Delivering Safer Healthcare in Western Australia

WA Sentinel Event Report

2009/2010
Acknowledgements

The Office of Safety and Quality in Healthcare (OSQH) acknowledges and appreciates the input of all individuals and groups who have contributed to the development of this report and the WA Sentinel Event Program, including the members of the Sentinel Event Executive Review Committee and Sentinel Event Review Group.

In particular, we acknowledge the patients and their families who have suffered inadvertent and unintended harm whilst receiving care in our health system. From time to time, things go wrong. By reporting, investigating and sharing the lessons learned, we aim to reduce human error and its impact.
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Foreword

“An adverse outcome for a patient is difficult, sometimes traumatic, for all concerned. Such incidents pose considerable challenges to an organisation in terms of the need to respond intelligently to their occurrence and in terms of the need to deal with their aftermath. The challenge is to find a way forward that provides the necessary support for the people involved while ensuring that the lessons of the incident are learned both by individual staff members and by the overall organisation.”

Sentinel events are rare events that lead to catastrophic outcomes for patients, their families and the healthcare professionals involved. Through the WA Sentinel Event Program, these serious clinical incidents are thoroughly investigated to ensure that action takes place to prevent future errors occurring.

This is the sixth public WA Sentinel Event Report which provides complete information on the numbers and types of sentinel events that have been notified during the 2009/2010 financial year in public and private hospitals/health services in WA.

Through the investigation of sentinel events and identification of systemic problems, opportunities present for focused efforts to improve the safety and quality of service delivery for consumers across the WA health system.

The focus of the WA Sentinel Event Program continues to be for health professionals and organisations to learn from clinical incidents to prevent similar events occurring in the future.

Kim Snowball
DIRECTOR GENERAL
WA Health
November 2010
Executive summary

Western Australia has a comprehensive sentinel event management program in place. This is the sixth annual report and all public and private health services participate in this program. In 2009/2010, St John Ambulance joined the WA Sentinel Event Program.

Sentinel events are rare adverse events leading to serious patient harm or death, that are specifically caused by healthcare rather than the patient’s underlying condition or illness.

Since the inception of the WA Sentinel Event Program in October 2003, there has been a total of 426 potential sentinel events notified. Of these events, 62 have been declassified leaving 364 confirmed events for inclusion in the WA Sentinel Event Program to 30 June 2010.

During the 2009/2010 financial year 51 sentinel events were notified and 47 events were confirmed. This represents only 0.01% of all public and private health service separations (one sentinel event per 10,000 separations).

During the 2009/2010 financial year, 64% of sentinel events were associated with the death of the patient.

The percentage of events that has resulted in patient death has decreased from 78% in 2003/2004 to 64% in 2009/2010.

In 2009/2010 the largest category of notified sentinel events was classified as “other adverse event resulting in serious patient harm or death”. In WA, this category is in addition to the eight core national categories. The 36 events in this category covered a variety of events, the majority of which fell into the subcategories of “other”, “misdiagnosis and subsequent management” and “complications of surgery”.

Eighty-nine percent of final sentinel event investigation reports for 2009/2010 were completed and forwarded to the Office of Safety and Quality in Healthcare by 31 August 2010, compared with 100% of investigation reports for 2008/2009.

The WA Open Disclosure Policy: Communication and Disclosure Requirements for Health Professionals Working in Western Australia was released in May 2009 to ensure the process of honest and open discussion to support patients and their nominated relatives/carers following a clinical incident. In approximately 66% of sentinel events, public hospitals and health services indicated, at the time of notification, that open disclosure would occur.
1. Introduction

“To improve patient safety, it is necessary to understand the frequency, seriousness, and causes of medical errors. Such knowledge is acquired by the analysis of data collected through error-reporting systems.”2

The WA Sentinel Event Program was established in October 2003 and includes the mandatory notification of events from public hospitals and health facilities, including community groups, primary care units and licensed private facilities.3

Sentinel events are defined as rare adverse events leading to serious patient harm or death, that are specifically caused by healthcare rather than the patient’s underlying condition or illness.4

Sentinel events are to be notified to the Director, Office of Safety and Quality in Healthcare (OSQH) within seven working days of the event occurring. Clinical investigations identifying the contributing factors that led to the event and recommendations to be implemented to prevent recurrence are to be completed and submitted to OSQH within 45 working days of the event’s notification. Recommendations arising from sentinel event investigations are to be implemented within 12 months of submitting the final investigation report to OSQH, then the event is considered closed.

In 2004, Australian Health Ministers endorsed eight core national sentinel event categories. The WA Sentinel Event Program includes an additional category of “other adverse event resulting in serious patient harm or death” that continues to capture a number of events. In the 2009/2010 financial year, category one was amended, to only include notifications of “procedures involving the wrong patient or body part resulting in death or major permanent loss of function.”

In addition to category one, the definition for category seven “maternal death or serious morbidity associated with labour or delivery” has been amended by WA Health, affecting notifications for the 2010/2011 financial year. The new definition reads: “maternal death or serious disability associated with labour or delivery while the patient is being cared for in a facility or by maternity care providers, including events that occur within 42 days post delivery.”

Western Australia continues to include the notification of sentinel events from both the public and private healthcare sectors. The 2009/2010 financial year saw the inclusion of two additional private healthcare providers to the WA Sentinel Event Program, including St John Ambulance as per recommendation nine of the St John Ambulance Inquiry.5

Governance

During 2009/2010 governance of the WA Sentinel Event Program continued to occur via the Sentinel Event Executive Review Committee (SEERC) and the Sentinel Event Review Group (SERG) in addition to oversight by the Director Office of Safety and Quality in Healthcare.
The governance structure of the program ensured:
- External clinical review of sentinel event investigations and outcomes
- Evaluation and monitoring of the effective implementation of recommendations arising from sentinel event investigation and mortality review
- Facilitation of system-wide learning and sharing of patient safety information/alerts (at a state and national level).

Declassified sentinel events
All notified sentinel events require a comprehensive investigation to identify any system errors that contributed to the event’s occurrence. Following the investigation, some events however are deemed to have not been preventable or caused by the delivery of healthcare. Where this is the case, hospitals and health services can request declassification of the sentinel event. If SEERC approve declassification of the event, any recommendations developed are still required to be implemented and evaluated by the hospital/health service where the event occurred.

Declassification requests are directed to the SEERC for consideration and are only approved where:
- no system vulnerabilities or contributing factors are identified
- the event does not fit into the nine sentinel event categories
- the event was deemed not to have been preventable.

For the 2009/2010 financial year a total of four events were notified to the WA Sentinel Event Program that were subsequently declassified. This compares with 10 events declassified in the 2008/2009 financial year.

Sentinel events declassified in 2009/2010 included the following type of events:
- Resourcing issue, initial concern regarding delay to theatre that proved incorrect
- Complication of surgery, patient mortality occurred not as a consequence of health care delivery
- Post natal care of the newborn infant, deemed to be appropriately managed following investigation
- Neonatal resuscitation, that did not cause or contribute to the patient’s morbidity.

Root cause analysis and human factors
"Root cause analysis (RCA) is the name given to the investigation of adverse events and “close calls” in health care.” “It usually involves a team of clinicians, managers, and technicians who are assigned to answer at least three questions: what happened; why did it happen; and what can be done to prevent it in the future?”

Root cause analysis is one of the methods that WA Health recommends for the comprehensive investigation of sentinel events to identify contributing factors and develop recommendations to prevent recurrence of similar events in the future.
“The human factors’ approach to error is based on understanding how human response moderates environmental and outcome covariation. The purpose is to inform the design of task environments that minimize adverse consequences of human factors.” In addition to the RCA methodology, WA health services are providing education and training to health professionals regarding human factors and patient safety.

Open Disclosure
The WA Open Disclosure Policy: Communication and Disclosure Requirements for Health Professionals Working in Western Australia was released in May 2009 to ensure the process of honest and open discussion to support patients and their nominated relatives/carers following a clinical incident. Public hospitals and health services are continuing to implement this policy to embed the effective open disclosure of clinical incidents as a key element of WA Health’s patient-centred culture that prioritises learning from errors to improve the delivery of safe and high quality healthcare.

The WA Open Disclosure Policy mandates that open disclosure is initiated for sentinel events occurring in public hospitals.

In 66% of confirmed sentinel events, public hospitals and health services indicated, at the time of notification, that open disclosure would occur. Twelve percent of sentinel event notifications indicated that open disclosure would not be undertaken and 22% of notifications did not report against this criterion.

The private sector also reported against the initiation of open disclosure when making sentinel event notifications, with 67% reporting open disclosure would occur. Open disclosure was not reported for 27% of events occurring in private hospitals and only one event identified that open disclosure would not be undertaken.
Watching brief: Resourcing issues and system events

During the 2009/2010 financial year, the Sentinel Event Executive Review Committee (SEERC) undertook a ‘watching brief’ on sentinel events associated with ‘resourcing issues’ such as delays to theatre, lack of beds and staffing issues. In addition, a second watching brief focused on ‘system events’ where sentinel events were associated with more than one hospital or healthcare provider.

As part of the watching brief on resourcing issues, an examination was undertaken specifically regarding clinical incidents notified into the Advanced Incident Management System (AIMS) associated with delays to theatre. The following reasons and contributing factors were reported as associated with the events:

- Emergency/higher priority cases/lack of theatres
- Non availability of appropriate surgeons
- Non availability of anaesthetic staff
- Non availability/insufficient instruments or equipment
- Inadequate theatre time
- State-wide non availability of intensive care beds
- Communication.

The examination of ‘system events’ identified the complexities involved in undertaking investigations across hospital and health service boundaries, especially when navigating State and Commonwealth qualified privilege arrangements. This matter will be addressed in the integrated clinical incident management policy currently under development by the Office of Safety and Quality in Healthcare.

WA Health will continue to monitor events occurring across hospital boundaries and the impact of resourcing issues on patient safety and the delivery of high quality healthcare.

Managing Adverse Events (MAE) Project

The MAE Project, WA Health’s response to the recommendations made by the Office of the Auditor General’s examination of the management of adverse events in public hospitals (2007), continues to focus on improving clinical incident management within WA Health.9
Key deliverables, some of which are to be finalised in 2010/2011 to conclude the Project, include:

- Procurement and implementation of clinical incident management software that allows for electronic notification of events
- Pursuing options for a state-wide complaints data base
- Implementation of the Variable Life Adjusted Display (VLAD) system
- Development of the safety and quality component of the Resource Allocation Model for WA Health (Activity Based Funding/Activity Based Management)
- Revision of current State qualified privilege legislation.
2. Sentinel Event Program 2009/2010

Notifying sentinel events has been mandated for the WA health system since October 2003. Since this time a total of 426 potential sentinel events have been reported.

Of these 426 notified events, 62 were considered not to fall in to the category of sentinel event or have not been preventable and were subsequently declassified. Therefore, 364 confirmed events have been included in the WA Sentinel Event Program to 30 June 2010.

In 2009/2010, 51 potential sentinel events were notified to the WA Sentinel Event Program from both public and private healthcare facilities.

A total of four events were declassified following thorough investigations that determined no preventable factors contributed to the events' occurrence. The declassified events have not been included in the data analysis of this report.

For the 2009/2010 financial year, there were 47 confirmed sentinel events.

Hospitals and health services continue to effectively manage all clinical incidents. The decrease in reported sentinel events in 2009/2010 is likely to reflect maturation in health service clinical incident management processes, whereby the most serious incidents are managed as sentinel events.

All events continue to be thoroughly investigated with recommendations implemented in a timely manner. Lessons learned, from event investigations, are shared across the WA health system to improve patient safety.

In addition, the amendment to sentinel event category one, procedures involving the wrong patient or body part, to only include events resulting in death or major permanent loss of function, has resulted in a significant decrease of notifications to this category.

The total of 47 confirmed sentinel events represents only 0.01% of all public and private health service separations (one sentinel event per 10,000 separations)a. The rate of sentinel events per separation has remained constant for the 2007/2008, 2008/2009 and 2009/2010 financial years.

For the 2009/2010 financial year, 64% of confirmed sentinel events led to the death of the patient; an increase compared to the previous financial year (53% of confirmed sentinel events resulting in the death of a patient in 2008/2009).

a The total number of separations is as reported to the Hospital Morbidity Data System by 16 September 2010 and private hospital separations are estimated to be 80% of the total for 2009/2010. Excludes unqualified (healthy) newborns, boarders, posthumous organ procurements, aged care residents and funding hospital (duplicate) cases. The same patient may have been counted multiple times if admitted to hospital multiple times.
In 2009/2010, of the 47 confirmed sentinel events, 11 fell into the core set of eight national sentinel event categories; a decrease compared to the previous financial year (27 events notified in 2008/2009). The remaining 36 events did not fit into the eight national categories, and were notified as ‘other’. The events included in the category “other adverse event resulting in serious patient harm or death” are examined in more detail in Section 3.

Table 1 illustrates the percentage of confirmed sentinel events. Notifications of sentinel events have steadily increased since the inception of the WA Sentinel Event Program until the 2009/2010 financial year when notifications decreased.

Table 1:  Notified and confirmed sentinel events for WA public and private hospitals  
1 October 2003 to 30 June 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Notified</th>
<th>Total Confirmed</th>
<th>Percent of confirmed sentinel events</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003/2004</td>
<td>23</td>
<td>23</td>
<td>100%</td>
</tr>
<tr>
<td>2004/2005</td>
<td>46</td>
<td>42</td>
<td>91%</td>
</tr>
<tr>
<td>2005/2006</td>
<td>57</td>
<td>44</td>
<td>77%</td>
</tr>
<tr>
<td>2006/2007</td>
<td>59</td>
<td>45</td>
<td>76%</td>
</tr>
<tr>
<td>2007/2008</td>
<td>90</td>
<td>81</td>
<td>90%</td>
</tr>
<tr>
<td>2008/2009</td>
<td>100</td>
<td>90</td>
<td>90%</td>
</tr>
<tr>
<td>2009/2010</td>
<td>51</td>
<td>47</td>
<td>92%</td>
</tr>
</tbody>
</table>


Figure 1 illustrates the percentage of confirmed sentinel events compared with confirmed sentinel events resulting in death. The percentage of events that have resulted in death has significantly decreased from 78% in 2003/2004 to 64% in 2009/2010.
Figure 1: Percentage of confirmed sentinel events and confirmed sentinel events resulting in death for WA public and private hospitals 1 October 2003 to 30 June 2010


Table 2 illustrates notifications for the nine sentinel event categories for each financial year since the inception of the Sentinel Event Program by WA Health in October 2003.
Table 2: Confirmed sentinel events for WA public and private hospitals by category  
1 October 2003 to 30 June 2010

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Procedure involving wrong patient or wrong body part resulting in death or major permanent loss of function</td>
<td>1</td>
<td>10</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>2. Suicide of a patient in an inpatient unit</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3. Retained instruments or other material after surgery requiring re-operation or further surgical procedure</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>4. Intravascular gas embolism resulting in death or neurological damage</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Haemolytic blood transfusion reaction resulting from ABO incompatibility</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>6. Medication error resulting in death of a patient</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. Maternal death or serious morbidity associated with labour or delivery</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>8. Infant discharged to wrong family or infant abduction</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9. Other adverse event resulting in serious patient harm or death</td>
<td>19</td>
<td>23</td>
<td>31</td>
<td>30</td>
<td>45</td>
<td>63</td>
<td>36</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23</td>
<td>42</td>
<td>44</td>
<td>45</td>
<td>81</td>
<td>90</td>
<td>47</td>
</tr>
</tbody>
</table>

Notes: 2003/2004 data comprises nine months only – 1 October 2003 to 30 July 2004. The sentinel event data base is a cumulative data base, with data changing over time as events are investigated retrospectively.

Table 3 illustrates confirmed sentinel events notified in the “other” category used by the WA Sentinel Event Program, in addition to the core set of eight national sentinel event categories.
Table 3: Confirmed sentinel events notified as “other adverse event resulting in serious patient harm or death” for WA public and private hospitals 1 October 2003 to 30 June 2010

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Complication of anaesthetic management</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Complication of emergency/resuscitation management</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Complications of surgery (including post operative death)</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Fetal complication of delivery (including neonatal death)</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Hospital process issue (e.g. failure to access timely and appropriate care, poor planning of discharge)</td>
<td>3</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>22</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>Medication error with serious consequence (not death)</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Patient absconding with adverse outcome</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Complication of an inpatient fall*</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Mental health incident*</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Infection control breach**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Misdiagnosis and subsequent management ***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>19</td>
<td>23</td>
<td>31</td>
<td>30</td>
<td>45</td>
<td>63</td>
<td>36</td>
</tr>
</tbody>
</table>

Notes: 2003/2004 data comprises nine months only – 1 October 2003 to 30 July 2004. The sentinel event data base is a cumulative data base, with data changing over time as events are investigated retrospectively. The addition of new subcategories to the sentinel event data base, as well as additional information provided following the investigation of events, has resulted in reclassification of events to different sub categories.  
* New sub categories added for 2005/2006. These events would previously have been classified as ‘other’. Category not included for 2009/2010.  
** New sub category added for 2006/2007. These events would previously have been classified as ‘other’.  
*** For the 2009/2010 financial year this category has been renamed to “misdiagnosis and subsequent management”.

WA Sentinel Event Report 2009/2010
Table 4 illustrates confirmed sentinel events by category where the outcome resulted in the patient’s death.

**Table 4: Confirmed sentinel events where the outcome was patient death by category for WA public and private hospitals 1 October 2003 to 30 June 2010**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Procedure involving wrong patient or wrong body part</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. Suicide of a patient in an inpatient unit</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3. Retained instruments or other material after surgery requiring re-operation or further surgical procedure</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. Intravascular gas embolism resulting in death or neurological damage</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Haemolytic blood transfusion reaction resulting in from ABO incompatibility</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6. Medication error resulting in death of a patient</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. Maternal death or serious morbidity associated with labour or delivery</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>8. Infant discharged to wrong family or infant abduction</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9. Other adverse event resulting in serious patient harm or death</td>
<td>16</td>
<td>18</td>
<td>21</td>
<td>23</td>
<td>31</td>
<td>42</td>
<td>25</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>18</strong></td>
<td><strong>22</strong></td>
<td><strong>28</strong></td>
<td><strong>29</strong></td>
<td><strong>45</strong></td>
<td><strong>48</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

**Notes:** 2003/2004 data comprises nine months only – 1 October 2003 to 30 July 2004.

Table 5 illustrates confirmed sentinel events where the outcome resulted in the patient’s death by “other” subcategory.
Table 5: Confirmed sentinel events where the outcome was patient death by “other” sub-category for WA public and private hospitals 1 July 2006 to 30 June 2010

<table>
<thead>
<tr>
<th>Event sub-category</th>
<th>2006/07</th>
<th>2007/08</th>
<th>2008/09</th>
<th>2009/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complication of anaesthetic management</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Complication of emergency/resuscitation management</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Complications of surgery (including post operative death)</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Fetal complication of delivery (including neonatal death)</td>
<td>0</td>
<td>6</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Hospital process issue (i.e. failure to access timely and appropriate care, poor planning of discharge)</td>
<td>6</td>
<td>13</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Medication error with serious consequence (not death)</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient absconding with adverse outcome</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Complication of an inpatient fall</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Mental health incident*</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Infection control breach</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Not appropriate**</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23</td>
<td>31</td>
<td>42</td>
<td>25</td>
</tr>
</tbody>
</table>

* Category not included for 2009/2010.
** For the 2009/2010 financial year this category has been renamed to “misdiagnosis and subsequent management”. 
3. Contributing System Factors

Key results

- In 2009/2010 there was an average of three contributing factors identified for each sentinel event* during the investigation that needed to be taken into consideration in developing recommendations to prevent recurrence of similar future events. This compared with two contributing factors per event in 2008/2009.

- Policy/procedure/guidelines, communication and human resources were the three most commonly identified contributing factors for events in 2009/2010.

* This is based on 38 confirmed sentinel events. Of the total 47 confirmed sentinel events, five events were excluded as they did not provide a final sentinel investigation report and another four events were excluded as no contributing factors were provided in the investigation report.

“Contributing factors/hazards are the circumstances, actions or influences which are thought to have played a part in the origin or development of an incident or to increase the risk of an incident. Examples are human factors such as behaviour, performance or communication; system factors such as work environment; and external factors beyond the control of the organization, such as the natural environment or legislative policy. More than one contributing factor and/or hazard is typically involved in a single patient safety incident.”

Through the investigation of sentinel events, contributing factors are identified and robust recommendations developed to address these causal elements in order to prevent future events occurring.

Appendix 1 outlines the 11 contributing factor categories currently being used by the WA Sentinel Event Program.

Figure 1 illustrates the identified contributing factors related to all sentinel events notified in the 2008/2009 and 2009/2010 financial years.
Overall, for the 2009/2010 financial year, an average of three contributing factors were identified per sentinel event. It is important to note, that each contributing factor may identify a number of issues that require the development of recommendations, however each contributing factor is only counted once.

The top three contributing factors identified following the investigation of sentinel events were policy/procedure/guidelines (82%), communication (71%) and human resources (55%).
3.1 Wrong patient or body part, or wrong procedure

Key results

- One sentinel event was notified in the 2009/2010 financial year involving the wrong patient or body part, or wrong procedure.

- This is a decrease from the 10 events reported in the 2008/2009 financial year and is due to amendment to the definition of the category.

- The sentinel event was associated with a wrong side procedure resulting in permanent loss of function.

WA Health amended this category following national review of the core sentinel event categories. For the 2009/2010 financial year only events that resulted in death or major permanent loss of function are included in this category. This has resulted in a decrease of notified events.

This sentinel event identified communication and policy/procedure/ guidelines as contributing factors.

The contributing factors identified from the sentinel event in this category included the need for:

- the “team time out” to be conducted immediately prior to knife to skin

Improving patient safety

Outlined below are two initiatives undertaken by WA Health to improve patient safety and prevent the recurrence of incidents related to the wrong patient, wrong body part or wrong procedure.

Correct Patient, Correct Procedure, Correct Site

In November 2009, Australian Health Ministers endorsed the WHO Surgical Safety Checklist (Checklist) as the agreed national strategy for surgical safety. Locally adapted versions of the Checklist are to be implemented by 1 July 2011, with the aim of reducing surgical mortality, errors and complications. The Checklist is principally a tool to improve communication to significantly reduce mortality, error and complication rates in the surgical setting.¹¹

Following a thorough stakeholder consultation process for local adaptation of the Checklist, it is anticipated that the WA Health version will be rolled out to public operating theatres and procedure rooms by the end of 2010.
Concurrently a review of the Correct Patient, Correct Procedure and Correct Site Policy and Guidelines for Western Australian Health Services has commenced to align with the implementation of the Checklist. This review will ensure the WA policy reflects the principles and design of the Checklist and includes all relevant specialties where a risk of adverse events involving the wrong patient, body part or procedure exists (e.g. radiotherapy, oncology and diagnostic procedures).

**Patient Identification**

The standardised WA Patient Identification Policy is due to be released by the end of 2010. This Policy is based on the national standard for patient identification bands in Australia, developed by the Australian Commission on Safety and Quality in Health Care. In addition to the Checklist and updated Correct Patient, Correct Procedure and Correct Site Policy, this will further strengthen preventing the misidentification of patients in WA public hospitals.

**3.2 Suicide of a patient in an inpatient unit**

**Key results**

There were three ‘inpatient suicides’ notified in the 2009/2010 financial year compared with four in 2008/2009.

In this category, two patients committed suicide while on approved leave and one patient committed suicide after absconding from the ward.

The inpatient suicide events notified in 2009/2010 identified communication, bed access issues and staff education as contributing factors.

The most common contributing factors for this category were communication, policy/procedure/guidelines and other.

The contributing factors identified from the sentinel events in this category included the need for:

- Staff training regarding risk assessment
- Management of bed shortages
- Increased inclusion of family in risk assessment processes
- Improved documentation
- Improving communication between staff
- Improving staff understanding and use of policies, procedures and guidelines
- Ensuring that staff are given a thorough orientation to the area.
Improving patient safety

The Assertive Patient Flow and Bed Demand Management for Adult Mental Health Services Policy (2009)\(^2\) has been developed to provide policy direction for consistency in patient flow processes and sustainable bed management practices within and between mental health services in WA.

While this policy assists all mental health services to monitor and manage bed capacity the focus remains on providing an integrated approach to the continuum of care. This includes effective coordination between community based elements of care and inpatient units, the local service having primary responsibility to meet bed requirements for those patients within their catchment area and all patients requiring admission to be prioritised on risk or need. An important aspect of this policy is that referring public mental health clinicians will retain direct responsibility for the care of a patient until the inpatient unit formally receives the patient. This responsibility includes the ongoing assessment of risk and ongoing communication to inpatient services of any escalation of risk to assist the process for reprioritisation of admission.

The inclusion of families and carers in initial and ongoing assessment (including risk assessment and management) is highlighted and mental health services are increasingly attentive to the vital issue of involvement of families and carers wherever possible.

The mental health sector has progressed the standardised documentation initiative to assist the application of processes which will support better communication through documentation and attention to processes such as leave arrangements and movements of patients outside immediate clinical supervision. Staff continuing education has been given further emphasis as has induction and orientation to ward areas.
**Focus on Seclusion and Restraint**

Following an increase in the number of reported mental health behaviour incidents to the Advanced Incident Management System (AIMS) database in 2007-2008, the Sentinel Event Executive Review Committee (SEERC) undertook to examine incidents associated with seclusion and restraint.

From the examination, it was identified that the most commonly reported reason for restraining or secluding a patient was for the protection of others, followed by protection of the patient. The most commonly associated contributing factors were physical followed by verbal aggression and for the majority of incidents the reported outcome was that the patient was settled and compliant.

Feedback was sought from mental health services regarding the increase in reporting that identified the following:

- Staff education on clinical incident reporting and management
- Increase in verbal aggression related to implementation of the Smoke Free policy
- Introduction of initiatives to reduce and where possible eliminate the use of seclusion and restraint resulting in significant monitoring and reporting of incidents

The WA Sentinel Event Program will continue to monitor clinical incident trends with respect to seclusion and restraint.

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

**Key results**

In the 2009/2010 financial year, four events of this type were notified, compared with six events notified in the previous financial year.

The events notified in this category were related to retained swabs, retained surgical packs and an orthopaedic device failure.

The most common contributing factors for this category were policy/procedure/guidelines, communication and equipment.

Examples of contributing factors included the need for:

- Staff education and training regarding theatre policies (i.e. count policies and procedures)
- Improved documentation
- Cultural change in operating theatres
- Implementation of “team time out”.
Improving patient safety

WA Health is progressing towards implementation of the WHO Surgical Safety Checklist, in conjunction with the finalisation of the amended Correct Patient, Correct Procedure, and Correct Site Policy. The WHO Surgical Safety Checklist requires verbal confirmation from the team that the instrument, sponge and needle counts are all correct prior to the patient leaving the operating room, thus aiming to eliminate adverse events associated with retained instruments/materials.

WA Health will continue to monitor events in this category and the impact of the implementation of the WHO Surgical Safety Checklist to improve patient safety in this area. (See also Section 3.1)

3.4 Intravascular gas embolism resulting in death or neurological damage

Key results
- Since the inception of the WA Sentinel Event Program in 2003 there have been no events notified in this category.

This category includes events where death or serious disability is associated with intravascular gas embolism that occurs while the patient is being cared for in a hospital/health service. It excludes deaths associated with neurosurgical procedures known to present a high risk of intravascular gas embolism.

3.5 Haemolytic blood transfusion reaction resulting from ABO incompatibility

Key results
- In the 2009/2010 financial year no events of this type were notified, compared with two events reported in the previous year.

This category includes events where patients have been administered ABO incompatible blood.
3.6 Medication error leading to the death of a patient reasonably believed to be due to incorrect administration of drugs

**Key results**

- For the 2009/2010 financial year, one patient death was attributed to a medication error compared with two deaths notified in 2008/2009.

This category includes events in which the incorrect administration of drugs is reasonably believed to have resulted in the death of a patient. Medication error can include the incorrect drug or wrong dosage being given to a patient or the administration of a drug by the wrong route and errors associated with inadequate surveillance (i.e. blood tests, clinical observation).

The contributing factors identified in association with this event could not be compiled as the final sentinel event investigation report had not been submitted by 31st August 2010.

**Improving patient safety**

Standardising medication charts improves medication safety by reducing the risk of errors associated with working with unfamiliar charts and by embedding key safety features throughout the chart such as dose calculations.

In 2010 the adult National Inpatient Medication Chart (NIMC) was updated to include recent national changes and to address state-wide issues. In addition, WA Health launched a paediatric NIMC for state-wide use.

To assist in the appropriate governance of standardised medication charts across WA Health the WA Medication Chart Advisory Committee was established in late 2009. The Committee consists of multi-professional representatives from all public health services and assists by providing strategic and operational advice on the impact of proposed changes to state standardised charts.

In April 2010 the WA Anticoagulation Medication Chart (WAAMC) became mandatory in all adult, non-critical settings across WA Health. This chart was developed by the WA Medication Safety Group (WAMSG) with the aim of increasing safety in the prescribing and administration of anticoagulants, a high-risk patient safety domain.

Ensuring medication safety and medication reconciliation continues to present challenges to healthcare providers as care is increasingly provided outside the hospital setting. As a result, WA Health is increasingly collaborating with primary and community care providers to improve medication safety across care settings through improved communication and patient education. One example is the introduction of Patient’s Own Medication Bags (POMBs), now provided to all patients arriving by ambulance to hospital, with the aim of improving the accuracy of medication reconciliation on admission through Emergency Departments.
In addition, medication reconciliation continues to be a mandatory Clinical Practice Improvement (CPI) strategy under the Safety and Quality Investment for Reform (SQuIRe) Program.

**Focus on Wrong Infusion Rates**

An examination of infusion errors, specifically related to wrong infusion rates recorded in the Advanced Incident Management System (AIMS) database was undertaken to inform the WA Medication Safety Group (WAMSG) on the contributing factors associated with these incidents to guide the development of strategies to reduce such errors from occurring. ‘Failure to follow policy or procedure’, ‘misread or did not read documentation’ and ‘inadequate knowledge or experience’ were identified as the most common staff contributing factors.

In addition, not checking charts/orders/infusion pumps, equipment factors (e.g. wrongly used, failure, not available), documentation, inexperience, busy/distracted staff, miscommunication and misread order were also identified as contributing factors to wrong infusion rate incidents.

The WA Sentinel Event Program will continue to monitor trends associated with medication incidents and seek the advice of the WAMSG to guide improvements in patient safety.

### 3.7 Maternal death or serious morbidity associated with labour or delivery

**Key results**

- Two events were notified in 2009/2010, one event resulted in permanent loss of function and one event resulted in maternal and fetal mortality.
- In 2008/2009 three events were notified, one event resulted in fetal mortality and two events were associated with serious maternal morbidity.

The events notified in this category were associated with post partum haemorrhage and discharge against medical advice.

The most common contributing factors with regard to this event category were communication, equipment, physical environment, policy/procedure/guidelines and human resources. Examples of these included the need for:

- Improved processes regarding patient discharge against medical advice
- Review of post partum haemorrhage guidelines
- Development of obstetric emergency management protocols
- Improved management of surgical patients in recovery
- Improved septic screening measures.
Improving patient safety

The WA Sentinel Event Program will continue to monitor incidents associated with the provision of maternity care and work in collaboration with the Chief Nursing and Midwifery Office to ensure safe and high quality maternity care for all women.

Focus on Beta Human Chorionic Gonadotropin (BHCG) Testing

Following an incident that occurred where a vaginal hysterectomy was performed on a patient who was unknowingly pregnant, and who had not had a Beta Human Chorionic Gonadotropin (BHCG) (urinary or blood) test performed, a State-wide examination of the sentinel event and Advanced Incident Management System (AIMS) data bases was undertaken to search for similar incidents.

The incidents notified identified the following contributing factors:

- Busy/pressured staff
- Guideline on management of abdominal pain not followed
- Check on BHCG results not performed in theatre.

This important patient safety issue has been brought to the attention of the Chief Medical Officer and the Women’s and Newborn Health Network to ensure that where women of child-bearing age are scheduled for diagnostic imaging or operative procedures, screening for pregnancy is performed. Hospitals/health services are encouraged to ensure existing policies and procedures regarding BHCG testing are followed to prevent future errors of this type.
Focus on Co-sleeping/bed sharing

Following an incident associated with co-sleeping and the recent public coronial inquest\(^\text{13}\) regarding an infant death associated with co-sleeping, a State-wide examination of the sentinel event and Advanced Incident Management System (AIMS) data bases was undertaken to search for similar incidents.

Communication, human resources, policy/procedures/guidelines and other were identified as contributing factors associated with the examined co-sleeping/bed sharing events.

The following recommendations were developed for implementation as a result of the notified co-sleeping/bed sharing incidents:

- Review/develop policies, procedures/guidelines regarding safe sleeping advice with respect to breastfeeding, SIDS, cultural needs, adolescent mothers and infants transferred from other hospitals
- Education regarding implementation of the WA Health Co-sleeping Operational Directive, patient preparation for transfer and resuscitation competency
- Development of ‘cot cards’ with safety sleeping guidelines
- Review of methods to educate parents
- Review of safe sleeping arrangements for post-natal mothers
- Consideration of regular routine checks on postnatal parents overnight.

The findings of the review above and recent coronial inquests identified that co-sleeping remains an important safety issue for the WA health system. In response the Chief Medical Officer advised all hospitals and health services providing care for mothers and their newborn(s) must ensure implementation of the *State-wide Co-sleeping / Bed-sharing Policy for WA Health Hospitals and Health Services*\(^\text{14}\) to facilitate safe sleeping practices for parents and their newborns.

3.8 Infant discharged to wrong family or infant abduction

**Key results**

- No events of this type have been notified since the two events notified in the 2007/2008 financial year.
3.9 Other

Key results

- The majority of confirmed sentinel events were notified into the category of “other adverse event resulting in serious patient harm or death”, rather than the eight national sentinel event categories.

- In the 2009/2010 financial year, 36 events were notified in this category compared with 63 in 2008/2009. Analysis of this category is provided in Section 2 (see Table 3).

- The top three subcategories of “other” were “other” (ten events), “complication of surgery” (six events) and “misdiagnosis and subsequent management” (six events).

- The majority of sentinel events resulting in death of the patient were captured in this “other” category (25 deaths) compared with the eight national sentinel event categories (five deaths).

This category, “other adverse event resulting in serious patient harm or death” includes events that do not fit in to the eight national sentinel event categories. The subcategories of “other” are outlined in Appendix 2.

The most common contributing factors in regards to the “other” category were policy/ procedure/guidelines (26%), communication (21%) and human resources (19%).

“Other”, “complication of surgery” and “misdiagnosis and subsequent management” were the top three sub-categories of “other” and are outlined further below.

Other

In the 2009/2010 financial year, ten “other” events were related to “other” issues compared with three in 2008/2009. Events notified as “other” included the following:

- Use of restraint (mental health patient) with adverse outcome
- Wrong patient surgery that did not result in death or permanent loss of function
- Management of the deteriorating patient (i.e. lack of observations, delayed assessment and treatment, failure to adhere to Medical Emergency Team (MET) criteria)
- Delayed access to care
- Medical device incident.

Investigation of events in this broad category has identified system vulnerabilities and areas for improvement including:

- Development of guidelines for medical management of mental health patients
- Improved processes for review of clinical imaging to assist in patient diagnosis
- Development of an improved observation chart
- Management of staff sick leave and relief cover
- Education regarding activation of METs
- Mandated use of risk assessment forms
- Clinical education regarding triage processes.

The most common contributing factors in regards to the “other” sub-category were policy/procedure/guidelines, communication and human resources.

Complication of surgery

In the 2009/2010 financial year, six “other” events were related to complications of surgery compared with eight in 2008/2009. Investigation of events in this broad category has identified system vulnerabilities and areas for improvement including the need for:

- improved documentation regarding post operative management
- improved communication between staff
- review and implementation of updated massive haemorrhage protocol
- implementation of the World Health Organisation (WHO) Surgical Safety Checklist
- education regarding initiation of MET calls and criteria.

The most common contributing factors in regards to the complication of surgery sub-category were communication, policy/procedure/guidelines, physical environment and other.
Focus on Medical Emergency Response

All confirmed sentinel events notified to the WA Sentinel Event Program over a five year period were examined to identify the inclusion of recommendations associated with medical emergency teams (MET) or medical emergency responses (MER).

The majority of events notified associated with MET/MER fell into the category of hospital process issue.

Examination of sentinel events associated with MET/MER identified the following:

- The need for comprehensive implementation and education regarding MET/MER policy and guidelines, including mock drills.
- The need for clear pathways for escalation/emergency response with respect to the deteriorating patient.

Work on clinical deterioration in WA Health includes the development and piloting of an adult observation chart and escalation processes through the WA Country Health Service.

WA Health is supporting the implementation of initiatives from the national Recognising and Responding to Clinical Deterioration Program currently being coordinated by the Australian Commission on Safety and Quality in Health Care.

WA Health has convened a state-wide Recognising and Responding to Clinical Deterioration Network to improve and align processes associated with clinical deterioration. This Network will be used to disseminate clinical information to public hospitals/health services and to coordinate and implement national initiatives.

Misdiagnosis and subsequent management

In the 2009/2010 financial year six “other” events were notified to this new category of “misdiagnosis and subsequent management”. Investigation of events in this broad category has identified system vulnerabilities and areas for improvement including the need to:

- ensure surgical consultants check and respond to consultation requests
- revise procedures to ensure the use of interpreters to communicate discharge instructions with non-English speaking patients
- develop and implement clinical guidelines
- review policy regarding patient admission and transfer
- ensure further investigations are undertaken when incongruence is identified between clinical assessment and physiological results
review of clinical handover processes in the Intensive Care Unit
implement education and training regarding reporting and assessment of clinically deteriorating patients.

The most common contributing factors in regards to the “misdiagnosis and subsequent management” sub-category were human resources and policy/procedure/guidelines.

Case example

Mrs Cake, an 88 year old woman, was brought into the Emergency Department by her daughter who noticed that she was confused. She had a history of high blood pressure and was treated with metoprolol and frusemide.

On arrival in the Emergency Department she was noted to be confused, had observations within normal limits and her urine tested positive for a urinary tract infection. A urine sample was sent to the laboratory for microscopy and culture, and she was commenced on oral antibiotics (Augmentin). As she lived at home on her own Mrs Cake was admitted to the hospital for care.

On the ward later that evening, her oxygen saturations were noted to be 90% on room air, with a systolic blood pressure of 110, respiratory rate of 28 and temperature of 35°C.

Supplemental oxygen was commenced by her nurse and a medical review was requested. The after hours resident doctor heard bibasal crackles on her chest, diagnosed a chest infection and ordered a chest x-ray. The doctor considered that her current antibiotic regime should treat her condition adequately.

During the evening Mrs Cake’s oxygen requirements continued to increase, however the junior nurse looking after her assumed this was due to her chest infection and did not call for any further medical review.

Her next set of observations were due at 10:00 pm, and at this point she was found to be cold, unresponsive and with a thready pulse. The Medical Emergency Team was called for, however she went into cardiac arrest shortly before their arrival and despite a prolonged resuscitation attempt she was unable to be revived.

The results from her urine sample were available the following day. The pathogen isolated was E. coli which was resistant to Augmentin. Unfortunately during Mrs Cake’s time in hospital the possibility of worsening urosepsis due to a pathogen resistant to the antibiotic chosen was never considered, and her worsening sepsis was mistaken for a concurrent infection.
Lessons learned

Investigation into this sentinel event focused on appropriate recognition and response to the deteriorating patient. The investigation team identified that elderly patients do not always develop a fever as a response to severe infection, and medications such as metoprolol often prevent the development of a fast heart rate. Decreasing oxygen saturations, increasing respiratory rate, and dropping blood pressure are important warning signs in deteriorating septic patients, but were not recognised by the junior staff looking after Mrs Cake that night.

Following review of this case, the hospital ensured that recognition of the deteriorating patient be included in teaching for all junior nursing and medical staff. A trial of new observation charts, designed to aid the recognition of deterioration, has also been implemented.

Note this is not a case from Western Australia. This is a composite incident. No real names have been used in this case example.

Improving patient safety

Recognising and Responding to Clinical Deterioration

“Ensuring that patients who deteriorate in hospitals receive appropriate and timely care is a key safety and quality challenge. All patients should receive the same level of comprehensive care irrespective of their location in the hospital or the time of day.”

WA Health is supporting the implementation of initiatives from the national Recognising and Responding to Clinical Deterioration Program, coordinated by the Australian Commission on Safety and Quality in Health Care, including the use of standardised observation charts in local hospitals and health services.

Current work in this area includes the convening of the WA Health Recognising and Responding to Clinical Deterioration Network to improve and align processes associated with clinical deterioration activities throughout the State. This Network will be used to disseminate clinical information to public hospitals/health services and to coordinate and implement national initiatives.

Previous work in this area includes the development and piloting of an adult observation chart and escalation processes through the WA Country Health Service.

Clinical Handover

“Effective communication at clinical handover is important for improving patient safety and reducing adverse outcomes.”
Endorsed by Health Ministers in April 2010, the Australian Commission on Safety and Quality in Health Care released the OSSIE Guide to Clinical Handover Improvement “to improve clinical handover practices at shift changes in a hospital setting”. The OSSIE Guide includes the iSoBAR tool developed by the WA Country Health Service and Royal Perth Hospital as one of its recommended tools to facilitate information exchange during clinical handover. OSSIE stands for:

\[ \text{O} = \text{Organisational leadership} \]
\[ \text{S} = \text{Simple solution development} \]
\[ \text{S} = \text{Stakeholder engagement} \]
\[ \text{I} = \text{Implementation} \]
\[ \text{E} = \text{Evaluation and maintenance} \]

WA Health is currently investigating options for the standardisation and implementation of clinical handover processes state-wide. The WA Clinical Handover Network has been established to initiate state-wide coordinated action, for public hospitals/health services, to reduce patient safety errors associated with clinical handover. This includes work to align the implementation of national handover initiatives, such as the OSSIE Guide to Clinical Handover Improvement, across WA Health.

In addition to this work, WA Health has partnered with Curtin University of Technology’s School of Nursing and Midwifery, and Royal Perth Hospital (RPH) on a clinical handover study. The study aims to analyse clinical handovers within a student training ward at RPH in order to design clinical handover practices, indicators and guidelines that are sensitive to different contexts.

\[ i \text{SoBAR stands for: Identity, Situation, Observation, Background, Agree a plan and Read Back.} \]
Case example

Mr Weaver, a seventy four year old man with dementia and a history of falls, was transferred to the Emergency Department with cellulitis (a skin infection). The medical history contained in the paperwork from the nursing home was limited to a list of his regular medications and his usual nursing care requirements. The attending resident medical officer made several attempts to contact the nursing home and Mr Weaver’s GP, but the phone was not answered and the GP’s office had shut for the day. His next of kin, his nephew, knew little about Mr Weaver’s medical history.

Due to the severity of the skin infection, Mr Weaver was commenced on intravenous flucloxacillin. Soon after this was given he developed coughing, a wheeze, redness to his face and chest, and facial swelling. Anaphylaxis was promptly recognised and successfully treated by medical and nursing staff with intramuscular adrenaline. Following discussion with the Infectious Diseases Consultant, Mr Weaver was then commenced on IV clindamycin, and went on to a full recovery.

Subsequently it was discovered that deep in the medical records, a letter from Mr Weaver’s GP referred to him being allergic to flucloxacillin, though the severity of the reaction was not described. This information was not documented anywhere else in the medical record, and had not been transferred to the front of the file, nor was an alert flagged on the hospital computer systems.

In addition, Mr Weaver’s allergy to flucloxacillin had not been documented in the aforementioned brief transfer papers from the nursing home.

Lessons learned

The handover of care from one care-giver to another continues to present potential risk for patients. It is all too easy for vital information to be omitted in the transfer of information. The interface between different health-care providers (GP, nursing home, ambulance service and hospital) represents a particular high-risk scenario for patients.

The incomplete and inconsistent documentation of patient allergies in the medical notes was identified as a contributory factor to this adverse incident by the review team. Work commenced to improve the documentation of patient allergies to be standardised across the hospital, including recording type and severity of reaction in a consistent place in the front of the patient’s health record. Alerts regarding allergies were also to be flagged in the hospital patient data computer systems.

The investigative review team also recommended promoting awareness with clinical staff regarding the Allergy Review Clinic provided by the Immunology Department and the Medic Alert Notification system.

Note this is not a case from Western Australia. This is a composite incident. No real names have been used in this case example.
4. Closing the loop

Completed sentinel event investigations
Eighty-nine percent of final sentinel event investigation reports for 2009/2010 were completed and forwarded to the OSQH by 31 August 2010, compared with 100% of investigation reports for 2008/2009. Hospitals/health services with overdue reports will be followed up by the OSQH to ensure completion of sentinel event investigations and the active management of safety and quality risks.

Open and closed events
Hospitals/health services have twelve months from the date the investigation report is received by the OSQH to implement recommendations. Once all recommendations are adequately implemented, the event is closed.

Health services provide an update to the OSQH on the status of the implementation of recommendations developed from sentinel event investigations on a six monthly basis. The most recent review on the status of the implementation of recommendations occurred in July 2010 (for sentinel events notified prior to December 2009).

At the time of review, 34 events were identified as open in the Sentinel Event Database. Of the 34 that remained open, 21 (62%) were not due to be closed at the time of the status review. The status review identified that two (6%) events had been open for more than 12 months from the receipt of the investigation report and were overdue to be closed (see Figure 3).

The responses received from health services in July 2010 indicate that 99.5% of all events notified before 31 December 2009 were closed within 12 months from the date of reporting recommendations (compared with 92% as of the January 2010 status report).

The review of the status of implementation of recommendations has shown that hospitals and health services are continuing to work effectively to ensure that the recommendations arising from the clinical investigation of sentinel events are successfully implemented.
Figure 3: The number of closed and open sentinel events (July 2010 Report on the Status of the Implementation of Recommendations)

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>Closed</td>
<td>11</td>
</tr>
<tr>
<td>Open - Due to be closed</td>
<td>2</td>
</tr>
<tr>
<td>Open - Not due to be closed</td>
<td>21</td>
</tr>
</tbody>
</table>

Note: Data correct as at 2nd August 2010.

Improving patient safety

Focus reports

During the 2009/2010 financial year the OSQH continued to produce a number of focus reports examining clinical incident data from both the WA Sentinel Event Program and the Advanced Incident Management System (AIMS) database to inform patient safety improvement and reform. Areas examined included medication incidents, mental health incidents, delays to theatre and medical emergency teams/responses.

Sharing lessons learned

WA Health has continued to disseminate valuable safety information across the State’s hospitals/health services to facilitate improvements in patient safety and to reduce the recurrence of clinical incidents and adverse events. Outlined below is an example of ‘sharing lessons learned’ developed in collaboration with the Women and Newborn Health Service (WNHS).
Sharing Lessons Learned: Preventing Magnesium Sulphate Overdose in Obstetric Settings

Magnesium sulphate is a drug commonly used in obstetric settings. An overdose of magnesium sulphate can result in respiratory depression and respiratory/cardiac arrest, therefore reducing the potential for this type of clinical incident is an important patient safety issue.

The Women and Newborn Health Service (WNHS) reviewed an incident using root cause analysis methodology that resulted in the implementation of a number of recommendations and actions for the prevention of magnesium sulphate overdose in obstetric settings. With a focus on designing the equipment to safely accomplish its intended purpose, the team at WNHS worked with the manufacturer for changes to the product and to associated guidelines.

The following changes and improvements for patient safety were implemented at WNHS:

- Use of standard manufacturer supplied magnesium sulphate IV bags containing 8g of magnesium sulphate in 100mL
- These bags are permanently labelled with an alert notification that is an easily visible and identifiable bright green
- Use of these standardised IV bags for all obstetric patients requiring magnesium sulphate anticonvulsant therapy
- Revised Obstetric and Midwifery clinical guideline for magnesium sulphate.

To ensure the safe administration of magnesium sulphate in obstetric settings, the OSQH in collaboration with the WNHS shared the lessons learned arising out of the investigation into the clinical incident involving an overdose of the medication.

To improve patient safety, obstetric units were recommended to:

- review their current practice in relation to the use of magnesium sulphate and ensure appropriate guidelines and processes are in place for the safe administration of this medication
- ensure midwifery and obstetric guidelines on the use of magnesium sulphate are regularly reviewed and updated
- further disseminate this information to obstetric clinical areas and staff involved in the prescribing, preparation and administration of magnesium sulphate
- ensure all midwives, obstetricians and medical staff, have a clear understanding of the signs and symptoms of therapeutic levels of magnesium sulphate and levels which suggest toxicity
- ensure that initial bolus and follow-up maintenance doses of magnesium sulphate are administered via a volumetric pump.
Sentinel event recommendations

Outlined below are examples of recommendations arising from the WA Sentinel Event Program that have been developed following the investigation of events occurring in the 2009/2010 financial year:

- Introduce multidisciplinary family case conferences
- Review, amend and continue to promote Medical Emergency Team (MET) tools and education process
- Ensure successful implementation of “team time out” procedures
- Review observation charts with a view to inserting prompts for MET criteria
- Develop and implement education programs for health professionals to identify and manage the seriously ill patient
- Establish an obstetric medical emergency response team
- Implement the WHO Surgical Safety Checklist
- Implementation of policy to ensure the use of interpreters when advising non-English speaking patients of discharge instructions and care plans
- Review of clinical handover processes.
5. 2010/2011 Sentinel Event Program

“The effects of serious incidents for patients, their relatives, and healthcare staff are long lasting. We therefore owe it to our patients and our staff to have an effective system that ensures that the lessons learned are long lasting. If we put into place the processes suggested, we have a realistic and sustainable chance of ensuring that experience of one incident can prevent future harm.”

Governance of the WA Sentinel Event Program

During the 2009/2010 financial year, the governance structure of the WA Sentinel Event Program was evaluated. Following this review the Sentinel Event Executive Review Committee (SEERC) and the Sentinel Event Review Group (SERG) were disbanded.

For the 2010/2011 financial year a Peak Incident Review Committee (PIRC) has been established that will have governance over sentinel events and clinical incident management, mortality review and implementation of recommendations arising from coronial inquest findings.

Integrated Clinical Incident Management Policy

WA Health is working towards improvements in the notification, investigation, analysis, reporting and monitoring of clinical incidents, including sentinel events and preventable inpatient deaths. Via the provision of new clinical incident management software that allows electronic notification, more efficient, continuous capture, management and monitoring of clinical incidents can occur. Timely analysis and reporting of clinical incidents will ensure more appropriate and effective decision-making processes to minimise the recurrence of adverse events and to facilitate sharing the lessons learned, both within and between health services and/or state-wide.

In addition to software improvements, in 2010/2011, WA Health will implement an integrated clinical incident management policy that incorporates the current clinical incident, sentinel event and mortality review policies. The integrated clinical incident management policy will define processes to effectively manage clinical incidents to prevent future patient harm by:

- Identifying and treating hazards before they cause harm
- Identifying when patients are harmed and promptly intervening to minimise harm
- Taking preventative actions
- Sharing lessons learned from clinical incident investigation.
Patient Safety Alert Policy

WA Health is working towards the implementation of a patient safety alert system in 2010/2011 to prevent the occurrence of clinical incidents by systematically disseminating patient safety information and recommendations for action across the WA health system, thereby “closing the loop”.

Through the development of a WA Health patient safety alert system, closing the loop will occur in two ways:

- Ensuring that important patient safety information is fed back to the health system at various levels
- Ensuring that action is taken and changes to clinical practice are implemented to improve patient safety and prevent recurrence of clinical incidents.

Future directions:

Issues arising following the examination of sentinel events for 2009/2010 that will be given particular attention over the next 12 months will include:

- Decreased reporting
- Misdiagnosis and subsequent management
- Investigation of sentinel events that involve more than one healthcare provider /agency (system events)
- Resourcing issues impacting on patient care (i.e. bed shortages, delays to theatre etc)
- Recognition and response to the deteriorating patient
- Retained instruments and other material following surgery.

WA Health’s complementary clinical incident reporting systems, timely identification, reporting and investigation of clinical incidents will continue to facilitate the development and implementation of robust recommendations to prevent the recurrence of adverse events and make improvements to the safety and quality of healthcare provision.
6. Contact Information

For information on making a compliment or complaint about the provision of healthcare, consumers can contact their local hospital patient liaison officers or complaint coordinators.

Consumers may also wish to contact the following agencies:

**Office of the Chief Psychiatrist**  
Telephone: (08) 9222 4462

**Health Consumers’ Council of Western Australia**  
Telephone: (08) 9221 3422  
Freecall: 1800 620 780  
Email: info@hconc.org.au

**Office of Health Review**  
http://www.healthreview.wa.gov.au  
Telephone: (08) 9323 0600  
Freecall: 1800 813 583

For information regarding safety and quality initiatives or the WA Sentinel Event Program contact:

**WA Department of Health – Office of Safety and Quality in Healthcare**  
http://www.safetyandquality.health.wa.gov.au  
Telephone: (08) 9222 4080  
Email: safetyandquality@health.wa.gov.au
APPENDIX 1: Categories of contributing factors used in analysing sentinel events

Table 6: Categories of contributing factors

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>communication between staff, patients and family members</td>
</tr>
<tr>
<td>Equipment</td>
<td>faulty equipment, lack of equipment provision</td>
</tr>
<tr>
<td>External factors</td>
<td>issues external to the reporting organisation</td>
</tr>
<tr>
<td>Health information</td>
<td>documentation – or lack of – in medical record, communication of information between hospital/health service and external service providers</td>
</tr>
<tr>
<td>Human resources</td>
<td>staff allocation, staff training, staff supervision, staff appraisals, recruitment</td>
</tr>
<tr>
<td>Inter-hospital issues</td>
<td>issues with transfer of a patient from one hospital/health service provider to another</td>
</tr>
<tr>
<td>Physical environment</td>
<td>issues with the physical environment of the hospital/health service or general suitability of the environment to support the function it is being used for</td>
</tr>
<tr>
<td>Policy, procedures and guidelines</td>
<td>behavioural assessment, physical assessment, patient observation process, clinical management guidelines, identification process, coordination of care</td>
</tr>
<tr>
<td>Translation issues</td>
<td>issues with translation of health information for a patient</td>
</tr>
<tr>
<td>Transportation issues</td>
<td>issues with interagency or hospital/health service transportation of a patient</td>
</tr>
<tr>
<td>Other factors</td>
<td>patient co-morbidities, patient factors</td>
</tr>
</tbody>
</table>
### APPENDIX 2: Sentinel event categories.

#### Table 7: Categories of sentinel events in Western Australia

<table>
<thead>
<tr>
<th>Category</th>
<th>Healthcare incidents that must be reported as sentinel events</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Procedures involving the wrong patient or body part resulting in death or major permanent loss of function.</td>
</tr>
<tr>
<td></td>
<td>- Surgery performed on a wrong body part or the wrong surgical procedure performed that is not consistent with the documented informed consent of that patient.</td>
</tr>
<tr>
<td>2</td>
<td>Suicide of a patient in an inpatient unit.</td>
</tr>
<tr>
<td></td>
<td>- Mental Health Services are required to report to the Chief Psychiatrist episodes of unexpected death.</td>
</tr>
<tr>
<td>3</td>
<td>Retained instruments or other material after surgery requiring re-operation or further surgical procedure.</td>
</tr>
<tr>
<td></td>
<td>- 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.</td>
</tr>
<tr>
<td>4</td>
<td>Intravascular gas embolism resulting in death or neurological damage.</td>
</tr>
<tr>
<td></td>
<td>- 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.</td>
</tr>
<tr>
<td>5</td>
<td>Haemolytic blood transfusion reaction resulting from ABO incompatibility.</td>
</tr>
<tr>
<td>6</td>
<td>Medication error resulting in major permanent loss of function or death reasonably believed to be due to incorrect administration of drugs. Includes:</td>
</tr>
<tr>
<td></td>
<td>- 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 and insufficient surveillance (e.g. blood tests, clinical observation). This category excludes reasonable differences in clinical judgment on drug selection and dose.</td>
</tr>
<tr>
<td></td>
<td>Maternal death or serious morbidity associated with labour or delivery.</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Maternal death or serious disability associated with labour or delivery while the patient is being cared for in a facility or by maternity care providers, including events that occur within 42 days post delivery.</td>
</tr>
<tr>
<td>8</td>
<td>Infant discharged to wrong family or infant abduction.</td>
</tr>
<tr>
<td>9</td>
<td>Other adverse event resulting in serious patient harm or death.</td>
</tr>
<tr>
<td></td>
<td>Complication of resuscitation; complication of anaesthesia management; complication of surgery; fetal complication; complication of an inpatient fall; misdiagnosis and subsequent management; infection control breach; patient absconding with adverse outcome; hospital process issues; medication error (not death); other.</td>
</tr>
</tbody>
</table>
APPENDIX 3: Safety management systems in WA hospitals/health services

Additional clinical incident management systems that contribute to the safety and improvement of patient care include:

- **Western Australian Review of Mortality (WARM)** requires all deaths that occur in public hospitals and licensed private healthcare facilities in Western Australia to be classified and reviewed. WARM is part of a system-wide approach to ensure that all preventable inpatient deaths are reviewed and is complementary to the sentinel event management process.

- **Western Australian Audit of Surgical Mortality (WAASM)** is an external, independent and confidential peer review surgical audit based on evidence-based methodology adapted from the Scottish Audit of Surgical Mortality. WAASM commenced in 2001, and is funded by WA Health, while being managed by the Royal Australasian College of Surgeons. WAASM is designed to provide feedback by surgeons to surgeons; the purpose of this feedback is to inform, educate, facilitate change and improve the practice of all clinicians. The WAASM process has contributed to system-wide learning on contributing factors associated with surgical deaths, e.g. VTE prophylaxis.

- **Coronial Investigations** into deaths occurring within the health system and reported under the Coroners Act 1996.

- **Clinical Incident Management System (using the Advanced Incident Management System AIMS)** is in place across all WA public hospitals/health services and facilitates the reporting, investigation, analysis and monitoring of clinical incidents that occur as a result of the provision of healthcare. The main objective of AIMS is to improve healthcare provision through the voluntary reporting of clinical incidents that enables hospital/health service staff to investigate, identify contributing factors and system errors that may have caused or contributed to the incident. Preventative measures can then be put in place to minimise the risk of similar events occurring in the future.

- **Open Disclosure** is the process of communicating with patients and their nominated relatives/carers following a clinical incident or adverse event. The Open Disclosure Policy: Communication and Disclosure Requirements for Health Professionals Working in Western Australia was released in May 2009. The Policy outlines the processes that health practitioners and hospitals/health services in WA are to follow when informing a patient/and or their nominated relatives/carers about a clinical incident that has occurred in a WA public hospital/health service.
7. References


