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: 2015

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Disclaimer

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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 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

The Australian Safety and Quality Framework for Health Care acknowledges that safe, high-quality health care is always consumer centred, driven by information and organised for safety. This framework underpins the Patient Safety Surveillance Unit's commitment to ensuring that state-wide safety and quality data is analysed and fed back to the health system for improvement.

While it is important to ensure that the health system is informed, information cannot stand alone. To be effective, data such as that included in this report needs to be reviewed in the local context to enable an understanding of relevant key contributing factors. Making informed decisions about what areas of service delivery need to be targeted assists health services in getting more value from quality improvement programs. Systematic review of clinical incidents helps us to be more selective about what initiatives to undertake; though, ongoing measurement and monitoring assists in the ongoing evaluation of interventions for their effectiveness. WA Health's commitment to quality improvement is certainly demonstrated throughout this report, particularly in the case studies provided by health services.

Having the right tools in place to support the efficient collection, analysis, reporting and evaluating improvements is essential. The recently implemented Datix Consumer Feedback Module (CFM) enables the online notification, investigation and management of complaints. The CFM, implemented in December 2014, complements the Datix Clinical Incident Management System (CIMS), implemented in February 2014. For the first time, WA Health has a standard complaint management system; and, one that is capable of linking records with the clinical incident management system. It is a positive indication of system maturity that clinical incidents are being considered from the consumer's, as well as the service provider's, perspective.

After all, the patient remains the heart of why we do this – to constantly strive to provide the best possible standard of care to every patient, every time, everywhere. Recognising the role of the patient/carer in safe health care delivery and good patient outcomes is critical. This report should serve to reassure health care consumers that clinical incidents are being managed and monitored across WA Health; and that this assists to prevent the recurrence of similar clinical incidents of preventable harm to patients.

This is the fourth report in the WA Health Patient Safety series which continues to provide an integrated approach to clinical incident review 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 clinicians and administrative staff to determine appropriate solutions to further improve our health care delivery.

Ensuring safe care for our patients is everyone's responsibility – we must all take action for safety. 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
AMI	Acute Myocardial Infarction
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
COF	Condition Onset Flag
COPD	Chronic Obstructive Pulmonary Disease
CPoA	Condition Present on Admission
C/S	Caesarean Section
DAMA	Discharge against Medical Advice
DCP	Department for Child Protection
DOH/WA	Department of Health, Western Australia
DVT	Deep Vein Thrombosis
FNOF	Fractured Neck of Femur
GP	General Practitioner
HDU	High Dependency Unit
HMDC	Hospital Morbidity Data Collection
HS	Health Services
HSMR	Hospital Standardised Mortality Ratio
ICD-10-AM	International Classification of Diseases 10th Revision-Australian Modification
ICU	Intensive Care Unit
IT	Incident type
NMHS	North Metropolitan Health Service
NSQHS	National Safety and Quality Health Service (Standards)
PIRC	Peak Incident Review Committee
PMF	Performance Management Framework

PSSU	Patient Safety Surveillance Unit
PE	Pulmonary Embolism
QI	Quality Improvement
QoCF	Quality of Care Framework
RACS	Royal Australasian College of Surgeons
ROD	Review of Death
ROGS	Report on Government Services
SAC	Severity Assessment Codes
SAMM	Severe Acute Maternal Morbidity
VLAD	CM Variable Life Adjusted Display Clinical Monitoring
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:

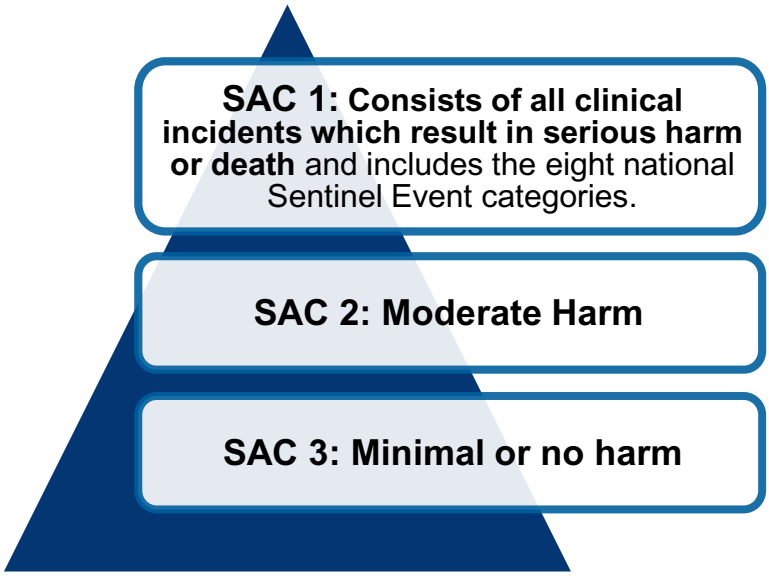
1. Procedure involving wrong patient or body part resulting in death or major permanent loss of function.
2. Suicide of a patient in an inpatient unit (or whilst on leave).
3. Retained instruments or other material after surgery requiring return to theatre.
4. Intravascular gas embolism resulting in 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 or serious morbidity associated with labour or delivery[1]
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.

[1] Please note that as of July 2015 this sentinel event definition has changed. Please see Appendix 1.

Figure 1: **Clinical Incidents by SAC**



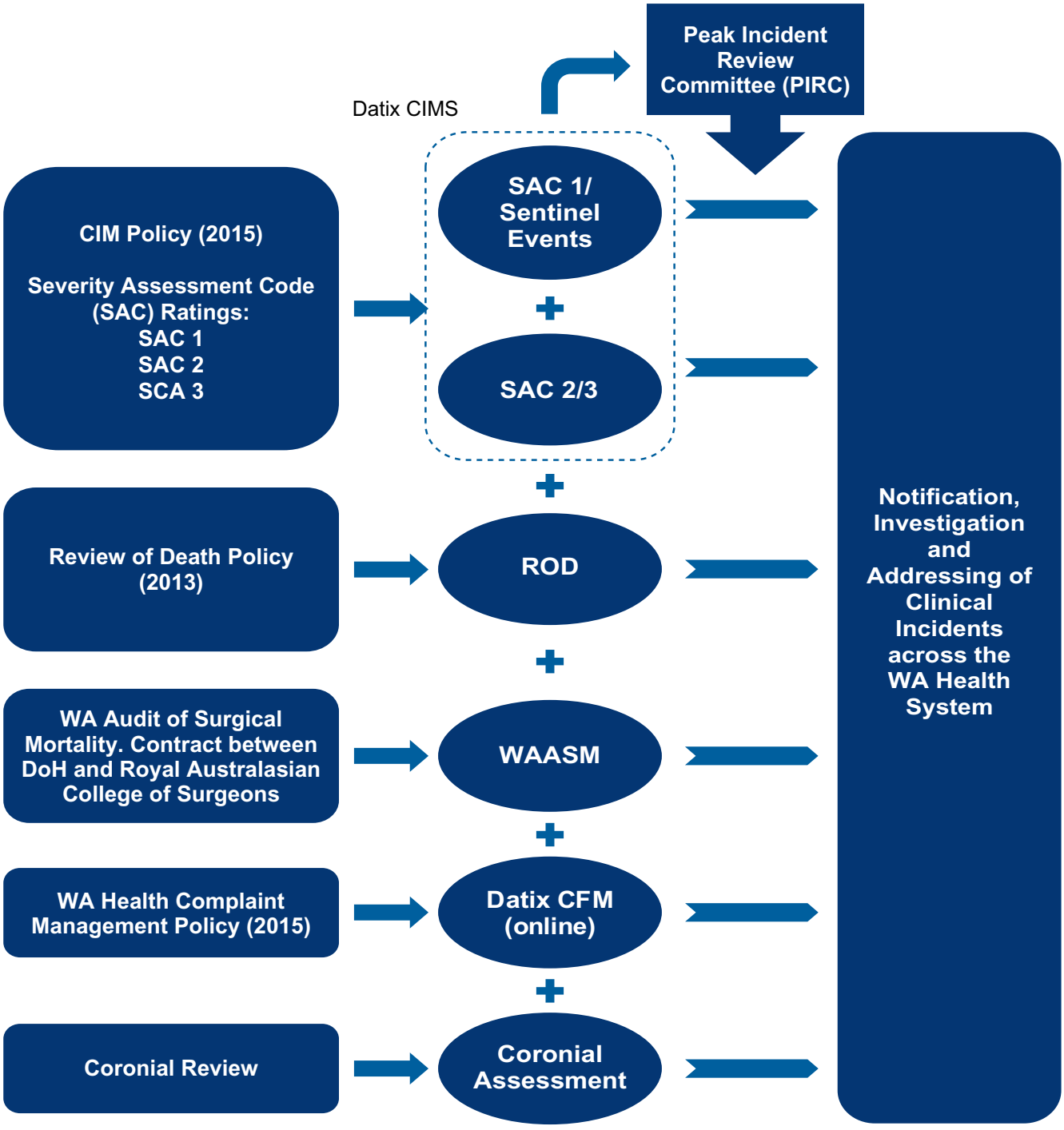
When a clinical incident is identified, immediate action is taken to provide care to the patient involved. Once this has occurred a clinical incident form is completed to notify senior staff and enable an appropriate investigation to take place. The clinical incident is then assigned a SAC rating that 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[2] 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. Complaints are also an integral component of CIM as it informs the provision of patient centred care. All health related findings from inquests are reviewed and assessed, with recommendations considered by Health Services (HS) and implemented where appropriate.

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

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[3] and CIM Toolkit, which are regularly updated to keep abreast with state and national changes.

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

Executive Summary

This is the first edition of the Your Safety in Our Hands Report 2014/15 that includes a full year of data obtained from the Datix CIMS web based clinical incident management system. This report provides to the WA public, information and data on how WA Health manages and resolves clinical incidents and coronial recommendations resulting from health care delivery. During 2014/15 there were 29,197 clinical incidents notified. The majority of clinical incidents (n=22,134; 76%) reported in 2014/15 were classified as SAC 3 and resulted in minimal or no harm to the patient.

There were 441 SAC 1 clinical incidents notified and investigated during 2014/15, of which 83 were declassified by 30 June 2015, resulting in 358 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. The investigation of 95 of these incidents remains ongoing at 30 June 2015. There has been a substantial increase in notifications compared to the previous reporting periods (326 notifications in 2012/13 and 407 in 2013/14), which is also the case when confirmed SAC 1 incidents are compared for both 2013/14 (n=315) and 2014/15 (n=358). Findings revealed that there were 83 incidents notified and investigated during 2014/15 which were approved for declassification up to 30 June 2015 compared to only 53 incidents notified and investigated during 2013/14 which were approved for declassification by 30 June 2014. This does not mean that staff are incorrectly reporting SAC 1 clinical incidents but rather that due to the complexity of the incident, are opting to undertake an in-depth investigation to fully ascertain the contributory factors that led to the clinical incident occurring.

Twelve SAC 1 clinical incidents comprised one of the eight national sentinel event incident categories, with suicide of an inpatient the most frequently report sentinel event (n=5). The most frequently reported categories of confirmed SAC 1 Other clinical incident included complications of an inpatient fall (n=82), the unexpected death of a mental health patient (n=47), and the absconding of any mental health patient (n=37). The rate of SAC 1 inpatient clinical incidents continues to remain low and was calculated at four clinical incidents per 10,000 hospital separations.[4] Communication factors and issues in relation to policies, procedures and guidelines continue to be the major contributory factors 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 five Australian Commission on Safety and Quality in Health Care's National Standards and include all clinical incidents categorised as a medication, patient identification, pressure injuries, clinical deterioration or falls clinical incidents. Medication (n=6,331; 21.7%) and falls (n=6,017; n=20.6%) clinical incidents remain the most frequently reported incidents for 2014/15.

[4] Please note that 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 only includes separation data from WA Health hospitals' inpatient activity.

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 complaints process, enables health services to recognise and understand areas for improvement from a consumer's perspective. The capacity for complaint records in the newly implemented Datix CFM to link with clinical incident records from the Datix CIMS will also enable health services to review clinical incidents from the consumer's perspective.

A total of 1,936 complaint issues assigned to the category 'Quality of Clinical Care' were reported by consumers throughout 2014/15, which constituted 28.2% of the total 6,874 complaint issues. 'Quality of Clinical Care' complaints comprised two categories which referred to:

1. General health complaints such as inadequate treatment, therapy, assessment or pain management. These complaints comprised 89.5% of all quality of clinical care complaints.
2. Mental health complaints accounted for the remaining 10.5% of complaints and included issues such as inadequate assessment, inadequate treatment/therapy, discharge or transfer issues or medication issues.

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.

There has been a considerable decrease in the number of inquests released in the 2014/15 year with 16 findings relevant to WA Health; a total of 9 health recommendations are currently being implemented across all relevant HS.

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 578 deaths notified in 2014. The WAASM Annual Report (2015) identified two adverse events that caused death in 2013 (neither were considered preventable) and two adverse events that caused death in 2014[5] (neither of these was considered preventable). The WAASM report is available at: http://www.surgeons.org/for-health-professionals/audits-and-surgical-research/anzasm/waasm/

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, mortality review and hospital acquired diagnoses. Finally, patient safety is a critically important component of health care delivery. In 2014/15, WA Health provided 537,780 episodes of care to inpatients. Encouragingly, reported inpatient clinical incidents were associated with only 4.7% (n=25,269) of hospital separations and an even lower figure was reported for confirmed SAC 1 clinical incidents (n=358; 1.2 %). However, more work in enhancing communication and engaging staff in adopting safer practices is 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.

With the introduction of online clinical incident reporting WA Health has taken a positive step toward improving health care delivery to our patients however it is only through the clinical incident investigation that risks resulting in patient harm can be identified, addressed and lessons learnt.

[5] Partial analysis – 2014 data includes that for which the audit process was complete at March 1, 2015.

About this Report

This comprehensive patient safety report for 2014/15 is the fourth 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
- Classification of Hospital Acquired Diagnoses (CHADx) system.

Data for 2014/15 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.
- The ROD data reflects the calendar year 1 January – 31 December 2014.
- 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 released across WA Health on the 17 December 2014. Complaints data gathered prior to the release of the online system have also been included in this report.
- The Coronial data and 'Quality of Clinical Care' complaints data include a full 12 months of financial year data.
- The WAASM data are captured by calendar year.

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 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 available.

This year the report has been reformatted to present data which focus on five National Safety and Quality in Health Care Standards. This report includes sections on medication, falls, pressure injuries, clinical deterioration, and patient identification clinical incidents. The inclusion of composite case studies for the National Standards data sections is used to facilitate learning opportunities by highlighting a few examples of the hundreds of quality improvement projects undertaken across WA Health to address and improve patient safety.

Declassification of a reported SAC 1 clinical incident may occur if it is identified that no healthcare causative factors contributed to the incident outcome. Declassification requests are tabled at the Peak Incident Review Committee (PIRC), which provides oversight of SAC 1/Sentinel Events clinical incidents and mandatory mortality review processes.

While complaints data is an important aspect of the quality improvement cycle, it is important to acknowledge that a patient complaint is not usually associated with a reported adverse event/clinical incident. The inclusion of complaints data, relating to the quality of clinical care, is to reinforce the importance of one aspect of consumer engagement (via the complaints process) to assist HS in recognising and facilitating quality improvements driven from a consumer's perspective. This report is further strengthened by the inclusion of administrative data from the:

- Hospital Morbidity Data Collection (HMDC) which captures all discharge summary data, including clinical incidents that have occurred during the inpatient stay.
- Classification of Hospital Acquired Diagnoses (CHADx) system which enables the monitoring of hospital acquired diagnoses from routine administrative inpatient data sources such as the HMDC, to assist clinicians in improving the health care delivery.

This report will also provide an update on the Variable Life Adjusted Display Clinical Monitoring (VLAD CM) system. The VLAD CM is a local quality monitoring system that provides clinicians and administrators with the ability to monitor risk-adjusted patient outcomes to identify unexpected trends through the application of statistical process control charts.

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 2014 and 30 June 2015 there were 537,780 separations from public hospitals and public patients attending two private hospitals (Peel Health Campus and Joondalup Health Campus). Of these clinical incidents, 25,269 occurred during a hospital stay, with the remainder of clinical incidents reported by private licensed healthcare facilities, community health services or other contracted non-government organisations.[7] Reported inpatient clinical incidents were associated with 4.7% (n=25,269) of hospital separations.

The rate of inpatient clinical incidents observed between July 2014 and June 2015 was calculated at:

- Four SAC 1 clinical incidents per 10,000 separations [7]
- 33 SAC 2 clinical incidents per 10,000 separations
- 382 SAC 3 clinical incidents per 10,000 separations.

Findings revealed that 463 mental health clinical incidents were notified that occurred in the community, with 874 010 occasions of service provided to ambulatory/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 2014/15 period.

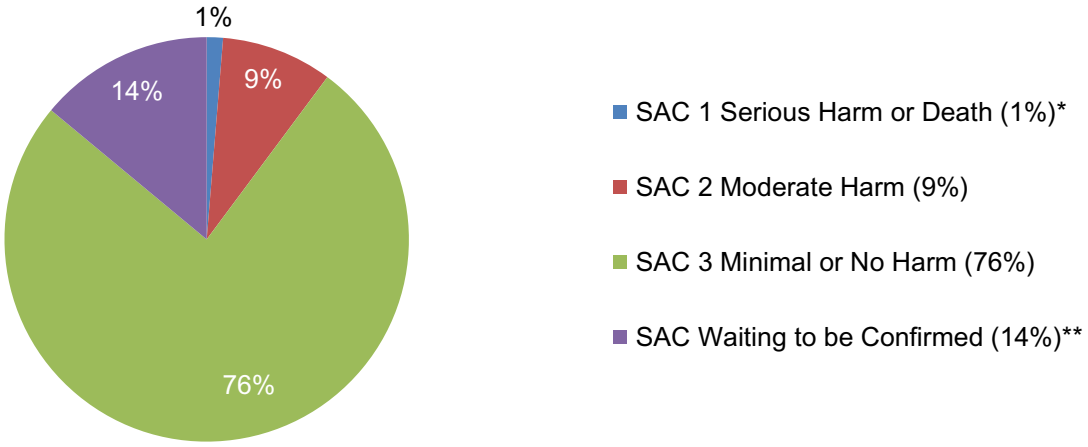
Clinical incidents categorised as SAC 3 (n=22,134; 76%)[8], referring to minimal or no harm, were the most frequently reported category of clinical incidents (see Figure 3). The next most frequently reported incident category was SAC 2 clinical incidents (n=2,613; 9%) followed by SAC 1 clinical incidents (n=358; 1.2%).

[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 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 only includes separation data from WA Health hospitals' inpatient activity.

[8] Please note that there are 4,092 clinical incidents awaiting a confirmed SAC classification.

Figure 3: **Percentage of Clinical Incidents by SAC (2014/15)**



*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 4,092 clinical incidents that had yet to have a confirmed SAC rating.

The five most frequently reported confirmed SAC 1 clinical incident categories representing 68.4% (n=245) of confirmed SAC 1 clinical incidents are presented in Table 1.

Table 1: **Frequency and Percentage of the Top Five Confirmed SAC 1 Clinical Incident Categories (2014/15)**

SAC 1 Category	(n)	(%)
Complication of an inpatient fall	82	22.9
Any other clinical incident resulting in serious harm or death	48	13.4
Unexpected death of a mental health patient	47	13.1
Absconding of any mental health patient	37	10.3
Hospital process issues	31	8.7
Total	**245**	**68.4**

Of the 48 incidents that were classified as ‘any other clinical incident resulting in serious harm or death’, attempted suicide/self-harm accounted for 42% (n=20) of clinical incidents. Incidents involving mental health patients accounted for 35.2% (n=126) of all SAC 1 clinical incidents. The most frequent SAC 1 clinical incident category involving mental health patients was the ‘unexpected death of a mental health patient’ which accounted for 37.3% (n=47) of these SAC 1 clinical incidents. In total there were 52 clinical incidents where the outcome was the death of a mental health patient (see Table 2).

Table 2: **Frequency and Percentage of the Top Three Confirmed SAC 1 Clinical Incident Categories for Mental Health Patients (2014/15)**

SAC 1 Category	(n)	(%)
Unexpected death of a mental health patient	47	37.3
Absconding of any mental health patient	37	29.4
Suicide of an inpatient (or whilst on authorised leave)	5	4.0
Total	**89**	**70.7**

The five most frequently reported Tier One incident types, which represent 72.6% (n=17,959) of all SAC 2 and 3 clinical incidents reported during the 2014/15 period, are presented in Table 3. Medication incidents (n=5,373; 21.7%) and falls (n=5,191; 21%) continue to be the most frequently reported SAC 2/3 clinical incidents notified in 2014/15.

Table 3: **Frequency and Percentage of the Top Five Tier One Incident Types for SAC 2 and 3 Clinical Incidents (2014/15)***

Tier One Incident Categories SAC 2/3	(n)	(%)
Medication	5,373	21.7
Falls**	5,191	21.0
Behaviour	3,563	14.4
Documentation	2,114	8.5
Therapeutic Processes/Procedures	1,718	6.9
Total	**17,959**	**72.6**

*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 21.2% (n=5,227) of all confirmed SAC 2 and SAC 3 clinical incidents (see Table 4). Findings revealed that physical aggression had the highest frequency with 1,657 behaviour incidents citing this category. In 1,273 clinical incidents, documentation was found to be ambiguous, incorrect or incomplete. While clinical incidents involving falls identified vulnerabilities for the patient when standing up or sitting down (n=1,252).

Table 4: **Frequency and Percentage of the Top Five Tier Three Incident Types for Confirmed SAC 2 and 3 Clinical Incidents (2014/15)**

Tier Three Incident Type SAC 2/3	(n)	(%)
Medication: Dose omitted	689	2.8
Falls: When standing up/sitting down	1,252	5.1
Behaviour: Physical aggression	1,697	6.9
Documentation: Ambiguous/incorrect/incomplete	1,273	5.1
Therapeutic Processes/Procedures: Treatment/ procedure was incomplete/incorrectly performed	316	1.3
Total	**5,227**	**21.1**

Data on five of the Australian Commission on Safety and Quality in Health Care's National Standard Categories accounted for 51.3% (n=14,965) of all clinical incidents (see Table 5). Results which include all confirmed SAC incidents show that medication (n=5,398) and falls (n=5,275) clinical incidents were the most frequently captured of the five National Standards.

Table 5: **Frequency and Percentage of Five National Standard Indicators (2014/15)***

Five National Standards	(n)	(%)
Standard 4: Medication Safety	5,398	18.5
Standard 5: Patient Identification and Procedure Matching	2,569	8.8
Standard 8: Preventing and Managing Pressure Injuries	1,056	3.6
Standard 9: Recognising/Responding to Clinical Deterioration	667	2.3
Standard 10: Preventing Falls and Harm from Falls	5,275	18.1
Total	**14,965**	**51.3**

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 2014/15 reporting period is the first complete period HS have reported SAC 1 clinical incidents via the web-based Datix CIMS.

In 2014/15, 441 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 346 of these incidents had been completed and 83 SAC 1 clinical incidents had been declassified, resulting in 358 SAC 1 clinical incidents confirmed (based on data as of 7 July). The investigation of 95 SAC 1 clinical incidents notified during 2014/15 remains ongoing at 30 June 2015.

Of these, twelve incidents (3.4%) were identified as sentinel events with the remainder of SAC 1 clinical incidents captured as an 'Other SAC 1 incident' (n=346; 96.6%; see Figure 4).

Figure 4: **Percentage of Confirmed SAC 1 Clinical Incidents by Category (2014/15)**

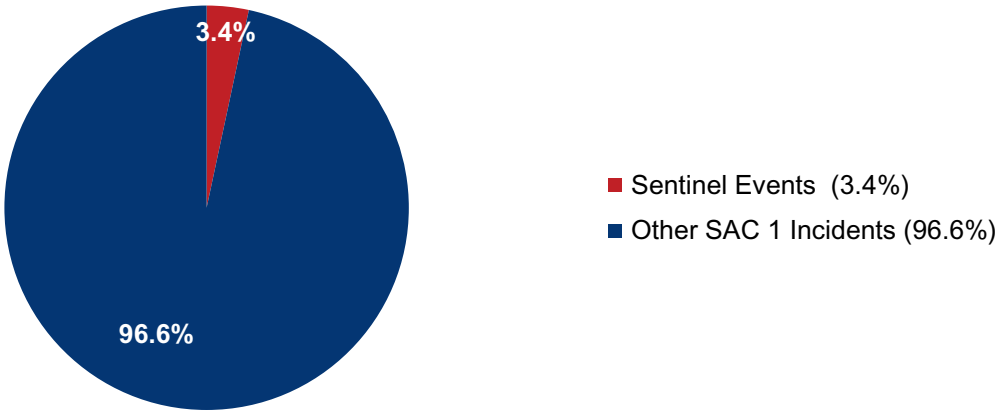


Table 6 illustrates the frequency of confirmed SAC 1 clinical incidents over a five year period. Findings show that for the last two years sentinel events have remained relatively stable.

Table 6: **Frequency of Confirmed SAC 1 Clinical Incidents by National Sentinel Event and Other SAC 1 Clinical Incident Types* (2010 to 2015)**

SAC 1 Categories	2010/11	2011/12	2012/13	2013/14	2014/15
Sentinel Events	17	15	17	10	12
Other SAC 1 Incidents	72	158	257	305	346
Total	**89**	**173**	**274**	**315**	**358**

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

Death was an outcome in 112 (31.3%) of confirmed SAC 1 clinical incidents. Of these deaths, 52 clinical incidents were either the unexpected death of a mental health patient or the suicide of a patient in an inpatient unit or whilst on leave.

Sentinel Event Notifications

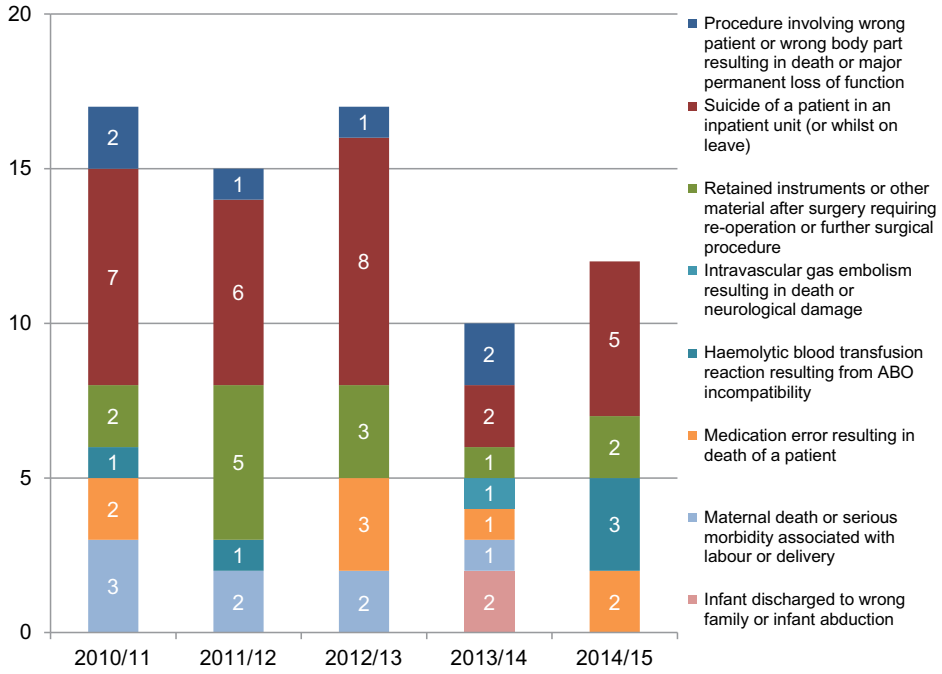
Sentinel events represent eight specific types of clinical incident that were endorsed by Australian Health Ministers in 2004 (see Appendix One). Western Australian public hospitals (and later licensed private healthcare facilities) have provided notification of their occurrence since 2004. In addition 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.[9]

It should be noted that the Australian Health Ministers' Advisory Council approved a change 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 the 1st July 2015 with the release of the revised CIM Policy but does not affect the data in this 2014/15 annual report. Furthermore, the change to the maternal death sentinel event definition has resulted in WA Health working with key stakeholders within WA and nationally to address issues with regard to severe acute maternal morbidity (SAMM).

Specifically, WA Health is investigating SAMM codes within WA Health HMDC dataset to provide feedback to the ACSQHC.

Figure 5 identifies the different categories of sentinel events notified from 2010/11 to 2014/15. The most frequently reported Sentinel Event category in 2014/15 was the suicide of a patient in an inpatient unit (or whilst on leave; n=5). In 2014/15 there were three notifications of haemolytic blood transfusion reactions resulting from ABO incompatibility resulting in death or neurological damage however these were all near miss events with no actual harm resulting to the patients concerned.

Figure 5: **Frequency of Sentinel Event by Category (2010/11 to 2014/15)**

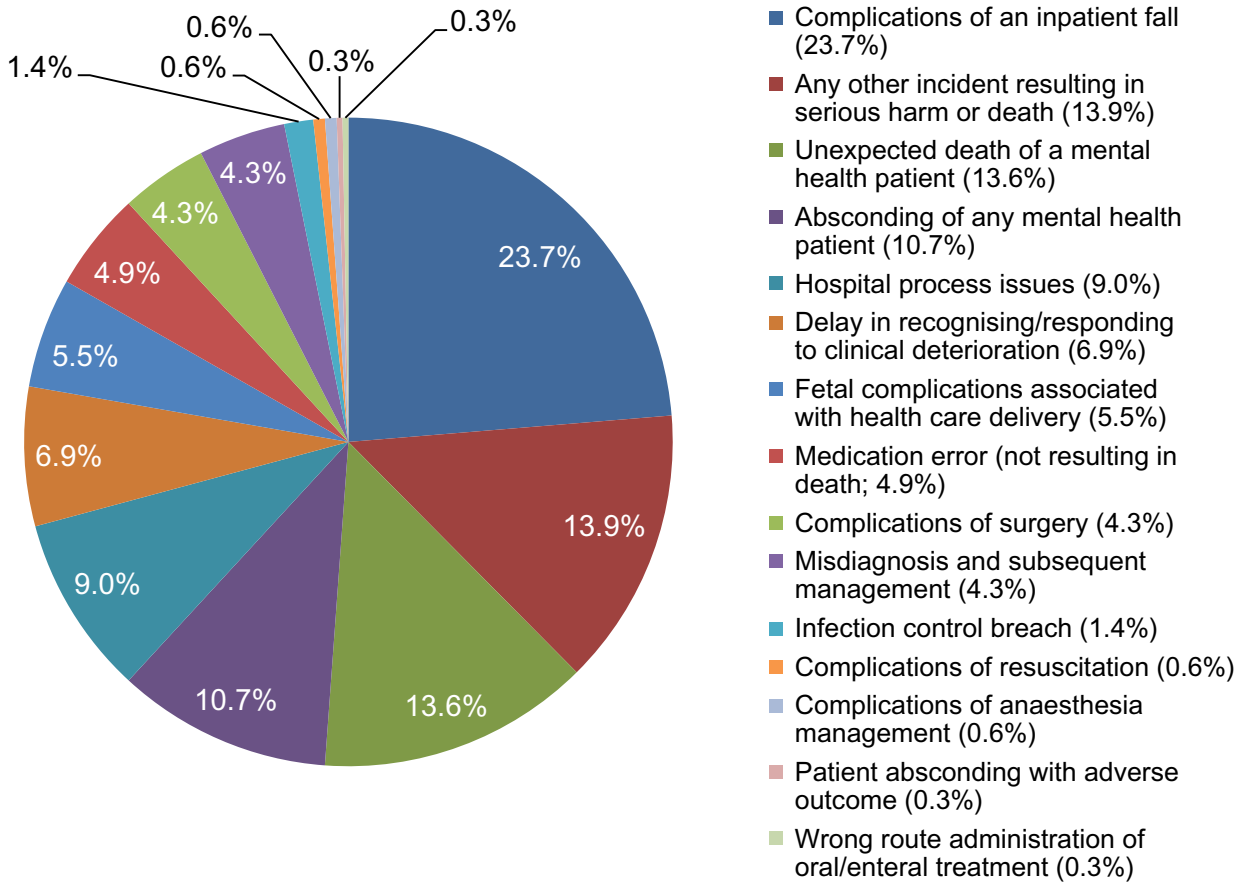


[9] Productivity Commission Report on Government Services Reports can be accessed at: http://www.pc.gov.au/gsp/rogs

Other Confirmed SAC 1 Clinical Incidents

In 2014/15, there were 346 SAC 1 clinical incidents other than sentinel events confirmed (see Figure 6). Complications of an inpatient fall (n=82; 23.7%) was the most frequently reported category of SAC 1 clinical incident, followed by any other clinical incident resulting in serious harm or death (n=48; 13.9%) and the unexpected death of a mental health patient (n=47; 13.6%).

Figure 6: **Percentage of Other Confirmed SAC 1 Clinical Incidents by Category (2014/15)**



In 2011 the introduction of the SAC rating in the CIM Policy, has shown a dramatic increase in Other SAC 1 Clinical incidents notified by HS, which increased from 72 clinical incidents in 2010/11 to 346 clinical incidents in 2014/15 (see Table 7). Over this period 'complications of an inpatient fall' continues to be one of the most frequently reported SAC 1 incident categories. It should be noted that prior to 2010/11 clinical incidents involving inpatient falls were captured in the AIMS database and were generally not reported as a separate SAC 1 clinical incident. Reporting of mental health patients who abscond as a SAC 1 clinical incident increased significantly in 2013/14 but has declined in 2014/15.

Table 7: **Frequency of Confirmed SAC 1 Clinical Incidents Other than Sentinel Events (2010/11 to 2014/15)**

	2010/11	2011/12	2012/13	2013/14	2014/15
Complications of an inpatient fall	11	33	72	55	82
Any other incident resulting in serious harm or death	14	13	29	36	48
Unexpected death of a mental health patient (i)	-	30	31	36	47
Absconding of any mental health patient (i)	-	4	26	64	37
Hospital process issues	14	11	20	29	31
Delay in recognising/responding to clinical deterioration (i)	-	10	15	27	24
Fetal complications associated with health care delivery	6	4	5	9	19
Medication error (not resulting in death)	4	17	12	14	17
Complications of surgery	4	18	18	17	15
Misdiagnosis and subsequent management	10	6	23	8	15
Infection control breach	1	2	2	7	5
Complications of resuscitation	2	3	4	1	2
Complications of anaesthesia management	2	2	0	1	2
Patient absconding with adverse outcome	4	5	0	1	1
Wrong route administration of oral/ enteral treatment (ii)	-	-	-	-	1
Total	**72**	**158**	**257**	**305**	**346**

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 2010/11 can be found in previous editions of this report.

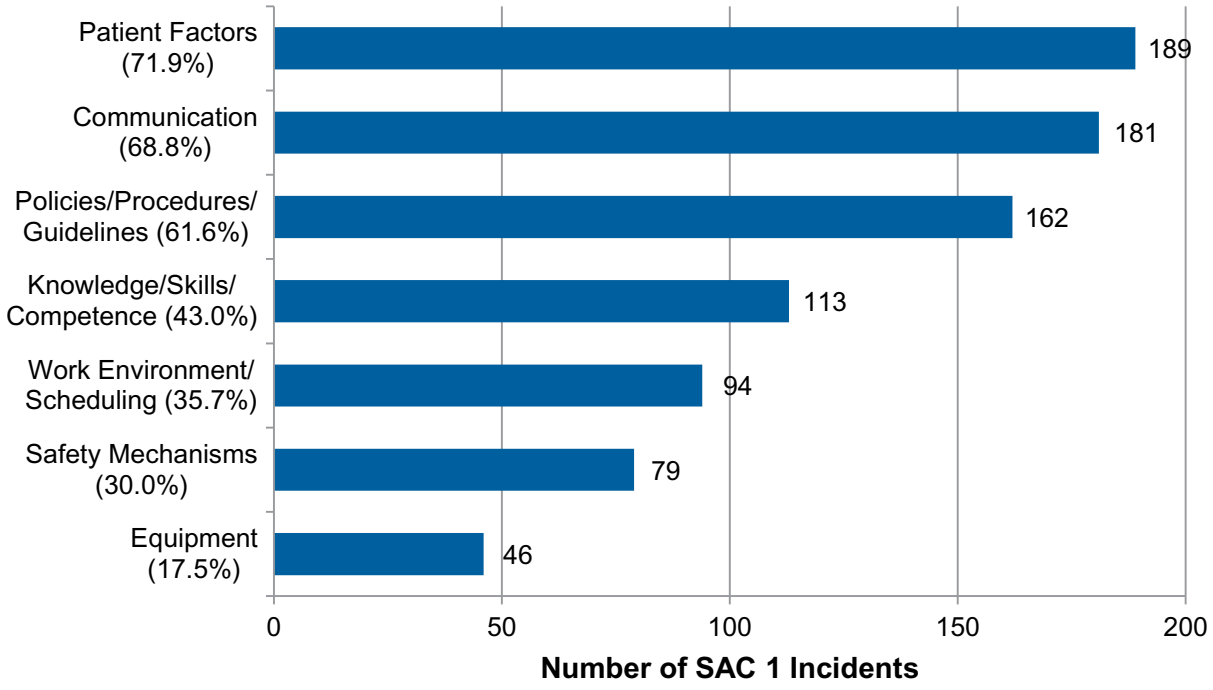
(i) New categories first included 2011/12.
(ii) New category first included 2014/15.

SAC 1 Contributory Factors

Figure 7 shows the contributory factors identified following the investigation of 263 SAC 1 clinical incidents (including sentinel events) by public hospitals, private licensed health care facilities and contracted non-government organisations (representing 73.5% of all confirmed incidents in 2014/15). At the time of reporting, 95 SAC 1 clinical incident investigations were being progressed by hospitals/health services.

The most frequently identified contributory factors were those relating to patient factors (n=189; 71.9% of investigated clinical incidents). This was followed by communication issues (n=181; 68.8%), and policy, procedure and guideline issues (n=162; 61.6%).

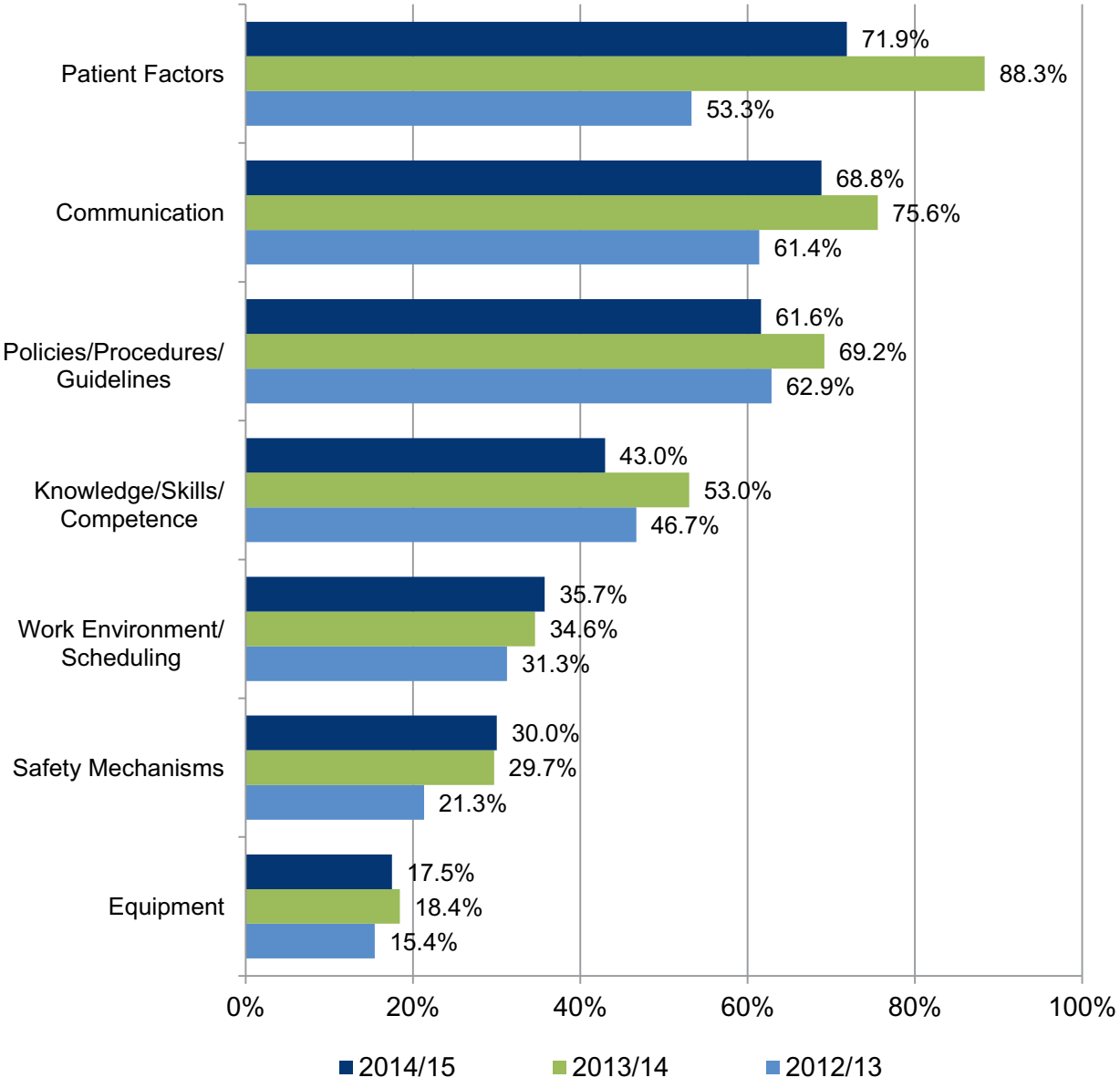
Figure 7: **Frequency and Percentage of Contributory Factors Identified for SAC 1 Clinical Incidents (2014/15)**



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

Contributory factors identified in 2014/15 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 (2012/13 to 2014/15)**



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

Sentinel Events and Lessons Learnt

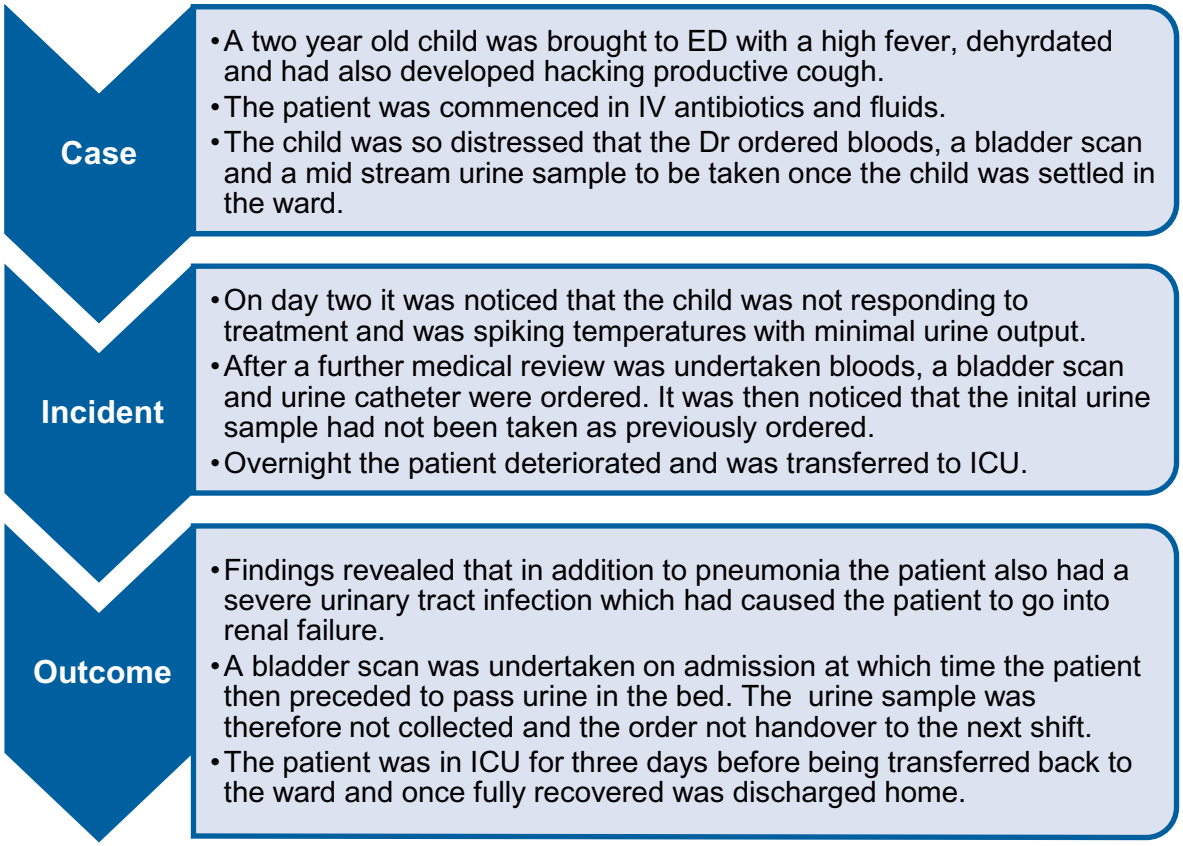
Of the twelve sentinel events reported during the 2014/15 period, eight investigation reports (67%) had been received at the time of reporting. Contributory factors identified through the investigation of sentinel events in 2014/15 are described in Table 8. The main themes revolved around refreshing staff training/education, enhancing communication between staff and strengthening or establishing protocols/pathways to assist in addressing patients' needs.

Table 8: **Sentinel Events Identified Contributory Factors (2014/15)**

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 patient identification label placed on the blood tube related to the intended patient however a different patient had been bled.	• The Blood Transfusion Module including the correct protocols for blood collection was incorporated into the orientation process for interns.
Policies for identifying the correct patient were not followed causing the wrong patient to be bled.	• Staff were provided with education and training specific to the Patient Identification Policy.
The Transfusion Policy Manual was not followed causing the patient's blood sample and request form for group and hold to be incorrectly labelled with another patient's details.	• Staff were required to complete specific education and training in collecting blood specimens.
Suicide of a patient in an inpatient unit or whilst on authorised leave	
The need to balance patient privacy and safety in respect of ward observations.	• The Visual Observation Policy was reviewed in respect of the self-harm risk rating and staff responsibilities. • Tests were conducted to confirm patients using showers could hear staff performing observation rounds.
Need to ensure that visiting medical officers are educated in the management of emergency situations.	• Mandatory annual life support education requirements were expanded to include visiting medical officers.
At the same time as the incident another patient experienced a medical emergency requiring immediate attention.	• Emergency drills, including life support drills and drills where there is more than one patient emergency occurring at the same time were reviewed.
A significant traumatic event involving another patient occurred on the same ward in the preceding days, which may have had an impact on the patient.	• Development of a procedural guideline to support patient debriefing following a significant incident was commenced.

Identified Issues	Hospital/ Health Service Improvements/ Initiatives
Suicide of a patient in an inpatient unit or whilst on authorised leave (continued)	
The management plan for the patient was not detailed enough to drive care of the patient.	• The format of the ward round was amended to include a review of the Brief Risk Assessment to re-evaluate the patient's risk level and amend the care plan.
The multidisciplinary team were found to have minimal contribution to the ward round.	• The multidisciplinary team is included in the development of the single care plan for the patient at the earliest point in their admission.
Compliance with the Clinical Handover Policy was inadequate.	• The Clinical Handover Policy requirement for inter-professional handover of clinical information was reinforced with staff to ensure continuity of care.
Retained instruments or other material after surgery requiring re-operation or further surgical procedure	
No specific issues were identified that led to the retention of a surgical pack.	• Relevant polices and standard operating procedures were reviewed to ensure compliance with standards of best practice. • Staff techniques were reviewed to ensure there is consistent practice and application of policies. • Potential physical solutions to assist with count-off procedures were reviewed.
Medication error resulting in death of a patient	
Abnormal pathology results were not reviewed by the treating team in a timely manner.	• The site worked with the pathology service provider to refine procedures for the test concerned and the communication of abnormal results to the ordering clinician.
The treating team did not follow the policies in place regarding the follow-up of results of clinical investigations and clinical handover.	• Development of a clinical guideline for the management of this patient group was commenced, to include ongoing monitoring requirements, medication management, and follow-up communication with the patient and their GP.
The patient's discharge summary was not received by their GP and the printed version was difficult to read.	• Duplicated details for GP services were identified and removed from systems. • The format of the discharge summary (including font sizes used) was referred to business user groups for review and improvement.
Resources for patients regarding the management of their condition (including medications) were limited.	• Patient information sheets were developed to detail important aspects of the condition and treatment. • A patient helpline was established, contactable by telephone and email.

SAC 1 Case Study



CAHS Multidisciplinary approach to implementing a standardised tool to improve clinical handover

Introduction: The Child and Adolescent Health Service (CAHS) needed to implement the Western Australian Clinical Handover Policy, which mandated the use of a standardised communication tool 'iSoBAR' to improve clinical accountability and responsibility. There were varying methods of clinical handover between clinicians, teams, wards / units / departments and agencies. Risk of losing critical information due to sub optimal handover could be a contributing factor to a patient suffering an adverse clinical incident. There was high variance in handover practices due to a restructure of the health service seven years ago.

Objective: To standardised communication using the 'iSoBAR' tool to improve clinical accountability and responsibility.

Methods: CAHS implemented an evidence based structured handover tool called 'iSoBAR' for both verbal and written handover practices for all shift to shift, intra-facility and inter-agency transfers of care. It is also used when communicating with a colleague to escalate a patient of concern to medical review.

Discipline specific implementation teams were involved in the planning, implementation and evaluation phases of the project under the leadership of the Project Team. The timetable for change was 12 months but took 14 months to complete. Implementation teams liaised with Patient Information Management Services to support document improvements. A booklet informing consumers of their opportunity to be involved in handover was revised in consultation with the Consumer Advisory Council and the Youth Advisory Committee.

Communication strategies to staff included; email, focus groups, departmental presentations, flyers and posters. Comprehensive educational opportunities were provided to improve knowledge and skills related to handover practices, including face-to-face sessions, a Grand Round presentation, development of an e-learning package, an 'iSoBAR' lanyard card and a screensaver.

Key performance indicators to measure effectiveness of handover have been developed by governance committees. Adverse clinical incidents related to sub optimal clinical handover are monitored and reported to governance committees. There are scheduled audits for respective disciplines and the audit action plan targets the areas of low compliance. Audit results are displayed on poster boards in the respective clinical areas and in staff rooms, entered into the QI database and reported to the respective Governance committees.

Results: After 18 months and with a structured audit program improvements have been seen across disciplines.

Medical Staff handover

- Morning General Paediatric handover – compliance with the iSoBAR format was 73% (n=30). An iSoBAR handover sheet was used in 53% morning handovers. A Consultant/ Fellow was present for every handover.
- Evening General Paediatric handover – compliance with the iSoBAR format was 87% (n=15). An iSoBAR handover sheet was not used. A Consultant or Fellow was present for every handover.
- Night ward handover (2200hrs) – compliance with the iSoBAR format was 3% (n=156). An iSoBAR handover sheet was used in only 8% of the handovers. This handover is not attended by senior medical staff.
- Paediatric Intensive Care handover – compliance with the iSoBAR format was 100% (n= 35). An iSoBAR handover sheet was used for 100% of the handovers and a PICU Consultant was present at every handover episode.

Nursing staff handover

- The iSoBAR structure is used in 98% of shift to shift bedside handovers in the ward (n=118). An iSoBAR handover sheet was used for 100% of the handovers.

Allied Health staff handover

- 94% of physiotherapy staff used iSoBAR for handovers with the support of an iSoBAR handover sheet.
- 100% of occupational therapy staff used iSoBAR for handovers with the support of an iSoBAR handover sheet.
- 90% of social work staff used iSoBAR for handovers with the support of an iSoBAR handover sheet.

Conclusion: CAHS concluded that:

- Patient safety is improved by implementing a standardised handover tool such as 'iSoBAR' which ensures continuity of care.
- Handover provides a valuable opportunity for consumers to be involved in their care.
- Senior clinical leadership is required to support the practice of iSoBAR and the use of written iSoBAR handover sheets promotes optimal clinical handover practices.

- Compliance improves when groups take ownership of their performance and staff are intentional about improvement.
- Monitoring handover through audit and occurrence of adverse incidents improves the governance of the health service and its accountability to deliver safe care.
- A quality improvement project addressing night duty medical handover is currently being undertaken.

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 2014/15. 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.

Twelve sentinel events were reported in 2014/15, representing four of the eight nationally reported sentinel events. While the three sentinel events notified in the category 'haemolytic blood transfusion reaction resulting from ABO incompatibility' were all near miss events resulting in no harm to the patient, the two sentinel events pertaining to the retention of a foreign object post procedure are examples of 'Never Events' which are serious events that are recognised as being preventable through the implementation of patient safety system processes.

While the completed investigation regarding one of the incidents which resulted in a surgical pack being retained did not identify a specific causal factor, three strategies were implemented to minimise the chance of this happening again. These strategies included reviewing the current policies and procedures to ensure compliance with standards of best practice, reviewing staff techniques to ensure consistent practice and application of policies, and investigating potential physical solutions that could assist with count-off procedures.

While sentinel event numbers remain relatively low and similar to previous years the numbers of other SAC 1 clinical incidents notified continues to increase, especially with regard to the number of falls that result in serious harm or the death of our patients. In 2014/15 82 SAC 1 falls incidents were notified of which 12 patients died as a result of a complication from the fall. 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 receiving care. To assist health services and clinicians with this WA Health implemented the Falls Risk Assessment and Management Plan (FRAMP) Policy in December 2014.

In 2014/15 there were 52 clinical incidents notified involving the death of a mental health patient. 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. While it is acknowledged that mentally unwell patients may cause harm to themselves, it remains the responsibility of all clinicians concerned to manage this vulnerable patient group to the best of their abilities to ensure their ongoing physical and mental wellbeing.

Absconding is a major patient 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. In 2014/15, there was a substantial decrease in the number of mental health patients absconding from care notified as a SAC 1 incident, with 37 incidents reported compared to 64 in 2013/14. This may be partially attributable to the:

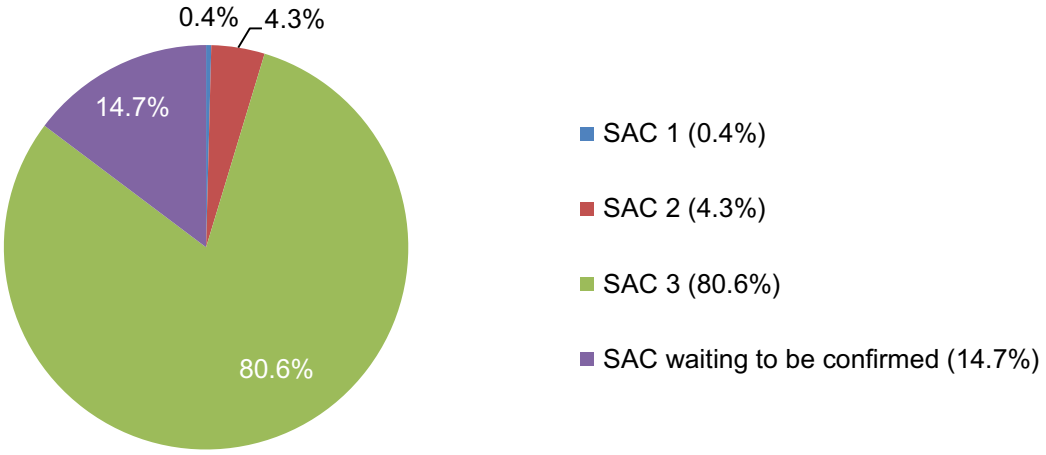
- Discussions between the Patient Safety Surveillance Unit and the HS, to help staff better understand the use of clinical risk assessments and judgement when reporting mental health patients who abscond. This clarification enables clinicians to focus on investigating SAC 1 incidents that result in serious harm or death (or near miss) rather than investigating less serious incidents of absconding.
- As a result of these discussions, the CIM Policy was also tightened with reference to absconding mental health patients, so that a clinical incident is reported when any high risk mental health patient is missing or absent without leave.

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".[10] 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 2014/15 reporting period there were 6,331 medication incidents reported which accounted for 21.7% clinical incidents reported. The majority (n=5,102; 80.6%) of medication clinical incidents were categorised as a SAC 3 clinical incidents with the patient sustaining either minor /no harm. Of the 26 SAC 1 clinical incidents, five incidents resulted in the death of the patient (see Figure 9).

Figure 9: **Percentage of Medication Clinical Incidents by SAC Rating for 2014/15**



There were 5,398 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=689) (see Table 9). The top five most frequent medication clinical incidents categories accounted for 47.2% (n=2,704) of all confirmed medication incidents reported for the 2014/15 period.

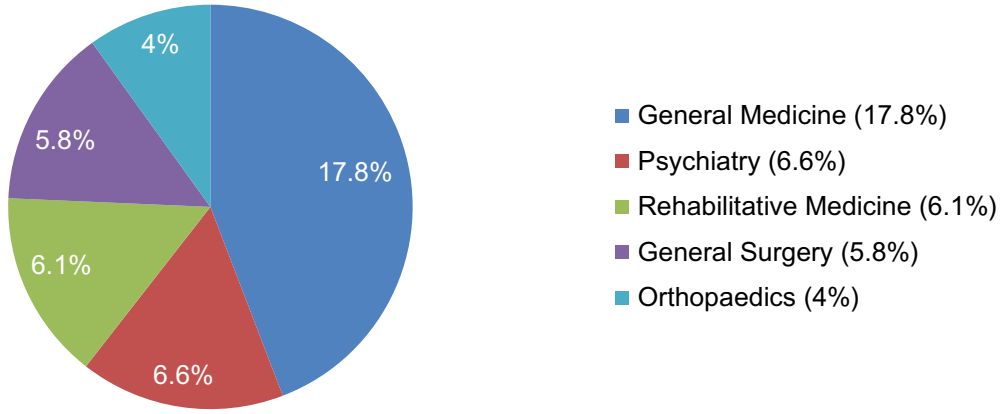
[10] Australian Commission on Safety and Quality in Health Care (September 2012), National Safety and Quality Health Service Standards, ACSQHC, Sydney.

Table 9: **Frequency and Percentage of Top Five Tier Three Confirmed Medication Clinical Incidents Categories for 2014/15**

Tier Three Medication Categories	(n)	(%)
Omitted medication	689	12.8
Incorrect medication dose	569	10.5
Incorrect timing of medication	493	9.1
Incorrect medication	447	8.3
Extra medication dose given	506	6.5
Total	**2,704**	**47.2**

The treating specialties which reported medication clinical incidents more frequently are listed in Figure 10. These five specialties accounted for 40.3% (n=2,175) 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=961; 17.8%).

Figure 10: **Percentage of Medication Clinical Incidents by Top Five Treating Specialties for 2014/15**



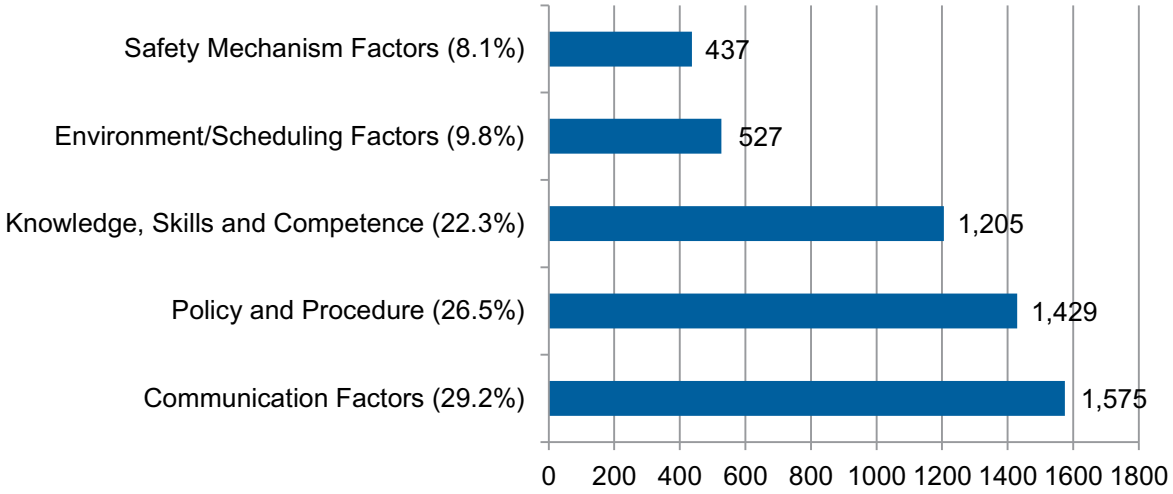
The ten most frequent types of medication involved in a clinical incident accounted for 58% (n=3,670) of all medication incidents. Opioid analgesia used for pain relief (n=908; 14.3%) was the most frequently reported medication type followed by antibiotics (n=758; 12%) and anticoagulants, which are blood thinning agents (n=470; 7.4%; see Table 10).

Table 10: **The Ten Most Frequent Types of Medications Involved in Clinical Incidents 2014/15**

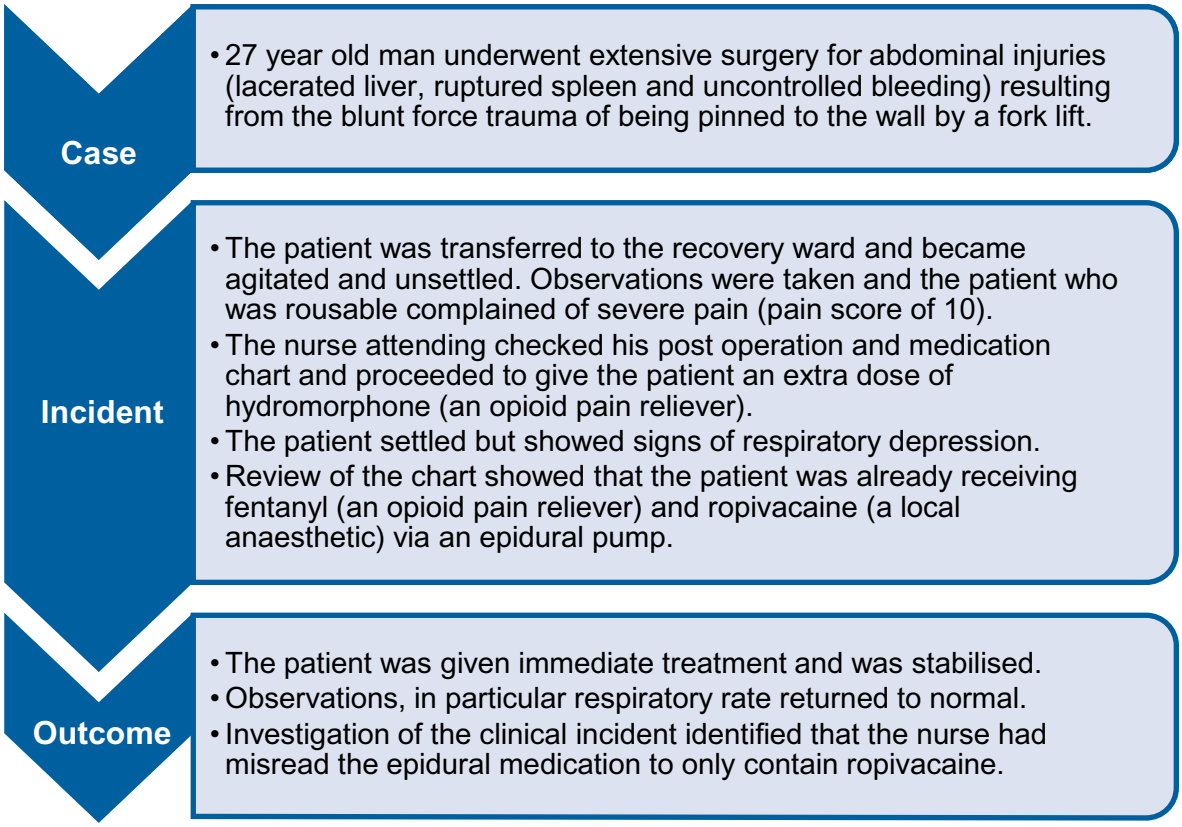
Top 10 Medication Categories	(n)	(%)
Opioid analgesics (opioid based pain relievers)	908	14.3
Antibacterials (antibiotics)	758	12.0
Anticoagulants (blood thinning medications)	470	7.4
Insulins (medications used for diabetes)	298	4.7
Antipsychotics (medications for psychosis)	270	4.3
Antihypertensives (medications for high blood pressure)	254	4.0
Non-opioid analgesics (non-opioid pain relievers)	212	3.3
Antiepileptics (medications for epilepsy)	193	3.0
Medications for anxiety and sleep disorders	175	2.8
Antidepressants (medications for depression)	132	2.1
Total	**3,670**	**58.0**

For medication clinical incidents, 95.8% (n=5,173) of contributory factors were captured in five main categories (see Figure 11). The most common contributory factor was communication factors which were cited in 29.2% (n=1,575) of all medication clinical incidents. Not following policy/guidelines or procedure was the next frequently reported contributory factor (n=1,429; 26.5%).

Figure 11: **Frequency and Percentage of the Top Five Contributory Factors for Medication Clinical Incidents for 2014/15**



Medication Case Study



The SCGH Post Anaesthetic Care Unit (PACU) Opioid Effective Management Tool Project

Introduction: Following the identification of a medication information gap which resulted in opioid medication clinical incidents, a new information chart for opioid administration was designed and implemented in PACU at Sir Charles Gairdner Hospital.

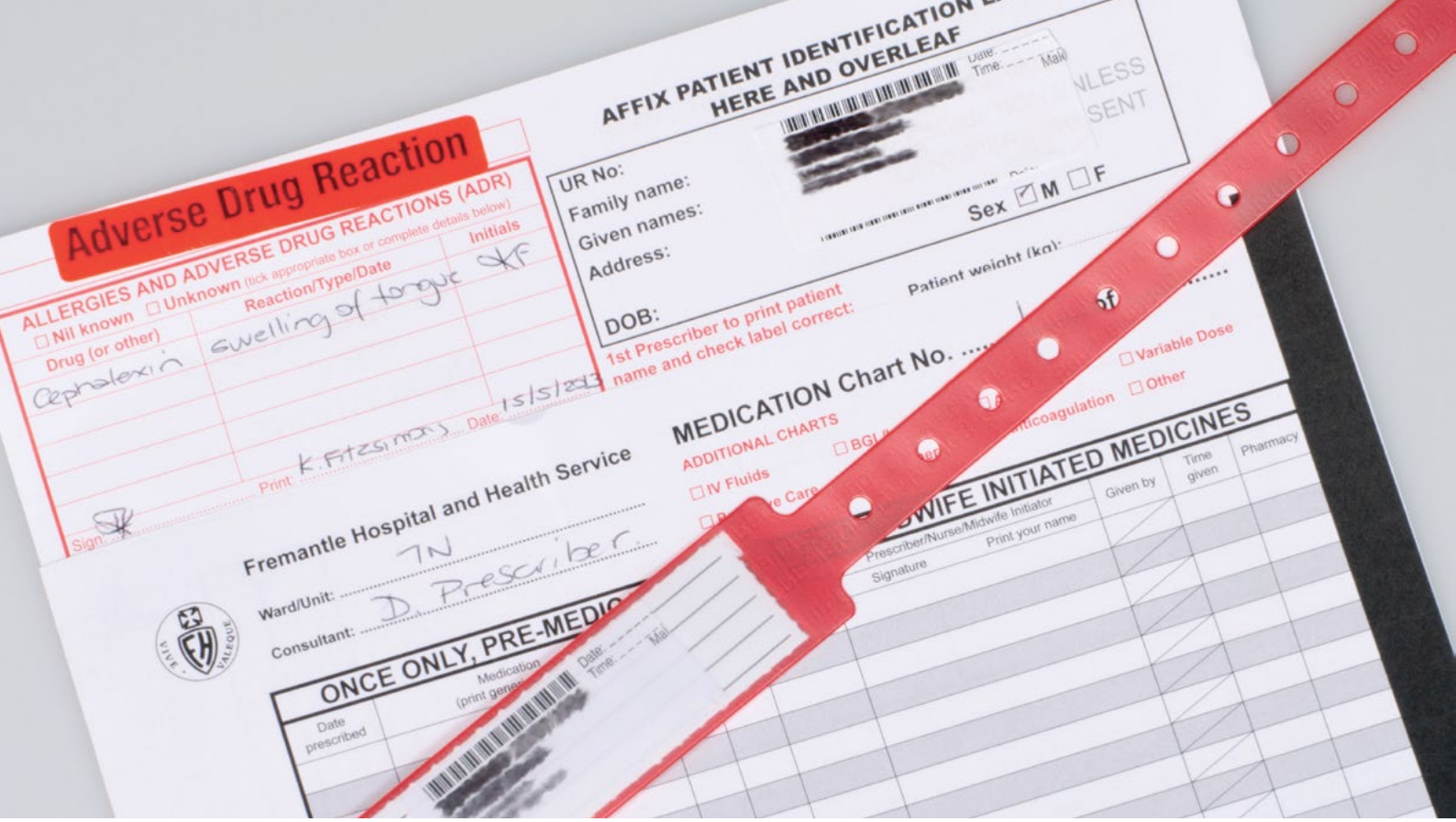
Objective: To reduce clinical incidents relating to schedule 8 opioid medications.

Methods: Opioid medication clinical incidents were recorded over a 52 week period (2013) and a staff survey undertaken following development and implementation of the PACU Opioid Information Chart.

Results: Baseline findings showed that there were ten actual opioid medication clinical incidents. Results showed that after the implementation of the PACU Opioid Information Chart there were only three opioid medication clinical incidents reported in the PACU from 2014.

Twenty three staff were surveyed with 100% recommending the tool as useful in learning and reference in giving opioids in PACU. The majority (n=19; 82%) of staff found that the chart was easy to read, useful (n=21; 90%) and the rationale of the chart was clear to the user (n=20; 86%).

Conclusion: Opioid medication clinical Incidents have decreased using the PACU Opioid Information Chart.



Key Medication Messages

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 6,332 medication clinical incidents were reported across WA Health in 2014/15 from tertiary hospitals through to community clinics. Medication administration of opioid analgesia, antibiotics, and anticoagulants accounted for 33.7% (n=2,136) of all medication incidents in 2014/15. 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 standardised 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".[11]

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

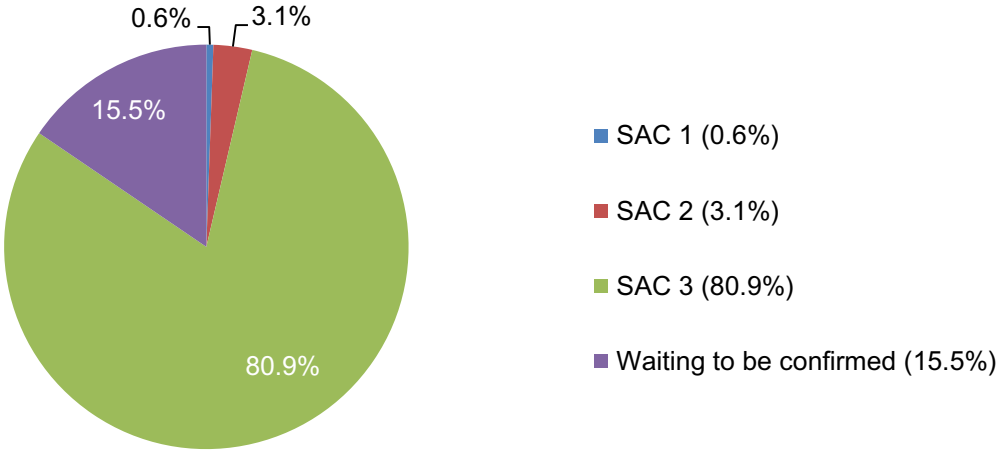
- Product mislabelled
- Product mislabelled and incorrect patient
- Investigation performed on incorrect patient
- Preparation of patient for investigation insufficient, incorrect or incomplete
- Ambiguous incorrect or incomplete documentation
- Illegibility of documentation
- Incorrect patient
- Documentation 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 2014/15 reporting period 3,040 patient identification clinical incidents were notified. Patient identification clinical incidents accounted for 10.4% clinical incidents reported in this time period.

The majority (n=2,459; 80.9%) 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 12). Sixteen patient identification incidents were classified as a SAC 1 clinical incident of which none resulted in the death of the patient. Six of these incidents were identified as near misses with documentation errors identified before the patient was treated. The remaining 10 SAC 1 clinical incidents consisted of wrong site surgery, scan results not being properly communicated or undertaken, resulting in misdiagnosis.

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

Figure 12: **Percentage of Patient Identification Incidents by SAC Rating for 2014/15**



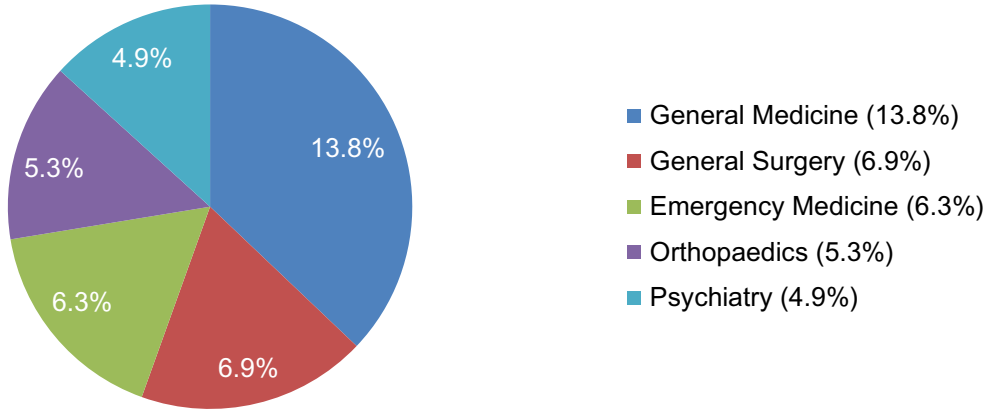
Of the 3,040 reported incidents 2,569 incidents had a confirmed SAC rating with the remainder waiting for the SAC rating to be confirmed. Findings revealed that most (n=1,276; 49.7%) patient identification incidents were categorised as ambiguous/ incorrect or incomplete documentation (see Table 11). Incorrect patient documentation accounted for 590 (23%) incidents and included incidents such as incorrect patient labels, forms, records, charts or lists.

Table 11: **Frequency and Percentage of the Top Five Tier Three Patient Identification Categories for 2014/15**

Patient Identification Categories	(n)	(%)
Ambiguous/incorrect or incomplete documentation	1,276	49.7
Incorrect patient documentation	590	23.0
Medication prescription illegible	164	6.4
Incorrect treatment or procedure	128	5.0
Medication dispense to the incorrect patient	60	2.3
Total	**2,218**	**86.3**

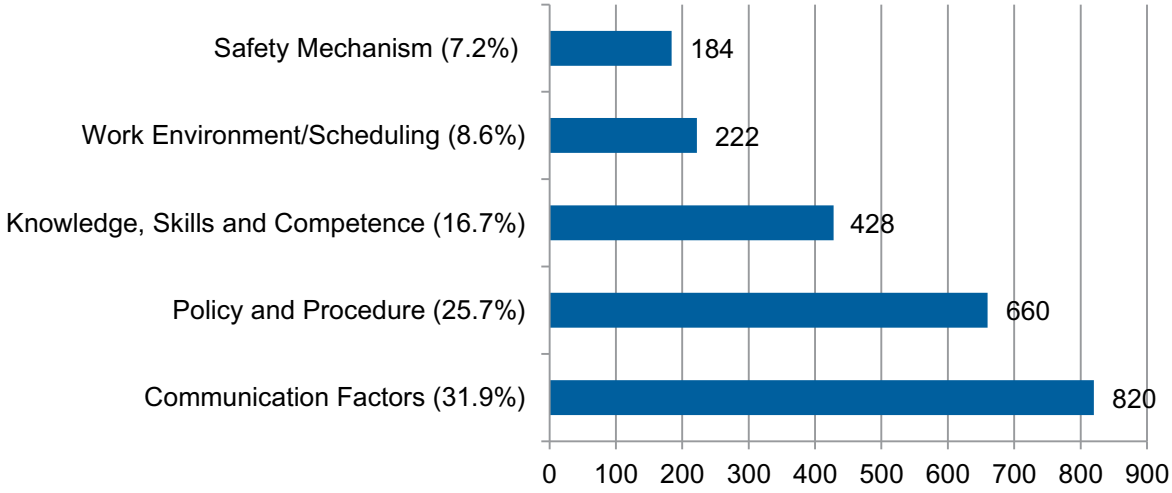
The treating specialties which reported patient identification clinical incidents more frequently are listed in Figure 13. These five specialties accounted for 37.3% (n=957) of all patient identification incidents reported in this 12 month time period.

Figure 13: **Percentage of Patient Identification Clinical Incidents by Top Five Treating Specialty for 2014/15**

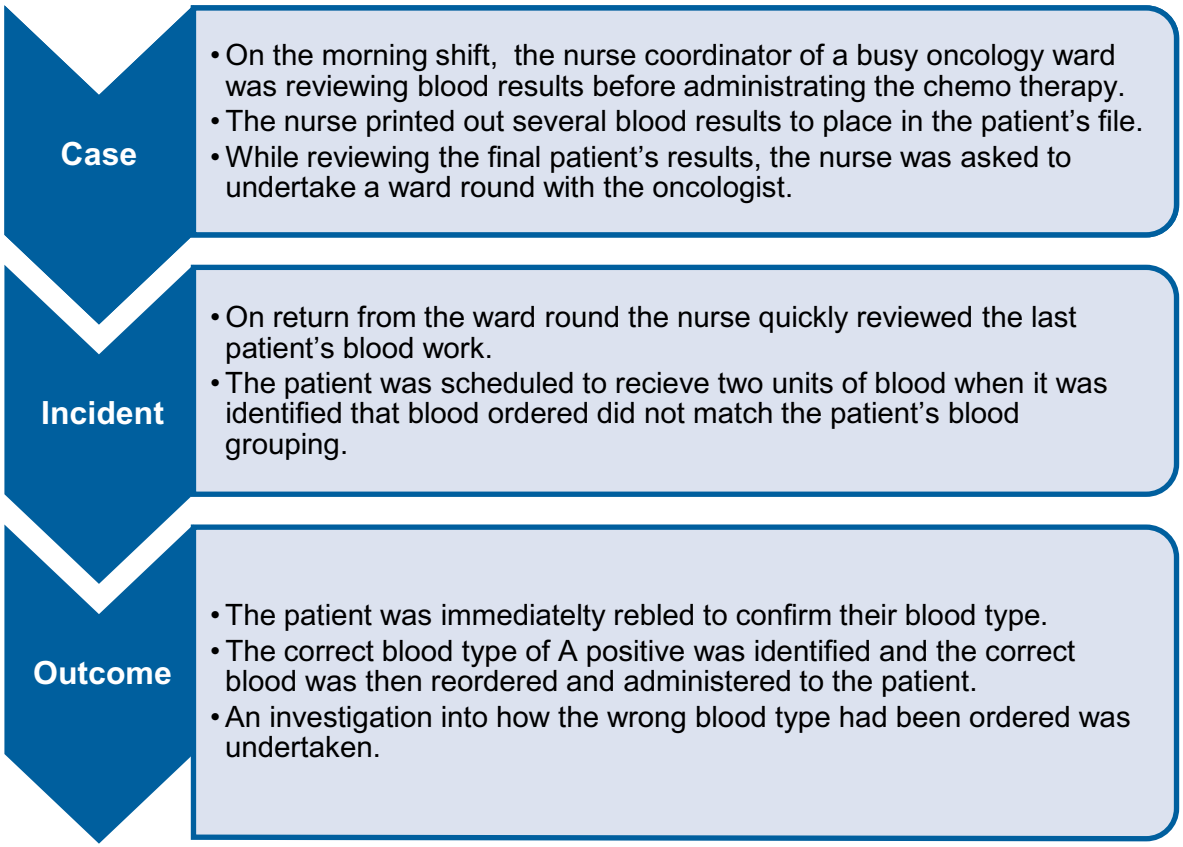


For patient identification clinical incidents, 90.1% (n=2,314) of contributory factors were captured in five main categories (see Figure 14). The most common contributory factor was communication factors which were cited in 31.9% (n=820) of all patient identification clinical incidents. Not following policy/guidelines or procedure was the next frequently reported contributory factor (n=660; 25.7%).

Figure 14: **Frequency and Percentage of Top Five Contributory Factors for Patient Identification Clinical Incidents for 2014/15**



Patient Identification Case Study



KEMH Observational Audit of Blood Products Bedside Checking Procedure

Introduction: King Edward Memorial Hospital (KEMH) undertook a clinical audit of blood product administration to determine compliance with the blood transfusion checking procedure according to Women and Newborn Health Service (WNHS) Transfusion Medicine Protocols. The team wanted to improve the quality of care provided to patients by ensuring that blood products administration practices were compliant with appropriate evidence based blood administration guidelines and protocols.

Objectives:

- Confirmation of consent and verification of prescription and blood product viability.
- Prescription, blood product labelling, paperwork and patient identity check at the patient's side.

Methods: Inclusion criteria included any patient receiving a blood product at KEMH when a staff member who had agreed to participate in collection of audit data, was available. The bedside checking procedure of the blood product was observed in the clinical area. An effort was made to include a number of different wards. The audit period was originally proposed as April 2015 but due to logistical issues with auditing the period was extended to July 2015.

Results: Two nurses/midwives confirmed the patient had consented (documented in notes) prior to commencing the transfusion at the bedside. All of the 21 cases audited had consent confirmed verbally although one patient was classed as 'No' to documented consent as the Medical Officer had not signed the consent form even though the patient had signed. Of those audited, therefore 'documented' consent was confirmed in twenty (94.7%) of cases but 'verbal' consent was 100% of cases. The patients receiving Anti D immunoglobulin were asked prior to administration and their consent was documented on the Anti D medical record form. The neonates had a completed neonatal blood product consent form present. Blood product was checked with the paperwork at the patient's bedside in all twenty one cases (100%) were checked at the patient's bedside.

The nurses/midwives asked the patient/parent to state their full name and date of birth. In four cases this was not applicable as the patients were babies and their parents were not present at the time of treatment. In the other seventeen cases only one patient was **not** asked to state their full name and date of birth. This was an Anti D administration in the Maternal Fetal Assessment Unit.

In the cases where the patient stated their name the identification band was verified as the patient performed the confirmation in all but one case. This was a patient on the assessment unit receiving Anti D, who did not have an ID band in place. Two nurses/midwives checked the patient details on the identification band matched the patient details on the prescription (fluid order sheet, medication chart, where applicable), with 90.4% (n=19) compliance. Findings showed that the patient details on the ID band matched the patient details on the PathWest compatibility sticker in 95.2% (n=20) of cases.

Conclusion: This audit was a snap shot of staff compliance with the blood transfusion checking procedure according to WNHS Transfusion Medicine Protocols. This audit provides data to allow benchmarking.

Points of interest include:

Consent – In line with other WNHS documentation audits which demonstrate increased compliance with documentation and awareness of consent for blood products, the results from this bedside observational audit show >90% compliance for the second year running and staff awareness is high.

Positive patient identification – Staff were fastidious with checking the patients identification at the bedside and cross checking the unit details with the identification band and the prescription fluid order form. Previous audits have highlighted a lack of consistency when asking the patient to state their Name and DOB which is an essential part of the procedure. The 2014 audit compliance with this was only 75% but this audit shows an improvement to 94.1%. In four cases this was not applicable as the patient was a baby with no parent present. Of note one audited patient receiving Anti D did not have an ID band on their person.

Key Patient Identification Messages

A fundamental component of health care delivery is to do no harm. In order to protect our patients as they move through their health care trajectory is the constant checking and rechecking of procedures that are done by every staff member. While it may appear tedius that patients are asked to verfiy their name and details, this is standard procedure to ensure they are receiving the correct treatment.

Patients need to understand they are working as partners in their health care delivery when staff ask them to confirm their details and what procedure or treatment they are about to receive. This is one of many safety checks that are continually undertaken to ensure patient safety.

Unfortunately, there are times when our safety checks break down and this is when clinical incidents occur. In 2014/15 there were 3,040 patient identification and procedure matching incidents reported. Fortunately, 80.9% (n=2,459) resulted in either no harm or minimal harm to the patient. However, 10 patients were seriously harmed as a result of wrong site surgery, scan results not being properly communicated or undertaken, resulting in misdiagnosis and this is unacceptable.

Patient verfication processes are not difficult or time consuming to undertake and in a controlled, calm environment are easy to complete. However, health care delivery is dynamic and usually fast paced, clinicians often work in demanding and stressful situations which can lead to miscommunication that results in patients' safety being compromised. A challenging work environment in no way mitigates the need for checks and matching procedures and if anything should reinforce to clinicians the need to slow down for one moment to check they have the right patient and are performing the right procedure or treatment.

We are seeing more clinical incidents being reported as 'near misses' and while it is comforting that our patients were not harmed is it imperative that we investigate and learn from these mistakes to prevent future incidents from occurring.

Standard 8: Pressure Injury Clinical Incidents

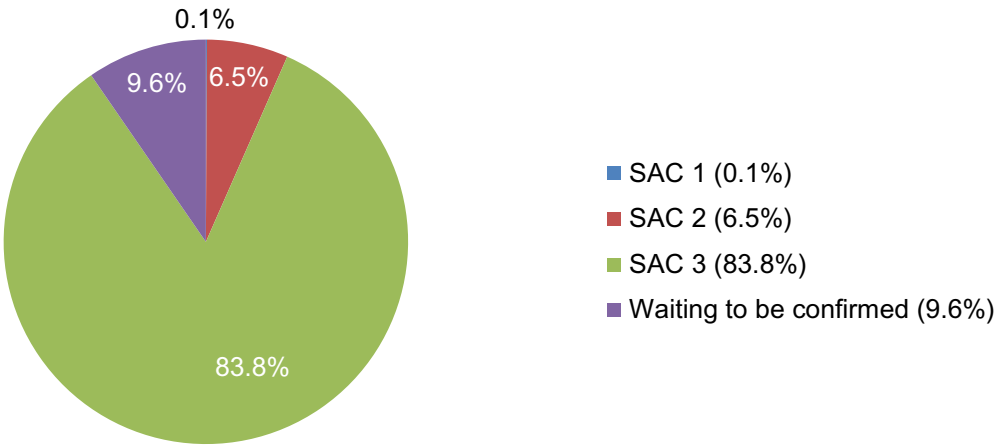
Pressure injuries refer to localised areas where the skin or underlying tissue is damaged by pressure or friction.[12] Pressure injuries in adults occur most commonly on the lower leg or sacral area but can develop anywhere on the body. There are four stages of pressure injury development and include:

- Stage I: “Intact skin with non-blanchable redness of a localized area usually over a bony prominence.” [12]
- Stage II: “Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. May also present as an intact or open/ ruptured serum-filled or sero-sanginous (blood filled) blister.” [12]
- Stage III: “Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss.” [12]
- Stage IV: “Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present.” [12]

Pressure injury clinical incidents are captured under the Tier One category within Datix CIMS. In the 2014/15 reporting period 1,168 pressure injury clinical incidents were identified. Pressure injury clinical incidents accounted for 4% of 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=979; 83.8%; see Figure 15). There was one SAC 1 pressure injury clinical incident report during 2014/15 which was reported as a suspected deep tissue injury with the depth of the pressure injury unknown.

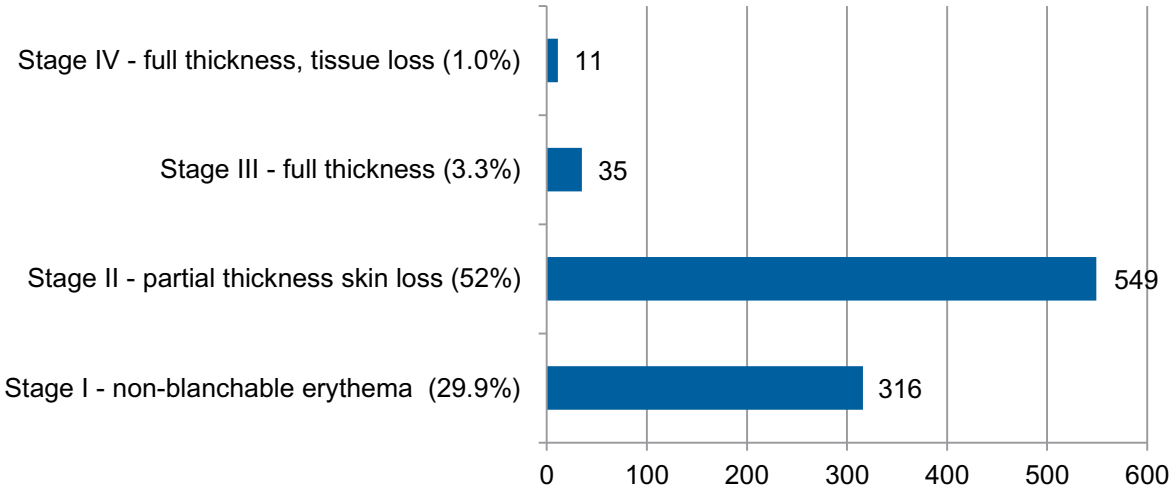
Figure 15: **Percentage of Pressure Injury Clinical Incidents by SAC Rating for 2014/15**



Of these incidents, 1,056 had a confirmed SAC rating with the remainder of clinical incidents awaiting confirmation. Findings revealed that 86.3% (n=911) pressure injuries were staged, with the majority (n=549; 52%) of pressure injuries classified as a Stage II with partial thickness tissue loss (see Figure 16). The remainder of pressure injuries had either not been staged or were unable to be staged.

[12] http://www.npuap.org/resources/educational-and-clinical-resources/npuap-pressure-ulcer-stagescategories cited 24/7/215.

Figure 16: **Frequency and Percentage of Pressure Injury Clinical Incidents by Stage for 2014/15**



The majority (n=672; 63.6%) of pressure injury clinical incidents were not present on admission (see Table 12).

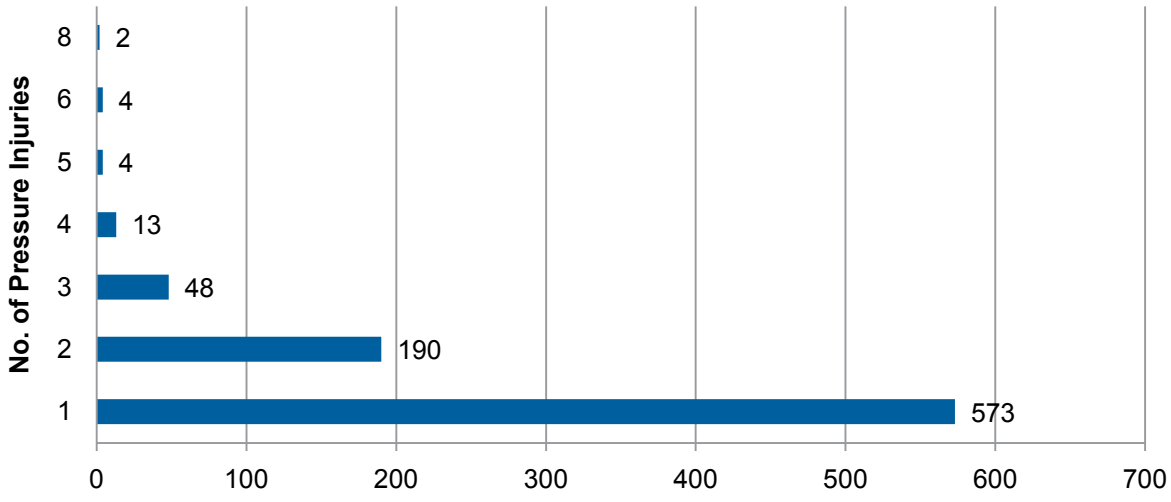
Table 12: **Frequency and Percentage of Pressure Injury Clinical Incidents Tier Three Categories for 2014/15**

Pressure Injury Category	(n)	(%)
Not present on admission	672	63.6
Unknown if present on admission	237	22.4
Present on admission*	147	13.9
Total	**1,056**	**100.0**

*Whilst being present on admission these pressure injuries were identified as having deteriorated after admission, or not having preventative, therapeutic interventions or risk assessments performed within 24 hours.

While the majority of patients had only one pressure injury (n=573; See Figure 17), 261 patients had more than one pressure injury and two patients had eight pressure injuries.

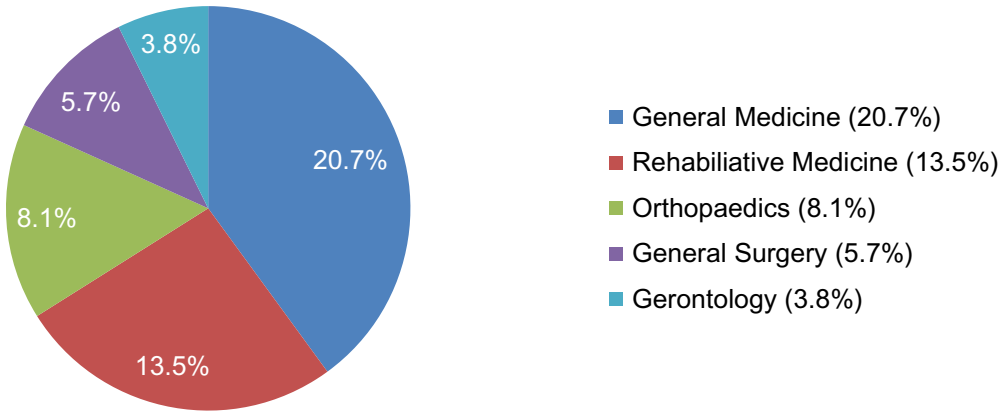
Figure 17: **Frequency of Pressure Injury Clinical Incidents for 2014/15**



Of the 672 pressure injury clinical incidents that were identified as not being present on admission, the majority were either Stage I (n=205; 31.5%) or Stage II pressure injuries (n=349; 52%). Nineteen patients (2.8%) sustained a Stage III pressure injury involving full skin thickness loss while four (n=0.6%) were classified as a Stage IV pressure injury involving full thickness tissue loss with exposed bone, tendon or muscle. It is concerning that four patients who developed a Stage IV pressure injury whilst in hospital were given a SAC rating of 2 (n=1) and three (n=3).

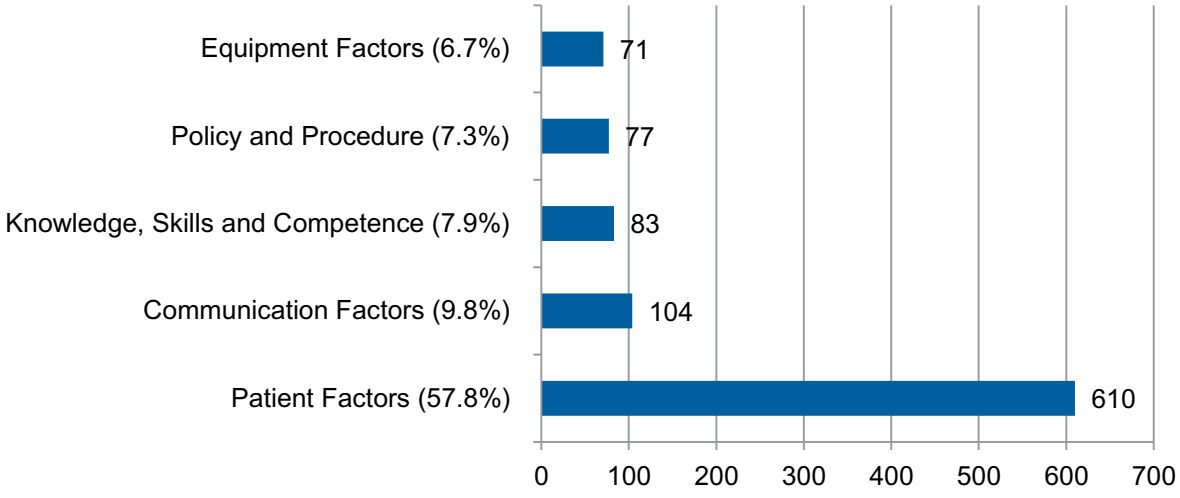
The treating specialties which reported pressure injury clinical incidents more frequently are listed in Figure 18. These five specialties accounted for 51.9% (n=548) of all pressure injury clinical incidents reported in this 12 month time period. The General Medicine specialty reported the most pressure injuries (n=219; 20.7%) compared to any other treating specialty.

Figure 18: **Percentage of Pressure Injury Clinical Incidents by Top Five Treating Specialties for 2014/15**

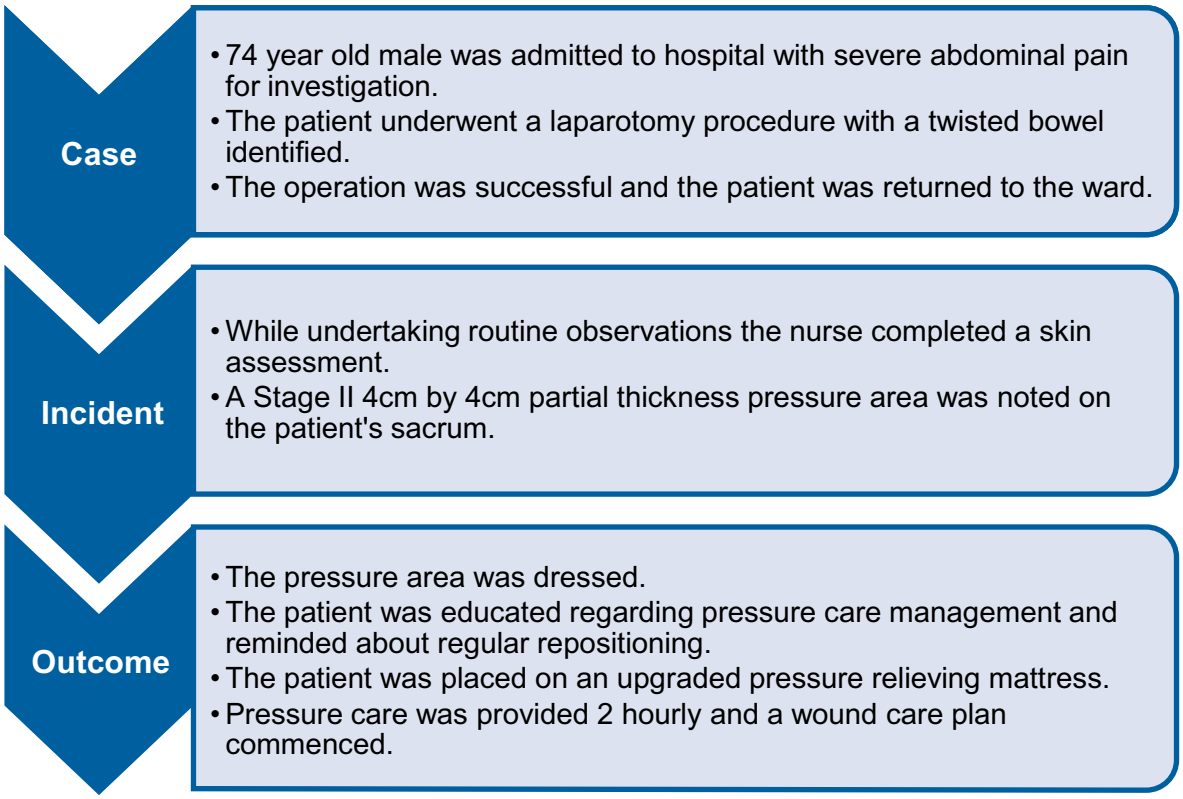


Patient factors were cited in more than half (n=610; 57.8%) of pressure injury clinical incidents as the main contributory factor (see Figure 19). Examples of patient factors included being critically unwell, obese, diabetic, having fragile skin etc.

Figure 19: **Frequency and Percentage of Top Five Contributory Factors for Pressure Injury Clinical Incidents for 2014/15**



Pressure Injury Case Study



SCGH Prophylactic Sacral Pressure Management in Operation Theatre (OT)

Introduction: An opportunity for a joint project between OT and the Plastic Surgery Ward at Sir Charles Gairdner Hospital was identified using CIMS data, to address an increase in sacral pressure injuries on patients undergoing major plastics free flap surgery.[13] The length of surgery can vary for these patients from 8 to 30 hours and the patient is unable to be moved or be repositioned during this time due to the complexity of the procedure and maintaining the sterile field.

Objective: To reduce the risk of pressure injury sustained intraoperatively in patients undergoing major plastics free flap surgery.

Audit 1 Methods: Pre-operatively a sacral pressure dressing was applied to all patients undergoing major free flap surgery by the Plastics team. Fourteen patients in total had the dressing applied and an additional post-operative sacral pressure area check was introduced in the Post Anaesthetic Care Unit prior to discharge to the ward. The dressing remained intact post-operatively and was removed on day three in the ward area. Only two of the 14 patients had a reported Stage 1 (redness) pressure injury post-operatively before day three.

Conclusion: Improvements were identified with regard to pressure injury prevention. The team recommended that a randomised control trial of all plastic surgery free flap patients be undertaken.

[13] Free Flap Surgery involves tissue (e.g., skin, fat, muscle, bone) being transferred to another part of the body where the divided artery and vein are reattached. Cited 17/8/2015 Medscape.

Randomised Controlled Trial (RCT) Methods: Fourteen patients in total underwent free flap surgery within an 8 week period during this trial with seven patients randomised to each group.

Group 1 – Patients with no sacral dressing applied pre-operatively for plastic surgery patients undergoing major plastics free flap surgery.

Group 2 – Patients with sacral dressing applied pre-operatively for plastic surgery patients undergoing major plastics free flap surgery.

Results: All appropriate pressure relieving aids were used on both groups to reduce the risk of pressure injury during surgery. No significant changes were observed in the pressure injury staging pre and post operatively except 1 patient identified post-operatively as having skin redness (Group 1) following an 8 hour procedure.

Conclusion: While the RCT did not show any significant difference with regard to pressure injuries between the two groups, findings reinforce the benefits of using pressure relieving aids, particularly on patients undergoing extensive surgeries.

Key Pressure Injury Messages

In the 2014/15 reporting period 1,168 pressure injury clinical incidents were identified. Patient factors can play a major role in the development of pressure injuries but the implementation of pressure relieving strategies and equipment also have major roles in prevention.

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.

A Stage I pressure injury can develop in as little as 1-4 hours[14] and can worsen to a stage IV injury where bone, tendon or muscle are exposed. 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.

It is alarming that four patients who developed a Stage IV pressure injury whilst in hospital were only given a SAC rating of 2 (n=1) and 3 (n=3). 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.

[14] Gefen A. How much time does it take to get a pressure ulcer? Integrated evidence from human, animal, and in vitro studies. Ostomy Wound Manage. 2008. Oct; 54 (10):26-8,30-5.

Standard 9: Clinical Deterioration Incidents

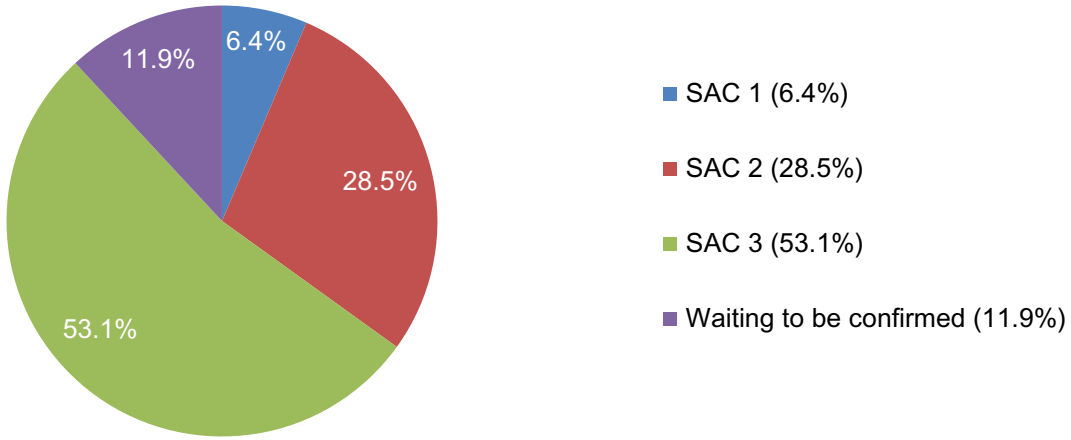
Standard 9 of the National Standards refers to “recognising and responding to clinical deterioration in acute health care”. The intent of which is to ensure that clinical deterioration of a patient is recognised promptly and appropriate care taken.

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.[15]

Clinical deterioration incidents accounted for 2.5% (n=715) of clinical incidents reported in 2014/15. The majority (n=380; 53.1%) of clinical deterioration incidents were categorised as a SAC 3 clinical incidents with the patient sustaining either minor/no harm (see Figure 20).

Figure 20: **Percentage of Clinical Deterioration Incidents by SAC Rating for 2014/15**



There were 630 clinical incidents which had a confirmed SAC rating with the remainder waiting for the SAC rating to be confirmed. Findings revealed that nearly one third of these clinical deterioration incidents were categorised as due to “unplanned elevation of care to intensive care setting” (n=225; 35.7%), followed by “failure/insufficient response to significant changes in patient status” (n=189; 30%; see Table 13).

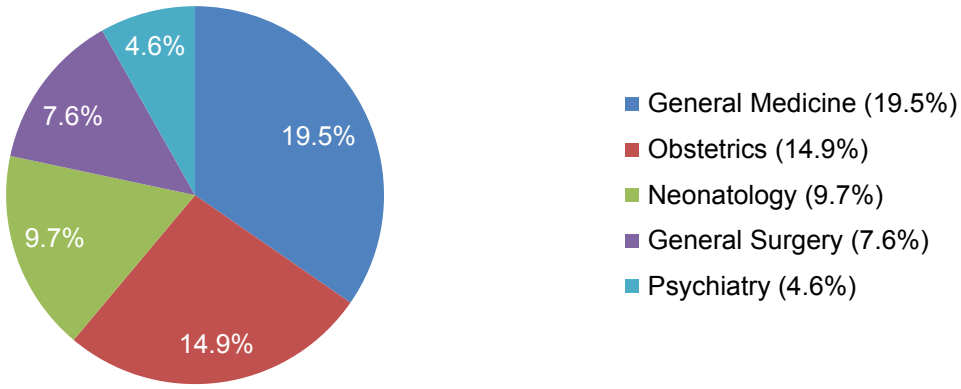
[15] Please note that the SAC 1 category of the delay in recognising and responding to clinical deterioration is also captured by the tier three definitions stated above.

Table 13: **Frequency and Percentage of Clinical Deterioration Tier Three Categories for 2014/15**

Tier Three Category	(n)	(%)
Unplanned elevation of care to intensive care setting	225	35.7
Failure/insufficient response to significant change in patient status	189	30.0
Failure/insufficient recognition of significant change in patient status	118	18.7
Failure to activate rapid response/ resuscitation team	50	7.9
Unplanned return to surgery	48	7.6
Total	**630**	**100.0**

The treating specialties which reported incidents of clinical deterioration most frequently are listed in Figure 21. These five specialties accounted for 56.3% (n=355) of all clinical deterioration incidents reported in 2014/15. The specialty of General Medicine reported the highest frequency of clinical deterioration incidents (n=123; 19.5%) followed by Obstetrics (n=94; 14.9%).

Figure 21: **Percentage of Clinical Deterioration Incidents by Top Five Treating Specialty for 2014/15**



When patient outcome from clinical deterioration was reviewed, the majority of patients sustained either no harm (n=202; 32.1%) or minor harm (n=215; 34.1%; see Table 14). However, 29 clinical deterioration incidents did result in the death of the patient.

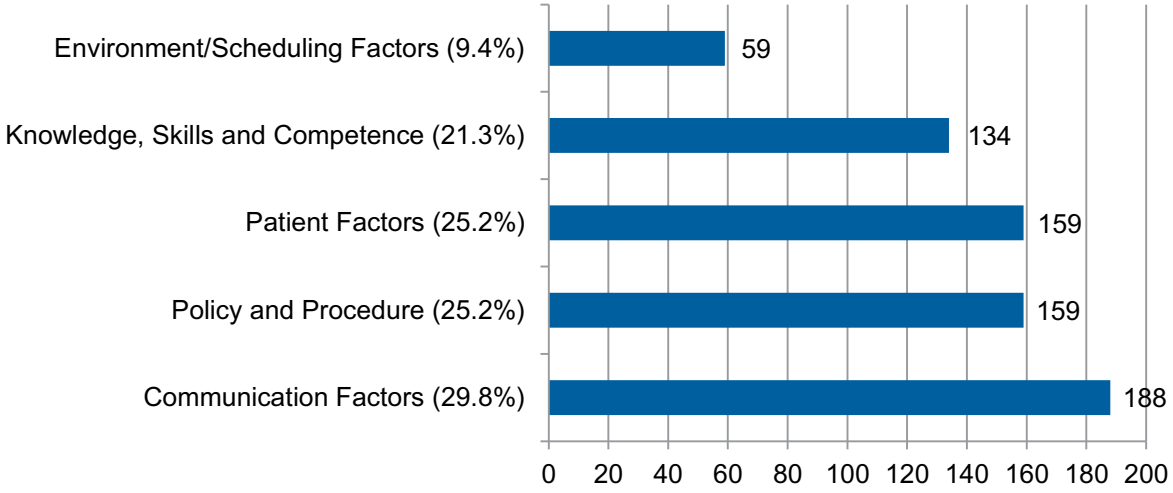
Table 14: **Frequency and Percentage of Clinical Deterioration Incidents by Patient Outcome for 2014/15**

Patient Outcome	(n)	(%)
Death	29	4.6
Serious harm	24	3.8
Moderate harm	159	25.2
Minor harm	215	34.1
No harm	202	32.1
Total	**629***	**100.0**

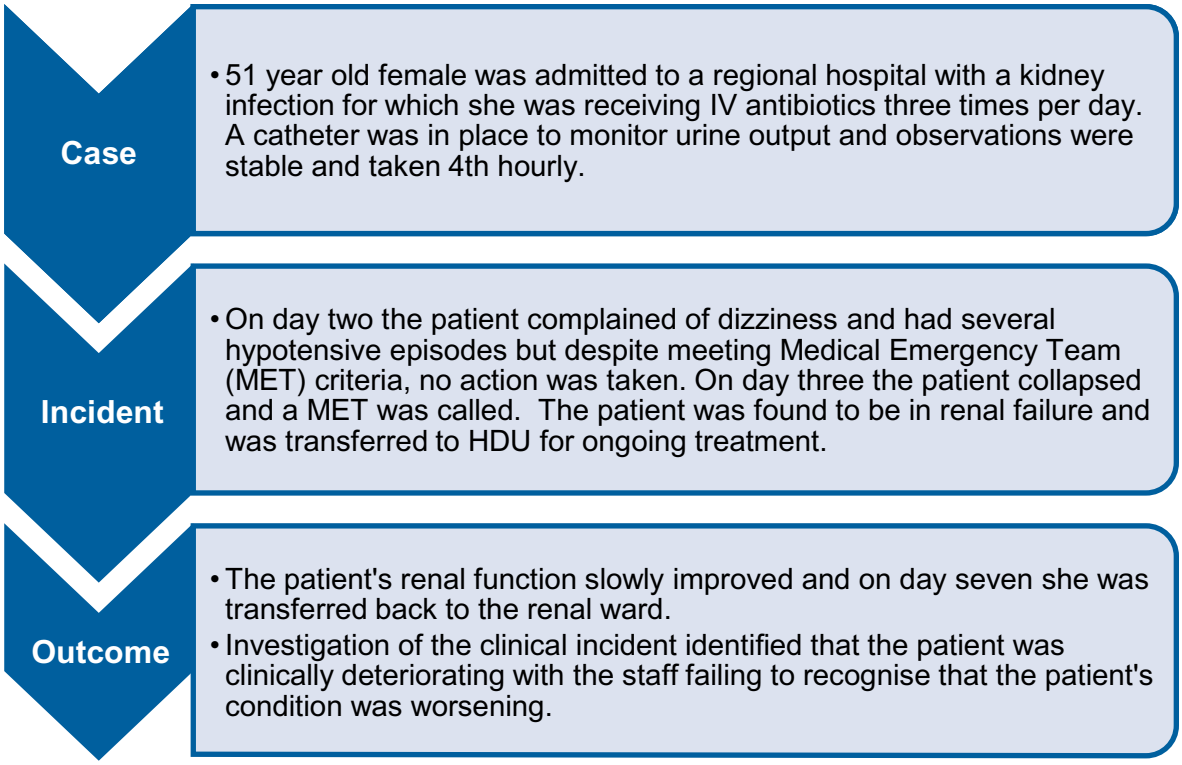
Missing data n=1

Communication factors (n=188; 29.8%) were the most frequently cited contributory factor followed by policy and procedures (n=159; 25.2%) and patient factors (n=159; 25.2%; see Figure 22) for clinical deterioration incidents.

Figure 22: **Frequency and Percentage of the Top Five Contributory Factors for Clinical Deterioration Incidents 2014/15**



Clinical Deterioration Case Study



To Improve Patient Safety and Governance of the Broome Hospital High Dependency Unit

Introduction: Broome Hospital's High Dependency Unit (HDU) identified clinical incidents resulting in acutely unwell patients requiring urgent transfers to tertiary hospitals in Perth. The HDU team wanted to conduct a quality improvement project to improve patient outcomes and reduce unnecessary patient transfers.

Objectives:

- Reduce transfers of the acutely unwell patient to tertiary hospitals in Perth.
- Create equitable access to specialist inpatient treatment for Kimberley patients.
- Improve clinical governance of the HDU with quality activities including clinical audits, case reviews, clinical education sessions and peer reviews.
- To create a stronger workforce linkage between staff at the tertiary link hospital and the Kimberley.
- To help close the gap in health outcomes between metropolitan/ country residents.

Methods: Establishment of a tertiary hospital link with Broome Hospital High Dependency Unit for daily telehealth reviews of the acutely unwell patient (video conferencing) and clinical governance of the unit through telehealth and agreed physical visits to Broome.

Results: Since establishing the telehealth tertiary link for patient review, patients at Broome Hospital have benefited from daily telehealth rounds with a SCGH HDU physician for all of the patients in the HDU 7 days per week. In addition, the SCGH physician remains on call for the 24 hour period so that patient clinical deterioration can be discussed directly with the consultant who knows that patient. New critically ill patients can also be discussed on an as required basis with the option to take the Telehealth equipment to the resuscitation room in the Emergency Department.

Anecdotally, the outcomes have been:

- Improved holistic care for all of our critically unwell patients, and in particular the surgical patients who have a significant risk of co-morbid medical conditions in our patient demographic, requiring an intensive medical approach to their post-operative care.
- Continuity of care by the SCGH small team who interact with the Broome HDU.
- Reduced variability of care as a result of the variability in critical care skill level of the ward District Medical Officer (DMO) team caring for HDU patients in Broome.
- Greater confidence in the HDU nursing staff team.
- Good will and closer networking across the SCGH and Broome HDU teams. Anaesthetic DMOs have preferentially been using their upskilling time in SCGH ICU/theatres as part of that closer link.

Key Clinical Deterioration Messages

Clinical deterioration is often insidious until that moment when our patient has deteriorated to the point of requiring critical or intensive intervention. Early detection is an important strategy to prevent patients from serious harmed or mortality. Observing patients and recording their vital signs provide clinicians with the basis for which to make informed clinical decisions and therefore should be regularly documented and reviewed. It is only when these observational trends are reviewed and analysed that clinical deterioration can be recognised, escalated and addressed. However, before any escalation plan can be implemented clinicians need to become more effective in being “situational aware”.

Simply put, situational awareness[16] is defined as “knowing what is going on around you”. The first level in the situation awareness model is to gather patient information, the second level is to recognise and understand the patient information you have obtained, e.g. the patient’s pulse has increased while their urine output has decreased continually over the last three observations. Thirdly, from this patient information what outcome can be anticipated? Is the patient is becoming dehydrated and going into shock? What can be done to prevent my patient from clinical deteriorating any further? Situational awareness is a crucial skill for clinicians to have as it can help identify triggers that a patient is deteriorating and enable staff to rapidly respond to their patients’ needs.

Strategies to assist novice clinicians or those new to a particular clinical area are instrumental. The introduction of the Observation and Response Chart is one such strategy which assists staff in identifying abnormal physiological trends. This data then enables clinicians to monitor their patients’ health and escalate care, if needed. The use of medical emergency response teams is another initiative that enables the rapid response of medical care to the patient. However, while charts and rapid response teams are important, a fundamental component to reducing the clinical deterioration incidents is improved communication both between staff and also between staff and their patients.

[16] Institute of Medicine (US) Forum on Medical and Public Health Preparedness for Catastrophic Events. Medical Surge Capacity: Workshop Summary. Washington (DC): National Academies Press (US); 2010. F, Creating Situational Awareness: A Systems Approach. Available from: http://www.ncbi.nlm.nih.gov/books/NBK32848/

Standard 10: Falls Clinical Incidents

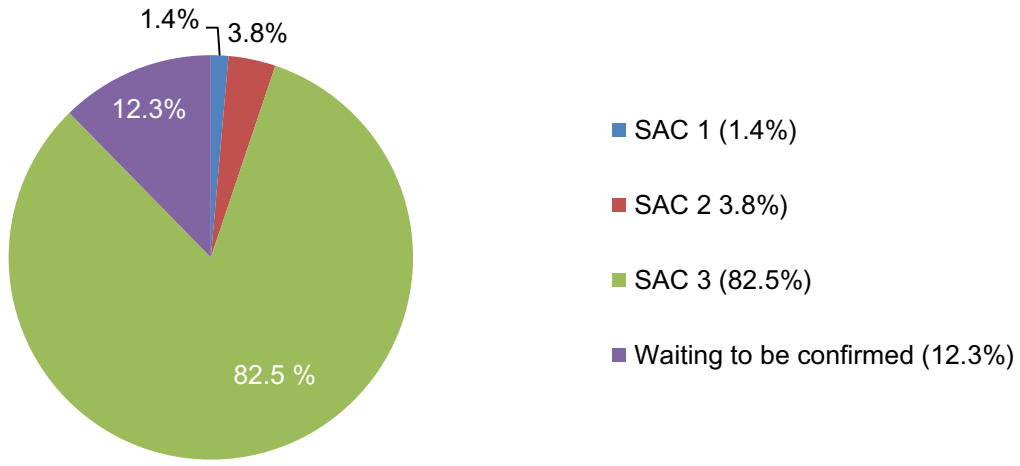
Standard 10 of the National Standards refers to “preventing falls and harm from falls”. The intent of which is to properly risk assess patients to try and prevent falls from occurring.

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 2014/15 reporting period 6,017 falls clinical incidents were identified. Falls clinical incidents accounted for 20.6% 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=4,964; 82.5%; See Figure 23). Of the 82 SAC 1 falls clinical incidents, 12 incidents resulted in the death of the patient.

Figure 23: **Percentage of Falls Incidents by SAC Rating for 2014/15**



Of the 6,017 incidents, 5,275 had a confirmed SAC rating with the remainder of clinical incidents awaiting confirmation. The majority (n=3,544; 67.2%) of patients who had a confirmed fall clinical incident where either admitted to hospital as a result of a fall or had more than one fall in the previous six months. The remainder of patients either had no fall history (n=1,730; 32.8%) or data were missing.

Findings revealed that the majority (n=3,636; 68.9%) of falls clinical incidents were categorised as “suspected slips/trips/falls” as they were unwitnessed (see Table 15).

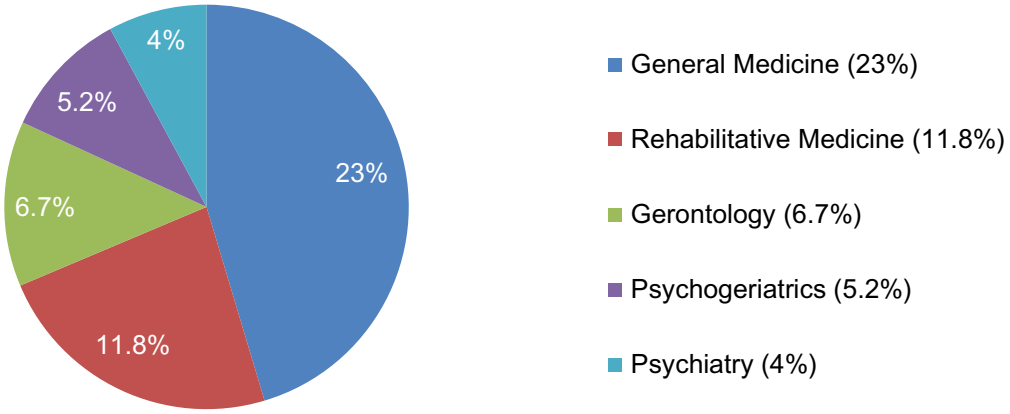
Table 15: **Frequency and Percentage of Tier Two Falls Categories for 2014/15**

Tier Two Falls Category	(n)	(%)
Unwitnessed falls	3,636	68.9
Witnessed falls	1,638	31.1
Total	**5,274***	**100.0**

*Missing data n=1.

The General Medicine specialty reported the highest frequency of falls incidents (n=1,381; 23%) followed by the Rehabilitative Medicine specialty (n=710; 11.8%; see Figure 24). The top five specialties accounted for 50.7% (n=2,912) of all fall incidents reported in this 12 month time period.

Figure 24: **Percentage of Falls Incidents by Top Five Treating Specialty for 2014/15**



When identifying the height the patient fell, over a third of falls clinical incidents were classified as between 0.5 to 1 metre in height (n=1,947; 36.9%). With a further 1,648 (31.2%) falls incidents occurring from a standing position.

The top five most frequent activities at the time a patient fell accounted for 70.5% of falls incidents. At the time of the fall incident, 1,110 (21%) patients were walking while a further 839 (15.9%) patients were attempting to stand (see Table 16).

Table 16: **Frequency and Percentage of Top Five Falls Incidents by Activity for 2014/15**

Falls by Activity at Time of Fall	(n)	(%)
Walking	1,110	21.0
Attempting to stand	839	15.9
Toileting or attempting to toilet	750	14.2
Getting out of bed	673	12.8
Bending/leaning or reaching over	349	6.6
Total	**3,721**	**70.5**

Nearly one third of falls occurred at the bedside (n=1,701; 32.2%) with a further 970 falls incidents occurring in the bathroom (18.4%; see Table 17).

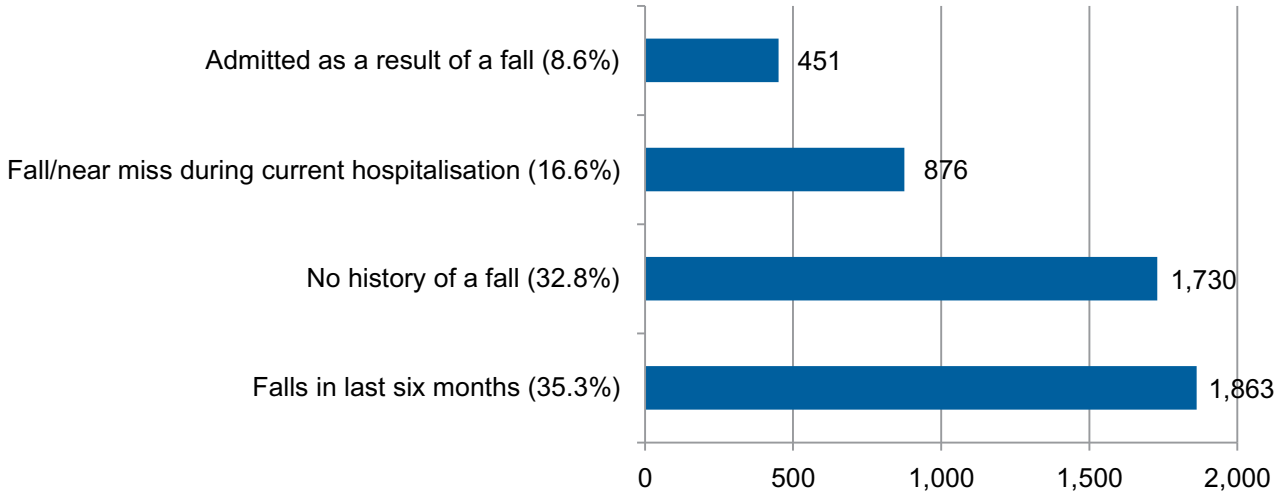
Table 17: **Frequency and Percentage of Top Five Places Where Falls Incidents Occurred for 2014/15**

Place of Fall	(n)	(%)
Bed side	1,701	32.3%
Ward	1,668	31.6%
Bathroom	970	18.4%
Dining room	161	3.1%
Grounds	112	3.1%
Total	**4,612**	**88.5%**

The outcome of a fall was poorly documented within the clinical incident management system, with 94 (1.8%) incidents resulting in a fracture, 21 incidents resulting in a subdural haematoma (0.4%) and 1,128 (21.4%) stating “other outcome”. The remainder of the falls incidents did not state an outcome.

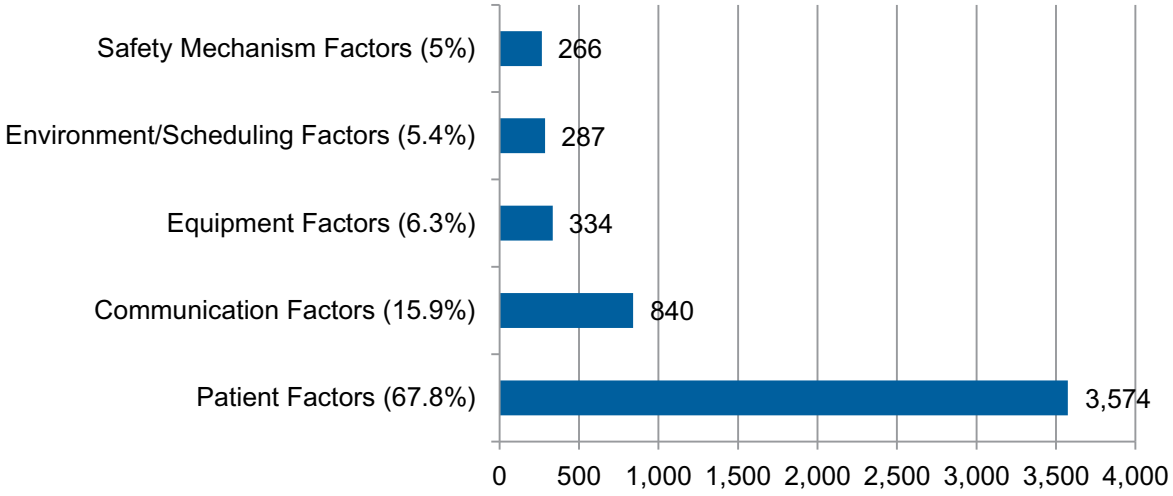
The majority of falls (n=3,486; 66.1%) were reported as having an unknown mechanism as to why the patient fell. Slips and trips where the next most frequently identified fall type and accounted for 17.6% (n=933) of all falls. Nearly ninety percent (n=4,707) of patients who sustained a fall were shown to have a falls risk assessment in place. With 1,738 (33%) of these patients having had their most recent falls risk assessment completed within the last 24 hours, followed by within the last week (n=1,575; 29.9%). The remainder (n=1,167; 22.1%) of patients had a falls risk assessment completed more than a week ago. Over a third (n=1,863; 35.3%) of patients who sustained a fall whilst in hospital had also experienced a fall within the last six months (see Figure 25). A similar proportion (n=1,730; 32.8%) of patients who fell in hospital had no previous history of a fall.

Figure 25: **Frequency and Percentage of Falls History for 2014/15**



Patient factors (n=3,574; 67.8%) were cited as the main contributory factor of falls clinical incidents followed by communication factors (n=840; 15.9%; see Figure 26).

Figure 26: **Frequency and Percentage of Top Five Contributory Factors for Falls Clinical Incidents for 2014/15**



Falls Case Study

Case

- 65 year old woman was admitted to hospital with chest pain for investigation.
- Tests were being carried out to identify the underlying reasons and including having an angiogram performed.

Incident

- The patient arrived on the ward and within 30 mins was being taken for an angiogram procedure.
- While transferring from the bed to a wheel chair fell and hit her head on the metal cabinet, before landing awkwardly on the floor.

Outcome

- The patient was given immediate treatment which included dressing her head laceration, organising a medical review and subsequent xrays.
- Results showed the patient had a skull fracture and sub dural bleeding. The patient responded well to treatment for this injury.
- An investigation showed that the patient had a history of falls but with minimal time to prepare the patient for the angiogram procedure, a full admission was not completed with no falls risk management assessment undertaken.

Fall rates in hospital rehabilitation units after individualised patient and staff education programs: A pragmatic, stepped-wedge, cluster-randomised controlled trial

Background

Falls are the most frequent adverse events that are reported in hospitals. We examined the effectiveness of individualised falls-prevention education for patients, supported by training and feedback for staff, delivered as a ward-level program.

Methods

Eight rehabilitation units in general hospitals in Western Australia (Armadale, Bentley, Fremantle, Kaleeya, Swan Districts, Royal Perth, Sir Charles Gairdner and Osborne Park hospitals) participated in this stepped-wedge, cluster-randomised study, undertaken during a 50 week period. Units were randomly assigned to intervention or control groups by use of computer-generated, random allocation sequences. We included patients admitted to the unit during the study with a Mini-Mental State Examination (MMSE) score of more than 23/30 to receive individualised education that was based on principles of changes in health behavior from a trained health professional, in addition to usual care. We provided information about patients' goals, feedback about the ward environment, and perceived barriers to engagement in falls-prevention strategies to staff who were trained to support the uptake of strategies by patients. The co-primary outcome measures were patient rate of falls per 1000 patient-days and the proportion of patients who were fallers. All analyses were by intention to treat. This trial is registered with the Australian New Zealand Clinical Trials registry, number ACTRN12612000877886.

Findings

Between Jan 13, and Dec 27, 2013, 3,606 patients were admitted to the eight units (n=1,983 control period; n=1,623 intervention period). There were fewer falls (n=196, 7·80/1000 patient-days vs n=380, 13·78/1000 patient-days, adjusted rate ratio 0·60 [robust 95% CI 0·42–0·94], p=0·003), injurious falls (n=66, 2·63/1000 patient-days vs 131, 4·75/1000 patient-days, 0·65 [robust 95% CI 0·42–0·88], p=0·006), and fallers (n=136 [8·38%] vs n=248 [12·51%] adjusted odds ratio 0·55 [robust 95% CI 0·38 to 0·81], p=0·003) in the intervention compared with the control group. There was no significant difference in length of stay (intervention median 11 days [IQR 7–19], control 10 days [6–18]).

Interpretation

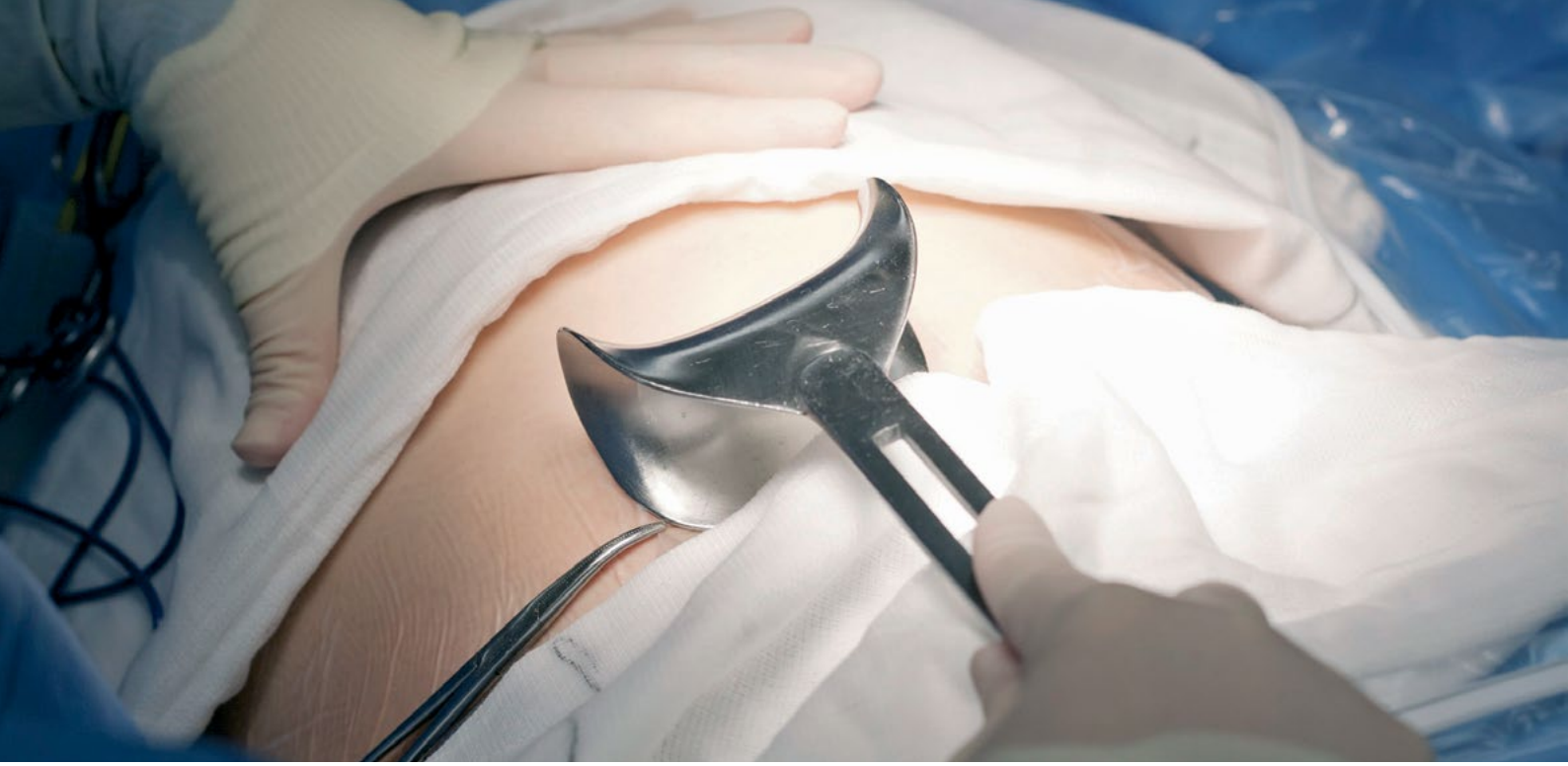
Individualised patient education programs combined with training and feedback to staff added to usual care reduces the rates of falls and injurious falls in older patients in rehabilitation hospital-units.

Funding

State Health Research Advisory Council, Department of Health, Government of Western Australia.

The full article available in the Lancet Journal.

Hill, Anne-Marie, McPhail, Steven M, Waldron, Nicholas, Etherton-Beer, Christopher, Ingram, Katharine, Flicker, Leon, Bulsara, Max, Haines, Terry P. Fall rates in hospital rehabilitation units after individualised patient and staff education programs: A pragmatic, stepped-wedge, cluster-randomised controlled trial. 2015; 385: 9987; 2592-2599.



Key Falls Incident Messages

Falls clinical incidents continue to be a common occurrence particularly for elderly patients who are admitted to hospital. Falls greatly impact on patient morbidity and mortality and often result in increased lengths of stay and greater costs to our health system. While falls incidents do occur in children and young patients, the impact of a fall being sustained by an elderly patient has far greater consequences. Falls can rob people of their confidence with regard to their mobility and can result in patients limiting their functional activity, which in turn can greatly impact on their recovery, their independence and their quality of life.

Findings revealed that the majority of falls clinical incidents reported in 2014/15 resulted in either minor or no harm to the patient (n=4,964; 82.5%). Unfortunately for this same time period, 82 patients fell and sustained serious harm, with 12 falls resulting in the death of our patient.

While interventions to reduce falls especially in the elderly are standard practice within WA Health, 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.[17]

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).[18] 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.

[17] 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 3 June 2015.
[18] Australian Commission on Safety and Quality in Health Care (September 2012), National Safety and Quality Health Service Standards, ACSQHC, Sydney.

Quality of Care

High quality health care underpins health care delivery for each and every one of our patients, regardless of whether they are receiving care at a community clinic or within a critical care setting. WA Health staff strive to provide excellent care and acknowledge openly and immediately when errors occur.

We need to focus on reducing the gap between best practice and common practice to ensure that health care delivery is constantly improving. Improvements in patient safety must also be underpinned by strong and rigorous evidence. Additionally, staff need to ensure that strategies implemented to reduce clinical incidents are continually assessed and not just implemented and forgotten. Lessons learnt need to be shared so that other areas experiencing the same types of clinical incidents can learn from your findings and do not have to "reinvent the wheel".

Pivotal to the delivery of high quality health care is the use of routine reporting mechanisms that are essential not only for the strategic planning of services and for operational decision making but also to ensure that continuous performance improvements are being measured and achieved. Currently, WA Health uses the Performance Management Framework (PMF)[19] to report on quality of service delivery and population outcomes which include financial, workforce, activity, access, quality and safety measures.

Complementing the PMF is the Quality of Care Framework (QoCF) 2013/17[20] which unlike the PMF focuses on individual health outcomes (see Table 18). The QoCF focuses on two domains:

1. Helping people to recover from episodes of ill health or injury.
2. Treating and caring for people in a safe environment and protecting them from avoidable harm.

Under each QoCF domain there is a series of clinical indicators which are used to measure appropriate patient care such as complications of care, in-hospital mortality, length of stay, readmission and complications of surgery (see Table 18).

[19] Department of Health. (2014). Annual Performance Management Framework 2014/15. Department of Health, Perth, Australia. Available from:

http://www.health.wa.gov.au/activity/docs/20140804_Performance%20Management%20Framework%202014-15_v3.0.pdf (accessed September 2014).

[20] Quality Improvement and Change Management Unit (2014), Western Australian Strategic Plan for Safety and Quality 2013–2017: Placing Patients First. Department of Health: Perth.

Table 18: **WA Health Quality of Care Framework**

Domain 1: Helping people to recover from episodes of ill health or injury	Domain 2: Treating and caring for people in a safe environment and protecting them from avoidable harm
Tier 1 • In-hospital mortality rates for acute myocardial infarction (AMI), Stroke, fractured neck of femur (FNOF), pneumonia (PMF EQ8)	**Tier 1** • Hospital Standardised Mortality Ratio (HSMR) (PMF EQ5)
Tier 2 Appropriate Care • Model of care premium payment (Stroke, AMI & FNOF) • Unplanned readmissions (PMF EQ9) (Hip replacement, Knee replacement, Hysterectomy, Prostatectomy, Cataract surgery, Adult appendectomy, Paediatric Tonsillectomy and Adenoidectomy)	**Tier 2 Complications of Care** • Health care acquired infection (SAB)* (PMF EQ3) • Complications of surgery (FNOF, Hip replacement, Knee replacement, Prostatectomy, Abdominal hysterectomy, Vaginal hysterectomy) • Complications of medical care (AMI & Stroke)
Tier 3 • VLAD in-hospital mortality (VLAD CM) • VLAD long stay (VLAD CM) • VLAD complications of surgery (VLAD CM) • VLAD readmission (VLAD CM) for AMI, Stroke, FNOF	**Tier 3** • SAC 1 Clinical Incidents (CIM Report, PSSU) • SAC 2 Clinical Incidents (CIM Report, PSSU) • SAC 3 Clinical Incidents (CIM Report, PSSU) • Health Service Complaints • CHADx data sets

*SAB refers to Staphylococcus aureus bacteraemia.

Classification of Hospital Acquired Diagnoses (CHADx)

In 2008, WA Health commenced collecting data on whether the onset of a diagnosed condition occurred during the inpatient episode. This condition onset flag (COF) code, allows the analysis of health care conditions/complications that happened during the inpatient stay. The COF codes, via the national data collection of Condition Present on Admission (CPoA) variables, have become an integral part of the CHADx system.

The CHADx system was commissioned for development at a national level through the Australian Commission on Safety and Quality in Health Care (ACSQHC), via researchers at the Australian Centre for Economic Research on Health. The CHADx system requires the capturing of CPoA variables, to identify if the condition was hospital acquired. The current CHADx version 5, comprises 17 categories and 145 subclasses of valid hospital acquired diagnosis codes. The purpose of CHADx is 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.

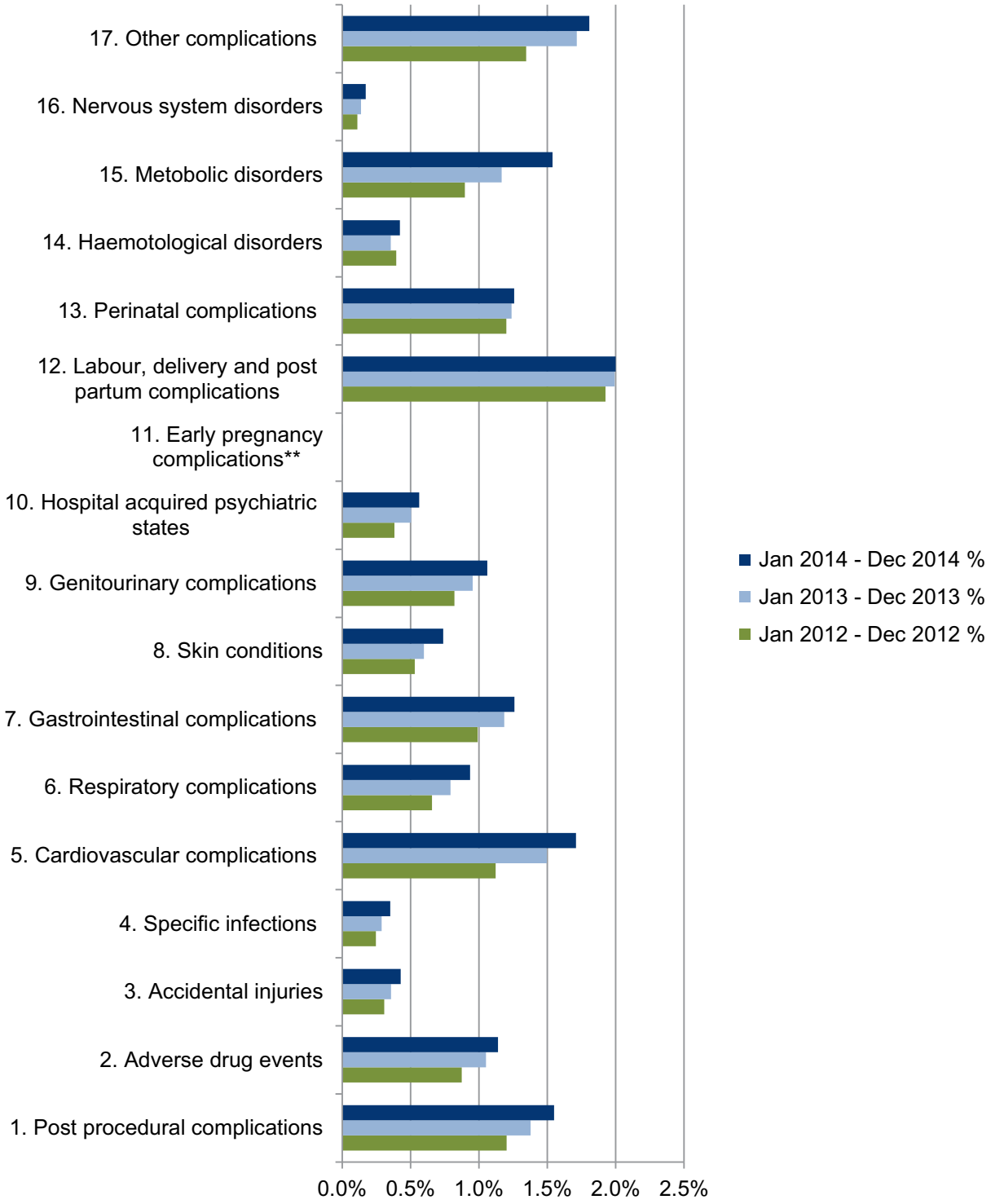
A review of 2010/11 CHADx data by Utz, Johnston and Halech (2012)[21], showed that 9% of all hospital admissions within Queensland included at least one hospital acquired illness or injury.

CHADx categories for WA Health shows that over the last three years complications were associated with 2% or less of all hospital separations (see Figure 27). Findings revealed that labour, delivery & postpartum complications continues to have the highest percentage of complications in the most recent reporting period as well as in the two previous years (see Figure 27).

Cardiovascular, post-procedural complications and metabolic disorders had the next highest levels of complications over the January to December 2014 period. In terms of trends, cardiovascular and metabolic COF codes experienced the largest percentage increases for complications when January 2014 to December 2014 was compared to the same period in the previous years (see Figure 27).

[21] Utz, M., Johnston, T., Halech, R. (2012), *A Review of the Classification of Hospital Acquired Diagnoses. Technical Report 12*, Queensland Government, Brisbane, Australia. Available from: http://www.safetyandquality.gov.au/wp-content/uploads/2013/01/A-review-of-the-Classification-of-Hospital-Acquired-Diagnoses-Utz-Johnston-and-Halech-Qld-Health-October-2012.pdf (accessed September 2014).

Figure 27: **Percentage of WA Health Hospital Separations with CHADx, by CHADx Categories and by Year**



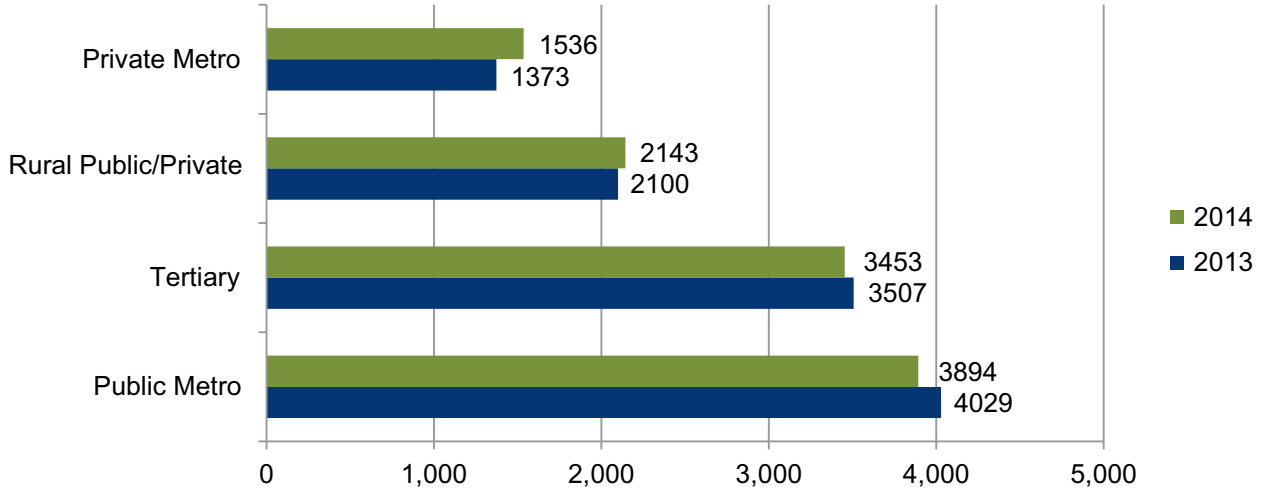
*Please note that one patient may have more than one complication.
**Early pregnancy complication data is =<16 for all three years.

CHADx Category 12: Labour, Delivery and Post-Partum Complications

Data showed that labour, delivery and post-partum CHADx codes recorded the highest frequency of complications for the last three years. This result is interesting given the disproportionate number of hospital admissions for obstetric patients compared with other specialty admissions. Explanations as to why labour, delivery and post-partum haemorrhage are so frequently presented include that the CHADx category 12 to do with labour, delivery & postpartum complications, are not necessarily complications attributable to hospital care.[20] For example, a vaginal delivery could result in a perineal laceration occurring however this laceration could have occurred regardless of the fact that the patient was in a hospital environment. Hence CHADx category 12 findings should be interpreted with caution as not all complications captured in this category can be attributed to being hospital acquired but rather are due to obstetric patients being more prone to complications such as perineal tears, post-partum haemorrhage etc.

In 2013 and 2014 there were 22,035 cases captured in the CHADx category 12. Most of the women in both 2013 (n=4,029) and 2014 (n=3,894) were found to have given birth at a public metropolitan hospital (see Figure 28).

Figure 28: **Frequency of CHADx, Category 12 Labour, Delivery & Postpartum Complications by Hospital Category and by Year**



In both 2013 (n=5,067) and 2014 (n=5,080) most women in this sample of patients were born in Australia (see Table 19). Table 19 shows the top five countries of birth for mothers in this sample, which accounted for 62.9% and 62.5% respectively.

Table 19: **The Top Five CHADx Category 12 Incidents by Country of Birth and by Year**

Country of Birth	2013		2014	
	n	%	n	%
Australia	5,067	46.0	5,080	46.1
India	638	5.8	585	5.3
New Zealand	586	5.3	580	5.3
England	400	3.6	411	3.7
Myanmar	236	2.1	239	2.2
Total	**6,927**	**62.9**	**6,895**	**62.5**

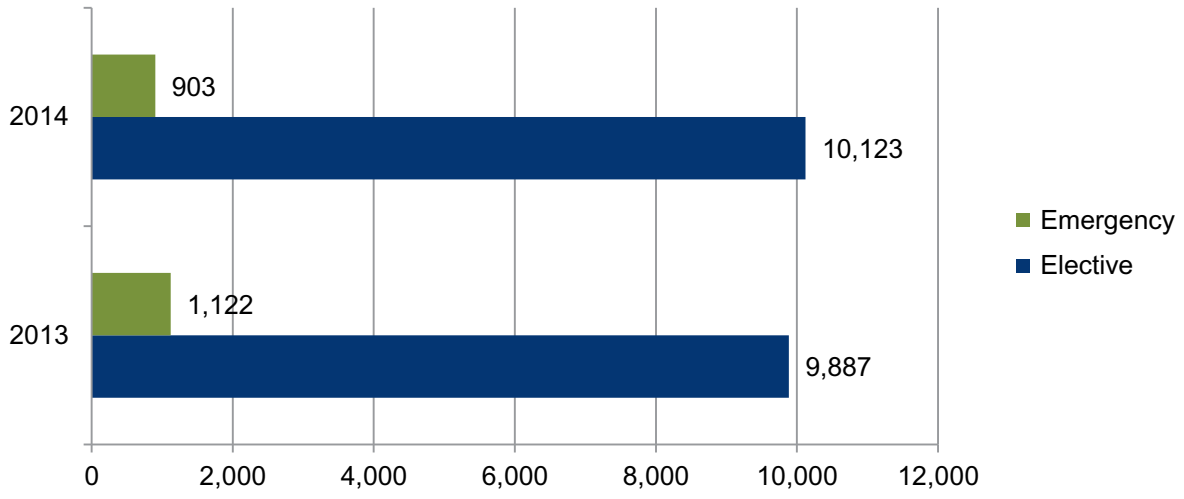
The mean age for females for both 2013 and 2014 was 28 years (SD 5.6 years; 6 years respectively). In this sample of obstetric patients, ages ranged from 13 years to 51 years (see Table 20).

Table 20: **Demographic Data of CHADx Category 12 Incidents by Year**

	2013	2014
Minimum Age (years)	13	14
Maximum Age (years)	51	51
Mean Age (years)	28.4	28.6
Standard Deviation (years)	5.6	6

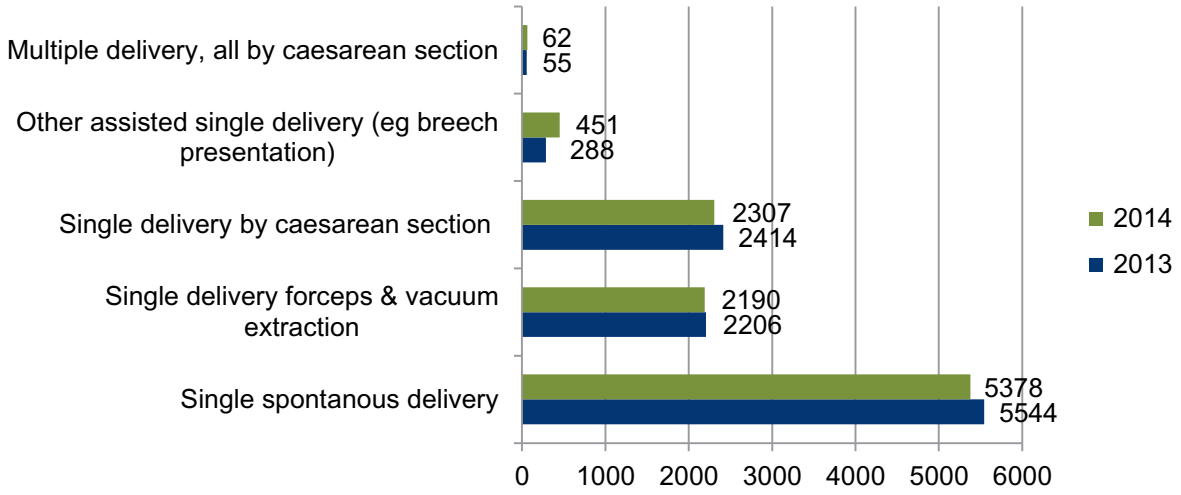
The majority of admissions for both 2013 and 2014 were identified as elective (see Figure 29).

Figure 29: **Frequency of CHADx, Category 12 Labour, Delivery & Postpartum Complications by Admission Status and by Year**



The top five most frequent CHADx labour, delivery and postpartum conditions for both 2013 and 2014 accounted for 95% (n=20,895) of Labour, Delivery & Postpartum Conditions (see Figure 30). Single spontaneous deliveries followed by single delivery caesarean sections were the most frequent conditions reported.

Figure 30: **Frequency of Top Five CHADx, Category 12 Labour, Delivery & Postpartum Conditions by Year**



Second degree perineal lacerations were the most frequent CHADx complication identified in both 2013 (n=3,679) and in 2014 (n=3,640) followed by other post-partum haemorrhage 2013 n=2,123; 2014 n=2,122; see Table 21). It should be noted that there were 52 patients who also sustained fourth degree perineal lacerations across the two years.

Table 21: **Frequency and Percentage of the Ten Most Relevant* CHADx Category 12 Complications by Year****

CHADx Category 12	2013		2014	
	n	%	n	%
Second degree perineal lacerations	3,679	32.1%	3,640	31.2%
Other post-partum haemorrhage	2,123	18.5%	2,122	18.2%
First degree perineal lacerations	1,751	15.3%	1,871	16.0%
Labour/delivery complicated by FHR anomaly	1,535	13.4%	1,783	15.3%
Labour/delivery with other fetal distress	656	5.7%	467	4.0%
Labour/delivery affected by incomplete rotation of head	510	4.4%	504	4.3%
Labour/delivery complicated by FHR anomaly and meconium	450	3.9%	467	4.0%
Labour delivery affected by shoulder dystocia	385	3.4%	390	3.3%
Third degree perineal lacerations	364	3.2%	406	3.5%
Fourth degree perineal lacerations	25	0.2%	27	0.2%
Total	**11,478**	**100.0%**	**11,677**	**100.0%**

*The ten most relevant CHADx categories based on preventability.
**Please note that one patient may have more than one complication.

In addition to this CHADx Category 12 work, as mentioned previously WA Health is also working with key stakeholders within WA and nationally to address issues with regard to SAMM. Specifically, WA Health is investigating SAMM codes within WA Health HMDC dataset to provide feedback to the ACSQHC.

Variable Life Adjusted Display (VLAD)

The adoption of Variable Life Adjusted Display Clinical Monitoring (VLAD CM) methodology by the Department of Health was an outcome of the Department's response to the Auditor General Report *First Do No Harm – Reducing Adverse Events in Public Hospitals, October 2007*.

The VLAD CM tool was launched as an enterprise-wide quality monitoring tool on the 1st July 2015. Armadale/Kelmscott Hospital, Bunbury Hospital, Fiona Stanley Hospital, Fremantle Hospital, Princess Margaret Hospital, Rockingham Hospital, Royal Perth Hospital and Sir Charles Gairdner Hospital were selected by the VLAD Steering Committee to be included in the July 2015 launch with other hospitals to follow.

The VLAD CM system is a local quality monitoring system that provides clinicians and administrators with the ability to monitor risk-adjusted patient outcomes to identify unexpected trends through the application of statistical process control charts. The statistical process control charts monitor patient outcomes and unexpected trends against the State averages at a hospital level for a range of in-hospital mortality, long stay and unplanned hospital

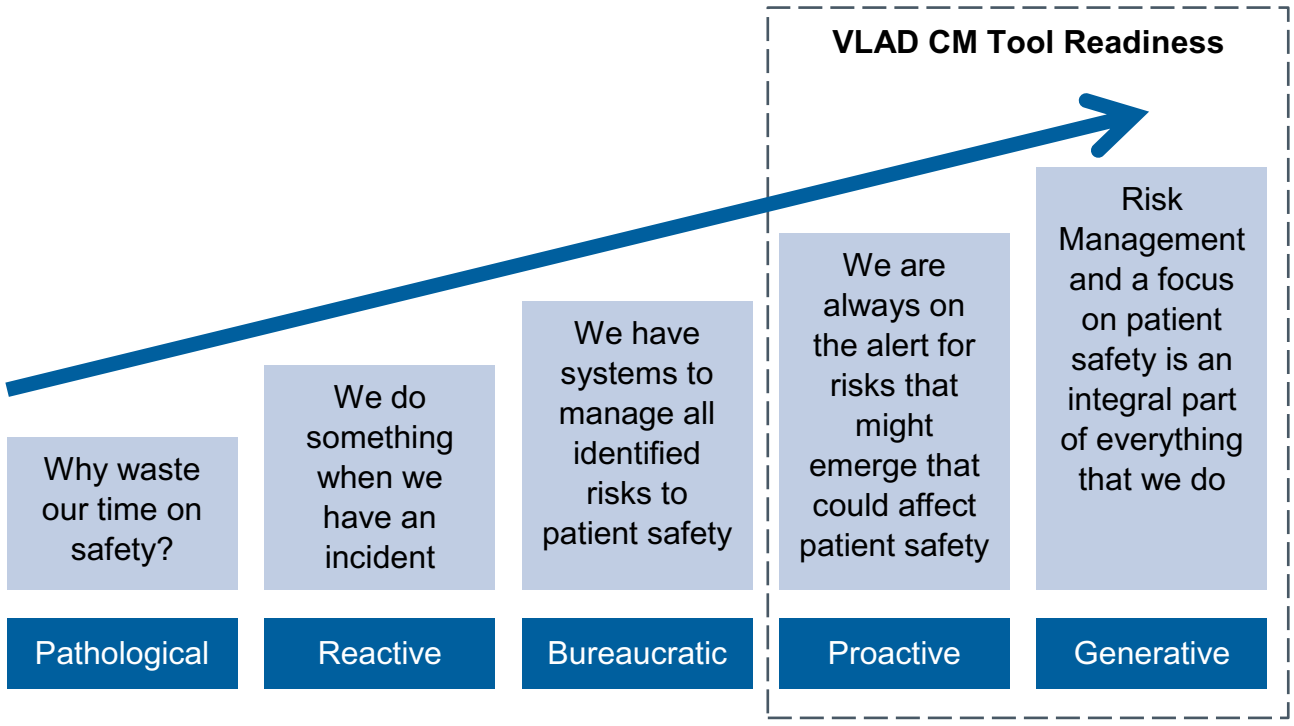
readmission indicators.[22] The VLAD CM system generates automatic flag notifications when the hospital's performance falls outside the pre-determined levels of variance from the State average for the selected indicator.

The VLAD CM system uses a Pyramid Model of Investigation that commences with a data/ clinical coding review and progresses to a clinical review of the patient records. The control charts provide drill-down features to the individual patient record level so that flagged variances between expected and actual patient outcomes to the State average can be investigated.

The WA Health Strategic Plan for Safety and Quality in Health Care 2013–2017 provides an overview of the Manchester Patient Safety Framework. The framework is an example of a Capability Maturity Model that is applied to health care. The framework aims to assist organisations in assessing the maturity of their patient safety culture.

A hospital or health service needs to reach the proactive and generative stages within the Capability Maturity Model before they are ready to adopt and fully benefit from the VLAD CM tool (see Figure 31).

Figure 31: **Five Levels of Maturity with Respect to Patient Safety Culture and the VLAD CM Tool Readiness**



Based on the Manchester Patient Safety Framework (2006).

The VLAD CM tool allows pro-active sites that are always on the alert for emerging risks to better understand issues that may affect patient safety.

[22] In hospital mortality indicators due to acute myocardial infarction, fractured neck of femur, and pneumonia are reported monthly. In hospital mortality indicator due to stroke, long stay indicators for hip replacement, knee replacement and acute myocardial infarction, and unplanned readmission indicators due to hip replacement, knee replacement, prostatectomy, hysterectomy, tonsillectomy and appendectomy are reported quarterly.

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 22 provides a summary of WA Health activity and response to coronial recommendations for the last three years. Where coronial recommendations propose more than one strategy for improvement, they have been recorded as separate recommendations. Recommendations are not considered completed until they have been implemented in **all** applicable HS (ongoing recommendations may be partially implemented).

Table 22: **Overview of Coronial Liaison Unit Activity (2012 to 2015)**

	2012/13	2013/14	2014/15
Total number of health related coronial inquest findings received by CLU	12	27	16
Total number of health related recommendations (including mental health)[23]	23	17	9
Number of general health related recommendations	20	15	8
Number of general health related recommendations completed/closed[24]	20	14	0
Number of mental health related recommendations	3	2	1
Number of mental health related recommendations completed/closed	3	2	1

The Coronial Review Committee was established in January 2014. This Committee operates closely with the Coronial Liaison Unit and provides a mechanism for recommendations to be considered in a collaborative manner with key stakeholders across WA Health. The Committee exists to improve the governance and decision-making in relation to the state-wide implementation and response to coronial recommendations.

[23] 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).
[24] Status as at most recent report to the State Coroner (August 2015).

The following synopses are provided for coronial inquests where recommendations have implications for WA Health and where findings have been released between July 2014 and June 2015. All HS are encouraged to use these summaries to raise awareness of important messages to facilitate continuous quality improvement. All inquests summarised here can be accessed at: http://intranet.health.wa.gov.au/osqh/inquest_findings/ (access to WA Health intranet required) or at the Office of the State Coroner's website: http://www.coronerscourt.wa.gov.au/I/inquest_findings_2015.aspx?uid=2027-0083-2664-6085

Mr B (July 2014)

Mr B was a 61-year-old Aboriginal man who was admitted to a country hospital with head injuries and comorbidities of liver cirrhosis, portal hypertension and varices. He was transferred to and treated at a regional hospital. Approximately two weeks following admission Mr B left the hospital prior to discharge and he was found deceased almost a month later. Mr B was reported to have been seen after he left the hospital in different clothing.

The coroner found that the death most likely occurred within a period of days of Mr B leaving the hospital but cause of death was unascertainable and she made an open finding. The coroner made no recommendations but said that it would seem prudent for WACHS to consider a standardised procedure regarding missing patients in a similar manner to the WACHS DAMA policy. WACHS have released the *Missing or suspected missing inpatient procedure*.

Mr W (July 2014)

Mr W had a background of metastatic lung cancer for which he was receiving palliative chemotherapy, and severe COPD which required ongoing supplemental oxygen. He was taken to hospital by ambulance with an acute episode of respiratory distress. He had a cardiorespiratory arrest and resuscitation was ceased once a 'not for resuscitation' order was identified. His condition did not improve and he died from pneumonia. No recommendations were made.

Ms D (July 2014)

Ms D was an 83-year-old woman who was admitted to an aged care facility for respite care and soon afterward suffered three falls. Medical examination revealed findings consistent with a hip fracture and she was transferred to a regional hospital where this was confirmed. Following surgery Ms D developed pneumonia and suffered a cardiac arrest nine days afterward. Resuscitation was not successful. It became apparent that several aspects of the care administered by the aged care facility did not meet the minimum standards and was not in keeping with policies. The coroner noted that the aged care facility had taken steps to improve their systems and educate staff and did not make any recommendations. The manner of death was by way of accident (fall).

Mrs H (October 2014)

Mrs H was a 62-year-old woman who had required ongoing psychiatric care and intermittent inpatient admissions since being diagnosed with schizophrenia in her early thirties. After being admitted to hospital involuntarily under the *Mental Health Act*, she refused to cooperate with a physical examination; as she did not have any existing physical complaints, the decision was made to wait until she was settled and more cooperative. She was later observed to be drinking large volumes of water and vomited several times. She later slept and appeared settled but was later found collapsed and unresponsive; resuscitation was unsuccessful.

Blood test results later identified a critically low sodium level. This was likely due to the large volume water ingestion in combination with escitalopram use. From post mortem, the overall impression was that Mrs H died as a result of hyponatraemia, which most likely caused a seizure during which she aspirated.

The coroner recommended that there needed to be an elevated awareness of the need to monitor sodium levels for patients being treated with SSRI medications, particularly those identified as more susceptible (female, elderly and other comorbidities affecting kidney function).

Miss S (October 2014)

Miss S was a 10-year-old girl who had been diagnosed with metastatic hepatoblastoma after experiencing right shoulder tip pain. The oncologist's recommendation was that Miss S required chemotherapy to treat the cancer and that without it she would die. Miss S's parents decided that she should be treated with natural therapies. The Minister for Health commenced legal action to secure orders for Miss S to proceed with chemotherapy. The day before the hearing, Miss S departed Australia for El Salvador with her mother.

Prior to flying the family sought advice from a GP to ascertain whether Miss S was fit to fly and to whether that course was in Miss S's best interests. The GP completed a fitness to fly certificate and provided encouragement to Miss S's parents that the tumour was not progressing based on a size comparison of ultrasound versus CT reports and blood tumour marker levels. This was not supported by evidence given by an independent oncologist at the inquest and the coroner did not hold that there was any basis for this encouragement. Miss S continued to deteriorate in El Salvador and died approximately 2.5 months after arriving. The coroner did not make any recommendations.

BC (December 2014)

BC was a five-month-old infant who had come to the attention of the Department for Child Protection and Family Services; however, was not under their care. BC presented with a fever to a remote hospital, and was transferred to the paediatric hospital in Perth. He had a febrile illness with multiple splenic lesions/abscesses treated with IV antibiotics. A cause for this was not found and his splenomegaly had not resolved on discharge. A follow up appointment was made to investigate this once the antibiotics were completed. However, a number of communication failures contributed to no follow-up appointment taking place and no receipt of, or delayed access to, the discharge summary for other services.

It was discovered BC also had splenic torsion which had caused complete infarction of his spleen and so detrimentally affected his immune ability. The coroner found that BC died as a result of acute meningitis. The coroner made five recommendations in relation to the ongoing resourcing of ambulatory care outreach programs; follow-up processes being included in birth planning with support for nominated GPs; implementation of clinical information sharing systems; and, the systematic sharing of information between agencies for children at risk or requiring assistance but not in care.

Ms Z (January 2015)

Ms Z was a young and physically fit woman with no known medical health problems; her only medication was the contraceptive pill. Approximately two to three months before her death Ms Z visited her GP on two occasions complaining of a headache; feeling faint, tired and dizzy; and a decline in her capacity to exercise. She appeared to have recovered the following month; however later presented to a hospital ED with left side chest pain. It was thought that the pain was musculoskeletal in origin and she was discharged. Record-keeping was identified as a deficiency as ECG readings were missing or not adequately signed or dated. It was therefore difficult to get a clear picture of the assessment.

After another visit to a GP, she was referred to a cardiologist for assessment. After reviewing her echocardiogram the cardiologist communicated her concerns to the GP. Unfortunately, these concerns were not communicated with Ms Z. She became acutely unwell and collapsed on the way to the ED. A pulmonary angiogram showed a massive pulmonary embolism and CT head scans showed severe diffuse hypoxic brain injury. Brain stem testing confirmed brain death.

The coroner made one recommendation for general practitioners to ensure that patients being prescribed the oral contraceptive pill are aware of the importance of declaring it when asked about any medications being taken.

Ms D (February 2015)

Ms D was a 58-year-old woman who had been diagnosed early in childhood with autism and severe mental retardation; she was a long-term voluntary patient. Severe communication difficulties and a range of behaviours made caring for her difficult. She was withdrawn most of the time, but became aggressive and agitated at times. She was aggressively resistant to staff, and on the few occasions she was cared for at SCGH she required sedation or general anaesthesia to facilitate assessment and examination. She collapsed and suffered a cardiac arrest following such a period of agitation when staff were attempting to assess a chest infection; resuscitation was unsuccessful. A head CT scan confirmed hypoxic brain injury and the Public Advocate agreed to withdraw life support. The coroner commented that her care had been managed well despite challenging behaviours and found that death was as a result of natural causes. No recommendations were made.

Mr K (February 2015)

Mr K was a 49-year-old man with a history of anxiety and depression. His wife detected symptoms and changes in mood similar to those displayed leading up to a previous suicide attempt 10 years earlier. When he disclosed suicidal thoughts to his GP, he was referred to a tertiary ED for psychiatric review. After being discharged he was reviewed by a transition program where he stated that the stressors and suicidal thoughts had alleviated. He returned to work however, was sent home until he had medical clearance to return. Unfortunately, his wife later returned to their home to find Mr K unresponsive in his car with the car running and fumes in and around the car. Paramedics were called and attended promptly however, there were no signs of life and he was declared life extinct.

In light of expert opinion, the coroner concluded that timely, suitable and thorough assessments had been made, and that the plans made were appropriate and safe. Nevertheless, comments were made regarding improvements to the assessment of patients and changes to discharge procedures in the ED. The coroner was satisfied that bed availability was not a factor in the decision to discharge Mr K from hospital. No recommendations were made by the coroner.

Ms M (February 2015)

Ms M was a 68-year-old woman who had previously undergone aortic valve replacement following infective endocarditis of a stenotic bicuspid aortic valve, contracted after a dental procedure undertaken without antibiotic cover. She was later diagnosed with atrial fibrillation and commenced lifelong anticoagulation. Approximately one decade following this diagnosis she sought dental treatment and was advised she required extractions with antibiotic cover and therapeutic warfarin levels. Two days following the extractions, she was found deceased at her home with blood evident in the bathroom. It was determined at inquest that ongoing bleeding from the tooth sockets was the likely cause of death.

The coroner noted that the treatment and advice for follow-up care was not in line with professional guidelines for the management of patients taking warfarin who require minor oral surgery. The coroner also stressed the importance of providing written post-operative instructions for follow-up care.

Mr T (February 2015)

Mr T was a young boy of two years and nine months when he died. In the eight days leading to his death he presented to the hospital ED twice and was seen by his GP on two separate occasions. As his illness progressed, he suffered from an ongoing fever with lethargy, vomiting, diarrhoea, rash, cough, dry cracked lips, conjunctivitis, loss of appetite; and, swelling of his face, feet and ankles. Doctors assured his parents that he was not seriously unwell and would recover. His parents reported that they felt they were repeatedly discouraged from seeking further review. His parents found him unresponsive in bed and he was taken to the hospital ED. Resuscitation was unsuccessful.

The coroner found that death was as a result myocarditis (induced by Kawasaki's Disease). It was acknowledged that Kawasaki's Disease is difficult to diagnose as it is based on clinical criteria rather than biological markers. It was impossible to say whether admission would have changed the outcome. Whilst the Coroner made no recommendations, she highlighted the importance of elevating suspicion of Kawasaki Disease in paediatric EDs; of encouraging re-presentation of the sick child; and provision of clear discharge letters and advice to carers.

Ms T (May 2015)

Ms T was a 21-year-old woman who died in a tertiary hospital following transfer from a small remote hospital where she'd been an inpatient for several days. Ms T initially presented to the town's GP with cold-like symptoms and after examination she was sent to the hospital for admission. The diagnosis was gastroenteritis with treatment focusing on hydration. Bloods were taken on the first and second day; however, results were not available until late the second evening. A high temperature and low systolic reading, both warranting medical review, were not escalated to the GP. She deteriorated further the following day and arrangements were made to transfer her to Perth. Ms T was admitted to ICU with a diagnosis of septic shock with multi-organ failure. Despite intensive treatment she died.

The coroner made three recommendations about considering limitations on remote medicine when assessing patients and the threshold for the administration of antibiotics; education and audits relating to the use of the Adult Observation and Response Chart; and, provision of flow charts summarising guidelines and procedures for the successful collection of bloods in rural and remote health services.

Mr L (August 2015)

Mr L was an Indonesian national who had been visiting his daughter when he visited a local doctor for what he understood was rheumatoid arthritis. The doctor prescribed the medication methotrexate at an incorrect dosage. The pharmacist detected the error but dispensed it after informing Mr L of the usual dosage. After suffering ill effects, he returned to the doctor who diagnosed a urinary tract infection. When symptoms persisted he was admitted to hospital and treated for methotrexate poisoning and septicaemia and transferred to a metropolitan tertiary hospital. Cause of death was multiple organ failure. The coroner made an open finding as he was not able to sufficiently determine whether methotrexate prescription caused the death. No recommendations were made.

Homebirth Cases (June 2015)

The following three cases were considered together in a joint inquest; the coroner stated that “all three deaths involved babies born at home in circumstances that were contrary to recognised standards and guidelines for home births in Australia”.

Baby B

The birth of Baby B was classified as high risk by the obstetrician due to the unexplained perinatal asphyxia of his mother’s first child; the obstetrician therefore advised against home birth. However, inadequate communication between the Community Midwifery Program midwives and the obstetrician contributed to the birth eventually taking place at home. Baby B was floppy and not breathing at birth and he was transferred by ambulance to hospital. He was successfully resuscitated; though a diagnosis of hypoxic ischaemic encephalopathy was made with poor prognosis. He died nine days following his birth.

The coroner made one recommendation relating to the improvement of the accessibility of obstetric review notes in the pregnancy record. The recommendation also required that the birth plan, and the obstetrician who approved it, be recorded on the Community Midwifery Program Discharge Form along with an indication of whether the birth plan should be reconsidered if issues are later identified.

Baby C

Due to an unsatisfactory experience with her first pregnancy and subsequently experiencing post-natal depression, Baby C’s mother developed a fear of hospitals and medical interventions and decided on an independent midwife and home birth for the birth of Baby C. At birth there was a meconium stained liquor. The placenta, delivered half-an-hour later, was reported as having a bad odour. Approximately one hour post-delivery Baby C became floppy and he was driven the short distance to the hospital ED. Baby C could not be resuscitated and was pronounced dead.

The coroner did not make any recommendations but agreed with expert evidence that better communication between health professionals and the patient, with the wellbeing of the patient the primary focus, was the key to avoiding similar outcomes.

Baby P

After it was confirmed that Baby P's mother was expecting twins, the pregnancy was no longer accepted as low risk and did not fit the eligibility criteria for care under the Community Midwifery Program. Baby P's mother communicated that she planned to pursue homebirth with an independent midwife. A shared care model was agreed to by obstetrics to allow continuity of care but this was on the understanding that a hospital birth was advised. Birthing and delivery options were discussed but at about 37 weeks Baby P's mother withdrew from the program and she later informed the hospital that she had found new caregivers.

A 'birth advocate', a midwife and a doula attended the birth. The birth advocate, no longer holding registration as a midwife, acted as the primary caregiver. The second twin was born approximately 38 minutes after the first twin and after the placenta, and was floppy and not breathing. Resuscitation at the home and hospital was unsuccessful. The cause of death was intrapartum hypoxia due to placental abruption.

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 2014, 89.3% of hospital deaths were reviewed within four months of the date of death (Table 23).

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 2014/15 period 47 notifications of clinical incidents were reported as originating from a mortality review process (13.1%). This is the first 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 23: **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 1/1/2014 and 31/12/2014)	89.3%

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 confirmation of a 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)[25] 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.[26]

Surgeons are asked to complete a form about a death, and are asked to identify when there has been an area for consideration,[27] an area of concern[28] 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 2014, 578 deaths were notified from 29 hospitals. Nine per cent (n=52) of completed cases were referred for second-line assessment (of the 561 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 Annual Report 2015[29], identified two adverse events that caused death in 2013 (neither of these were considered preventable) and two adverse events that caused death in 2014[30] (neither were considered preventable; see Table 24).

[25] http://www.surgeons.org/for-health-professionals/audits-and-surgical-research/anzasm/
[26] Royal Australasian College of Surgeons (2013) WA Audit of Surgical Mortality (WAASM) Annual Report 2013.
[27] Area of consideration = clinician believes an area of care could have been improved.
[28] Area of concern = clinician believes an area of care should have been better.
[29] Please note that WAASM data are captured by calendar year and the 2015 report presents audit undertaken in 2014.
[30] Partial analysis – 2014 data includes that for which the audit process was complete at March 1, 2015.

Table 24: **Frequency and Percentage of Adverse Events Causing Death that were Considered Definitely Preventable (2004 to 2014)***

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
3	7	2	4	3	4	1	4	1	0	0
<1%	1.3%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	0%	0%

*Includes cases complete as at March 31, 2015. Terminal cases are excluded.

In 2014, two primary adverse events causing death were identified, including injury to the small bowel during a laparoscopic operation and injury caused by fall in hospital (see Table 25).

Table 25: **Frequency of Adverse Events Causing Death for 2012 to 2014 (Including Events that were Considered Not Preventable)***

Adverse Event	2012	2013	2014
Arterial or venous complication	1	-	-
Secondary haemorrhage	-	-	1
Heart complication of open surgery	-	-	1
Arterial complication of open surgery	-	-	1
Intra- or post-operative bleeding during or following open surgery	2	-	-
Injury to small bowel during laparoscopic operation	-	-	1
Failure to recognise severity of illness	-	1	-
Injury caused by fall in hospital	1	-	1
Total	**4**	**1**	**5**

*2014 data includes those cases that were complete at March 1, 2015. Multiple adverse events can be recorded for each death.

A total of 111 primary adverse events were identified during the period 2004-2014. The most frequently reported adverse events by surgeon assessors over the audit period of 2004 to 2014 were: complications of surgery (n=22); bleeding associated with operation (n=12); pulmonary embolus (n=11); and, infection (including septicaemia; n=11; see Table 26).

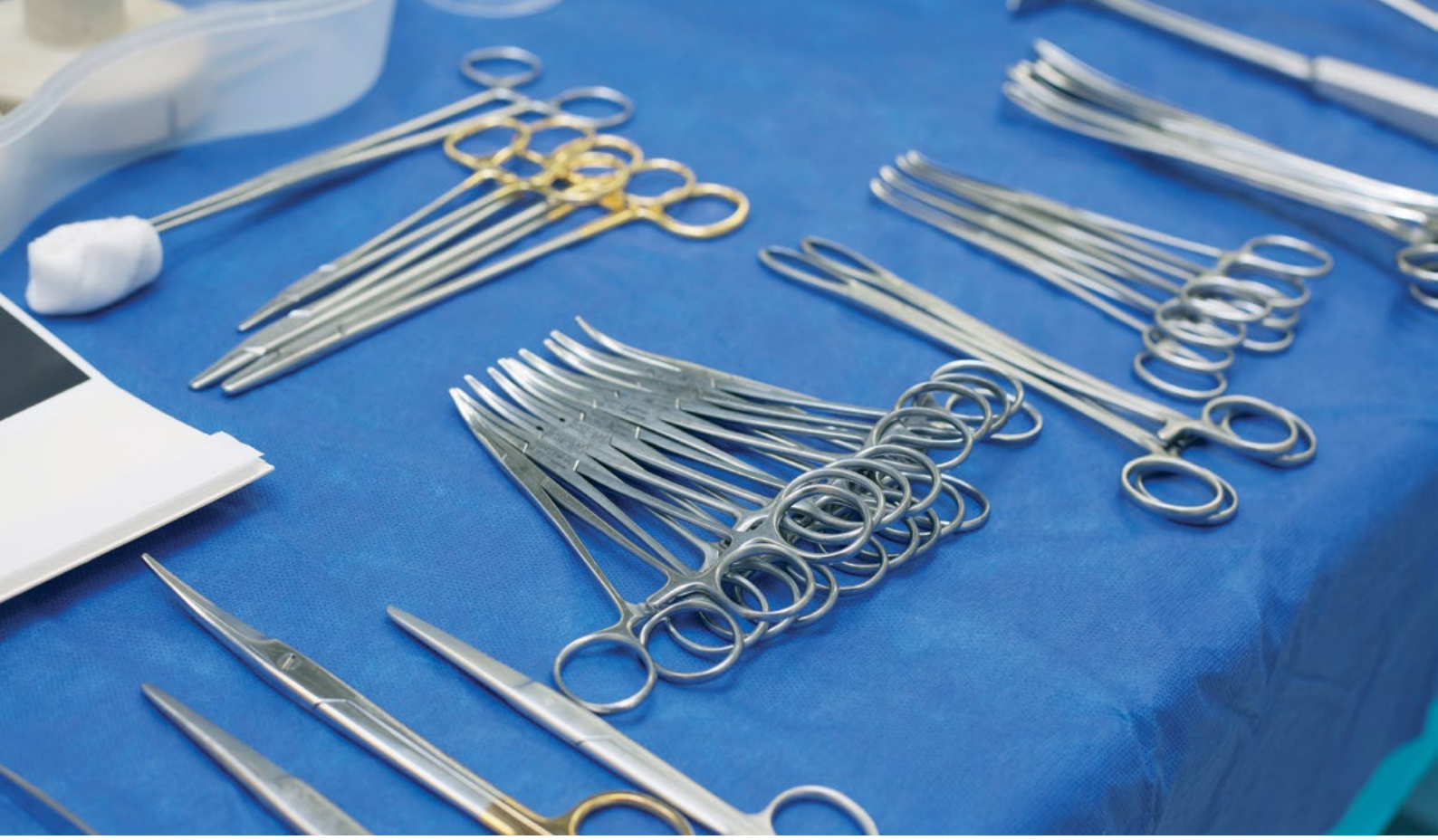


Table 26: **Most Frequently Reported Adverse Events Causing Death 2004 to 2014 (Including Events that were Considered Not Preventable)***

Adverse Event	2004-2014
Complication of surgery	22
Bleeding associated with operation	12
Pulmonary embolus	11
Infection (including septicaemia)	11
Anastomotic leak	10
Injury caused by fall in hospital	9
Related to DVT or CVT	8
Total	**83**

*Note: 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/

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/osqh/reports/ (access is restricted to WA Health staff).

Complaints Review

Consumer feedback about health care enables health services to be responsive to consumer concerns and experiences by placing their feedback at the centre of safety and quality initiatives. This concept of patient centred care is the focus of Standard 2: Partnering with Consumers of the NSQHS which encourages engaging with consumers at all points of the health care cycle.

With the introduction of Datix CFM, WA Health has the opportunity to improve the consistency, completeness and quality of complaints data collected, including data reported under section 75 of the Health and Disability Services (Complaints) Act 1995. By standardising database content and entry across all health services, WA Health is better equipped to identify and address system-wide issues and improve services provided to consumers. The system allows for greater facilitation of complaint management within the health service leading to timely and thorough complaint management processes. Additionally the system enables consumer complaints to be linked with clinical incidents, further contributing to consumer input in improvements in safety and quality of health care throughout the WA Health system.

While complaints data is an important aspect of the quality improvement cycle, it is necessary to point out that not all complaint categories are relevant to the examination of a clinical incident. From those categories defined in the WA Complaints Management Policy, this review will only focus on complaints that have identified ‘Quality of Clinical Care’ issues. However, these complaints should not be interpreted as an indication that a clinical incident has indeed occurred.

Quality of Clinical Care

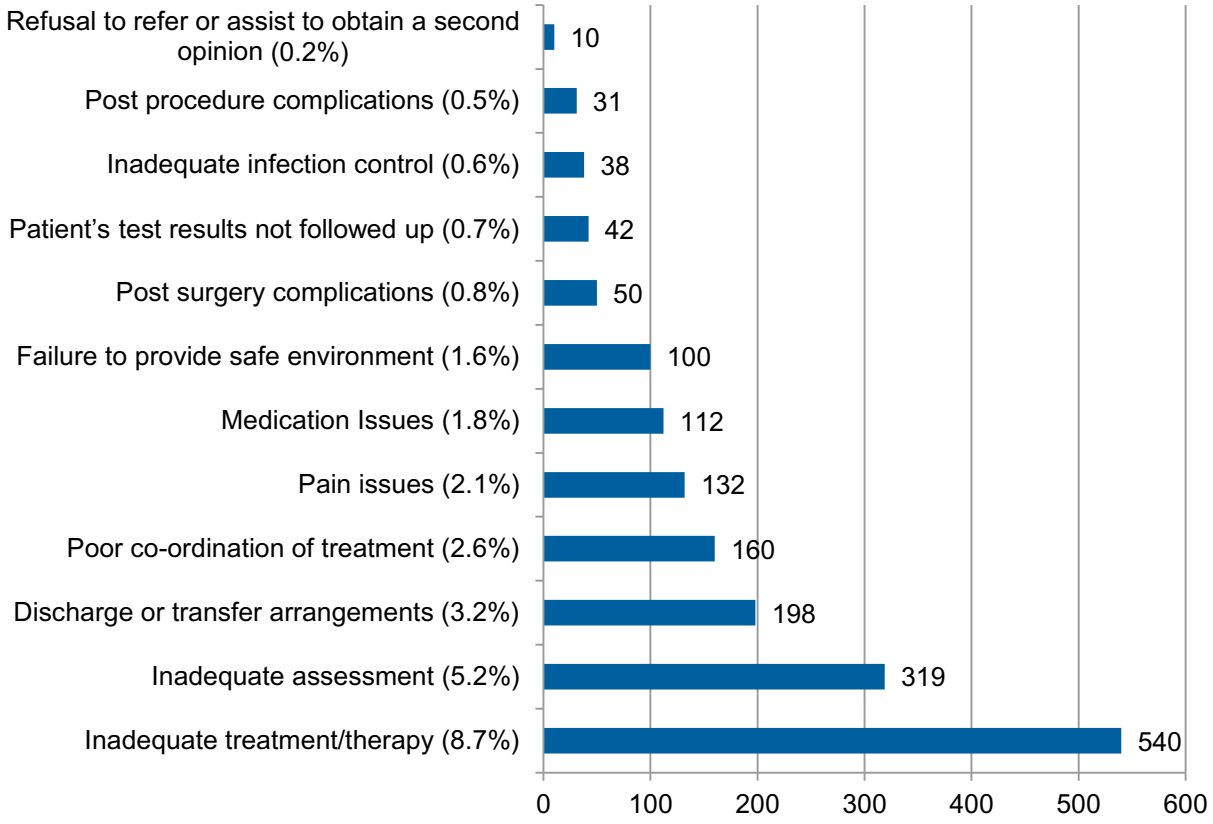
A total of 1,936 complaint issues assigned to the category ‘Quality of Clinical Care’ were reported by consumers throughout 2014/15, which constituted 28.2% of the total 6,874 complaint issues.

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. All remaining complaints, not specifically lodged against mental health related health care, are considered as general health complaints.

General Health Complaint Issues relating to Quality of Clinical Care

Accounting for 28.1% of the total 6,174 general health complaint issues, 1,732 issues concerning quality of clinical care were reported. These issues related most frequently to: inadequate treatment or therapy (n=540; 8.7%), inadequate assessment (n=319; 5.2%) and discharge or transfer arrangements (n=198; 3.2%; see Figure 32).

Figure 32: **Frequency and Percentage of General Health Complaint Issues Relating to 'Quality of Clinical Care' (2014/15)***

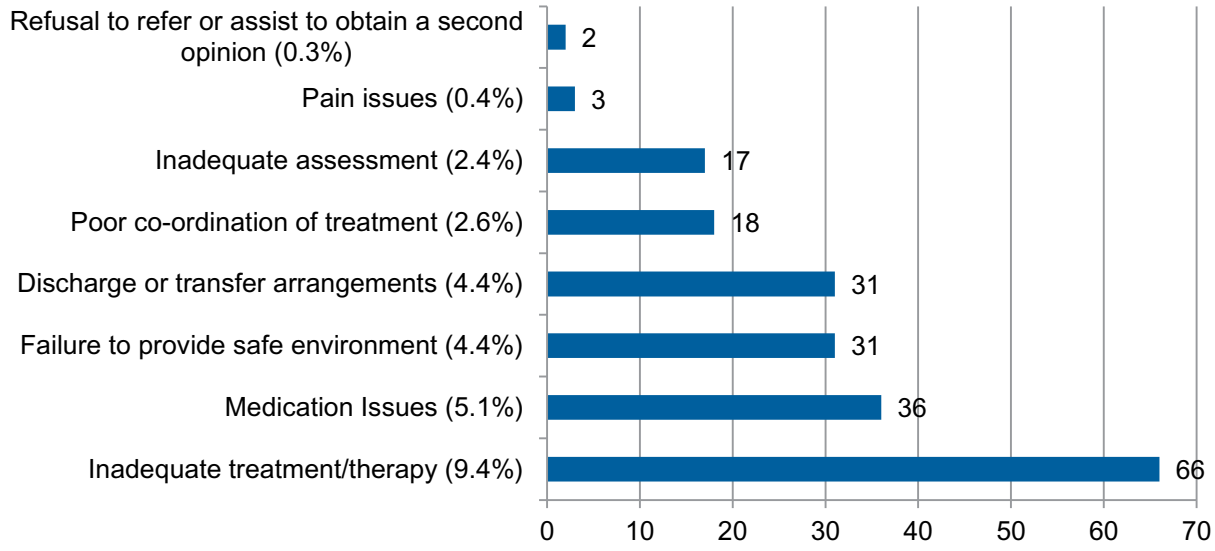


*Percentages relate to total general health complaint issues.

Mental Health Complaint Issues Relating to Quality of Clinical Care

In relation to mental health complaints, a total of 204 quality of clinical care issues were notified, which constituted 29.1% of the total 700 mental health complaint issues. For the 'Quality of Clinical Care' category, most frequently raised issues related to inadequate treatment or therapy (n=66; 9.4%), medication issues (n=36; 5.1%) and discharge or transfer arrangements and failure to provide safe environment (for both, n=31; 4.4%; see Figure 33).

Figure 33: **Frequency and Percentage of Mental Health Complaint Issues Relating to 'Quality of Clinical Care' (2014/15)***



*Percentages related to total mental health complaint issues.

Key Messages for 'Quality of Clinical Care' Complaint Issues

For both general health and mental health complaint issues, 'inadequate treatment and/or therapy' was the most frequently reported complaint issue. It draws attention to consumers' experience of treatment that is inadequate, negligent, incorrect, delayed or rough; or, of a perceived failure in the duty of care. Involving consumers in the health care improvement cycle by instigating quality improvement initiatives to address these quality of clinical care concerns can not only improve consumer satisfaction but also reduce the risk of similar and potentially harmful events reoccurring.

Current Achievements

Addressing patient safety within a demanding and dynamic health care system requires multifactorial responses if improvements are to be made. Innovation is a key component in achieving high patient safety standards as it ensures that the very safety systems we use to deliver high quality health care are constantly challenged and thereby enhanced. When we harm our patients we must not only learn from our mistakes, we must ensure that we can prevent them from reoccurring and share our successes.

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 2014/2015 (1.2%).
2. While SAC 1 clinical incidents comprise only a small proportion of clinical incidents, across the health system, there has been a consistent increase in the number of SAC clinical incidents notified in the past four years. This increase is seen as an achievement stemming from a maturing workforce that integrates patient safety into high quality health care delivery.
3. The release of two iterations of the CIM Policy (2014/2015) has been undertaken to address major reporting changes required at both a State and National level. The refinement of the CIM Policy has assisted WA Health staff to better understand the types of clinical incidents resulting in serious harm or death that require rigorous clinical investigation and reporting at a State and National level.

   Specifically, the A/Director General directed that SAC 1 clinical incident reporting times be reduced from 45 to 28 working days to ensure that clinical incidents investigations resulting in serious harm or death were completed more quickly and that all improvement recommendations were implemented and evaluated within six months rather than one year. This required PSSU to update and release a state-wide CIM Policy in October 2014 while a national sentinel event definition change also required further changes, with an updated CIM Policy released in June 2015.
4. WA Health released a state-wide electronic clinical incident management system known as Datix CIMS. This online notification, investigation and management system is used both nationally and internationally to assist in the management of clinical incidents to improve health care delivery. The new Datix CIMS is further advancing the extensive work currently being achieved in the area of patient safety with an increase observed in clinical incident reporting.
5. The release of an updated CIM Toolkit (2015) was completed to address major reporting changes required at both a State and National level.
6. As key stakeholders Safety and Quality staff continue to work closely with the HIN Support team to assist in the ongoing refinement of the successful implementation of the web based Datix CIMS.
7. Members of the Clinical Incident Management System Business Advisory Group (CIMS BAG) have been instrumental in advising and guiding the implementation of Datix CIMS. This includes the development and refinement of resources to educate and assist staff in utilising the new system to revising and refining the configuration of the Datix CIMS database.

8. CIMS BAG has:
   - Undertaken Datix CIMS state-wide Data Quality Audits to assess clinical incident data quality and to identify areas that require further education/training or system enhancements.
   - Worked closely with HIN 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, and continues to do so.
   - Reviewed and refined the Service Plan Agreement for CIMS Support 2014/15 which was subsequently approved.
   - Worked closely with HIN Support to undertake the decommissioning of the AIMS which was successfully decommissioned in August 2014.
   - Undertaken a Reporting Workshop in September 2014 with HS representation to refine and improve the reporting capabilities within Datix CIMS. As mentioned above the reports suite within in Datix CIMS has been revised to better address business requirements.
   - Worked closely with the Office of the Chief Psychiatrist to address the increased monitoring and reporting requirements set out in the Mental Health Bill 2013 through the utilisation and modification of Datix CIMS.
   - In consultation with the OCP, also streamlined the duplication of notification and reporting processes for HS staff, with regard to mental health incidents.
   - Implemented the A/Director General's operational directive that the reporting requirements for SAC 1 clinical incidents be revised from 45 works days to 28 working days. This policy refinement has required that CIMSBAG work to ensure that business processes at the Health Service Level are updated so that this directive could be implemented.
   - Arranged for the devolvement of local administrator access for the updating of user profiles and worked with CIMS Support to implement this change.
9. Four 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.
10. 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 2014/15, the following state-wide Clinical Incident Check Up Reports have been released:
    - Consumer Consent
    - Blood/Plasma Products
    - Top Medication Incidents Types
    - Clinical Deterioration Incidents.
11. Two state-wide CIM Focus Reports have been produced over the last 12 months. These reports were requested by WA Health staff and addressed ad hoc clinical incident issues on medication prescribing issues and Datix CIMS user guide utilisation.

12. WA Health released the state-wide Datix Consumer Feedback Module (CFM) in December 2014 with full business utilisation from 1 January 2015. For the first time WA Health has a standard complaint management system offering benefits in terms of data collection and analysis functionality. This system will greatly improve WA Health's capacity to meet statutory reporting obligations under the *Health and Disability Services (Complaints) Act 1995 and accompanying Regulations 2010*.
13. To facilitate the implementation of the Datix CFM, a User Guide was released. This guide was written to assist with HS ongoing implementation of the CFM. Furthermore, the CFMBAG was established in June 2015 and comprises membership from each of the HS and PSSU. This group will provide ongoing advice and support the use of the CFM and related business processes and, contribute to the ongoing development and configuration of the CFM to meet the business needs of WA Health.
14. Due to the shared functionality across both the Datix CFM and Datix CIMS, the State Datix Committee (SDC) was established in May 2015. The SDC provides strategic direction and oversight for both the CIMSBAG and CFMBAG subcommittees.
15. The WA Health Complaint Management Policy and Toolkit were updated and released in February 2015 to reflect the implementation of the Datix CFM. The revised policy provides guidance about the Severity Assessment Matrix (SAM) which has been introduced to assist in the evaluation of risk associated with complaints. It also clarified health services' responsibilities for reporting against the National Emergency Access Target (NEAT) and the *Health and Disability Services (Complaints) Act 1995*.
16. In August 2014 and February 2015, 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. For the first time the executive summary of this report was published on the Safety and Quality intranet site (available at: http://intranet.health.wa.gov.au/osqh/reports/). The PSSU supports the sharing of this information for the purposes of communicating lessons learned and quality improvement initiatives across the health system.
17. 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 2014/15 the Committee members have discussed 16 inquest findings, with 9 health-related recommendations being reviewed and actioned.
18. The *From Death We Learn 2013*[31] annual publication was released in December 2014. This 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.

[31] From Death We Learn (2013) available at: http://ww2.health.wa.gov.au/Reports-and-publications/From-Death-We-Learn

Future Focus

While WA Health staff have always been focused on patient safety, the use of patient safety reporting systems has only been in place since 2001. The recent implementation of an online clinical incident management system has improved the real time capture and action of incidents that have resulted in harm to our patients. While the notifying and investigation of clinical incidents continues to grow, we must turn our focus to the development and evaluation of quality improvement recommendations.

Recommendations provide the framework for action in improving or preventing adverse events from occurring. Health service staff currently report and undertake rigorous investigations of clinical incidents that result in serious harm or death of our patients. Building on this strength WA Health staff need to ensure that the recommendations they are implementing are 'SMART'.[32] The 'SMART' acronym refers to recommendations that are specific, measurable, accountable, realistic and timely. By using 'SMART' recommendations staff are making sure that further clinical incidents are prevented or at least the very least minimised. In addition, WA Health staff also need to make sure that strong recommendation actions are implemented to ensure that desired outcomes are achieved. An example of a strong action to prevent medication errors would be the removal of two look-alike medicines from the ward pharmacy stock. A weaker action would be to simply remind staff that there are two look alike medicines available on the ward.

Building on from this, the integrity of the clinical incident data we capture must not be compromised by the inclusion of erroneous and contradictory data that is not checked for accuracy or quality. It is only by ensuring the quality of clinical incident data that we will be able to accurately identify, prioritise and address our safety hazards.

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.

However, quality improvement strategies are only the first phase in addressing and preventing clinical incidents from reoccurring. Fundamental to this process is the "Closing the Loop Program" which requires the stringent evaluation of these quality improvement recommendations to see if they are effective mechanisms to improving patient safety or simply a 'good idea at the time'.

Without empirical evidence to show that a clinical incident prevention strategy is effective we may as well have left those look-alike medications side by side on the shelf and crossed our fingers that our patients' care will not be compromised.

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 efficient. 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.

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[32] US Department of Veterans Affairs National Center for Patient Safety, 2010, NCPS Root Cause Analysis Tools, viewed 13 September 2010, Washington. <http://www4.va.gov/ncps/CogAids/RCA/index.html#page=page-1>.

Appendix One: Severity Assessment Code 1 Clinical Incident Notification List

Severity Assessment Code 1 Categories	
Clinical incidents that must be reported as SAC 1 (Category 1–8 are nationally endorsed 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.**[33] 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).

Severity Assessment Code 1 Categories	
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."**[34]
8	**Infant discharged to wrong family or infant abduction.**

[33] This category excludes reasonable differences in clinical judgement on drug selection and dose.
[34] Health Statistics and Health Information Systems, Maternal Mortality Ratio (per 100 000 live births). WHO, 2015. [internet]. [cited 2015 May 14]. http://www.who.int/healthinfo/statistics/indmaternalmortality/en/

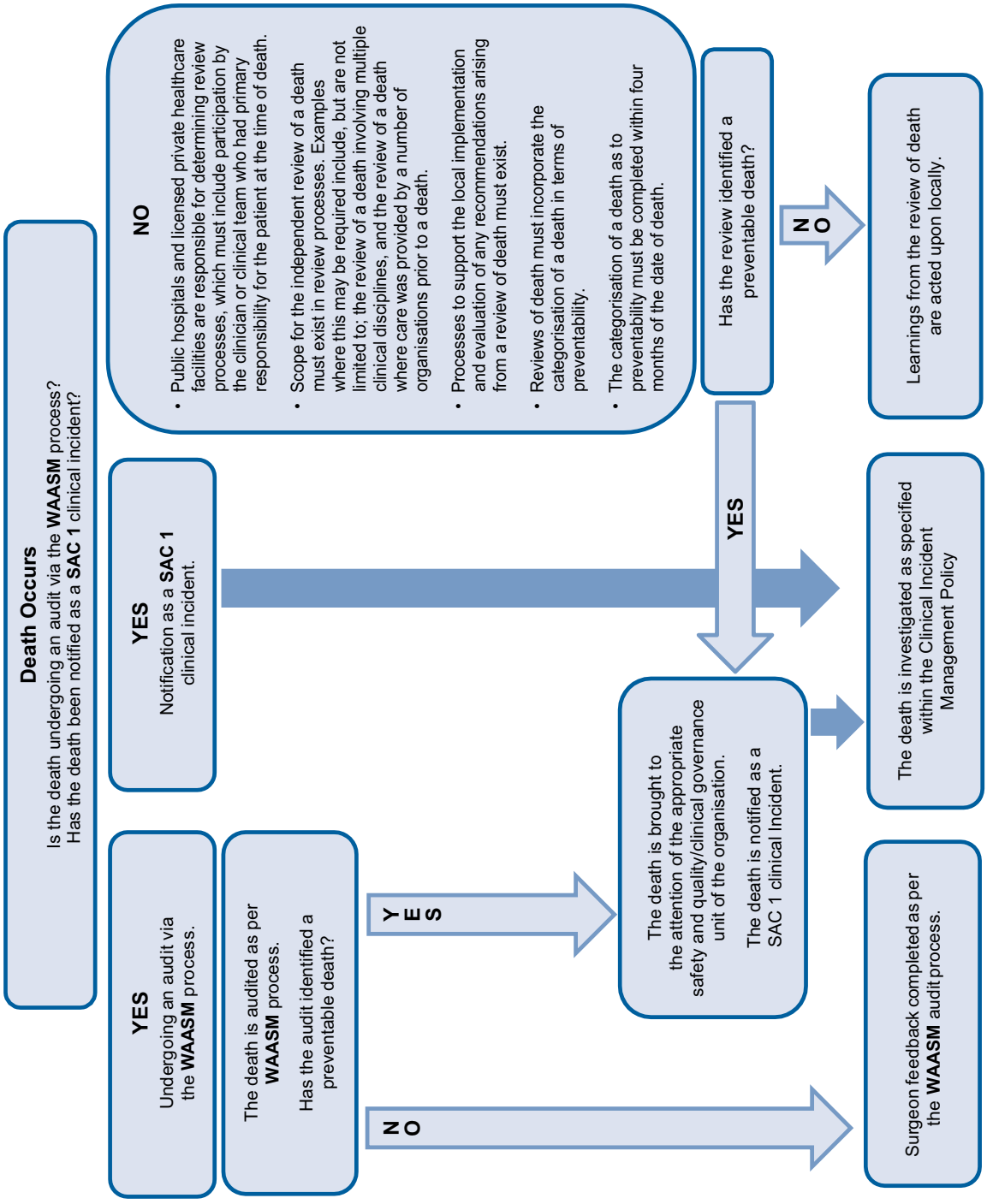
Appendix One: Severity Assessment Code 1 Clinical Incident Notification List

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.

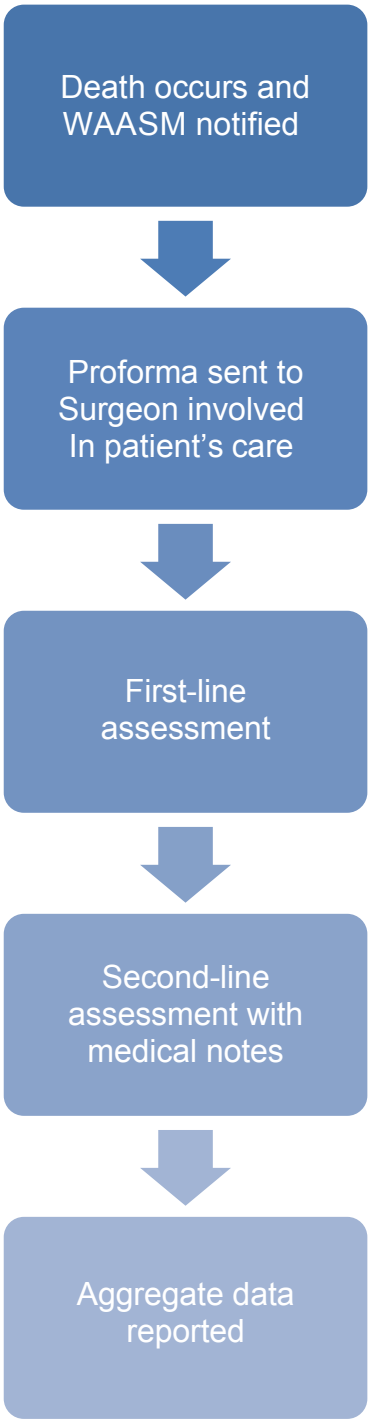
SAC 1 Clinical Incident Notification List. Note this list is NOT EXHAUSTIVE.
Complications of an inpatient fall.
Hospital process issues: • Events in which hospital processes such as triaging, assessment, planning or delivery of care • e.g. miscommunication of test results, response to abnormal test results contributed to death, or serious and/or ongoing morbidity. • 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 or violent death).
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.[10] ^ 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 Datasets used in 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 clinical incidents which 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 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. Complaints data were obtained from the Health Services. 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 data is to report all state-wide clinical incidents notified within the 2014/15 period, to the Datix CIMS data. 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 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. All 'Quality of Care' data were captured by WA Health hospitals and health services, and reported to PSSU who then captured the data in a state-wide complaints spreadsheet/Consumer feedback model system. Complaints are an integral component of CIM as it informs patient centred care.
Timeliness	The reference period for this data is 1 July 2014 to 30 June 2015. Due to data coding delays there is a two month lag time with regard to some Datix CIMS data such as confirmed SAC data. As such data frequencies may change over time and this would prohibit comparisons with previous reports.

Quality Dimensions	
Accuracy	Data are entered into the Datix CIMS database 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 data are dynamic and data lag times for some Datix CIMS variables exist which can prohibit the comparison of data at different time periods.
Accessibility	The data are only accessible to WA Health employees who have been granted permission to access the Datix CIMS database. 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

Atrial Fibrillation – the condition of being fibrillated in which the normal rhythmical contractions of the cardiac atria are replaced by rapid irregular twitching of the muscular wall; the ventricles respond irregularly to the dysrhythmic bombardment from the atria. (35)

Cirrhosis – end-stage liver disease. (35)

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.

Co-morbidity – A concomitant but unrelated pathologic or disease process; usually used in epidemiology to indicate the coexistence of two of more disease processes. (35)

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)

Coagulation – clotting; the process of changing from a liquid to a solid, especially of blood. (35)

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)

Encephalopathy – refers to any disorder of the brain. (35)

Endocarditis – refers to inflammation of the endocardium (innermost tunic of the heart).(35)

Hepatoblastoma – a malignant neoplasm occurring in young children, primarily in the liver. (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)

Hyponatraemia – refers to abnormally low concentrations of sodium in the circulating blood. (35)

Hypoxia – refers to below normal levels of oxygen in inspired gases, arterial blood or tissues.[35]

Increased length of stay – a situation whereby a patient has to stay longer in hospital than would normally be expected.

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.

Kawasaki's Disease – a systemic vasculitis of unknown origin that occurs primarily in children under eight years of age. [35]

Meconium – refers to the first intestinal discharges of the newborn infant. [35]

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

Myocarditis – inflammation of the muscular walls of the heart. [35]

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

Schedule 8 – Controlled Drugs, substances which should be available for use but require restriction of manufacture, supply, distribution, possession and use to reduce abuse, misuse and physical or psychological dependence.

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]

Splenomegaly – refers to enlargement of the spleen. [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. 2015.

[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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