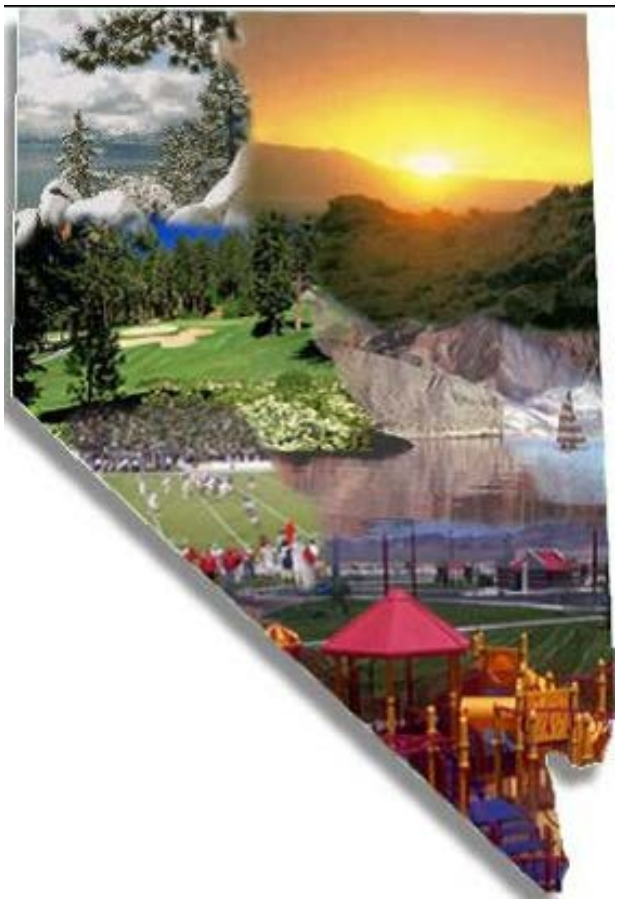

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2016 Annual Sentinel Event Summary Report

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Sentinel Event Report Organization and Contents

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Section I: Executive Summary

Acknowledgments

This report was prepared by the Division of Public and Behavioral Health (DPBH) – Office of Public Health Informatics and Epidemiology (OPHIE).

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OPHIE acknowledges all the agencies and healthcare facilities for their ongoing contribution to the Sentinel Event program and the peer review panel(s) for their advice and recommendations to this report. This report serves as a testimony to the patients and their families who have experienced adverse outcomes and the consequences of clinical errors, and a spotlight upon their plight. Without all stakeholders support, cooperation, and dedication to improve patient safety in Nevada this report would not be possible.

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Background and Purpose

During the 2009 session, the Nevada Legislature passed a law requiring DPBH to compile the Annual Sentinel Event Report summaries and submit the compilation to the State Board of Health by June 1. The purpose of this report is to share the outcomes, investigations, and root causes of those events. It is intended for use by legislators, healthcare facilities, patients and their families, and the public; it contains results from both the annual summary report for the Sentinel Event Registry (ASRSER) and the individual reports submitted by facilities to the Sentinel Event Registry (SER). This is the eighth annual summary report compiled pursuant to Nevada Revised Statutes (NRS) 439.843.

This report will provide a summary of sentinel events to all healthcare consumers, healthcare providers, and healthcare organizations and regulators in Nevada from various perspectives and areas. This report aims to help readers see the trends from year to year, to identify areas that have improved and to shed light on areas that still need improvement.

The data in this report reflects a transparency in addressing patient safety issues in Nevada. A facility's size, type, volume of services, complexity of procedures, and staff's understanding of the definition of the Sentinel Event will influence the number of the events reported. It is expected that through this report healthcare consumers, healthcare providers and healthcare organizations will have some basis to achieve improved outcomes. Healthcare consumers can manage their healthcare decisions better; healthcare providers can learn from these events to prevent them from happening again; (i.e. to develop and implement improved safety strategies); and healthcare organizations and regulators will have uniform and comparable data tools to assess accountability of healthcare facilities in Nevada.

Sentinel Event Defined

A sentinel event means an event included in Appendix A of "Serious Reportable Events in Healthcare--2011 Update: A Consensus Report," published by the National Quality Forum. If the publication described above is revised, the term "sentinel events" means the most current version of the list of serious reportable events published by the National Quality Forum as it exists on the effective date of the revision (NRS 439.830). Use the link below for further details on Appendix A of "Serious Reportable Events in Healthcare." CR serious reportable events 2011 .

As described by the National Quality Forum, sentinel events are events in the following areas of healthcare: surgical or invasive events, product or device events, patient protection events, care management events, environmental events, radiologic events and potential criminal events. Another description used for sentinel events found in literature prior to legislative action classified these events as 'never events,' as in they should never happen, a set of serious, largely preventable, and harmful clinical events. The most current National Quality Forum definition of a sentinel event can be found here, Quality Forum Topics SRE List .

In 2013 certain types of Healthcare Acquired Infections (HAI) that had been included in SER data reporting requirement were excluded from the sentinel event report as they no longer met the

definition of a sentinel event. These infections are recorded in the National Healthcare Safety Network (NHSN) reporting system at the Centers for Disease Control and Prevention (CDC). All reporting for current and past years included in this report reflect only sentinel events as defined in 2016.

The Sentinel Events Registry is a database used to collect, compile, analyze, and evaluate such adverse events. The intent is that the reporting of these sentinel events will reveal systemic issues across facilities so they may be addressed through quality improvement and educational activities at a systems and work culture level.

NRS 439.835 requires that medical facilities report sentinel events to DPBH, and the SER database is administered by OPHIE. As specified in NRS 439.805, the medical facility types required to report sentinel events are as follows:

The definition for medical facility for sentinel events is as follows:

NRS 439.805 "Medical facility" defined. "Medical facility" means:

1. A hospital, as that term is defined in NRS 449.012 and 449.0151;

2. An obstetric center, as that term is defined in NRS 449.0151 and 449.0155;

3. A surgical center for ambulatory patients, as that term is defined in NRS 449.0151 and 449.019; and

4. An independent center for emergency medical care, as that term is defined in NRS 449.013 and 449.0151.

(Added to NRS by 2002 Special Session, 13)

Methodology

Pursuant to NRS 439.865, NRS 439.840(2), NRS 439.845(2)b, NRS 439.855 , and NAC439.900-920, each medical facility is required to report sentinel events to the SER when the facility becomes aware that a sentinel event has occurred. The sentinel event report form includes two parts. The Part 1 form includes facility information, patient information, and event information. The Part 2 form includes the facility information, primary contributing factors to the event, and corrective actions. Sentinel event information is entered into the sentinel event database by the facility designated Patient Safety Officer (PSO), or by a designated sentinel event reporter (allowing up to a total of three authorized reporters per facility). Implemented in 2016, a new reporting system utilizes the Research Electronic Capture web based data input system (REDCaps https://www.project-redcap.org/). As of October 20, 2016, this system can be located at https://dpbhrdc.nv.gov/redcap/. The Sentinel Event Registrar verifies the data entry content for qualified reporting individuals, validates the correct entry of required fields, and then notifies the facility of data requiring additional input, or of a successful data entry effort.

A sentinel event ASRSER form is also available through the REDCaps reporting system. Each medical facility completes the online reporting requirement by March 1, 2017 for the calendar year 2016. The following information is required:

a) The total number and types of sentinel events reported by the medical facility;
b) A copy of the patient safety plan established pursuant to NRS 439.865; and
c) A summary of the membership and activities of the patient safety committee established pursuant to NRS 439.875.

Section II-a: Sentinel Event Summary Report Information

In 2016, 50 facilities reported sentinel events. Of those reporting, two of the facilities reported events that were later determined to not be sentinel events. A total of the 339 reported sentinel event records groups as follows. 324 events are true sentinel events per the definition, 12 events were determined to not be reportable sentinel events and three events continue to have a determination pending, awaiting autopsy and laboratory testing results.

Table 1: Sentinel Event Record Classification 2016

Year of Record	Event Type	Count in CY16
2016	Not a Sentinel Event	12
2016	To be determined - Pending	3
2016	Is a Sentinel Event	324

Table 2: Sentinel Event Facility Types from Reports 2016

Facility Type Defined	Facility Type	Count Of Facility Type in CY16
Surgical center for ambulatory patients	ASC	**10**
Hospital	HOS	**32**
Rural hospital	RUH	**6**
Facility for modified medical detoxification	MDX	**1**

Table 3: Sentinel Event Type Totals in 2016 (from the sentinel events registry forms)

Rank	Event	Count	Percent
1	Fall	126	38.9
2	Pressure ulcer	87	26.9
3	Retained foreign object	18	5.6
4	Surgery on wrong body part	10	3.1
5	Sexual assault	9	2.8
6	Burn	8	2.5
7	Suicide	7	2.2
8	Physical assault	7	2.2
9	Medication error(s)	7	2.2
10	Contaminated drug, device, or biologic	5	1.5
11	Elopement	5	1.5
12	Device failure	5	1.5
13	Wrong surgical procedure	4	1.2
14	Restraint	4	1.2
15	Pressure ulcer (stage 3 or 4)	4	1.2
16	Other – specify	2	0.6
17	Failure to communicate test result	2	0.6
18	Contaminated product/device	2	0.6
19	Intra- or post-operative death	2	0.6
20	Labor or delivery	1	0.3
21	Lost specimen	1	0.3
22	Assault (attempted battery)	1	0.3
23	Wrong or contaminated gas	1	0.3
24	Surgery on wrong patient	1	0.3
25	Procedure complication(s)	1	0.3
26	Wrong site/surgery procedure	1	0.3
27	Medication error	1	0.3
28	Discharge to wrong person	1	0.3
29	Neonate labor or delivery	1	0.3
30	(blank)		0
	Grand Total	**324**	100

Section II-b: Sentinel Event Annual Summary Report

This section provides information regarding the total number of sentinel events indicated by the medical facilities as reported on the ASRSER as well as a breakdown of the event types.

Event Types and Totals

For the calendar year 2016, 119 facilities completed the ASRSER, uploaded a copy of their Patient Safety Plan, and updated the designated Patient Safety Committee (PSC) reporters contact information, even if no Sentinel Event occurred. Fifty-five facilities had not filed their ASRSER as of March 1, 2017 **(**NRS439.843,**)**. As of May 19, 2017 only two facilities remain that need to file their ASRSSER. This is a proactive, iterative dialog process between the SER Registrar and the contacts at the facilities, especially when meeting timeliness of reporting.

These medical facilities included

Table 4: Annual Summary Report Record Classification 2016

Year of Record	Event Type	Count in CY16
2016	Facility Reported No Sentinel Events	67
2016	Facility Reported One Sentinel Event	18
2016	Facility Reported More than One SE	34
2016	Total Facilities Reporting	119

Note: One ASC facility had two entries, one with an incorrect Facility ID.

Table 5: Annual Summary Report Sentinel Event Facility Types from Reports 2016

Facility Type	Facility Type Defined	Count Of Facility Type	Count of Reported Events
ASC	A surgical center for ambulatory patients	**59**	**17**
ICE	An independent center for emergency medical care	**1**	**0**
HOS	A hospital	**46**	**305**
HOS	A hospital (rural)	**13**	**9**
ALL	Count of Facilities and Events	**119**	**331**

Table 6 lists the types of sentinel events reportable with a total for each as indicated on the medical facilities' ASRSER. A percentage of all sentinel events reported is provided for each event type. In 2016, the medical facilities indicated that reported a total of 331 sentinel events.

Table 6: Sentinel Event Type Totals in 2016 (from the summary forms)

Rank	Event	Count	Percent
1	Fall	132	40.0
2	Pressure Ulcer	91	27.6
3	Retained Foreign Object	19	5.8
4	Physical Assault	10	3.0
5	Surgery on wrong body part	8	2.4
6	Burn	8	2.4
7	Sexual Assault	8	2.4
8	Suicide	7	2.1
9	Medication Error	7	2.1
10	Neonate Labor or Delivery	7	2.1
11	Device Failure	6	1.8
12	Failure to Communicate Test Result	5	1.5
13	Elopement	4	1.2
14	Wrong Surgical Procedure	3	0.9
15	Intra- or Post-Operative Death	3	0.9
16	Contaminated drug, device, or biologic	3	0.9
17	Restraint	3	0.9
18	Maternal Labor or Delivery	2	0.6
19	Surgery on wrong patient	1	0.3
20	Lost Specimen	1	0.3
21	Wrong or Contaminated Gas	1	0.3
22	Abduction	1	0.3
23	Air Embolism	0	0
24	Discharge to Wrong Person	0	0
25	Transfusion Error	0	0
26	Wrong Sperm or Egg	0	0
27	Electric Shock	0	0
28	Introduction of Metallic Object Into MRI Area	0	0
29	Impersonation of Healthcare Provider	0	0
30	Other (forensic restraint)	1	0
	Grand Total	331	100

Section III: Registry Data Analysis and Comparision between Summary Report and Registry Data

This section summarizes the data that has been received and recorded in the Sentinel Events Registry, and compares the event types to data from the summary forms.

Event Types and Totals

Similar to Table 6, Table 7 lists the types of sentinel events reported with totals for the number reported according to both the summary forms and the reports recorded in the sentinel events Registry. In 2016, a total of 331 sentinel events were reported according to the summary forms versus 336 as recorded in the Sentinel Events Registry. Twelve (12) of the events reported were determined not to be sentinel events, bringing the actual total to 324.

Table 7 – Sentinel Event Type Totals from the 2011-2016 Sentinel Event Report Summary Forms and Sentinel Events Registry

Description (*, **)	2011 ASR	2011 SER	2012 ASR	2012 SER	2013 ASR	2013 SER	2014 ASR	2014 SER	2015 ASR	2015 SER	2016 ASR	2016 SER
Abduction	0	0	0	1	0	1	1	1	0	1	1	1
Air embolism	2	2	0	0	2	2	0	0	0	1	0	0
Burn	12	11	9	9	5	6	7	5	4	5	8	8
Contaminated drug or product or device	0	3		2	0	2	0	4	0	1	3	7
Device failure	2	8	1	1	2	3	6	5	6	7	6	5
Discharge to wrong person	0	0	0	0	0	0	1	1	0	1	0	1
Elopement	10	8	10	11	12	11	6	6	5	4	4	5
Failure to communicate test results	0	0	0	0	2	2	6	6	2	3	5	2
Fall	135	123	135	134	109	115	105	98	114	106	132	126
Impersonation of healthcare provider	0	0	0	0	0	0	2	1	0	0	0	0
Intra- or post-operative	6	4	23	17	10	10	12	14	11	12	3	2
Introduction of metallic object in MRI area	0	0	2	1	1	1	0	0	0	0	0	0
Lost Specimen	0	0	0	0	1	1	1	1	0	0	1	1
Maternal labor or delivery	0	0	1	1	0	2	2	3	3	3	2	2
Medication error	0	32	0	44	0	31	0	7	0	5	0	1
Medication error(s)	33	33	51	51	29	29	8	8	8	1	7	7
Neonate labor or delivery	0	0	11	4	5	4	1	1	9	7	7	1
Physical assault	4	4	5	4	4	5	27	28	6	12	10	8
Pressure ulcer All types	40	44	60	64	72	129	66	135	68	135	91	91
Procedure complication(s)	0	0	0	0	0	0	0	1	0	0	0	1
Restraint	1	1	14	14	1	1	2	2	0	0	3	4
Retained foreign object	12	18	11	12	13	16	18	16	19	21	19	18
Sexual Assault	2	2	4	4	7	8	5	4	3	3	8	9
Suicide	0	7	0	11	0	5	0	7	0	3	0	7
Suicide - attempted	6	6	6	6	5	5	7	7	3	3	7	7
Surgery on wrong body part	4	3	6	7	3	4	4	3	6	8	8	10
Surgery on wrong patient	0	0	0	0	0	1	0	2	0	0	0	1
Transfusion error	1	1	3	2	2	3	2	2	0	0	0	0
Wrong or contaminated gas	1	1	0	0	0	0	2	2	0	0	1	1
Wrong patient/wrong surge	0	0	1	1	2	2	1	1	0	0	1	1
Wrong sperm or egg	0	0	4	1	0	0	0	0	0	0	0	0
Wrong surgical procedure	0	0	2	1	1	1	2	2	3	4	3	4

*columns bounded by thick borders indicate the same reporting year. White and blue backgrounds indicate the data source for the counts.

**Other counts were not included. Events for which no values were recorded in either data source are not included. Events deprecated as of the post 2013 Sentinel Event definition are not included.

***Figure 1 illustrates the differences by total count per year.

Total Sentinel Events Summary Data vs. Registry Data (2014-2016)

From Table 8, readers will notice that the total number of sentinel events from the summary forms and the registry reports all increased from 2015 to 2016. The increase rate is 18% and 17% from the registry reports and the summary forms respectively. The data in 2011-2013 were not listed in this table since the definition of sentinel events has been changed since Oct. 1, 2013.

Table 8: Total Events Summary vs. Registry (2014-2016)

Year	2014	2015	2016
Not Sentinel Events*	20	12	12
Registry Sentinel Events	287	274	324**
Summary Sentinel Events	300	283	331

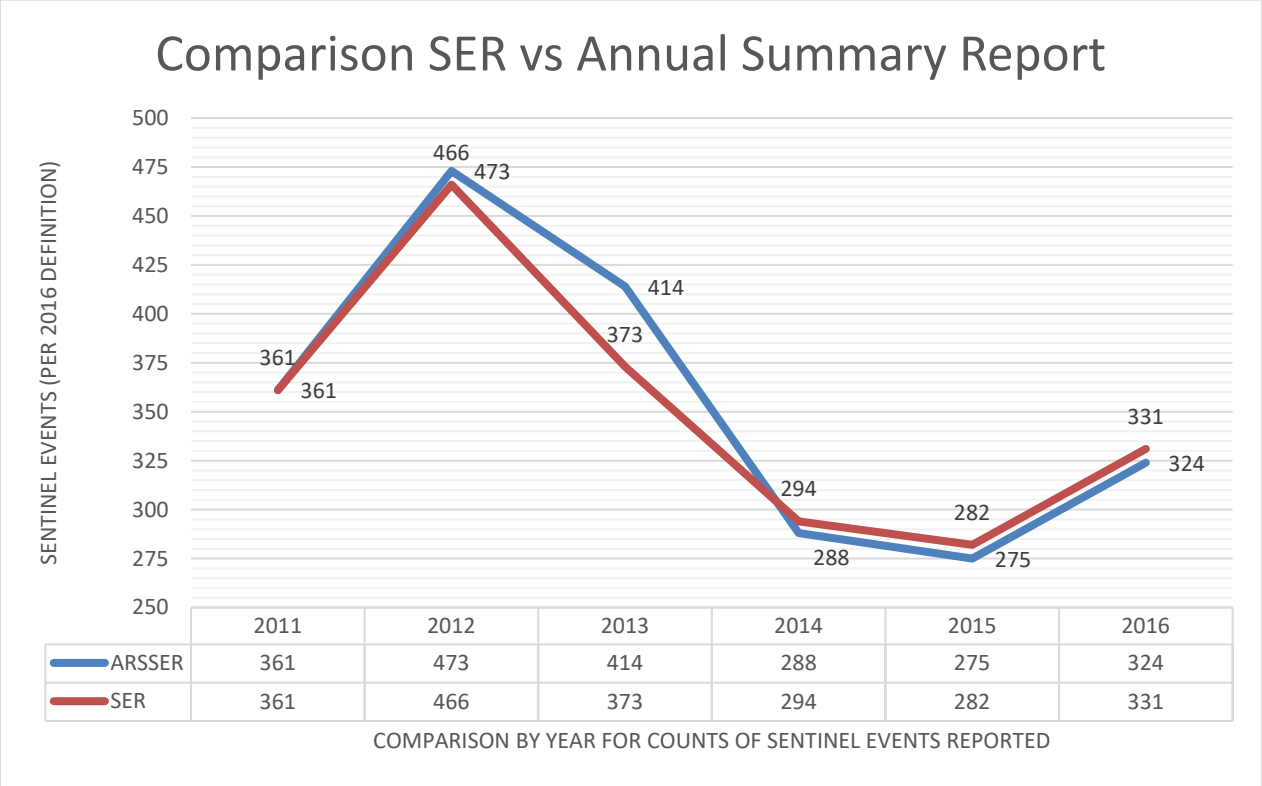
Remark:

*Not Sentinel Event: Upon investigation, the event reported was determined not to be a Sentinel Event after the Part 1 form submission.

** Three events not included in this total have the status of pending further results.

Figure 3 illustrates the relationship between the two reporting methods since 2011. In 2016 there was one facility that reported an event in the SER, yet as of this report, had not filed an Annual Summary Report (ASR). There was also another facility that reported in the ASR an event for which no record was made in the SER.

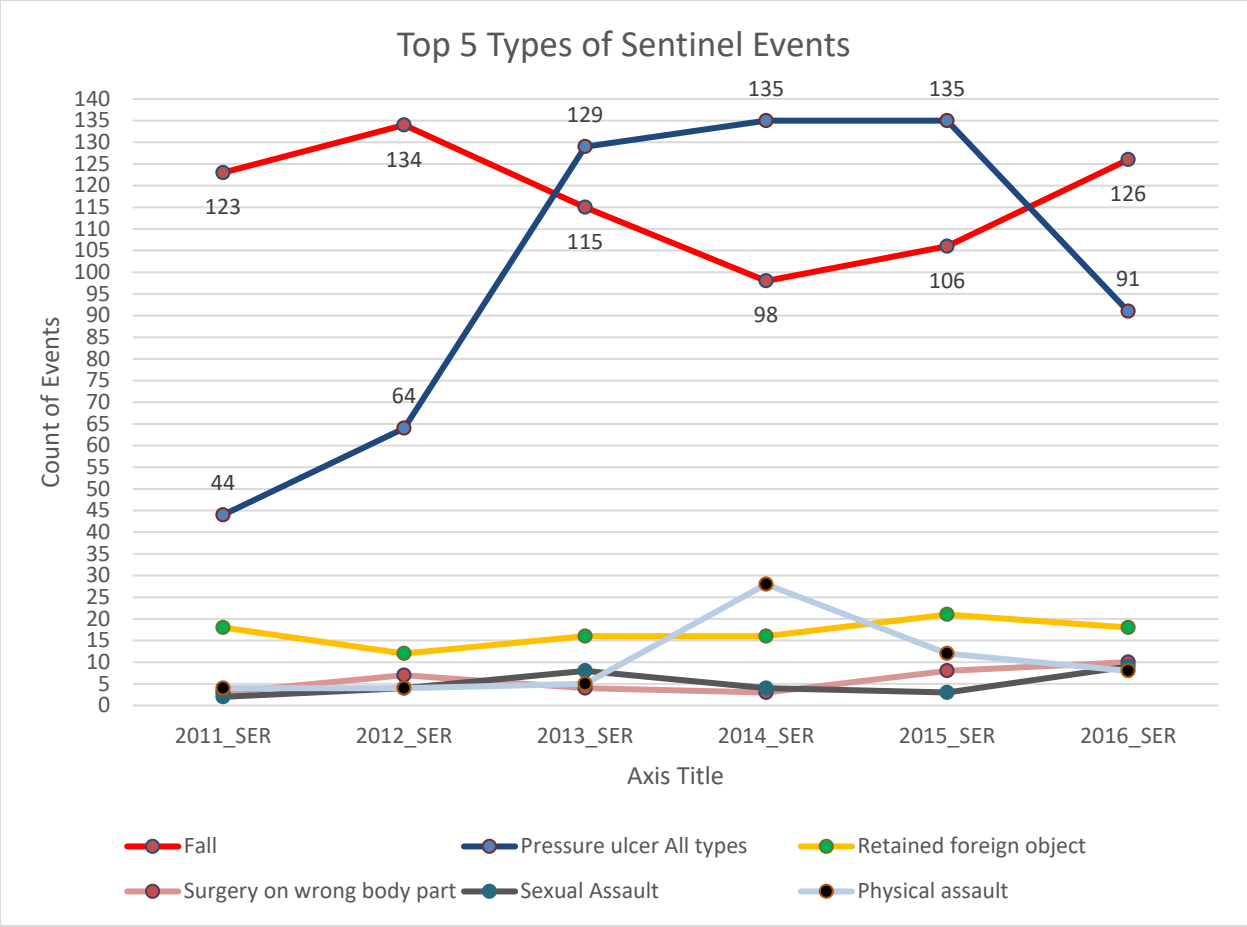
Figure 1: Total Sentinel Events Summary Report vs. Registry (2011-2016) (per the 2016 Sentinel Event definition)



Top 5 Types of Sentinel Events in 2016, Compared to Prior 5 Years

Figure 4 shows the top 5 types of sentinel events in 2016 compared to the prior 5 years (with assaults, physical and sexual included). The definition of sentinel event has been changed since October 1, 2013. The new definition has been adapted since 2014, and this would affect the data in the 2011-2013 and the 2014-2016 time periods. However, the data illustrated is only as a qualified event per the 2016 definition. From the graph, readers will notice that "Fall" showed a very high number since 2011. It increased from 2015 to 2016 by 16%. "Pressure ulcer" (merged with Ulcer (no further detail) from past data) decreased by 48% from 2015 to 2016 and "Retained Foreign Object" decreased from 17% (from 21 to 18) from 2015 to 2016.

Figure 2: Top 5 Types of Sentinel Events in 2016, Compared to Prior 6 Years



Primary Contributing Factors in 2016

For each sentinel event, up to four contributing factors are allowed to be entered. In 2016, there were 814 primary factors that contributed to sentinel events, which included patient-related, staff-related, communication/documentation, organization, technical, environment, and other primary contributing factors. Table 9 and Figure 5 show the top three primary contributing factors as:

- Patient related: 336 (41%)
- Staff related: 201 (25%)
- Communication/documentation related: 149 (18%).

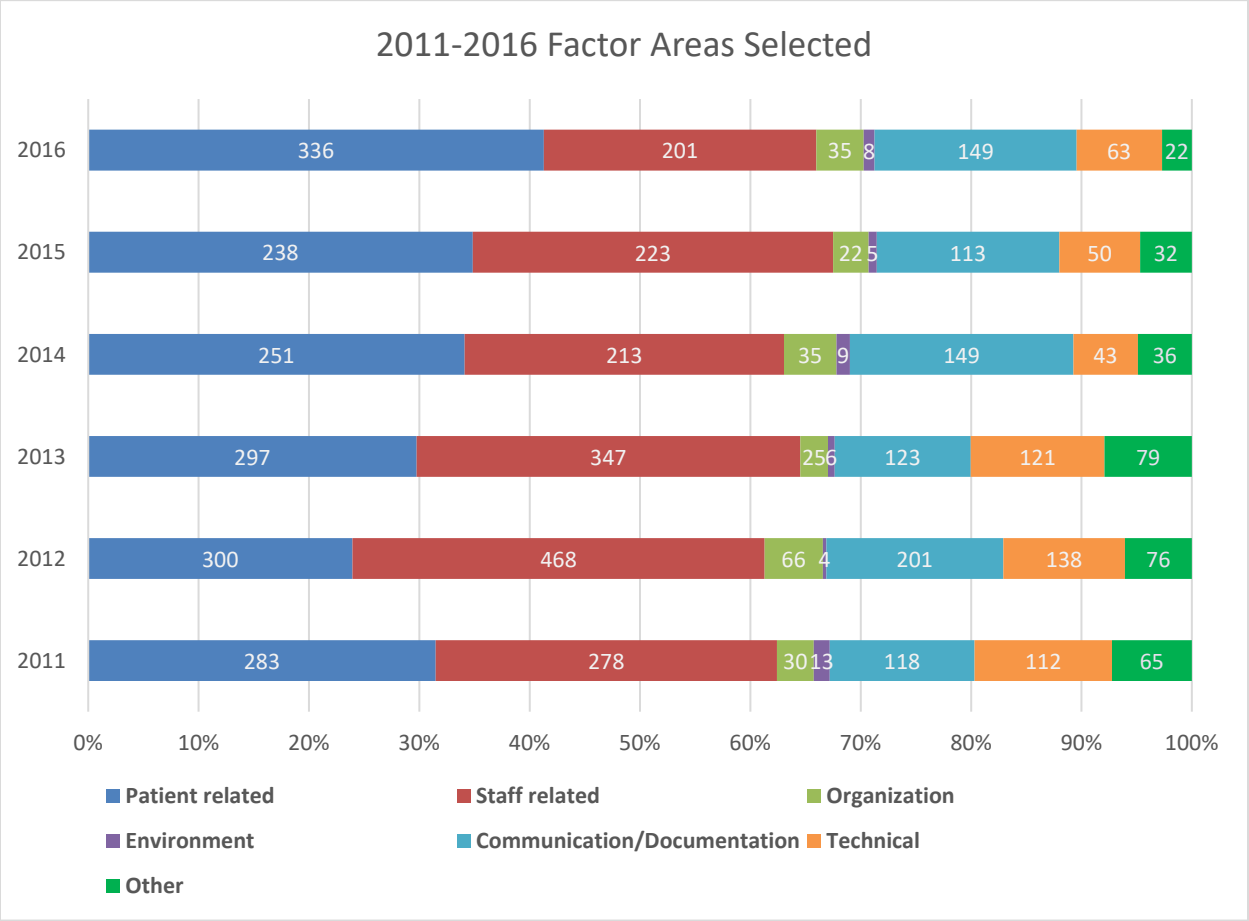
These three factor groups constitute 70% of the total primary contributing factor groups in 2016. Comparing with 2015, the patient-related factor area increased the most, followed by communication/documentation, organization and technical factor groups recording increases. Staff-related, and other factor groups have decreased year over year.

Table 9: Primary Contributing Factors from 2011 to 2016

Factor Area	Factor count	2011	2011 percent	2012	2012 percent t	2013	2013 percent	2014	2014 percent	2015	2015 percent	2016	2016 percent
Patient	13	**283**	31.5	**300**	23.9	**297**	29.8	**251**	34.1	**238**	34.8	**336**	41.3
Staff	6	**278**	30.9	**468**	37.4	**347**	34.8	**213**	28.9	**223**	32.7	**201**	24.7
Organization	5	**30**	3.3	**66**	5.3	**25**	2.5	**35**	4.8	**22**	3.2	**35**	4.3
Environment	5	**13**	1.4	**4**	0.3	**6**	0.6	**9**	1.2	**5**	0.7	**8**	1
Communication/Documentation	12	**118**	13.1	**201**	16	**123**	12.3	**149**	20.2	**113**	16.5	**149**	18.3
Technical	32	**112**	12.5	**138**	11	**121**	12.1	**43**	5.8	**50**	7.3	**63**	7.7
Other	1	**65**	7.2	**76**	6.1	**79**	7.9	**36**	4.9	**32**	4.7	**22**	2.7
SUM	74	**899**		**1253**		**998**		**998**		**683**		**814**	

Note: Counts from the previous report (2015) for the years 2014 and 2015 are slightly lower. Reporting changed from a paper submittal of summary forms to an electronic submittal with the REDCaps system.

Figure 3: Primary Contributing Factors from 2011 to 2016 relative comparison



Trends observed appear to indicate greater emphasis on patient-related factors, and a reduction in the selection of staff-related factors, while communication/documentation appear to be increasing. Technical issues were reported in fewer events.

Detailed Primary Contributing Factors in 2016

The detailed primary contributing factors in 2016 are displayed in Table 10. From the table, readers will notice that the factor Clinical Decision/Assessment contributed to 91 events (11% of the total events); non-compliant contributed to 86 events (10.5%); and Frail/Unsteady contributed to 84 events (10%).

Table 10: Detail of Primary Contributing Factors in 2016

Factors (up to 4 per event can be selected)	2016 Count	2016 percent
STAFF Clinical Decision Assessment	91	11.18
PATIENT Non-Compliant	86	10.57
PATIENT Frail Unsteady	84	10.32
PATIENT Impairment Physical	77	9.46
STAFF Failure Follow Policy/Procedure	71	8.72
PATIENT Confusion	46	5.65
STAFF Clinical Performance/Administration	38	4.67
COM-DOC Hand-Off Teamwork Cross-Coverage	37	4.55
COM-DOC Verbal Communication Inadequate	32	3.93
COM-DOC Lack of Communication	27	3.32
COM-DOC Lack of Documentation - Inadequate	24	2.95
TECHNICAL OTHER	22	2.70
Other	22	2.70
ORGANIZATION Inappropriate or No Policy or Process	17	2.09
COM-DOC Written Communication Inadequate	14	1.72
PATIENT Psychosis	13	1.6
TECHNICAL Equipment Failures	12	1.47
PATIENT Self Harm	11	1.35
ORGANIZATION Training Inadequate or Not Done	11	1.35
PATIENT Medicated	10	1.23
TECHNICAL Treatment Delay	6	0.74
TECHNICAL No Detail	6	0.74
ORGANIZATION Staffing Level	5	0.61
EVENT Floor Surface Wet/Slippery	5	0.61
COM-DOC Written Communication Incorrect	5	0.61
PATIENT Substance Use	4	0.49
TECHNICAL Equipment Incorrect	4	0.49
All Others	34	4.18
Total	**814**	**100**

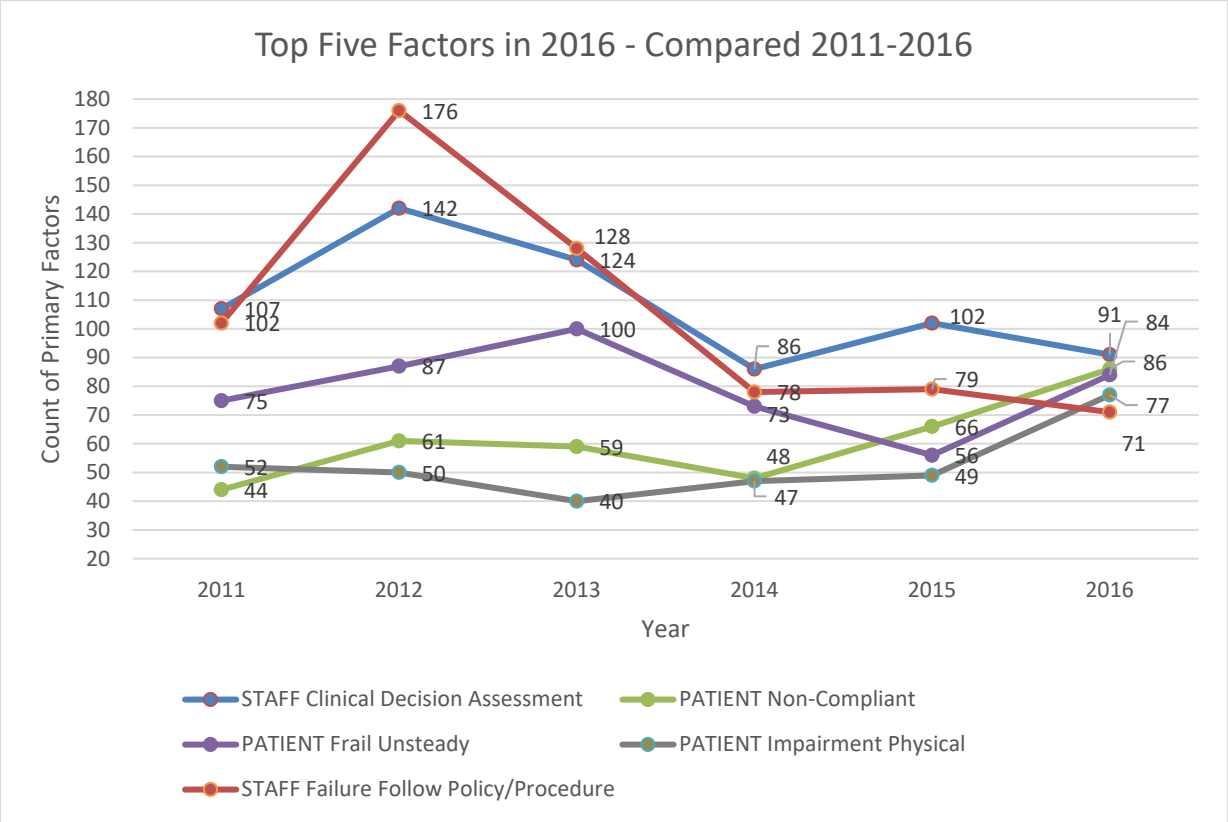
Top 4 Contributing Factors in 2016, Compared to the prior 5 Years

Table 11 and Figure 6 below show the top 4 contributing factors in 2016 compared to the prior 5 years. From 2015 to 2016 though Staff Clinical Decisions decreased, it was the most commonly cited factor. Patient groups, Non-Compliant, Frail/Unsteady and Impairment-Physical all increased year over year. The data indicate that these contributing factors dramatically decreased from 2013 to 2014. It was at that time that the Healthcare Acquired Infections (HAI) reporting was shifted away from the Sentinel Events Registry. The changes suggest that there may be a connection with reduced reporting since that time.

Table 11: The Top 4 Primary Contributing Factors in 2016, Compared to Prior 5 Years

Year	STAFF Clinical Decision Assessment	PATIENT Non-Compliant	PATIENT Frail Unsteady	PATIENT Impairment Physical
2011	107	44	75	52
2012	142	61	87	50
2013	124	59	100	40
2014	86	48	73	47
2015	102	66	56	49
2016	91	86	84	77

Figure 4: The Top 5 Primary Contributing Factors in 2016, Compared to Prior 5 Years



Note: This data uses the current sentinel event definition. Prior to 2014, changes in definitions for a sentinel event may have impacted the reporting of contributing factors.

Distribution of Sentinel Events by Facility Type in 2016

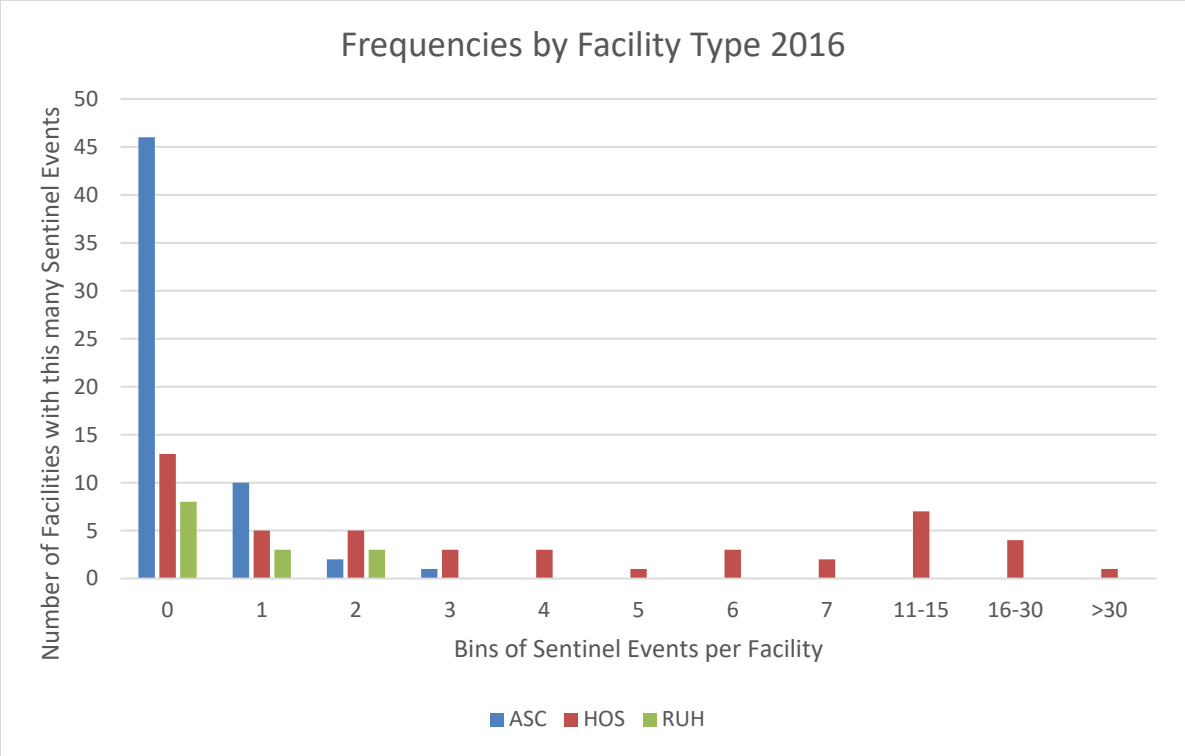
Figure 7 and Table 12 illustrate the average sentinel events for each type of facility in 2016. Surgical Center for Ambulatory Patients (ASC) showed a low average with 0.17 events per facility in 2016. Hospitals (HOS), had an average of 5.23 events per hospital while the rural hospitals (RUH) indicates an average of 1.71 events per hospital in 2016. Nevada's Independent Center for Emergency Medical Care (ICE) reported no sentinel events in 2016, while facilities for modified medical detoxification MDX reported one event.

Table 12: Sentinel Event Counts by facility type in 2016

Facility/#	0	1	2	3	4	5	6	7	11-15	16-30	>30
ASC	46	10	2	1							
ICE	0										
HOS	13	5	5	3	3	1	3	2	7	4	1
MDX	0	1									
RUH	8	3	3								

Note: Some facilities may have reported that were not required to do so.

Figure 5: Frequency Counts of Sentinel Events by Facility Type



Sentinel Events by Location in 2016

The following set of maps illustrate the sentinel events based upon facility location, number of employees, and count of sentinel events.

The first set of maps shows the location of the facilities along with a thematic representation of the count of the number of events.

The maps thematic color represents the absolute count and does not indicate what type of licensure the facility has, nor the size in patient volume, procedure volume or number of employees.

The second set of maps illustrate by location a simplified index that relates the size of the facility as counted by the number of employees in the denominator, while the count of the number of events is in the numerator.

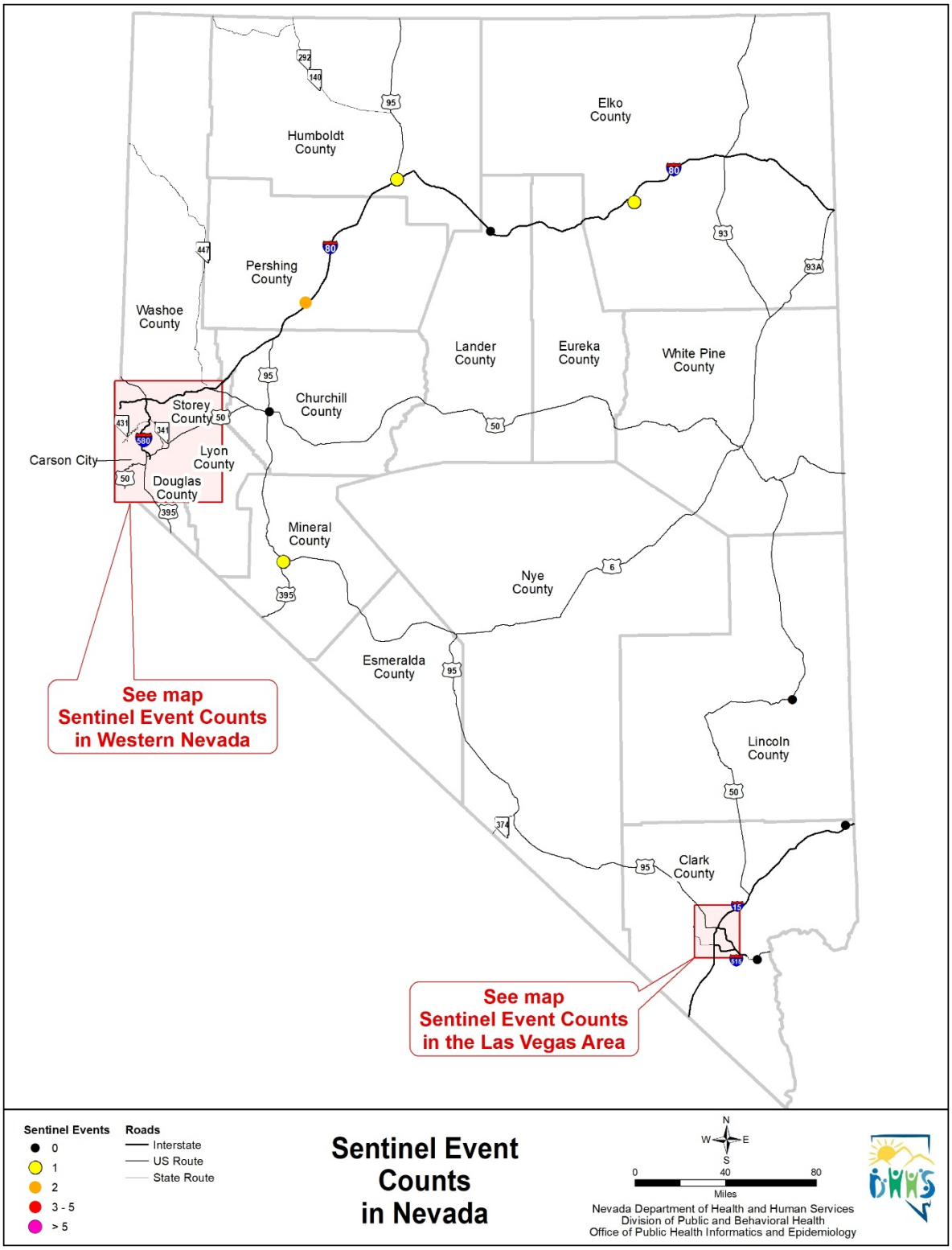
This Event Count/Employee Count ratio then has a factor and rounding applied to arrive at a single digit.

For facilities with fewer employees, along with a single event will have a higher score than a facility with many employees.

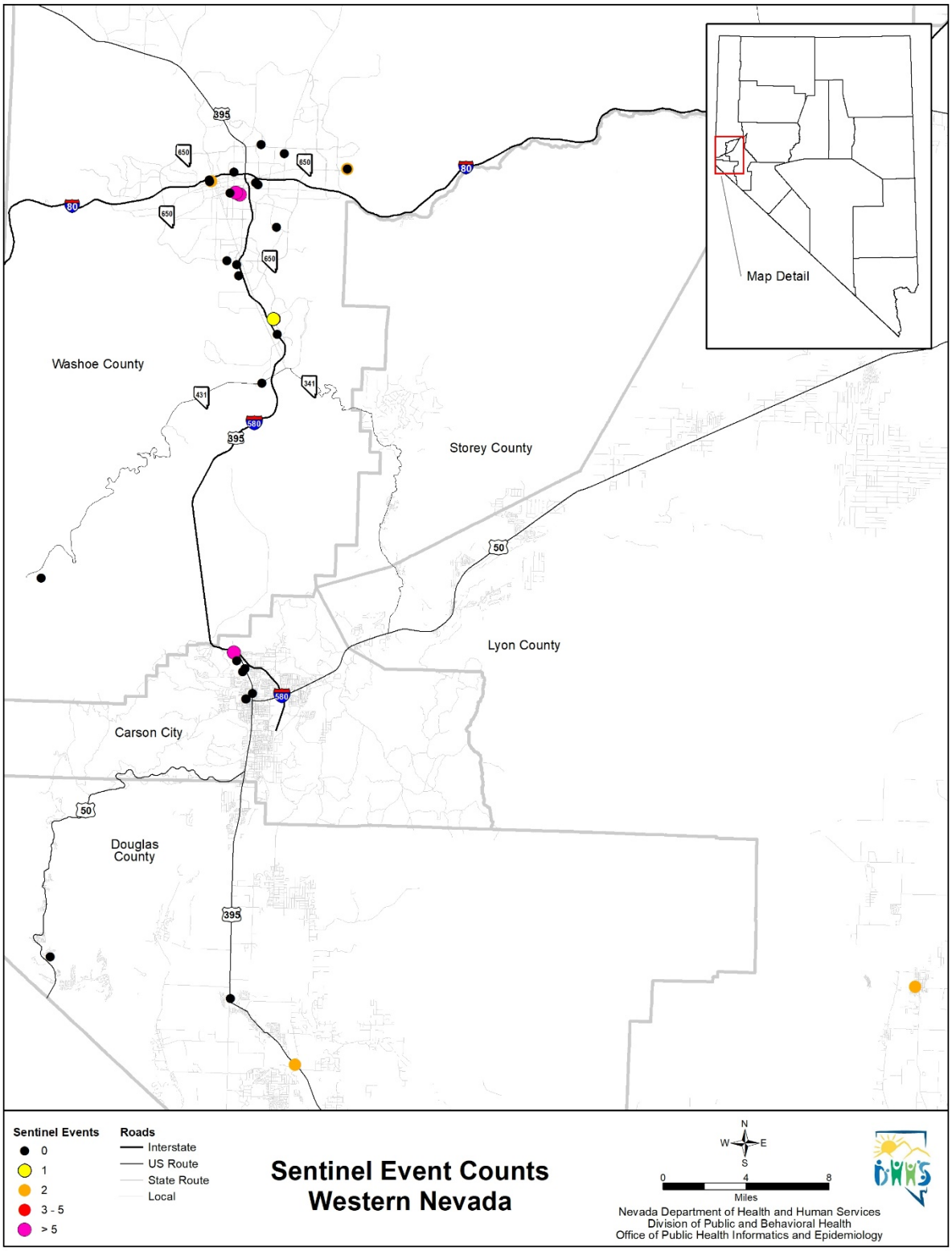
An example would be an ambulatory surgical center with 1 event and 10 employees would have a number of 10, while a facility with 20 events but 2500 employees would have a number of 1, or a facility with 12 events and 3000 employees would have a number of 0. Since the western Nevada and Las Vegas areas have significantly more healthcare facilities than rural Nevada, they warrant localized maps.

In areas of high concentration for healthcare facilities, some overlap has been addressed, so that each facility should have a distinct symbol.

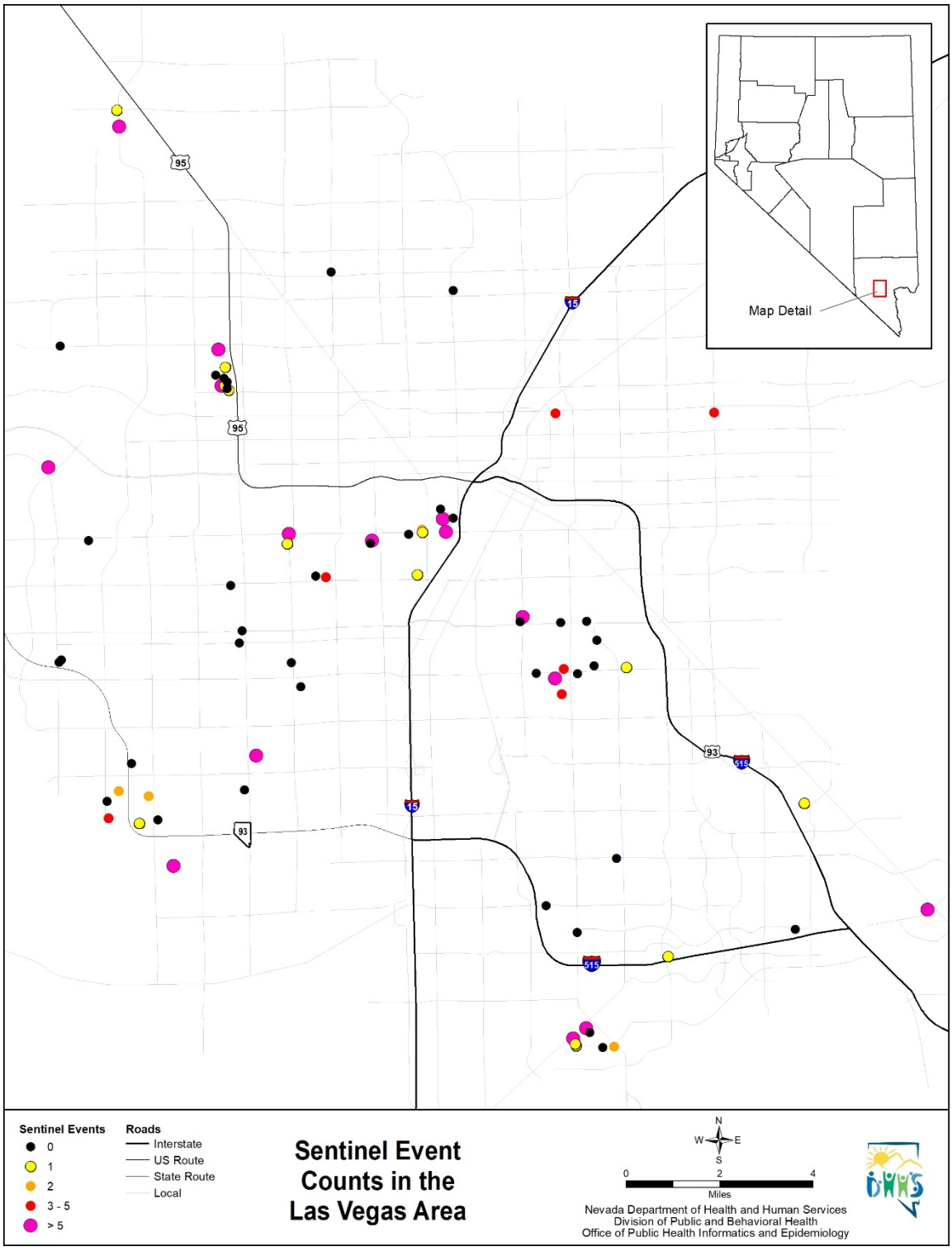
Map 1a: Sentinel Events by Location - State



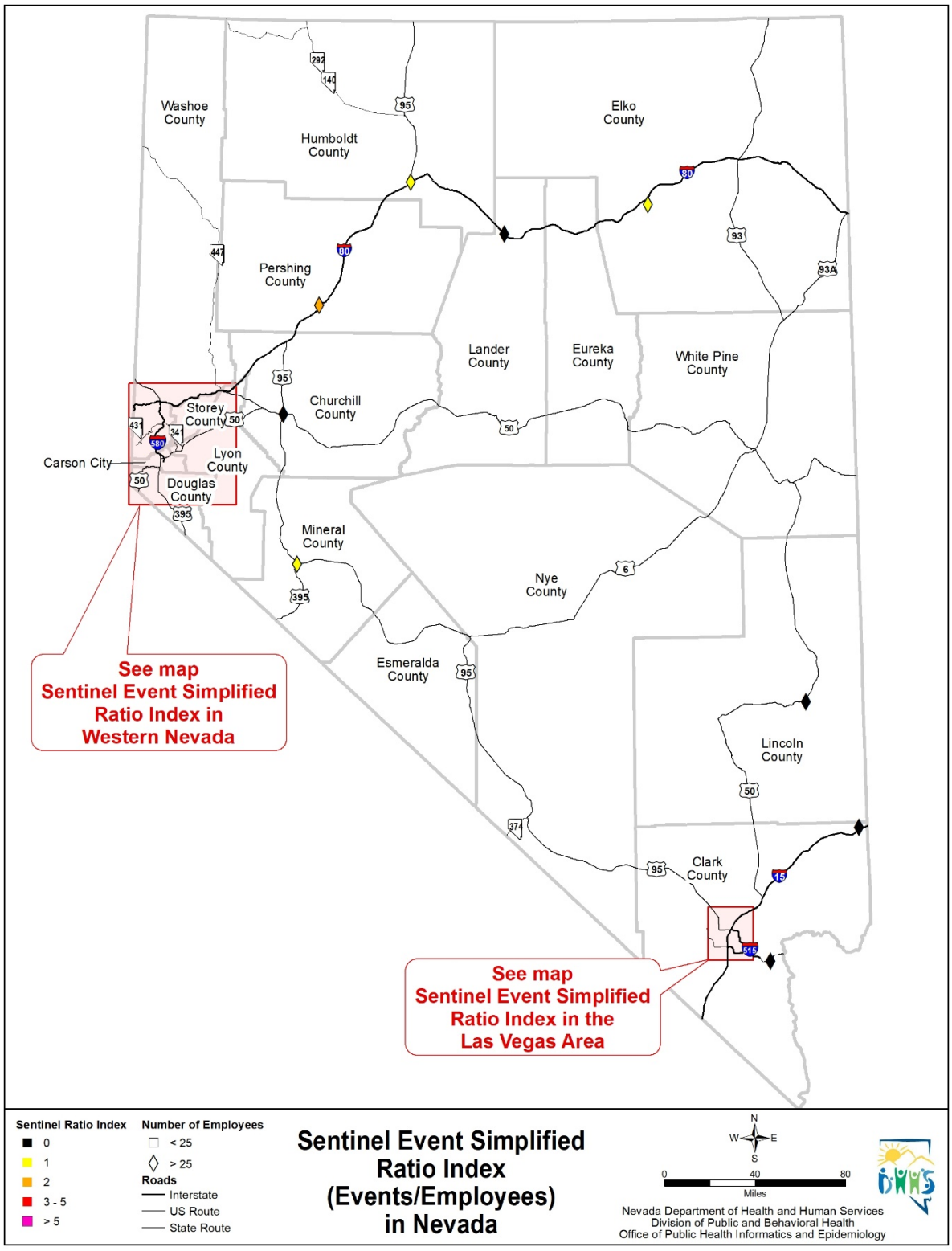
Map 1b: Sentinel Events by Location – Reno/Sparks



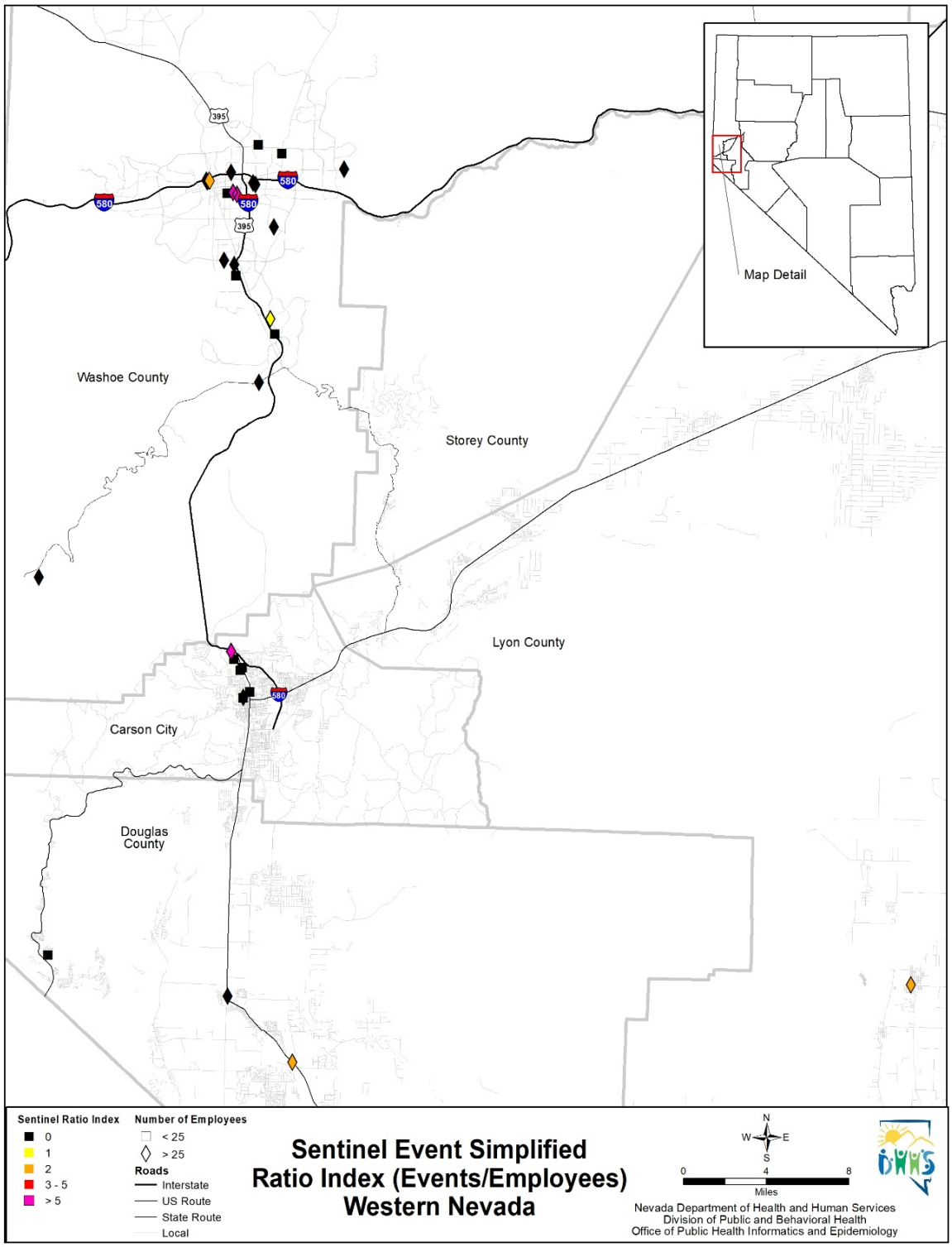
Map 1c: Sentinel Events by Location – Las Vegas



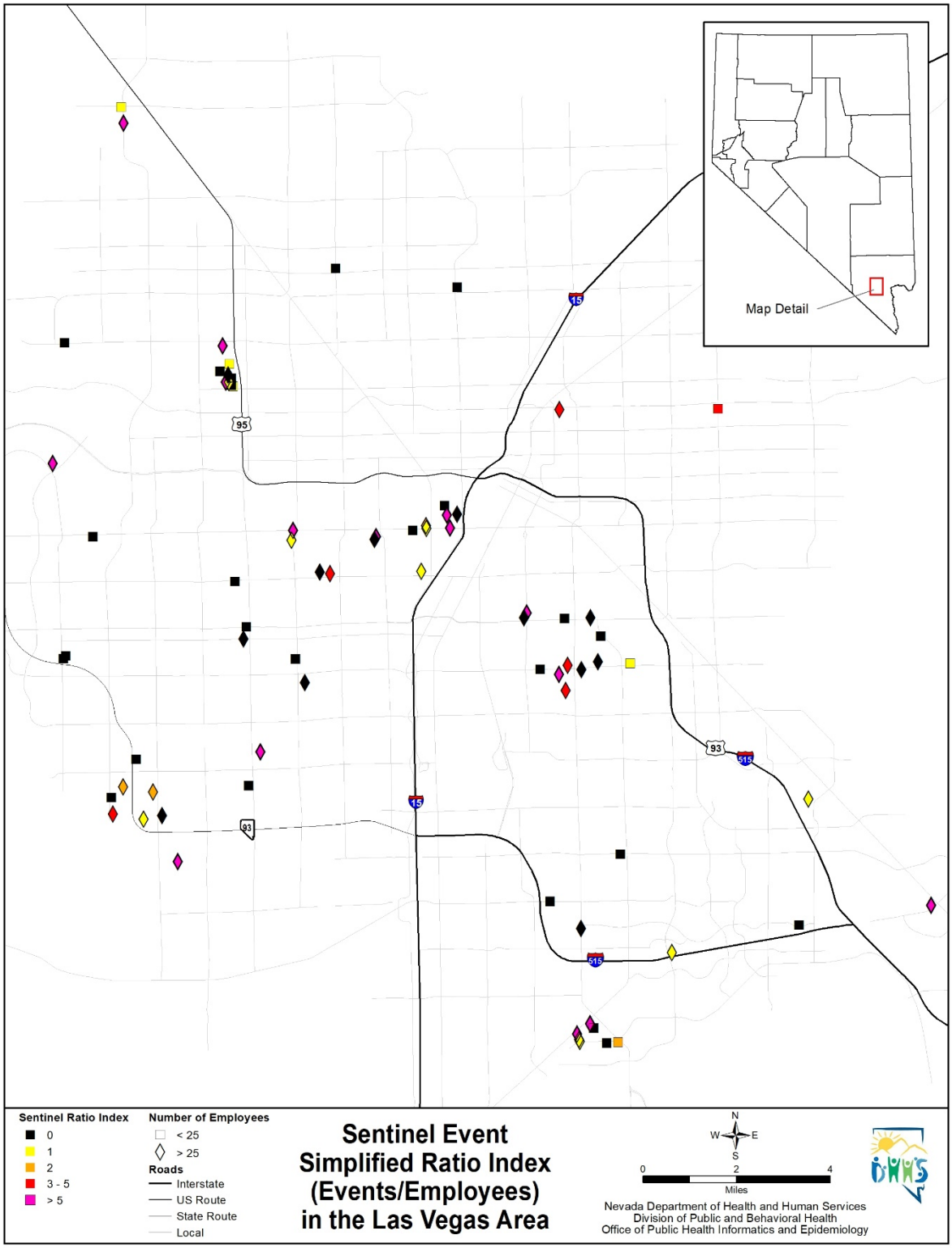
Map 2a: Sentinel Events by Simplified Events/Employees ratio - State



Map 2b: Sentinel Events by Simplified Events/Employees ratio – Reno/Sparks



Map 2c: Sentinel Events by Simplified Events/Employees ratio – Las Vegas

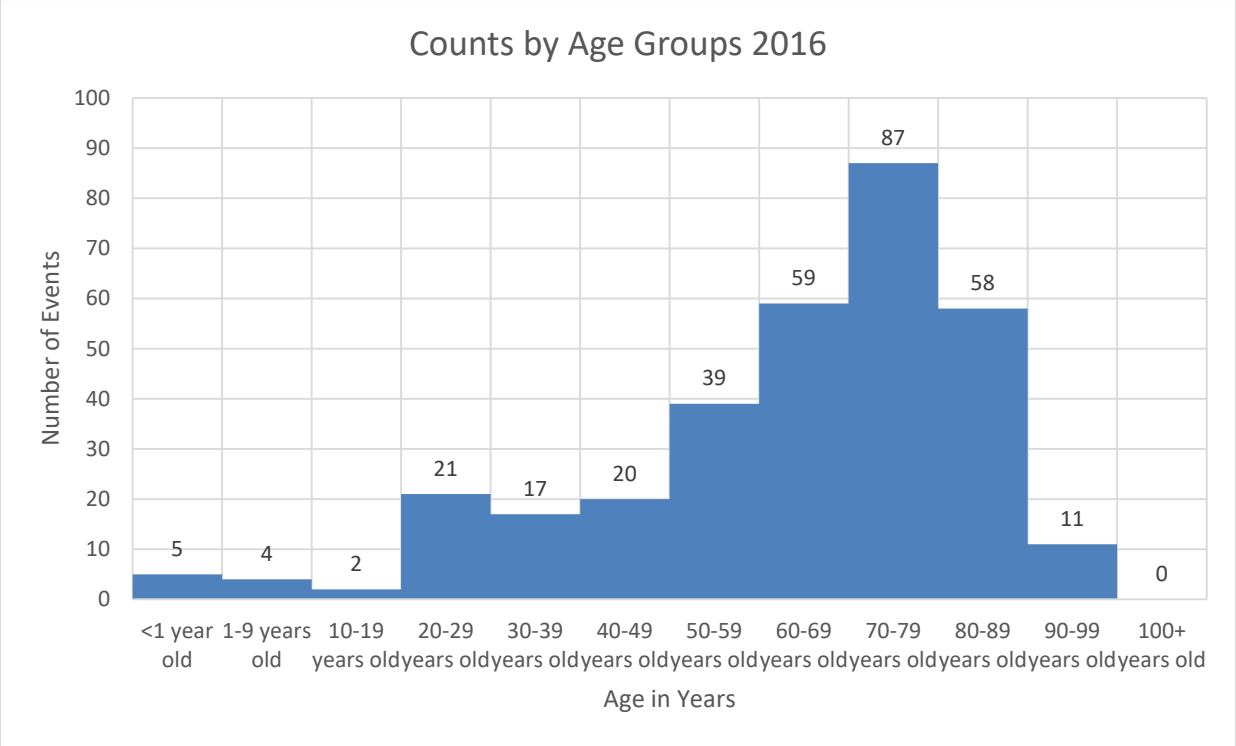


Sentinel Events by Age in 2016

Table 13: Sentinel Events by Age in 2016 (inclusive of the SER database)

Patient's Age	Count	Percent
<1 year old	5	2.00%
1-9 years old	4	1.00%
10-19 years old	2	1.00%
20-29 years old	21	7.00%
30-39 years old	17	5.00%
40-49 years old	20	6.00%
50-59 years old	39	12.00%
60-69 years old	59	18.00%
70-79 years old	87	27.00%
80-89 years old	58	18.00%
90-99 years old	11	3.00%
100+ years old	0	0.00%
Total (excludes missing DOB)	**323**	100.00%

Figure 6: Sentinel Events by Age in 2016 (inclusive of the SER database)



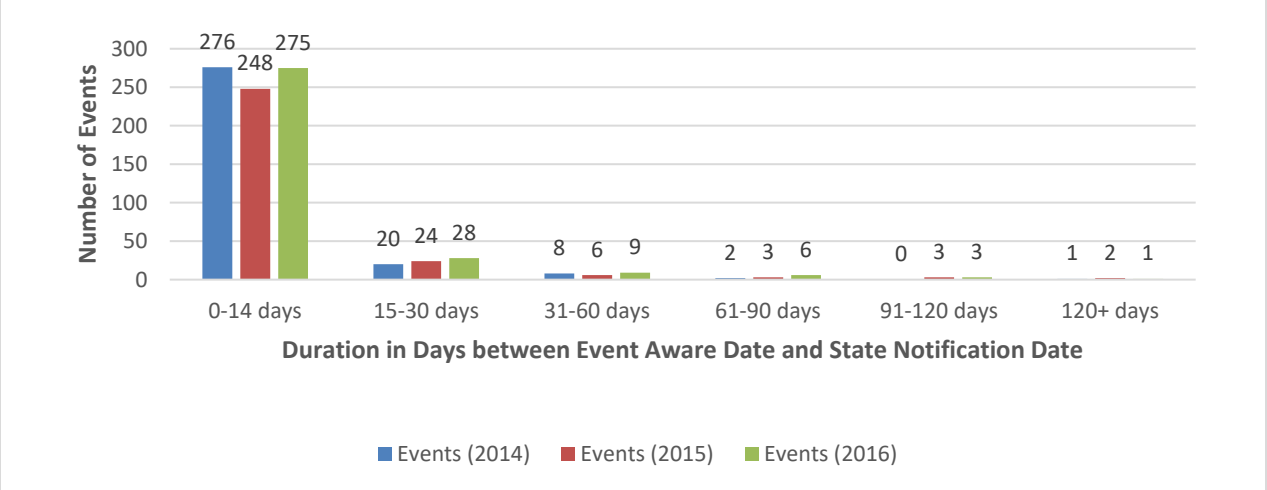
Duration in Days between Event Aware Date and Facility State Notification Date

According to NRS 439.835, facilities must notify the SER within 13 or 14 days depending upon if the patient safety officer or another healthcare worker discovers the event. Table 14 and Figure 9 show 275 facilities, (85%) notified the SER within 14 days after the event. There were 28 events (9%) that were reported to the SER between 15 days and 30 days after the event, and 19 events that were reported more than 30 days after the event. The sentinel events reported to the state within 14 days has decreased from 89.9% to 86.7% from 2014 to 2015, but has increased in 2016 by nearly the same amount as the decrease from 2014 to 2015.

Table 14: Duration between Event Aware Date and State Notification Date (inclusive of all the events from the SER database)

Duration	Events (2014)	Events (2015)	Events (2016)	Percent (2016)
0-14 days	276	248	275	85.40%
15-30 days	20	24	28	8.70%
31-60 days	8	6	9	2.80%
61-90 days	2	3	6	1.86%
91-120 days	0	3	3	0.93%
120+ days	1	2	1	0.31%
Total (* 2 data errors)	**307**	**286**	**322***	**100.00%**

Figure 7: Duration between Event Aware Date and State Notification Date in 2014 and 2016 (inclusive of all the events from the SER database)



Duration in Days between SER Part 1 Form and Part 2 Form

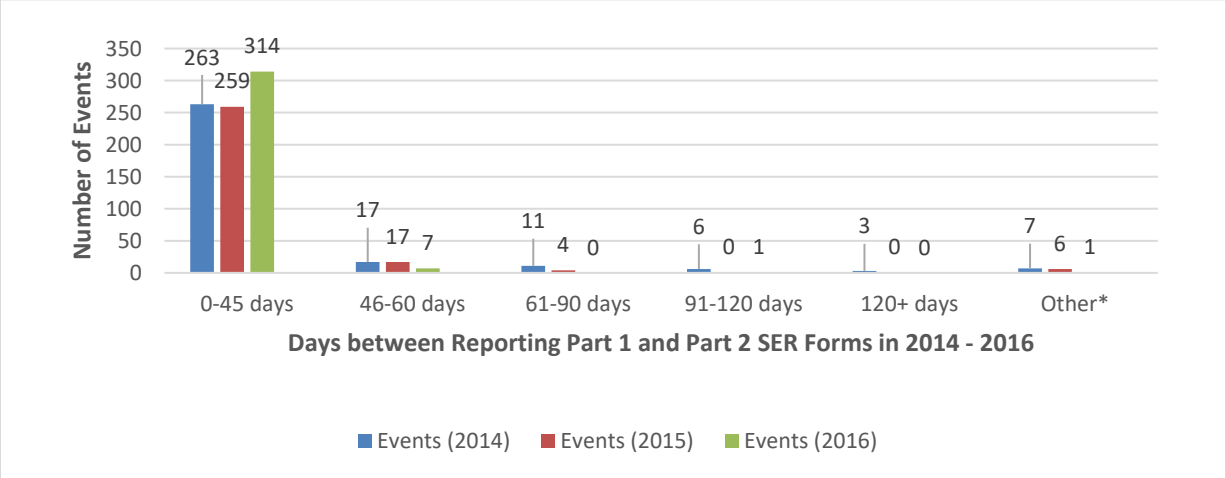
According to NRS 439.835 within 14 days of becoming aware of a reportable event, mandatory reporters must submit to the Part 1 form to the SER. Within 45 days of submitting the Part 1 form, the facility is required to submit the Part 2 form, which includes the facility's quality improvement committee describing key elements of the events, the circumstances surrounding their occurrence, the corrective actions that have been taken or proposed to prevent a recurrence, and methods for communicating the event to the patient's family members or significant other. Upon processing the Part 1 report, SER sends an email to remind the medical facilities when the SER Part 2 form will be due.

Table 15 and Figure 10 illustrate that in 2016 over 97% of the facilities met the requirement to complete the Part 2 form within 45 days of submitting the Part 1 form. In 2015 close to 90% and in 2014 about 86% reported within the expected timeline. Two (2) events are categorized as "other" since there are date data errors associated with those records.

Table 15: Reporting Duration in Days between SER Part 1 Form and SER Part 2 Form (inclusive of all events from SER database)

Days between Part 1 and Part 2 SER Report Submission	Events (2014)	Events (2015)	Events (2016)	Percent (2016)
0-45 days	263	259	314	96.91%
46-60 days	17	17	7	2.16%
61-90 days	11	4	0	0.00%
91-120 days	6	0	1	0.31%
120+ days	3	0	0	0.00%
Other (*date data errors)	7	6	2	0.62%
Total Events	**307**	**286**	**324**	**100. 00%**

Figure 8: Duration in Days between Reporting Part 1 and Part 2 SER Forms in 2014, 2015 and 2016



Duration in Days Between Event Aware Dates and the Patient Notification Dates and the Noticification Methods

As shown in Table 16, patients affected by approximately 80% of the events were notified within one day as long as the facilities were aware of the occurrence of the sentinel events. Table 17 indicates the predominant notification methods are telling the patient in person (243, 75%) or over the telephone (69, 21%).

Table 16: Duration in Days between Event Aware and the Patient Notification Date.

Duration (days)	Events	Percent
<1	248	79.74%
1-2	30	9.65%
3-5	20	6.43%
6-8	5	1.61%
8+	8	2.57%
Total (12 not included for data issues)	311	100.0%

Table 17: Method of Notification to the Patient.

Notification methods	Events	Percent
Told in Person	243	75.0%
Telephone	69	21.3%
Hand-Delivered Message	8	2.47%
Mail	3	0.93%
Email	1	0.31%
Total	324	100.0%

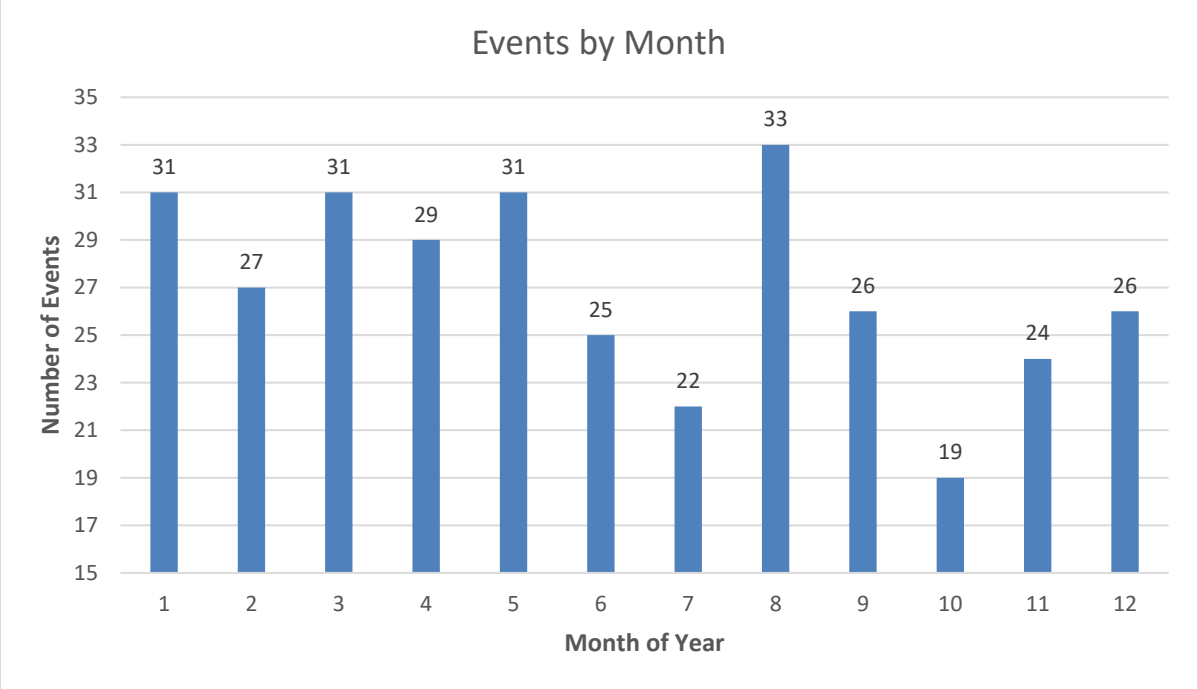
Sentinel Events by Month in 2016

Table 18 and Figure 11 indicate that August was the peak month for sentinel events occurrence in 2016 (January in 2015), 22% higher than the average of 27 events per month (23.8 2015), and 173% higher than October, which had the lowest occurrence of the sentinel events in 2016.

Table 18: Sentinel Events by Month in 2016 (inclusive of all events from SER database)

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Count of Events	31	27	31	29	31	25	22	33	26	19	24	26	324

Figure 9: Sentinel Events by Month in 2016 (inclusive of all events from SER database)



Department or Locations where Sentinel Events Occurred in 2016

Table 19 indicates that approximately 45% of sentinel events occurred at the medical/surgical department and the intensive/critical care department in 2016.

Table 19: Department or Location Where Sentinel Events Occurred in 2016 (inclusive of all events from SER database)

Department/Location	Count	Percent	Department/Location	Count	Percent
Medical/surgical	103	31.79%	Imaging	8	2.47%
Intensive/critical care	47	14.51%	Outpatient/ambulatory care	4	1.23%
Inpatient rehabilitation unit	25	7.72%	Nursing/skilled nursing	3	0.93%
Intermediate care	25	7.72%	Neonatal unit (level 3)	2	0.62%
Psychiatry/behavioral health/geropsychiatry	23	7.10%	Anesthesia/PACU	2	0.62%
Emergency department	23	7.10%	Pediatrics	2	0.62%
Outpatient/ambulatory surgery	17	5.25%	Trauma emergency department (level 1)	1	0.31%
Inpatient surgery	15	4.63%	Newborn nursery (level 1)	1	0.31%
Labor/delivery	10	3.09%	Pediatric intensive/critical care	1	0.31%
Long term care	9	2.78%	Endoscopy/Pharmacy/Cardiac catherization	3	0.93%
			Total	324	100.00 %

Section IV: Patient Safety Plans

In accordance with NRS 439.865, each medical facility is required to develop an internal patient safety plan to protect the health and safety of patients who are treated at their medical facility. The patient safety plan is to be submitted to the governing board of the medical facility for approval and the facility must notify all healthcare providers who provide treatment to patients in their facility of the plan and its requirements.

All medical facilities submitted some sort of document as a patient safety plan in response to the 2016 sentinel event report summary form. As was the case from 2009 to 2015, there was great variety in the documents submitted, ranging from fully comprehensive plans to single-page documents. Patient safety plans are addressed in NRS 439.865. Yurui Liu, the previous Biostatistician, in coordination with specialized knowledge workers has prepared a base template for the Patient Safety Plan to help guide those facilities that are unable to build their own PSP.

Patient Safety Committees

In accordance with NRS 439.875, medical facilities must establish a patient safety committee.

The composition of the committee and the frequency with which it is required to meet varies depending on the number of employees at the facility.

A facility with 25 or more employees must have a patient safety committee comprised of:

1) The infection control officer of the medical facility;
2) The patient safety officer of the medical facility, if he or she is not designated as the infection control officer of the medical facility;
3) At least three providers of healthcare who treat patients at the medical facility, including, without limitation, at least one member of the medical, nursing and pharmaceutical staff of the medical facility; and
4) One member of the executive or governing body of the medical facility.

Such a committee must meet *at least once each month*.

In accordance with NAC 439.920, a medical facility that has fewer than 25 employees and contractors must establish a patient safety committee comprised of:

1) The patient safety officer of the medical facility;
2) At least two providers of healthcare who treat patients at the medical facility, including, without limitation, one member of the medical staff and one member of the nursing staff of the medical facility; and
3) The chief executive officer (CEO) or chief financial officer (CFO) of the medical facility.

Such a committee must meet *at least once every calendar quarter*.

In either case, a facility's patient safety committee must, at least once each calendar quarter, report to the executive or governing body of the medical facility regarding:

1) The number of sentinel events that occurred at the medical facility during the preceding calendar quarter; and
2) Any recommendations to reduce the number and severity of sentinel events that occurred at the medical facility.

According to the summary reports provided by the medical facilities, 77 facilities indicated they had 25 or more employees, and 42 indicated that they had fewer than 25. Overall, the patient safety committees at 117 of the 109 facilities (92%) met as frequently as required. Among the facilities that had 25 or more employees, 69 (90%) of the patient safety committees met monthly. Among the facilities that had fewer than 25 employees, 40 (95%) of the patient safety committees met on a quarterly basis. Table 20 shows these figures.

Table 20: Compliance with Mandated Meeting Periodicity among Facilities

Facilities Having 25 or More Employees			Facilities Having Fewer Than 25 Employees and Contractors		
Monthly Meetings	**Total Facilities**	**Percentage**	**Quarterly Meetings**	**Total Facilities**	**Percentage**
Yes	69	89.61%	Yes	40	95.24%
No	4	5.19%	No	1	2.38%
Did Not Report	4	5.19%	Did Not Report	1	2.38%
Total	**77**	**100.00%**	**Total**	**42**	**100.00%**

Not all patient safety committees had the appropriate staff in attendance at the patient safety committee meetings. Table 21 shows this in greater detail. Table 21 shows that some facilities that have 25 or more employees did not have monthly meetings. The percentage of medical facilities that did not report suggests the need for some scrutiny of the reporting by those facilities. Of those facilities with 25 or more employees, 84% had mandatory staff in attendance when meetings were held, while 77% of those with fewer than 25 employees met this criteria.

Table 21: Compliance with Mandated Staff Attendance among Facilities

Facilities Having 25 or More Employees			Facilities Having Fewer Than 25 Employees and Contractors		
Mandatory Staff	**Total Facilities**	**Percentage**	**Mandatory Staff**	**Total Facilities**	**Percentage**
Yes	65	84.42%	Yes	37	77.08%
No	4	5.19%	No	5	10.42%
Did Not Report	8	10.39%	Did Not Report	1	2.08%
Total	**77**	**100.00%**	**Total**	**48**	**100.00%**

Section V: Plans, Conclusion, and Resources

Plans and Goals for the Upcoming Year

Nevada's Sentinel Event Registry program has completed the major parts of developing and deploying a web-based sentinel event reporting project by using REDCap (Research Electronic Data Capture) database to replace the current submission of sentinel events via facsimile. Identification of features, requirements, and enhanced work flows to improve the system are ongoing. Data uniformity, better dashboard information, improved web-based metrics reporting, and optimized record validation work flow are near the top of the improvements list.

The Sentinel Event Registry program developed a sentinel event toolkit comprised of a brochure/workbook that clarifies the reporting procedures with the goal of ensuring reliable and accurate reporting of Sentinel Events.

In 2017, the SER will continue to enhance the Sentinel Event Registry program in the following areas:

- Provide the technical assistance related to the REDCap reporting systems, the sentinel event toolkit review, and consultations as requested.
- Implement the sentinel events reporting statutes. (review the list of required reporting facility types)
- Continue to look for the best practices in sentinel event reporting systems.
- Continue to maintain ongoing communication with the related facilities and stakeholders regarding reporting requirements, corrective actions, and lessons learned to prevent the events from being repeated, and reduce or eliminate preventable incidents, in order to help facilitate the improvement in the quality of healthcare for citizens in Nevada.
- Assist the educational activities designed to help facilities increase their skills in root cause analysis and process improvement related to sentinel events.
- Continue to identify and address data quality issues.

Conclusion

Sentinel event reporting focuses on identifying and eliminating serious, preventable healthcare setting incidents. Mandatory reporting, including reporting of sentinel events, lessons learned, corrective actions, and the patient safety committee activities are key factors for the state of Nevada to hold facilities accountable for disclosing that an event has occurred and that appropriate action has been taken to prevent similar events from occurring in the future. The system was designed for continuous improvement to the quality of services provided by the facilities by learning from prior sentinel events to establish better preventive practices.

Improving patient safety is the responsibility of all stakeholders in the healthcare system, and includes patients, providers, health professionals, organizations, and government. From the data analysis, readers can see that the total number of sentinel events has slightly increased compared to previous years. The major categories of a fall and an ulcer changed their trends, with falls increasing while ulcers decreased compared to the previous year. Most of the facilities followed the procedures and requirements to submit the reports and had internal patient safety plans. With a few bumps being worked out of the new REDCap system, reporting efficiency, data quality and stakeholder education continue to improve.

Resources

The Sentinel Events Registry main page is located at:
http://dpbh.nv.gov/Programs/SER/Sentinel_Events_Registry_(SER)-Home/

Sentinel event reporting guidance and manuals are located at:
http://dpbh.nv.gov/Programs/SER/Sentinel_Events_Registry_(SER)-Home/

The 2012 sentinel event reporting guidance, which explains in detail each of the sentinel event categories, is located at:
http://dpbh.nv.gov/Programs/SER/Sentinel_Events_Registry_(SER)-Home/

The National Quality Forum Topics in Sentinel Reporting Events is located at:
http://www.qualityforum.org/topics/sres/serious_reportable_events.aspx

The Serious Reportable Events in Healthcare – 2011 Update: A Consensus Report, Appendix A explains in detail each of the Sentinel Event categories used in this report, is located at:
http://dpbh.nv.gov/Programs/SER/Sentinel_Events_Registry_(SER)-Home/

Citations

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