Sentinel Event Data

Root Causes by Event Type

2004 – 3Q 2015

The Joint Commission

© Copyright, The Joint Commission

Joint Commission Root Cause Information

- An appropriate response to a sentinel event includes the completion of a comprehensive systematic analysis for identifying the causal and contributory factors.
- Root cause analysis, which focuses on systems and processes, is the most common form of comprehensive systematic analysis used for identifying the factors that underlie a sentinel event.
- A hospital benefits from self-reporting in the following ways:
  - The Joint Commission can provide support and expertise to the hospital during the review of a sentinel event.
  - A review with The Joint Commission Sentinel Event Unit of the Office of Quality and Patient Safety provides the opportunity for the hospital to collaborate with a Patient Safety Specialist who is likely to have reviewed similar events.
  - Reporting raises the level of transparency in the hospital and helps promote a culture of safety.
  - Reporting conveys the hospital's message to the public that it is doing everything possible, proactively, to prevent similar patient safety events in the future.

For more information refer to the Sentinel Event Policy available online at: www.jointcommission.org/Sentinel_Event_Policy_and_Procedures/

© Copyright, The Joint Commission

Root Cause Definition

- *Fundamental reason(s) for the failure or inefficiency of one or more processes.*
- *Point(s) in the process where an intervention could reasonably be implemented to change performance and prevent an undesirable outcome.*
- *The majority of events have multiple root causes.*

© Copyright, The Joint Commission

Data Limitations

- *The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.*

© Copyright, The Joint Commission

Commonly Identified Root Cause Categories and Subcategories

- **Anesthesia Care**
  Planning, monitoring and/or discharge
- **Assessment**
  Adequacy, timing, or scope of; assessment; pediatric, psychiatric, alcohol/drug, and/or abuse/neglect assessments; patient observation; clinical laboratory testing; care decisions
- **Care Planning**
  Planning and/or collaboration
- **Communication**
  Oral, written, electronic, among staff, with/among physicians, with administration, with patient or family
- **Continuum of Care**
  Access to care, setting of care, continuity of care, transfer of patient, and/or discharge of patient
- **Health Information Technology-related**
  Administrative/billing or practice management system; automated dispensing system; electronic health record (EHR) including CPOE, CDS, or eMAR; human interface device (e.g., keyboard, mouse, touchscreen); laboratory information system (LIS); radiology/diagnostic imaging system; incompatibility between devices; hardware failure or problem; failure of or problem with wired or wireless network; ergonomics; security, virus, or other malware issue; unexpected software design issue

© Copyright, The Joint Commission

Commonly Identified Root Cause Categories and Subcategories *continued…*

- **Human Factors**
  Staffing levels, staffing skill mix, staff orientation, in-service education, competency assessment, staff supervision, resident supervision, medical staff credentialing/privileging, medical staff peer review, other (e.g., rushing, fatigue, distraction, complacency, bias)
- **Information Management**
  Information management needs assessment, confidentiality, security of information, data definitions, availability of information, technical systems, patient identification, medical records, aggregation of data
- **Leadership**
  Organizational planning, organizational culture, community relations, service availability, priority setting, resource allocation, complaint resolution, leadership collaboration, standardization (e.g., clinical practice guidelines), directing department/services, integration of services, inadequate policies and procedures, non-compliance with policies and procedures, performance improvement, medical staff organization, nursing leadership
- **Medication Use**
  Formulary, storage/control, labeling, ordering, preparing/distributing, administering, and/or patient monitoring
- **Nutrition Care**
  Nutrition care planning, timing, storage, and/or patient monitoring

© Copyright, The Joint Commission

Commonly Identified Root Cause Categories and Subcategories *continued…*

- **Operative Care**
  Operative care planning, blood use, and/or patient monitoring
- **Patient Education**
  Planning education, providing education, effectiveness of education
- **Patient Rights**
  Informed consent, participation in care, end-of-life care, pain management, privacy
- **Performance Improvement**
  Improvement planning, design/redesign testing, design/redesign measurement, data collection, data analysis, improvement actions
- **Physical Environment**
  General safety, fire safety, security systems, hazardous materials, emergency management, smoking management, equipment management, utilities management
- **Rehabilitation**
  Rehabilitation care planning, patient monitoring
- **Special Interventions**
  Special intervention planning, assessment, restraint equipment, patient monitoring
- **Surveillance, Prevention, and Control of Infection**
  Sterilization/contamination, universal precautions

© Copyright, The Joint Commission

Most Frequently Identified Root Causes of Sentinel Events Reviewed by The Joint Commission by Year

The majority of events have multiple root causes
(Please refer to subcategories listed on slides 5-7)

2013 (N=887)		2014 (N=764)		3Q 2015 (N=731)	
Human Factors	635	Human Factors	547	Human Factors	464
Communication	563	Leadership	517	Leadership	382
Leadership	547	Communication	489	Communication	343
Assessment	505	Assessment	392	Assessment	247
Information Management	155	Physical Environment	115	Physical Environment	88
Physical Environment	138	Information Management	72	Health Information Technology-related	74
Care Planning	103	Care Planning	72	Care Planning	64
Continuum of Care	97	Health Information Technology-related	59	Information Management	29
Medication Use	77	Operative Care	58	Medication Use	29
Operative Care	76	Continuum of Care	57	Performance Improvement	26

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Anesthesia-related Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=110) ***The majority of events have multiple root causes***	
Communication	103
Assessment	90
Human Factors	87
Anesthesia Care	78
Leadership	71
Physical Environment	24
Information Management	21
Medication Use	18
Continuum of Care	10
Care Planning	6

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Criminal Events--Assault/Rape/Homicide Reviewed by The Joint Commission

(Rape defined as un-consented sexual contact.

One or more of the following must be present to determine reviewability: Any staff witnessed sexual contact; or sufficient clinical evidence; or admission by the perpetrator)

2004 through 3Q 2015 (N=409) ***The majority of events have multiple root causes***	
Human Factors	390
Leadership	354
Assessment	338
Communication	320
Physical Environment	154
Patient Rights	82
Care Planning	57
Information Management	48
Continuum of Care	48
Special Interventions	17

The Joint Commission

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Delay in Treatment Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=1035) ***The majority of events have multiple root causes***	
Communication	1567
Assessment	1377
Human Factors	1203
Leadership	1020
Information Management	332
Continuum of Care	311
Care Planning	200
Physical Environment	193
Medication Use	89
Health Information Technology-related	46

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Elopement-related Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=98) ***The majority of events have multiple root causes***	
Communication	111
Assessment	110
Leadership	89
Physical Environment	88
Human Factors	72
Care Planning	24
Continuum of Care	16
Information Management	9
Special Interventions	7
Medication Use	5

The Joint Commission

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Fall-related Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=777) ***The majority of events have multiple root causes***	
Assessment	839
Communication	656
Human Factors	612
Leadership	572
Physical Environment	326
Care Planning	164
Information Management	92
Continuum of Care	65
Patient Education	55
Medication Use	46

The Joint Commission

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Fire-related Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=136) ***The majority of events have multiple root causes***	
Communication	101
Leadership	100
Human Factors	80
Physical Environment	69
Assessment	65
Operative Care	38
Care Planning	31
Patient Education	29
Anesthesia Care	18
Information Management	13

The Joint Commission

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Infant Abduction Events Reviewed by The Joint Commission

(Any individual receiving care, treatment or services)

2004 through 3Q 2015 (N=29) ***The majority of events have multiple root causes***	
Communication	49
Physical Environment	37
Leadership	30
Human Factors	20
Assessment	14
Information Management	10
Continuum of Care	5
Care Planning	4
Performance Improvement	3
Patient Education	1

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Infection-related Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=185) ***The majority of events have multiple root causes***	
Communication	164
Leadership	145
Human Factors	139
Surveillance, Prevent. & Ctrl of Infect.	104
Assessment	93
Information Management	48
Physical Environment	35
Care Planning	33
Continuum of Care	23
Medication Use	21

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Maternal Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=129) ***The majority of events have multiple root causes***	
Communication	121
Human Factors	120
Assessment	83
Leadership	61
Information Management	27
Physical Environment	24
Continuum of Care	20
Care Planning	14
Medication Use	13
Operative Care	8

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Medical Equipment-related Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=229) ***The majority of events have multiple root causes***	
Human Factors	259
Communication	215
Leadership	199
Physical Environment	199
Assessment	198
Information Management	30
Care Planning	25
Operative Care	12
Medication Use	11
Health Information Technology-related	10

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

The Joint Commission

© Copyright, The Joint Commission

Root Cause Information for Medication Error Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=452) ***The majority of events have multiple root causes***	
Medication Use	652
Communication	594
Human Factors	548
Leadership	469
Assessment	299
Information Management	225
Physical Environment	94
Health Information Technology-related	62
Care Planning	49
Continuum of Care	45

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Op/Post-op Complication Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=904) ***The majority of events have multiple root causes***	
Human Factors	802
Communication	799
Assessment	633
Leadership	484
Information Management	171
Operative Care	123
Physical Environment	108
Care Planning	93
Medication Use	92
Continuum of Care	79

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Perinatal Events Reviewed by The Joint Commission

(Full-term infant 2500g or > and absence of obvious congenital abnormality; resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=335) *The majority of events have multiple root causes*	
Human Factors	438
Communication	416
Assessment	349
Leadership	259
Information Management	70
Physical Environment	67
Care Planning	36
Medication Use	29
Continuum of Care	24
Patient Education	13

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Radiation Overdose Events Reviewed by The Joint Commission

(Cumulative dose > 1500 rads to a single field, or any delivery of radiotherapy to the wrong body region or > 25% above the planned radiotherapy dose)

2004 through 2015 (N=41) ***The majority of events have multiple root causes***	
Human Factors	62
Leadership	44
Communication	34
Information Management	23
Assessment	20
Physical Environment	14
Care Planning	7
Operative Care	5
Health Information Technology-related	3
Medication Use	2

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Restraint-related Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=129) ***The majority of events have multiple root causes***	
Human Factors	159
Communication	145
Assessment	140
Leadership	116
Special Interventions	108
Physical Environment	62
Care Planning	28
Information Management	25
Medication Use	19
Continuum of Care	18

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Suicide Events Reviewed by The Joint Commission

(Suicide of any individual receiving care, treatment or services in a staffed around-the-clock care setting or within 72 hours of discharge)

2004 through 3Q 2015 (N=932) ***The majority of events have multiple root causes***	
Assessment	1194
Communication	855
Human Factors	750
Leadership	655
Physical Environment	472
Information Management	206
Continuum of Care	191
Care Planning	171
Medication Use	28
Patient Education	25

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Transfer-related Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=28) ***The majority of events have multiple root causes***	
Communication	37
Leadership	28
Human Factors	24
Continuum of Care	24
Assessment	22
Care Planning	7
Information Management	6
Physical Environment	5
Special Interventions	2
Anesthesia Care	1

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

The Joint Commission

© Copyright, The Joint Commission

Root Cause Information for Transfusion-related Events Reviewed by The Joint Commission

(Hemolytic transfusion reaction involving administration of blood or blood products having major blood group incompatibilities)

2004 through 3Q 2015 (N=136) ***The majority of events have multiple root causes***	
Leadership	152
Human Factors	134
Information Management	122
Communication	107
Assessment	57
Medication Use	53
Physical Environment	20
Health Information Technology-related	8
Operative Care	6
Continuum of Care	4

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Unintended Retention of Foreign Object Events Reviewed by The Joint Commission

2004 through 3Q 2015 (N=1072) ***The majority of events have multiple root causes***	
Leadership	1160
Human Factors	1095
Communication	1022
Operative Care	567
Assessment	303
Physical Environment	244
Information Management	159
Continuum of Care	30
Performance Improvement	25
Health Information Technology-related	21

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

The Joint Commission

© Copyright, The Joint Commission

Root Cause Information for Ventilator-related Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 3Q 2015 (N=51) ***The majority of events have multiple root causes***	
Human Factors	62
Communication	56
Physical Environment	47
Leadership	37
Assessment	37
Information Management	11
Special Interventions	8
Continuum of Care	6
Care Planning	6
Anesthesia Care	5

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

© Copyright, The Joint Commission

Root Cause Information for Wrong-patient, Wrong-site, Wrong-procedure Events Reviewed by The Joint Commission

(Regardless of the magnitude of the procedure)

2004 through 3Q 2015 (N=1196) ***The majority of events have multiple root causes***	
Leadership	1635
Human Factors	1313
Communication	1298
Assessment	504
Information Management	489
Operative Care	394
Physical Environment	124
Patient Rights	72
Anesthesia Care	64
Continuum of Care	44

The reporting of most sentinel events to The Joint Commission is voluntary and represents only a small proportion of actual events. Therefore, these root cause data are not an epidemiologic data set and no conclusions should be drawn about the actual relative frequency of root causes or trends in root causes over time.

The Joint Commission

© Copyright, The Joint Commission