also increased in 2015/16 and this may reflect embedding of the link between CIM and the WAASM as well as increasing maturity of the health system in identifying events where surgical outcomes were poorer than expected.

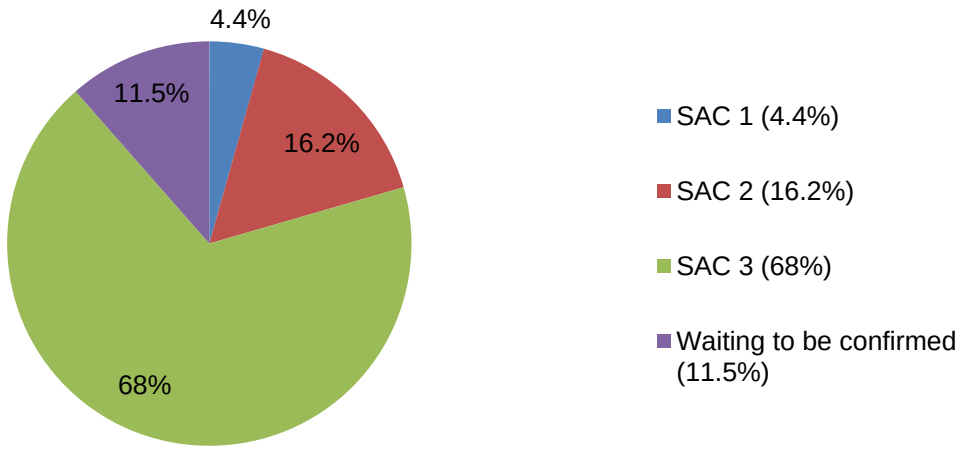
The increase in the number of confirmed SAC 1 incidents relating to infection control breaches is most likely related to clarification of the CIM Policy in July 2015 that healthcare associated infections resulting in serious harm or the death of a patient should be reviewed as potential SAC 1 clinical incidents. In accordance with Standard 3 of the National Standards all WA Health hospitals have extensive programs in place to prevent, identify and manage healthcare associated infections.

In 2015/16 54 SAC 1 falls incidents were confirmed, representing a decrease compared to previous years which may reflect the implementation and subsequent embedding of WA Health's Falls Risk Assessment and Management Plan (FRAMP) Policy in December 2014. It is acknowledged that the best falls interventions can all be in place and a confused patient at high risk of falling may still climb out of bed and fall. However, busy clinicians need to ensure that the right assessments are made at the right times so that the best available interventions are used to keep our most vulnerable and ageing patients from injuring themselves whilst in our care.

Standard 3: Preventing and Controlling Healthcare Associated Infections

Standard 3 of the National Standards refers to preventing and controlling Healthcare Associated Infections (HAI) and specifically refers to systems and strategies that prevent and manage HAI. Figure 9 highlights HAI by SAC rating which shows that there were 619 HAI clinical incidents notified in 2015/16. Of these, 548 were confirmed incidents and 27 (4.4%) were rated as a SAC 1 clinical incident. The majority (n=24; 89%) of SAC 1 clinical incidents related to a blood stream infection stemming from the insertion of an intravenous device, with the remainder of SAC 1 HAI clinical incidents identified as wound infections and one near miss with equipment not correctly sterilised identified before use.

Figure 9: **Percentage of HAI Clinical Incidents by SAC Rating for 2015/16**



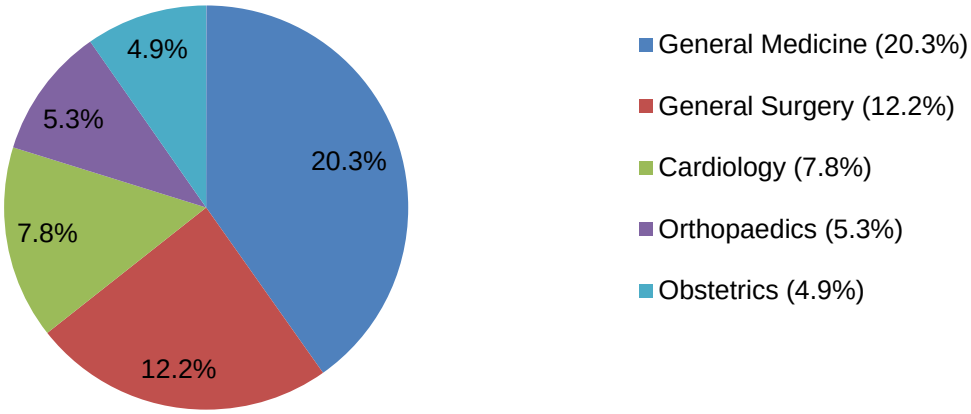
Findings revealed that the majority (n=288; 52.4%) of confirmed HAI clinical incidents were categorised as established processes/protocols not being followed or adhered to (see Table 9). The top five most frequent HAI clinical incidents categories accounted for all confirmed HAI incidents reported for the 2015/16 period.

Table 9: **Frequency and Percentage of Top Five Tier Three Confirmed HAI Clinical Incidents Categories for 2015/16**

Tier 3 HAI Categories	(n)	(%)
Established processes/protocols not followed	288	52.4
Contamination other than sterilisation	147	26.8
Breaches in sterilisation technique	58	10.6
Processes/protocols not established	42	7.7
Contamination due to manufacturing problems	13	2.4
Total	**548**	**100.0**

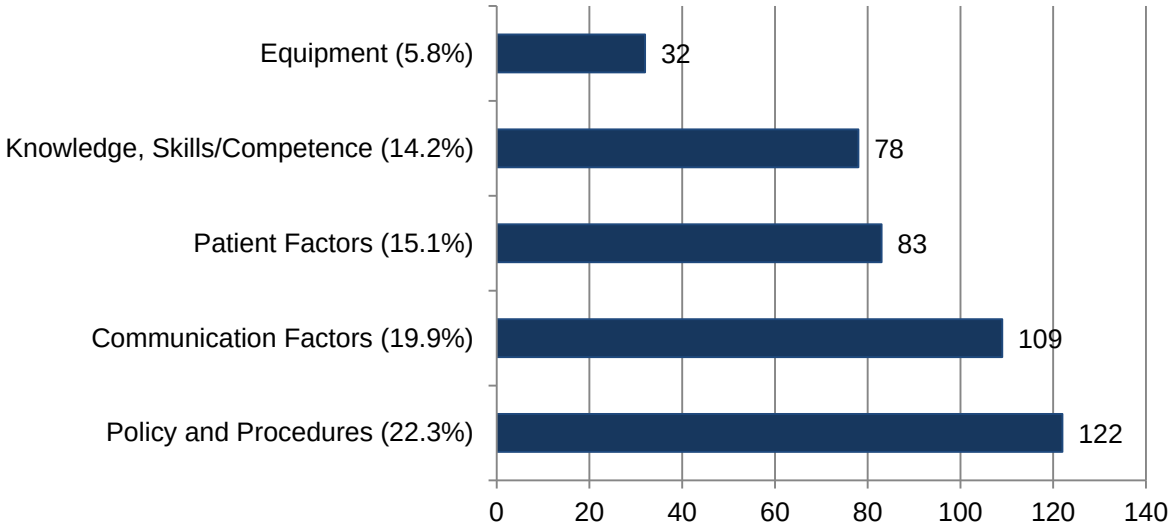
The treating specialties which reported HAI clinical incidents more frequently are listed in Figure 10. These five specialties accounted for 51% (n=277) of all HAI clinical incidents reported in this 12 month time period. The General Medicine specialty reported the most number of HAI clinical incidents (n=111; 20.3%).

Figure 10: **Percentage of HAI Clinical Incidents by Top Five Treating Specialties for 2015/16**



For HAI clinical incidents, 77.4% (n=424) of contributory factors were captured in five main categories (see Figure 11). The most common contributory factor was policy and procedure issues not being followed which were cited in 22.3% (n=122) of all HAI clinical incidents.

Figure 11: **Frequency and Percentage of the Top Five Contributory Factors for HAI Clinical Incidents for 2015/16**



Key Messages: Healthcare Associated Infections

Healthcare associated infections can cause serious morbidity and mortality and as such prevention of HAI is an important determinant to ensuring the safety and well-being of our acutely and chronically ill patients.

The majority (n=24; 89%) of SAC 1 HAI clinical incidents were identified as originating from an intravenous device. These clinical incidents caused serious harm and in one case the patient died. To assist in preventing infection stemming from the insertion of an intravenous device, staff must adhere to the strict protocols that are required for the review and replacement of intravenous devices.

Also targeted approaches to reduce and prevent HAI need to keep focussing on the adoption of strong hand hygiene practices, continuous review of intravenous devices and the appropriate use of antimicrobial therapy.

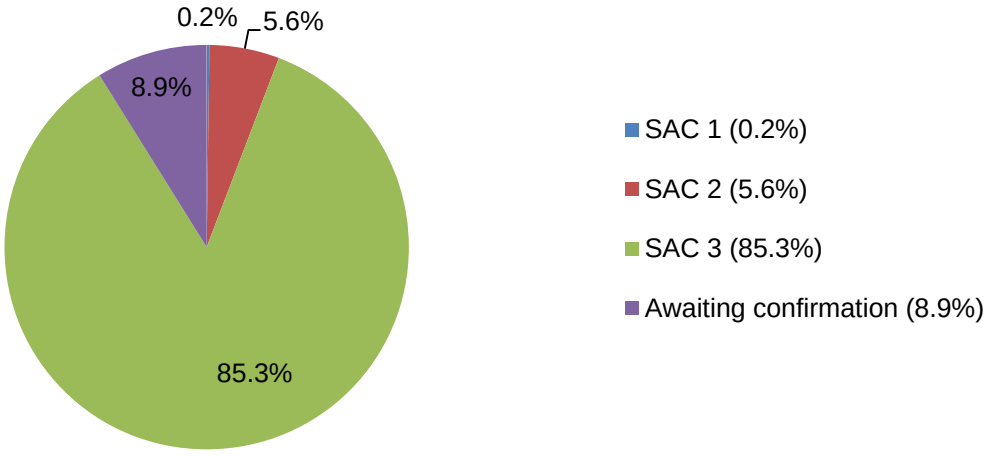
Standard 4: Medication Clinical Incidents

Standard 4 of the National Standards refers to medication safety and "describes systems and strategies to ensure clinicians safely prescribe, dispense and administer appropriate medicines to informed patients" (ACSQHC, 2013). Medicines are the most frequent form of treatment used in health care and as such also have a higher incidence of clinical incidents. Reasons for medication incidents are varied but include prescribing issues, timing of medication administration, omission and overdose of medications. It is therefore, integral that effective system strategies are in place to prevent medication incidents and ensure the delivery of safe care of all our patients. Unfortunately, medication incidents continue to occur despite improvements in standardisation and systematisation of medication procedures.

Medication clinical incidents are captured under the Tier One category within Datix CIMS which includes medications, biologics and fluids. In the 2015/16 reporting period there were 6,744 medication incidents reported which accounted for 22% of all clinical incidents reported.

The majority (n=5,754; 85.3%) of medication clinical incidents were categorised as a SAC 3 clinical incidents with the patient sustaining either minor /no harm. Of the 15 SAC 1 clinical incidents, two incidents resulted in the death of the patient (see Figure 12).

Figure 12: **Percentage of Medication Clinical Incidents by SAC Rating for 2015/16**



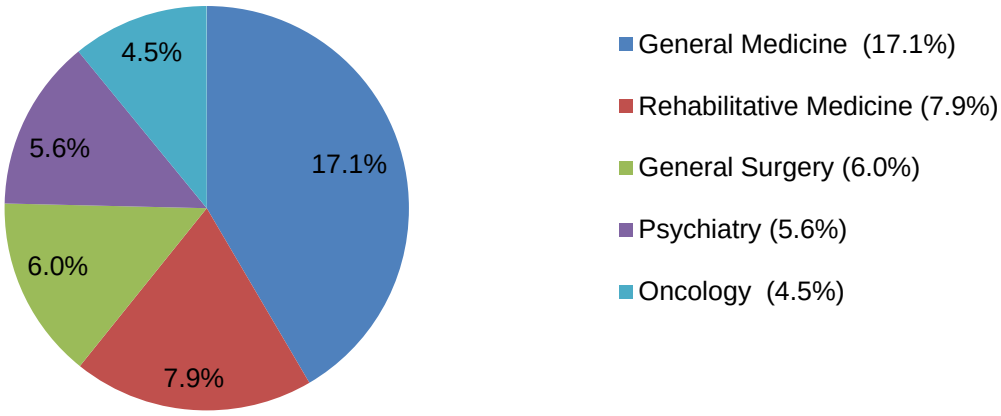
There were 6,146 confirmed medication clinical incidents, with the remainder waiting for the SAC rating to be confirmed. Findings revealed that the most frequent confirmed medication clinical incidents were categorised as omitted medication (n=915; see Table 10). The top five most frequent medication clinical incidents categories accounted for 45.3% (n=2,725) of all confirmed medication incidents reported for the 2015/16 period.

Table 10: **Frequency and Percentage of Top Five Tier Three Confirmed Medication Clinical Incidents Categories for 2015/16**

Tier Three Medication Categories	(n)	(%)
Omitted medication	915	14.9
Incorrect medication dose	579	9.4
Incorrect medication	495	8.1
Extra medication dose given	397	6.5
Incorrect dose (formulation/preparation)	339	6.5
Total	2,725	45.3

Five specialties accounted for 41.1% (n=2,526) of all medication clinical incidents reported in this 12 month time period. The General Medicine specialty reported the most number of medication clinical incidents (n=1,049; 17.1%; See Figure 13).

Figure 13: **Percentage of Medication Clinical Incidents by Top Five Treating Specialties for 2015/16**



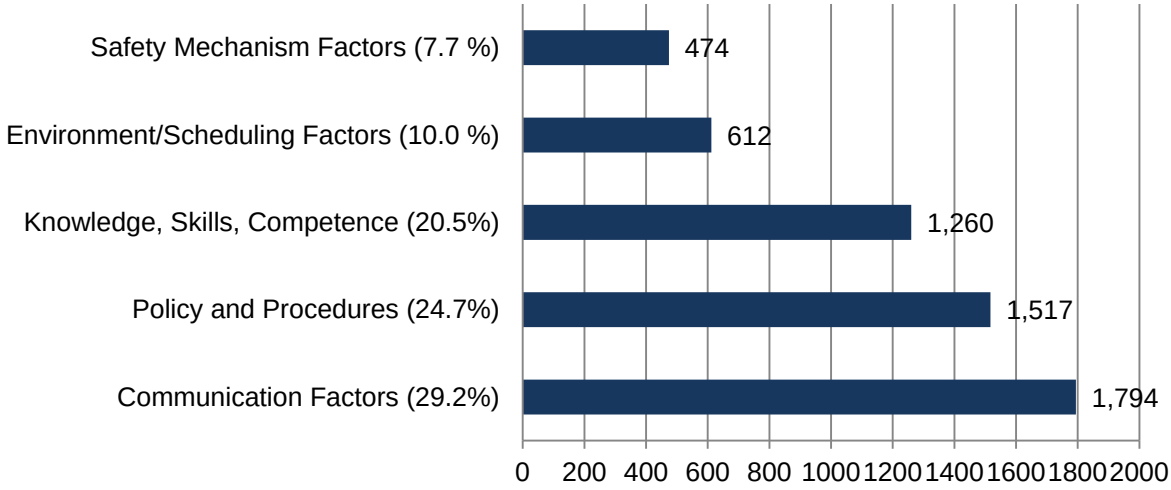
The ten most frequent types of medication involved in a clinical incident accounted for 63.5% (n=3,903) of all medication incidents. Opioid analgesia (n=904; 14.7%) was the most frequently reported medication type followed by antibiotics (n=771; 12.5%; see Table 11).

Table 11: **The Ten Most Frequent Types of Medications Involved in Clinical Incidents 2015/16**

Top 10 Medication Categories	(n)	(%)
1. Opioid analgesics (opioid based pain relievers)	904	14.7
2. Antibacterials (antibiotics)	771	12.5
3. Anticoagulants (blood thinning medications)	456	7.4
4. Insulins (medications used for diabetes)	351	5.7
5. Antihypertensives (medications for high blood pressure)	289	4.7
6. Antipsychotics (medications for psychosis)	276	4.5
7. Non-opioid analgesics (non-opioid pain relievers)	245	4.0
8. Antiepileptics (medications for epilepsy)	212	3.4
9. Cytotoxic antineoplastics (medications used to treat cancer or supress the immune system)	203	3.3
10. Medications for anxiety and sleep disorders	196	3.2
Total	**3,903**	**63.5**

For medication clinical incidents, 92% (n=5,657) of contributory factors were captured in five main categories (see Figure 14). The most common contributory factor was communication factors which were cited in 29.2% (n=1,794) of all medication clinical incidents. Not following policy/guidelines or procedure was the next frequently reported contributory factor (n=1,517; 24.7%).

Figure 14: **Frequency and Percentage of the Top Five Contributory Factors for Medication Clinical Incidents for 2015/16**



Key Messages: Medication Clinical Incidents

Medications continue to be the most frequent type of clinical treatment given to patients. Based on sheer volume it is not unreasonable that medication clinical incidents are the most frequently reported type of clinical incident. However, it is unreasonable given the strict checking processes in place that medication clinical incidents continue to occur.

Results showed that 6,146 confirmed medication clinical incidents were reported across WA Health in 2015/16 from tertiary hospitals through to community clinics. Medication administration of opioid analgesia, antibiotics, and anticoagulants accounted for 34.6% (n=2,131) of all medication incidents in 2015/16. Improving medication safety with regard to these commonly administered medications would be an appropriate start to reducing medication clinical incidents overall.

Human factors continue to play an integral part in medication incidents occurring with communication issues and not following correct policy and procedure reported as the most frequent contributory factors for medication clinical incidents. Training and education of staff is only one small component in preventing clinical incidents from occurring. Clinicians and administrators must address patient safety at both a macro and micro level by ensuring that safety is an inherent component in both workplace redesign and health care delivery.

Medication safety is an integral process in WA health care delivery but it is also a complex process that unfortunately still results in unnecessary errors occurring. WA Health continues to address medication safety as evidenced by the use of computerised analysis of patient information, the implementation of automation dispensing/bar coding, substantial investment in clinical area redesign and improvements in medication charting to name a few. Further complementing these strategies is the ongoing review, investigation and analysis of medication incidents at both a local and state-wide level to not only identify and address immediate medications concerns but also to improve and standardise our medication processes and clinical practices.

Standard 5: Patient Identification Clinical Incidents

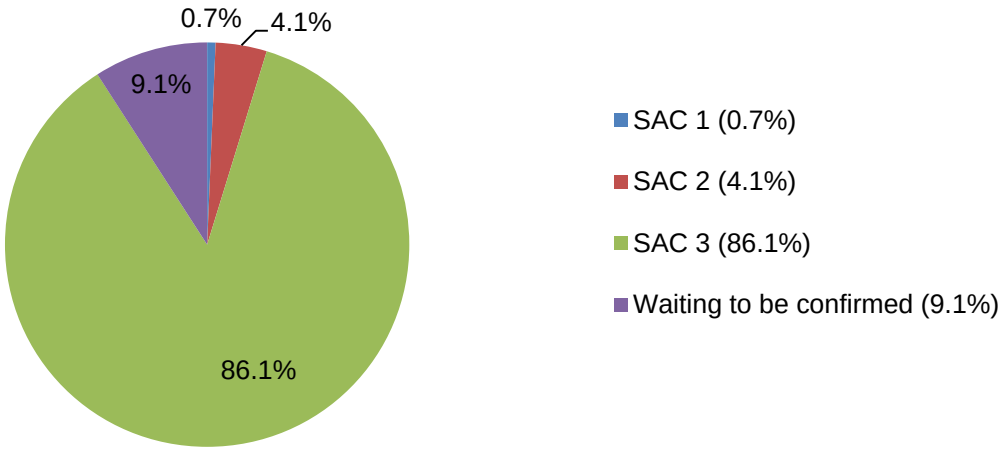
Standard 5 of the National Standards refers to patient identification and procedure matching. The intent of which is to "describe the systems and strategies to identify patients and correctly match their identity to the correct treatment" (ACSQHC, 2013).

Patient identification clinical incidents are captured under Tier Three categories within Datix CIMS which include:

- Product mislabelled
- Product mislabelled and incorrect patient
- Investigation performed on incorrect patient
- Preparation of patient for investigation insufficient, incorrect or incomplete
- Ambiguous incorrect or incomplete documentation
- Illegibility of documentation
- Incorrect patient
- Documentation temporarily unavailable or delay in accessing
- Incorrect treatment or procedure
- Medication dispensed to incorrect patient
- Treatment or procedure performed on incorrect body part/site.

In the 2015/16 reporting period 3,592 patient identification clinical incidents were notified, of which 3,265 clinical incidents were confirmed. The majority (n=3,094; 86.1%) of patient identification clinical incidents were categorised as a SAC 3 clinical incidents with the patient sustaining either minor harm or no harm (see Figure 15).

Figure 15: **Percentage of Patient Identification Incidents by SAC Rating for 2015/16**



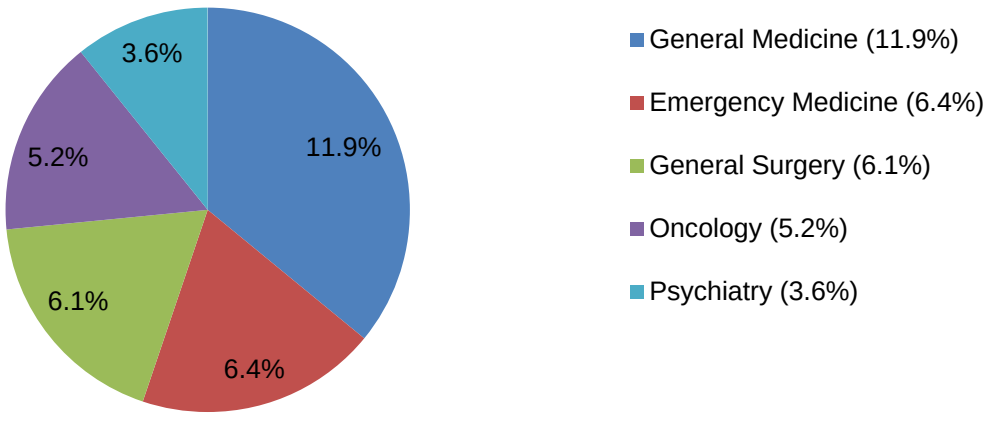
Twenty four patient identification clinical incidents were classified as a SAC 1 clinical incident. Nine of these incidents were identified as near misses with documentation errors identified before the patient was treated. The remaining SAC 1 clinical incidents consisted of investigations performed on incorrect patient, incorrect treatment/procedure given or ambiguous/incorrect or incomplete documentation. Table 12 shows that ambiguous, incorrect or incomplete documentation (n=1,546; 47.4%) was the most frequently mentioned category of patient identification clinical incidents.

Table 12: **Frequency and Percentage of the Top Five Tier Three Patient Identification Categories for 2015/16**

Patient Identification Categories	(n)	(%)
Ambiguous/incorrect or incomplete documentation	1,546	47.4
Incorrect patient documentation	819	25.1
Documentation unavailable or access temporarily delayed	222	6.8
Incorrect product	174	5.3
Incorrect treatment/procedure	141	4.3
Total	**2,902**	**88.9**

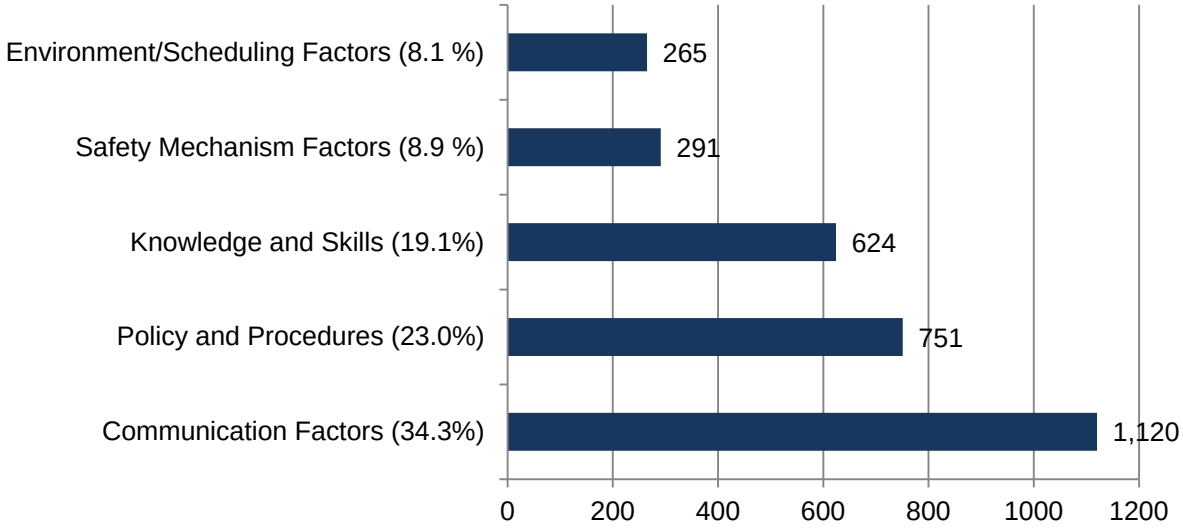
The treating specialties which reported patient identification clinical incidents more frequently are listed in Figure 16. These five specialties accounted for 33.2% (n=1,085) of all patient identification incidents reported in this 12 month time period.

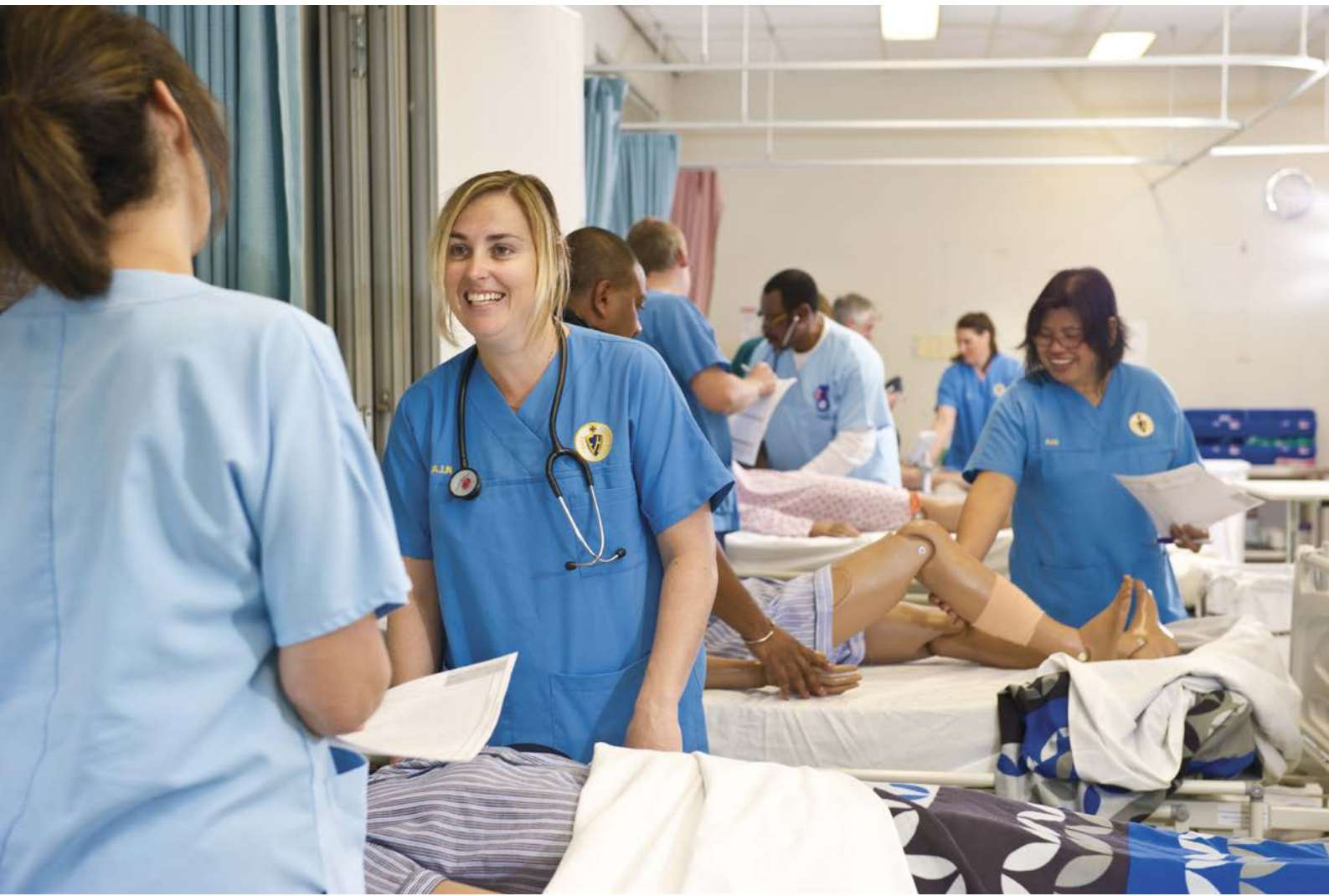
Figure 16: **Percentage of Patient Identification Clinical Incidents by Top Five Treating Specialty for 2015/16**



For patient identification clinical incidents, 93.4% (n=3,051) of contributory factors were captured in five main categories (see Figure 17). The most common contributory factor was communication factors which were cited in 34.3% (n=1,120) of all patient identification clinical incidents. Not following policy/guidelines or procedure was the next frequently reported contributory factor (n=751; 23%).

Figure 17: **Frequency and Percentage of Top Five Contributory Factors for Patient Identification Clinical Incidents for 2015/16**





Key Messages: Patient Identification

Correct patient identification at every step of the patient's journey is absolutely essential for the delivery of safe patient care. A zero tolerance to incorrect patient identification is fundamental to ensuring that the health system works efficiently and harmoniously. WA Health has many system factors designed to prevent errors from occurring, which include patient identification check lists, automated bar coding of patient details and medications to name a few.

As digital technology continues to be adapted within our health care systems it is even more imperative that we continue to undertake due dilligence to ensure that the technology we rely on is always checked for accuracy and quality. This will ensure that our health care is delivered to the correct patient every time.

Unfortunately, there are instances when our safety checks break down and this is when clinical incidents occur. In 2015/16 there were 3,265 confirmed patient identification and procedure matching incidents reported. Fortunately, 86.1% (n=3,094) resulted in either no harm or minimal harm to the patient. However, 24 patient identification incidents were classified as a SAC 1 clinical incident. Nine of these incidents were identified as near misses with documentation errors identified before the patient was treated. The remaining SAC 1 clinical incidents consisted of investigation performed on incorrect patient, incorrect treatment/procedure given or ambiguous/incorrect or incomplete documentation.

Patient identification and procedure matching are complex processes complicated further when our patients are unable to verify their own identity and health care details. Any patient identification improvements will need to be multifaceted to ensure that our administration processes marry with our bedside processes, especially as digital technology continues to permeate all aspects of health care delivery.

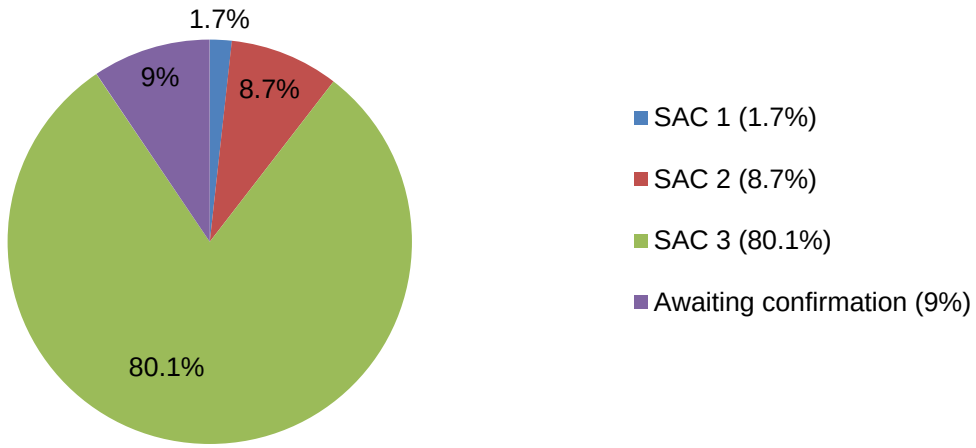
Standard 6: Clinical Handover

Standard 6 of the National Standards refers to clinical handover which describes “the systems and strategies for effective clinical communication whenever accountability and responsibility for a patient’s care is transferred” (ACSQHC, 2013). The Datix Clinical Incident Management classification system was reviewed by the Clinical Incident Management System Business Advisory Group (CIMSBAG) to identify responses that would best capture clinical handover incidents and includes the following categories:

- Incorrect/insufficient/delayed handover
- Discharge processes being inappropriate/insufficient/incomplete
- Medical records/forms/bar codes/labels/results/reports being unavailable/ ambiguous/ incorrect/incomplete/illegible
- Patient discharge information/instructions being unavailable/ambiguous/ incorrect/incomplete/illegible
- Health care referrals/discharge correspondence being unavailable/ambiguous/ incorrect/incomplete/illegible.

There were 2,489 confirmed clinical handover clinical incidents, with a further 260 (9%) clinical incidents waiting for the SAC rating to be confirmed. Clinical handover incidents accounted for 9% of clinical incidents reported in 2015/16. Findings revealed that the most frequent clinical handover incidents were categorised as SAC 3 clinical incidents (80.1%; n=2,201; see Figure 18).

Figure 18: **Percentage of Clinical Handover Clinical Incidents by SAC Rating for 2015/16**



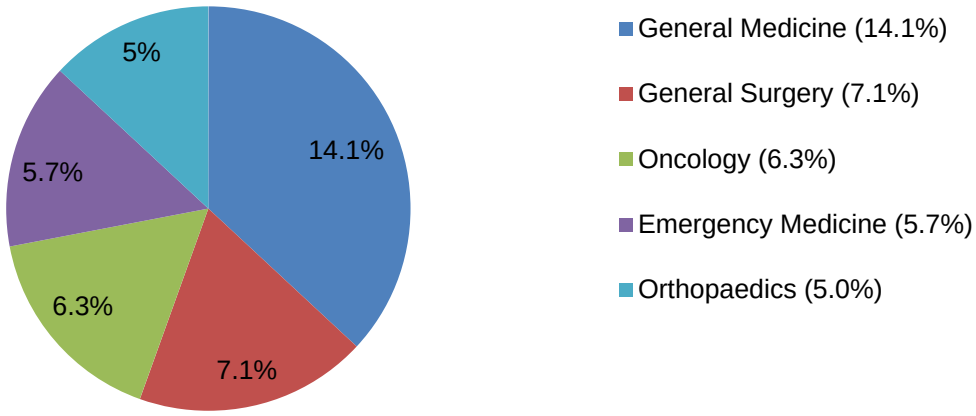
The top five most frequent clinical handover clinical incidents categories accounted for 89% (n=2,214) of all confirmed clinical handover incidents reported for the 2015/16 period. Ambiguous/incorrect or incomplete handover was the most frequently identified clinical handover category accounting for 62.1% (n=1,546) of clinical incidents reported in this period (see Table 13).

Table 13: **Frequency and Percentage of Top Five Tier Three Confirmed Clinical Handover Clinical Incidents Categories for 2015/16**

Tier 3 Clinical Handover Categories	(n)	(%)
Ambiguous/incorrect/incomplete	1,546	62.1
Between health care professionals insufficient/incorrect/ incomplete	246	9.9
Temporarily unavailable/delay in accessing	222	8.9
Incorrect/insufficient handover	106	4.3
Illegible	94	3.8
Total	**2,214**	**89.0**

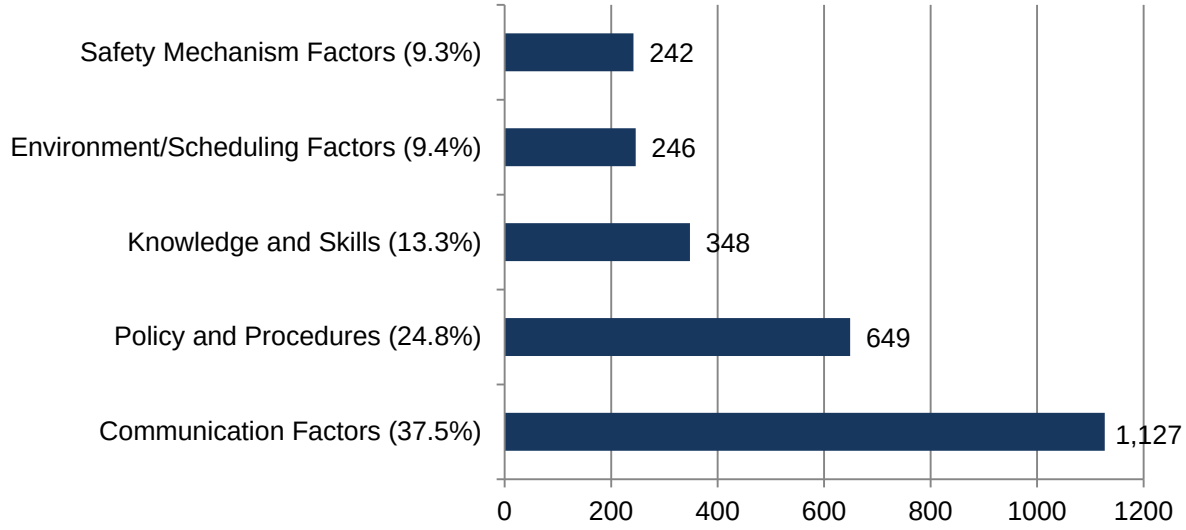
The treating specialties which reported clinical handover clinical incidents more frequently are listed in Figure 19. These five specialties accounted for 38.2% (n=952) of all clinical handover clinical incidents reported in this 12 month time period. The General Medicine specialty reported the most number of clinical handover clinical incidents (n=352; 14.1%; see Figure 19).

Figure 19: **Percentage of Clinical Handover Clinical Incidents by Top Five Treating Specialties for 2015/16**



For clinical handover clinical incidents, 94.3% (n=2,612) of contributory factors were captured in five main categories (see Figure 20). The most common contributory factor was communication factors which were cited in 37.5% (n=1,127) of all clinical handover clinical incidents. Policy and procedures was the next frequently reported contributory factor (n=649; 24.8%).

Figure 20: **Frequency and Percentage of the Top Five Contributory Factors for Clinical Handover Clinical Incidents for 2015/16**



Please note that multiple responses are permitted and therefore the responses are higher than the total number of clinical incidents.

Key Messages: Clinical Handover

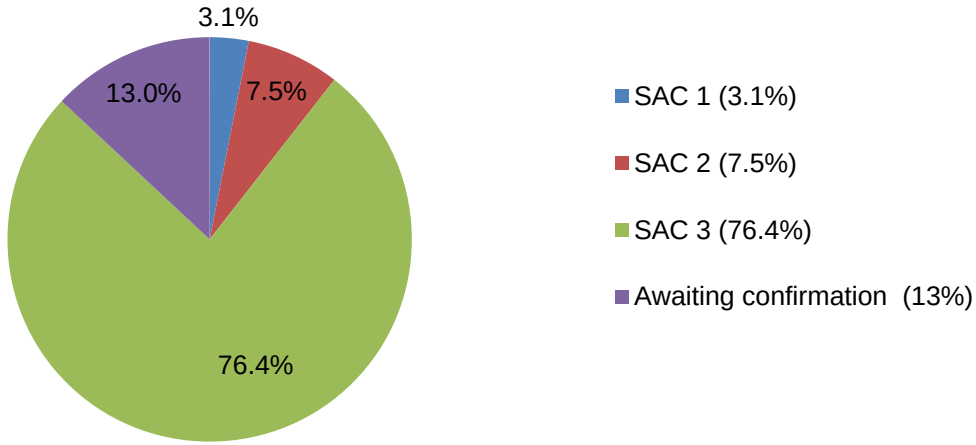
Clinical handover is an inherent part of health care delivery. Each day thousands of handovers are shared safely and effectively between busy clinicians handing over care of their patients. Whether the patient information to be communicated is provided verbally, written hard copy or via electronic copy, it is essential that the information is clear, concise, accurate and apportions appropriate accountability.

A standardised approach to clinical handover is beneficial especially in a dynamic and transient work place such as health. WA Health requires that staff comply with the Clinical Handover Policy and has been using ISOBAR (Identify, Situation, Observations, Background, Agree to a Plan, Readback) as a routine clinical handover process for many years. While clinical handover clinical incidents account for just 9% (n=2,489) of all clinical incidents it is still imperative that improvements in our clinical communications are made. It should also be noted that communication is cited as a significant factor in all clinical incidents across all national health standard categories.

Standard 7: Blood and Blood Products

Standard 7 of the National Standards refers to “systems and strategies for the safe, effective and appropriate management of blood and blood products” (ACSQHC, 2013). There were 140 confirmed blood and blood products clinical incidents, with the remainder waiting for the SAC rating to be confirmed (n=21). Findings revealed that the most frequent confirmed blood and blood products clinical incidents were categorised as SAC 3 clinical incidents (76.4%; n=123; see Figure 21).

Figure 21: **Percentage of Blood and Blood Products Clinical Incidents by SAC Rating for 2015/16**



Of the five SAC 1 clinical incidents which involved blood or blood products, three incidents involved incorrect pathology labelling being sent to the laboratory. In all these cases the error was identified prior to release of any blood products to the clinical areas, with no harm to the patients. In one incident there was a delay in commencing the transfusion and in the remaining SAC 1 clinical incident the ventilated patient was transfused correctly but it was later identified there was a religious consent issue. A further 34 clinical incidents were classified as near misses with staff identifying errors prior to administrating the blood or blood product to the patient.

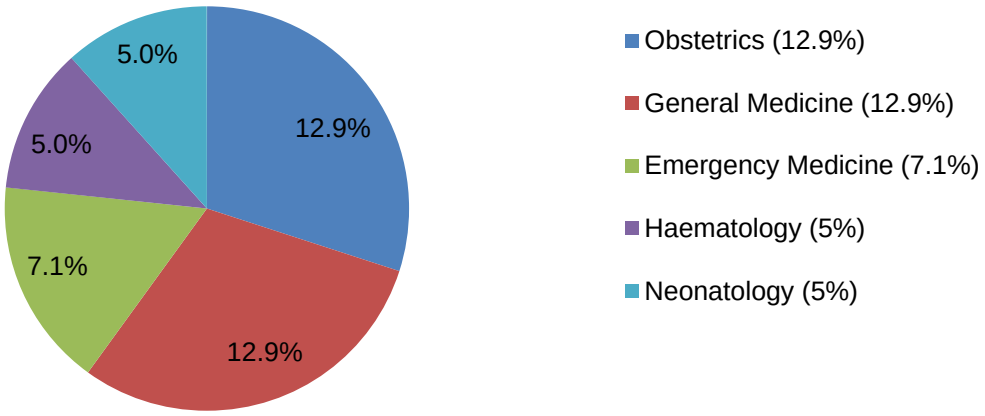
The top five most frequent blood and blood products clinical incidents categories accounted for 40% (n=56) of all confirmed blood and blood products clinical incidents reported for the 2015/16 period (see Table 14).

Table 14: **Frequency and Percentage of Top Five Tier Three Confirmed Blood and Blood Products Clinical Incidents Categories for 2015/16**

Tier Three Blood and Blood Products Categories	(n)	(%)
Product delivery delayed	14	10.0
Insufficient/incorrect storage/refrigeration	12	8.6
Not given when indicated/delayed	12	8.6
Product mislabelled (incorrect patient)	9	6.4
Insufficient/incomplete monitoring of patient	9	6.4
Total	56	40.0

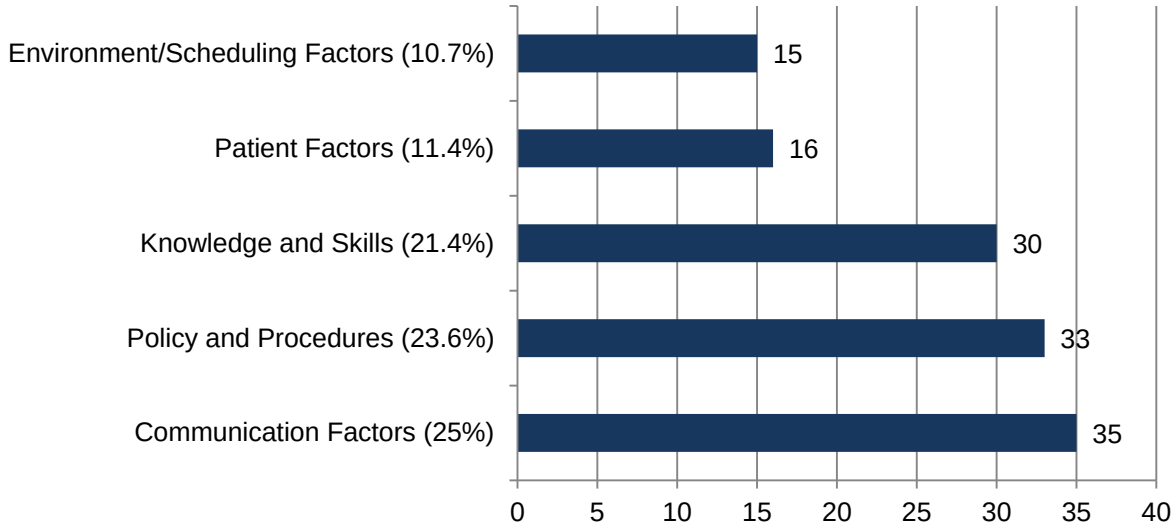
The treating specialties which reported blood and blood products clinical incidents more frequently are listed in Figure 22. These five specialties accounted for 42.9% (n=60) of all blood and blood products clinical incidents reported in this 12 month time period. The Obstetric specialty and General Medicine specialty each reported the most number of blood and blood products clinical incidents (n=18; 12.9%).

Figure 22: **Percentage of Blood and Blood Products Clinical Incidents by Top Five Treating Specialties for 2015/16**



For blood and blood products clinical incidents, 92.1% (n=129) of contributory factors were captured in five main categories (see Figure 23). The most common contributory factor was communication factors which were cited in 25% (n=35) of all blood and blood products clinical incidents. Policy and procedures was the next frequently reported contributory factor (n=33; 23.6%).

Figure 23: **Frequency and Percentage of the Top Five Contributory Factors for Blood and Blood Products Clinical Incidents for 2015/16**



Key Messages: Blood and Blood Products

Haemovigilance and reporting and management of adverse events enhances patient safety through investigation and the adoption of best practice recommendations. While we acknowledge that health care delivery can be complex, demanding and dynamic, we also need to ensure that we follow established processes and procedures that enable blood and blood products not only to be delivered safely but that are also delivered on time.

There were 140 confirmed clinical incidents involving blood and blood products reported in 2015/16. Of these, 26% (n=37) were classified as near miss incidents, highlighting errors ranging from incorrect orders, orders that were contraindicated, incompatiable, or for the incorrect patient. The key message is to check and double check.

Standard 8: Pressure Injury Clinical Incidents

In 2016, the National Pressure Ulcer Advisory Panel redefined pressure injury definitions. "A pressure injury is localized damage to the skin and underlying soft tissue usually over a bony prominence or related to a medical or other device. The injury can present as intact skin or an open ulcer and may be painful. The injury occurs as a result of intense and/or prolonged pressure or pressure in combination with shear. The tolerance of soft tissue for pressure and shear may also be affected by microclimate, nutrition, perfusion, co-morbidities and condition of the soft tissue**."**[9] Pressure injuries in adults occur most commonly on the lower leg or sacral area but can develop anywhere on the body.

There are several stages of pressure injury development and include:

- Stage I: "Intact skin with non-blanchable redness of a localized area."
- Stage II: "Partial-thickness loss of skin with exposed dermis. The wound bed is viable, pink or red, moist, and may also present as an intact or ruptured serum-filled blister."
- Stage III: "Full-thickness loss of skin, in which adipose (fat) is visible in the ulcer and granulation tissue and epibole (rolled wound edges) are often present. Slough and/or eschar may be visible."
- Stage IV: "Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage or bone in the ulcer. Slough and/or eschar may be visible. Epibole (rolled edges), undermining and/or tunneling often occur."
- Unstageable Pressure Injury: "Full-thickness skin and tissue loss in which the extent of tissue damage within the ulcer cannot be confirmed because it is obscured by slough or eschar. If slough or eschar is removed, a Stage 3 or Stage 4 pressure injury will be revealed."
- Deep Tissue Pressure Injury: Persistent non-blanchable deep red, maroon or purple discoloration. Intact or non-intact skin with localized area of persistent non-blanchable deep red, maroon, purple discoloration or epidermal separation revealing a dark wound bed or blood filled blister." 9

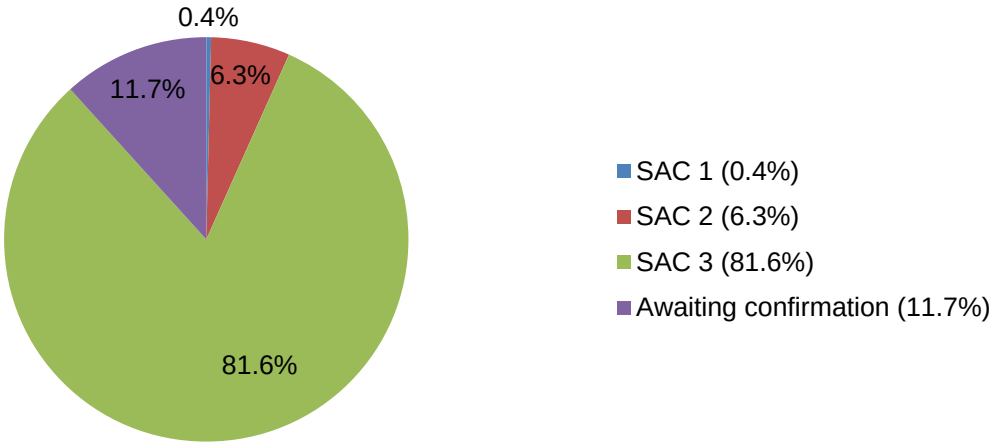
In the 2015/16 reporting period 1,147 pressure injury clinical incidents were confirmed, with a further 152 pressure injury clinical incidents awaiting confirmation. Pressure injury clinical incidents accounted for 4.3% of all clinical incidents reported in this time period.

The majority of pressure injury clinical incidents were categorised as a SAC 3 clinical incidents with the patient sustaining either minor harm or no harm (n=1,060; 81.6%; see

9 http://www.npuap.org/resources/educational-and-clinical-resources/npuap-pressure-injury-stages/ cited 6/9/2016.

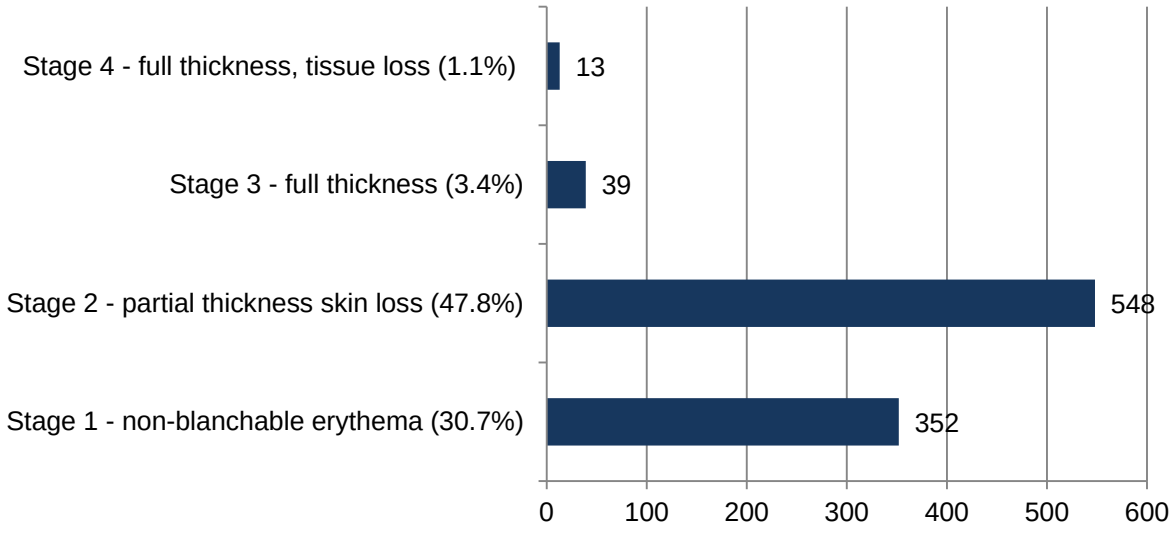
Figure 24). There were five (0.4%) SAC 1 pressure injury clinical incidents reported during 2015/16, one was as a Stage III pressure injury, one was a Stage IV pressure injury and three were reported as a suspected deep tissue injury with the depth of the pressure injury unknown.

Figure 24: **Percentage of Pressure Injury Clinical Incidents by SAC Rating for 2015/16**



Findings revealed that 83% (n=952) of confirmed pressure injuries were staged, with the majority (n=548; 47.8%) of pressure injuries classified as a Stage II with partial thickness tissue loss (see Figure 25). The remainder of pressure injuries had either not been staged (n=80), were unable to be staged (n=76) or suspected depth was unknown (n=39).

Figure 25: **Frequency and Percentage of Pressure Injury Clinical Incidents by Stage for 2015/16**



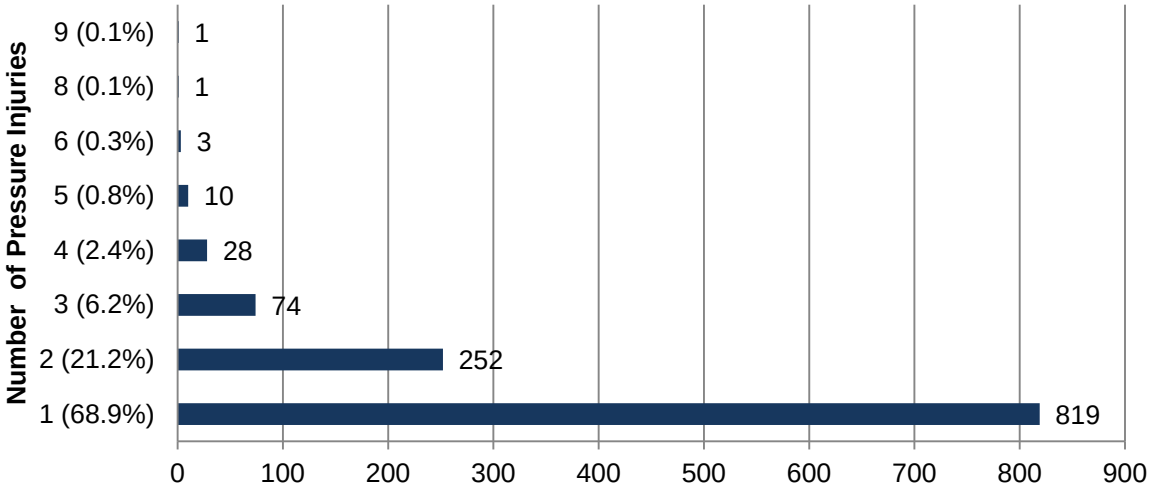
The majority (n=746; 65%) of pressure injury clinical incidents were not present on admission (see Table 15). Pressure injuries identified as present on admission (n=168), are included because they were found to have deteriorated after admission, or did not have preventative, therapeutic interventions/risk assessments performed within 24 hours.

Table 15: **Frequency and Percentage of Pressure Injury Clinical Incidents Tier Three Categories for 2015/16**

Pressure Injury Category	(n)	(%)
Not Present on Admission	746	65.0
Present on Admission	168	14.6
Unknown whether Present on Admission	233	20.4
Total	1,147	100.0

While the majority (68.9%) of patients had only one pressure injury (n=819; See Figure 26), 369 patients had more than one pressure injury and one patient had nine pressure injuries.

Figure 26: **Frequency of Pressure Injury Clinical Incidents for 2015/16**



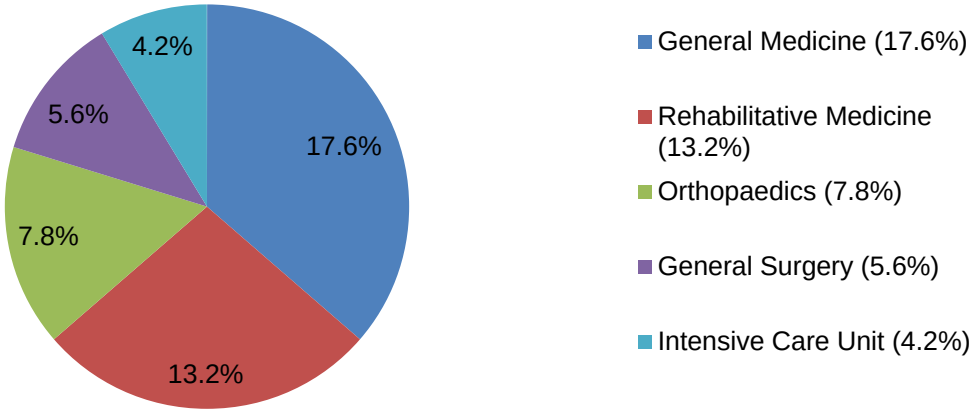
Of the 746 pressure injury clinical incidents that were identified as not being present on admission, the majority were either Stage I (n=238; 31.9%) or Stage II pressure injuries (n=357; 47.9%). Twenty three patients (3.1%) sustained a Stage III pressure injury involving full skin thickness loss while seven (0.9%) patients were classified with a Stage IV pressure injury involving full thickness tissue loss with exposed bone, tendon or muscle.

It is concerning that of the seven patients who developed a Stage IV pressure injury whilst in hospital, only one was classified as a SAC 1 clinical incident with the remaining Stage IV pressure injuries given a SAC 2 rating (n=3) or SAC 3 rating (n=3). Similar SAC rating results were identified for the 23 Stage III pressure injuries, with four Stage III

injuries given a SAC 2 (moderate harm) rating and a further 18 given a SAC 3 rating of no or minor harm.

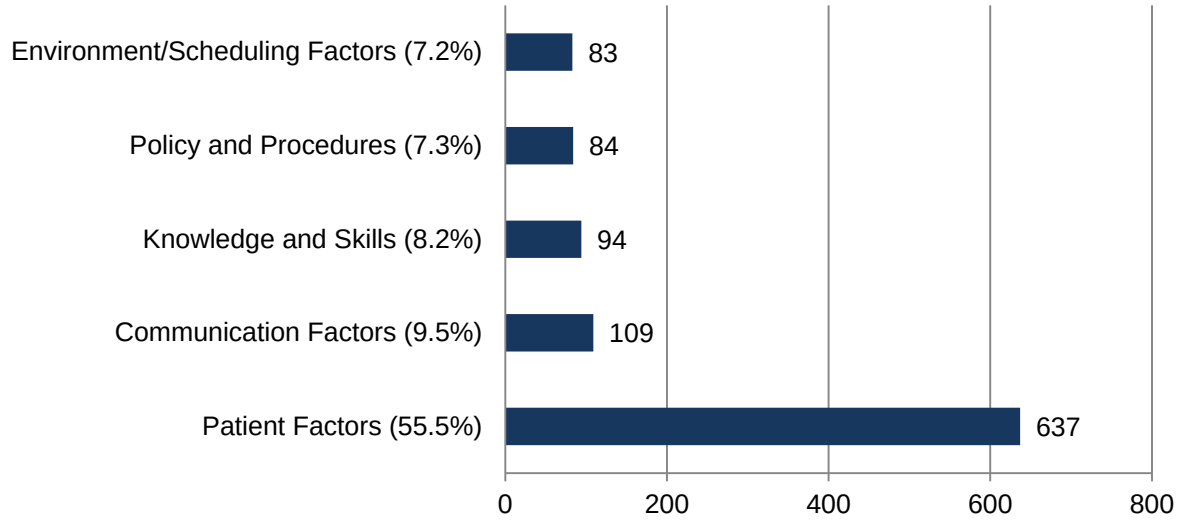
The treating specialties which reported pressure injury clinical incidents more frequently are listed in Figure 27. These five specialties accounted for 48.4% (n=555) of all pressure injury clinical incidents reported in this 12 month time period. The General Medicine specialty reported the most pressure injuries (n=202; 17.6%) compared to any other treating specialty.

Figure 27: **Percentage of Pressure Injury Clinical Incidents by Top Five Treating Specialties for 2015/16**



Patient factors were cited in more than half (n=637; 55.5%) of pressure injury clinical incidents as the main contributory factor (see Figure 28). Examples of patient factors included being critically unwell, obese, diabetic, having fragile skin etc.

Figure 28: **Frequency and Percentage of Top Five Contributory Factors for Pressure Injury Clinical Incidents for 2015/16**



Key Messages: Pressure Injury

In the 2015/16 reporting period 1,147 pressure injury clinical incidents were confirmed. While patient factors play a major role in the development of pressure injuries, effective communication and knowledge skills can also have major roles in prevention. In 2015/16, 746 patients developed pressure injuries whilst in hospital. Fortunately, 75.9% were either a Stage I pressure injury (n=226; 30.3%) or a Stage II pressure injury (n=360; 45.6%) which either resolved after repositioning or applying of a simple dressing.

Of more concern are the 30 patients who developed a Stage III or Stage IV pressure injury whilst in hospital. While it is acknowledged that a Stage I pressure injury can develop in a matter of hours, it is equally acknowledged that deep tissue injuries take much longer to develop, which unfortunately highlights the fine balance in delivering basic nursing care to complex critically ill patients who have competing clinical priorities.

Pressure injuries are painful, often difficult to treat and are a predictor of mortality in the elderly. Therefore a multifaceted approach to pressure injury prevention is needed of which patient education is an important component. Additionally, senior staff need to review their understanding of SAC ratings in light of the serious harm that is sustained by patients who developed pressure injuries, in particular, patients who develop Stage III and Stage IV pressure injuries. Clinical staff can also empower their patients and their families with simple pressure relieving strategies to ensure that pressure injuries can be prevented, especially in our most vulnerable patients.

The completion of skin assessments is fundamentally important to ensure that pressure injuries are immediately identified and treated. Additionally, this assessment also provides staff with baseline information should a pressure injury subsequently develop. This data would highlight to staff if the pressure injury prevention strategies for their patient were suitable. Furthermore, when a pressure injury is identified it is imperative that staff are competent to stage the injury and if not then they need to seek appropriate expert advice. Staging of a pressure injury will assist in providing the correct treatment and enable staff to determine if the pressure injury is improving.

Standard 9: Clinical Deterioration Incidents

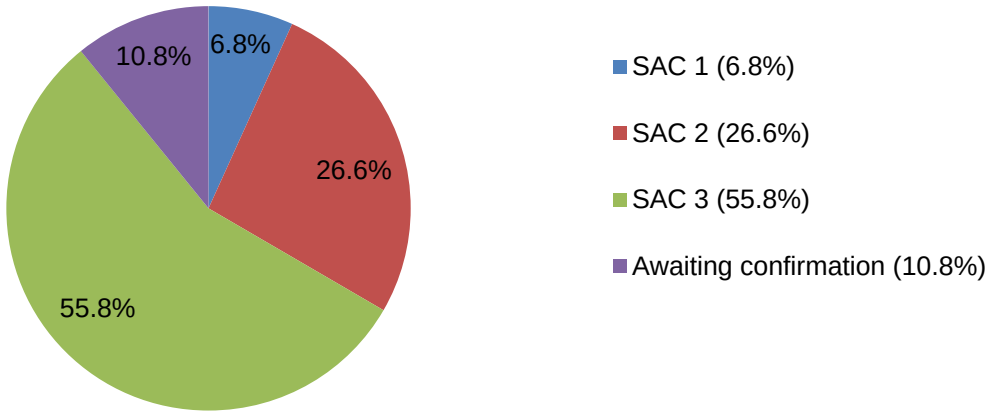
Standard 9 of the National Standards refers to “recognising and responding to clinical deterioration in acute health care” (ACSQHC, 2013). The intent of which, is to ensure that clinical deterioration of a patient is recognised promptly and that appropriate care taken. Clinical deterioration incidents are captured under several Tier Three categories within Datix CIMS which include:

- Failure/insufficient recognition of significant change in patient status
- Failure/insufficient response to significant change in patient status
- Failure to activate rapid response/resuscitation team
- Unplanned elevation of care to intensive care setting
- Unplanned return to surgery.

Please note that the SAC 1 category of delay in recognising and responding to clinical deterioration is also captured by the tier three definitions stated above.

Clinical deterioration incidents accounted for 1.9% (n=590) of clinical incidents reported in 2015/16. The majority (n=329; 55.8%) of confirmed clinical deterioration incidents were categorised as a SAC 3 clinical incidents with the patient sustaining either minor/no harm (see Figure 29).

Figure 29: **Percentage of Clinical Deterioration Incidents by SAC Rating for 2015/16**



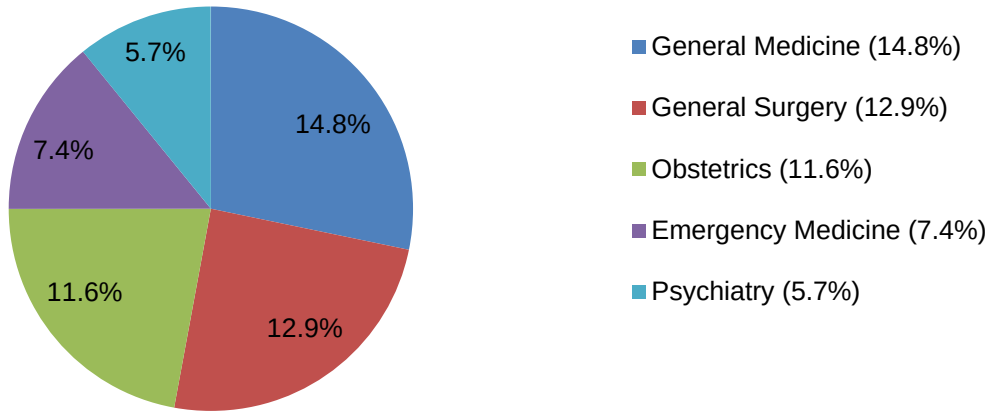
There were 526 clinical incidents which had a confirmed SAC rating with the remainder (n=64; 10.8%) waiting for the SAC rating to be confirmed. Findings revealed that nearly one third of these clinical deterioration incidents were categorised as due to failure/insufficient response to significant changes in patient status (n=158; 30%), followed by "unplanned elevation of care to intensive care setting" (n=135; 25.7%; see Table 16).

Table 16: **Frequency and Percentage of Clinical Deterioration Tier Three Categories for 2015/16**

Tier Three Category	(n)	(%)
Failure/insufficient response to significant change in patient status	158	30.0
Unplanned elevation of care to intensive care setting	135	25.7
Failure/insufficient recognition of significant change in patient status	122	23.2
Failure to activate rapid response/resuscitation team	60	11.4
Unplanned return to surgery	51	9.7
Total	526	100.0

The treating specialties which reported incidents of clinical deterioration most frequently are listed in Figure 30. These five specialties accounted for 52.5% (n=276) of all clinical deterioration incidents reported in 2015/16. The specialty of General Medicine reported the highest frequency of clinical deterioration incidents (n=78; 14.8%) followed by General Surgery (n=68; 12.9%).

Figure 30: **Percentage of Clinical Deterioration Incidents by Top Five Treating Specialties for 2015/16**



When patient outcome from clinical deterioration was reviewed, the majority of patients sustained either no harm (n=185; 35.2%) or minor harm (n=178; 33.8%; see Table 17). However, 23 clinical deterioration incidents did result in the death of the patient.

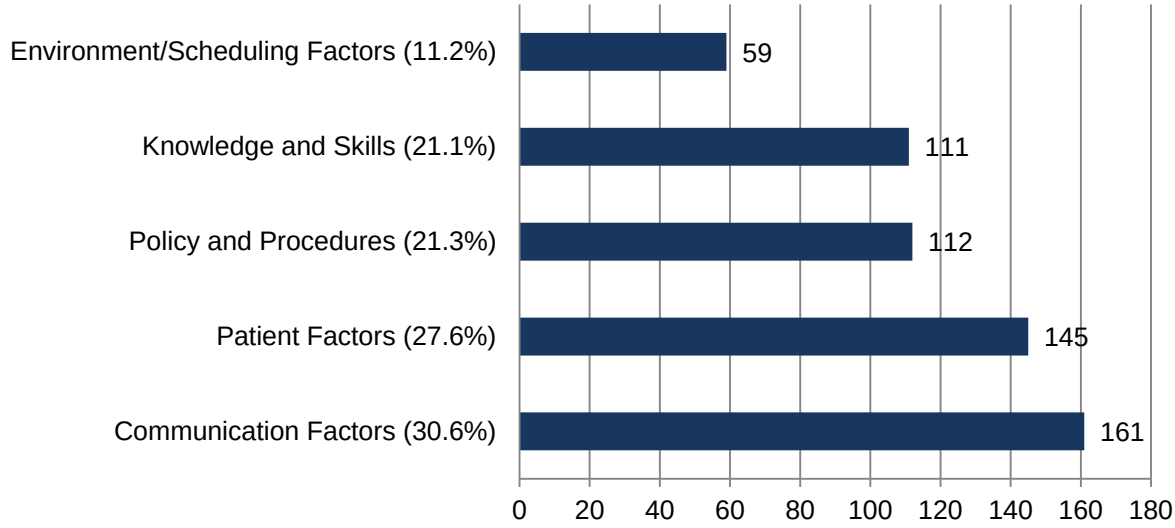
Table 17: **Frequency and Percentage of Clinical Deterioration Incidents by Patient Outcome for 2015/16**

Patient Outcome	(n)	(%)
Death	23	4.4
Serious harm	21	4.0
Moderate harm	111	21.1
Minor harm	178	33.8
No harm	185	35.2
Total	**518***	**98.5**

*Missing data n=8

Communication factors (n=161; 30.6%) were the most frequently cited contributory factor followed by patient factors (n=145; 27.6%) and policy and procedures factors (n=112; 21.3%; see Figure 31) for clinical deterioration incidents.

Figure 31: **Frequency and Percentage of the Top Five Contributory Factors for Clinical Deterioration Incidents 2015/16**



Please note that more than one contributory factor can be assigned to each clinical incident.

Key Messages: Clinical Deterioration

The early identification of clinical deterioration is fundamental to preventing serious patient harm. Patients in acute conditions can rapidly deteriorate due to worsening of their pre-existing conditions or as the result of an acute onset of serious physiological or psychological disturbances.

Clinical triggers such as hypotension, hypertension, respiratory distress, oxygen desaturation, rapid heart rate, low heart rate and changes in mental status are just some of the common indicators used by clinicians to identify a worsening in their patient's condition. Appropriate monitoring of these vital signs combined with the assessment and interpretation of these clinical findings is integral to the planning and implementation of appropriate and timely interventions to address clinical deterioration.

Management of an acutely unwell patient requires a multitude of different skills, in conjunction with knowledge and experience. It is therefore imperative that clinicians continue to seek timely advice when confronted by patients who are not responding to treatment and becoming increasing unwell. Team work, situational awareness and strong and clear communication continue to be essential components in identifying and addressing clinical deterioration of our patients.

Standard 10: Falls Clinical Incidents

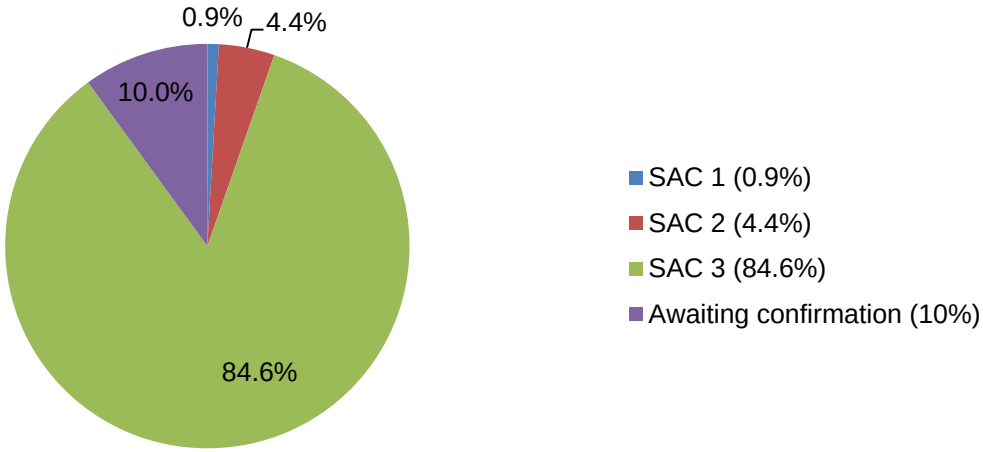
Standard 10 of the National Standards refers to “preventing falls and harm from falls” (ACSQHC, 2013). The intent of which is to properly risk assess patients to try and prevent falls from occurring.

Falls clinical incidents are captured under two Tier Two categories within Datix CIMS which include:

- Witnessed Slips/Trips/Falls (includes faints)
- Suspected Slips/Trips/Falls (un-witnessed, Includes faints).

In the 2015/16 reporting period 5,895 falls clinical incidents were identified. Falls clinical incidents accounted for 19.4% clinical incidents reported in this time period. The majority of falls clinical incidents were categorised as a SAC 3 clinical incidents with the patient sustaining either minor harm or no harm (n=4,988; 84.6%; See Figure 32). Of the 54 (0.9%) SAC 1 falls clinical incidents, 20 falls clinical incidents had an outcome of death.

Figure 32: **Percentage of Falls Incidents by SAC Rating for 2015/16**



Of the 5,895 incidents, 5,304 had a confirmed SAC rating with the remainder of clinical incidents awaiting confirmation (n=591). Only 36.4% (n=1,931) of patients were identified as having a history of falls.

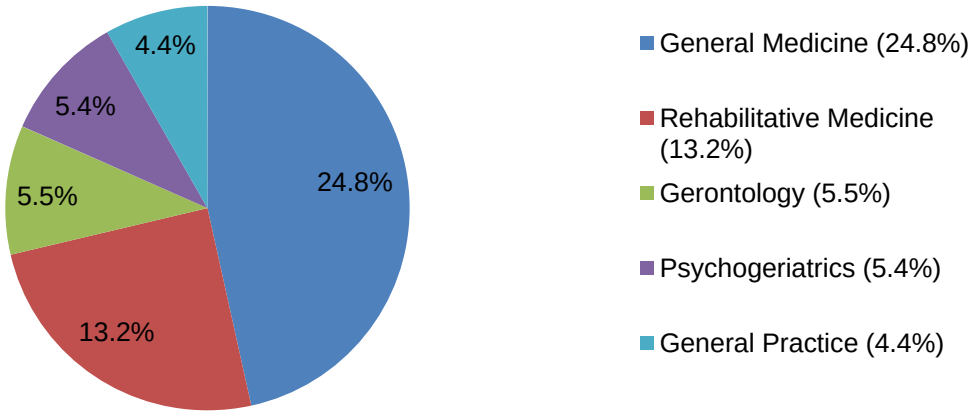
Findings revealed that the majority (n=3,589; 67.7%) of falls clinical incidents were categorised as “suspected slips/trips/falls” as they were unwitnessed (see Table 18).

Table 18: **Frequency and Percentage of Confirmed Tier Two Falls Categories for 2015/16**

Tier Two Falls Category	(n)	(%)
Unwitnessed falls	3,589	67.7
Witnessed falls	1,715	32.3
Total	5,304	100.0

The General Medicine specialty reported the highest frequency of falls incidents (n=1,316; 24.8%) followed by the Rehabilitative Medicine specialty (n=698; 13.2%; see Figure 33). The top five specialties accounted for 53.3% (n=2,827) of all fall incidents reported in this 12 month time period.

Figure 33: **Percentage of Falls Incidents by Top Five Treating Specialty for 2015/16**



When identifying the height the patient fell, over a third of falls clinical incidents were classified as a low fall from a height of 0.5 metre or less (n=1,919; 36.2%). With a further 1,609 (30.3%) falls incidents occurring from a standing position.

The top five most frequent activities at the time a patient fell accounted for 69% (n=3,662) of falls incidents. At the time of the fall incident, 1,137 (21.4%) patients were walking while a further 885 (16.7%) patients were attempting to stand/sit (see Table 19).

Table 19: **Frequency and Percentage of Top Five Falls Incidents by Activity for 2015/16**

Falls by Activity at Time of Fall	(n)	(%)
Walking	1,137	21.4
Attempting to stand/sit	885	16.7
Toileting or attempting to toilet	759	14.3
Getting out of bed	576	10.9
Standing	305	5.8
Total	3,662	69.0

Nearly one third of falls occurred at the bedside (n=1,668; 31.4%) with a further 1,622 falls incidents occurring in the ward setting (30.6%; see Table 20).

Table 20: **Frequency and Percentage of Top Five Places Where Falls Incidents Occurred for 2015/16**

Place of Fall	(n)	(%)
Bedside	1,668	31.4
Ward	1,622	30.6
Bathroom	994	18.7
Dining room	161	3.0
Grounds	145	2.7
Total	4,590	86.5

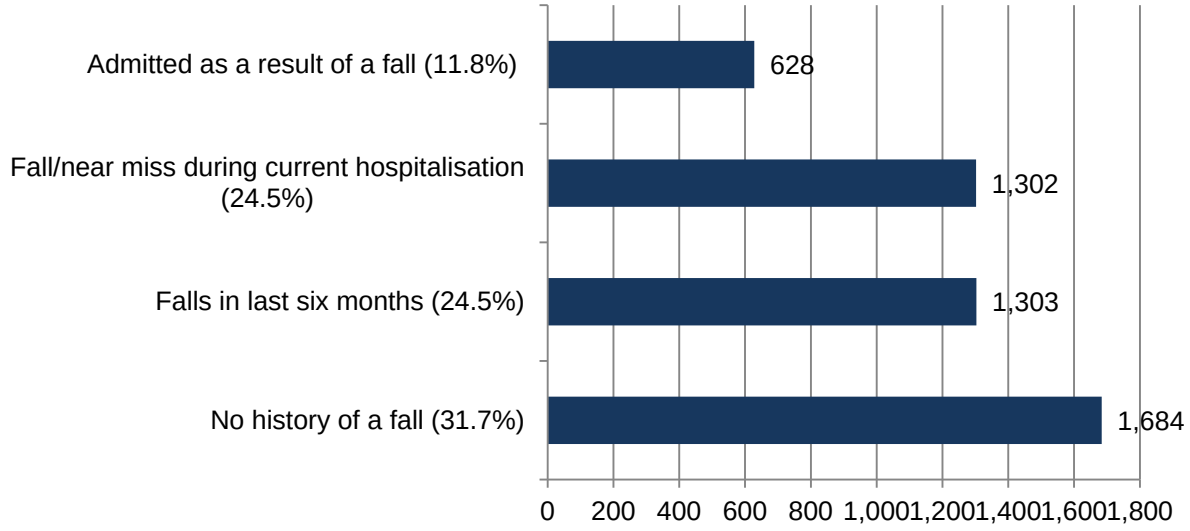
The outcome of a fall was poorly documented within the clinical incident management system, with 74 (1.4%) incidents resulting in a fracture, 9 clinical incidents resulting in a subdural haematoma (0.2%) and 1,139 (21.5%) stating “other outcome”. The remainder of the falls incidents did not state an outcome.

The majority of falls (n=3,457; 65.2%) were reported as having an unknown mechanism as to why the patient fell. Slips and trips were the next most frequently identified fall type and accounted for 17.1% (n=906) of all falls, followed by faints, cardiac collapse or epilepsy (n=230; 4.3%; missing data n=711).

Nearly eighty four percent (n=4,436) of patients who sustained a fall were shown to have a falls risk assessment in place. With 2,067 (39%) of these patients having had their most recent falls risk assessment completed within the last 24 hours, followed by within the last week (n=1,383; 26.1%). Nearly nineteen percent (n=986) of patients had a falls risk assessment completed more than a week ago while the remainder did not have any falls risk assessment (n=868; 16.4%).

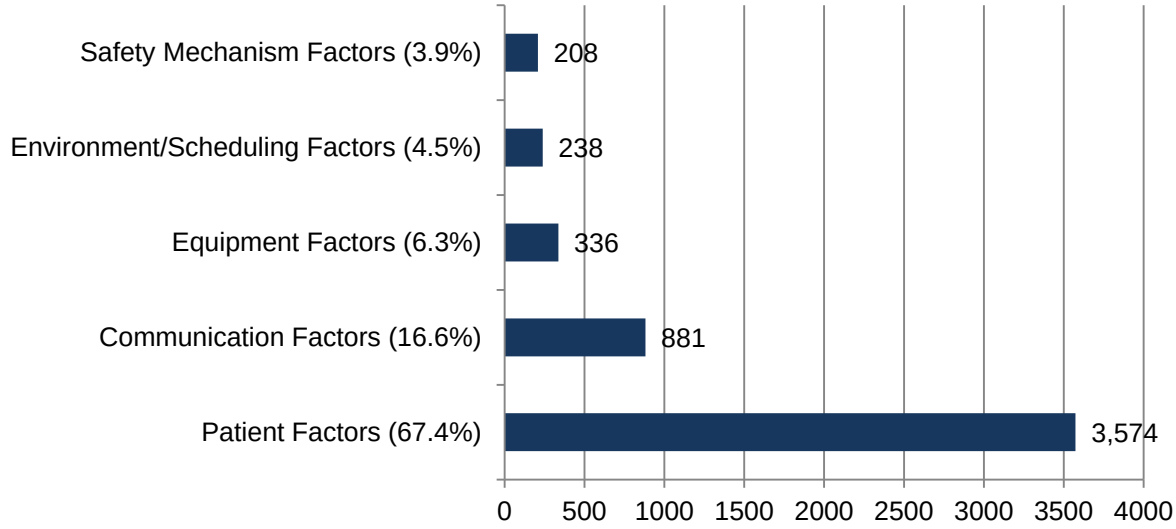
Nearly one third (n=1,684; 31.7%) of patients who fell in hospital had no previous history of a fall. While a quarter (n=1,303; 24.5%) of patients who sustained a fall whilst in hospital had also experienced a fall within the last six months (see Figure 34).

Figure 34: **Frequency and Percentage of Falls History for 2015/16**



Patient factors (n=3,574; 67.4%) were cited as the main contributory factor of falls clinical incidents followed by communication factors (n=881; 16.6%; see Figure 35).

Figure 35: **Frequency and Percentage of Top Five Contributory Factors for Falls Clinical Incidents for 2015/16**



Key Falls Incident Messages

Falls continue to be one of the most frequently reported clinical incidents in 2015/16, second only to medication clinical incidents. Falls greatly impact on patient morbidity and mortality and often result in increased lengths of stay which means greater costs to our health system. While the majority of inpatient falls clinical incidents result in no/minor harm (n=4,988; 94%), it is the psychological harm that can have the greatest impact by robbing patients of their confidence. This can result in patients limiting their functional activity, which in turn can greatly impact on their recovery, their independence and their quality of life. Unfortunately, for this same time period, 34 patients fell and sustained serious harm, with a further 20 patients who fell having an outcome of death.

Falls prevention strategies are standard practice within WA Health. One such strategy is the Falls Risk Assessment and Management Plan (FRAMP), which is a comprehensive document used by staff to screen, assess and manage patients with regard to their risk of falling. However, the fact that falls continue to occur highlights the complexity of the issue which has numerous risk factors such as age, diagnosis, medical history, previous fall history, polypharmacy and incontinence which are further compounded by the patient being in a new and/or hazardous clinical environment.[10] With our population ageing, it can only be expected that the frequency of falls and the complications associated with falls will increase. Therefore, continually implementing and refining our falls interventions is imperative.

Falls prevention is a major priority not only for WA Health but also at a national level, as demonstrated by its inclusion in the NSQHS Standards (2012).[11] Undertaking a comprehensive screening and risk assessment, especially targeting our most vulnerable patients, is only the first step in preventing falls clinical incidents from occurring. One area that does require further consideration is the reassessment of patients' falls risk status based on changes to their medical condition. For our most vulnerable patients we need to be hyper-vigilant with regard to our falls risk mitigation efforts.

[10] Cumming, R., Sherrington, C., Lord, S., Simpson, J., et al. Cluster randomised trial of a targeted multifactorial intervention to prevent falls among older people in hospital. British Medical Journal. Online First. 2008: cited 21 July 2016.

[11] Australian Commission on Safety and Quality in Health Care (September 2012), National Safety and Quality Health Service Standards, ACSQHC, Sydney.

Quality of Care

Health care delivery has inherent risks whereby patients may develop complications based on the interventions/treatments or procedures they receive to address their underlying health care problems. Clinicians are constantly trying to mitigate these potential complications to enable our patients to have a full and complete recovery.

To better understand the quality of health care delivery within WA Health, the HMDC administrative data collection was also reviewed. The HMDC captures all inpatient activity and discharge data, which may include hospital acquired conditions captured by the condition onset flag code.

The PSSU have used HMDC data to complement data notified to the Datix Clinical Incident Management System and to review the quality of care that has been delivered to WA Health patients. The following code sets have been used:

- Classification of Hospital Acquired Diagnoses (CHADx)
- Hospital Acquired Complications (HAC)
- Serious Acute Maternal Morbidity (SAMM).

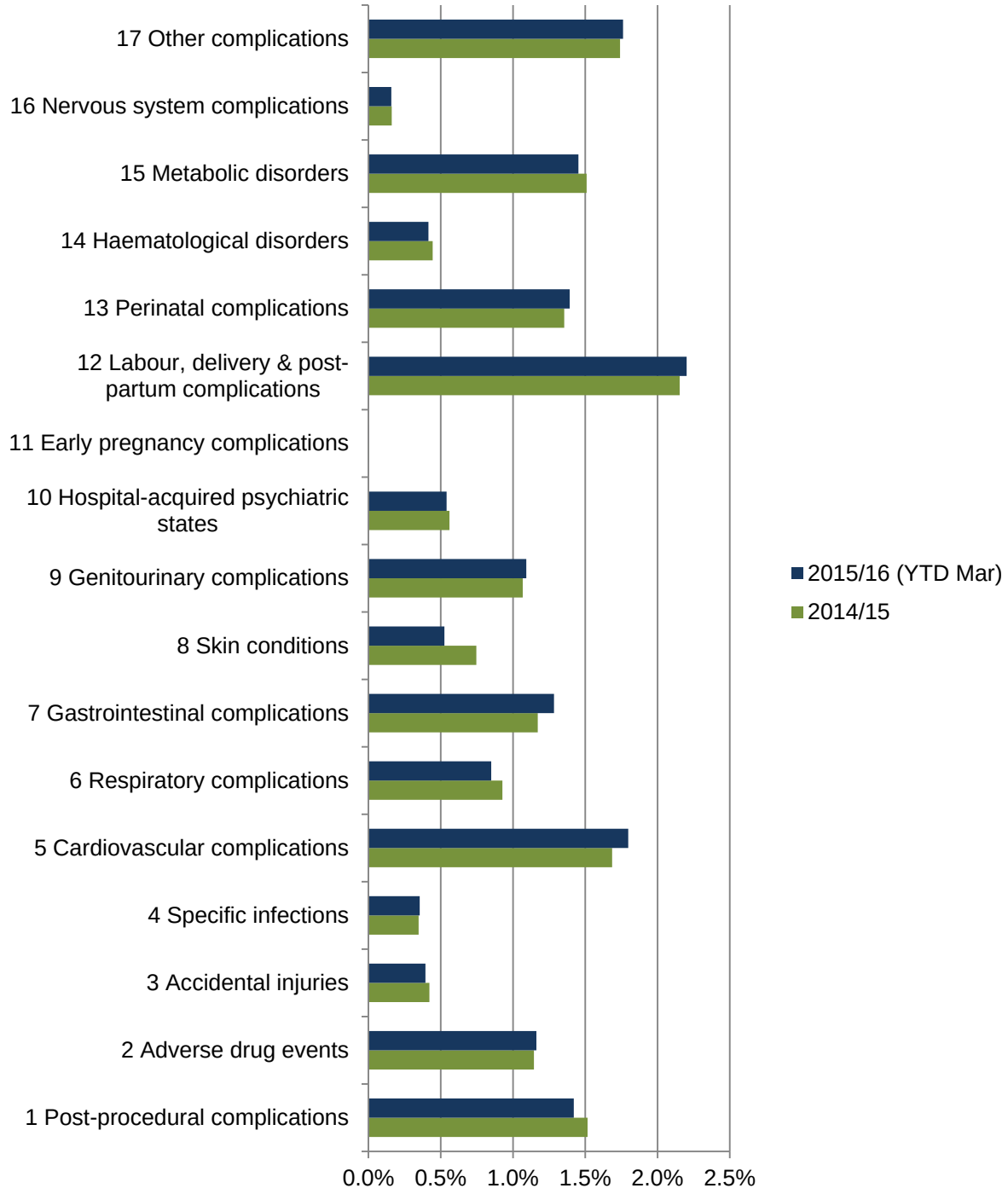
Classification of Hospital Acquired Diagnoses (CHADx)

The CHADx uses the condition onset flag code to identify if conditions were hospital acquired. Specifically, CHADx comprises of over 4,500 ICD-10-AM diagnosis codes captured in 17 classes and 145 subclasses. The purpose of CHADx was to enable the monitoring of hospital acquired diagnoses from routine administrative inpatient data sources such as the HMDC, to assist clinicians in improving the care that is delivered to patients.

Figure 36 shows that WA Health CHADx complication classes for the last two financial years were associated with 10.6%[12] of all hospital separations for both 2014/15 (n=57,203) and 2015/16 (YTD Mar; n=44,838). Labour, delivery & postpartum complications continues to have the highest percentage of complications followed by cardiovascular complications for both the 2014/15 and 2015/16 periods.

[12] Count of separations across all CHADx classes (excludes double or multiple counts).

Figure 36: **Percentage of WA Health Hospital Separations by CHADx Categories by Year**



A single episode may be counted in multiple classes if it includes conditions from multiple classes.

Hospital Acquired Complications

Since 2012, the ACSQHC has been working to identify Hospital Acquired Complications (HAC) which could be reduced if appropriate risk mitigation strategies where in place. This HAC work builds on the detailed work undertaken to develop the CHADx. Specifically, the development of the refined HAC code list was undertaken to identify HAC with regard to preventability. A comprehensive process involving an extensive literature review and environmental scan was undertaken by the ACSQHC. The environmental scan included the review of patient clinical data to indicate patient safety improvement areas/issues.

A proof of concept study was then undertaken in 2014 and 2015 involving seven public hospitals and eight private hospitals from across Australia. The study assessed the completeness and accuracy of patient clinical data for over 5,000 hospital records. A second component of the study assessed the feasibility and utility of using HAC codes for monitoring and reporting patient complications. Conclusions from this ACSQHC study include:

- "The general concept of using patient clinical data to derive clinical measures for safety and quality purposes is useful and acceptable to clinicians.
- The specific concept of using patient clinical data to detect and report HACs is useful and acceptable to clinicians.
- Patient clinical data is sufficiently accurate to support implementation of measurement and monitoring of HACs for safety and quality monitoring, notwithstanding that there are areas for improvement in data quality. Key areas for coding improvement are the accuracy of the condition onset flag and selected HACs – falls with fracture, iatrogenic pneumothorax, medication complications and persistent incontinence.
- Monitoring and reporting on HACs at the hospital level can be used by clinicians to detect patient safety problems and develop clinical risk mitigation strategies to reduce (but not necessarily eliminate) the risk of the complication occurring.
- Clinicians will make use of reported data if they have confidence in the measures of safety and quality and have access to analytical reporting tools and data expertise." [13]

The national list of high priority HAC consists of 16 complications that have been deemed to possibly respond to clinical risk mitigation strategies and thereby reduce the risk of that complication occurring (see Table 21). It is acknowledged that risk mitigation strategies may not necessarily eliminate the complication from occurring.

[13] http://www.safetyandquality.gov.au/our-work/information-strategy/indicators/hospital-acquired-complications/

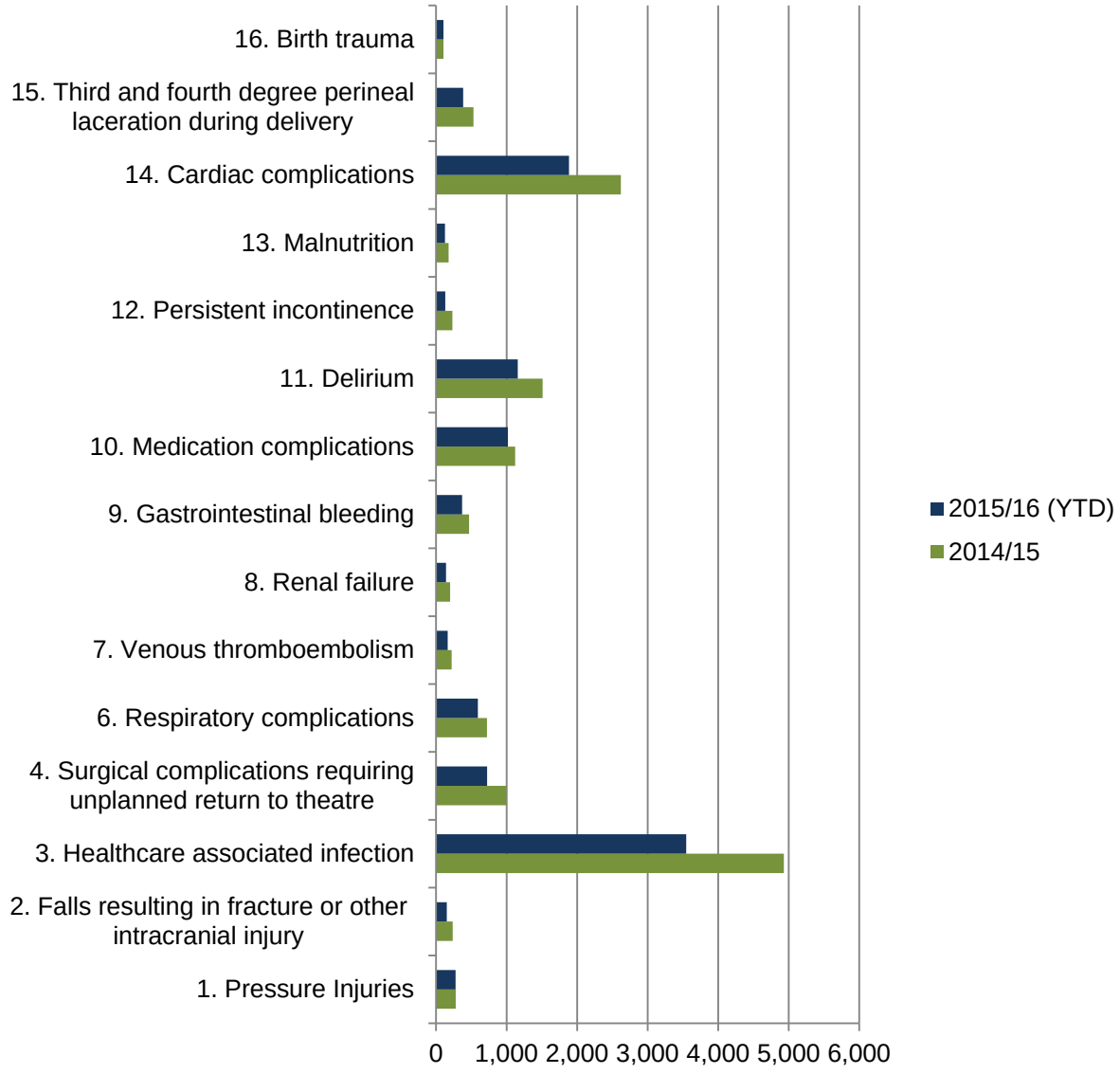
Table 21: **National List of Hospital Acquired Complications**

Hospital Acquired Complications	Diagnosis
Pressure injury	Stage III ulcer Stage IV ulcer Unspecified decubitus ulcer and pressure area
Falls resulting in fracture or intracranial injury	Intracranial injury Fractured neck of femur Other fractures
Healthcare associated infection	Urinary tract infection Surgical site infection Pneumonia Blood stream infection Central line and peripheral line associated bloodstream infection Multi-resistant organism Infection associated with prosthetics/implantable devices Gastrointestinal infections
Surgical complications requiring unplanned return to theatre	Post-operative haemorrhage/haematoma requiring transfusion and/or return to theatre Surgical wound dehiscence Anastomotic leak Vascular graft failure Other surgical complications requiring unplanned return to theatre
Unplanned intensive care unit admission	Unplanned admission to intensive care unit (Please note that WA Health does not collect this data as defined for counting by ACSQHC)
Respiratory complications	Respiratory failure including acute respiratory distress syndrome requiring ventilation Aspiration pneumonia
Venous thromboembolism	Pulmonary embolism Deep vein thrombosis
Renal failure	Renal failure requiring haemodialysis or continuous veno-venous haemodialysis
Gastrointestinal bleeding	Gastrointestinal bleeding
Medication complications	Drug related respiratory complications/depression Haemorrhagic disorder due to circulating anticoagulants Hypoglycaemia
Delirium	Delirium
Persistent incontinence	Urinary incontinence
Malnutrition	Malnutrition
Cardiac complications	Heart failure and pulmonary oedema Arrhythmias Cardiac arrest Acute coronary syndrome including unstable angina, STEMI and NSTEMI (heart attack)
Third and fourth degree perineal laceration during delivery	Third and fourth degree perineal laceration during delivery
Neonatal birth trauma	Neonatal birth trauma

Western Australian hospital morbidity data were reviewed with regard to HAC incidents for the 2014/15 and 2015/16 (YTD March 2016). Findings showed that healthcare associated infections were the most frequently reported complication for both 2014/15 (n=4,931) and 2015/16 (n=3,547; see Figure 37). The next most frequently mentioned HAC for this same data period was cardiac complications (n=2,621 in 2014/15 and n=1,884 in 2015/16).

In 2014/15, 2.5% (n=10,766) of separations accounted for all instances of a HAC 1-14 diagnoses while in 2015/16 (March YTD) 2.4% (n=7,984) separations accounted for all instances of HAC 1-14 diagnoses. Third and fourth perineal lacerations accounted for 2.8% (n=460) of HAC in 2014/15 and 2.7% (n=342) in 2015/16 (March YTD). While birth trauma accounted for 0.2% of HAC in both 2014/15 (n=43) and 2015/16 (YTD; n=41).

Figure 37: **Frequency of Hospital Acquired Complication Diagnoses by Year**



Please note that a separation is counted once within each HAC category but can be counted multiple times across HAC categories.

Patients with a Healthcare Associated Infection

Healthcare Associated Infections accounted for 1.2% (n=4,931) of HAC in 2014/15 and 1.1% (n=3,547) in 2015/16 (YTD Mar 2016). In both 2014/15 (n=2,564; 52%) and 2015/16 (YTD Mar 2016; n=1,815; 51.2%) females reported a higher frequency of HAI compared to males.

The mean age for this sample of patients with HAI in 2014/15 was 62 years (SD 25 years). The mean age increased slightly in 2015/16 (YTD Mar 2016) to 64 years (SD 24 years). Ages ranged from newborns to 108 years (see Table 22).

Table 22: **Patients with HAI by Age by Year**

Age	2014/15	2015/16 (YTD)
Minimum Age (years)	0	0
Maximum Age (years)	108	108
Mean Age (years)	62	64
Standard Deviation (years)	25	24

The majority of patients who sustained a HAI for 2014/15 and 2015/16 were identified as emergency department admissions (n= 2,170; 1,478 respectively see Table 23).

Table 23: **Frequency of Patients with HAI by Admission Status and by Year**

Admission Type	2014/15	2015/16 (YTD)
Elective Waitlist	792	556
Elective Non Waitlist	1,198	928
Emergency Dept Admission	2,170	1,478
Emergency Dept Direct Admission	771	585
Total	4,931	3,547

The majority of HAI were reported by the Tertiary Hospitals (2014/15 n=2,622 and 2015/16 YTD Mar 2016; n=2,117; see Figure 38).

Figure 38: **Frequency of Patients with HAI by Hospital Category and by Year**

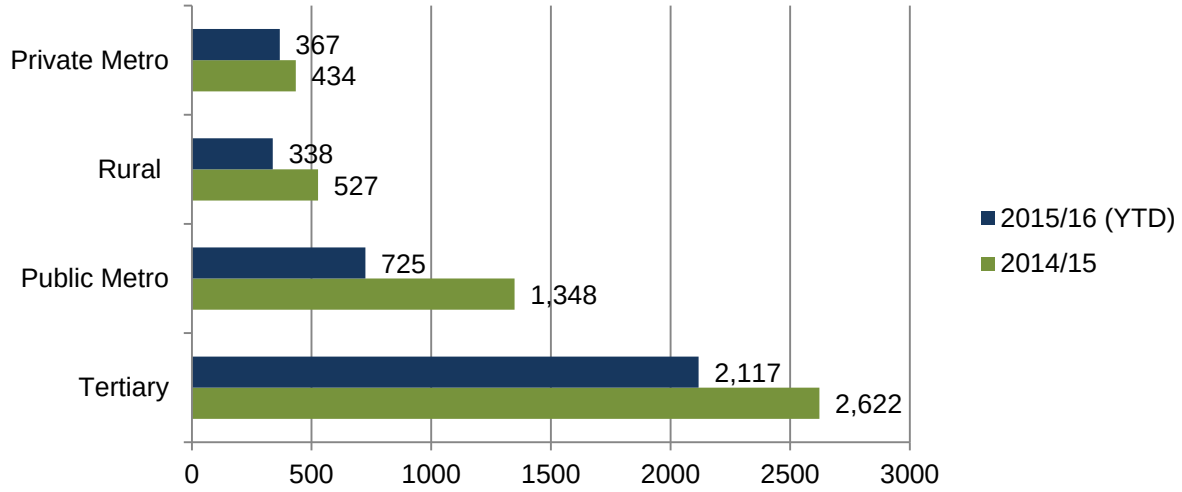
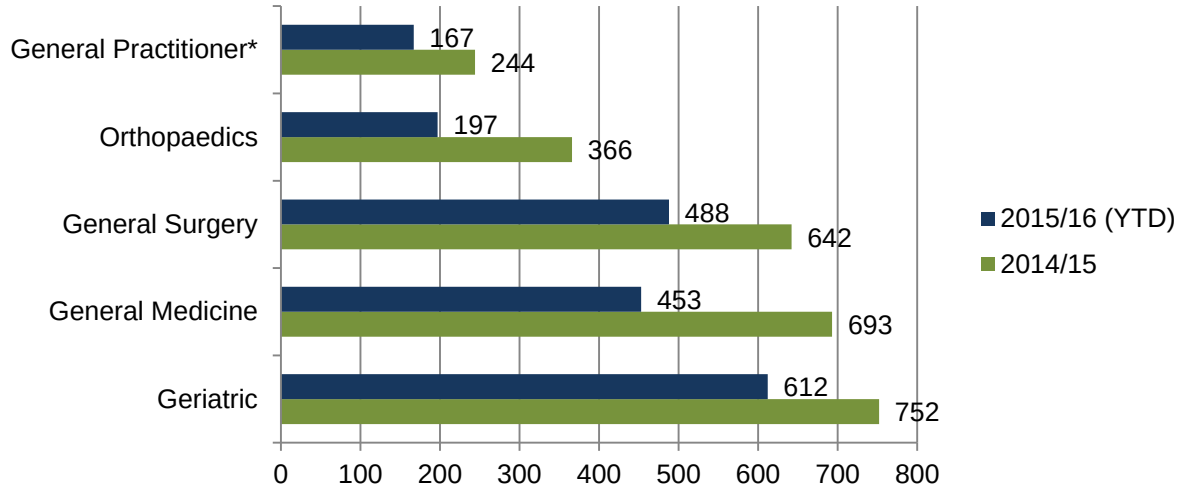


Figure 39 shows the top five most frequently reported HAI, with urinary catheter infections showing the highest frequency for both 2014/15 (n=1,635) and 2015/16 (YTD Mar 2016; n=1,156). Pneumonia was the next most frequently reported HAI for both 2014/15 (n=1,492) and 2015/16 (YTD Mar 2016; n=1,051).

Figure 39: **Frequency of Top Five HAI by Year**

Geriatric specialty patients were found to have the most frequently reported instances of HAI in both 2014/15 (n=752) and in 2015/16 (YTD Mar 2016; n=612; see Figure 40). The next most frequent specialty group was general medicine patients who reported 693 HAI in 2014/15 and 453 HAI in 2015/16 (YTD Mar 2016).

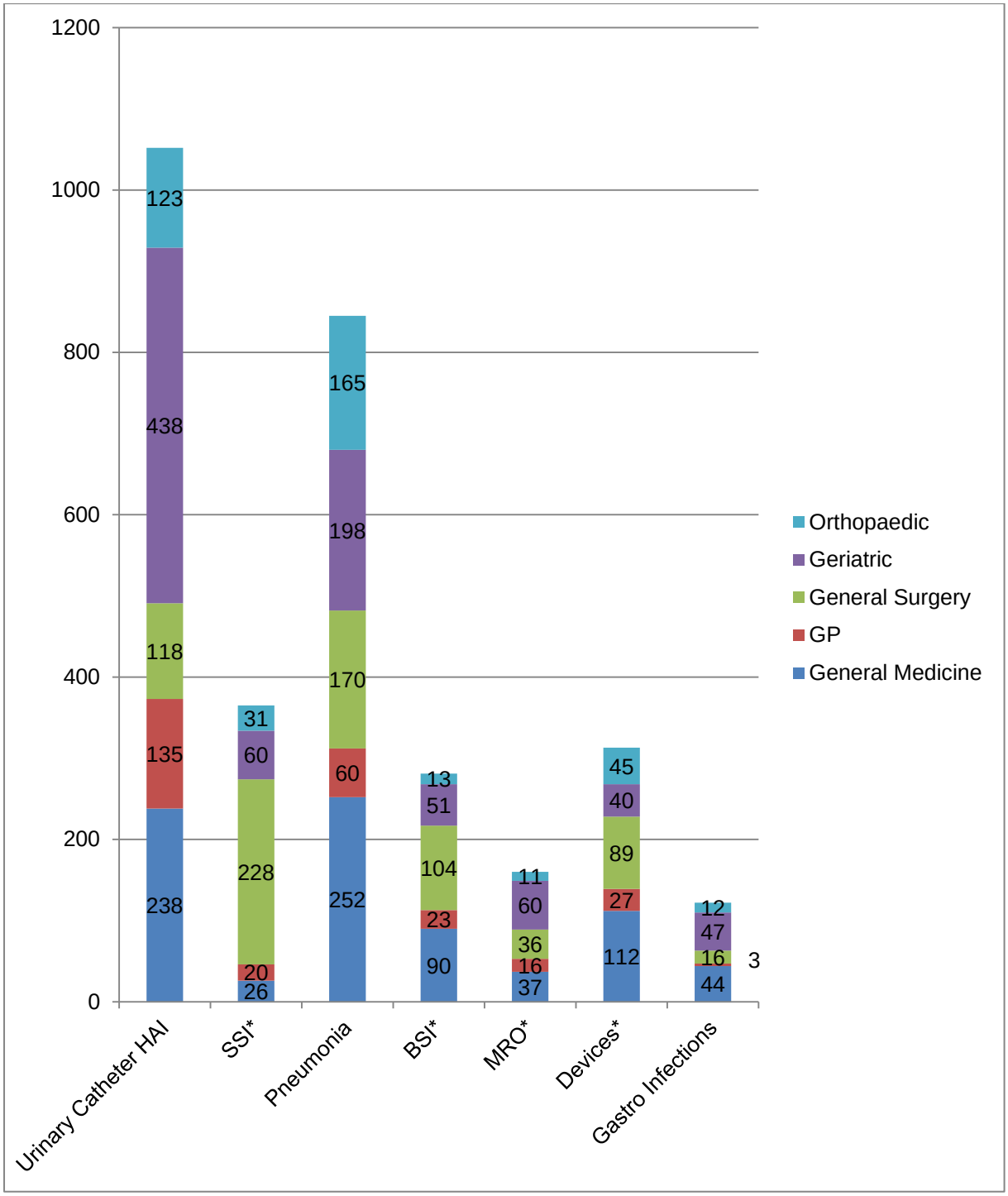
Figure 40: **Frequency of Patients with HAI by Top Five Discharge Specialty and by Year**



*General Practitioner specialty refers to the medical model used in some rural hospitals.

In 2014/15, a urinary catheter HAI (n=438) was the most commonly reported type of infection for geriatric specialty patients while for general medicine patients, pneumonia (n= 252) was the most frequently report infection (see Figure 41).

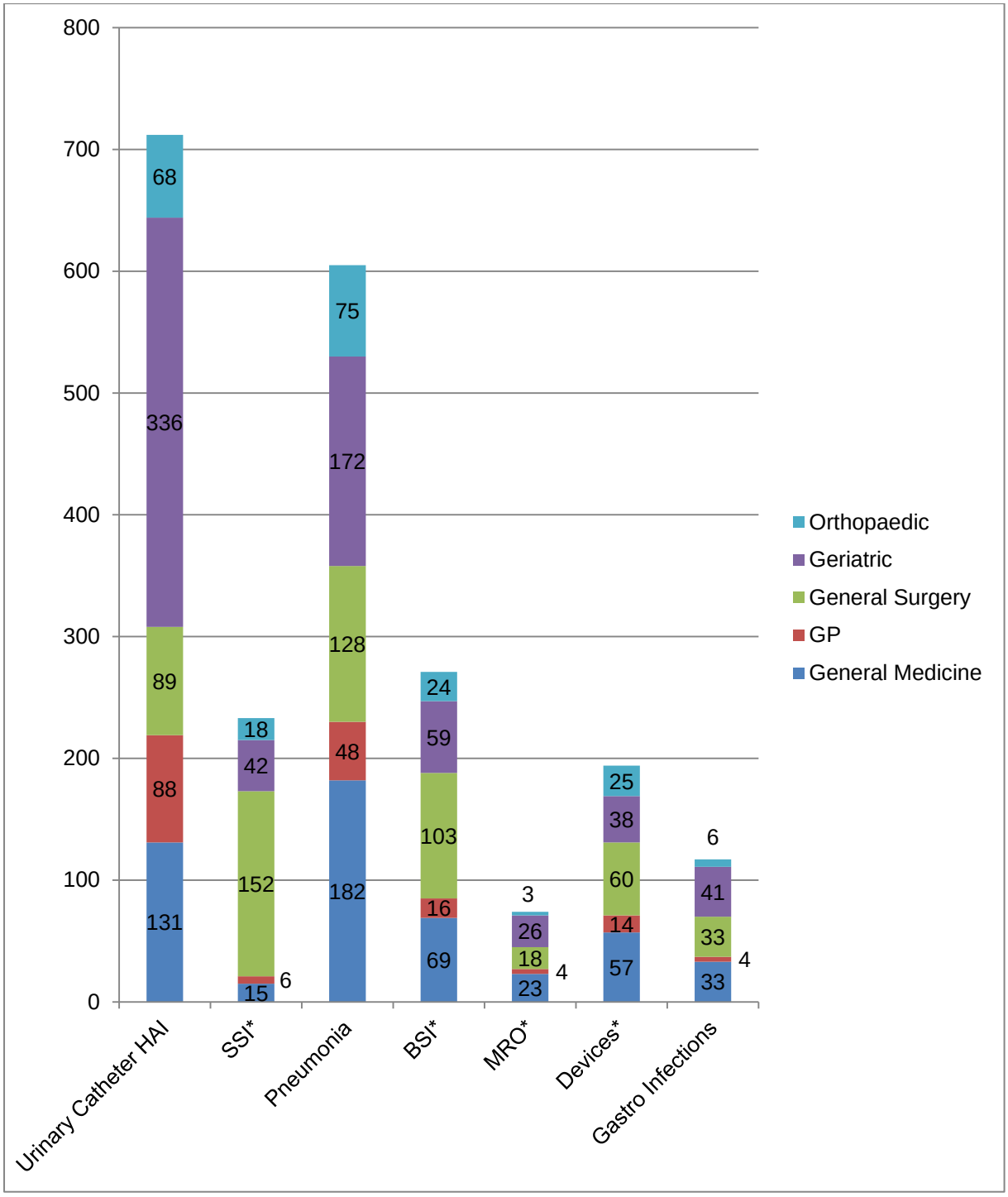
Figure 41: **Frequency of HAI by Top Five Discharge Specialty for 2014/15**



*SSI =surgical site infection; BSI= blood stream infections; MRO= multiresistant infection; Devices= prosthetics and implantable devices.

In 2015/16 (YTD Mar 2016), similar findings were seen with urinary catheter HAI (n=336) the most commonly reported type of HAI for geriatric patients while for general medicine patients, pneumonia (n=182) was the most frequently report infection (see Figure 42).

Figure 42: **Frequency of HAI by Top Five Discharge Specialty for 2015/16 (YTD)**



*SSI =surgical site infection; BSI= blood stream infections; MRO= multiresistant infection; Devices= prosthetics and implantable devices.


OVES
WING SETS
RETIES
PICC ADAPTORS
LINE EXTENTIONS
3WAY TAPS

Serious Acute Maternal Morbidity (SAMM)

In addition to HAC work, as mentioned previously WA Health also worked with key stakeholders within WA and nationally to address issues with regard to SAMM. In June 2013 the ACSQHC formed the Maternal Sentinel Event and Post Partum Haemorrhage Working Group to address safety issues to do with maternal sentinel events and postpartum haemorrhage incidents. With the maternal sentinel event definition changing to only capture maternal death, it was decided that SAMM incidents would be routinely reviewed and reported.

The ACSQHC requested that States and Territories review their morbidity data to capture SAMM cases and provided a SAMM clinical definition and International Classification of Disease (ICD) code combinations document, to assist States and Territories in developing their own SAMM dataset. On 13 March 2015 the Australian Health Ministers' Advisory Council noted the work and recommendations being undertaken by the ACSQHC with regard to SAMM data.

The PSSU subsequently engaged key WA Health stakeholders from the Data Integrity Directorate, Clinical Coding Education Team and Nursing/Midwifery and Obstetric Medicine to review the ACSQHC SAMM document and establish a WA position on clinical definitions and code ranges that would best capture SAMM data. The consultation process resulted in a slightly modified list of SAMM codes that were subsequently used to extract data for the WA Health SAMM dataset version 1.

The Inpatient Data Collection staff, using the ACSQHC specified code combinations, extracted aggregate data from the Hospital Morbidity Data Collection for a two year period from March 2013 to February 2015 for all public hospitals and public patients at Joondalup and Peel Health Campus. During the extraction process, further expert coding advice was provided by the Department of Health Clinical Coding Education Team, which resulted in additional SAMM coding refinements.

Table 24 provides findings based on the original WA Health SAMM codes, while Table 25 provides the data containing the refined SAMM codes and is referred to as WA Health SAMM dataset version two.

Several SAMM codes did not result in data being obtained due to the SAMM code range definition either being too wide to be captured in a logical code set or the data requested was outside the scope of ICD-10-AM codes (e.g. identifying unplanned admission to ICU/CCU). Advice received indicated that this identification would require Data Linkage. For the two year period commencing March 2013 to February 2015, there were 9,350 patients who experienced 10,694 SAMM complications identified from the WA Health SAMM version 1 data.

Massive postpartum haemorrhage (n=6,042) was the most frequently reported complication followed by massive obstetric haemorrhage (n=4,449; see Table 24). The 69 cases of attempted suicide or self-harm reported over this two year period were associated with an abortion/termination, pregnancy episode of care, delivery episode of care or postpartum episode of care.

Table 24: **Frequency of WA Health Severe Acute Maternal Morbidity (Version 1) Over Two Years**

SAMM Conditions	Mar 2013 Feb 2014	Mar 2014 Feb 2015	Total
A. Massive obstetric haemorrhage	2,164	2,285	4,449
B. Massive non-obstetric haemorrhage	0	0	0
C. Massive postpartum haemorrhage	3,024	3,018	6,042
D. Peripartum hysterectomy	8	8	16
E. Uterine rupture	16	20	36
F. Acute kidney injury	10	22	32
G. Pre-eclampsia requiring ICU admission	0	0	0
H. Eclampsia	27	23	50
I. Peripartum cardiomyopathy requiring ICU/CCU admission	0	0	0
J. Severe pulmonary oedema	0	0	0
K. Amniotic fluid embolus	<5	<5	<5
L. Severe sepsis	0	0	0
M. Any spontaneous rupture	0	0	0
N. Unplanned admission to ICU	0	0	0
O. Unplanned admission to CCU	0	0	0
P. Severe de novo cerebral event	0	<5	<5
Q. Attempted suicide/self harm	39	30	69
R. Unplanned acute admission to Mental Health Unit	0	0	0
Total	**5,208**	**5,406**	**10,694**

For patient confidentiality reasons, figures less than five have been suppressed. Please note that totals do not include suppressed data. Please note that patients may have more than one complication recorded. Items that are greyed out are because the SAMM code range definition is either too wide to be captured in a logical code set or the data requested was outside the scope of ICD-10-AM codes with data shown as a zero.

The WA Health SAMM codes were further refined by WA and showed that there were 9,572 patients who experienced 11,017 SAMM complications (see Table 25). When compared with Table 24 the frequency of massive obstetric haemorrhage decreased by 293 cases due to the exclusion of the “delayed and secondary postpartum haemorrhage” code from this category. While massive postpartum haemorrhage cases were shown to increase by 650 cases due to the inclusion of “delayed and secondary postpartum haemorrhage” data being captured in this category. Furthermore, uterine rupture cases were shown to decrease (n=34) when “outcome of delivery” was included in the uterine rupture code range.

Table 25: **Frequency of WA Health Severe Acute Maternal Morbidity (Version 2) Over Two Years**

SAMM Conditions	Mar 2013 - Feb 2014	Mar 2014 - Feb 2015	Total	Differences when data compared to Table 1
A. Massive obstetric haemorrhage	2,020	2,136	4,156	-293
B. Massive non-obstetric haemorrhage	0	0	0	0
C. Massive postpartum haemorrhage	3,353	3,339	6,692	650
D. Peripartum hysterectomy	8	8	16	0
E. Uterine rupture	<5	<5	<5	-34
F. Acute kidney injury	10	22	32	0
G. Pre-eclampsia requiring ICU admission	0	0	0	0
H. Eclampsia	27	23	50	0
I. Peripartum cardiomyopathy requiring ICU/CCU admission	0	0	0	0
J. Severe pulmonary oedema	<5	0	<5	<5
K. Amniotic fluid embolus	<5	<5	<5	0
L. Severe sepsis	<5	0	<5	<5
M. Any spontaneous rupture	0	0	0	0
N. Unplanned admission to ICU	0	0	0	0
O. Unplanned admission to CCU	0	0	0	0
P. Severe de novo cerebral event	0	<5	<5	0
Q. Attempted suicide/self harm	40	31	71	<5
R. Unplanned acute admission to MHU	0	0	0	0
Total	**5,458**	**5,559**	**11,017**	

For patient confidentiality reasons, figures less than five have been suppressed and totals do not include suppressed data. Patients may have more than one complication recorded. Items that are greyed out are because the SAMM code range definition is either too wide to be captured in a logical code set or the data requested was outside the scope of ICD-10-AM codes with data shown as a zero

These preliminary SAMM data findings have provided baseline data to better understand the prevalence of SAMM cases from a WA Health perspective. The addition of the SAMM version 2 data highlights the coding expertise that is required to enhance data accuracy, with a subtle code change resulting in a substantial category increase. However, as stated this is only preliminary data which requires further validation processes to be undertaken such as record linkage methods to ensure data accuracy and additional consultation with key experts to devise a standardised SAMM dataset.

The data provided by HMDC is continuously reviewed for accuracy and quality. The use of this administrative dataset to identify clinical incidents remains a work in progress and is not definitive. While the reduced HAC list is certainly more manageable it cannot be stressed enough that this code range is only new and requires extensive analysis, discussion and approval at a national level before it can be determined that all these complications are actually preventable in each setting where the care was delivered.

Coronial Review

The Coronial Liaison Unit (CLU) was established in 2005 to improve communication between WA Health and the Office of the State Coroner. It allocates health related findings from coronial inquests to appropriate stakeholders for implementation of recommendations. This information drives quality improvement in hospitals and HS which supports the provision of a high standard of health care. Health Services, and other stakeholders, provide advice and comments on coronial findings and an account of actions taken to improve patient safety. This feedback is communicated to the State Coroner in a biannual report. The CLU continues to work effectively with the Office of the State Coroner to share lessons learned from mortality review to improve future patient care within the health care system.

Table 26 provides a summary of WA Health activity and response to coronial recommendations for the last three years. Recommendations are not considered completed until they have been implemented in *all* applicable HS (ongoing recommendations may be partially implemented).

Table 26: **Overview of Coronial Liaison Unit Activity (2013 to 2016)**

	2013/14	2014/15	2015/16
Total number of health related coronial inquest findings received by CLU	27	16	28
Total number of health related recommendations (including mental health)[14]	17	10	21
Number of general health related recommendations	15	9	16
Number of general health related recommendations completed/closed[15]	15	8	7
Number of mental health related recommendations	2	1	5
Number of mental health related recommendations completed/closed	2	1	2

The Coronial Review Committee was established in January 2014. This Committee operates closely with the CLU and provides a mechanism for recommendations to be considered in a collaborative manner with key stakeholders across WA Health. The

[14] Health related recommendations that are within WA Health's jurisdiction to action (targeted toward a specific Health Service, WA Health and not external agencies; and/or are applicable to the services provided by WA Health).
[15] Status as at most recent report to the State Coroner (August 2016).

Committee exists to improve the governance and decision-making in relation to the state-wide implementation and response to coronial recommendations.

The following synopses are provided for coronial inquests where recommendations have implications for WA Health and where findings have been released between July 2015 and June 2016 (month and year the findings were released are in brackets). All HS are encouraged to use these summaries to raise awareness of important messages to facilitate continuous quality improvement. Unless otherwise stated, all inquests summarised here can be accessed at the Office of the State Coroner's website: http://www.coronerscourt.wa.gov.au/default.aspx.

Mr S (July 2015)
Mr S was a 31-year-old man who presented to ED following a suicide attempt. Security arrangements were put in place; however, Mr S was able to abscond unnoticed when a neighbouring patient became aggressive and violent. Mr S soon afterward committed suicide. The coroner found that the supervision was inadequate but acknowledged that the health service had implemented changes since this death that addressed the system failures that allowed him to abscond; and did not make any recommendations.

Mr N (July 2015)
Mr N was a 53-year-old man with a significant medical history including brain aneurysm, which required multiple surgeries, and chronic back pain. He attended a secondary metropolitan hospital after developing chest and thoracic back pain with sweating and raised blood pressure. He was later transferred to a tertiary hospital where a CT scan confirmed Type A aortic dissection; he died during induction of anaesthesia for surgical repair. The coroner found he died of natural causes as a result of a ruptured dissection of the thoracic aorta. Expert opinion provided at inquest was that the care provided was reasonable and appropriate and no recommendations were made.

Ms M (August 2015)
Ms M was a 52-year-old woman who died from an intracerebral haemorrhage after undergoing an elective right carotid endarterectomy. The surgery was uncomplicated and technically successful; however, her recovery time centred on symptom control (pain, nausea, constipation) and relationship management with nursing staff. It appeared that her aggression and agitation were attributed to tetrahydrocannabinol (THC) withdrawal and blood pressure fluctuations were attributed to emotional upset. The coroner noted the changes that had been made by the hospital in relation to the Adult Observation and Response Chart, Clinical Deterioration Policy and Clinical Handover Policy, and did not make any recommendations.

Ms S (September 2015)
Ms S died at 28 years as a result of combined drug toxicity shortly after injecting heroin. At the time she was subject to a community treatment order and was thus an involuntary patient under the *Mental Health Act 1996*. The coroner was satisfied that the supervision, treatment and care of the deceased was reasonable and appropriate, and did not make any recommendations.

Mr W (September 2015)
Mr W had a complex past medical history and was taking a number of medications to manage comorbidities. Mr W presented to the ED feeling unwell with black stools and dizziness. Following an examination Mr W was diagnosed as having gastroenteritis and dehydration and discharged home. He later collapsed at home and was unable to be revived by paramedics.

He died as a result of gastrointestinal haemorrhage. Expert opinion at inquest was that the appropriate standard of care was not provided as adequate information was available to make the correct diagnosis. The coroner made one recommendation relating to ensuring the provision of timely information to clinicians in emergency departments.

Mr M (October 2015)
Mr M, 82 years, was an involuntary patient under the *Mental Health Act 1996*. He had sustained serious brain injury in his twenties and at the time of death Mr M had been cared for by the psychiatric hospital for many years. The coroner found that the death occurred by way of natural causes, being consistent with pneumonia in an elderly man with advanced lung cancer. No recommendations were made.

Miss S (November 2015) (QLD inquest)
Miss S was a 4-year-old girl who had ingested a button battery of unknown origin. In the days preceding her death Miss S visited her GP and was diagnosed with giardia and prescribed medication. Miss S was taken to the local ED on two separate occasions by ambulance with symptoms including black stools, blood nose, and vomiting blood. The battery went undetected until an x-ray was done following intubation.

Miss S was transferred to the nearest children's hospital where she went into cardiac arrest. The size of the aortic defect prevented any corrective procedures and the team decision was that the situation was futile. Miss S died as a result of haemorrhage due to an aorto-oesophageal fistula caused by a foreign body (battery). The Queensland coroner made 13 recommendations, with two being relevant to all State Health Departments and all Paediatric Hospital sites.

Mrs C (November 2015)
Mrs C died from hypoxic brain injury secondary to aspiration of food. At the time of her death she was an involuntary patient under the *Mental Health Act 1996*. Mrs C developed schizophrenia in early adulthood; over time her condition became more treatment resistant and she required longer admissions to hospital.

A Code Blue was called after Mrs C began choking on her food. Staff commenced CPR after dislodging some food from her throat and she was transferred to a tertiary hospital and admitted to the ICU. Mrs C developed seizures and aspiration pneumonia and the decision was made to palliate her until she died.

The coroner was satisfied with the treatment Mrs C had received at both the psychiatric and tertiary hospitals, and found that the manner of death was by way of accident. No recommendations were made.

Ms H (November 2015)

Ms H died as a result of injuries sustained in a head-on motor vehicle collision. At the time, Ms H was an involuntary patient under the *Mental Health Act 1996* and was taking approved leave from the hospital. The coroner considered witness statements and the fact that there was no recent indication of any suicidal ideation, and reasoned it was more likely death occurred due to a failure to pay due care and attention while driving. The coroner found that the manner of death was by accident. The coroner felt that appropriate actions had been taken by the hospital since this incident and did not make any recommendations.

Ms C (November 2015)

Ms C died from head injuries sustained when struck by a train in a regional area. Ms C was an involuntary patient under the *Mental Health Act 1996* at the time of her death but was allowed unescorted leave for a smoke. Ms C was seen standing on the railway embankment 45 minutes prior to being found deceased at the bottom as another train passed through. The coroner made an open finding as he was unable to determine whether the Ms C intended to be struck by the train or whether she was struck by accident. The coroner was satisfied that the mental health service had implemented steps to address failures in the standard of supervision, treatment and care of Ms C. The coroner did not make any recommendations but acknowledged the ongoing work to implement recommendations from the Stokes Review of the admission or referral to and the discharge and transfer practices of public mental health facilities/services in Western Australia.

ALMA STREET CENTRE CASES (December 2015)

The following five cases were considered together in a joint inquest. The coroner made two recommendations for all cases, which related to carer's plans and sharing of information with carers; and, continuation of the implementation of recommendations from the Stokes Review of the admission or referral to and the discharge and transfer practices of public mental health facilities/services in Western Australia.

Ms N-D

Ms N-D died aged 18 years less than 24 hours after discharge from a mental health service. Ms N-D had a long history with mental health services and was in the process of transitioning to adult services. After Ms N-D attempted to hang herself, she was reviewed by the psychiatrist who felt there was no evidence of depression or psychosis. The psychiatrist declined her request for a week-long admission, but decided the most suitable management was for her to remain in hospital for two more days. No risk management plan was documented. Ms N-D requested early discharge the following day and attempts by both the hospital and her father to remain in hospital, were unsuccessful. She was found deceased in a park. The coroner found that Ms N-D died as a result of ligature compression of the neck by way of suicide. Attempts to guide transition of care were felt to be reasonable. However, the psychiatrist was found to have not exercised sound clinical judgement when discharge was approved, and there was poor planning, documentation, and risk assessment during her admission. The failure to communicate with Ms N-D's father during the admission was highlighted as a failing.

Ms E
Ms E died as a result of ligature compression of the neck (hanging) by way of suicide. Ms E had a history of mental health issues and tended to engage with mental health services when she reached crisis point. After failing to attend a number of appointments, Ms E was discharged from the mental health service by letter. Over the next two months mental health services made contact with Ms E however, she declined further assistance. Nonetheless, the coroner found that the care provided lacked cohesion and continuity, such as to leave Ms E responsible for following up on her own care.

Mr T
Mr T died as a result of unknown causes by way of suicide after going missing less than 24 hours after discharge from hospital (medical admission with psychiatric review). Psychiatric review prior to discharge determined that Mr T was at chronic risk of suicide, but not at acute risk, and he was discharged. An appointment was made the following day; however Mr T left the family home.

A full-scale search failed to locate him and his remains were found some months afterward in nearby scrubland. The coroner identified concerns about no clear discharge planning; inadequate responses to Mr T's call for help; and, no adequate contact with Mr T's family regarding discharge.

Mr E
Mr E died, aged 26 years, as a result of multiple injuries by way of suicide less than 24 hours following discharge as an involuntary patient under the *Mental Health Act 1996*. Mr E had a significant history of mental health issues including multiple admissions to psychiatric inpatient services and multiple suicide attempts. After Mr E declined admission at an outpatient appointment a consultant psychiatrist determined that involuntary admission was required. Mr E made it clear that his condition was not to be discussed with his father.

After improving he was discharged with follow-up arrangements in place. Mr E jumped from an apartment building the following day. The coroner was of the view that follow-up could have been improved and this has been rectified since this death. Further, the coroner was critical of the communication with Mr E's family regarding post-discharge care (specifically regarding information about triggers and indications of relapse).

Mr R
Mr R died as a result of multiple injuries by way of suicide immediately after absconding whilst an involuntary patient under the *Mental Health Act 1996*. Mr R had an extensive history of mental health problems including personality disorder, depression, anxiety, benzodiazepine dependence and alcohol abuse. Despite treatment via a combination of medication and other interventions Mr R did not improve.

Mr R absconded whilst on escorted ground access and stepped into the path of a prime mover on a nearby road. Witness statements persuaded the coroner that his actions were deliberate rather than accidental. He was conveyed to the ED; however, was unable to be resuscitated. The coroner acknowledged a number of improvements made by the mental health service.

Ms S (January 2016)

Ms S, a remote area nurse, died as a result of multiple injuries sustained in a head-on motor vehicle collision whilst transporting a patient along a remote unsealed road to meet the RFDS for transfer. An inquest was held to investigate whether fatigue was a contributing factor. The coroner could not entirely eliminate it as a contributing factor however, nothing could be found to suggest that the crash occurred for any reason other than driver error. The coroner acknowledged a number of changes that had been made since the death and did not make any recommendations.

Ms D (February 2016)

Ms D died as a result of ischaemic heart disease due to natural causes. At the time she was an involuntary patient under the provisions of the *Criminal Law (Mentally Impaired Accused) Act 1996*. Ms D had rheumatic fever as a child, which resulted in rheumatic heart disease requiring mitral valve and aortic valve replacements. In the weeks preceding her death she developed a breast abscess and she was admitted to a tertiary hospital. She was found unresponsive one morning and could not be revived. The coroner found the supervision, treatment and care of Ms D was of a satisfactory standard and made no recommendations.

PRESCRIPTION SHOPPING (February 2016)

The following three cases were considered together in a joint inquest. The coroner made thirteen recommendations for all cases, which related to secure databases, management of benzodiazepines, the Community Program for Opioid Pharmacotherapy (CPOP), and Australia-wide dispensing information.

Mr B

Mr B died aged 44 years as a result of combined drug effect by way of misadventure. Mr B had a history of illicit drug use with ongoing use of opioids including methadone, benzodiazepine and cannabis. He had a medical history bipolar affective disorder, anxiety, chronic back pain, obesity and possible sleep apnoea. Mr B attended two separate GP clinics; at one time being registered with the CPOP, and received prescriptions from GPs at both clinics. Mr B died after intravenously injecting OxyContin.

Post mortem analysis revealed toxic levels of oxycodone, plus therapeutic levels of several different benzodiazepines, quetiapine and amitriptyline, with the possibility of terminal aspiration of vomit. Expert evidence suggested that the effects of the oxycodone in combination with other sedating drugs in an obese man with likely sleep apnoea would have led to impaired ventilation and inability to maintain and protect his airway.

Mr H

Mr H died aged 26 years as a result of multiple drug toxicity and bronchopneumonia by way of misadventure. Mr H attended several GP surgeries requesting large amounts of prescription drugs and was caught forging prescriptions on two occasions. He regularly obtained prescriptions for opioids from EDs following accidents. Mr H was registered with the CPOP; however, participation was patchy. Following surgery, Mr H convinced the specialist that he had a very high opioid tolerance and would need higher doses and was prescribed 20 x 80mg tablets of OxyContin.

The coroner was satisfied that Mr H consumed a minimum of 10 tablets in the 24 hours preceding his death. Post mortem revealed left anterior descending artery occlusion, secondary to anabolic steroid abuse; early bronchopneumonia but no aspiration; and, oxycodone residue in the stomach. Toxicology revealed oxycodone, venlafaxine, diazepam, zolpidem, chlorpromazine, olanzapine, propoxyphene, pethidine, pholcodine, quinine, alprazolam, sildenafil, with lignocaine in his urine.

Mr W

Mr W died aged 22 years after commencing on methadone therapy. Mr W started using cannabis, heroin and amphetamines in his teenage years. Mr W had been registered with Next Step three years before his death but did not continue with the program. He attended two main GP surgeries seeing a range of GPs; and also obtained drugs through the black market. Mr W refused to go to Next Step or settle for daily dispensing and attempts were made to safely wean his benzodiazepine use. Mr W was registered on the CPOP for methadone and within two days of commencing the program, he was found deceased at home.

Death was consistent with combined drug toxicity and was by manner of misadventure. Toxicology revealed lethal amounts of alprazolam, with sub-therapeutic to therapeutic levels of methadone, diazepam, oxazepam and dextromethorphan. It was not clear from the examination whether aspiration or other factors were present. The coroner was satisfied that Mr W overstated his tolerance to obtain higher amounts of medicine than he needed.

Mr P (February 2016)

Mr P died aged 53 years as a result of ligature compression of the neck (hanging) by manner of suicide. He was an involuntary patient under the *Mental Health Act 1996* at the time. Mr P had a long history of mental illness and contact with psychiatric hospitals. He was eventually diagnosed with severe chronic paranoid schizophrenia, characterised by bizarre delusions, auditory hallucinations and severe thought disorder. Despite considerable effort to improve and stabilise Mr P's condition, he remained unwell. During a period of leave Mr P refused to engage with a staff member of a community mental health service when he attended Mr P's residence, and alternative arrangements were made for follow-up. Mr P was found deceased by family members three days later. The coroner found that the supervision, treatment and care of the deceased was reasonable and appropriate in the circumstances and did not make any recommendations.

Ms B (February 2016)

Ms B died aged 25 years as a result of multiple injuries and by manner of suicide. Ms B was an involuntary patient under the *Mental Health Act 1996* at the time. Ms B had suffered depressive symptoms after the birth of her first child and received treatment in a mother-baby unit, complicated by absconding episodes. Following her recovery, she remained well until the days following the uncomplicated birth of her second child. Again she was referred to the mother-baby unit; however, she absconded twice from the ED whilst awaiting transfer. It appears that the history of absconding was not given any particular emphasis in risk assessments conducted and she was transferred. She appeared to be doing well over the following two days, but later absconded and walked to a nearby railway, where she was hit by a train. The coroner acknowledged the changes that had been made at the service since the death and was satisfied they should greatly reduce the risk of a similar incident. No recommendations were made.

Mr B-R (March 2016)

Mr B-R died aged 26 years as a result of ligature compression of the neck (hanging) and by manner of suicide. He was admitted as an involuntary patient under the *Mental Health Act 1996* with grandiose delusions and no insight and was commenced on medication. Mr B-R's family were keen to have him transferred back to New Zealand to be closer to his father. During one period of leave, he was told by a family member that his father wasn't sure he'd be able to provide him with the accommodation and support he needed, and that he may have to stay with another family member. The following day Mr B-R absconded. Police were not informed for nine hours and a search was unsuccessful. He was found deceased three days later. The coroner acknowledged changes to policy requiring immediate notification to police. No recommendations were made.

Mr D (March 2016)

Mr D died aged 17 years as a result of ligature compression of the neck (hanging) and by manner of suicide. He was an involuntary patient under the *Mental Health Act 1996* at the time. He was admitted to a regional hospital following a deliberate medication overdose and was assessed as having a moderately severe depressive episode with anxiety, high lifelong risk of suicide, but low to moderate immediate risk. Four days after admission, he absconded and search attempts were unsuccessful. He was found deceased in a nearby park.

The coroner considered that the hospital staff had done their best with the resources available at the time to provide appropriate medical care whilst respecting Mr D's right to be treated in the least restrictive manner available. The adult mental health unit was described as a less than ideal place for an adolescent, although more input from nurses with experience in mental health would have been available there. The coroner acknowledged the significant changes that had been made since this death and did not make any recommendations.

Mr R (April 2016)

Mr R died aged 62 years as a result of bronchopneumonia on a background of COPD by manner of natural causes. He was an involuntary patient under the *Mental Health Act 1996* at the time. Mr R had a long history of treatment resistant schizophrenia, complicated by his itinerant lifestyle and poor compliance with medications. He often refused conventional treatment for COPD. He developed Type 2 respiratory failure four times during his admission, and was transferred to a tertiary hospital for specialist care. Care was often complicated by his aggressive refusal of medication, and required security guards and physical restraint at times. His family made clear their wishes for no active resuscitation efforts in the event of deterioration. He later deteriorated, eventually became non-responsive, and died.

The coroner was satisfied that the deceased was given a high standard of care and that his death was anticipated due to the ongoing progression of his lung disease. The coroner found that efforts were made to keep the deceased as comfortable as possible during his final decline, while still managing his psychiatric symptoms. No recommendations were made.

Mrs S (May 2016)

Mrs S died aged 69 years as a result of multiple organ failure due to sepsis of unknown origin by manner of natural causes. Mrs S had a significant medical history including Type 2 diabetes, hypertension, peripheral arterial disease, ischaemic heart disease, paroxysmal supraventricular tachycardia, arterial fibrillation and long term use of anticoagulation medication. Mrs S suffered adverse reactions to this medication on a number of occasions and required rehydration to recover her renal function.

After being treated for a spiral fracture of her left humerus after a fall at home, and being administered morphine for pain relief, Mrs S attended the regional hospital ED another three times in the following 10 days. Tests were ordered to assess renal function and they indicated the onset of acute renal failure. Mrs S was transferred to a private metropolitan hospital. Mrs S's renal function appeared to improve; however other results reflected an ongoing septic process. Investigation failed to identify the cause of sepsis. Mrs S continued to deteriorate and she died.

The coroner could not find any evidence to suggest that a different course of action would have changed the outcome for Mrs S. The coroner acknowledged the changes that had taken place at the regional hospital since this death but noted there was no indication these would have altered the outcome. No recommendations were made.

Master P (May 2016)

Master P died aged six years as a result of pneumonia complicating influenza (H1N1) infection by manner of natural causes. Master P was seen informally in the ED of a regional hospital after a few days of mild flu-like symptoms and developing a bright red rash. When he didn't improve the next day, his mother took him back to the ED. Master P was discharged before the radiologist's report was available which indicated pneumonia. Master P's mother took him to a GP the following morning who wrote a letter instructing admission to hospital. He was admitted with scarlet fever and possible chest infection and administered intravenous penicillin and maintenance fluids. Master P remained tachycardic and tachypnoeic and went into cardiac arrest. Resuscitation was unsuccessful and he died.

The coroner found that Master P died from complications of a natural illness which were not appropriately treated and made two recommendations relating to the practice of delayed prescription of antibiotics; and, improving the availability of radiologists' reports.

Mr R (June 2016)

Mr R died aged 23 years as a result of combined drug toxicity due to being recommenced on methadone as an opioid substitute whilst a hospital inpatient. He was a voluntary patient under the *Mental Health Act 1996* at the time. Mr R was diagnosed with schizophrenia at an early age and had been using illicit drugs since the age of 13. He had previously commenced methadone therapy several years prior to his death. He was admitted to a mental health unit following poor medication compliance and exacerbation of psychotic symptoms; it had been 19 weeks since his last methadone dose.

Mr R attended Next Step and was commenced on a higher-than-normal starting dose. It was not emphasised with the mental health unit that side effects needed to be monitored. It was assumed that hospital staff would have knowledge of the effects of methadone. Mr R appeared sedated, irritable and had an unsteady gait and slurred speech after his methadone dose on the fourth day. Shortly afterward he was found unresponsive; resuscitation attempts were unsuccessful.

The coroner acknowledged changes that had been made since this death. Three recommendations were made regarding the amendment of operational directive relating to the CPOP; resourcing of addiction medicine specialist consultants; and, CPOP training for psychiatrists.

Review of Death

The Review of Death (ROD) Policy 2013 recognises the role that reviews of death play in improving the safety and quality of health care by complementing improvements identified through the investigation of clinical incidents and patient complaints.

Under the ROD Policy, all hospital deaths must be reviewed and categorised in terms of preventability within four months of the date of death. Appendix Two provides a diagrammatical representation of the interaction of reviews of deaths with clinical incident management processes and the Western Australian Audit of Surgical Mortality.

Data provided by public health services and private licensed health care facilities showed that for deaths occurring during the period 1 January to 31 December 2015, 90.6% of hospital deaths were reviewed within four months of the date of death (Table 27).

Public and private hospitals are also required to indicate when notifying a SAC 1 clinical incident if notification was an outcome of a mortality review process. In the 2015/16 period 48 notifications of clinical incidents were reported as originating from a mortality review process (11.1%). This is the second year that Datix CIMS data has been used to identify SAC 1 clinical incidents notified following a mortality review process, and care should be exercised if comparing this figure to previous years. The PSSU conducts ongoing reviews of data integrity in Datix CIMS.

Table 27: **Review of Death Indicator**

Indicator	Outcome
Percentage of deaths with a completed review within four months of the date of death (reflecting deaths that occurred between 1/1/2015 and 31/12/2015)	90.6%

Data comprises public and private hospitals. A completed review includes a death:

a) where no further investigation is required

b) with a completed WAASM audit

c) notified as a SAC 1 clinical incident following identification of a potentially preventable death.

Western Australian Audit of Surgical Mortality (WAASM)

The Western Australian Audit of Surgical Mortality (WAASM) is a review of surgical deaths using a peer review methodology. The WAASM is managed by the Royal Australasian College of Surgeons (RACS) and funded by the DOH. The WAASM has been operating since 2002, with data reported by calendar year.

Participation in the WAASM fulfils mortality review obligations mandated by the ROD Policy. All deaths that occur in WA hospitals (including private hospitals), where the patient was under the care of a surgeon are notified to the WAASM and reviewed.

The RACS' Continuing Professional Development Manual mandates surgeons' participation in the Australian and New Zealand Audit of Surgical Mortality (ANZASM) [16] if a surgeon is "in operative based practice, has a surgical death and an audit of surgical mortality is available in the surgeon's hospital." Non participation jeopardises a surgeon's registration with the Medical Board of Australia.[17]

Surgeons are asked to complete a form about a death, and are asked to identify when there has been an area for consideration,[18] an area of concern[19] or an adverse event. The case then undergoes first line assessment, whereby it is de-identified and sent to a peer surgeon at a different hospital for review. Second-line assessment is the process whereby cases are reviewed by a second peer surgeon along with the patient's medical notes. Cases are only referred for second-line assessment if an area of concern or adverse event has been identified, or where there is the potential for lessons to be learned (refer to Appendix Three for an overview of the audit process).

In 2015, 586 deaths were notified from 17 hospitals. Eight per cent (n=48) of completed cases were referred for second-line assessment (of the 575 deaths falling within the WAASM inclusion criteria).

For the WAASM, an adverse event is defined as "an unintended injury caused by medical management, rather than by the disease process, which is sufficiently serious to lead to prolonged hospitalisation, lead to temporary or permanent impairment or disability of the patient at the time of discharge or contribute to/or cause death." The WAASM has identified 13 adverse events that caused death in 2014 (four of these were considered definitely preventable) and eight adverse events that caused death in 2015[20] (one was considered definitely preventable; see Table 28).

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[16] http://www.surgeons.org/for-health-professionals/audits-and-surgical-research/anzasm/
[17] Royal Australasian College of Surgeons (2013) WA Audit of Surgical Mortality (WAASM) Annual Report 2013.
[18] Area of consideration = clinician believes an area of care could have been improved.
[19] Area of concern = clinician believes an area of care should have been better.
[20] 2015 data includes that for which the audit process was complete at 27 July 2016.

Table 28: **Frequency Adverse Events Causing Death that were Considered Definitely Preventable and Associated Deaths (2005 to 2015)**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
AEs considered definitely preventable	7	4	7	5	5	4	7	4	1	4	1
Deaths associated with preventable AE	7	4	6	5	5	3	7	2	1	3	1
Deaths as % of surgical deaths	<1%	<1%	<1%	<1%	<1%	<1%	1.2%	<1%	<1%	<1%	<1%

Includes cases complete as at 27 July 2016. Multiple adverse events that caused death and were considered definitely preventable may have been recorded for a single surgical death.

For years 2005-2008 inclusive surgical deaths are total deaths reported to WAASM; from 2009 onward surgical deaths are those reported as meeting the WAASM criteria in the WAASM Annual Reports.

In 2015, eight adverse events causing death were identified, including ‘decision to operate’; ‘diagnosis missed by medical unit’; and, ‘injury caused by fall in hospital’ (see Table 29).

Table 29: **Frequency of Adverse Events Causing Death for 2013 to 2015 (Including Events that were Considered Not Preventable)**

Adverse Event	2013	2014	2015
Arterial complication of open surgery	-	1	-
Arterial or venous complication	-	-	1
Decision to operate	-	1	1
Delay in diagnosis	1	-	-
Delay in recognising complications	-	1	-
Diagnosis missed by medical unit	-	-	1
Diagnosis missed by surgeon at operation	-	1	-
Extension of ischaemia after open surgery	-	1	-
Failure to recognise severity of illness	1	-	-
Heart complication of open surgery	-	1	-
Inadequate post-operative assessment	-	1	-
Inadequate post-operative cardiac assessment	-	1	-
Injury caused by fall in hospital	-	1	1
Injury to liver during endoscopic operation	1	-	-
Injury to small bowel during laparoscopic operation	-	1	-
Injury to spleen during endoscopic operation	-	-	1
Intra- or post-operative bleeding during or following open surgery	-	1	1
Open surgery – organ related technical	-	-	1
Patient related factors	1	-	-
Post-operative care unsatisfactory	1	-	-
Post-operative pancreatitis	-	1	-
Pulmonary embolism	-	-	1
Septicaemia – cause unspecified	-	1	-
Total	**5**	**13**	**8**

2015 data includes those cases that were complete at 27 July 2016. Multiple adverse events that caused death may have been recorded for a single surgical death.

A total of 185 adverse events were identified during the period 2005-2015. The most frequently reported adverse events by surgeon assessors over the audit period of 2005 to 2015 were: complications of surgery (n=32); anastomotic leak (n=26); delay to treatment (medical and surgical) (n=16); and, bleeding associated with operation (n=14; see Table 30).

Table 30: **Most Frequently Reported Adverse Events Causing Death 2005 to 2015 (Including Events that were Considered Not Preventable)**

Adverse Event	2005-2015
Complication of surgery	32
Anastomotic leak	26
Delay to treatment (medical and surgical)	16
Bleeding associated with operation	14
Injury caused by fall in hospital	12
Pulmonary embolus	12
Infection (including septicaemia)	12
Decisions relating to surgical treatment	11
Medical management/assessment issues	11
Gastrointestinal perforation	8
Related to DVT or CVT	6
Others	25
Total	**185**

Only events with frequencies ≥5 have been included. Adverse events have been grouped by the PSSU based on event descriptions provided by the surgeon assessors for the WAASM.

WA Audit of Surgical Mortality Annual Reports can be accessed online at: http://www.surgeons.org/for-health-professionals/audits-and-surgical-research/anzasm/waasm/#Reports.

The ANZASM provides central oversight for each of the jurisdictional surgical audits, including WAASM, and provides national overview of data. The PSSU encourages all health practitioners to review the cases in the case note review booklet for educational and professional development purposes. The most recent booklet can be accessed at: http://intranet.health.wa.gov.au/osgh/reports/ (access is restricted to WA Health staff).

Consumer Feedback Review

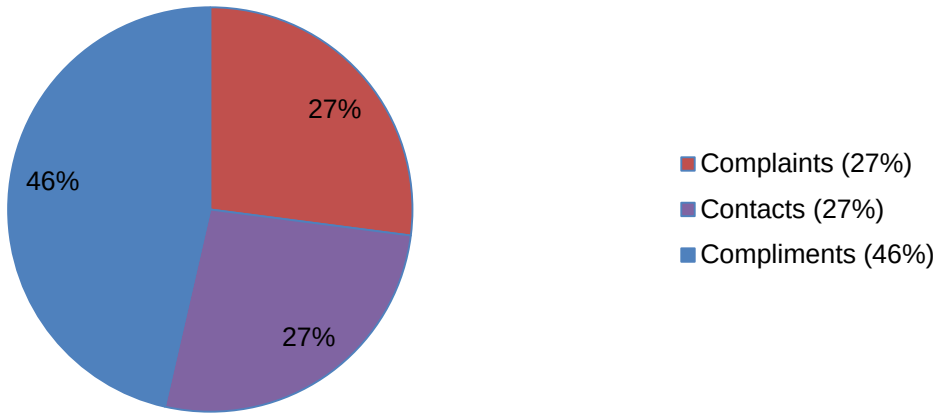
Standard 2 of the National Standards refers to partnering with consumers and describes the need for health services to have systems in place that support collaboration with consumers to improve the safety and quality of care. This standard is intended to underpin all aspects of health service operations, with opportunities for patients, families, carers and other consumers to be involved in health care design, delivery and evaluation to be incorporated into the implementation of National Standards 3 to 10.

Consumer feedback provides health services with an indication of current areas of concern to consumers and thereby highlights potential areas for service improvements. Implementation of these service improvements is likely to improve the safety of a health service, potentially preventing the occurrence of a future clinical incident. Indeed some clinical incidents are only identified during the review of a consumer feedback item. Although not all consumer feedback items and resultant improvements will directly relate to the quality of clinical care provided, improvements in the quality of a service leading to increased consumer satisfaction are equally valuable. Consumer feedback may also be positive in nature and emphasise what a health service does well. Health service staff need to be aware of avenues for consumers to provide feedback and actively encourage them to do so to enable the health service to learn from this valuable resource.

With the introduction of the *Mental Health Act WA 2014*, the rights of mental health service consumers, their carers and families have been clarified and strengthened. Under the *Mental Health Act 2014* (s.309) the Health and Disability Services Complaints Office (HaDSCO) has authority to collect complaints information relating to mental health episodes of care to fulfil its functions under the Act. WA Health aims to strengthen the collection of complaints data relating to mental health episodes of care and continue to work with HaDSCO in this space.

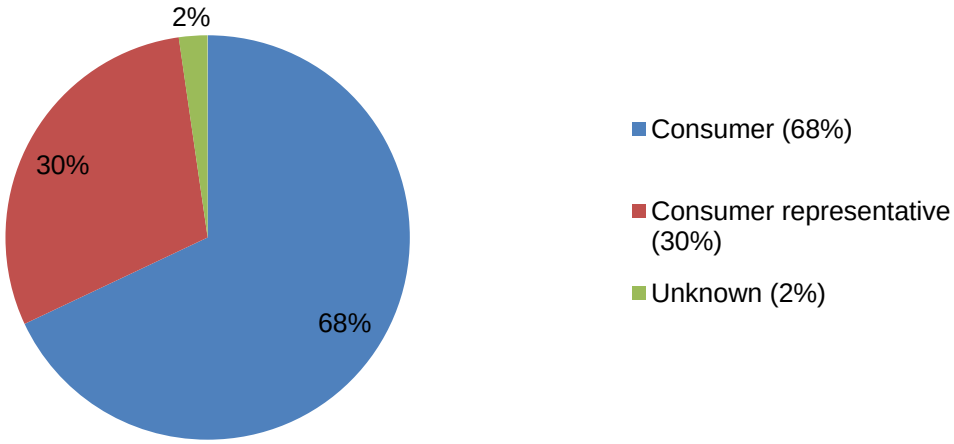
In 2015/16, 16,901 consumer feedback items were reported across WA Health. These feedback items included complaints (n=4,573; 27%), contacts (n=4,485; 27%) and compliments (n=7,843; 46%) with the proportion of each feedback type received by WA Health displayed in Figure 43. In accordance with the WA Health Complaints Management Policy 2015, contacts are items of feedback regarding a minor aspect of service where the individual is seeking information or assistance, or does not wish to lodge a formal complaint, or is satisfied that the feedback has been adequately addressed at the point of contact, negating the need for any follow up actions. A large proportion (46%) of feedback items received by WA Health were compliments, with consumers and carers expressing their gratitude regarding a service provided by WA Health.

Figure 43: **Type of Consumer Feedback Received by WA Health for 2015/16**[21]



Consumers may report feedback regarding their own experience interacting with a health service or they may report feedback on behalf of a related party. In 2015/16 the majority (n=11,491; 68%) of feedback was received directly from consumers communicating about their own experience with health services, with the remainder received from families, carers and other concerned parties, as displayed in Figure 44 below.

Figure 44: **Person Reporting the Feedback Item to WA Health for 2015/16**



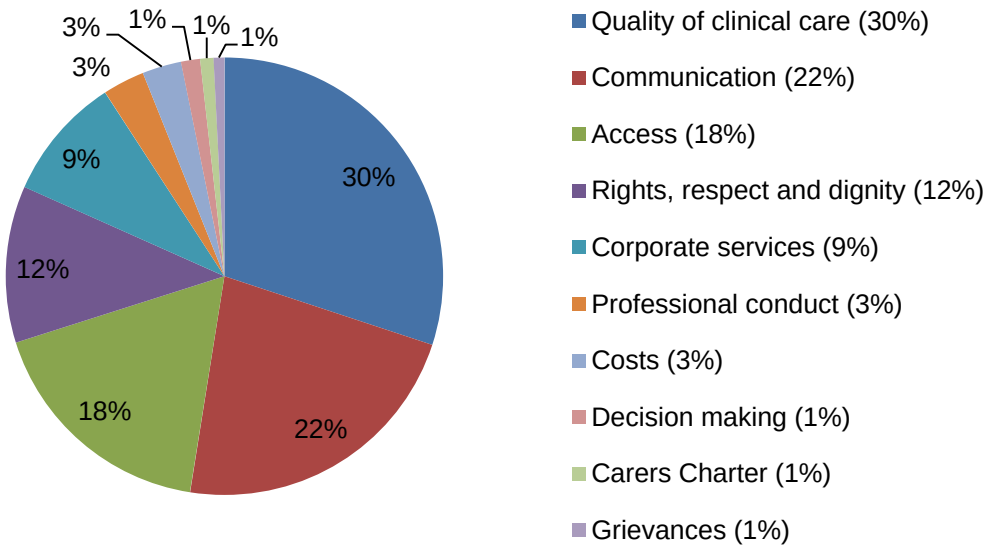
[21] It is mandatory for all complaints received by WA Health hospitals and health services to be entered in Datix CFM, and all complaints relating to public patients at public private partnerships (JHC, PHC and SJOG Midland) to be reported to PSSU. Recording of compliments and contacts in Datix CFM is optional. Public private partnerships do not provide PSSU with compliments and contacts data.

Complaints Overview

Each complaint received by WA Health must have at least one issue identified, with the possibility for multiple issues identified in one complaint. Complaints are categorised in accordance with categories described in the *Health and Disability Services (Complaints) Regulations 2010*.

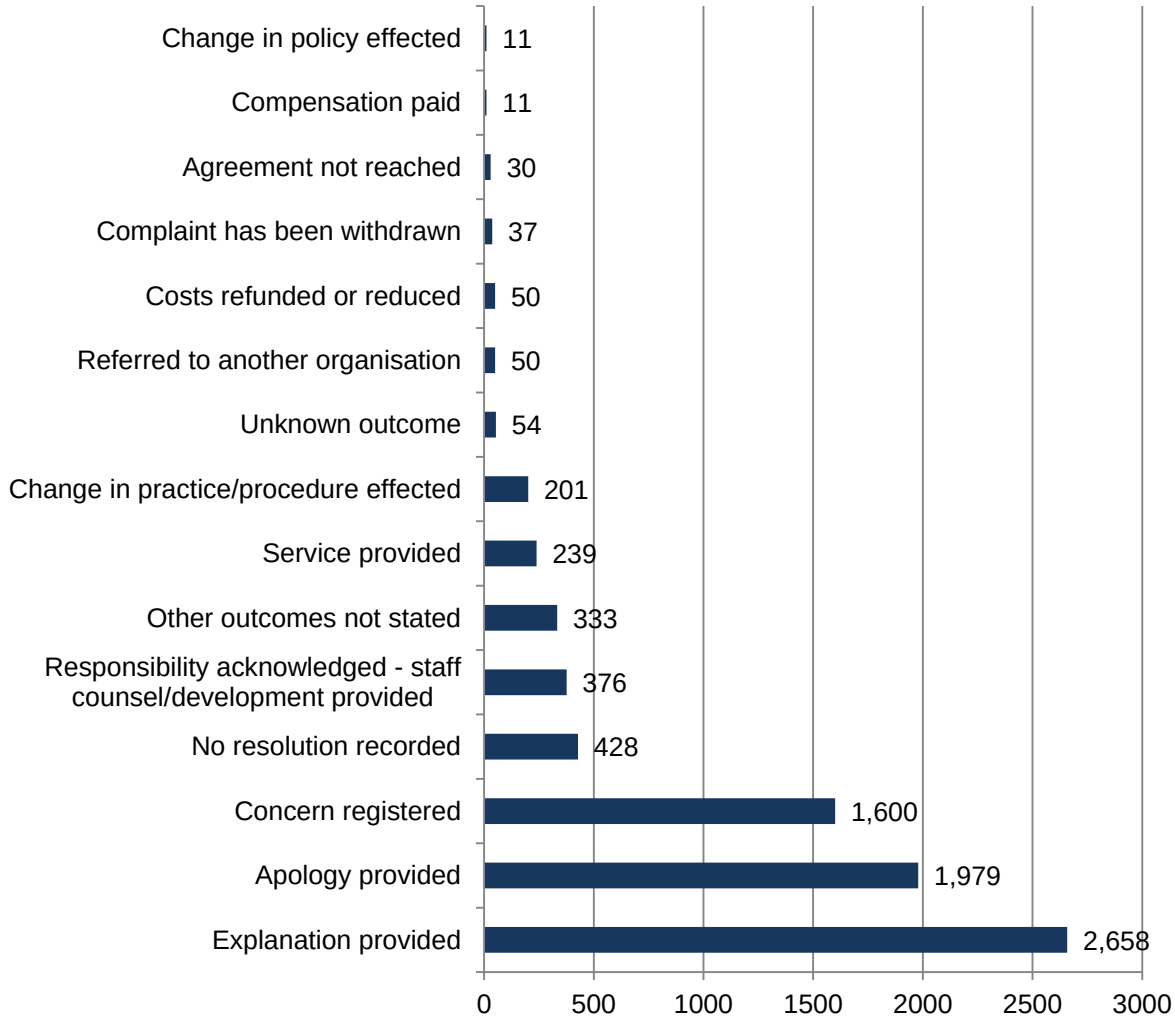
In 2015/16 a total of 7,154 issues were reported in the 4,573 complaints received. Issues are recorded as reported by the person reporting the feedback to the health service. The proportion of issues identified in each category in 2015/16 is displayed in Figure 45.

Figure 45**: Issues Identified by Person Reporting the Feedback in Complaints Received by WA Health for 2015/16**



At the cessation of the complaint management process a resolution is recorded, with multiple resolutions possible as seen in Figure 46. The most common resolution achieved following investigation into a complaint and engagement with consumers for 2015/16 was 'Explanation Provided' (n=2,658; 58%).

Figure 46: **Resolution Achieved in Complaints in WA Health 2015/16**[22]

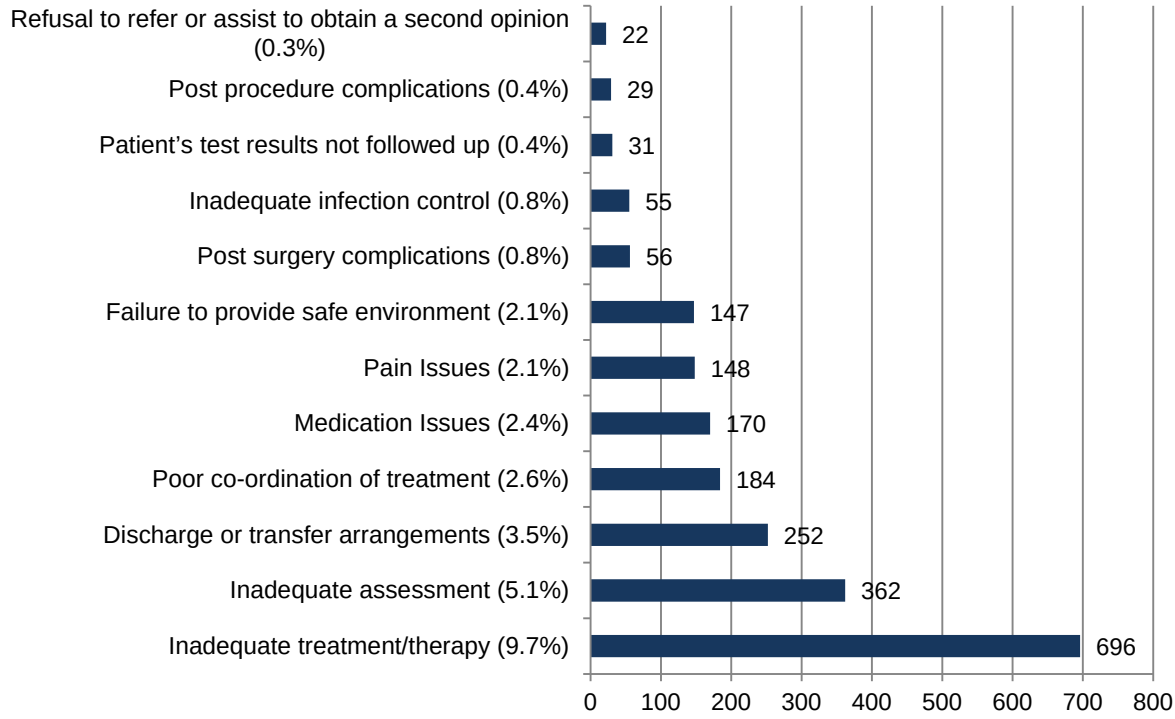


[22] Resolution information is not received for public private partnership hospitals.

Quality of Clinical Care Complaint Issues

A total of 2,152 complaint issues assigned to the category ‘Quality of Clinical Care’ were reported by consumers throughout 2015/16, which constituted 30.1% of the total 7,154 complaint issues. These issues related most frequently to: inadequate treatment or therapy (n=696; 9.7%), inadequate assessment (n=362; 5.1%) and discharge or transfer arrangements (n=252; 3.5%; see Figure 47).

Figure 47: **Frequency and Percentage of Complaint Issues Relating to ‘Quality of Clinical Care’ (2015/16)**



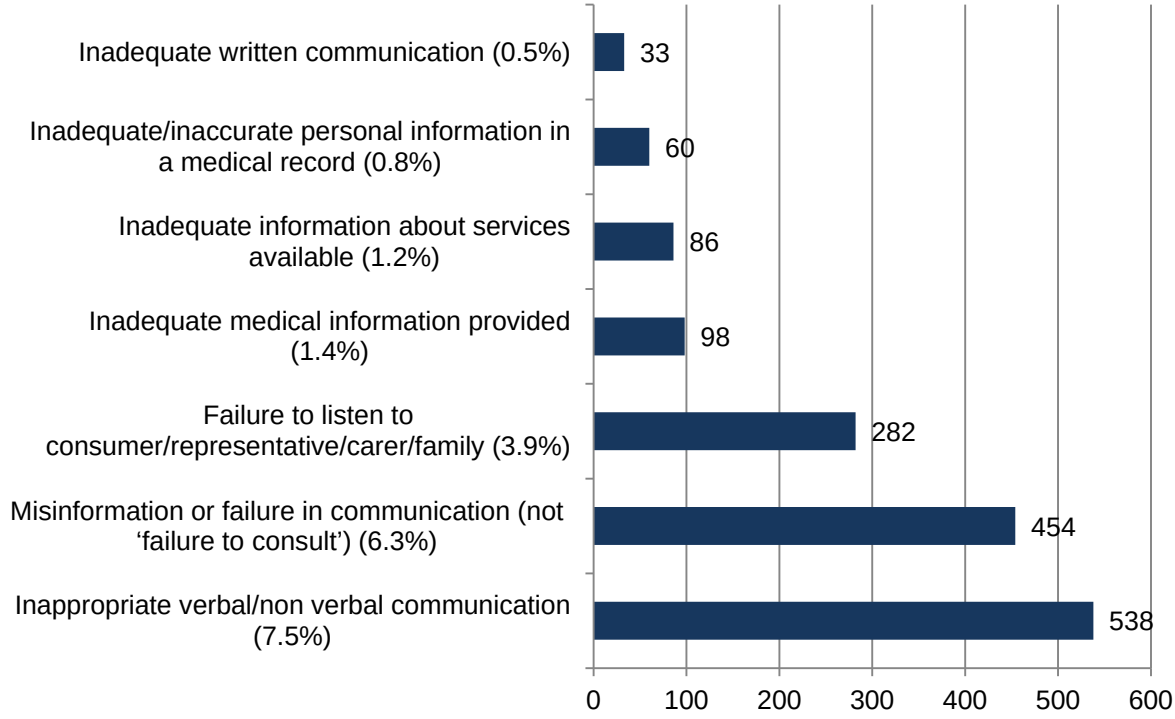
Key Messages for ‘Quality of Clinical Care’ Complaint Issues

For complaints relating to the quality of clinical care, ‘inadequate treatment and/or therapy’ was the most frequently reported issue. It identifies consumers’ experience of treatment that is inadequate, negligent, incorrect, delayed or rough; or, of a perceived failure in the duty of care. Because of the clinical focus of the category, quality of clinical care complaint issues are most likely to reflect events that are potential clinical incidents. Early identification of these issues by consumers should be seen as an opportunity for a health service to proactively make service improvements to high-risk areas before serious clinical incidents occur.

Communication Complaint Issues

A total of 1,551 complaint issues assigned to the category ‘Communication’ were reported by consumers throughout 2015/16, which constituted 21.6% of the total 7,154 complaint issues. The most frequently reported issues were inappropriate verbal/non-verbal communication (n=538; 7.5%), misinformation or failure in communication (not ‘failure to consult’; n=454; 6.3%) and failure to listen to consumer/representative/carer/family (n=282; 3.9%; see Figure 48).

Figure 48: **Frequency and Percentage of Complaint Issues Relating to ‘Communication’ (2015/16)**



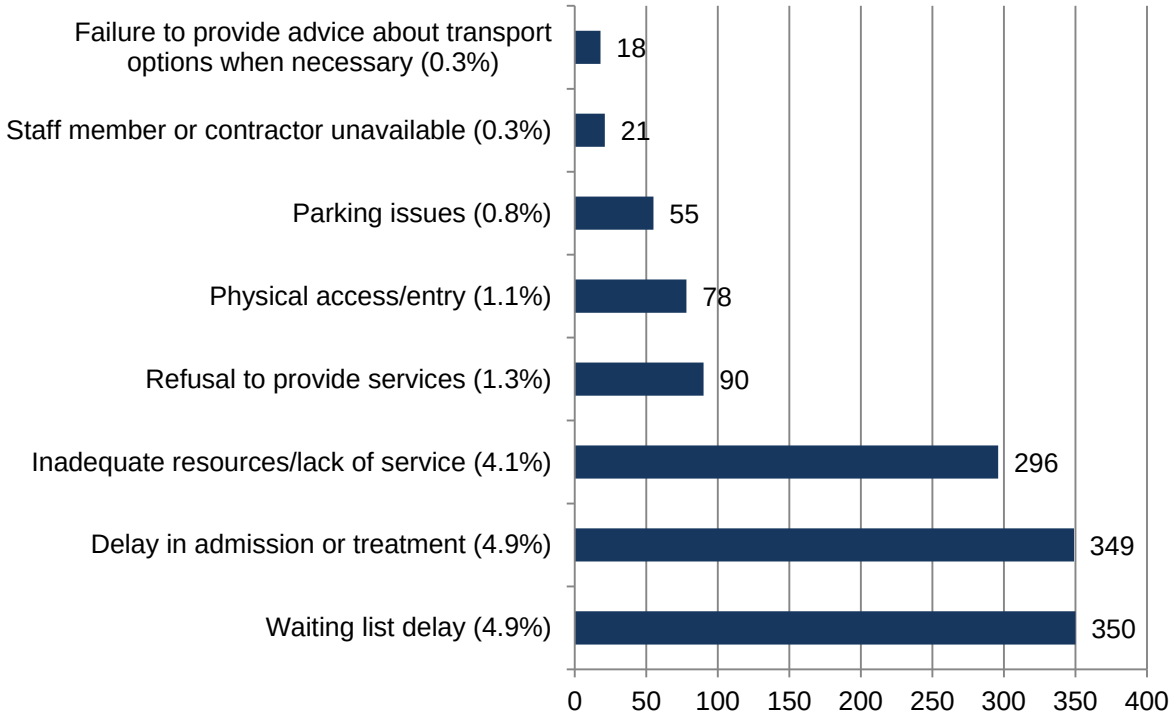
Key Messages for ‘Communication’ Complaint Issues

For complaints relating to communication, ‘inappropriate verbal/non-verbal communication’ was the most frequently reported issue. As outlined in the sections relating to national standards 3-10 in this report, communication issues, including communication between staff and patients/families/carers, are consistently reported as one of the most common contributing factors in clinical incident investigations. These findings provide evidence that poor and/or ineffective communication can not only create a bad experience for consumers in their interaction with a health service, but has the potential to contribute to significant harm to patients. Poor communication experiences can also potentially deter consumers from engaging with health services in the future, negatively impacting on the health care of the individual and related parties.

Access Complaint Issues

A total of 1,257 complaint issues assigned to the category ‘Access’ were reported by consumers throughout 2015/16, which constituted 17.6% of the total 7,154 complaint issues. These issues related most frequently to waiting list delays (n=350; 4.9%), delays in admission/treatment (n=349; 4.9%) and inadequate resources/lack of service (n=296; 4.1%; see Figure 49).

Figure 49: **Frequency and Percentage of Complaint Issues Relating to ‘Access’ (2015/16)**



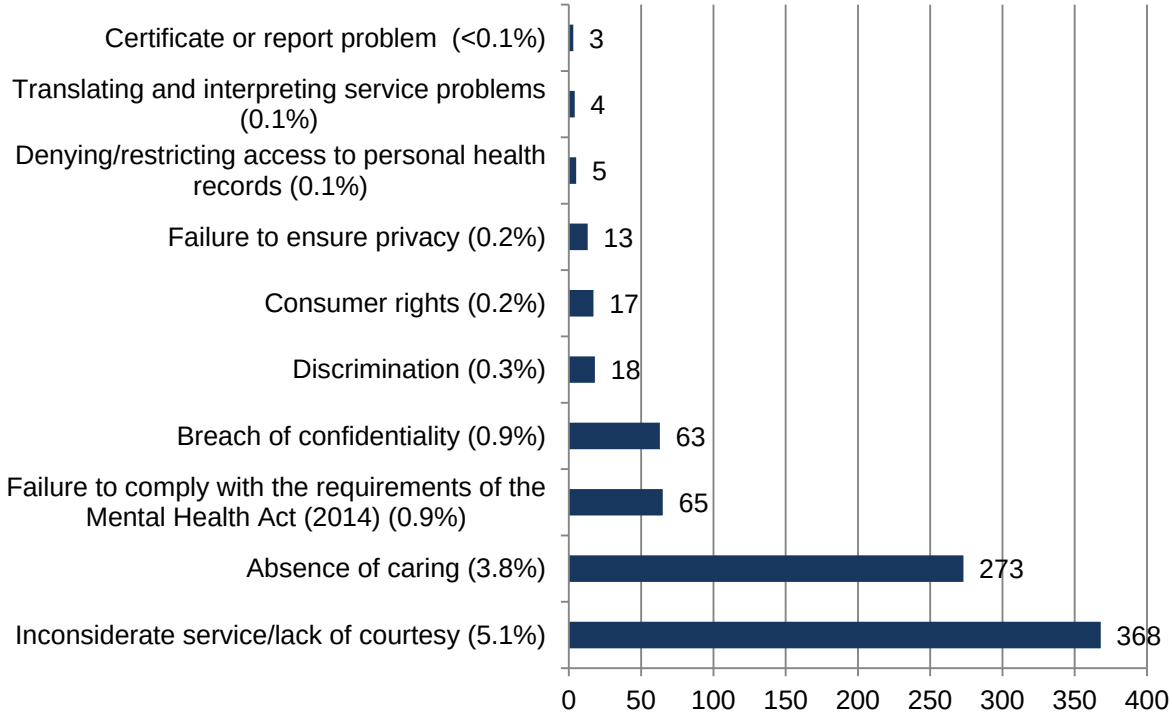
Key Messages for ‘Access’ Complaint Issues

In 2015/16 the main access issues were surrounding ‘waiting list delay’ and ‘delay in admission or treatment’. Both of these factors can impact on the quality of care provided to consumers in the WA Health system, as delayed care can have detrimental effects on health. Resources in the WA Health system are finite, but acting on issues identified by consumers surrounding access to health services and confirming efficient management of limited resources can lead to improvements in the actual and perceived quality of care received by WA Health consumers.

Rights, Respect and Dignity Complaint Issues

A total of 829 complaint issues assigned to the category 'Rights, Respect and Dignity' were reported by consumers throughout 2015/16, which constituted 11.6% of the total 7,154 complaint issues. These issues related most frequently to inconsiderate service/lack of courtesy (n=368; 5.1%), absence of compassion (n=273; 3.8%) and failure to comply with the requirements of the *Mental Health Act 2014* (n=65; 0.9%; see Figure 50).

Figure 50: **Frequency and Percentage of Complaint Issues Relating to 'Rights, Respect and Dignity' (2015/16)**



Key Messages for 'Rights, Respect and Dignity' Complaint Issues

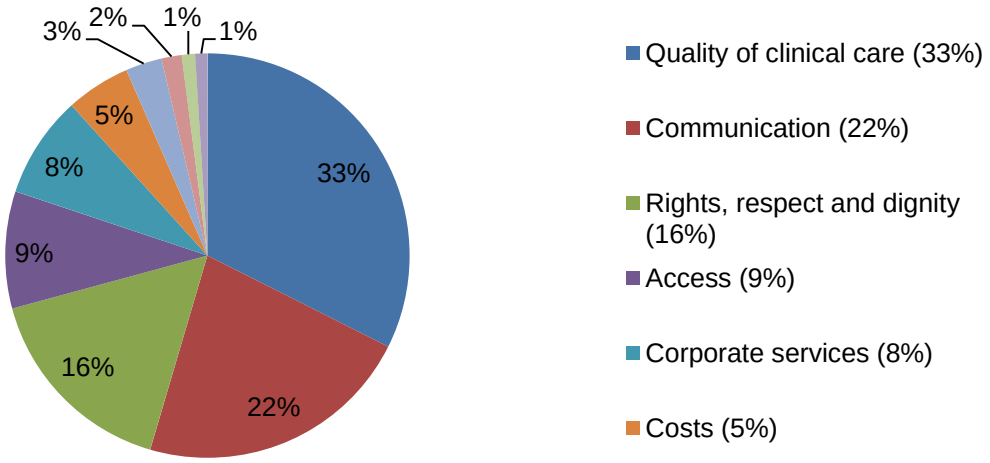
For rights, respect and dignity complaints, 'inconsiderate service/lack of courtesy' was the most frequently reported issue. It identifies situations where consumers' interactions with health services have involved perceived lack of politeness or kindness, being ignored or patronised. Experiences such as these are unsettling for health care consumers and may cause consumers to disengage with services, impacting on their or their family's health care. These experiences may also cause unnecessary additional distress, given that times when consumers interact with health services either as a patient or relative are often already stressful.

Mental Health Complaints

For the purpose of this section, the term mental health complaint is utilised for those complaints notified against health services providing specialised mental health care in community services or hospitals, and reported as a subset of the total complaint data reported above.

A total of 931 complaint issues relating to 882 mental health complaints were reported in 2015/16. The proportion of issues reported in each of the categories described in the *Health and Disability Services (Complaints) Regulations 2010* is displayed in Figure 51.

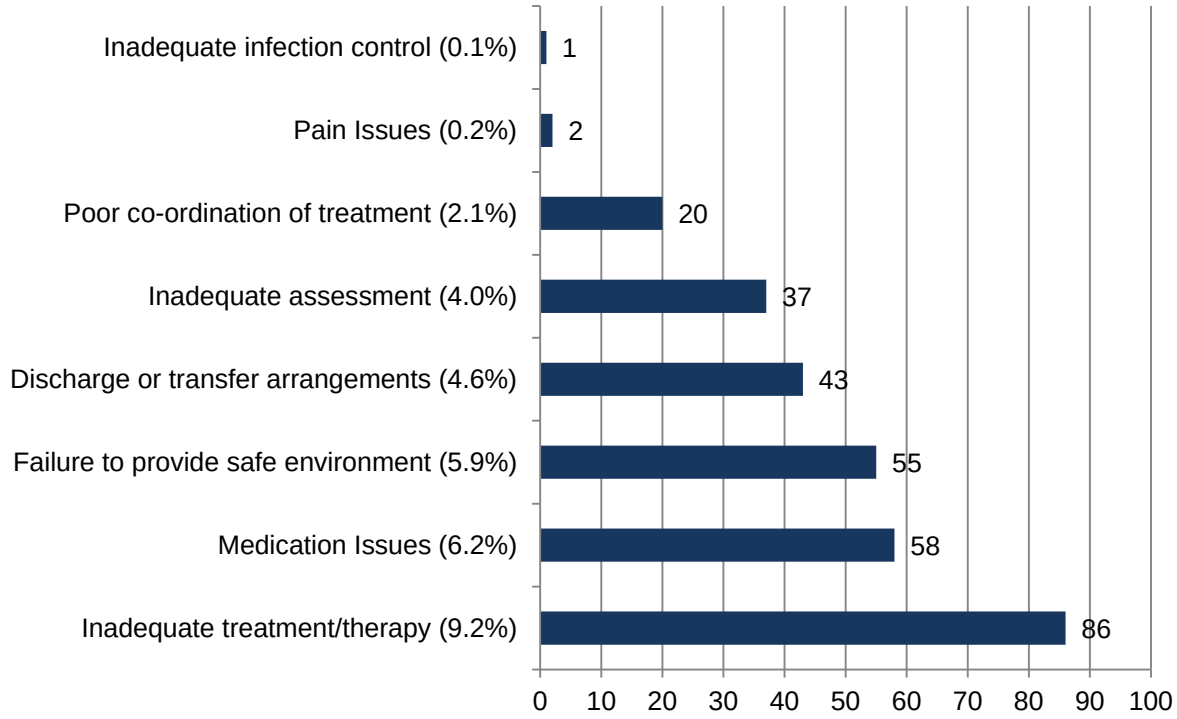
Figure 51: **Issues Identified by Persons Reporting the Feedback in Mental Health Complaints Received by WA Health for 2015/16**



Mental Health Complaint Issues Relating to Quality of Clinical Care

In relation to mental health complaints, a total of 302 quality of clinical care issues were notified, which constituted 32.4% of the total 931 mental health complaint issues. The most frequently raised issues in this category related to inadequate treatment or therapy (n=86; 9.2%), medication issues (n=58; 6.2%) and failure to provide safe environment (n=55; 5.9%; see Figure 52).

Figure 52: **Frequency and Percentage of Mental Health Complaint Issues Relating to 'Quality of Clinical Care' (2015/16)**

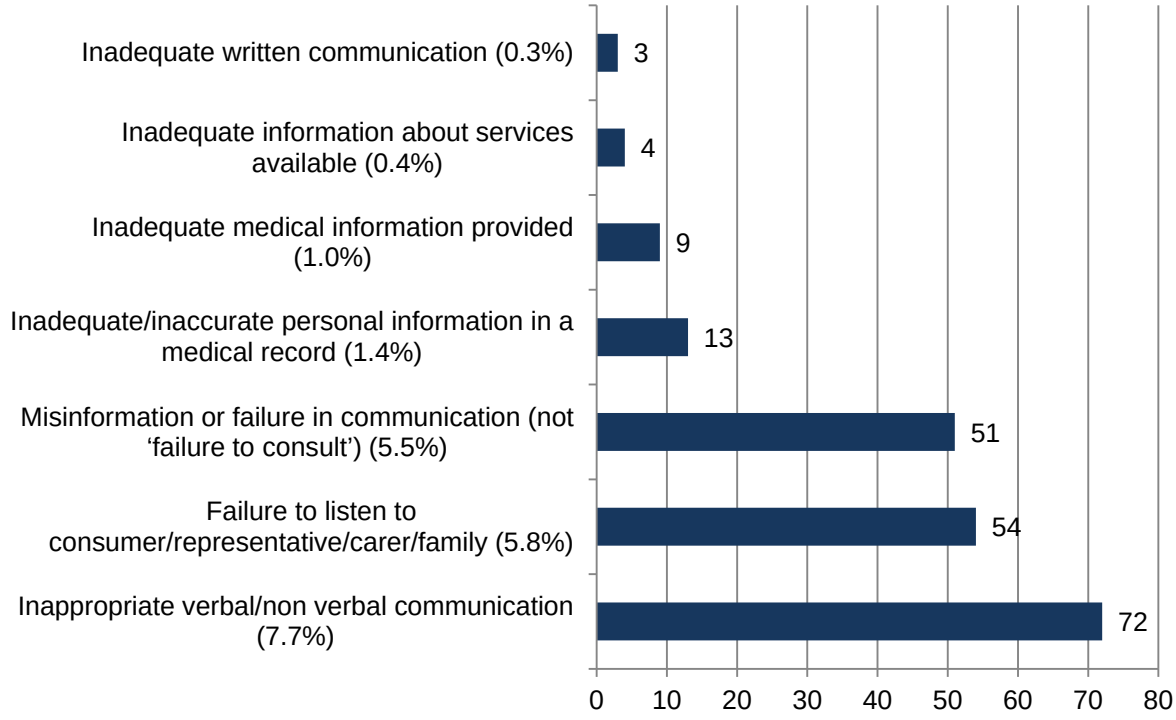


Percentages relate to total mental health complaint issues.

Mental Health Complaint Issues Relating to Communication

In relation to mental health complaints, a total of 206 communication issues were notified, which constituted 22.1% of the total 931 mental health complaint issues. The most frequently raised issues in this category related to inappropriate verbal/non-verbal communication (n=72; 7.7%), failure to listen to consumer/ representative/carer/family (n=54; 5.8%) and misinformation or failure in communications (not 'failure to consult') (n=51; 5.5%; see Figure 53).

Figure 53: **Frequency and Percentage of Mental Health Complaint Issues Relating to 'Communication' (2015/16)**

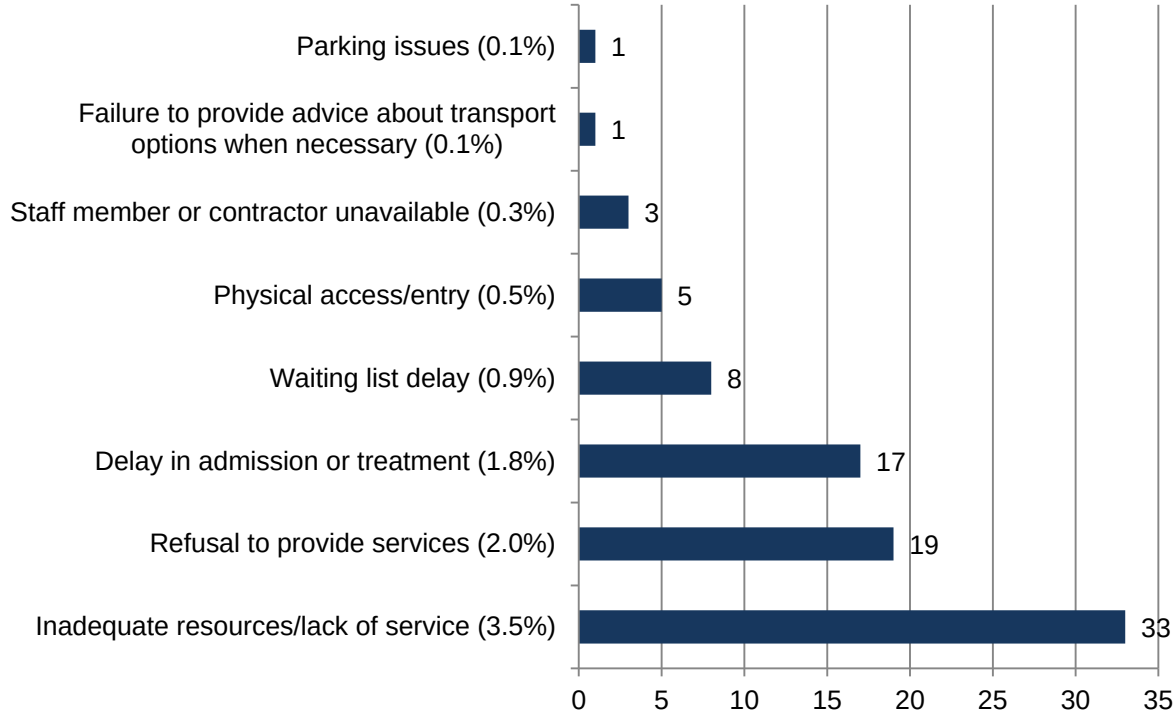


Percentages relate to total mental health complaint issues.

Mental Health Complaint Issues Relating to Access

A total of 87 access issues were notified in relation to mental health complaints, which constituted 9.3% of the total 931 mental health complaint issues. The most frequently raised issues in this category related to inadequate resources/lack of service (n=33; 3.5%), refusal to provide services (n=19; 2.0%) and delay in admission or treatment (n=17; 1.8%; see Figure 54).

Figure 54: **Frequency and Percentage of Mental Health Complaint Issues Relating to 'Access' (2015/16)**

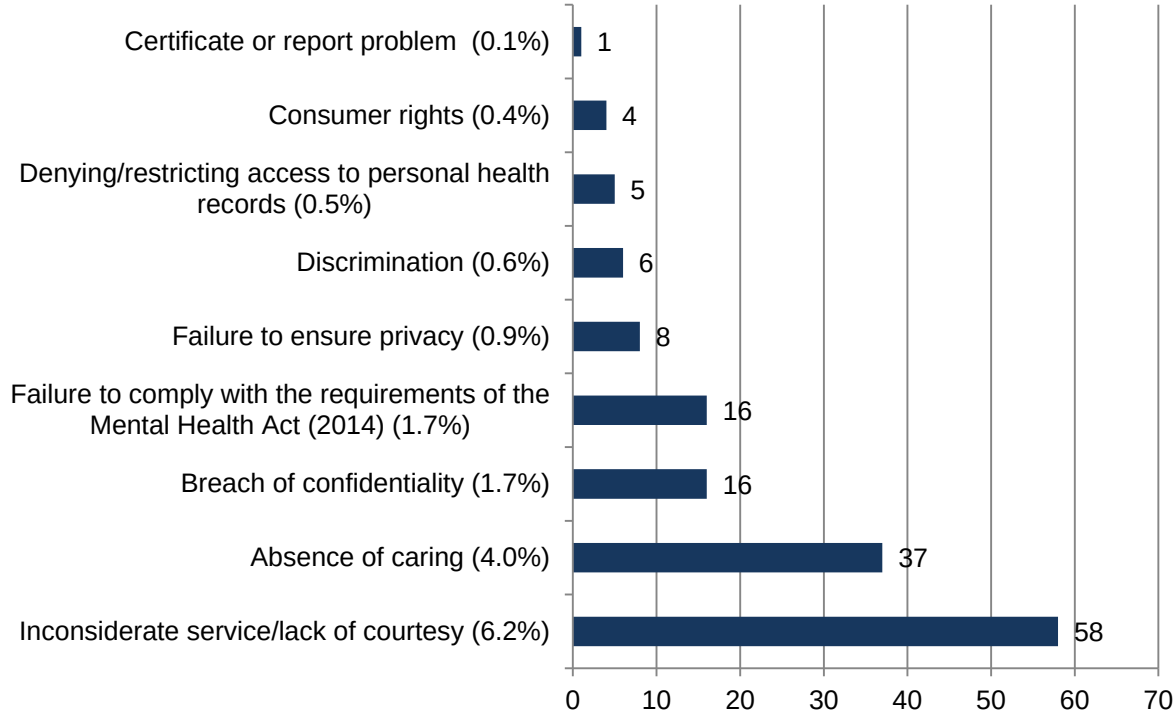


Percentages relate to total mental health complaint issues.

Mental Health Complaint Issues Relating to Rights, Respect and Dignity

In relation to mental health complaints, a total of 151 rights, respect and dignity issues were notified, which constituted 16.2% of the total 931 mental health complaint issues. The most frequently raised issues in this category related to inconsiderate service/lack of courtesy (n=58; 6.2%), absence of compassion (n=37; 4.0%) and breach of confidentiality and failure to comply with the requirements of the *Mental Health Act 2014* (for both, n=16; 1.7%; see Figure 55).

Figure 55: **Frequency and Percentage of Mental Health Complaint Issues Relating to 'Rights, Respect and Dignity' (2015/16)**



Percentages relate to total mental health complaint issues.

Key messages for mental health complaints

Mental health complaints exhibited the same top four issue categories as total WA Health complaints, suggesting that consumers of mental health services face similar issues to the rest of the WA Health consumer population in their interactions with our health system. Of note is the greater proportion of mental health complaint issues stemming from the 'Rights, Respect and Dignity' category and lesser proportion from the 'Access" category in comparison to the whole of WA Health. Staff engaging with mental health clients should be mindful of patient rights under the *Mental Health Act 2014*, and the application of the Charter of Mental Health Care Principles.

Current Achievements

Adoption and implementation of initiatives to address and improve patient safety are essential to the transformation of health care delivery. WA Health continues to foster a strong patient safety ethos that is demonstrated by the following achievements:

1. The provision of exceptional and safe health care as demonstrated by the very low rate reported for the more serious SAC 1 clinical incidents in 2015/16 (2 per 10,000 bed days or 5 per 10,000 separations).
2. As key stakeholders Safety and Quality staff continue to work closely with the HSS CIMS Support team to assist in the ongoing refinement of the web based Datix CIMS.
3. Invited presentation at the Health Consumer Council Panel on CFM issues.
4. Incorporated new CIM Policy (2015) definition changes into Datix such as:
    - Maternal death associated with pregnancy, birth and the puerperium or occurring within 42 days post-delivery.
    - Mental health clinical deterioration resulting in serious harm.
5. Development of a statewide 'closing the loop' program to monitor the implementation and evaluation of recommendations arising from SAC 1 clinical incidents.
6. The establishment of the State Datix Committee (SDC) which is an overarching committee for the Clinical Incident Management Business Advisory Group (CIMSBAG) Subcommittee and the Consumer Feedback Module (CFM) Business Advisory Group Subcommittee.
7. The SDC has:
    - Developed and received endorsement for their new terms of reference (TOR).
    - Worked closely with Health Services and PSSU for the release of CIMS data for use with business intelligence tools and also access to CIMS data extracts to assist with data analysis.
    - Re-established the PathWest organisational tree into the central statewide organisational tree.
    - Provided advice and direction with regard to the management of clinical incidents captured at the now closed Swan Districts Hospital.
    - Reconfigured Datix CIMS to capture clinical incidents that include ICT contributory factors.
    - Agreed to undertake a state-wide Datix project upgrade to align with the latest Datix CIMS and CFM version and to resolve current issues identified in version 12.2.
8. Participated in the inaugural PowerHealth Solutions Australasian Datix Users Forum and subsequent quarterly forums.

9. The CIMS BAG subcommittee has:
    - Worked closely with HSS CIMS Support to develop suitable report queries within Datix CIMS to facilitate clinical incident data extraction.
    - Played a critical part in addressing and resolving issues raised from the use of the Datix CIMS.
10. The CFM BAG subcommittee has:
    - Played a critical part in addressing and resolving issues raised from the use of the Datix CFM.
    - Released the CFM data dictionary.
11. The establishment of the Project Control Group (PCG) to undertake the implementation of the state-wide Datix Upgrade CIMS and CFM Project. The PCG has:
    - Played a critical part in the implementation and successful release of the statewide Datix Upgrade Project from version 12 to version 14 CIMS and CFM.
    - Oversaw the consolidation of the Datix technical environments to ensure consistency and better management by resolving disk space issues and incorrect server specifications.
    - Automated software installations.
12. Four PSSU CIM and Complaints Quarterly Reports have been produced in the last 12 months to provide WA Health staff with a state-wide account of clinical incident data in a timelier manner and to facilitate system learning from a whole of WA Health perspective.
13. Developed to complement the CIM and Complaints Quarterly Reports are the Clinical Incident Check Up Reports. These reports focus on specific types of clinical incidents to provide WA Health staff with a snap shot of the clinical incident and the types of clinical actions that can be implemented to address the underlying causes.

    In 2015/16, the following state-wide Clinical Incident Check Up Reports have been released addressing:
    - Clinical incidents by shift/professional group
    - Clinical handover
    - Data quality
    - Intercostal catheter.
14. Eight focus reports were developed to review the following issues:
    - Falls clinical incidents from 2005 to 2016.
    - Closing the Loop audit of the implementation and evaluation of recommendations.
    - Obstetric and neonatal SAC 1 clinical incidents review.
    - Clinical incidents involving reported risks or incidences related to Speech Pathologists.

- Review of Clinical Deterioration clinical incidents from 1 July 2015 to 30 September 2015.
- Review of clinical incidents involving information technology issues from 1 February 2014 to 1 July 2015.
- Severe Acute Maternal Morbidity Report from March 2013 to February 2015.
- These reports are only available to WA Health Staff from PSSU.

15. In August 2015 and February 2016, the State Coroner was provided with an account of WA Health's response to recommendations that have been made following coronial inquests. The "Progress Report for Health Related Coronial Recommendations" included updates on recommendations that required longer term implementation, and responses for recent recommendations. The PSSU supports the sharing of this information for the purposes of communicating lessons learned and quality improvement initiatives across the health system, and continues to publish the executive summary of this report on the Safety and Quality intranet site (available at: http://intranet.health.wa.gov.au/osqh/reports/).
16. The Coronial Review Committee, established in January 2014, continues to review coronial inquest findings and provide guidance in relation to the implementation of coronial recommendations across WA Health. In 2015/16 the Committee members have discussed 24 inquest findings including two joint inquests (30 cases in total), with 19 health-related recommendations being reviewed and actioned.
17. The *From Death We Learn 2014 (2015 Edition)*[23] publication was released in November 2015. This annual publication reviews the coronial inquests that have taken place and provides key messages, recommendations and actions taken by WA Health to address the Coroner's concerns. For the first time, *From Death We Learn 2014* included Discussion Points to promote reflection, discussion and learning from the key issues of the cases.
18. The PSSU undertook an evaluation survey of the *From Death We Learn* annual publication in November 2015. The purpose of the survey was to seek feedback about the awareness and utility of *From Death We Learn* in order to identify potential improvements. The survey was disseminated via email and promoted through HealthPoint and Health Happenings. The *From Death We Learn: Evaluation Survey Focus Report* is available at: http://intranet.health.wa.gov.au/osqh/reports/.

[23] From Death We Learn (2014) available at: http://ww2.health.wa.gov.au/Reports-and-publications/From-Death-We-Learn

Future Focus

WA Health staff by reporting clinical incidents are protecting not only their patients but are potentially protecting every other patient in the state where these same clinical incidents are occurring. The reporting of a clinical incident enables safety and quality staff to analyse clinical incident data, target resources to prevent reoccurrence and share lessons learned from successful patient safety initiatives. But incident management on its own is not enough.

The patient safety culture in WA Health continues to mature. This is evidenced by increased reporting including that of near miss events where minimal or no harm occurred but patient harm was prevented. The next step in this maturation is to utilise data and other information sources to focus our attention in a more targeted manner. To ramp up our attention on continuous improvement and the prevention of patient harm. This goal can be achieved by a focus on learning from what works well and what can be improved, identifying what is *quality* health care and the management of clinical risk.

Joining WA Health staff in this focus on improved health care delivery are the Safety and Quality subcommittees supporting the five new WA Health Service Boards. From 1 July 2016 the *Health Services Act* (2016) established a new governance structure for WA Health. This legislation confirms the Department of Health as System Manager and creates Health Service Providers as statutory authorities with legal accountabilities responsible to Health Service Provider Boards. The WA Health Reform Program has a two year transition period to establish these governance roles. Safety and Quality is a high priority domain area in the WA Health Transition Plan reinforcing the importance of Clinical Governance for the System Manager and Health Service Providers and their Boards.

While our future focus will be on establishing the new governance structure and finding a good fit for our roles this will also be a time for consolidation. It is time to consolidate the requirements of SMART recommendations for adverse events. Time for consolidation of the review of the effectiveness of recommendations via the Closing the Loop Program. Time for consolidation of reporting with a view to data quality supported by the use of Business Intelligence Systems and real time, dashboards.

As stated previously with strong and rigorous evidence we have the confidence to change our practice and commence newer and safer ways to deliver health care. We will also have the proof to argue for additional resources that will make our health care delivery safer and more sustainable. And finally, we will have the evidence to publish our findings and influence change not just within our health care system but nationally and internationally.

Appendix One: SAC 1 Clinical Incident Notification List

Severity Assessment Code 1 Categories	
Clinical incidents that must be reported as SAC 1 (includes 8 national sentinel event categories)	
1	**Procedures involving the wrong patient or body part resulting in death or major permanent loss of function.**
2	**Suicide of an inpatient (including patients on leave).** Mental Health Services are required to report to the Chief Psychiatrist and to the State Coroner (for involuntary patients) episodes of unexpected death.
3	**Retained instruments or other material after surgery requiring re-operation or further surgical procedure.** Retention of a foreign object in a patient after surgery or other procedure including surgical instruments or other material such as gauze packs inadvertently left inside the patient when the surgical incision is closed - excluding objects intentionally implanted as part of a planned intervention and objects present prior to surgery that are intentionally retained.
4	**Intravascular gas embolism resulting in death or neurological damage.** Death or serious disability associated with intravascular gas embolism that occurs while the patient is being cared for in a facility - excluding deaths associated with neurosurgical procedures known to present a high risk of intravascular gas embolism.
5	**Haemolytic blood transfusion reaction resulting from ABO incompatibility.**
6	**Medication error resulting in death of a patient**. Death or serious injury associated with a medication error, including, but not limited to errors involving: • the wrong drug • a contaminated drug • the wrong dose • the wrong patient • the wrong time • the wrong rate • the wrong preparation • the wrong route of administration • insufficient surveillance (e.g. blood tests, clinical observation).
7	**Maternal death** is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.
8	**Infant discharged to wrong family or infant abduction.**

Appendix One: Severity Assessment Code 1 Clinical Incident Notification List

SAC 1 Clinical Incident Notification List. Note this list is NOT EXHAUSTIVE.

SAC 1 includes all clinical incidents/near misses where serious harm or death is/could be specifically caused by health care rather than the patient's underlying condition and include:

Medication error (not resulting in death) includes:
The inappropriate administration of daily oral methotrexate*
The intravenous administration of epidural medication*
Wrong gas being administered.*

Fetal complications associated with health care delivery:
Unrelated to congenital abnormality in an infant having a birth weight greater than 2500 grams causing death, or serious and/or ongoing perinatal morbidity.
Complications not anticipated yet arose and were not managed in an appropriate/timely manner resulting in death, serious and/or ongoing morbidity.
Delivery at a site other than where labour commences which requires transfer to another facility for a higher level of care resulting in death, or serious and/or ongoing morbidity.

Misdiagnosis and subsequent management (refers to physical and mental health)
Failure to monitor and respond to oxygen saturation*

Delay in recognising/responding to physical clinical deterioration

Complications of resuscitation:
Events in which staff experienced problems in managing an emergency situation or resuscitation resulting in death, or serious and/or ongoing morbidity.
Failed resuscitation where resuscitation guidelines could not be followed due to a deficiency of equipment, communication, or staffing resulting in death, or serious and/or ongoing morbidity.

Complications of anaesthetic management:
Unintended intra-operative awareness.
Anaesthetic events resulting in death, or serious and/or ongoing morbidity.

Complications of surgery:
Wrong site surgery not resulting in death or major permanent loss of function*
Pulmonary embolism
Injury to major blood vessels.

Complications of an inpatient fall.

Hospital process issues:
Events in which hospital processes such as triaging, assessment, planning or delivery of care e.g. miscommunication of test results, response to abnormal test results contributed to death, or serious and/or ongoing morbidity, Information technology incidents.
Transport or transfer – Events in which delays in transport or transfer contributed to death, or serious and/or ongoing morbidity.
Misidentification of patients.*

Infection control breach (e.g. IV cannula related bacteraemia infections).

The unexpected death of a mental health client (e.g. suspected suicide, unnatural/violent death).

Mental health clinical deterioration resulting in serious harm

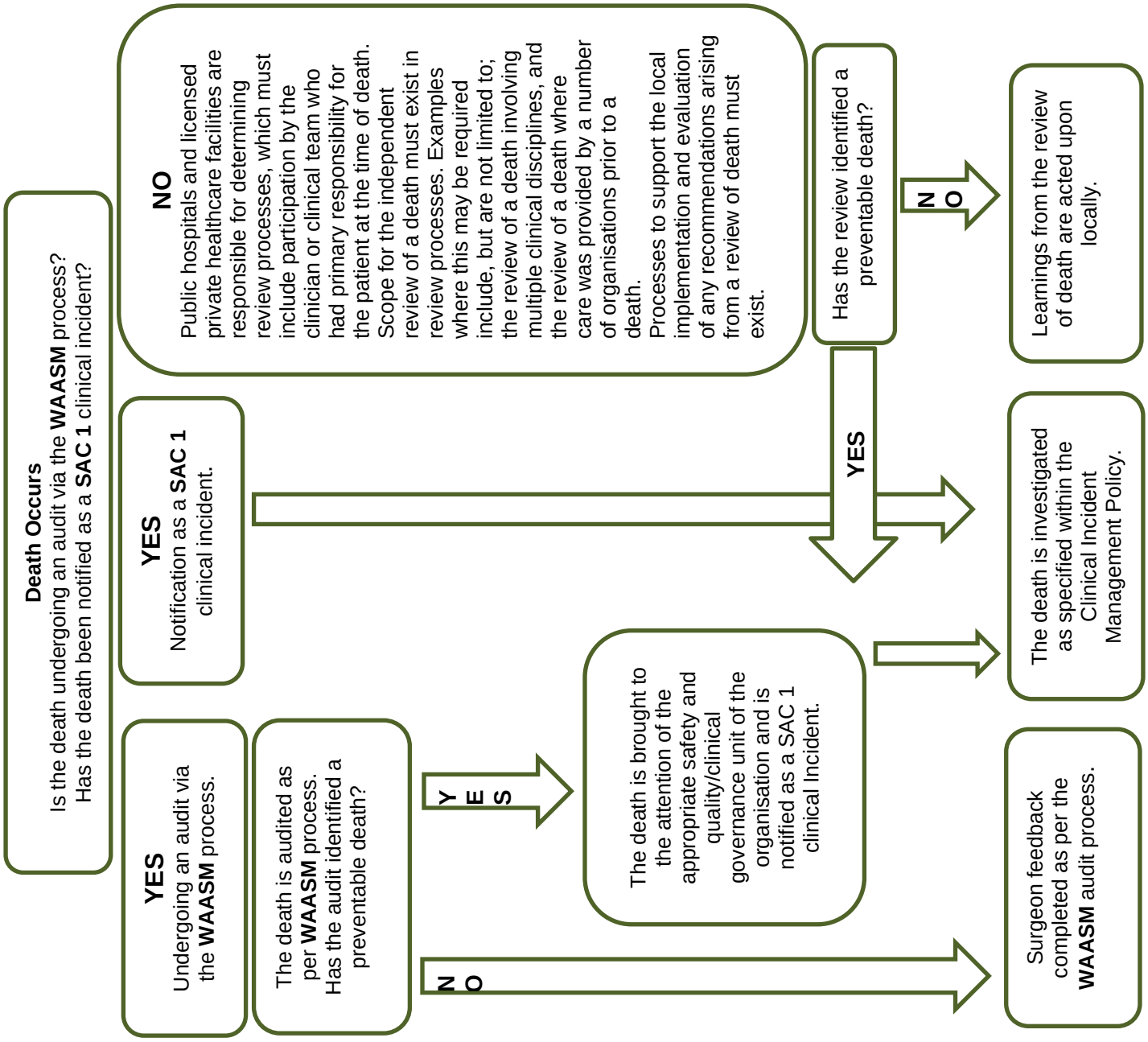
Missing or absent without leave of any high risk mental health patient/consumer.♦

Patient missing or absent without leave with adverse outcome

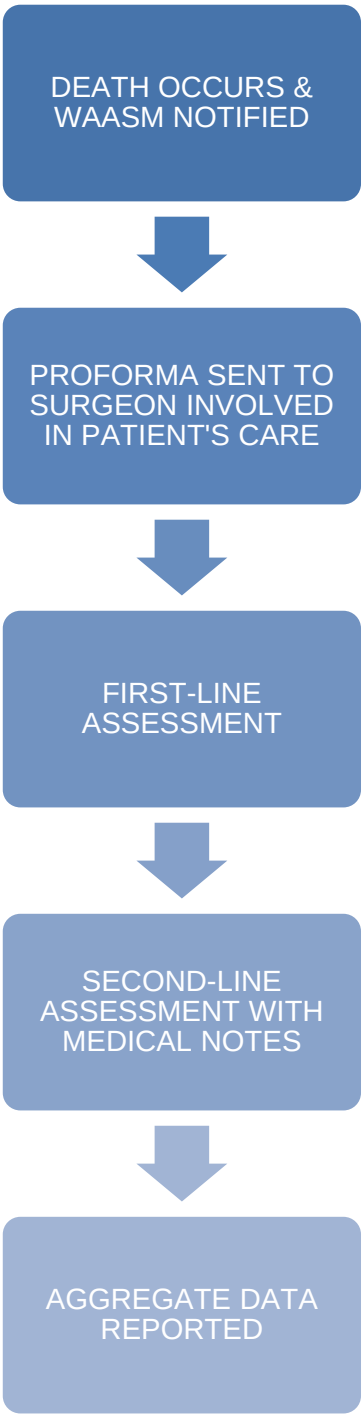
Wrong route administration of oral/enteral treatment*

This SAC 1 notification list is not exhaustive and if unsure of whether to notify an incident, please contact your line manager or local risk manager/Safety Quality and Performance team or the PSSU for advice.*Never Events refer to serious, preventable patient safety incidents that should not occur if preventative measures are in place. ♦High risk mental health patients include those detained under the *Mental Health Act (1996 or 2014)* and voluntary patients at high risk of causing significant harm to themselves or others, or being harmed by others. The assessment of a mental health patient as high risk is based on the patient's medical condition and is determined using clinical judgement. For example, if a mental health patient who is deemed at high risk of suicide leaves hospital, this would be notified as a SAC 1 clinical incident. Further information can be found in the *Policy for Mandatory Reporting of Notifiable Incidents to the Chief Psychiatrist* available at: http://www.health.wa.gov.au/CircularsNew/attachments/1012.pdf

Appendix Two: Flowchart Reflecting the Interaction of the Review of Death Policy with Clinical Incident Management Processes and the Western Australian Audit of Surgical Mortality



Appendix Three: Western Australian Audit of Surgical Mortality (WAASM) Process



Deaths where a surgeon was involved in the care of the patient are audited, regardless of whether an operation has taken place.

Surgeons are asked to identify any areas for consideration, areas of concern, or adverse events in addition to other audited information.

Peer surgeon, from a different hospital and from the same specialty, undertakes a review of the case and completes a proforma.

The case, with medical notes, is sent to a second peer surgeon for further review. Second-line assessment only occurs if an area of concern or adverse event is identified, or the potential for learning is recognised.

Data is then analysed and an annual report written and released, to enable lessons to be learnt.

Data Quality Statement for this Report

Quality Dimensions	
Institutional Environment	Clinical Incident data are obtained from across WA Health hospitals and health services. It is mandatory to report all SAC 1 and SAC 2 clinical incidents. SAC 1 clinical incidents are also received from all WA licensed private hospitals and contracted non-government agencies. The PSSU undertakes all data analysis presented within this report unless otherwise stated. Hospital separation and bed day data, Hospital Complications data and CHADx data are extracted from the Hospital Morbidity Data Collection and are provided by Data Integrity Management. Data Integrity sits within the Purchasing & System Performance Division. WAASM data are obtained from the Royal Australasian College of Surgeons. Consumer Feedback data are obtained from WA Health hospitals including complaints from public patients in public-private partnership hospitals. It is mandatory for public hospitals, and private hospitals providing health care to public patients, to report complaints data in accordance with WA Health policy.
Relevance	The purpose of the clinical incident data is to report all state-wide clinical incidents notified within the 2015/16 period, to the Datix CIMS database. SAC 1 incidents include data from WA Health hospitals and community health services plus data from licensed private hospitals and contracted non-government services. Rates calculations include inpatient clinical incidents only (unless other wised specified) with the denominator including separation/beddays data from WA Health hospitals' inpatient activity. Mental health clinical incidents rates include mental health incidents notified in the community with the denominator using non admitted mental health occasions of service data. The introduction of the new web based CIMS has improved rates analysis by providing more robust categorisation of the care setting. The purpose of the Consumer Feedback data is to report all complaints and other consumer feedback received by WA Health hospitals and health services to the Datix CFM database, as well as complaints data reported to PSSU by public-private partnership hospitals, within the 2015/16 period. Complaints are an integral component of CIM as it informs patient centred care.
Timeliness	The reference period for this data is 1 July 2015 to 30 June 2016. Due to data coding delays there is a two to three month lag time with regard to some Datix CIMS data such as confirmed SAC data. As such data frequencies may change over time and prohibits comparisons with previous reports.
Accuracy	Data are entered into the Datix CIMS and CFM databases on a routine basis by WA Health staff at each facility. Datix CIMS data are entered in real time by the notifier. All data entered undergo data validation processes both at a local and state-wide level. This is to ensure the data are clean and free from duplicates. Missing data are identified and rounding errors of + or – 1 are deemed acceptable. WAASM data has been reported in accordance with that reported to PSSU by the Royal Australasian College of Surgeons.
Coherence	The CIMS and CFM data are dynamic and data lag times for some CIMS and CFM variables exist which can prohibit the comparison of data at different times.
Accessibility	The data are only accessible to WA Health employees who have been granted permission to access the Datix CIMS and/or CFM databases. The PSSU does allow access to de-identified CIMS data by external parties whose research proposal has been approved by PSSU and who have obtained DOH ethics approval. All requests for HMDC data require extraction and approval from Data Integrity Management.
Interpretability	Any queries with regard to data found in this report can be directed to the Patient Safety Surveillance Unit, DOH.

Glossary

Bed days – the number of days a patient stays in hospital between admission and discharge. An aggregate measure of Health Service utilisation.

Clinical incident – an event or circumstance resulting from health care which could have, or did lead to unintended and/or unnecessary harm to a person. Clinical incidents include:

- **Near miss** which is an incident that may have, but did not cause harm, either by chance or through timely intervention.
- **Adverse event** which is an injury/harm caused by medical management or complication thereof, instead of the underlying disease. It results in an increase in the level of care and/or prolonged hospitalisation and/or disability at the time of discharge. Medical management refers to management under health care services.
- **Sentinel event** which refers to unexpected occurrences involving death or serious physical or psychological injury, or risk thereof.[2]

Clinical Incident Management (CIM) – the process of effectively managing clinical incidents with a view to minimising preventable harm.[2]

Clinical Incident Management System (CIMS) – a database system developed for collecting and analysing information on clinical incidents. It covers voluntary reporting, investigating, analysing and monitoring of clinical incidents.

Contributory factor – a circumstance, action or influence which is thought to have played a part in the origin or development of an incident or to increase the risk of an incident. [36]

COPD – abbreviation for chronic obstructive pulmonary disease.[35]

Declassification – is the process by which a clinical incident can be made inactive following the comprehensive and systematic investigation of a notified SAC 1 clinical incident. This can only be done if no causative factors contributed to the patient's/consumer's outcome and in fact the clinical incident was not preventable. [2]

Embolism – a plug that occludes a vessel. Could be composed of a thrombus, vegetation, mass of bacteria or some other foreign body.[35]

Hypertension – high blood pressure; transitory or sustained elevation of systemic arterial blood pressure to a level likely to induce cardiovascular damage or other adverse consequences. [35]

Injury – in the context of CIM includes burns, injury due to an impact or collision, pressure injuries, injury of unknown origin, unintended injury during a procedure or treatment, or other injuries not classifiable in the previous categories.

Mental Health Patient – refers to any involuntary or voluntary mental health patient as well as any referred mental health patient.

Never Events – Serious, preventable patient safety incidents that should not occur if preventative measures are in place. (2)

Sentinel event – refers to unexpected occurrences involving death or serious physical or psychological injury, or risk thereof. There are eight nationally endorsed sentinel event categories, endorsed by Australian Health Ministers (see Appendix 1 for a list of the eight sentinel events). (2)

Separation – A patient is separated at the time the hospital ceases to be responsible for their care and the patient is discharged from hospital accommodation. Separation is synonymous with discharge. (34)

Septicaemia – systemic disease caused by the spread of micro-organisms and their toxins within the blood.(35)

Severity Assessment Code (SAC) – is the assessment of actual or potential consequences associated with a clinical incident. The SAC rating (1, 2 or 3) is used to determine the appropriate level of analysis, action and escalation.

- SAC 1 includes all clinical incidents/near misses where serious harm or death is/could be specifically caused by health care rather than the patient's underlying condition or illness. In WA, SAC 1 also includes the eight nationally endorsed sentinel event categories.
- SAC 2 includes all clinical incidents/near misses where moderate harm is/could be specifically caused by health care rather than the patient's underlying condition or illness.
- SAC 3 includes all clinical incidents/near misses where minimal or no harm is/could be specifically caused by health care rather than the patient's underlying condition or illness. (2)

[34] Department of Health WA. Admissions, Readmissions, Discharge and Transfer Policy for WA Health Services (2014). In: Health Services Purchasing Directorate, DoH, Western Australia, editor. Perth. 2014.
[35] Stedman's Medical Dictionary. 27 ed. Baltimore: Lippincott Williams & Wilkins; 2000.
[36] World Health Organisation. Conceptual Framework for the International Classification for Patient Safety Technical Report. Version 1.1, January 2009.

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