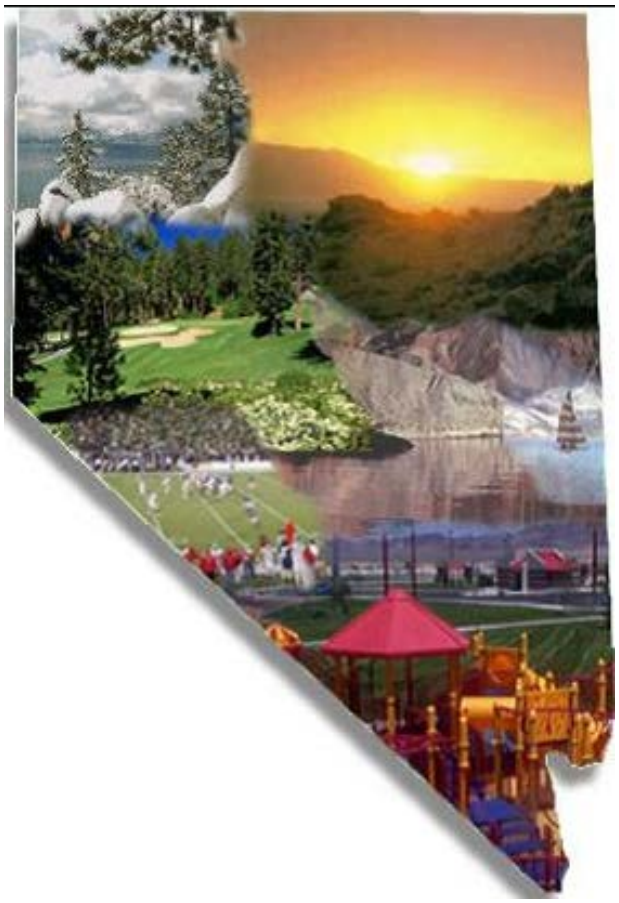

June 2018
Edition: 1.0

2017 Annual Sentinel Event Summary Report

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Sentinel Event Report Organization and Contents

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Acknowledgments

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The Office of Analytics and 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 concerned parties 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 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 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 2017.

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. All forms are marked 'Unverified' by the reporting party. Once submitted to the sentinel event database, the SER Registrar will review the record and mark the stats 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 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 (REDCaps) 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 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 was to complete the online reporting requirement by March 1, 2018, for the calendar year 2017. 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 2017, 52 facilities reported sentinel events. Of those reporting, one facility was not of the type required by NRS to report. A total of 280 sentinel events were reported, grouped as follows:

277 events were true sentinel events per definition.

Two (2) events were determined to not be reportable sentinel events as stated by the facilities.

One (1) event needs a determination from 2017, and three (3) events remain pending from 2016. 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 2017

Year of Record	Event Type	Count in CY17
2017	Not a Sentinel Event	2
2017	To be determined – (*3 from 2016)	4*
2017	Is a Sentinel Event	277

Table 2: Sentinel Event Facility Types from Reports 2017

Facility Type Defined	Facility Type	Count of Facility Type in CY17
Surgical center for ambulatory patients	ASC	13
Hospital	HOS	32
Rural hospital	RUH	5
Facility for modified medical detoxification	MDX	1
Voluntarily reported	HHA	1

Table 3: Sentinel Event Type Totals in 2017 (from the sentinel events registry forms)

Rank	Event	Count	Percent
1	Fall	113	40.8
2	Pressure Ulcer - All Types	61	22
3	Retained foreign object	16	5.8
4	Burn	14	5.1
5	Other	11	4
6	Medication error(s)	10	3.6
7	Surgery wrong site/wrong procedure	9	3.2
8	Elopement	7	2.5
9	Sexual assault	5	1.8
10	Discharge to wrong family/care-giver	3	1.1
11	Neonate labor or delivery	3	1.1
12	Suicide	3	1.1
13	Procedure complication(s)	3	1.1
14	Suicide - attempted	3	1.1
15	Wrong surgical procedure	2	0.7
16	Assault (attempted battery)	2	0.7
17	Battery	1	0.4
18	Wrong patient/wrong surgery procedure	1	0.4
19	Device failure	1	0.4
20	Transfusion error	1	0.4
21	Surgery on wrong body part	1	0.4
22	Physical assault	1	0.4
23	Intra- or post-operative death	1	0.4
24	Maternal labor or delivery	1	0.4
25	Medication error	1	0.4
26	Surgical site infection	1	0.4
27	Rape - attempted	1	0.4
28	Failure to communicate test result	1	0.4
	Grand Total	**277**	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 2017, one hundred twenty-nine (129) facilities that completed the annual summary sentinel events report (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 (55) facilities had not filed their ASRSER as of March 1, 2017 **(**NRS439.843,**)**. As of May 19, 2017, only two (2) facilities remain that need to file their ASRSER. 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 the following:

Table 4: Annual Summary Report Record Classification 2017

Year of Record	Event Type	Count in CY17
2017	Facility Reported No Sentinel Events	84
2017	Facility Reported One Sentinel Event	16
2017	Facility Reported More than One Sentinel Events	38
2017	**Total Facilities Reporting**	**138**

Note: One ASC facility had three entries, each with a different number of employees. Another facility that is currently licensed with HCQC says that they are no longer in business and is not included here.

Table 5: Annual Summary Report Sentinel Event Facility Types from Reports 2017

Facility Type	Facility Type Defined	Count of Facility Type	Count of Reported Events
ASC	Surgical center for ambulatory patients	71	34
ICE	Independent center for emergency medical care	1	0
HOS	Hospital	50	234
RUH	Rural Hospital	14	15
MDX	Facility for modified medical detoxification	2	0
ALL	**Count of facilities and events**	**138**	**283**

Note: Due to data quality concerns, one psychiatric hospital has been excluded from this analysis.

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 2017, the medical facilities reported a total of 283 sentinel events.

Table 6: Sentinel Event Type Totals in 2017 (from the annual summary forms)

Rank	Event	Count	Percent
1	Fall	113	39.9
2	Pressure Ulcer all stages	58	20.5
3	Retained Foreign Object	18	6.4
4	Other	17	6
5	Medication Error	15	5.3
6	Burn	13	4.6
7	Elopement	8	2.8
8	Surgery on wrong body part	7	2.5
9	Suicide	7	2.5
10	Sexual assault	6	2.1
11	Neonate Labor or Delivery	5	1.8
12	Wrong Surgical Procedure	4	1.4
13	Discharge to Wrong Person	3	1.1
14	Intra- or Post-Operative Death	2	0.7
15	Physical assault	2	0.7
16	Contaminated drug, device, or biologic	1	0.4
17	Device Failure	1	0.4
18	Transfusion Error	1	0.4
19	Maternal Labor or Delivery	1	0.4
20	Failure to Communicate Test Result	1	0.4
21	Surgery on wrong patient	0	0
22	Air Embolism	0	0
23	Wrong Sperm or Egg	0	0
24	Lost Specimen	0	0
25	Electric Shock	0	0
26	Wrong gas	0	0
27	Restraint	0	0
28	Introduction of Metallic Object Into MRI Area	0	0
29	Impersonation of Healthcare Provider	0	0
30	Abduction	0	0
	Grand Total	**283**	**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 individual incident reporting, and then compares the event types to data from the annual summary sentinel events report.

Event Types and Totals

Like Tables 3 and 6, 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 2017, a total of 283 sentinel events were reported according to the summary forms versus 277 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.'

Total Sentinel Events Summary Data vs. Registry Data (2014-2017)

From Table 7, it should be noted that comparison of event counts between reporting methods for 2017 differ by about 2.2%, the same as 2016 and less than the 3% for 2015 and the 4.5% 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 (2014-2017)

Year	2014	2015	2016	2017
Not Sentinel Events*	20	12	12	2
Registry Sentinel Events	287	274	324	277**
Summary Sentinel Events	300	283	331	283
Difference	13	9	7	6

Remark:

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

** One event not included in this total has the status of pending further results.

In 2017 a facility reported an event in the SER, yet as of this report, had not filed an annual summary report (ASR). Another facility reported in the ASRSER an event for which no record was made in the SER.

See Figure 1 below for a graphical comparison of the relationship between the two reporting methods since 2011.

Figure 1: Total Sentinel Events Summary Report vs. Registry (2011-2017)

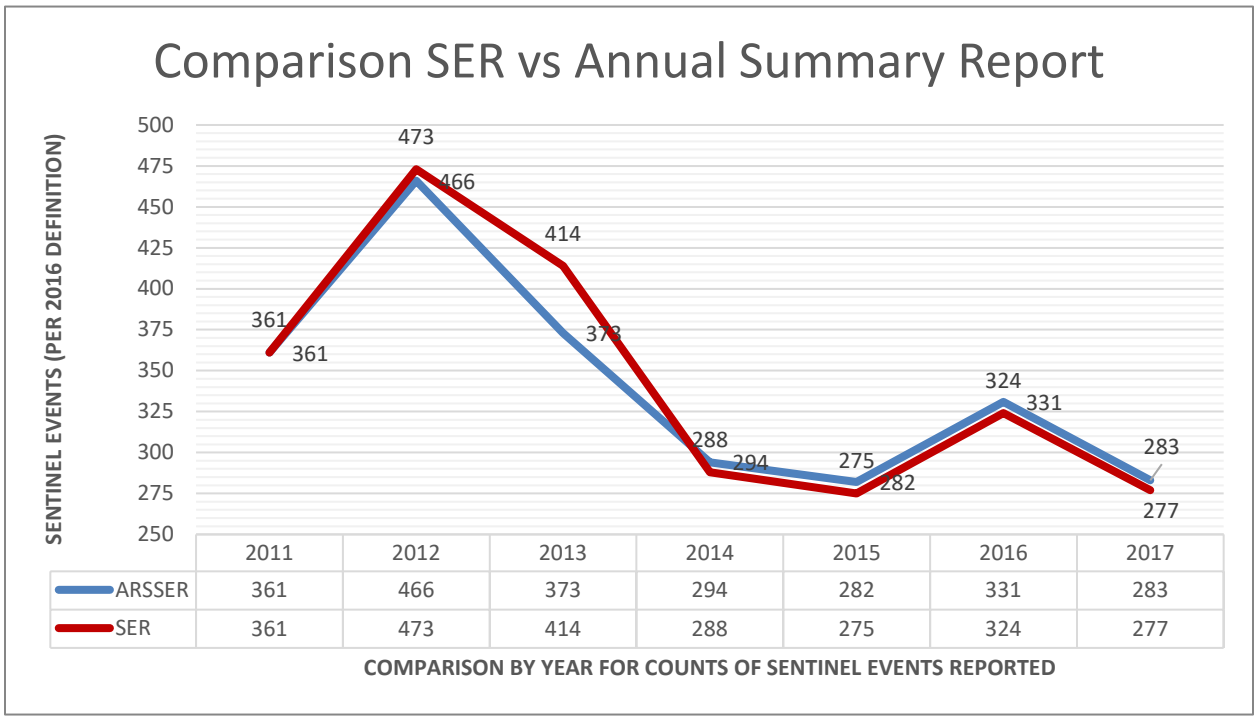


Table 8 – Sentinel Event Type Totals from the 2011-2017 Sentinel Event Report Summary Forms and Sentinel Events Registry

Description (*, **,***)	2012 ASRSER	2012 SER	2013 ASRSER	2013 SER	2014 ASRSER	2014 SER	2015 ASRSER	2015 SER	2016 ASRSER	2016 SER	2017 ASRSER	2017 SER
Abduction	0	1	0	1	1	1	0	1	1	1	0	0
Air embolism	0	0	2	2	0	0	0	1	0	0	0	0
Burn	9	9	5	6	7	5	4	5	8	8	13	14
Contaminated drug or product or device		2	0	2	0	4	0	1	3	7	1	0
Device failure	1	1	2	3	6	5	6	7	6	5	1	1
Discharge to wrong person	0	0	0	0	1	1	0	1	0	1	3	3
Elopement	10	11	12	11	6	6	5	4	4	5	8	7
Failure to communicate test results	0	0	2	2	6	6	2	3	5	2	1	1
Fall	135	134	109	115	105	98	114	106	132	126	113	113
Impersonation of healthcare provider	0	0	0	0	2	1	0	0	0	0	0	0

Intra- or post-operative	23	17	10	10	12	14	11	12	3	2	2	1
Introduction of metallic object in MRI area	2	1	1	1	0	0	0	0	0	0	0	0
Lost Specimen	0	0	1	1	1	1	0	0	1	1	0	0
Maternal labor or delivery	1	1	0	2	2	3	3	3	2	2	0	1
Medication error(s)	51	95	29	60	8	15	8	6	7	8	15	11
Neonate labor or delivery	11	4	5	4	1	1	9	7	7	1	5	3
Physical assault	5	4	4	5	27	28	6	12	10	8	2	3
Pressure ulcer All types	60	64	72	129	66	135	68	135	91	91	58	61
Procedure complication(s)	0	0	0	0	0	1	0	0	0	1	0	3
Restraint	14	14	1	1	2	2	0	0	3	4	0	0
Retained foreign object	11	12	13	16	18	16	19	21	19	18	18	16
Sexual Assault	4	4	7	8	5	4	3	3	8	9	6	6
Suicide	0	11	0	5	0	7	0	3	0	7	7	3
Suicide - attempted	6	6	5	5	7	7	3	3	7	7	0	3
Surgery on wrong body part	6	7	3	4	4	3	6	8	8	10	7	9
Surgery on wrong patient	0	0	0	1	0	2	0	0	0	1	0	1
Transfusion error	3	2	2	3	2	2	0	0	0	0	1	1
Wrong or contaminated gas	0	0	0	0	2	2	0	0	1	1	0	0
Wrong patient/wrong surge	1	1	2	2	1	1	0	0	1	1	4	2
Wrong sperm or egg	4	1	0	0	0	0	0	0	0	0	0	0
TOTALS	**466**	**473**	**373**	**414**	**294**	**288**	**282**	**275**	**331**	**324**	**283**	**277**

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

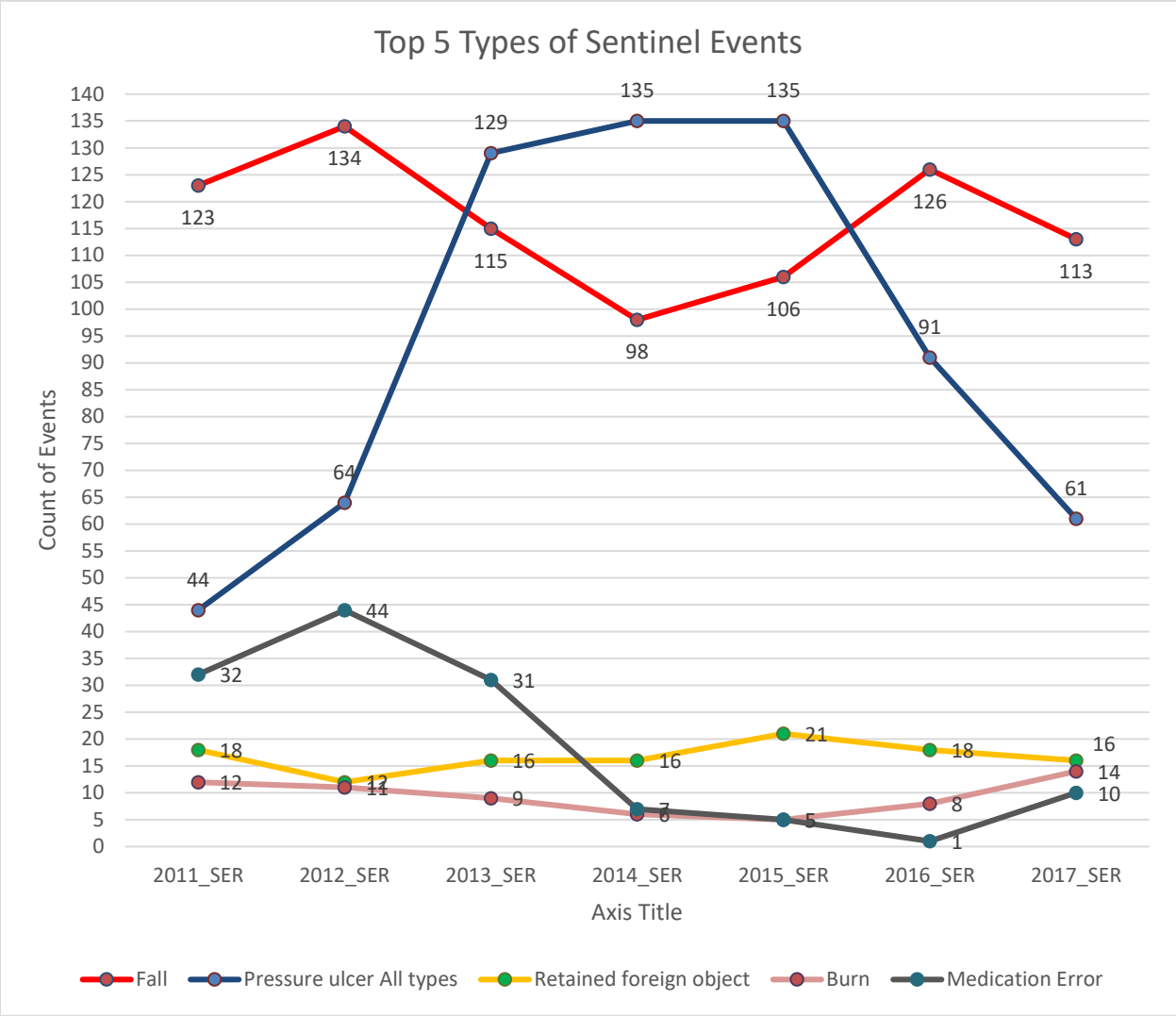
**Other counts were not included. Events for which no values were recorded in either data source are not included. Events deprecated as of the post-2013 sentinel event definition are not included.

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

Top 5 Types of Sentinel Events in 2017, Compared to Prior 6 Years

Figure 2 shows the top five (5) types of sentinel events in 2017 compared to the prior six (6) years. 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 2014-2017 time periods. However, the data illustrated is only as a qualified event per the 2017 definition. From the graph, readers will notice that "Fall" showed a very high number since 2011. Along with overall reported sentinel events decreasing, the absolute number of falls also decreased from 2016 to 2017 by 10.3%. "Pressure ulcer" (merged with Ulcer (no further detail) from past data) decreased by 33% from the previous year. "Retained Foreign Object" decreased from 11% reported events (from 18 to 16) from 2016 to 2017. "Assault", "physical or sexual" is not in the top five (5) in 2017, in contrast, this category was included last year.

Figure 2: Top 5 Types of Sentinel Events in 2017, Compared to Prior 6 Years



Primary Contributing Factors in 2017

For each sentinel event, a maximum of four contributing factors may be entered. In 2017, there were 674 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:

- Patient related: 287 (43%)
- Staff related: 201 (30%)
- Communication/documentation related: 114 (17%).

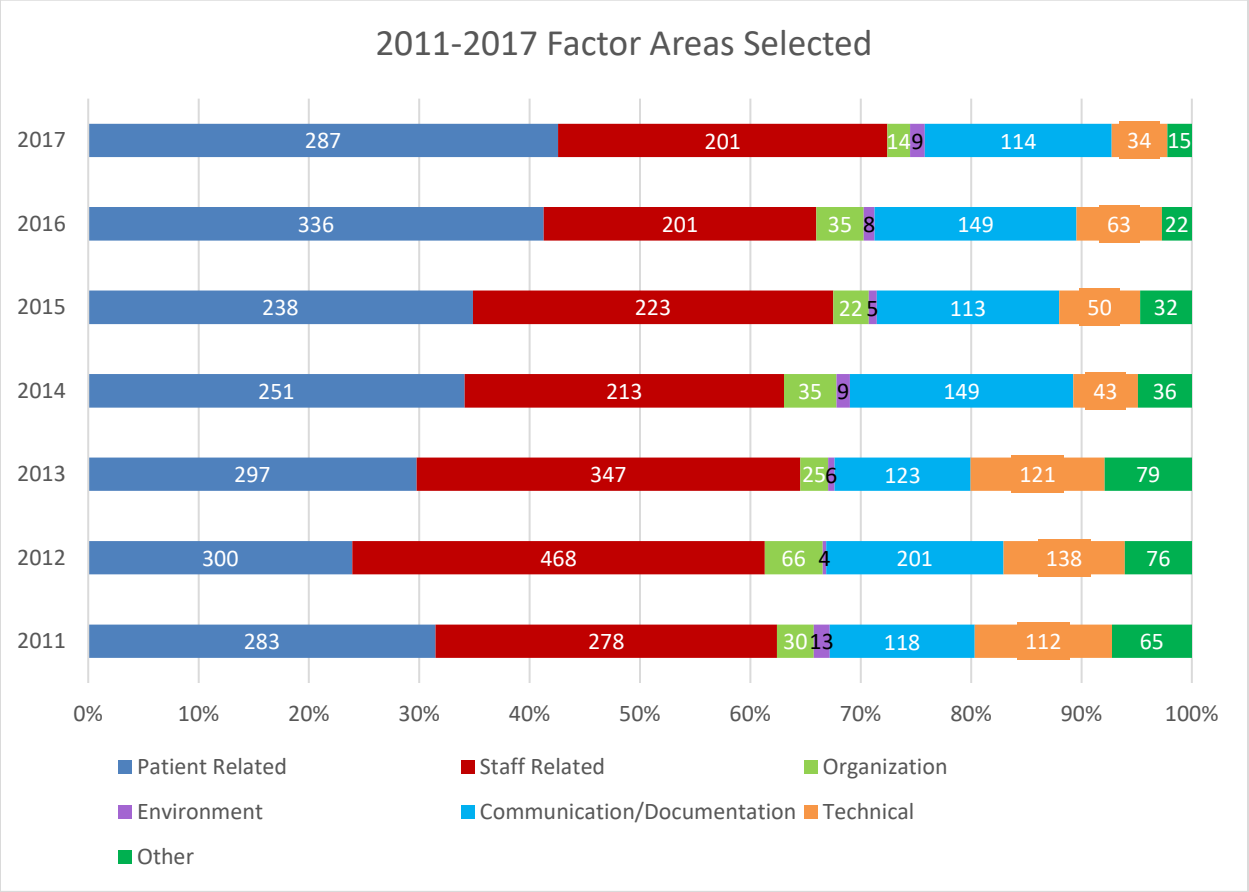
These three (3) factor area groups constitute 90% of the total primary contributing factor groups in 2017. Comparing with 2016, the patient-related, and environment factor areas changed little, while communication/documentation, other, and organization factor areas decreased slightly, and the staff related, and technical factor area recorded an increase.

Table 9: Primary Contributing Factors from 2012 to 2017

Factor Area	2012 factor count	2012 percent t	2013 factor count	2013 percent	2014 factor count	2014 percent	2015 factor count	2015 percent	2016 factor count	2016 percent	2017 factor count	2017 percent
Patient	300	23.9	297	29.8	251	34.1	238	34.8	336	41.3	287	42.6
Staff	468	37.4	347	34.8	213	28.9	223	32.7	201	24.7	201	29.8
Organization	66	5.3	25	2.5	35	4.8	22	3.2	35	4.3	14	2.1
Environment	4	0.3	6	0.6	9	1.2	5	0.7	8	1	9	1.3
Communication/Documentation	201	16	123	12.3	149	20.2	113	16.5	149	18.3	114	16.9
Technical	138	11	121	12.1	43	5.8	50	7.3	63	7.7	34	5.0
Other	76	6.1	79	7.9	36	4.9	32	4.7	22	2.7	15	2.2
SUM	**1,253**		**998**		**998**		**683**		**814**		**674**	

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 2011 to 2017 relative comparison



Note: Each event can list up to 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, environment issues and 'other' have decreased. Patient related factors, communication/documentation issues and technical issues remain very similar. Longer term trends show increases in patient related, and communication/documentation factor group areas.

Detailed Primary Contributing Factors in 2017

Within the primary factor group areas are many sub areas, referred to as 'detailed primary factors.' The detailed primary contributing factors in 2017 are displayed in Table 10. From the table, readers will notice that the factor Patient Related Non-Compliant, with 83 events was the highest this year (12% of total events). Clinical Decision/Assessment contributed to 80 events (12% of the total events) was second whereas last year this category was first; Failure to Follow Policy/Procedure contributed to 74 events (11%) and Frail/Unsteady contributed to 63 events (9%).

Table 10: Detail of Primary Contributing Factors in 2017

Factors (up to 4 per event can be selected)	2017 Count	2017 percent (%)
Patient Related Non-compliant	83	12.31
Staff-Related Clinical decision/assessment	80	11.87
Staff-Related Failure to follow policy and/or procedure	74	10.98
Patient-Related Frail/unsteady	63	9.35
Patient-Related Physical Impairment	60	8.9
Patient-Related Confusion	40	5.93
Staff-Related Clinical performance/administration	38	5.64
Communication/Documentation Hand off/teamwork/cross coverage	31	4.6
Communication/Documentation Lack of communication	28	4.15
Communication/Documentation Verbal communication inadequate	28	4.15
Communication/Documentation Lack of/inadequate documentation	19	2.82
Patient-Related Medicated	15	2.23
OTHER	15	2.23
Patient-Related Psychosis	10	1.48
Technical Equipment failure(s)	8	1.19
Technical Other	8	1.19
Patient-Related Self harm	7	1.04
Patient-Related Alcohol/drugs	6	0.89
Organization Inappropriate/no policy/process	5	0.74
Organization Training inadequate/not done	5	0.74
Technical Equipment incorrect	5	0.74
Staff-Related Iatrogenic error(s)	4	0.59
Environment emergency situation internal	4	0.59
Environment Wet/slippery floor/surface	4	0.59
Staff-Related Patient identification	3	0.45
Organization Culture principles, ethics, values	3	0.45
Patient-Related Self- administration	2	0.3
Staff-Related Working outside scope of practice	2	0.3
Communication/Documentation Medical record incorrect	2	0.3

Communication/Documentation Verbal communication incorrect	2	0.3
Communication/Documentation Written communication inadequate	2	0.3
Technical Dose miscalculation	2	0.3
Technical Equipment unavailable	2	0.3
Technical Incorrect dose	2	0.3
Technical Supplies incorrect	2	0.3
Patient-Related Language barrier	1	0.15
Organization Staffing level	1	0.15
Environment Noise level	1	0.15
Communication/Documentation Medical record unavailable	1	0.15
Communication/Documentation Written communication incorrect	1	0.15
Total (detailed primary factors)	**674**	**100**

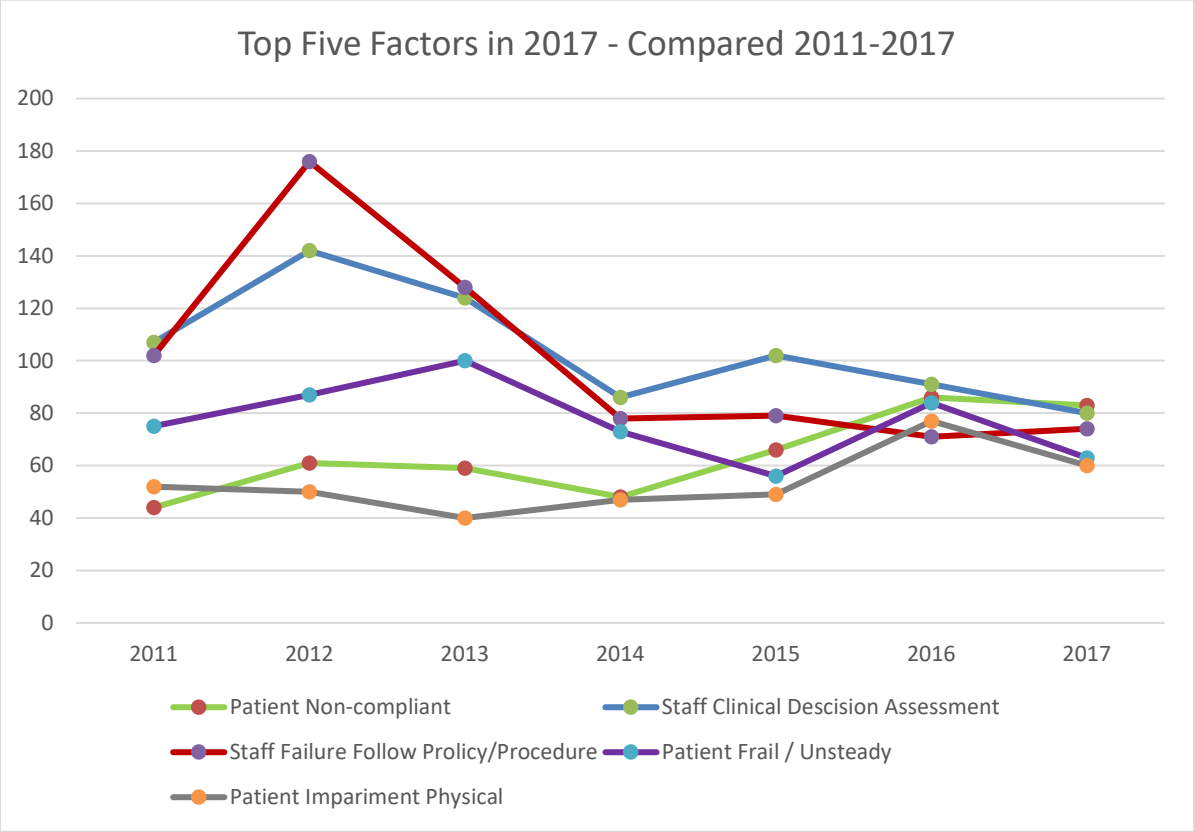
Top 5 Contributing Factors in 2017, Compared to the prior 6 Years

Table 11 and Figure 4 below show the top five (5) contributing factors in 2017 compared to the prior six (6) years. Patient Non-Compliant was the most cited contributing factor in 2017. From 2015 to 2017 though Staff Clinical Decisions decreased, it was the second 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 5 Primary Contributing Factors in 2017, Compared to Prior 6 Years

Year	PATIENT Non-Compliant	STAFF Clinical Decision Assessment	STAFF Failure to follow policy	PATIENT Frail Unsteady	PATIENT Impairment Physical
2017	83	80	74	63	60
2016	86	91	71	84	77
2015	66	102	79	56	49
2014	48	86	78	73	47
2013	59	124	128	100	40
2012	61	142	176	87	50
2011	44	107	102	75	52

Figure 4: The Top 5 Primary Contributing Factors in 2017, Compared to Prior 6 Years



Note: This data uses the current sentinel event definition.

Distribution of Sentinel Events by Facility Type in 2017

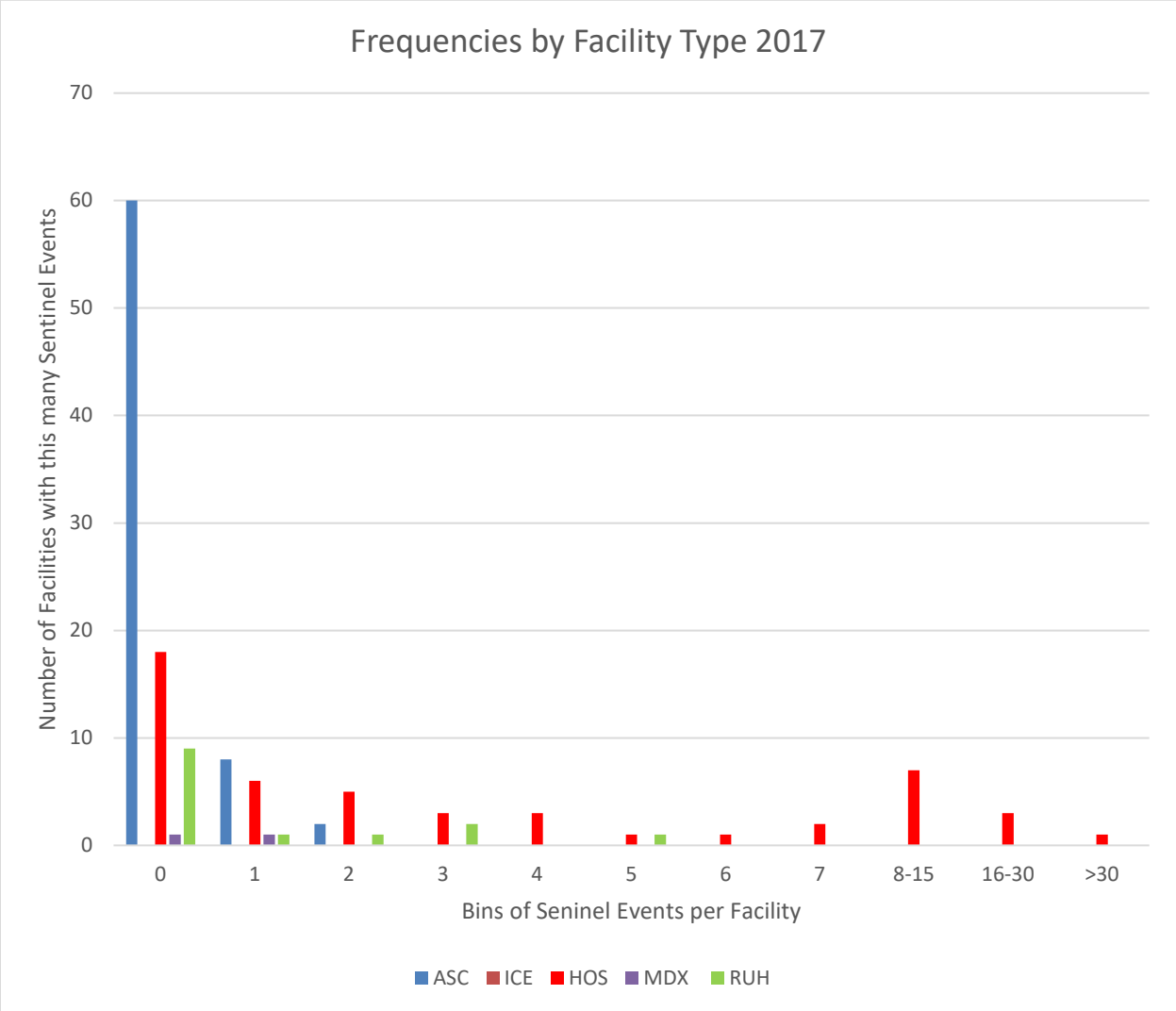
Table 12 and Figure 5 illustrate the sentinel events for each type of facility in 2017 as counts. Surgical Center for Ambulatory Patients (ASC) showed a low average with 0.48 events per facility in 2017 up from 0.17 in 2016. Hospitals (HOS), had an average of 4.78 events per hospital (down from 5.23 in 2016) while the rural hospitals (RUH) have an average of 1.07 events per hospital in 2017 (down from 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 2017, and for modified medical detoxification (MDX) facilities that reported one (1) event.

Table 12: Sentinel Event Counts by facility type in 2017

Facility/#	0	1	2	3	4	5	6	7	8-15	16-30	>30
ASC	60	8	2	0	0	0	1	0	0	0	0
ICE	0	0	0	0	0	0	0	0	0	0	0
HOS	18	6	5	3	3	1	1	2	7	3	1
MDX	1	1	0	0	0	0	0	0	0	0	0
RUH	9	1	1	2	0	1	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 2017

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

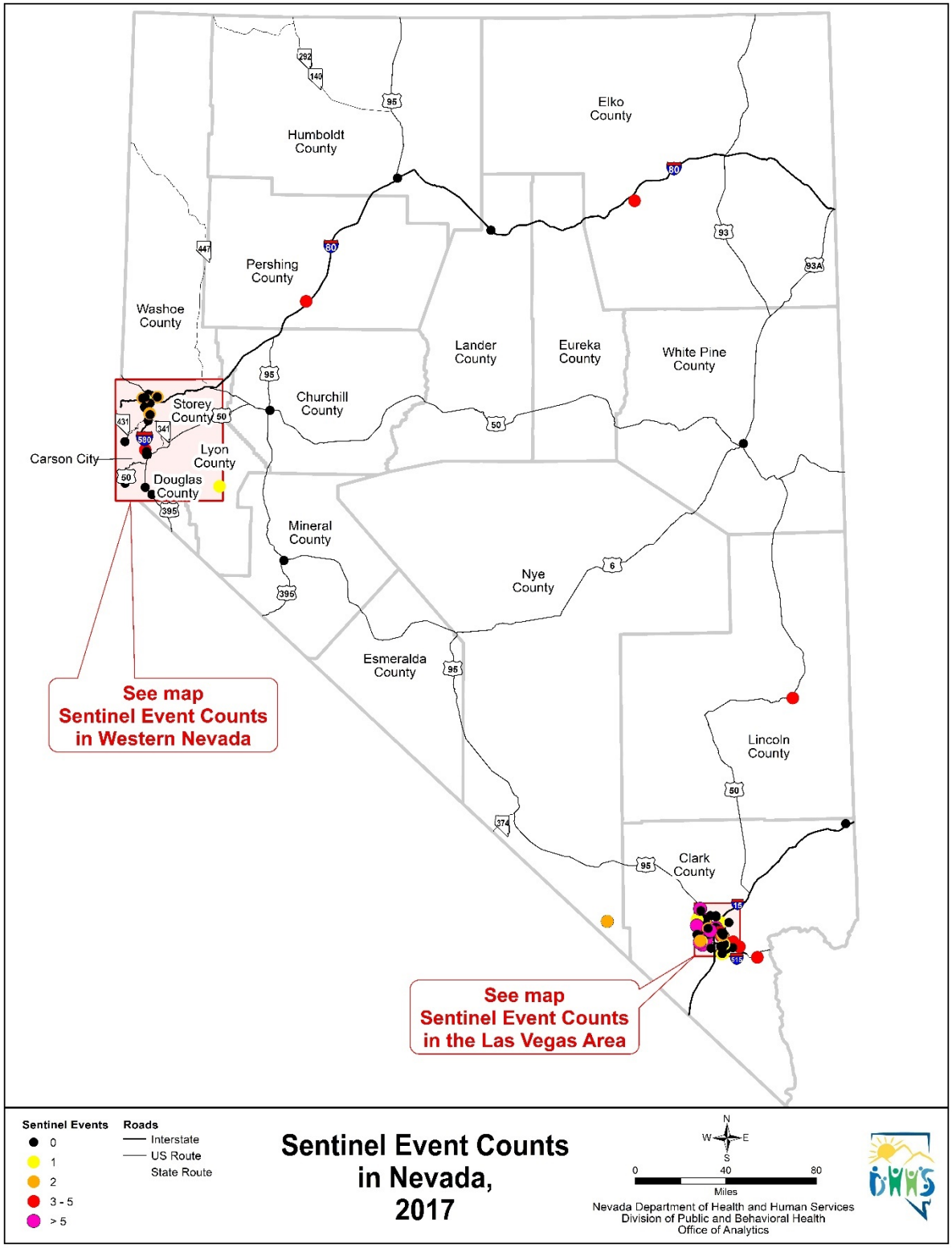
The three maps show the location of the facilities along with a color range representation of the count of the number of events.

Maps have a legend of sentinel event counts per facility represented as follows: no event reported is shown as a block 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.

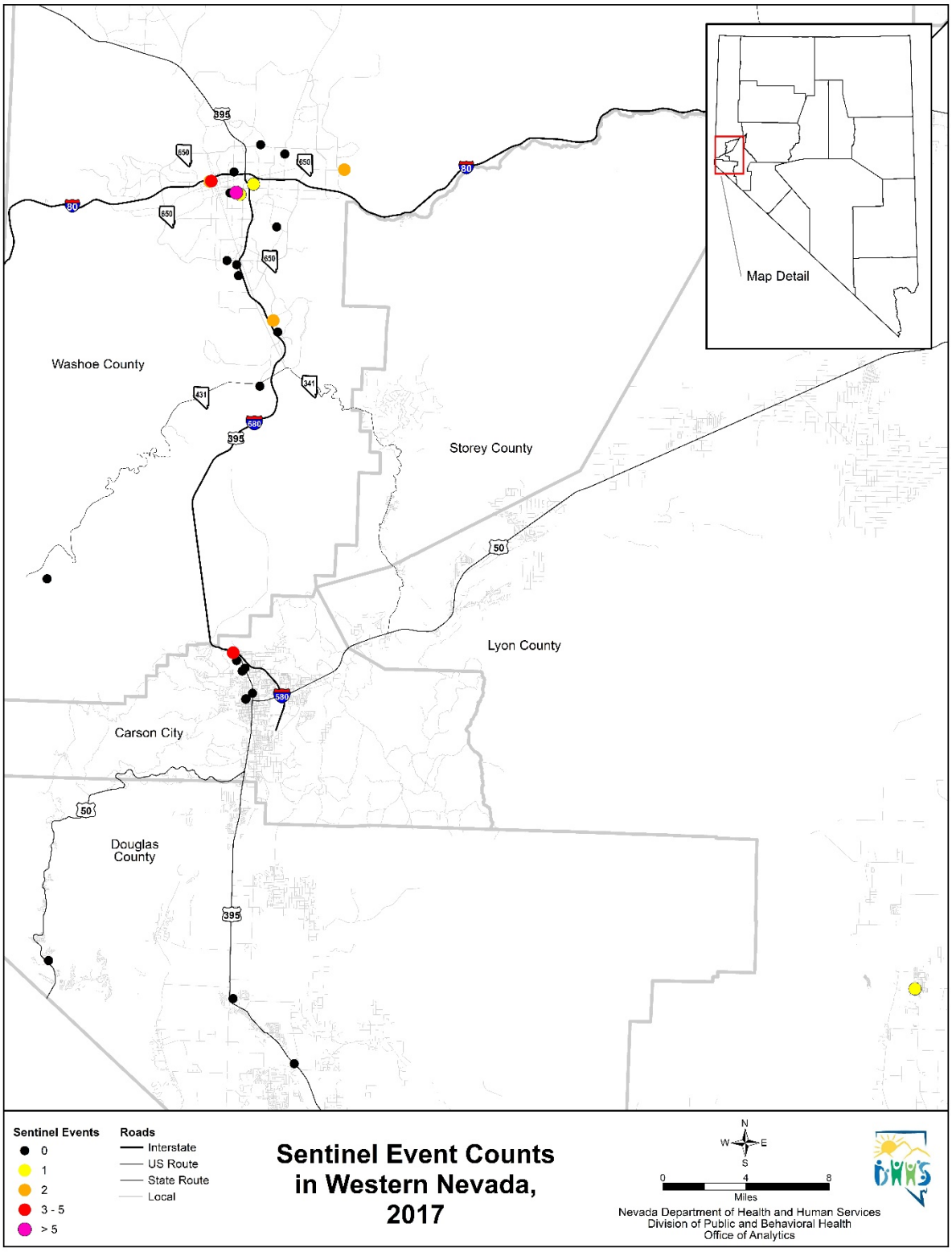
The maps' color range represents the absolute count and does not indicate what type of licensure the facility has, nor the size in patient volume, procedure volume or number of employees.

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

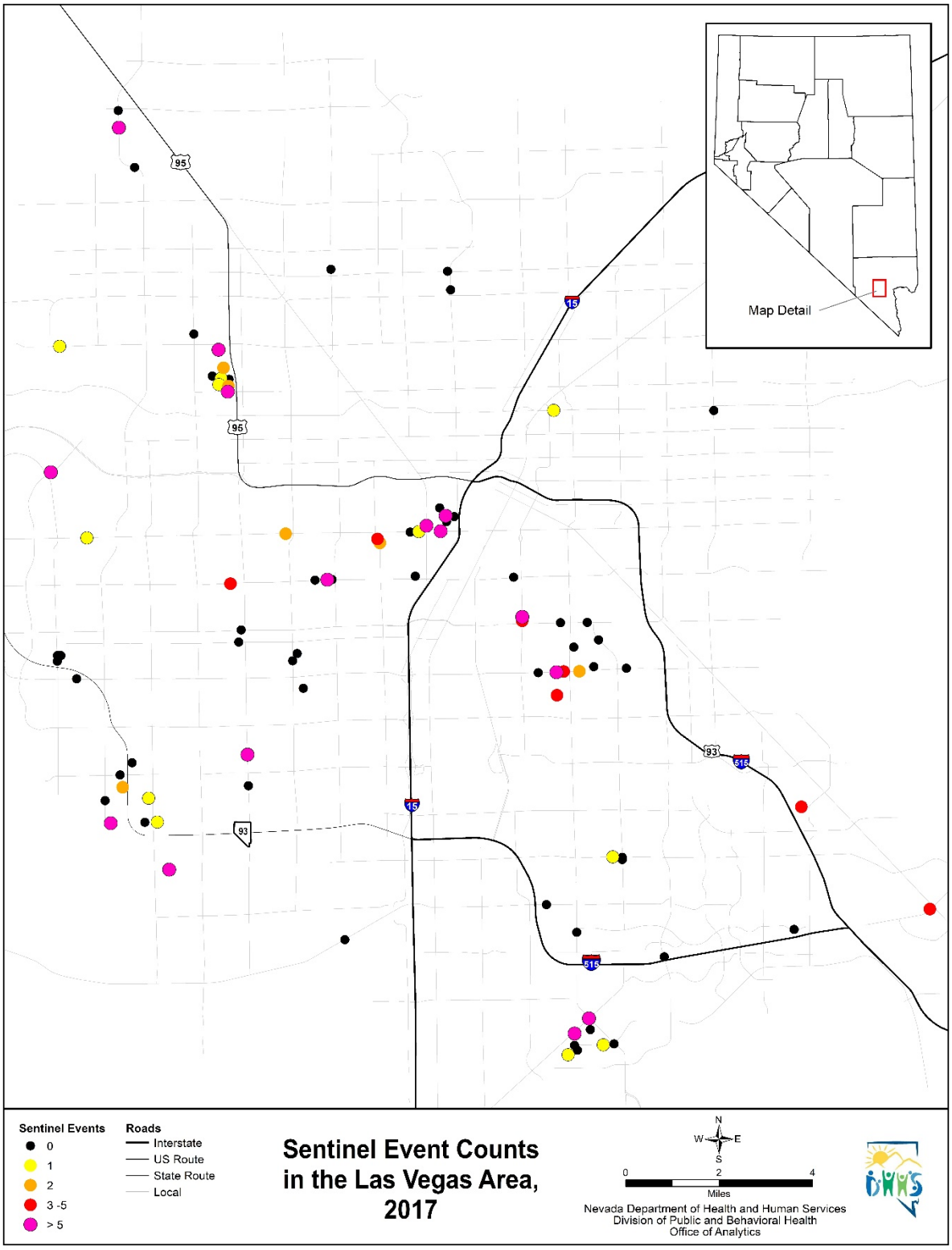
Map 1a: Sentinel Events by Location - State



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



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

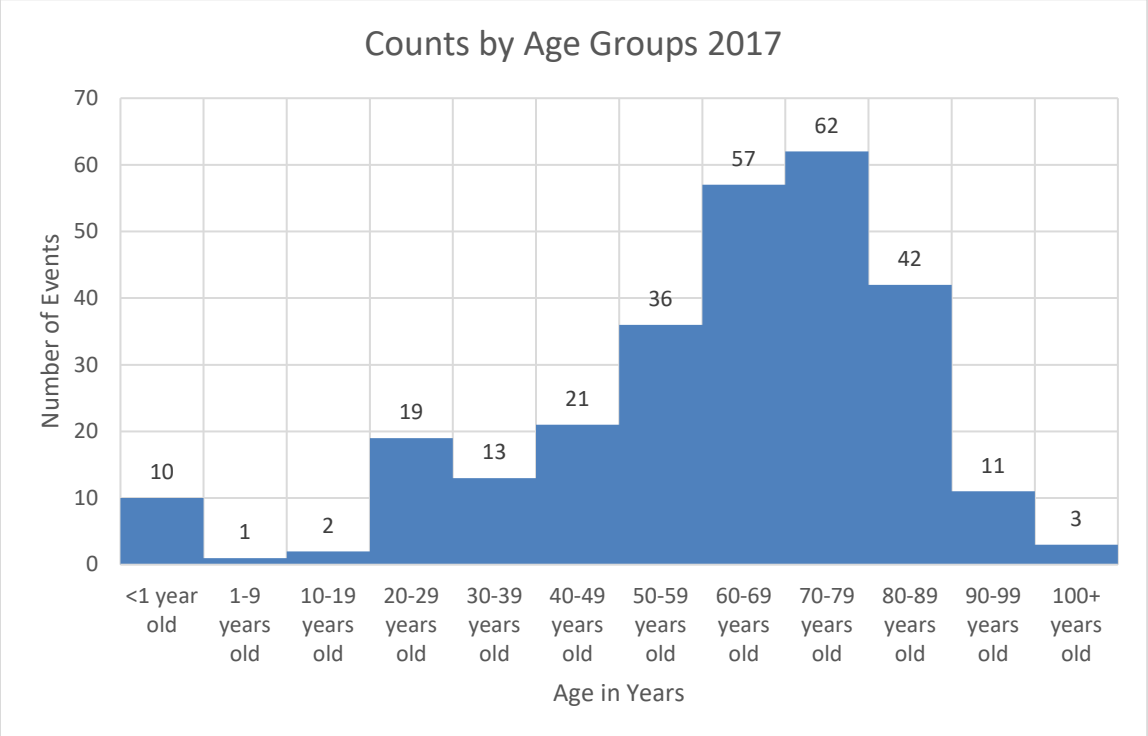


Sentinel Events by Age in 2017

Table 13: Sentinel Events by Age in 2017 (SER database)

Patient's Age	Count	Percent
<1 year old	10	3.6 %
1-9 years old	1	0.4 %
10-19 years old	2	0.7 %
20-29 years old	19	6.9 %
30-39 years old	13	4.7 %
40-49 years old	21	7.6 %
50-59 years old	36	12.9 %
60-69 years old	57	20.5 %
70-79 years old	62	22.3 %
80-89 years old	42	15.1 %
90-99 years old	11	4 %
100+ years old	3	1.1 %
Total (excludes missing DOB)	**277**	100.00%

Figure 6: Sentinel Events by Age in 2017 (SER database)



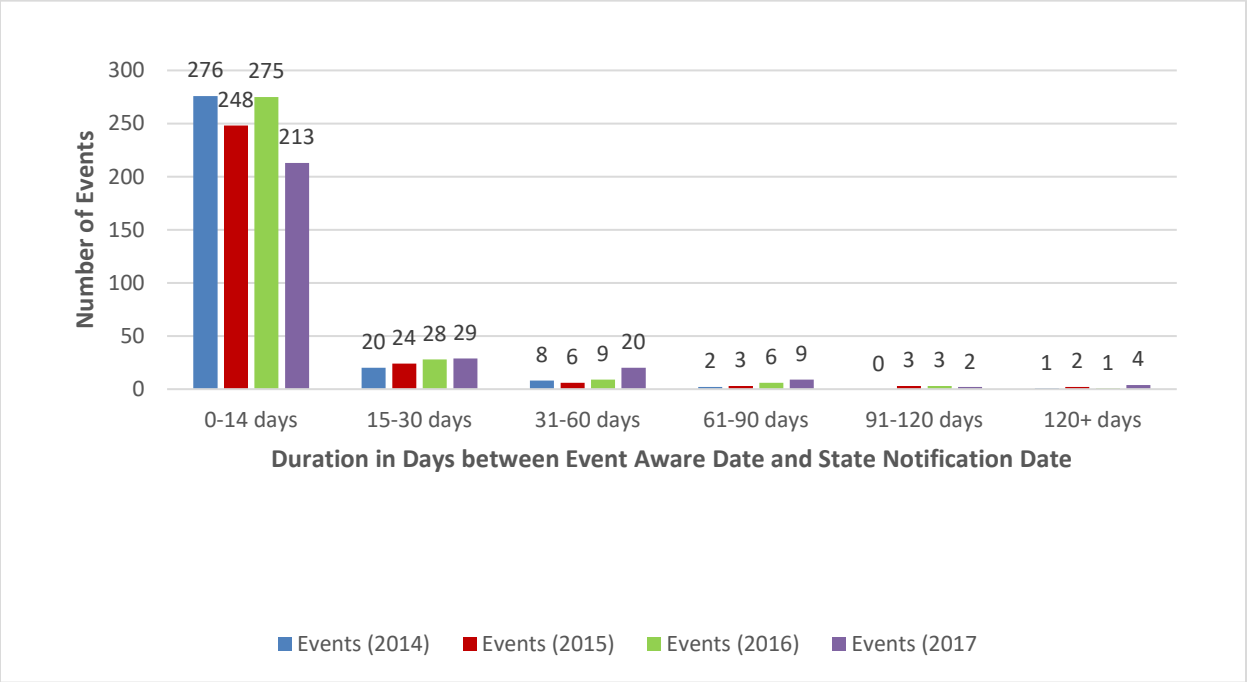
Duration in Days between Event Aware Date and Facility State Notification Date

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 213 facilities (77%) notified the SER within 14 days after the event, a drop from 85% in 2016. There were 29 events (11%) that were reported to the SER between 15 days and 30 days after the event, and 20 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, and further decreased in 2017 to 77%.

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

Duration	Events (2014)	Events (2015)	Events (2016)	Events (2017	Percent (2017)
0-14 days	276	248	275	213	76.9 %
15-30 days	20	24	28	29	10.5 %
31-60 days	8	6	9	20	7.2 %
61-90 days	2	3	6	9	3.2 %
91-120 days	0	3	3	2	0.7 %
120+ days	1	2	1	4	1.4 %
Total	**307**	**286**	**322**	**277**	**100.00%**

Figure 7: Duration between Event Aware Date and State Notification Date in 2014 to 2017 (SER database)



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

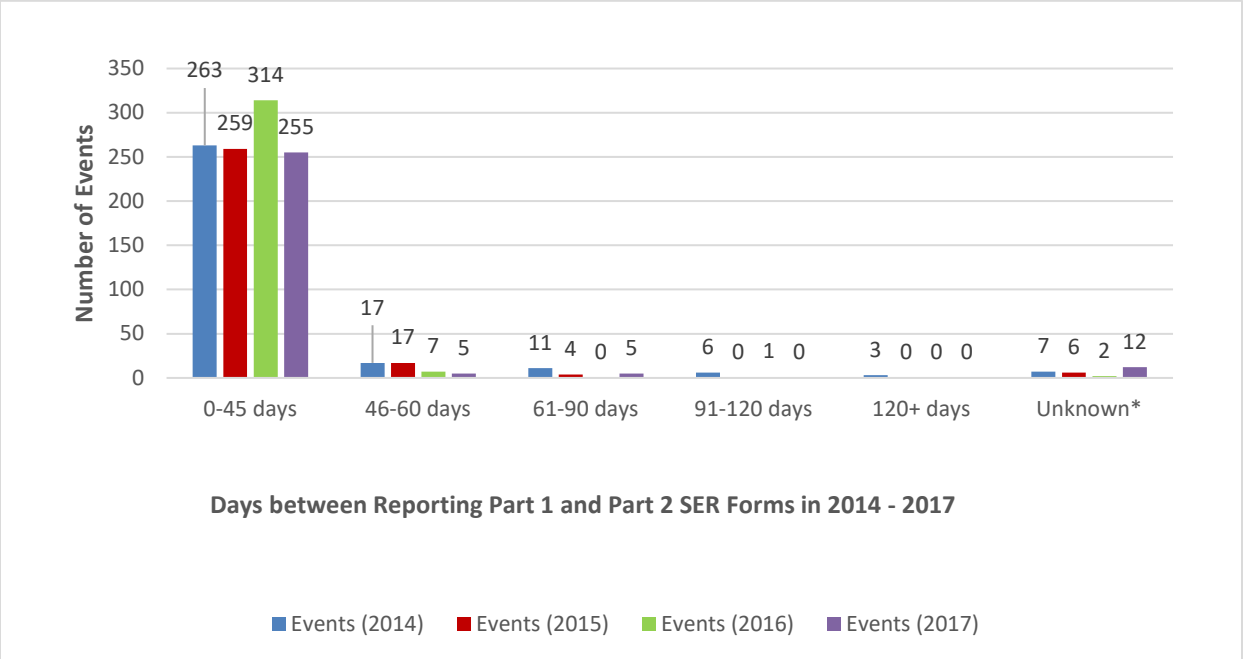
According to NRS 439.835 within 14 days of becoming aware of a reportable event, mandatory reporters must submit the Part 1 form to the SER. Within 45 days of submitting the Part 1 form, the facility is required to submit the Part 2 form, which includes the facility's quality improvement committee describing 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 2017 just over 92% of the facilities met the requirement to complete the Part 2 form within 45 days of submitting the Part 1 form, a drop from 97% in 2016. 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 (SER database)

Days between Part 1 and Part 2 SER Report Submission	Events (2014)	Events (2015)	Events (2016)	Events (2017)	Percent (2017)
0-45 days	263	259	314	255	92.06%
46-60 days	17	17	7	5	1.81%
61-90 days	11	4	0	5	1.81%
91-120 days	6	0	1	0	0.00%
120+ days	3	0	0	0	0.00%
Unknown (date data errors)	7	6	2	12	4.33%
Total Events	**307**	**286**	**324**	**277**	**100.00%**

Figure 8: Duration in Days between Reporting Part 1 and Part 2 SER Forms in 2014, 2015, 2016 and 2017



Duration in Days Between Event Aware Dates and the Patient Notification Dates and the Noticification Methods 2017

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 (203, 73%) or over the telephone (54, 20%).

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

Duration (days)	Events	Percent
<1	220	79.4%
1 - 2	15	5.4%
3 - 5	7	2.5%
6 - 8	1	0.4%
8+	5	1.8%
Unknown	11	4.0%
Not notified or null entry	18	6.5%
Totals	**277**	**100%**

Table 17: Method of Notification to the Patient.

Notification methods	Events	Percent
Told in Person	203	73.3%
Telephone	54	19.5%
No Entry	10	3.6%
Not Notified	8	2.9%
Hand-Delivered Message	1	0.4%
Email	1	0.4%
Total	**277**	**100%**

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

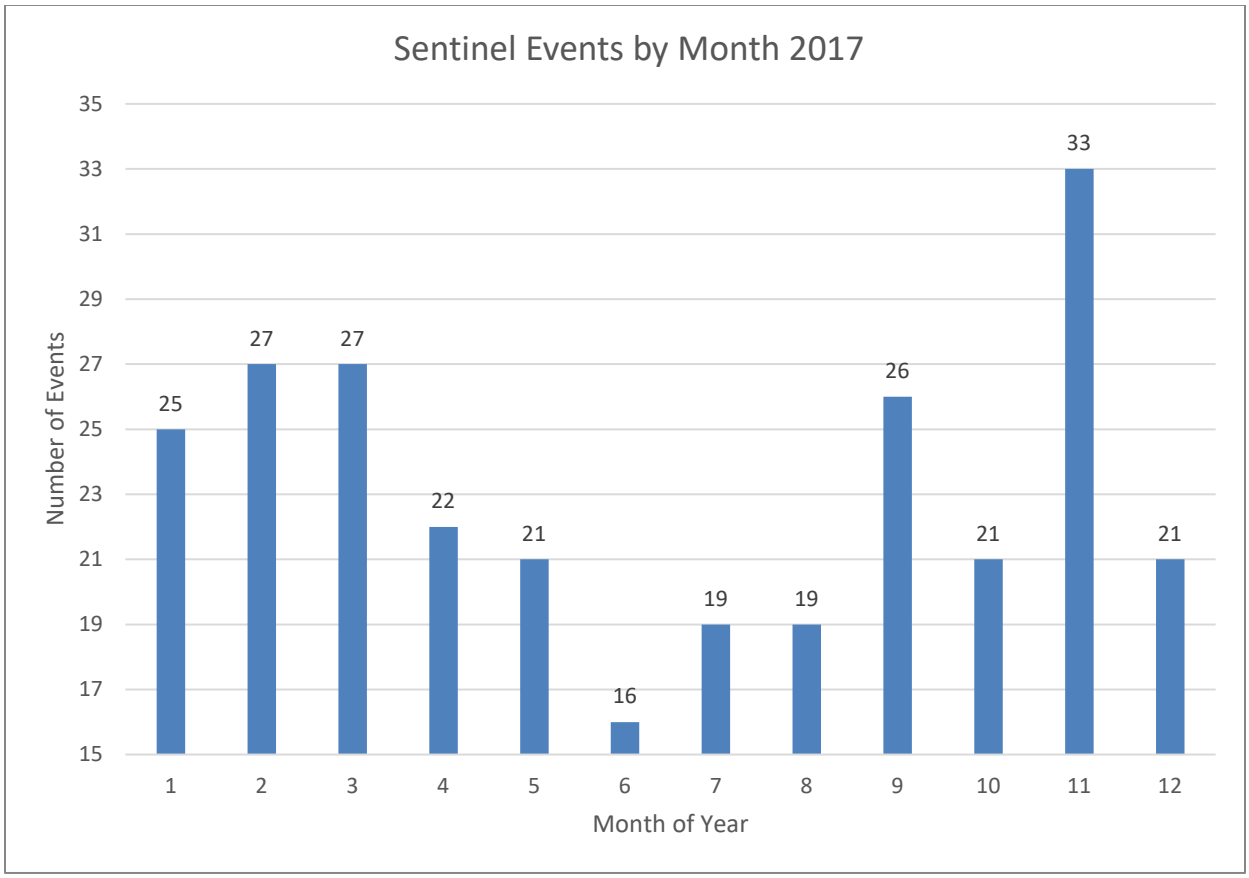
Sentinel Events by Month in 2017

Table 18 and Figure 9 indicate that November was the peak month for sentinel events occurrence in 2017 (August in 2016, January in 2015), 22% higher than the average of 27 events per month (average events per month: 27 in 2016, 24 in 2015), and 106% higher than June, which had the lowest occurrence of sentinel events in 2017.

Table 18: Sentinel Events by Month in 2017 (SER database)

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Count of Events	25	27	27	22	21	16	19	19	26	21	33	21	**277**

Figure 9: Sentinel Events by Month in 2017 (SER database)



Department or Locations where Sentinel Events Occurred in 2017

Table 19 indicates that approximately 40% of sentinel events occurred at the medical/surgical department and the intensive/critical care department in 2017, down from 45% in 2016. Each event can attribute up to 4 departments. With 277 events and 295 departments contributing and average of 1.06 departments responsible per event.

Table 19: Department or Location Where Sentinel Events Occurred in 2017 (SER database)

Department/Location	Count	Percent	Department/Location	Count	Percent
Medical/surgical	88	29.8 %	Outpatient/ambulatory care	4	1.4 %
Intensive/critical care	29	9.8 %	Neonatal unit (level 2)	2	0.7 %
Intermediate care	20	6.8 %	Neonatal unit (level 3)	2	0.7 %
Emergency department	19	6.4 %	Observational/clinical decision unit	2	0.7 %
Inpatient rehabilitation unit	19	6.4 %	Pharmacy	2	0.7 %
Outpatient/ambulatory surgery	18	6.1 %	Antepartum	1	0.3 %
Psychiatry/behavioral health/geropsychiatry	15	5.1 %	Dialysis unit	1	0.3 %
Inpatient surgery	14	4.7 %	Endoscopy	1	0.3 %
Anesthesia/PACU	10	3.4 %	Laboratory	1	0.3 %
Imaging	10	3.4 %	Pediatric emergency department	1	0.3 %
Ancillary other	9	3.1 %	Pediatric intensive/critical care	1	0.3 %
Nursing/skilled nursing	8	2.7 %	Pediatrics	1	0.3 %
Labor/delivery	6	2 %	Pulmonary/respiratory	1	0.3 %
Cardiac catheterization suite	5	1.7 %	Trauma emergency department (level 1)	1	0.3 %
Long term care	4	1.4 %	**Total**	**295**	**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.

Not all medical facilities submitted some sort of document as a patient safety plan in response to the 2017 sentinel event report summary form. One hundred twenty-nine (129) 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 2016, 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 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, 92 facilities indicated they had 25 or more employees, and 46 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, 82 (90%) of the patient safety committees met monthly. Among the facilities that had fewer than 25 employees, 45 (98%) 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 and Contractors			Facilities Having Fewer Than 25 Employees and Contractors		
Monthly Meetings	**Total Facilities**	**Percentage**	**Quarterly Meetings**	**Total Facilities**	**Percentage**
Yes	82	89.13%	Yes	45	97.83%
No	8	8.70%	No	1	2.17%
Did Not Report	2	2.17%	Did Not Report	0	0%
Total	**92**	**100.00%**	**Total**	**46**	**100.00%**

Not all patient safety committees had the appropriate staff in attendance at the patient safety committee meetings. Table 21 shows this with attendance details. Table 21 also 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, in 2017 94% had mandatory staff in attendance when meetings were held, while 96% of those with fewer than 25 employees met the criteria. To compare, in 2016 84% of those facilities with 25 or more employees had mandatory staff in attendance when meetings were held, while 77% of those with fewer than 25 employees had mandatory staff attendance.

Table 21: 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	86	94.48%	Yes	44	95.65%
No	3	3.26%	No	2	4.35%
Did Not Report	3	3.26%	Did Not Report	0	0%
Total	**92**	**100.00%**	**Total**	**46**	**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 2018, 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 on a single source of data truth. There will continue to be separate tables for the reporting of individual events (SER), and the annual summary reporting (ASRSER).
- 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.
- 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 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 followed the procedures and requirements to submit the reports and had internal patient safety plans.

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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www.leg.state.nv.us/Session/77th2013/Bills/AB/AB28_EN.pdf

Nevada State Legislature. *Assembly Bill 59*. 2005 73rd Regular Session. Available at: http://www.leg.state.nv.us/Session/73rd2005/Reports/history.cfm?ID=1424

National Quality Forum. *Serious Reportable Events In Healthcare-2011 Update: A Consensus Report*. Washington, DC: NQF; 2011. Available at: www.qualityforum.org/Publications/2011/12/Serious_Reportable_Events_in_Healthcare_2011.aspx

Funding Sources(s)

This report was produced in collaboration with the Department of Health and Human Services – Office of Analytics and the Office of Public Health Informatics and Epidemiology of the Division of Public and Behavioral Health with funding from budget accounts 3216 and 3219.

Recommended Citation

Department of Health and Human Services, Office of Analytics and Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. *2017 Sentinel Event Summary Report*. Carson City, Nevada. June 2018.