Acknowledgements

The Patient Safety Directorate (PSD) 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 Peak Incident Review Committee.

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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Disclaimer

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Suggested Citation:

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Executive Summary

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.

Western Australia has a comprehensive sentinel event management program in place and this seventh annual report includes events occurring in both the public and private healthcare sectors.

Since the inception of the WA Sentinel Event Program in October 2003, there has been a total of 530 potential sentinel events notified. Of these events, 73 have been declassified leaving 457 confirmed events for inclusion in the WA Sentinel Event Program to 30 June 2011.

During the 2010/2011 financial year 104 sentinel events were notified and 96 events were confirmed. This represents only 0.01% of all public and private health service separations (one sentinel event per 10,000 separations).


The increase in reported sentinel events in 2010/2011 reflects a strong patient safety culture and the commitment of WA hospitals and health services to effectively manage and learn from clinical incidents.

During the 2010/2011 financial year 58% of sentinel events were associated with the death of the patient. The percentage of events that have resulted in patient death has decreased from 64% in 2009/2010 to 58% in 2010/2011.

In 2010/2011 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 79 events in this “other” category covered a variety of events, the majority of which fell into the subcategories of “hospital process issue”, “other” and “complication of an inpatient fall”.

Ninety-five percent of final sentinel event investigation reports for 2010/2011 were completed and forwarded to the Patient Safety Directorate (PSD) by 31 August 2011, compared with 89% of investigation reports for 2009/2010.

In approximately 69% of sentinel events, public hospitals and health services indicated, at the time of notification, that open disclosure would occur. This compares with 66% for 2009/2010.

---

* The Patient Safety Directorate within the Office of Safety and Quality in Healthcare, Performance Activity and Quality Division manages of the WA Sentinel Event Program.
1. Introduction

“Patient safety events, including preventable adverse events and near misses, will continue to occur in healthcare; it is essential therefore to gain a better understanding of these events and to learn from them”.¹

The WA Sentinel Event Program was established in October 2003 and requires the mandatory notification of events from public hospitals and health facilities, including community groups, primary care units and licensed private facilities.²

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.³

Sentinel events are to be notified to the Director, PSD 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 the PSD 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 the PSD, 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.

Western Australia continues to include the notification of sentinel events from both the public and private healthcare sectors.

Governance

During the 2010/2011 financial year governance of the WA Sentinel Event Program transitioned from the Sentinel Event Executive Review Committee (SEERC) and the Sentinel Event Review Group (SERG) to a single committee, the Peak Incident Review Committee (PIRC) in addition to oversight by the Director, PSD.

The PIRC monitors hospital and health service compliance with the requirements to:

- notify and investigate sentinel events and clinical incidents in accordance with policy
- undertake inpatient mortality review processes (in accordance with the WA Review of Mortality Policy (2008))
- take action in response to coronial inquest findings and recommendations.

The governance structure of the program continues to ensure:

- 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 potential system errors that contributed to the event’s occurrence. Following the investigation, some events 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 PIRC 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 PIRC 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 2010/2011 a total of eight notified events were subsequently declassified. This compares with four events declassified in the 2009/2010 financial year.

Sentinel events declassified in 2010/2011 included the following types of events:

- complication of an inpatient fall with no system or process issues being identified as contributing factors
- care of the newborn infant in the postnatal period
- death of an inpatient which occurred as a result of an accident unrelated to healthcare delivery
- retained material from a procedure where the outcome of the investigation established that this was not due to an equipment failure
- a process issue which was investigated and deemed appropriately managed by the healthcare service.

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. The WA Open Disclosure Policy mandates that open disclosure is initiated for sentinel events occurring in public hospitals. Table 1 indicates that 69% of sentinel events in the public sector and 53% of sentinel events in the private sector initiated the open disclosure process.

---

b Data correct as of 31 August 2011.
Table 1: Percentage of confirmed sentinel events initiating the open disclosure process

<table>
<thead>
<tr>
<th></th>
<th>Public</th>
<th></th>
<th>Public</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Open disclosure will occur</td>
<td>66%</td>
<td>69%</td>
<td>67%</td>
<td>53%</td>
</tr>
<tr>
<td>Open disclosure will not occur</td>
<td>12%</td>
<td>31%</td>
<td>6%</td>
<td>47%</td>
</tr>
<tr>
<td>Nil response</td>
<td>22%</td>
<td>0%</td>
<td>27%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Notes: Data is correct as of 05/09/2011. The data base is cumulative and changes over time as events are investigated retrospectively. Data does not include declassified events.

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) was finalised in 2010/2011.5

Key deliverables included in the project, some of which are to be finalised in 2011/2012, are:

- 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 2010/2011

Notifying sentinel events has been mandated for the WA health system since October 2003. Since this time a total of 530 potential sentinel events have been reported.

Of these 530 notified events, 73 were considered not to fall in to the category of sentinel event or could not have been preventable and were subsequently declassified. Therefore, 457 confirmed events have been included in the WA Sentinel Event Program to 30 June 2011.

In 2010/2011, 104 potential sentinel events were notified to the WA Sentinel Event Program from both public and private healthcare facilities.

A total of eight 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 2010/2011 financial year, there were 96 confirmed sentinel events.

The increase in reported sentinel events in 2010/2011 reflects a strong patient safety culture and the commitment of WA hospitals and health services to effectively manage and learn from clinical incidents.

The 96 confirmed sentinel events represent only 0.01% of all public and private health service separations (one sentinel event per 10,000 separations). The rate of sentinel events per separation has remained constant for the 2007/2008, 2008/2009 and 2009/2010 financial years.

For the 2010/2011 financial year, 58% of confirmed sentinel events led to the death of the patient, a decrease compared to the previous financial year (64% of confirmed sentinel events resulting in the death of a patient).

In 2010/2011, of the 96 confirmed sentinel events, 17 fell into the core set of eight national sentinel event categories; an increase compared to the previous financial year (11 events notified). The remaining 79 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.

---

The total number of separations is as reported to the Hospital Morbidity Data System (HMDS). Data correct as of 28/9/2011. Public hospital separations are estimated to be approximately 96% of the total for 2010/2011. Private hospital separations are estimated to be approximately 94% of the total for 2010/2011. Excludes unqualified 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. Public patients at Joondalup Health Campus and Peel Health Campus have been included in the public hospital group. Public separation counts are taken from TOPAS and HCARe discharge extracts and Next Step separations from HMDS.
Table 2 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 2: Notified and confirmed sentinel events for WA public and private hospitals 1 October 2003 to 30 June 2011\(^d\)

<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>
<tr>
<td>2010/2011</td>
<td>104</td>
<td>96</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 decreased from 78% in 2003/2004 to 58% in 2010/2011.

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 2011\(^e\)

\(^d\) Note: 2003/2004 data compromises nine months only – 1 October 2003 to 30 July 2004.

\(^e\) Note: 2003/2004 data comprises nine months only – 1 October 2003 to 30 July 2004.
Table 3 illustrates notifications for the national sentinel event categories for each financial year since the inception of the Sentinel Event Program by WA Health in October 2003.

### Table 3: Confirmed sentinel events for WA public and private hospitals by national category 1 October 2003 to 30 June 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<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>
<td>2</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>
<td>7</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>
<td>2</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>
<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>
<td>1</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>
<td>2</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>
<td>3</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>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>4</strong></td>
<td><strong>19</strong></td>
<td><strong>13</strong></td>
<td><strong>15</strong></td>
<td><strong>36</strong></td>
<td><strong>27</strong></td>
<td><strong>11</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

*Note: 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 4 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 4: 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 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<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>
<td>2</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>
<td>2</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>
<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>
<td>9</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>
<td>15</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>
<td>4</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>
<td>4</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>
<td>15</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>
<td>11</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>-</td>
<td>-</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>
<td>1</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>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>19</td>
<td>23</td>
<td>31</td>
<td>30</td>
<td>45</td>
<td>63</td>
<td>36</td>
<td>79</td>
</tr>
</tbody>
</table>

Note: 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 since 2009/2010. *** New sub category added for 2006/2007. These events would previously have been classified as “other”. **** From the 2009/2010 financial year this category has been renamed to “misdiagnosis and subsequent management” from “not appropriate”.


Table 5 illustrates total confirmed sentinel events notified in the national sentinel event categories and the “other” category used by the WA Sentinel Event Program. The majority of confirmed sentinel events continue to be notified into the “other” category.

**Table 5: Total confirmed sentinel events notified by national categories and “other adverse event resulting in serious patient harm or death” for WA public and private hospitals 1 October 2003 to 30 June 2011**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>National sentinel event categories</td>
<td>4</td>
<td>19</td>
<td>13</td>
<td>15</td>
<td>36</td>
<td>27</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>WA category: “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>
<td>79</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>
<td>96</td>
</tr>
</tbody>
</table>

Note: 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 6 illustrates confirmed sentinel events by category where the outcome resulted in the patient’s death.

Table 6: Confirmed sentinel events where the outcome was patient death by category for WA public and private hospitals 1 October 2003 to 30 June 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<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>
<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>
<td>7</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>
<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>
<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>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>
<td>2</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>
<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>
<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>
<td>46</td>
</tr>
<tr>
<td>TOTAL</td>
<td>18</td>
<td>22</td>
<td>28</td>
<td>29</td>
<td>45</td>
<td>48</td>
<td>30</td>
<td>56</td>
</tr>
</tbody>
</table>

Note: 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 7 illustrates confirmed sentinel events where the outcome resulted in the patient’s death by “other” subcategory.

Table 7: 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 2011

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Complication of anaesthetic management</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Complication of emergency/resuscitation management</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>2</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>
<td>1</td>
</tr>
<tr>
<td>Fetal complication of delivery (including neonatal death)</td>
<td>0</td>
<td>6</td>
<td>11</td>
<td>2</td>
<td>6</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>
<td>11</td>
</tr>
<tr>
<td>Medication error with serious consequence (not death)</td>
<td>Not applicable</td>
<td></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>
<td>3</td>
</tr>
<tr>
<td>Complication of an inpatient fall</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Mental health incident*</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Infection control breach</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Misdiagnosis and subsequent management**</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23</td>
<td>31</td>
<td>42</td>
<td>25</td>
<td>46</td>
</tr>
</tbody>
</table>

Notes: 2003/2004 data comprises nine months only – 1 October 2003 to 30 July 2004. * Category not included since 2009/2010. ** From the 2009/2010 financial year this category has been renamed to “misdiagnosis and subsequent management” from “not appropriate”.


3. Contributing System Factors

Key results

- In 2010/2011 there was an average of two contributing factors identified for each sentinel event\(^k\) during the investigation that needed to be taken into consideration in developing recommendations to prevent recurrence of similar future events, compared with three contributing factors per event in 2009/2010.

- Policy/procedure/guidelines, communication and “other” factors (including patient factors) were the three most commonly identified contributing factors for events in 2010/2011.

“Inadequacies in aspects of quality which impinge on safety may be systematically captured as contributing factors, such as external or environmental factors (including availability of resources, transport and so on), organisational factors (such as rosters, protocols) and human factors (factors affecting the behaviour and performance of both individuals and teams)\(^6\).

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 eleven contributing factor categories currently being used by the WA Sentinel Event Program.

Figure 2 illustrates the identified contributing factors related to all sentinel events notified in the 2009/2010 and 2010/2011 financial years.

Overall, for the 2010/2011 financial year, an average of two 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.

\(^k\) This is based on 96 confirmed sentinel events. Of the total 96 confirmed sentinel events, five events were excluded as a final sentinel investigation report was not provided and another one event was excluded as no contributing factors were provided in the investigation report.
The top three contributing factors identified in 2010/2011, following the investigation of sentinel events, were policy/procedure/guidelines (72%), communication (69%) and other (43%). This compares with the top three contributing factors for the 2009/2010 financial year which were policy/procedure/guidelines (82%), communication (71%) and human resources (55%).

Communication continues to be identified as a key contributing factor in notified sentinel events reinforcing the importance of effective clinical handover practices to improve patient safety.
3.1 Wrong patient or body part, or wrong procedure

Key results

- Two sentinel events were notified in the 2010/2011 financial year involving the wrong patient or body part, or wrong procedure.
- This is an increase from the one event reported in the 2009/2010 financial year.
- The sentinel events were both associated with wrong site surgery of a digit.

WA Health amended this category following national review of the core sentinel event categories. From 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.

The two sentinel events notified in this category were associated with wrong site surgery of a digit. While neither event resulted in death or major permanent loss of function, each health service identified the incident as warranting notification and investigation as a sentinel event.

These sentinel events identified communication, policy/procedure/guidelines and safety mechanisms as contributing factors.

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

- “team time out” procedures to include the whole surgical team
- improved site marking
- improved documentation (legibility).

Improving patient safety

Complications of surgery and adverse events caused by procedures on the wrong patient or wrong site remain a significant patient safety concern locally and internationally. In March 2011 the WA Health Surgical Safety Checklist was released for implementation as a minimum standard by June 2011.

The World Health Organisation (WHO) developed the Surgical Safety Checklist as a tool to reduce the rate of surgical error and complications. The Checklist includes a core set of safety checks for use in any operating theatre environment.

The Checklist is designed to improve safety by focussing on anaesthetic safety practice, ensuring correct site surgery, avoiding surgical site infection and venous thromboembolism. Most importantly the Checklist enhances communication within the surgical team, a critical factor in ensuring safety and quality of care. It’s structure is based on the universally accepted sequence of surgical and other invasive procedures.

The recently developed WA Health Checklist is to be implemented as a minimum standard in all WA operating theatres and procedure rooms where invasive procedures requiring sedation/anaesthesia are performed.8
3.2 Suicide of a patient in an inpatient unit

Key results

There were seven “inpatient suicides” notified in the 2010/2011 financial year compared with three in 2009/2010.

In this category, four patients committed suicide after absconding from the ward, two patients committed suicide as an inpatient and one as an outpatient. While the national sentinel event category focuses on inpatient deaths, WA Health continues to accept notifications of events occurring outside inpatient settings to ensure lessons can be learned from all patient suicides to improve the delivery of care of mental health patients.

The most common contributing factors for this category were work environment, communication and knowledge/skills/competence. Patient factors were also identified as contributing factors (e.g. drug and substance use).

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

- removal of identifiable means of self harm from patient environments
- improved observation processes and regular reviews of observation categorisation
- improved mental state assessments
- development of a suicide risk assessment tool for non-specialist staff
- increased availability of mental health liaison nurse support
- improved clinical documentation
- revision of the hospital-wide ‘missing inpatients’ policy
- improved management plans.

Improving patient safety

The Department of Health has progressed improvements in the quality of documentation through the standardised documentation initiative which has referenced best practice clinical documentation in jurisdictions in Australia. The pilot project used to facilitate this initiative is currently being evaluated so that the full implementation can take into account practical matters in the use of the improved documentation.

Policies regarding patients who have absconded or who are regarded as missing from inpatient facilities have been reviewed and changes appropriate to communication and immediate actions have been instigated.

Recommendations arising from coronial inquests in relation to required observation of patients at risk have been further implemented and changes made to ensure consistency with the intent of the recommendations to improve the safety and interventions for patients at risk of harm. In addition, improvements in recording of the timing and receipt of medications have been made following consideration of related coronial recommendations.
The clinical risk assessment and management policies and tools are being further reviewed to improve the clinical services management of suicide and other risk issues.

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

**Key results**
- In the 2010/2011 financial year, two events of this type were notified, compared with four events notified in the previous financial year.

The events notified in this category were related to a retained surgical pack and a retained raytec “dab” or swab.

The most common contributing factors for this category were communication, knowledge/skills/competence and policies/procedures/guidelines.

Examples of recommendations included the need for:
- mandatory competency regarding counting of accountable items
- improved documentation
- improved handover processes
- education regarding existing policy/procedures.

**Improving patient safety**

WA Health will continue to monitor events in this category and the impact of the implementation of the WA Health 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 2010/2011 financial year one event of this type was notified, compared with zero events reported in the previous year. The event resulted in no patient harm.

This category includes events where patients have been administered ABO incompatible blood.

The investigation of this event identified the need for:
- updated policy (checking blood and blood products against patient identification)
- improved documentation
- staff education.

3.6 Medication error resulting in major permanent loss of function or death of a patient reasonably believed to be due to incorrect administration of drugs

Key results
- For the 2010/2011 financial year, two patient deaths were attributed to a medication error compared with one death notified in 2009/2010.

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 events notified in this category were associated with lack of appropriate administration of venous thromboembolism (VTE) prophylaxis and procedural sedation.

The most common contributing factors for this category were policy/procedure/guidelines, physical environment, other (patient factors) and communication.

Examples of recommendations included the need for:
- staff education
- development of practice guidelines regarding post operative care
- improved recognition and response to the deteriorating patient
- development of hospital guidelines for medical escort of the critically ill patient.
Improving patient safety

National inpatient medication chart
WA Health is represented on the national governance committee, Health Service Medication Expert Advisory Group (HSMEAG), overseeing safety aspects and quality improvement of the National Inpatient Medication Chart.

Medication reconciliation
Raising patient awareness of the need to understand all of their medications and how they should take them is an important patient safety matter. Evidence suggests that a formal procedure for matching, or reconciling, medication information when patients move on from one care setting to another is an effective way to reduce medication errors.

A WA Medication Reconciliation Network has been formed to address consistency of medication reconciliation practices across all WA hospitals. During 2010/2011, WA Health in conjunction with the Medication Reconciliation Network, developed the following medication safety initiatives:

- Development and distribution of a “Going into Hospital” poster for GP surgeries and community pharmacies. The poster was developed to raise patient awareness of their medications and to encourage patients to bring their medications or a medication list with them upon admission to hospital.
- Encouraging ambulance staff to bring the patient’s medications to the hospital in a Patient’s Own Medication (POM) bag.
- Development and implementation of standardised tools, such as medication management plans, across WA Health.

**Standardisation of parenteral labelling practices**

Labelling is a recognised risk in the safe administration of injectable or parenteral medicines. Preparation of injectable medicines for bolus injection or infusion is complicated with multiple opportunities for error. Labelling of injectable medicines is often not done or is incomplete, omitting information such as the name of the medicine, medicine dose, patient name or time of preparation. It has been shown that errors in injectable medicine administration are less likely to occur when a single person is responsible for preparing and labelling each injectable medicine, and that medicines in well labelled syringes are more likely to have been prepared correctly.

WA Health has adopted the labelling recommendations developed by the Australian Commission on Safety and Quality in Health Care (ACSQHC) to standardise labelling of parenteral medicines, fluids and lines as a safety initiative and are currently working towards implementation by March 2012.

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

**Key results**
- Three events were notified in 2010/2011, one event resulted in perinatal and maternal death, one event resulted in maternal morbidity and one event resulted in infant morbidity.
- In 2009/2010 two events were notified, one event resulted in permanent loss of function and one event resulted in maternal and fetal mortality.

The events notified in this category were associated with pre-term labour and intrapartum haemorrhage, post partum haemorrhage and peripartum cardiomyopathy.

The most common contributing factors with regard to this event category were communication, other factors (patient factors), equipment and policy/procedure/guidelines. Examples of recommendations included the need for:
- improved recognition and management of pre-term labour
- consideration of the development of an Obstetric Emergency Response Team
- improved clinical handover
- development of a massive blood loss protocol.
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 Nursing and Midwifery Office to ensure safe and high quality maternity care for all women.

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 2010/2011 financial year 79 events were notified in this category compared with 36 in 2009/2010. Analysis of this category is provided in Section 2 (see Table 3).
- The top three subcategories of “other” for 2010/2011 were hospital process issue (15 events), “other” (15 events) and complication of an inpatient fall (11 events) compared with “other” (10 events), complication of surgery (6 events) and misdiagnosis and subsequent management (6 events) in 2009/2010.
- The majority of sentinel events resulting in death of the patient were captured in this other category (46 deaths) compared with the eight national sentinel event categories (10 deaths).

WA Health has a comprehensive incident reporting system to capture complex incident information from a variety of health services and sources. The WA Sentinel Event Program is a fundamental element of WA Health’s Clinical Governance Framework. In addition, the WA Review of Mortality process has established a consistent approach to the classification and review of all inpatient deaths for both public and private hospitals/health services. This comprehensive mortality review process also provides a secondary identification source for sentinel events notified in this “other” category.

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

For the 2010/2011 financial year the most common contributing factors were hospital process issues, “other” and complication of inpatient fall which are outlined further below.

3.9.1 Other: other

In the 2010/2011 financial year 15 “other” events were related to “other” issues compared with 10 in 2009/2010 (“other/other”). Events notified as “other” included the following:

- pre-hospital care
- complication of anticoagulation reversal
- delayed treatment and assessment of a deteriorating patient
- mental health events (i.e. events not included in category two such as attempted suicide of an inpatient, suicide post discharge and management of physical co-morbidities)
- wrong site dental extraction
- delay in treatment and surgical intervention
- multiagency events.

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

- development of a guideline for the urgent reversal and recommencement of anticoagulation for emergency situations
- teamwork, communication and leadership in the management of ill patients
- implementation of a standardised formal psychiatric risk assessment tool
- development of a mental health medical escalation process
- implementation of a correct client, correct procedure, correct tooth policy
- establishment of protocols for the management of physical illness for mental health inpatients
- implementation of iSoBAR\textsuperscript{m} principles to surgical areas with a focus on telephone handover communication
- improved discharge communication and provision of information for the patient and multiple care providers
- education and training regarding cardiac arrest management
- establishment of communication processes for notification of patient transfers between health services.

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

The majority (80%) of events notified as “other/other” for the 2010/2011 financial year resulted in patient death and were not included in the alternative “other” subcategories. Six events were associated with mental health patients.

\textsuperscript{m} iSoBAR is a step by step process that provides a sequential approach to giving and receiving clinical handover. In WA, iSoBAR defines the minimum data set to be applied in clinical handover.
Notification of “other/other” events is welcomed to ensure the comprehensive and systematic evaluation of breakdowns in healthcare systems and the implementation of recommendations to minimise the occurrence of similar events in the future.

**Case example**

Mr Pie, a 19 year old man, was brought into hospital by the police as they were concerned about his behaviour. He was found standing in the middle of the street “directing traffic”. Mr Pie was a student and his friends said that he had been acting very strangely and had been smoking a lot of “dope”.

Mr Pie had a psychiatric assessment and was admitted as an involuntary patient under the Mental Health Act. He was diagnosed with a paranoid psychosis, possibly secondary to marijuana usage.

A couple of days later at 2:30pm, another patient on the same unit became agitated and aggressive. Whilst staff where attending to him, Mr Pie left the ward.

Mr Pie was on hourly observations. His nurse had prepared his 3:00pm medications and checked and signed for them on the medication chart. However Mr Pie was not administered his medications at 3:00pm.

Because of the problem with the aggressive patient, the care of Mr Pie was not handed over to the afternoon staff.

When the next nurse came on shift she checked Mr Pie’s medical records and saw the 3:00pm entry stating his medication had been given. The nurse assumed he had been seen at the time 3:00pm when was given his medication, which was not the case.

At 4:00pm, Mr Pie could not be found in the ward. Staff did not inform the charge nurse until 4:45pm. The nurse-in-charge informed security and the police. Security searched the grounds unsuccessfully.

The police contacted the ward at 5:30pm to say that Mr Pie had been run over by a truck on the freeway sustaining life threatening injuries and had been admitted to an Intensive Care Unit.
Lessons learned
The investigation of this sentinel event identified a number of key areas for system improvement and resulted in the development of the following recommendations:

- Improved hospital security including the implementation of doors that can only be entered or exited via the use of staff swipe cards.
- Education and training to be provided to all staff to ensure the use of iSoBAR principles for clinical handover. This recommendation was to be followed by an audit of clinical practice to ensure compliance.
- All staff to review the hospital clinical documentation policy to ensure that documentation in patient medical records is contemporaneous and reflects the actual time of care/medications provided.
- The review of this event identified that the awareness of the escalation policy regarding the management of absconding patients was low. An education and training program was developed to ensure staff complied with the policy.

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

3.9.2 Other: hospital process issues
In the 2010/2011 financial year 15 “other” events were related to hospital process issue events compared with three in 2009/2010. Events notified as associated with hospital process issues included:

- delay in recognising and responding to clinical deterioration (including post operative, paediatric and post fall patients)
- delayed diagnosis
- management of sepsis
- triage of patients presenting to the Emergency Department
- delays in treatment and referral
- patient transfer between health services
- misinterpretation and ineffective clinical handover
- coordination and continuum of patient care.

The most common contributing factors to the hospital process issues’ sub-category were policy/procedure/guidelines, communication and human resources.
The investigation of events in this broad category has identified system vulnerabilities and areas for improvement including:

- early recognition and response to clinical deterioration
- clinical handover
- management of urgent pathology tests
- discharge planning and documentation
- on-call availability of clinical specialists
- management of diagnostic pathology results
- recognition of the need to escalate care for medical review during triage
- development of MET\(^n\) style processes in the Emergency Department
- introduction of standardised graphical observation charts
- cultural awareness training for staff
- management of re-presenting patients to the Emergency Department
- development of a pressure ulcer prevention plan
- development of patient transfer guidelines.

Improving patient safety

**Recognising and Responding to Clinical Deterioration**

“Recognising patients whose condition is deteriorating and responding to their needs in an appropriate and timely way are essential components of safe and high quality care”\(^{10}\)

WA Health has been progressing patient safety work in this important area and in 2011 the WA Health Recognising and Responding to Clinical Deterioration Statewide Executive Steering Committee was established to:

- afford strategic governance to the WA Health recognition and response to clinical deterioration strategy
- provide executive leadership to health services in this critical safety area
- provide oversight to the development of a Statewide policy to recognise and respond to clinical deterioration in line with the National Consensus Statement developed by the ACSQHC
- facilitate communication, clinical leadership, education and support across the WA health system regarding recognising and responding to clinical deterioration
- provide oversight of the development and implementation of a Statewide observation chart to ensure that patients who deteriorate in hospitals receive appropriate and timely care.

\(^n\) Medical Emergency Team (MET).
The Recognising and Responding to Clinical Deterioration WA Observation and Response Chart subcommittee has also been established to assist in the piloting and roll out of the WA Adult Observation and Response Chart (WA A-ORC) and WA A-ORC for obstetric and gynaecology patients.

Improving the recognition and response to clinically deteriorating patients is a key patient safety initiative for WA Health. For the 2011/2012 financial year, “delay in recognising and responding to clinical deterioration” has been included as a new clinical incident subcategory to ensure lessons can be learnt from adverse events in this area.

**Clinical Handover**

“Clinical handover is a high risk area for patient safety”\(^\text{11}\) and a priority area for patient safety improvement for the WA health system. The WA Clinical Handover Network, which has representation from all WA Area Health Services as well as all WA private hospitals, has now been in operation for a year. In this time, the Network has enabled the sharing and aligning of clinical handover practice improvements across WA Health services.

A Clinical Handover Programme is being developed to ensure that all handovers initiated by WA Health staff are consistently safe and effective, and in line with the National Safety and Quality for Health Service (NSQHS) Standards.\(^\text{p}\) The Policy will provide a framework so that:

- healthcare workers have the skills, knowledge and attitude to adopt effective handover principles and practices
- effective clinical handover is considered core business
- resources, such as staff time, are allocated for handover processes
- iSoBAR, as a minimum data set is applied in handover.\(^\text{q}\)

Implementation of the policy in 2011/2012 and continued quality improvement work in this area aims to improve all clinical communication.


\(^\text{p}\) Australian Commission on Safety and Quality in Health Care. At the time of writing, the NSQHS Standards were being reviewed for approval by the Australian Health Ministers Advisory Committee.

\(^\text{q}\) Identify, Situation, Observations, Background, Assessment/Agree a Plan, Request/Recommendations/Read Back/Ready for Discharge.
Case example
Mrs Queen, an 83 year old lady, attended hospital following a fall at home. She was found to have a forearm fracture and was admitted to hospital for pain relief and rehabilitation.

When she was admitted to the rehabilitation ward, she was assessed as at high risk of a fall by her admitting nurse and her geriatrician. She was subsequently assessed by the ward physiotherapist and occupational therapist.

The pharmacist contacted her GP to ensure “medicine reconciliation”. She was noted to be an “independently minded lady” and cognitively intact with no dementia or confusion.

A management plan was started. It included a high-low bed, non-slip mat, walking aids, falls risk sign and her call bell within easy reach. Mrs Queen had education regarding reducing her risk of a fall on the ward by wearing slippers when walking.

Mrs Queen needed one person to assist her for mobilising and was aware that she needed to let the nursing staff know if she needed to walk to the toilet.

Mrs Queen, however, decided “not to bother” nursing staff and self-mobilised to the toilet. While attempting to return to bed she slipped, fell and broke her other forearm.

This incident was notified as a Sentinel Event associated with a “complication of an inpatient fall.”

A root cause analysis of the event was undertaken by a multi-disciplinary team including the geriatrician, allied health staff and the falls risk manager.

Lessons learned
The investigation team thoroughly reviewed the care provided to Mrs Queen on the ward, the completion of her falls risk assessment and the management plans put in place to reduce her risk of a fall.

The investigation team concluded that the hospital policy and guideline associated with falls prevention had been adhered to and that there were no system errors associated with Mrs Queen’s care. The team agreed to continue quality improvement activities on the ward related to falls prevention, including engaging and educating patients and their relatives/carers on falls prevention strategies.

Due to the outcome of the investigation and lack of system issues being identified that contributed to the incident, the health service requested declassification of this event, which was supported by the PIRC.

Note this is not a case from Western Australia. This is a composite incident. No real names have been used in this case example.
3.9.3 Other: complication of an inpatient fall

In the 2010/2011 financial year 11 “other” events were related to complications of an inpatient fall compared with one in 2009/2010.

The most common contributing factors to complications of an inpatient fall were policy/procedures/guidelines, communication and patient factors.

Patient factors identified as contributing to the sentinel events included:

- reluctance to call for assistance or use the call bell
- independently ambulant, wandering and subject to confusion
- medication changes
- reluctance to use duress alarms
- reduced vision
- co-morbidities associated with increased risk of a fall
- decreased cognition related to dementia
- communication challenges (i.e. non-English speaking, hearing/vision/speech limitations).

Nine of the eleven events in this category included the age of the patient with the event description. Of these nine events, the average patient age was 87 years old (age range 76 to 94 years).

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

- staff education on caring for patients requiring oxygen
- improved inter-disciplinary communication and handover
- improved medication reconciliation
- improved compliance with policy
- improved documentation of referrals
- increased staff education (i.e. falls risk management tool, interventions, response to a fall)
- improved patient and carer education and advice regarding falls prevention
- development of a multidisciplinary falls protocol
- development of a falls risk assessment tool to include communication impairment as a risk
- review of falls risk assessment and management plans for patients on anti-coagulation therapy.
Focus on fractured neck of femur (NOF) incidents

In March 2011, the PSD reviewed fractured neck of femur (NOF) incidents occurring in WA public hospitals to investigate the frequency and trends of incidents notified into the AIMS, Hospital Morbidity Data System (HMDS) and Sentinel Events databases.

In the AIMS database, Falls were one of the most frequently reported clinical incidents. A total of 34,079 clinical incidents, as a result of a fall, were notified into AIMS for the period 1 July 2005 to 30 June 2010 and of these 203 resulted in the patient sustaining a fractured NOF (three resulting in death of the patient).

Since 2005 a slightly decreasing trend has been observed with regard to Falls incident rates. Fractured NOF incidents were found to constitute less than one percent of all Falls incidents reported to AIMS during 2005-2010.

A higher proportion of fractured NOF incidents were sustained by those patients aged 80 years or more.

To further complement the data findings for fractured NOF incidents identified in the AIMS database, the HMDS and Sentinel Event databases were also investigated. To enable data comparison of fractured NOF incidents from the three data bases, the period of July 2008 to June 2010 was utilised.

The findings highlighted (see Figure 3) reporting discrepancies between data sources for fractured NOF incidents with a higher reporting of incidents observed in the AIMS database compared with the HMDS and Sentinel Event databases, indicating that WA Health staff may require further education on the need for accurate and consistent reporting, documentation and coding of adverse events.

The results of this examination were shared with key safety and quality stakeholders working in the area of falls prevention.
Figure 3: Frequency of fractured neck of femur incidents by data source
(1 July 2008 – 30 June 2010)

Data correct as of 29 March 2011.

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>HMDS Number of # NOF</td>
<td>34</td>
<td>25</td>
</tr>
<tr>
<td>AIMS Number of # NOF</td>
<td>42</td>
<td>48</td>
</tr>
<tr>
<td>SE Number of # NOF</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>
```

“Multi-agency events”

The PIRC continued to focus on sentinel events investigated as “multi-agency events” where the patient’s journey across multiple health systems may have contributed to an adverse outcome. During the 2010/2011 financial year hospitals and health services from the public and private sector, in addition to transport providers (i.e. St John Ambulance, Royal Flying Doctor Service) have collaboratively participated in joint investigations to develop system wide patient safety improvements with respect to the management of complex patient care requirements.

For complex clinical incidents involving a number of hospitals and health service providers, it is recommended that all organisations are consulted and participate in collaborative investigation planning. This approach will ensure the effective development of recommendations to address system issues at multiple points.
Focus on “multi-agency events”

Multi-agency events are defined to occur where the patient’s journey across multiple health systems and transitions in care may have contributed to an adverse outcome for the patient. Sentinel events identified as multi-agency events are part of the PIRC’s watching brief to determine what lessons can be learnt to improve patient safety from this type of event.

A recent examination of multi-agency events examined those events reported during the period 1 July 2009 to 15 August 2011. A total number of seven multi-agency sentinel events were reported representing 4% of the total number of events notified for the reporting period.

The examination of the seven multi-agency events found that:
- the majority of events occurred in public hospitals and occurred in metropolitan health services
- all of the notified multi-agency events resulted in patient death
- the investigations of only two events included representation from the non-notifying health service (i.e. the health service that did not notify the sentinel event but did provide care for the patient)
- contributing factors identified by the investigations included:
  - delay in treatment
  - transport issues
  - patient management issues
  - clinical co-ordination issues
  - access to resources
  - the need for improved communication and policy.

The joint investigation of multi-agency events is recommended to ensure the development of recommendations with system-wide benefit in addition to sharing patient safety improvement initiatives across multiple health sites.

Early communication between health services, following the identification of a multi-agency event, is recommended to determine how the sentinel event is to be collaboratively investigated.

Multi-agency events will continue to remain a watching brief for the PIRC for consideration of the dissemination of recommendations with system wide applicability beyond the health services involved in the event and investigation.
4. Closing the loop

Notification and investigation timelines
Sentinel events are to be notified within seven working days of the event's occurrence with investigation reports completed and submitted to the PSD within 45 working days of the event's notification.

Figure 4 shows that for the 2010/2011 financial year 26% (n=25) of notifications (confirmed events) occurred within seven working days of the event's occurrence compared with 36% (n=17) for the 2009/2010 financial year.

Figure 4: Notifications occurring within seven working days of the event’s occurrence 2009-2011

The sentinel event data base is a cumulative data base, with data changing over time as events are investigated retrospectively.
Figure 5 shows that for the 2010/2011 financial year 31% \((n=30)\) of investigation reports were submitted within 45 working days of the events notification compared with 36% \((n=17)\) for the 2009/2010 financial year.

**Figure 5: Investigation reports received within 45 working days of notification 2008-2011**

Completed sentinel event investigations

Ninety-five per cent of final sentinel event investigation reports for 2010/2011 were completed and forwarded to the PSD by 31 August 2011, compared with 89% of investigation reports for 2009/2010. Hospitals/health services with overdue reports will continue to be followed up by the PSD 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 PSD to implement recommendations. Once all recommendations are adequately implemented, the event is closed.

Health services provide an update to the PSD 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 2011 (for sentinel events notified prior to 30 June 2011).

At the time of review, 117 events were identified as open in the Sentinel Event Database. Of the 117 that remained open, 95 events (81%) were not due to be closed at the time of the status review.

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* The sentinel event database is a cumulative database, with data changing over time as events are investigated retrospectively.
The status review identified that 22 events (19%) had been open for more than 12 months from the receipt of the investigation report. Hospitals/health services advised that 15 events had been closed (after 12 months) and 7 events were overdue to be closed (see Figure 6).

The responses received from health services in July 2011 indicate that 94% of all events notified before 30 June 2010 were closed within 12 months from the date of reporting recommendations (compared with 99.5% as of the July 2010 status report).\(^1\) 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 investigation of sentinel events are successfully implemented.

**Figure 6: The number of closed and open sentinel events (July 2011 report on the status of the implementation of recommendations)**

![Pie chart showing the number of closed and open sentinel events](image)

1. Closed (open more than 12 months)
2. Open - Due to be closed
3. Open - Not due to be closed

### Improving patient safety

**Focus reports**

During the 2010/2011 financial year the PSD 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 errors, falls, diagnostic errors and equipment recalls.

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\(^u\) Note: Data correct as at 9/9/2011.
Patient safety alerts
In March 2011, the WA Health Patient Safety Alert Policy was released outlining the process for State-wide communication of clinical risk information and the rapid actions required to improve patient safety.

The Patient Safety Alert System has been developed to provide hospitals and health services with brief reports and recommendations for action on identified clinical risks and safety improvement issues arising from clinical incident investigations and quality improvement activities.

In addition, the Patient Safety Alert System will provide a systematic approach to the dissemination and management of important patient safety information to improve the delivery of healthcare in WA hospitals and health services.

The Patient Safety Alert System includes three different options for the dissemination of patient safety information to be used depending on the priority of the response required by WA hospitals/health services. The three levels of notifications are as follows:

1. Patient Safety Alerts (red)
2. Safer Practice Notice (amber)

The PSD will undertake the development and production of Patient Safety Alerts, Safer Practice Notices and Patient Safety Information based on clinical risks identified from a number of sources which will be disseminated via email and available on the safety and quality website.v

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 2010/2011 financial year:

- development of hospital policy on the role and responsibility of students from all health disciplines
- introduction of protocols and monitoring systems for sending discharge summaries to general practitioners
- development of best practice guidelines for antenatal and intrapartum management of women with increased Body Mass Index (BMI)
- education and training for medical staff on the iSoBAR methodology for clinical handover
- availability of a VTE algorithm to be followed in the Emergency Department.

v www.safetyandquality.health.wa.gov.au
5. 2011/2012 Sentinel Event Program

Integrated Clinical Incident Management Policy

On the 1 September 2011, WA Health commenced implementation of an integrated clinical incident management policy incorporating the clinical incident and sentinel event management processes.

The integrated Clinical Incident Management Policy (2011)\(^2\) (CIM Policy) defines 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.

The integrated clinical incident management policy introduces Severity Assessment Codes (SAC) to the WA health system.

A SAC is the assessment of 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.\(^3\)

SAC 1 includes all clinical incidents/near misses where serious harm or death is/could be specifically caused by healthcare rather than the patient’s underlying condition or illness.

In WA, SAC 1 also includes the eight nationally endorsed sentinel event categories\(^4\) along with all other events that result in serious patient harm or death, previously known as category nine “other adverse event resulting in serious patient harm or death”.

In the CIM Policy, the WHO definition of a sentinel event has been adopted for use by the WA health system. Sentinel Event refers to:

> “unexpected occurrences involving death or serious physical or psychological injury/harm or risk thereof”.\(^5\)

Future directions

Issues arising following the examination of sentinel events for 2010/2011 that will be given particular attention over the next 12 months will include:

- implementation of the SAC categorisation system
- suicide of a patient in an inpatient setting
- investigation of events across health service boundaries.

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

**Health and Disability Services Complaints Office**
Telephone: (08) 9323 0600
Freecall: 1800 813 583
Email: mail@hadsco.wa.gov.au

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

**WA Department of Health – Patient Safety Directorate**
Office of Safety and Quality in Healthcare
Performance Activity and Quality Division
http://www.safetyandquality.health.wa.gov.au
Telephone: (08) 9222 4080
Email: safetyandquality@health.wa.gov.au
7. References


APPENDIX 1: Categories of contributing factors used in analysing sentinel events

Table 8: Categories of contributing factors

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1</td>
<td>Communication (communication between staff, patients and family members)</td>
</tr>
<tr>
<td>2</td>
<td>Equipment (faulty equipment, lack of equipment provision)</td>
</tr>
<tr>
<td>3</td>
<td>External factors (issues external to the reporting organisation)</td>
</tr>
<tr>
<td>4</td>
<td>Health information (documentation – or lack of – in medical record, communication Other factors (patient co-morbidities, patient factors) of information between hospital/health service and external service providers)</td>
</tr>
<tr>
<td>5</td>
<td>Human resources (staff allocation, staff training, staff supervision, staff appraisals, recruitment)</td>
</tr>
<tr>
<td>6</td>
<td>Inter-hospital issues (issues with transfer of a patient from one hospital/health service provider to another)</td>
</tr>
<tr>
<td>7</td>
<td>Physical environment (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>8</td>
<td>Policy, procedures and guidelines (behavioural assessment, physical assessment, patient observation process, clinical management guidelines, identification process, coordination of care)</td>
</tr>
<tr>
<td>9</td>
<td>Translation issues (issues with translation of health information for a patient)</td>
</tr>
<tr>
<td>10</td>
<td>Transportation issues (issues with interagency or hospital/health service transportation of a patient)</td>
</tr>
<tr>
<td>11</td>
<td>Other factors (patient co-morbidities, patient factors)</td>
</tr>
</tbody>
</table>
APPENDIX 2: Sentinel event categories

Table 9: 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. 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. 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. 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. 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: 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>7.</td>
<td>Maternal death or serious morbidity associated with labour or delivery. 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. Complication of resuscitation; complication of anaesthesia management; complication of surgery; fetal complication; complication of an inpatient fall; misdiagnosed 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 Review 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 (using the AIMS database)** 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.
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