Sentinel Event Data

Root Causes by Event Type

2004 – 2015

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.

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.*

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.*

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

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

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

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)		2015 (N=936)	
Human Factors	635	Human Factors	547	Human Factors	999
Communication	563	Leadership	517	Leadership	849
Leadership	547	Communication	489	Communication	744
Assessment	505	Assessment	392	Assessment	545
Information Management	155	Physical Environment	115	Physical Environment	202
Physical Environment	138	Information Management	72	Health information technology-related	125
Care Planning	103	Care Planning	72	Care Planning	75
Continuum of Care	97	Health Information Technology-related	59	Operative Care	62
Medication Use	77	Operative Care	58	Medication Use	60
Operative Care	76	Continuum of Care	57	Information Management	52

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.

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=113) ***The majority of events have multiple root causes***	
Communication	105
Assessment	92
Human Factors	90
Anesthesia Care	79
Leadership	73
Physical Environment	24
Information Management	21
Medication Use	19
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.

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 2015 (N=425) ***The majority of events have multiple root causes***	
Human Factors	408
Leadership	370
Assessment	351
Communication	334
Physical Environment	158
Patient Rights	84
Care Planning	60
Information Management	49
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.

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=1052) ***The majority of events have multiple root causes***	
Communication	1585
Assessment	1394
Human Factors	1232
Leadership	1043
Information Management	333
Continuum of Care	316
Care Planning	203
Physical Environment	196
Medication Use	90
Health Information Technology-related	48

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.

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=101) ***The majority of events have multiple root causes***	
Communication	113
Assessment	113
Leadership	93
Physical Environment	88
Human Factors	75
Care Planning	27
Continuum of Care	17
Information Management	9
Special Interventions	8
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.

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=806) ***The majority of events have multiple root causes***	
Assessment	863
Communication	672
Human Factors	639
Leadership	601
Physical Environment	335
Care Planning	167
Information Management	92
Continuum of Care	66
Patient Education	56
Medication Use	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.

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=140) ***The majority of events have multiple root causes***	
Communication	105
Leadership	102
Human Factors	82
Physical Environment	69
Assessment	66
Operative Care	39
Care Planning	32
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.

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

(Any individual receiving care, treatment or services)

2004 through 2015 (N=31) ***The majority of events have multiple root causes***	
Communication	50
Physical Environment	37
Leadership	32
Human Factors	21
Assessment	15
Information Management	10
Continuum of Care	5
Care Planning	5
Performance Improvement	3
Patient Education	1

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.

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=189) ***The majority of events have multiple root causes***	
Communication	165
Leadership	149
Human Factors	143
Surveillance, Prevent. & Ctrl of Infect.	105
Assessment	95
Information Management	48
Physical Environment	35
Care Planning	33
Continuum of Care	23
Medication Use	22

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.

Root Cause Information for Maternal Events Reviewed by The Joint Commission

(Resulting in death or permanent loss of function)

2004 through 2015 (N=131) ***The majority of events have multiple root causes***	
Human Factors	127
Communication	125
Assessment	86
Leadership	66
No Root Cause Identified	28
Information Management	27
Physical Environment	24
Continuum of Care	20
Care Planning	14
Medication Use	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.

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=236) ***The majority of events have multiple root causes***	
Human Factors	266
Communication	220
Leadership	205
Physical Environment	203
Assessment	201
Information Management	30
Care Planning	25
Operative Care	12
Medication Use	11
Health Information Technology-related	11

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

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=475) ***The majority of events have multiple root causes***	
Medication Use	663
Communication	606
Human Factors	569
Leadership	486
Assessment	301
Information Management	225
Physical Environment	97
Health Information Technology-related	68
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.

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=924) ***The majority of events have multiple root causes***	
Human Factors	817
Communication	805
Assessment	635
Leadership	495
Information Management	171
Operative Care	123
Physical Environment	109
Care Planning	94
Medication Use	93
Continuum of Care	81

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.

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 2015 (N=348) ***The majority of events have multiple root causes***	
Human Factors	454
Communication	431
Assessment	360
Leadership	268
Information Management	71
Physical Environment	70
Care Planning	36
Medication Use	30
Continuum of Care	26
Patient Education	15

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.

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.

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

(Resulting in death or permanent loss of function)

2004 through 2015 (N=130) ***The majority of events have multiple root causes***	
Human Factors	160
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.

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 2015 (N=952) ***The majority of events have multiple root causes***	
Assessment	1215
Communication	871
Human Factors	769
Leadership	673
Physical Environment	477
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.

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

(Resulting in death or permanent loss of function)

2004 through 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

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 2015 (N=137) ***The majority of events have multiple root causes***	
Leadership	153
Human Factors	135
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.

The Joint Commission

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

2004 through 2015 (N=1103) ***The majority of events have multiple root causes***	
Leadership	1201
Human Factors	1130
Communication	1058
Operative Care	577
Assessment	306
Physical Environment	252
Information Management	161
Continuum of Care	30
Performance Improvement	26
Health Information Technology-related	22

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

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

(Resulting in death or permanent loss of function)

2004 through 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.

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 2015 (N=1215) ***The majority of events have multiple root causes***	
Leadership	1656
Human Factors	1335
Communication	1319
Assessment	509
Information Management	490
Operative Care	400
Physical Environment	124
Patient Rights	72
Anesthesia Care	64
Health Information Technology-related	48

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.