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2018 Annual Sentinel Event Summary Report

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Sentinel Event Report Organization and Contents

Contents

Contents.....	i
Section I: Executive Summary.....	2
Acknowledgments.....	2
Background and Purpose.....	3
Sentinel Event Defined.....	3
Methodology.....	4
Section II-a: Sentinel Event Summary Report Information.....	5
Event Types and Totals.....	5
Table 1: Sentinel Event Record Classification 2018.....	5
Table 2: Sentinel Event Facility Types from Annual Reports 2018 (at least one event).....	6
Table 3: Sentinel Event Type Totals in 2018 (from the sentinel events registry forms).....	6
Section II-b: Sentinel Event Annual Summary Report.....	7
Event Types and Totals.....	7
Table 4: Annual Summary Report Record Classification 2018.....	7
Table 5: Annual Summary Report Sentinel Event Facility Types from Reports 2018.....	7
Table 6: Sentinel Event Type Totals in 2018 (from the annual summary forms).....	8
Section III: Registry Data Analysis and Comparison between Summary Report and Registry Data.....	9
Event Types and Totals.....	9
Total Sentinel Events Summary Data vs. Registry Data (2014-2018).....	9
Table 7: Total Events Summary vs. Registry (2014-2018).....	9
Figure 1: Total Sentinel Events Summary Report vs. Registry (2014-2018 all reports).....	10

Table 8 – Sentinel Event Type Totals from the 2014-2018 Sentinel Event Report Summary Forms and Sentinel Events Registry 10

Top 5 Types of Sentinel Events in 2018, Compared to Prior 5 Years 12

 Figure 2: Top 5 Types of Sentinel Events in 2018, Compared to Prior 5 Years 12

Primary Contributing Factors in 2018 13

 Table 9: Primary Contributing Factors from 2014 to 2018 13

Detailed Primary Contributing Factors in 2018 14

 Table 10: Detail of Primary Contributing Factors in 2018 15

Top 5 Contributing Factors in 2018, Compared to the prior 5 Years 16

 Table 11: The Top 5 Primary Contributing Factors in 2018, Compared to Prior 5 Years 17

 Figure 4: The Top 5 Primary Contributing Factors in 2018, Compared to Prior 5 Years 17

Distribution of Sentinel Events by Facility Type in 2018 18

 Table 12: Sentinel Event Counts by facility type in 2018 18

 Figure 5: Frequency Counts of Sentinel Events by Facility Type 18

Sentinel Events by Location in 2018 19

 Map 1a: Sentinel Events by Location - State 20

 Map 1b: Sentinel Events by Location - Reno/Sparks Area 21

 Map 1c: Sentinel Events by Location - Las Vegas Area 22

Sentinel Events by Age in 2018 23

 Table 13: Sentinel Events by Age in 2018 (SER database) 23

 Figure 6: Sentinel Events by Age in 2018 (SER database) 23

Sentinel Events in relation to total patient discharges 24

 Figure 7: Sentinel Events per Discharges in 2018 (SER and CHIA databases) 24

Figure 8: Sentinel Events Chance by Discharge Count in 2018 (SER and CHIA databases)..... 25

Duration in Days between Event Aware Date and Facility State Notification Date 25

Table 14: Duration between Event Aware Date and State Notification Date (SER database) 25

Figure 9: Duration between Event Aware Date and State Notification Date in 2014 to 2018 (SER database) 26

Duration in Days between SER Part 1 Form and Part 2 Form..... 26

Table 15: Reporting Duration in Days between SER Part 1 Form and SER Part 2 Form 27

Figure 10: Duration in Days between Reporting Part 1 and Part 2 SER Forms in 2014, to 2018..... 27

Duration in Days Between Event Aware Dates and the Patient Notification Dates and the Notification Methods 2018 28

Table 16: Duration in Days between Event Aware and the Patient Notification Date..... 28

Table 17: Method of Notification to the Patient. 28

Sentinel Events by Month in 2018 29

Table 18: Sentinel Events by Month in 2018 (SER database) 29

Figure 11: Sentinel Events by Month in 2018 (SER database) 29

Department or Locations where Sentinel Events Occurred in 2018 30

Table 19: Department or Location Where Sentinel Events Occurred in 2018 (SER database)..... 30

Discussion: reporting reflecting past sentinel event definitions 31

Table 20 – Sentinel Event Type Totals from the 2011-2018 Sentinel Event Report Summary Forms and Sentinel Events Registry – previous sentinel event definition..... 31

Patient Safety Approaches in nearby States..... 32

Section IV: Patient Safety Plans 33

Patient Safety Committees 34

Table 21: Compliance with Mandated Meeting Periodicity among Facilities 35

Table 22: Compliance with Mandated Staff Attendance among Facilities 35

Section V: Plans, Conclusion, and Resources 36

 Plans and Goals for the Upcoming Year..... 36

Conclusion..... 37

Resources..... 37

 Safety Checklists for Patients –..... 37

Citations..... 38

Funding Sources(s)..... 38

Recommended Citation 38

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Section I: Executive Summary

Acknowledgments

This report was prepared by Jesse Wellman, with the DHHS Office of Analytics, for the Division of Public and Behavioral Health (DPBH) – Office of Public Health Investigation and Epidemiology (OPHIE).

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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 of each year. 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 ninth 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, 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 reflect 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. 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 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, "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 following link 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 2018. See table 20 and discussion in this report regarding facilities that continue to sporadically report under the previous definition.

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. 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. All forms are marked ‘Unverified’ by the reporting party upon completion and submittal. Once submitted to the sentinel event database, the SER Registrar will review the record and mark the form record as ‘Verified.’ 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 facility-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 (REDCap) web-based data input system (<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 (a 20% FTE position) 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, resulting in the record having a locked, 'Verified' status.

A sentinel event ASRSER form is also available through the REDCap reporting system. Each medical facility was to complete the online reporting requirement by March 1, 2019, for the calendar year 2018. 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

This section provides information regarding the total number of sentinel events indicated by the medical facilities as reported to the SER throughout the year, as well as a breakdown of the event types.

Event Types and Totals

In 2018, 50 facilities reported sentinel events. Of those reporting, one facility was not of the type required by NRS to report. A total of 276 sentinel event records reported, grouped as follows:

273 events were true sentinel events per all definitions (current and previous definitions).

262 events were true sentinel events per the current definition.

* Three events (3) from 2018, seven events (7) from prior years remain pending. Events pending determination are awaiting either autopsy and laboratory testing results yet to be available to the state, or the review of the record by licensed medical professionals.

Table 1: Sentinel Event Record Classification 2018

Year of Record	Event Type	Count in CY 2018 (Calendar Year)
2018	Not a Sentinel Event	0
2018	To be determined	3*
2018	Is a Sentinel Event	262

Table 2: Sentinel Event Facility Types from Annual Reports 2018 (at least one event)

Facility Type Defined	Facility Type Code	Count of Facility Types in CY 2018	Count of sentinel events by Facility Type in CY 2018
Surgical center for ambulatory patients	ASC	9	11
Hospital	HOS	32	241
Rural hospital	RUH	5	9
Facility for modified medical detoxification	MDX	1	1

Table 3: Sentinel Event Type Totals in 2018 (from the sentinel events registry forms)

Rank	Event	Count	Percent
1	Fall	91	34.7
2	Pressure ulcer stage 1, 2 ,3 or 4	90	34.4
3	Retained foreign object	19	7.3
3	Other – specify	12	4.6
4	Surgery on wrong body part or wrong procedure	9	3.3
6	Burn	9	3.3
7	Medication error or errors	6	2.3
8	Suicide or suicide attempt	6	2.3
9	Sexual assault	4	1.5
10	Device failure	4	1.5
11	Physical assault	2	0.8
12	Elopement	2	0.8
13	Contaminated product or device	2	0.8
14	Wrong or contaminated gas	1	0.4
15	Restraint	1	0.4
16	Surgery on wrong patient	1	0.4
17	Discharge to wrong person	1	0.4
18	Contaminated drug	1	0.4
19	Maternal intrapartum	1	0.4
	Grand Total (2014 reporting definition)	262	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 2018, one hundred forty-two (142) facilities were expected to file. One hundred thirty-eight (138) facilities have completed the annual summary sentinel events report (ASRSER), uploaded a copy of their Patient Safety Plan (PSP), and updated the designated Patient Safety Committee (PSC) reporter's contact information, even if no sentinel event occurred. Fifty-two (52) facilities had not filed their ASRSER as of the close of the business day on March 1, 2019 (**NRS439.843**). Five facilities have not filed, one is closed, one asked for and received a filing exemption, as that facility is only active at/during the Burning Man event, and three have made no entry. As of May 3, 2019, of all the facilities that started completing the annual summary form, only one facility remains needing to finish a partial filing. This is a proactive, iterative dialog process between the SER Registrar and the contacts at the facilities, especially when meeting timeliness of reporting. These reporting medical facilities included the following:

Table 4: Annual Summary Report Record Classification 2018

Year of Record	Event Type	Count in CY18
2018	Facility Reported No Sentinel Events	87
2018	Facility Reported One Sentinel Event	20
2018	Facility Reported More than One Sentinel Events	31
2018	Total Facilities Reporting	138

Table 5: Annual Summary Report Sentinel Event Facility Types from Reports 2018

Facility Type	Facility Type Defined	Count of Facility Type	Count of Reported Events - Current Definition
ASC	Surgical center for ambulatory patients	69	41
HOS	Hospital	53	250
RUH	Rural Hospital	13	9
ICE	Independent center for emergency medical care	2	0
MDX	Facility for modified medical detoxification	1	1
ALL	Count of facilities and events	138	301

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 2018, the medical facilities reported a total of 301 sentinel events.

Table 6: Sentinel Event Type Totals in 2018 (from the annual summary forms)

Rank	Event	Count	Percent
1	Pressure ulcer stage 1 or 2 or 3 or 4	99	32.9
2	Fall	96	31.9
3	Medication error or errors	25	8.3
4	Retained foreign object	21	7.0
5	Other - specify	12	4.0
6	Burn	9	3.0
7	Surgery on wrong body part	7	2.3
8	Contaminated drug	6	2.0
9	Suicide or suicide attempt	5	1.7
10	Sexual assault	4	1.3
11	Device failure	3	1
12	Wrong surgical procedure	2	0.7
13	Elopement	2	0.7
14	Failure to communicate test result	2	0.7
15	Physical assault	2	0.7
17	Surgery on wrong patient	1	0.3
18	Intra- or post-operative death	1	0.3
19	Discharge to wrong person	1	0.3
20	Maternal labor or delivery	1	0.3
21	Wrong or contaminated gas	1	0.3
22	Restraint	1	0.3
24	Air embolism	0	0
25	Transfusion error	0	0
26	Neonate labor or delivery	0	0
27	Wrong sperm or egg	0	0
28	Lost specimen	0	0
29	Electric shock	0	0
30	Introduction of metallic object into MRI area	0	0
31	Impersonation of healthcare provider	0	0
32	Abduction	0	0
1	Grand Total (current definition)	301	100

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

This section summarizes the data that has been received and recorded in the sentinel events registry individual incident reporting, and then compares the event types to data from the annual summary sentinel events reporting.

Event Types and Totals

Like Tables 3 and 6 above, Table 8 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 SER. In 2018, a total of 301 sentinel events were reported according to the summary forms versus 262 as recorded in the SER. These numbers reflect actual events and do not include the categories of 'to be determined' or 'is not a sentinel event' and does not include reporting conforming to event definitions pre-2014.

Total Sentinel Events Summary Data vs. Registry Data (2014-2018)

From Table 7, it should be noted that the comparison of event counts between reporting methods for 2018 differ by about 14.9%. The 2018 difference is a large increase, compared to the 2017 difference of about 2.2%, the 2016 difference of 2.2%, the 2015 difference at 3.3%, and the 4.5% difference for 2014. Data between 2011 and 2013 were not listed in this table since the definition of sentinel events has been changed since Oct. 1, 2013.

Table 7: Total Events Summary vs. Registry (2014-2018)

Year	2014	2015	2016	2017	2018
Not Sentinel Events*	20	12	12	2	0
Registry Sentinel Events	286	270	323	277*	262*
Summary Sentinel Events	301	283	337	273	301
Difference	-15	-13	-14	4	-39
Difference Percent	-5.24%	-4.81%	-4.33%	1.44%	-14.89%

Remark:

* In 2018 three events not included in this total have the status of to-be-determined. – (*3 in 2018 and 7 in previous years schedules have so far prevented determination by qualified medical staff)

See Figure 1 below for a graphical comparison of the relationship between the two reporting methods since 2014.

Figure 1: Total Sentinel Events Summary Report vs. Registry (2014-2018 all reports)

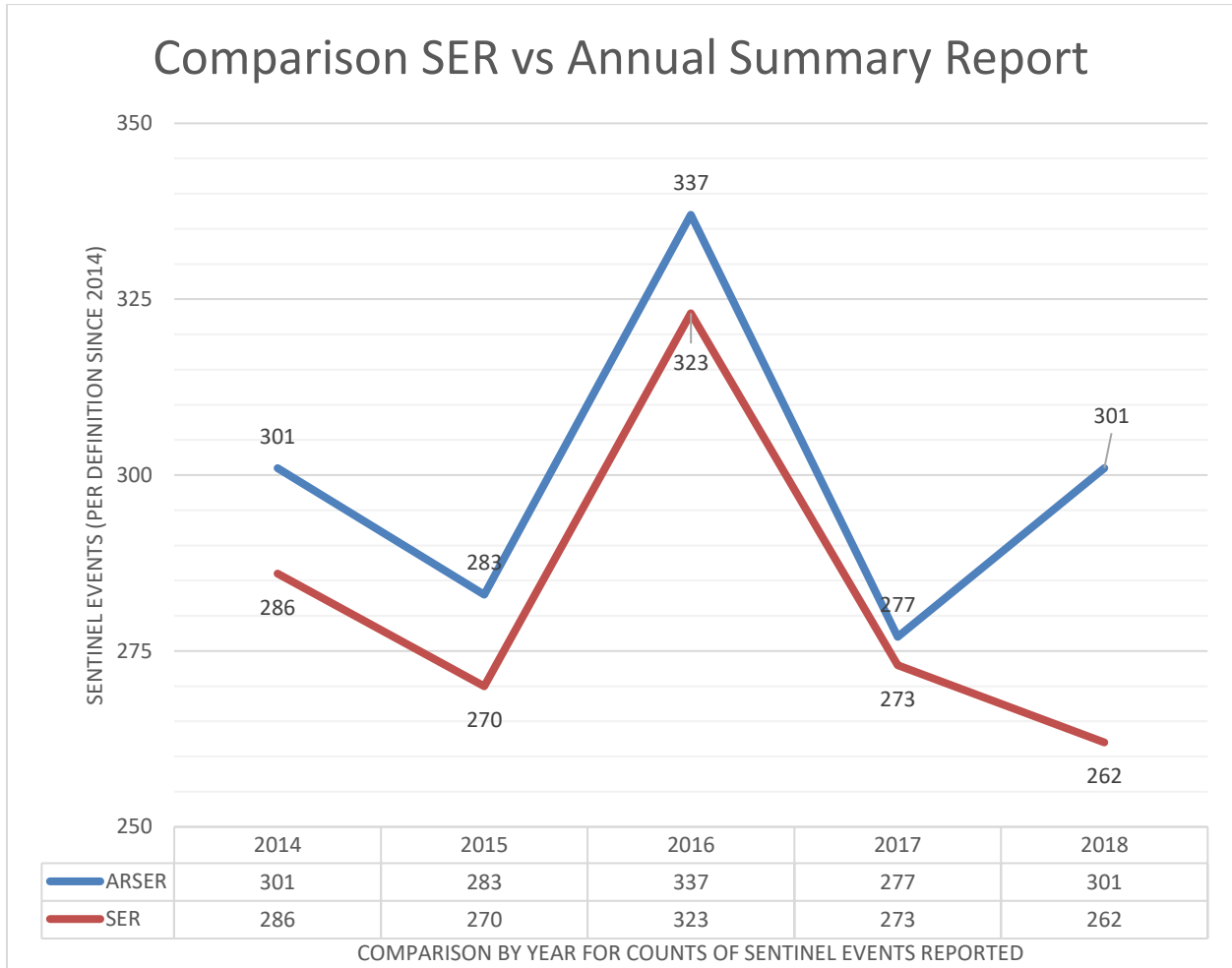


Table 8 – Sentinel Event Type Totals from the 2014-2018 Sentinel Event Report Summary Forms and Sentinel Events Registry

Description (*, **, ***, ****)	2014 ASRSER	2014 SER	2015 ASRSER	2015 SER	2016 ASRSER	2016 SER	2017 ASRSER	2017 SER	2018 ASRSER	2018 SER
Abduction	1	0	0	1	1	0	0	0	0	0
Air embolism	0	0	0	1	0	0	0	0	0	0
Burn	7	5	4	5	8	8	13	14	9	9
Contaminated product or device or Drug	6	4	1	1	3	7	1	0	6	3
Device failure	6	5	6	7	6	5	1	1	3	4
Discharge to wrong person	1	1	0	0	0	1	3	3	1	1

2018 ANNUAL SENTINEL EVENT SUMMARY REPORT

Electric shock	0	0	0	0	0	0	0	0	0	0
Elopement	6	6	5	4	4	5	8	7	2	2
Failure to communicate test result	6	6	2	3	5	2	1	1	2	0
Fall	105	98	114	106	132	126	113	112	96	91
Hypoglycemia	0	0	0	0	0	0	0	0	0	0
Impersonation of healthcare provider	2	1	0	0	0	0	0	0	0	0
Infant perinatal	1	0	9	0	7	0	5	0	0	0
Intra- or post-operative death	12	14	11	12	3	2	2	1	1	0
Introduction of metallic object into MRI area	0	0	0	0	0	0	0	0	0	0
Lost specimen	1	1	0	0	1	1	0	0	0	0
Maternal labor or delivery or intrapartum	2	3	3	3	2	1	1	1	1	1
Medication error or errors	8	7	8	6	7	8	15	11	25	6
Neonate labor or delivery or hyperbilirubinemia	1	1	9	7	7	1	5	3	0	0
Other - specify	0	0	0	0	0	2	0	12	12	12
Physical assault (attempted battery)	27	28	10	12	10	8	2	4	2	2
Pressure ulcer Stage 1 or 2 or 3 or 4 ****	66	69	68	67	91	94	58	63	99	90
Procedure complication or complications	0	1	0	0	0	1	0	3	0	0
Restraint	2	2	0	0	3	4	0	0	1	1
Retained foreign object	18	16	19	21	19	19	18	16	21	19
Sexual assault	5	4	3	3	8	9	6	6	4	4
Suicide or suicide attempt	7	7	3	3	7	6	7	6	5	6
Surgery on wrong body part ****	4	3	6	8	8	10	8	2	7	0
Surgery on wrong patient	1	2	0	0	1	1	0	1	1	1
Surgery wrong procedure ****	2	0	2	0	3	1	5	9	2	9
Transfusion error	2	0	0	0	0	0	1	1	0	0
Wrong or contaminated gas	2	2	0	0	1	1	0	0	1	1
Wrong sperm or egg	0	0	0	0	0	0	0	0	0	0
Totals	301	286	283	270	337	323	273	277	301	262

*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.

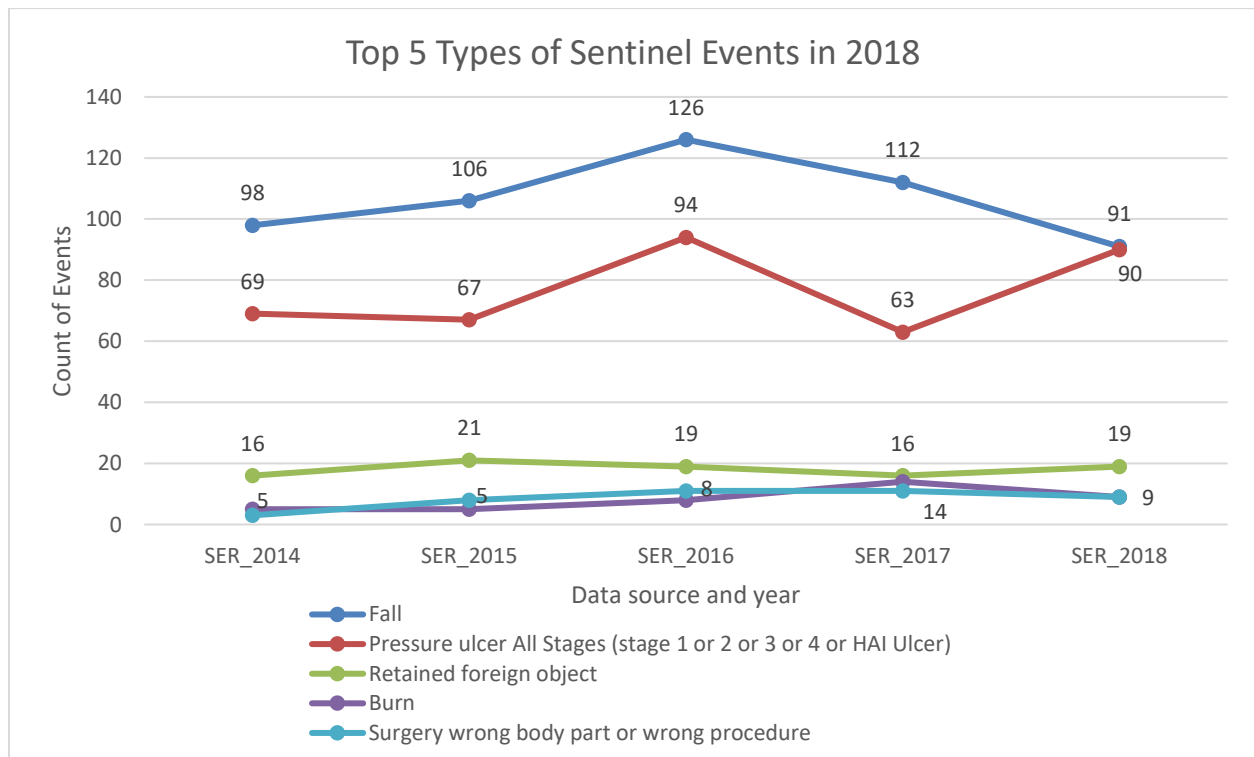
***Figure 1 illustrates the differences by total count per year.

**** Input form labeling may have caused some confusion.

Top 5 Types of Sentinel Events in 2018, Compared to Prior 5 Years

Figure 2 shows the top five (5) types of sentinel events in 2018 compared to the prior five (5) years. The definition of sentinel event has been changed since October 1, 2013. However, the data illustrated is only as a qualified event per the 2018 definition. From the graph, readers will notice that “Fall” is the number one type of event. Along with overall reported sentinel events decreasing, the absolute number of falls also decreased since 2016 by about 38%. “Pressure ulcer” fluctuates, increasing in 2018 by about 55% from the previous year. “Retained Foreign Object” increased by 3%, returning to its 2016 level. Burn and Surgery on wrong body part/wrong procedure were added this year.

Figure 2: Top 5 Types of Sentinel Events in 2018, Compared to Prior 5 Years



Primary Contributing Factors in 2018

For each sentinel event, a maximum of four contributing factors may be entered. In 2018, there were 688 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 3 show the top three primary contributing factors as:

- ❖ Staff related: 252 (37%)
- ❖ Patient related: 222 (32%)
- ❖ Communication/documentation related: 107 (16%).

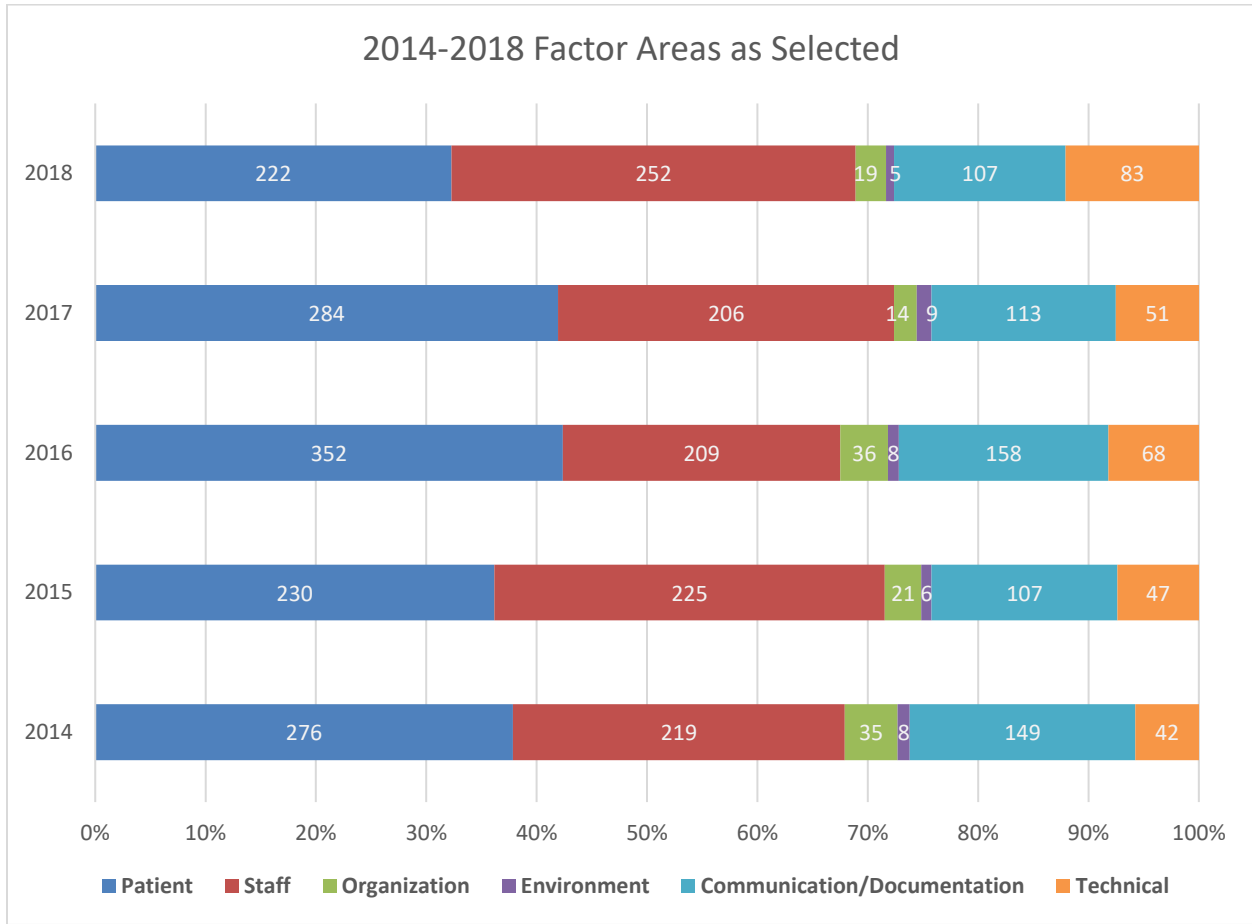
These three (3) factor area groups constitute greater than 85% of the total primary contributing factor groups in 2018. Comparing with 2017, staff related moved up displacing patient-related from the top spot. On a percentage basis Environment and Communication/Documentation decreased slightly while, Organization and the Technical factor area increased.

Table 9: Primary Contributing Factors from 2014 to 2018

Factor Area	2014 factor count	2014 percent	2015 factor count	2015 percent	2016 factor count	2016 percent	2017 factor count	2017 percent	2018 factor count	2018 percent
Patient	276	37.9	230	36.2	352	42.4	284	41.9	222	32.3
Staff	219	30	225	35.4	209	25.2	206	30.4	252	36.6
Organization	35	4.8	21	3.3	36	4.3	14	2.1	19	2.7
Environment	8	1.1	6	0.9	8	1	9	1.3	5	0.7
Communication/Documentation	149	20.4	107	16.8	158	19	113	16.7	107	15.6
Technical	42	5.8	47	7.4	68	8.1	51	7.6	83	12.1
SUM	729	100	636	100	831	100	677	100	688	100

Note: Each event can list up to 4 factors per factor area. Percent is proportion of all factors listed for that year.

Figure 3: Primary Contributing Factors from 2014 to 2018 relative comparison



Note: Each event can list up to four (4) factors per factor area. The color bar represents the relative proportion of all factor group areas for each year.

Trends observed from the previous year suggest that staff-related factors have increased, while organization issues, and environment issues have decreased. Patient related factors are proportionately less, while communication/documentation issues and technical issues remain very similar. Longer term trends show modest improvement in reduction of communication related issues with technical issues increasing.

Detailed Primary Contributing Factors in 2018

Within the primary factor group areas there are many sub areas, referred to as ‘detailed primary factors.’ The detailed primary contributing factors in 2018 are displayed in Table 10. The table illustrates that Staff Area Clinical Decision Assessment tops the list with 100, accounting for over 14% of selected areas. Staff Area Failure to Follow Policy Procedure and Staff Area Clinical Performance Administration rank staff area factors in the top three (3) selections followed by four (4) patient related factors before

any mention of Environment, Organization, Technical or Communication/Documentation appear. As a contrast, in 2017 the factor Patient Related Non-Compliant, with 83 events was the highest (12% of total events), Clinical Decision/Assessment contributed 80 events (12% of the total events) to ranked second in 2017, while in 2016 this category was ranked first. Finishing 2017 in review, Failure to Follow Policy/Procedure ranked third with 74 events (11%) and Frail/Unsteady contributed to 63 events (nine (9)%) ranking fourth. Unfortunately, it appears that the top ranked primary factors fluctuate from year to year and that no consistent reduction of any specific primary factor has been achieved to date.

Table 10: Detail of Primary Contributing Factors in 2018

Factors (up to 4 per event can be selected)	2018 Counts	2018 Percent (%)
STAFF Clinical Decision Assessment	100	14.5
STAFF Failure Follow Policy Procedure	80	11.6
STAFF Clinical Performance Administration	68	9.9
PT Frail Unsteady	59	8.6
PT Impairment Physical	55	8
PT Non Compliant	39	5.7
PT Confusion	35	5.1
ENV Noise Level	28	4.1
ORG Staffing Level	26	3.8
TECH Treatment Delay	23	3.3
COMDOC Hand Off Teamwork Cross Coverage	22	3.2
ORG Training Inadequate Not Done	21	3.1
TECH NONE	15	2.2
PT Medicated	12	1.7
TECH Supplies Incorrect	9	1.3
TECH Equipment Failures	8	1.2
TECH Equipment Incorrect	8	1.2
PT Substance Use	7	1
PT Self Harm	7	1
ORG Training Inadequate Not Done	7	1
TECH OTHER	7	1
PT Language Barrier	4	0.6
ORG Culture Ethics Values	4	0.6

ORG Staffing Level	4	0.6
COMDOC Written Communication Inadequate	4	0.6
COMDOC Written Communication Incorrect	4	0.6
TECH Equipment Unavailable	4	0.6
ORG Inappropriate No Policy Process	3	0.4
ENV Noise Level	3	0.4
PT Psychosis	2	0.3
PT Self Administration	2	0.3
STAFF patient ID	2	0.3
EVN Floor Surface Wet Slippery	2	0.3
TECH Dose Incorrect	2	0.3
TECH Omission	2	0.3
STAFF Iatrogenic Error	1	0.1
STAFF Work Outside Scope Of Practice	1	0.1
ORG patient Volume Exceeds Capacity	1	0.1
ORG patient Volume Exceeds Capacity	1	0.1
COMDOC Verbal Communication Incorrect	1	0.1
TECH Dose Miscalculation	1	0.1
TECH Infusion Rate Incorrect	1	0.1
TECH Packaging Label Ambiguous	1	0.1
TECH Supplies Unavailable	1	0.1
TECH Frequency Wrong	1	0.1
Total (detailed primary factors)	688	100

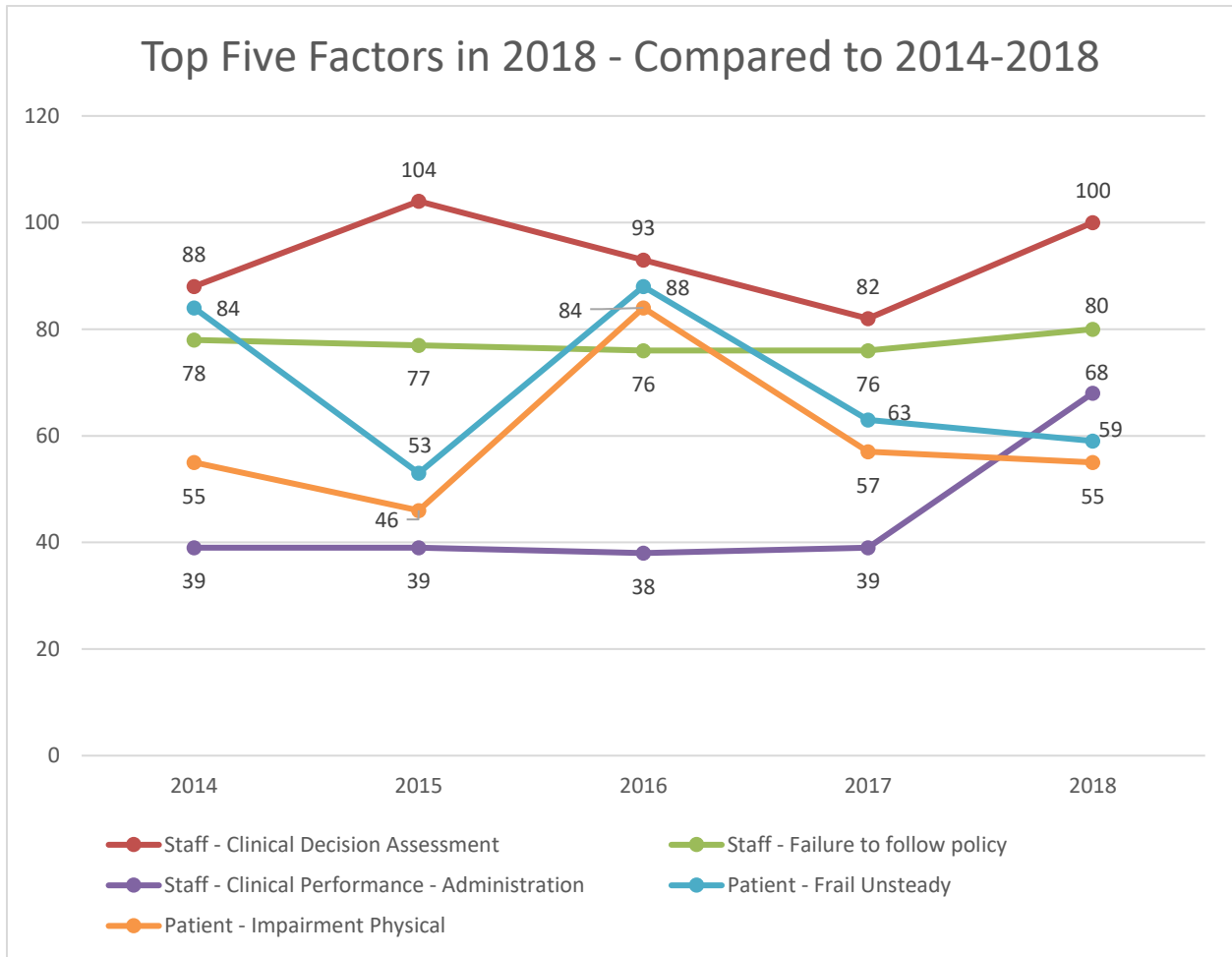
Top 5 Contributing Factors in 2018, Compared to the prior 5 Years

Table 11 and Figure 4 below show the top five (5) contributing factors in 2018 compared to the prior five (5) years. This illustrates the significance of potential improvements that could be made in the areas of Staff decision making processes, recognition of the value of following established policy and administration's delivery of performance. Ranked 4th and 5th both related to patients, suggest room for improvement in recognition and appropriate action when the patient needs physical assistance.

Table 11: The Top 5 Primary Contributing Factors in 2018, Compared to Prior 5 Years

Year	STAFF Clinical Decision Assessment	STAFF Failure to follow policy	STAFF Clinical Performance Administration	PATIENT Frail Unsteady	PATIENT Impairment Physical
2018	100	80	68	59	55
2017	82	76	39	63	57
2016	93	76	38	88	84
2015	104	77	39	53	46
2014	88	78	39	84	55

Figure 4: The Top 5 Primary Contributing Factors in 2018, Compared to Prior 5 Years



Note: This data uses the current sentinel event definition.

Distribution of Sentinel Events by Facility Type in 2018

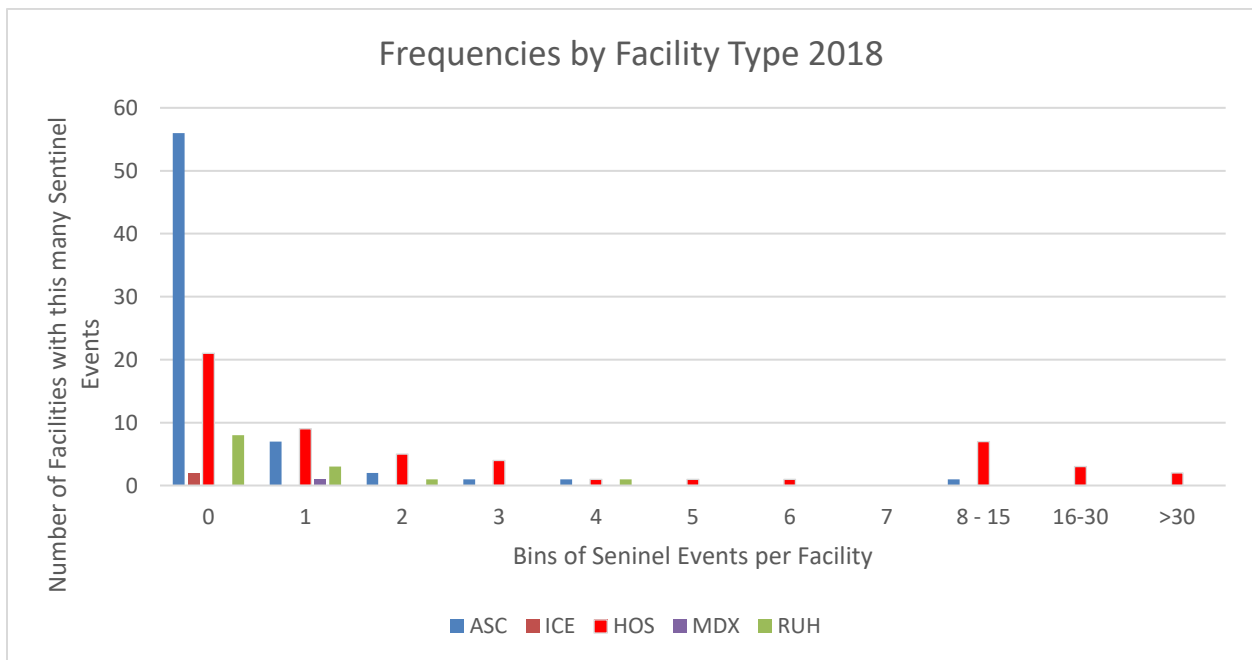
Table 12 and Figure 5 illustrate the sentinel events for each type of facility in 2018 as counts. Surgical Center for Ambulatory Patients (ASC) showed an average with 0.59 events per facility in 2017 up from 0.48 in 2017 and 0.17 in 2016. Hospitals (HOS), had an average of 4.70 down slightly from 4.78 events per hospital and down from 5.23 in 2016. Rural hospitals (RUH) have an average of 0.56 notably less than 1.07 events per hospital in 2017 and still lower than 1.71 in 2016. Small numbers preclude comparison of averages for Nevada’s independent center for emergency medical care (ICE) that reported no sentinel events in 2018, and for modified medical detoxification (MDX) facilities that reported one (1) event.

Table 12: Sentinel Event Counts by facility type in 2018

Facility/#	0	1	2	3	4	5	6	7	8-15	16-30	>30
ASC	56	7	2	1	1	0	0	0	1	0	0
ICE	2	0	0	0	0	0	0	0	0	0	0
HOS	21	9	5	4	1	1	1	0	7	3	2
MDX	0	1	0	0	0	0	0	0	0	0	0
RUH	8	3	1	0	1	0	0	0	0	0	0

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 2018

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

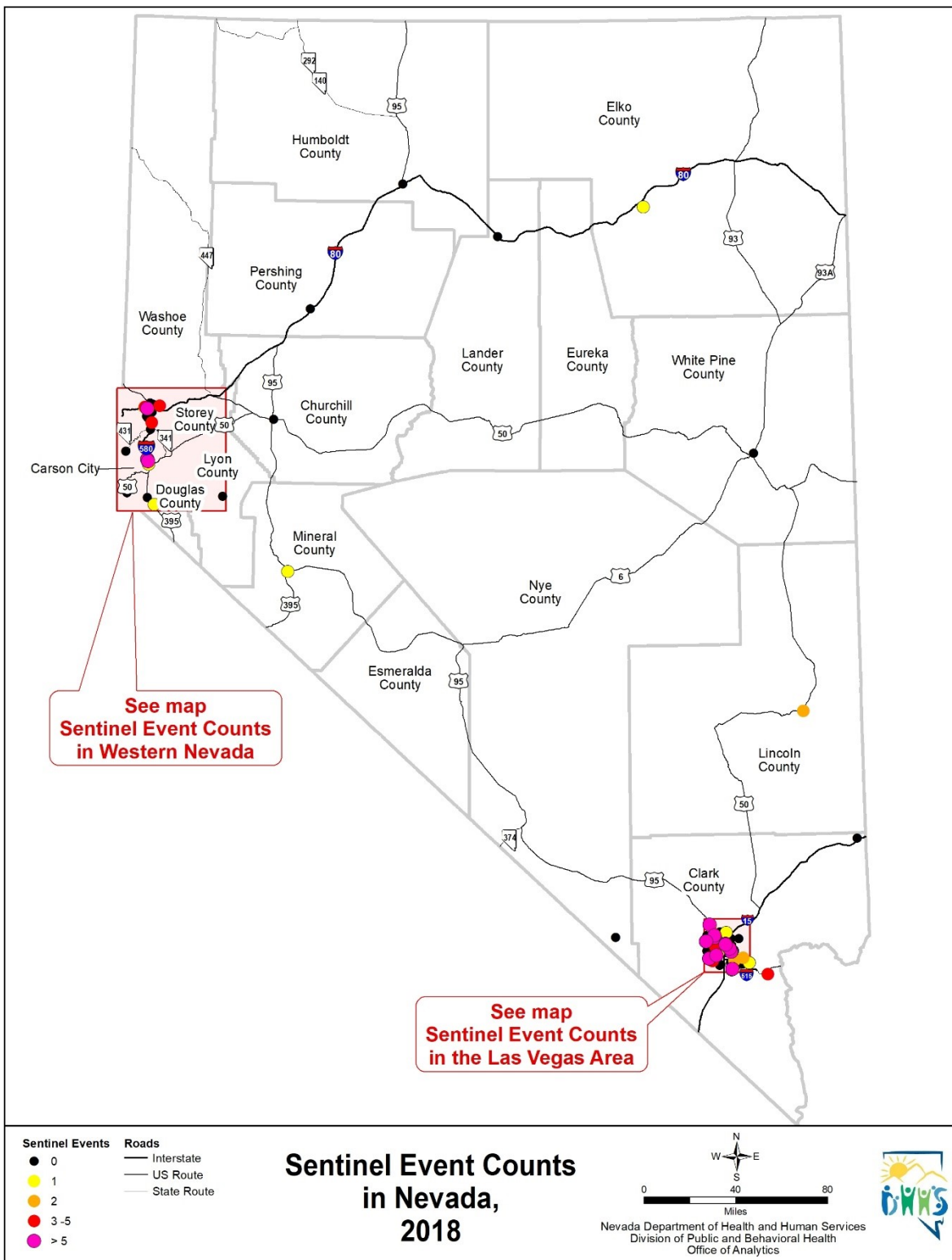
The three maps show the location of the facilities along with a color range representation of the count of the number of events.

Maps have a legend of sentinel event counts per facility represented as follows: no event reported is shown as a black dot, a single event is shown by a yellow dot, two events by an orange dot, three to five events as a red dot, and more than five events as a magenta dot.

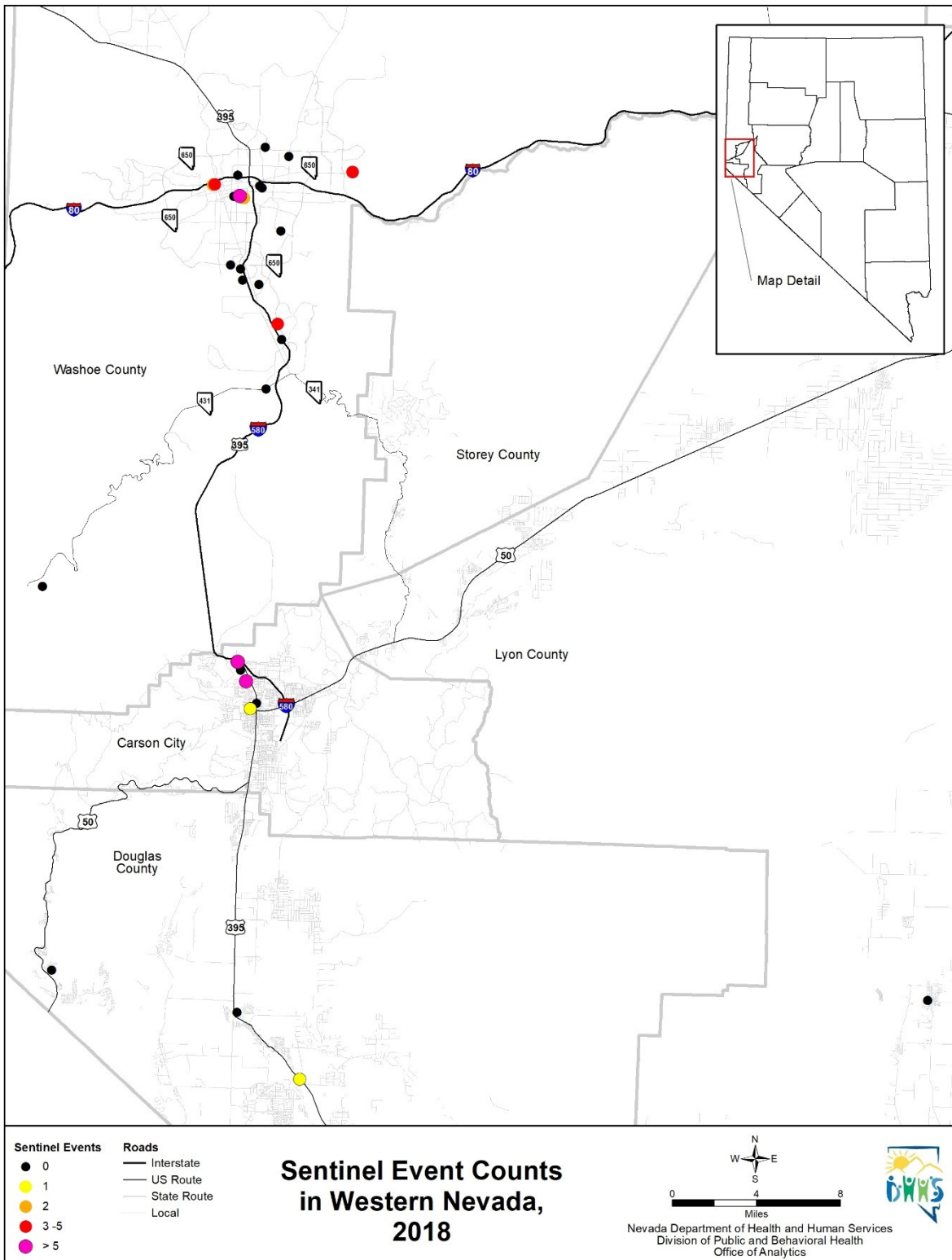
The maps' color range represents the absolute count and does not indicate what type of licensure the facility has, nor the size in patient volume, procedure volume or number of employees.

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

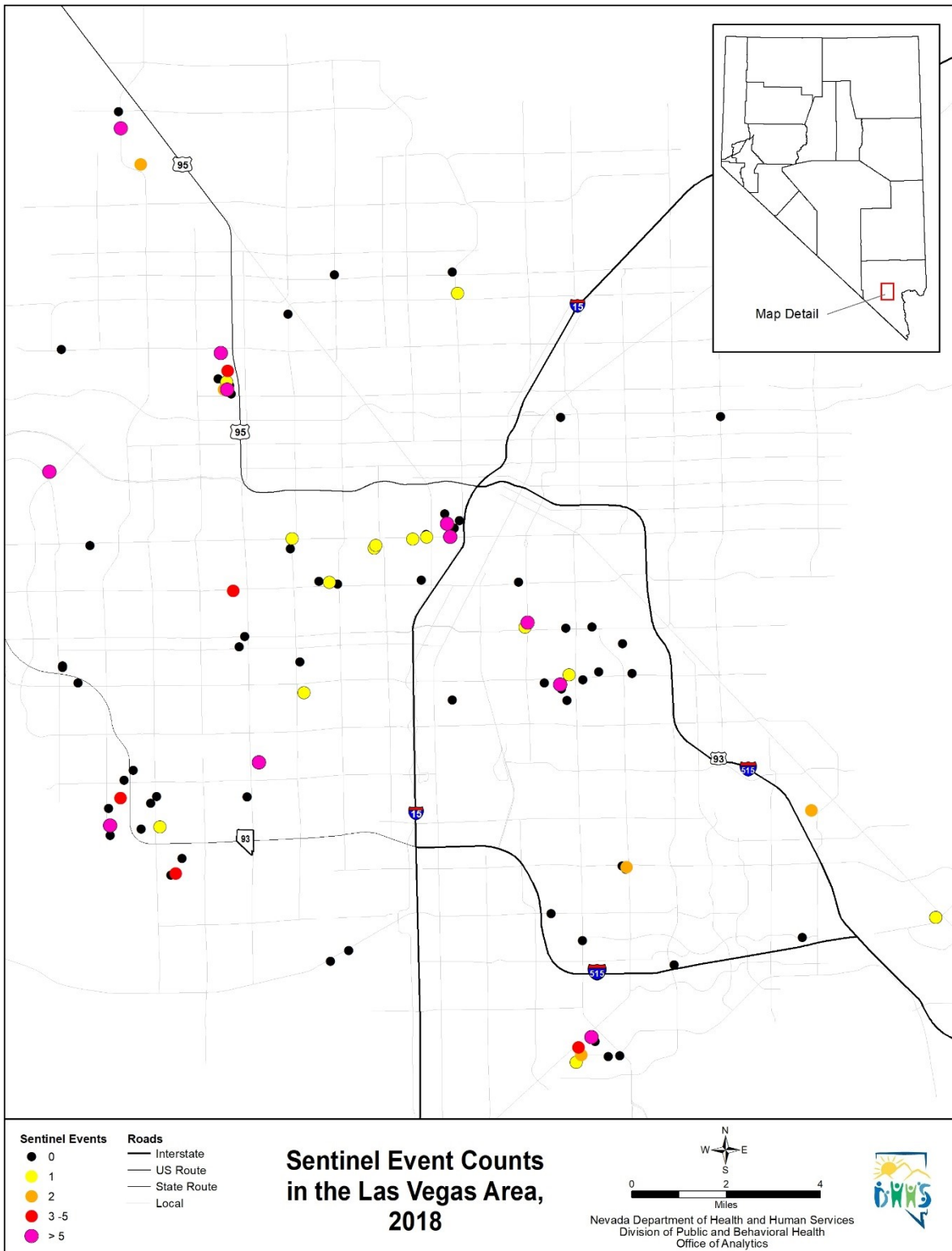
Map 1a: Sentinel Events by Location - State



Map 1b: Sentinel Events by Location - Reno/Sparks Area



Map 1c: Sentinel Events by Location - Las Vegas Area

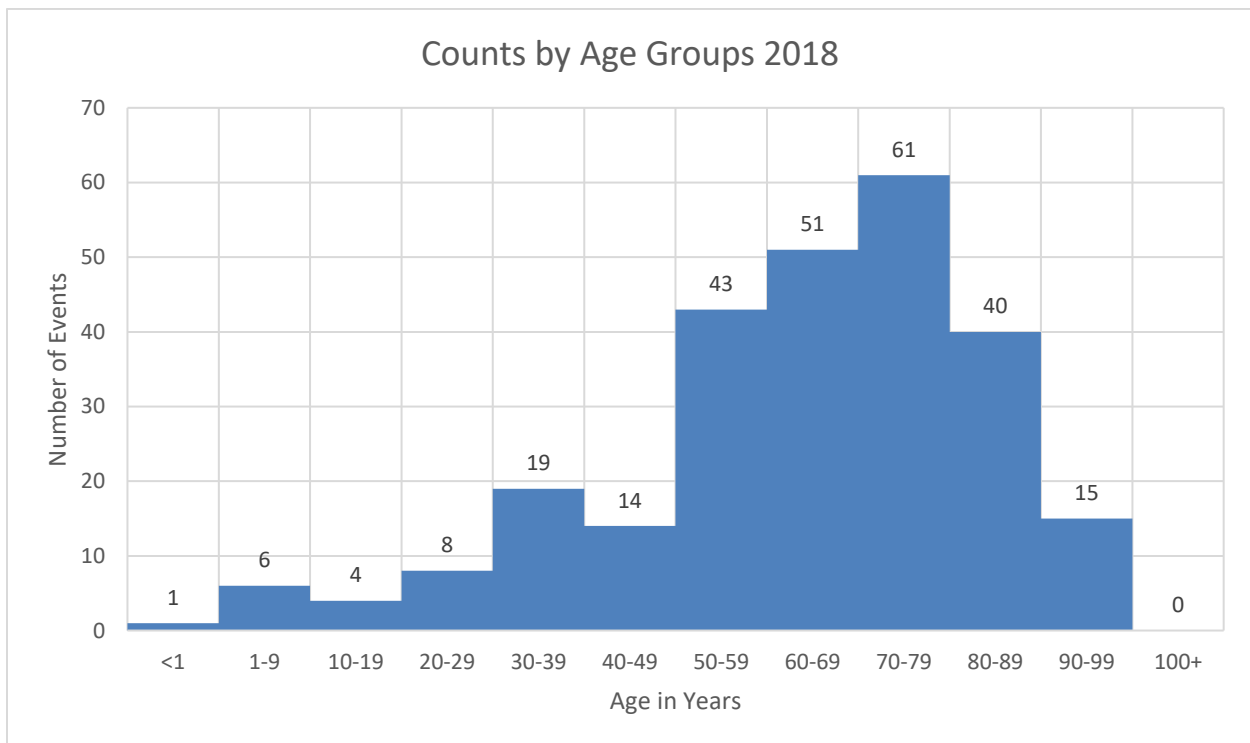


Sentinel Events by Age in 2018

Table 13: Sentinel Events by Age in 2018 (SER database)

Patient's Age	Count	Percent
<1 year old	1	0.38%
1-9 years old	6	2.29%
10-19 years old	4	1.53%
20-29 years old	8	3.05%
30-39 years old	19	7.25%
40-49 years old	14	5.34%
50-59 years old	43	16.41%
60-69 years old	51	19.47%
70-79 years old	61	23.28%
80-89 years old	40	15.27%
90-99 years old	15	5.73%
100+ years old	0	0.00%
Total (excludes missing DOB)	262	100.00%

Figure 6: Sentinel Events by Age in 2018 (SER database)



Sentinel Events in relation to total patient discharges

By taking the total discharges per facility and comparing that to the reported number of sentinel events a range of quantified risks can be calculated.

For facilities that have reported no sentinel events this metric cannot be calculated (71 facilities with CHIA data have no reported sentinel events). Also, if the Center for Health Information Analysis (CHIA) does not have information on discharges, this metric cannot be calculated (19 facilities do not have CHIA data for 2018).

The highest chance is generally found in facilities with less than 1000 discharges and one or more sentinel events reported. For all facilities with sentinel events the maximum rate was 0.017, the lowest rate was 0.0000688, the average rate was 0.00074 and the mode rate was 0.00073.

When considering all facilities, the rate was 0.000645 per discharge.

Figure 7: Sentinel Events per Discharges in 2018 (SER and CHIA databases)

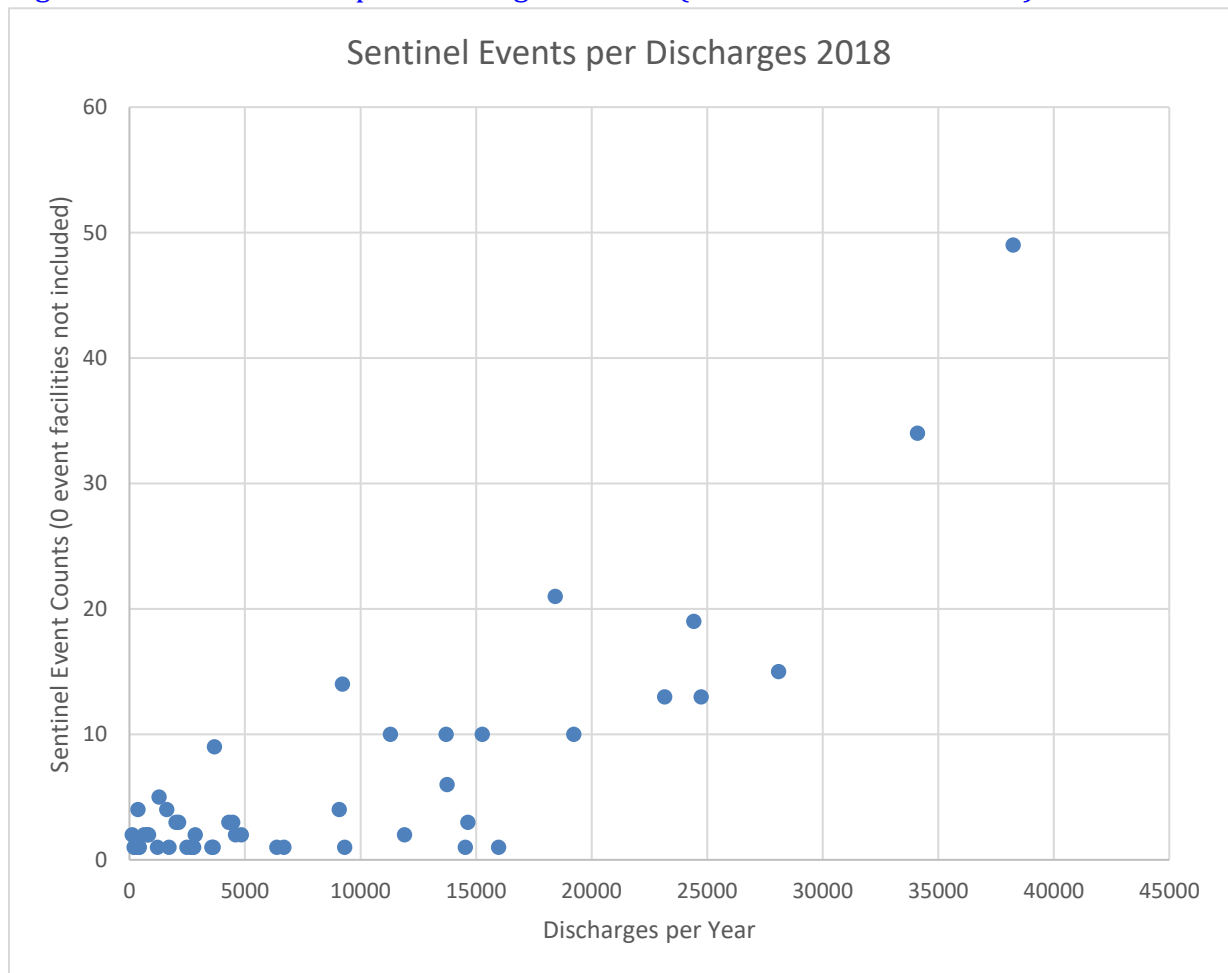
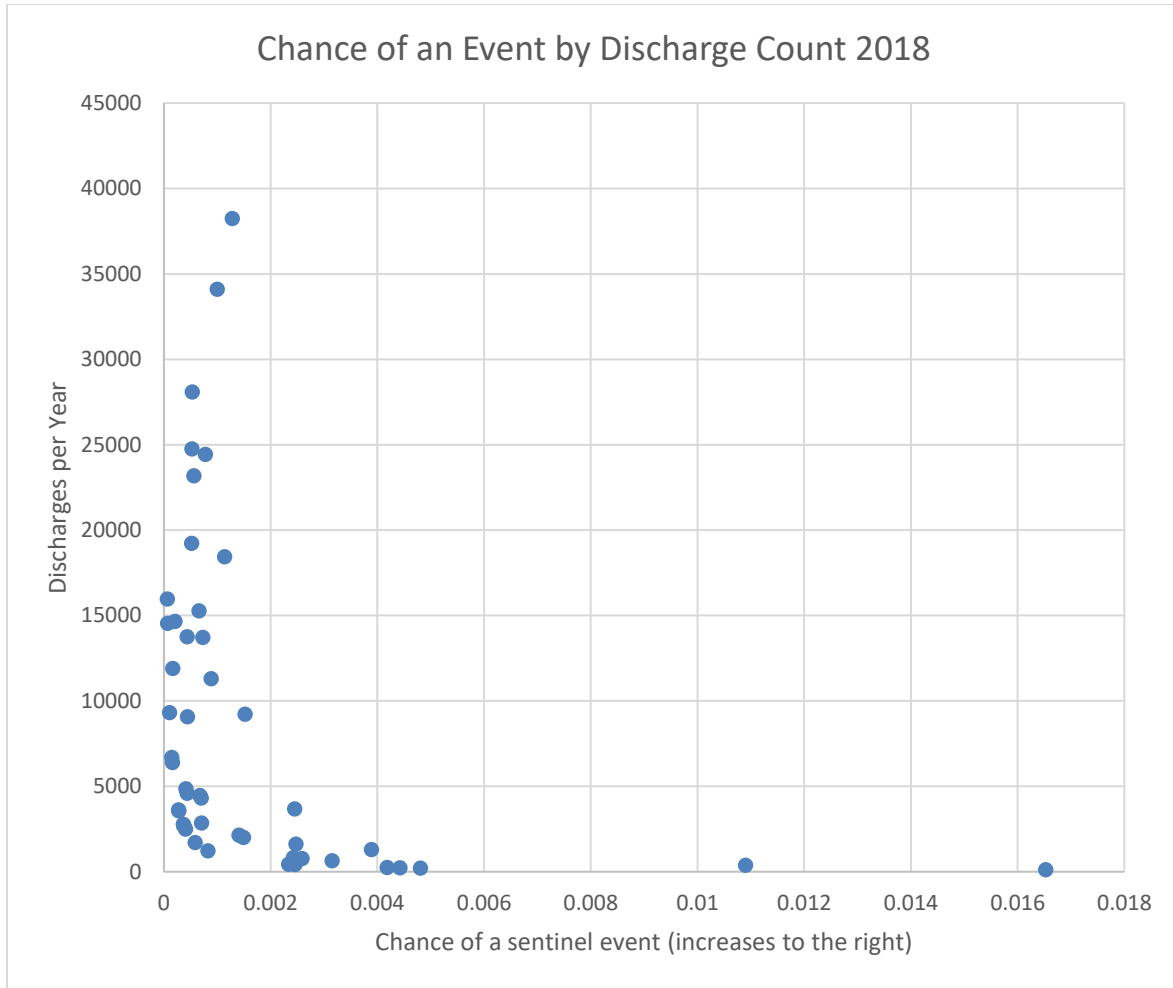


Figure 8: Sentinel Events Chance by Discharge Count in 2018 (SER and CHIA databases)



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

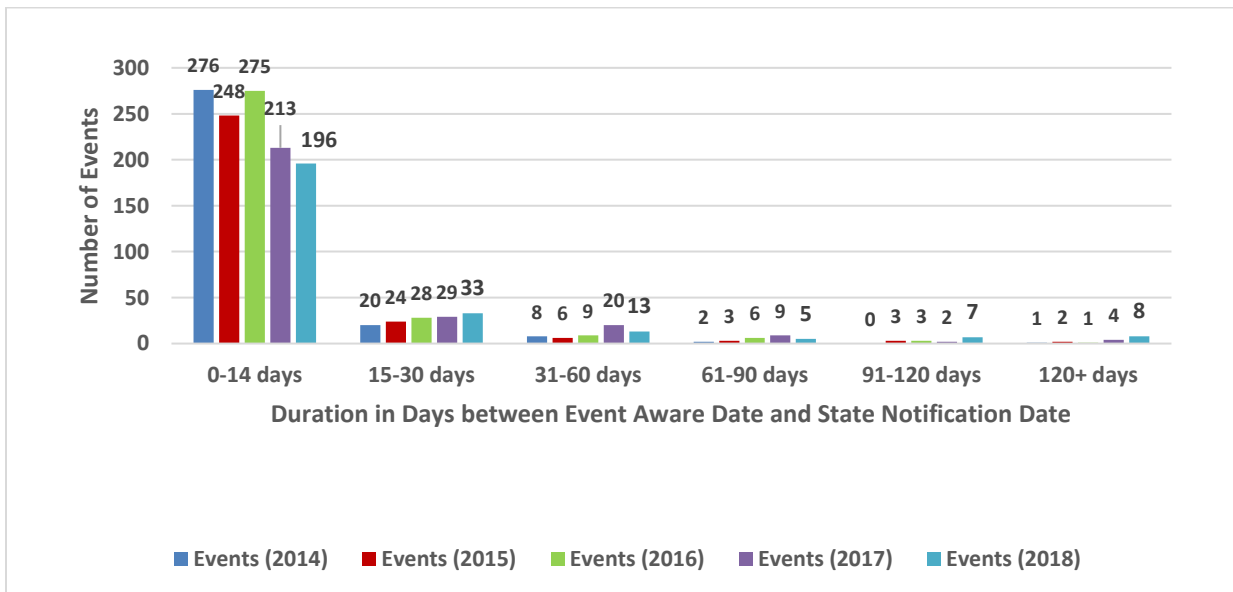
According to **NRS 439.835**, facilities must notify the Sentinel Events Registry (SER) within 13 or 14 days depending upon if the patient safety officer or another healthcare worker discovers the event. Table 14 and Figure 7 show 196 facilities (75%) notified the SER within 14 days after the facility became aware of the event, almost no change from 74% in 2017 and still well below 85% in 2016. There were 33 events (13%) that were reported to the SER between 15 days and 30 days after the event, and 13 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, to 85% in 2016, 74% and essentially unchanged from 2017, with 75% in 2018.

Table 14: Duration between Event Aware Date and State Notification Date (SER database)

Duration	Events (2014)	Events (2015)	Events (2016)	Events (2017)	Events (2018)	Percent (2018)
0-14 days	276	248	275	213	196	74.81%
15-30 days	20	24	28	29	33	12.60%
31-60 days	8	6	9	20	13	4.96%
61-90 days	2	3	6	9	5	1.91%
91-120 days	0	3	3	2	7	2.67%
120+ days	1	2	1	4	8	3.05%
Total	307	286	322	277	262	100.00%

Figure 9: Duration between Event Aware Date and State Notification Date in 2014 to 2018 (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 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

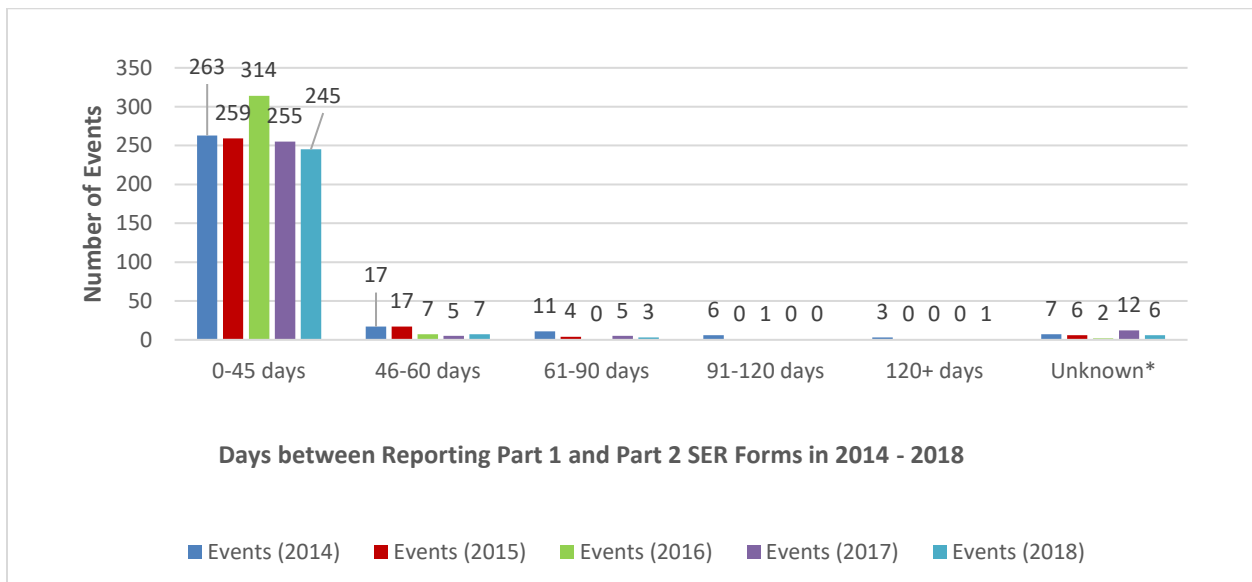
communicating the event to the patient’s family members or significant other. Upon processing the Part 1 report, SER sends an email to remind the medical facilities when the SER Part 2 form will be due.

Table 15 and Figure 8 illustrate that in 2018 just over 93% of the facilities met the requirement to complete the Part 2 form within 45 days of submitting the Part 1 form, up slightly from 2017 at 92% but still below 97% in 2016, yet in 2015 close to 90% and in 2014 about 86% reported within the expected timeline. Twelve (12) events are categorized as “unknown” 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

Days between Part 1 and Part 2 SER Report Submission	Events (2014)	Events (2015)	Events (2016)	Events (2017)	Events (2018)	Percent (2018)
0-45 days	263	259	314	255	245	93.50%
46-60 days	17	17	7	5	7	2.70%
61-90 days	11	4	0	5	3	1.10%
91-120 days	6	0	1	0	0	0.00%
120+ days	3	0	0	0	1	0.40%
Unknown*	7	6	2	12	6	2.30%
Total Events	307	286	324	277	262	100.00%

Figure 10: Duration in Days between Reporting Part 1 and Part 2 SER Forms in 2014, to 2018



Duration in Days Between Event Aware Dates and the Patient Notification Dates and the Notification Methods 2018

As shown in Table 16, patients affected by approximately 79% 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 that the predominant notification methods are telling the patient in person (198, 76%) or over the telephone (45, 17%).

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

Duration (days)	Events	Percent
<1	206	78.60%
1 - 2	13	5.00%
3 - 5	2	0.80%
6 - 8	3	1.10%
8+	22	8.40%
Not notified or null entry* *Majority mention failed attempts to contact.	16	6.10%
Totals	262	100.00%

Table 17: Method of Notification to the Patient.

Notification methods	Events	Percent
Told in Person	198	75.60%
Telephone	45	17.20%
Not Notified	16	6.10%
U.S. Mail	2	0.80%
Email	1	0.40%
Totals	262	100.00%

Note Table 16 lists 18 records as 'un-notified,' and they correspond to the Table 17's No Entry and Not Notified categories.

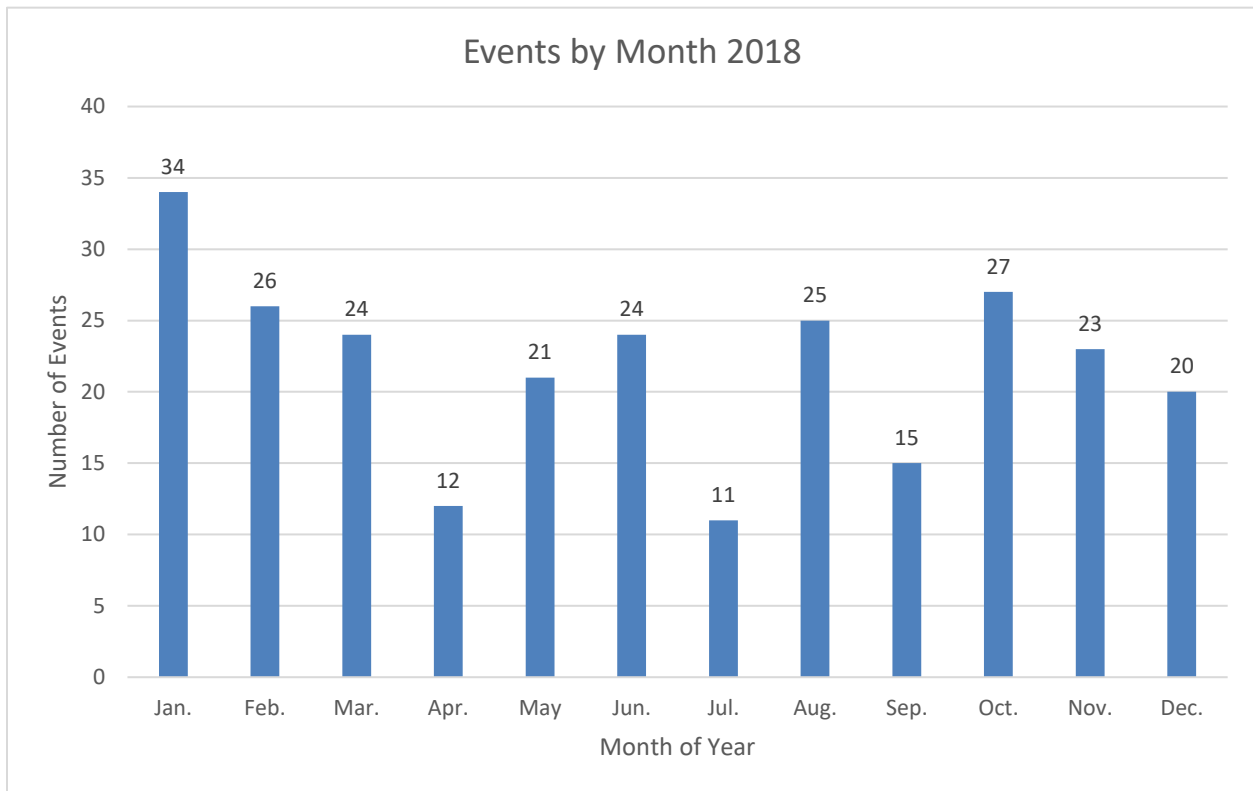
Sentinel Events by Month in 2018

Table 18 and Figure 11 indicate that January was the peak month for sentinel event occurrence in 2018 (November 1, 2017, August in 2016, January in 2015), 56% higher than the average of 22 events per month (average events per month: 27 in 2017, 27 in 2016, 24 in 2015), and 209% higher than the July count, which had the lowest number of sentinel events in 2018.

Table 18: Sentinel Events by Month in 2018 (SER database)

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Count of Events	34	26	24	12	21	24	11	25	15	27	23	20	262

Figure 11: Sentinel Events by Month in 2018 (SER database)



Department or Locations where Sentinel Events Occurred in 2018

Table 19 indicates that approximately 29% of sentinel events occurred at the medical/surgical department and the intensive/critical care department in 2018, down from 40 in 2017 and 45% in 2016. Each event can attribute up to 4 departments. With 262 events and 287 departments contributing and average of 1.1 departments responsible per event compared to 1.06 for 2017.

Table 19: Department or Location Where Sentinel Events Occurred in 2018 (SER database)

Department/Location	Count	Percent
Medical/surgical	83	28.92%
Intensive/critical care	49	17.07%
No Selection Made	45	15.68%
Inpatient surgery	14	4.88%
Outpatient/ambulatory surgery	14	4.88%
Intermediate care	13	4.53%
Emergency department	12	4.18%
Inpatient rehabilitation unit	12	4.18%
Psychiatry/behavioral health/geropsychiatry	9	3.14%
Imaging	5	1.74%
Nursing/skilled nursing	4	1.39%
Outpatient/ambulatory care	4	1.39%
Anesthesia/PACU	3	1.05%
Cardiac catheterization suite	3	1.05%
Ancillary other	3	1.05%
Endoscopy	2	0.7%
Long term care	2	0.7%
Labor/delivery	1	0.35%
Laboratory	1	0.35%
Observational/clinical decision unit	1	0.35%
Pediatrics	1	0.35%
Postpartum	1	0.35%
Pulmonary/respiratory	1	0.35%
Trauma emergency department (level 3)	1	0.35%
Wound Care	1	0.35%
Respiratory Therapy	1	0.35%
Physical Therapy	1	0.35%
Total	287	100%

Discussion: reporting reflecting past sentinel event definitions

For the beginning of calendar year 2014 the definition of a sentinel event to be reported to the state of Nevada per NRS changed. From 2013 and earlier HAI or Healthcare Acquired Infections were included in the definition of a reportable sentinel event. About that time some HAI's were to be reported to the CDC, NHSN (National Health Safety Network). For purposes of data completeness REDCap was initially set so that the data input forms have the definition from both before and after the 2013/2014 change. Even though the forms list the old definition categories last, they do not appear to indicate that they are from a previous definition. This has led to facilities selecting those prior definitions. In addition, as to the HAI, it appears that there are two types of HAI that are no longer captured since 2013 for facilities that report sentinel events, as they were not reported to the CDC and are not now officially reported to the SER, CAUTI (Facility-acquired infection - catheter-associated urinary tract infection) and VAP (Facility-acquired infection - ventilator-associated pneumonia) as well as other HAI for non-central-line blood infections and non-catheter-related urinary tract infections. In 2018 there were 11 sentinel events and 3 annual summary events entered that met the older sentinel event definition.

Table 20 – Sentinel Event Type Totals from the 2011-2018 Sentinel Event Report Summary Forms and Sentinel Events Registry – previous sentinel event definition

Description	SE Definition *	ASERR 2011	SER 2011	ASERR 2012	SER 2012	ASERR 2013	SER 2013	ASERR 2014	SER 2014	CDC NHSN HOS	ASERR 2015	SER 2015	CDC NHSN HOS	ASERR 2016	SER 2016	CDC NHSN HOS	ASERR 2017	SER 2017	CDC NHSN HOS	ASERR 2018	SER 2018
(1) HAI - other - specify	P	202	214	201	205	259	315		0	0		0	0		0	0		0	0		3
(1, 2) HAI CAUTI - catheter-related urinary tract infection	P	148	146	343	325	216	244	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HAI CLABSI - central line-related bloodstream infection	P	148	152	187	185	161	168	0	0	354	0	0	343	0	0	253	0	0	289	1	1
(1, 2) HAI Other BSI - non-central line-related bloodstream infection	P	202	0	201	0	259	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(1) HAI SSI - surgical site infection - Not all sub types	P	155	173	237	235	184	183	0	0	110	0	0	127	0	0	95	0	1	125	2	7
(1, 2) HAI VAP - ventilator-associated pneumonia	P	24	20	34	35	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All Definitions		879	705	1203	985	1083	915	0	0	464	0	0	470	0	0	348	0	1	414	3	11

1: Sentinel event definition removed most healthcare acquired infections at the end of 2013.

2: Not reported to either CDC NHSN or SER after 2013.

- P=Pre2014 and C=Current

Patient Safety Approaches in nearby States

There is a wide range of approaches to patient safety and quality between the states. A good starting place that lists most states can be found here. <http://qups.org/index.html>

California:

Adverse events in healthcare settings appear to be driven by public complaints. Apparently, there is no formal reporting mechanism from the California Department of Public Health, Center for Health Care Quality, Licensing and Certification program. In addition, the state has its own definition of Reportable Adverse Events. Based on website information and news articles it does appear that several facilities have been assessed significant monetary penalties related to medication errors, failing to protect against interpatient abuse, retained foreign objects, etc.

<https://www.cdph.ca.gov/Programs/CHCQ/LCP/Pages/Reportable-Adverse-Events.aspx>.

Oregon:

The Oregon Patient Safety Commission has the Patient Safety Reporting Program where healthcare settings such as Ambulatory Surgery Centers, Hospitals, Nursing Facilities and Pharmacies may voluntarily report adverse events in complete confidentiality. For participation the facilities are provided the services of a Patient Safety System Analyst at no charge, and organizations meeting or exceeding PSRP recognition targets may be acknowledged on the OPSC website and can display a recognition emblem, signifying their achievement, on their own website.

<https://oregonpatientsafety.org/psrp/about-psrp/>

Idaho:

There are no initiatives or programs within the Idaho Department of Health and Welfare ([IDHW](#)) that specifically address patient safety or adverse event reporting.

Utah:

The Patient Safety Initiatives program is the Utah Department of Health's commitment to the goal of increased patient safety in healthcare facilities. Beyond simply reporting adverse events, there are separate additional reporting requirements related to the use of anesthesia. Interestingly, it appears that some aspects of the program deploy the REDCaps system.

<http://health.utah.gov/psi/index.html>

Arizona:

The Arizona Department of Health Services has no formal reporting of adverse events in a healthcare setting. In 2003, the Arizona Legislature passed legislation requiring each healthcare institution to develop policies and procedures for '*reviewing*' reports made by health professionals regarding adverse events, including those related to malfeasance. The law did not require reporting to any regulatory authority, and it specifically extended protections to the reporter(s) against termination and/or retaliation for at least 180 days following the report to the institution, to JCAHO, or to a state regulatory authority. <https://www.azleg.gov/arsDetail/?title=36> in article 11.

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.

Not all medical facilities submitted some sort of document as a patient safety plan in response to the 2018 sentinel event report summary form. One hundred thirty-eight (138) patient safety plans were submitted from one hundred thirty-eight (138) facilities that filed annual summary sentinel event reports. As was the case from 2009 to 2017, 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**. DPBH has prepared a base template for the Patient Safety Plan to help guide those facilities that are unable to build their own Patient Safety Plan (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, 84 facilities indicated they had 25 or more employees, and 43 indicated that they had fewer than 25. Overall, the patient safety committees at 127 of the 138 facilities (92%) met as frequently as required. Among the facilities that had 25 or more employees, 84 (93%) of the patient safety committees met monthly. Among the facilities that had fewer than 25 employees, 43 (93%) of the patient safety committees met on a quarterly basis. Table 21 shows these figures.

Table 21: Compliance with Mandated Meeting Periodicity among Facilities

Facilities Having 25 or More Employees and Contractors			Facilities Having Fewer Than 25 Employees and Contractors		
Monthly Meetings	Total Facilities	Percentage	Quarterly Meetings	Total Facilities	Percentage
Yes	84	93.33%	Yes	43	93.48%
No	5	5.56%	No	2	4.35%
Did Not Report	1	1.11%	Did Not Report	1	2.17%
Total*	90	100.00%	Total	46	100.00%
*(2 facilities did not enter employee numbers)					

Not all patient safety committees had the appropriate staff in attendance at the patient safety committee meetings. Table 22 shows this with attendance details. Table 22 also shows that some facilities that have 25 or more employees did not report if they 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, in 2018, 93% had mandatory staff in attendance when meetings were held, while 89% of those with fewer than 25 employees met the criteria. To compare, in 2017 94% and, in 2016 84% of those facilities with 25 or more employees had mandatory staff in attendance when meetings were held. In 2017 96%% and in 2016, 95% of those with fewer than 25 employees had mandatory staff attendance.

Table 22: Compliance with Mandated Staff Attendance among Facilities

Facilities Having 25 or More Employees and Contractors			Facilities Having Fewer Than 25 Employees and Contractors		
Mandatory Staff	Total Facilities	Percentage	Mandatory Staff	Total Facilities	Percentage
Yes	84	93.33%	Yes	41	89.13%
No	0	0%	No	4	8.70%
Did Not Report	6	6.67%	Did Not Report	1	2.17%

Total*	90	100.00%	Total	46	100.00%
*(2 facilities did not enter employee numbers)					

Section V: Plans, Conclusion, and Resources

Plans and Goals for the Upcoming Year

Nevada's Sentinel Event Registry program a web-based sentinel event reporting project by using REDCap (Research Electronic Data Capture) database that replaced the previous submission of sentinel events via facsimile. Users of the web-based reporting tool REDCap continue to have optimum workflow issues. Identification of features, requirements, and enhanced work flows to improve the system are ongoing within the scope of what REDCap's single table database allows. Data uniformity and form validation, better dashboard information, improved autogenerated metrics reporting, and ease of work flow are near the top of the improvements list.

A Sentinel Event Registry Frequently Asked Questions was prepared. It is being provided to patient safety officers (PSO's) and DR's as needed and is to be placed on the programs website.

The Sentinel Event Registry program developed a sentinel event toolkit comprised of a brochure/workbook that seeks to help clarify the reporting procedures with the goal of ensuring reliable and accurate reporting of sentinel events.

In 2019, the SER will continue to enhance the Sentinel Event Registry program in the following areas:

- Rebuild the data tables so that a single table contains all records available resulting in a single source of data truth. Issues with common selection lists for both the individual event and the annual summary report will be resolved. There will continue to be separate tables for the reporting of individual events (SER), and the annual summary reporting (ASRSER). Added forms in the sentinel event form to record the number of staff and non-staff interviewed for the RCA, the date that the administration is informed of the results of the RCA and an indication if any changes in policy or procedure, etc. are warranted as a result of the RCA.
- Provide the technical assistance related to the REDCap reporting systems, the sentinel event toolkit review, and consultations as requested. Review and update, bringing recommendations up to date with current best practice.
- The new Frequently Asked Questions will be expanded, a video aspect added, and the website content placed.
- 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, with the goal 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 reported has slightly decreased compared to previous years. The major categories of a fall and an ulcer tracked lower in absolute numbers, though still number one and two, the same as in previous years. Most of the facilities diligently followed the procedures and requirements to submit the reports and had patient safety plans.

The number of sentinel events reported by a facility reflects many aspects of the facility. Diligent, timely and complete reporting can sometimes give the impression that a facility may have measurable room for improvement, when in fact, the number simply represents greater accuracy in reporting.

Resources

Safety Checklists for Patients –

- 1) Bring all important papers with you including any Medical Power of Attorney or Advanced Care Directives, any medication records, allergy records, past health condition records.
- 2) Try to have friends or family stay with the patient 24/7 as much as possible.
- 3) Ask questions. Hygiene, medications, supplements, allergies, known reactions.
- 4) If anything does not seem right, keep asking someone until you are satisfied.
- 5) Put tape with 'NO' on any 'twin' organs not involved.

Forms for the patient or patient's loved ones to help defend against preventable harm:

<https://www.psqh.com/marapr05/pschecklist.pdf>

<https://armstronginstitute.blogs.hopkinsmedicine.org/2011/12/20/a-safety-checklist-for-patients/>

<https://www.aarp.org/health/doctors-hospitals/info-03-2012/patient-checklist-for-hospital-stay.html>

The Sentinel Events Registry main page is located at:

[http://dpbh.nv.gov/Programs/SER/Sentinel_Events_Registry_\(SER\)-Home/](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/](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/](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/](http://dpbh.nv.gov/Programs/SER/Sentinel_Events_Registry_(SER)-Home/)

Citations

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