NERC
Improving Human Performance

Sentinel Event Reporting, Analysis and Prevention in Healthcare

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The Joint Commission

Healthcare Worker Fatigue

- Extended duration work shifts significantly increase fatigue and impair performance and safety. Residents who work traditional schedules with recurrent 24-hour shifts:
  - Make 36 percent more serious preventable adverse events than individuals who work no more than 16 consecutive hours
  - Make five times as many serious diagnostic errors
  - Experience 61 percent more needlestick and other sharp injuries after their 20th consecutive hour of work
  - Experience a 1.5 to 2 standard deviation deterioration in performance related to baseline rested performance on both clinical and non-clinical tasks
  - Report making 300 percent more fatigue-related preventable adverse events that led to a patient's death

Source: November 2007 *Joint Commission Journal on Quality and Patient Safety*

The Joint Commission
Sentinel Event Alert

A complimentary publication of The Joint Commission

Issue 48, December 14, 2011

Published for Joint Commission accredited organizations and interested health care professionals, *Sentinel Event Alert* identifies specific types of sentinel events, describes their common underlying causes, and suggests steps to prevent occurrences in the future.

Accredited organizations should consider information in an Alert when designing or redesigning relevant processes and consider implementing relevant suggestions contained in the Alert or reasonable alternatives.

Health care worker fatigue and patient safety

The link between health care worker fatigue and adverse events is well documented, with a substantial number of studies indicating that the practice of extended work hours contributes to high levels of worker fatigue and reduced productivity. These studies and others show that fatigue increases the risk of adverse events, compromises patient safety, and increases risk to personal safety and well-being.[1,2,3,4,5] While it is acknowledged that many factors contribute to fatigue, including but not limited to insufficient staffing and excessive workloads, the purpose of this *Sentinel Event Alert* is to address the effects and risks of an extended work day and of cumulative days of extended work hours.

The impact of fatigue

Fatigue resulting from an inadequate amount of sleep or insufficient quality of sleep over an extended period can lead to a number of problems, including:

- lapses in attention and inability to stay focused
- reduced motivation
- compromised problem solving
- confusion
- irritability
- memory lapses
- impaired communication
- slowed or faulty information processing and judgment
- diminished reaction time
- indifference and loss of empathy[6]

Contributing factors to fatigue and risks to patients

Shift length and work schedules have a significant effect on health care providers' quantity and quality of sleep and, consequently, on their job performance, as well as on the safety of their patients and their individual safety. This fact has been borne out in numerous studies. Findings from a groundbreaking 2004 study of 393 nurses over more than 5,300 shifts – the first in a series of studies of nurse fatigue and patient safety – showed that nurses who work shifts of 12.5 hours or longer are three times more likely to make an error in patient care.[7] Additional studies show that longer shift length increased the risk of errors and close calls and were associated with decreased vigilance,[7] and that nurses suffer higher rates of occupational injury when working shifts in excess of 12 hours.[8] Still, while the dangers of extended work hours (more than 12 hours) are well known, the health care industry has been slow to adopt changes, particularly with regard to nursing.

"An overwhelming number of studies keep saying the same thing – once you pass a certain point, the risk of mistakes increases significantly," says Ann Rogers, Ph.D., R.N., FAAN, a nationally renowned sleep medicine expert with Emory University's Nell Hodgson Woodruff School of Nursing. "We have been slow to accept that we have physical limits and biologically we are not built to do the things we are trying to do."

The Joint Commission

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Actions Suggested by The Joint Commission

1. Assess your organization for fatigue-related risks.
2. Assess your organization's hand-off processes
3. Invite staff input
4. Create and implement a fatigue management plan
5. Educate staff about sleep hygiene
6. Provide opportunities for staff to express concerns about fatigue
7. Encourage teamwork as a strategy to support staff who work extended work shifts
8. Consider fatigue as a potentially contributing factor when reviewing all adverse events
9. Assess the environment provided for sleep breaks to ensure that it fully protects sleep

The Joint Commission's Sentinel Event Policy

- Implemented in 1995 in response to a rash of health care-related sentinel events widely covered by the media –
  - Betsy Lehman case – Chemotherapy overdose
  - Potassium Chloride overdose
  - Wrong Site Surgery
- Voluntary reporting
- Mandatory reporting
- RCAs, Corrective Action Plans and Measures of Success required

The Joint Commission's Sentinel Event Policy

- Standards require RCA (responsive) and FMEA (proactive risk assessment)
- Sentinel Event Policy – requires reporting, analysis and prevention
- Maintain a Sentinel Event database
- Publish *Sentinel Event Alerts* (Lessons Learned)
- National Patient Safety Goals (require compliance)

The Joint Commission's Sentinel Event Policy

- Sentinel Event defined: "An unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof."
- All RCAs for "Reviewable Events" analyzed by The Joint Commission expert staff and iterative discussion with submitting organization until "Acceptable"
- Medico-legal environment requires The Joint Commission to provide reporting options
- An RCA Framework and electronic reporting tool provided to organizations

Public & Private Sector Sentinel Event Reporting Systems in Healthcare

- Federal agencies (CMS, AHRQ)
- 27 States have active reporting systems
- 76 Patient Safety Organizations (PSWP, NPSD)
- The Joint Commission

Sentinel Event Alerts

- 48 Alerts issued as evidence-based recommendations focused on preventing serious safety events from occurring
- Selected Alert topics include:
  - Issue 6: Lessons Learned: Wrong Site Surgery - 08/28/1998
  - Issue 7: Inpatient Suicides: Recommendations for Prevention - 11/06/1998
  - Issue 9: Infant Abductions: Preventing Future Occurrences - 04/09/1999
  - Issue 11: High-Alert Medications and Patient Safety - 11/19/1999
  - Issue 21: Medical gas mix-ups - 07/01/2001
  - Issue 23: Medication errors related to potentially dangerous abbreviations - 09/01/2001
  - Issue 28: Infection control related sentinel events - 01/22/2003
  - Issue 38: Preventing accidents and injuries in the MRI suite -02/14/2008
  - Issue 40: Behaviors that undermine a culture of safety - 07/09/2008
  - Issue 41: Preventing errors relating to commonly used anticoagulants - 09/24/2008
  - Issue 45: Preventing violence in the health care setting - 06/03/2010
  - Issue 48: Health care worker fatigue and patient safety -12/14/2011

Summary Data of Sentinel Events Reviewed by The Joint Commission

Sources of Reviewable Sentinel Events 2004 through 2011	Total Incidents	Self-Reported	Non-Self Reported	% of Self Reported
2004	418	267	151	63.9%
2005	592	367	225	62.0%
2006	511	357	154	69.9%
2007	740	448	292	60.5%
2008	819	509	310	62.1%
2009	968	624	344	64.5%
2010	802	572	230	71.3%
2011	1243	865	378	69.6%
2004 through 2011 Total	6093	4009	2084	65.8%

Top 10 Sentinel Events Reviewed by The Joint Commission

Type of Sentinel Event	2004-2011 Total	2009	2010	2011
Wrong-patient, wrong-site, wrong-procedure	819	149	93	152
Delay in Treatment	683	123	95	138
Unintended Retention of a Foreign Body	658	119	133	188
Op/Post-op Complication	636	94	86	133
Suicide	600	87	67	131
Fall	462	81	56	96
Other Unanticipated Event	366	52	38	71
Medication Error	336	43	44	45
Criminal Event	237	34	28	49
Perinatal Death/Injury	203	31	31	36

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)

2009 (N=936)		2010 (N=802)		January through 3rd Quarter 2011 (N=914)	
Assessment	*602*	Leadership	710	Human Factors	655
Care Planning	*136*	Human Factors	699	Leadership	599
Communication	*612*	Communication	661	Communication	549
Continuum of Care	*97*	Assessment	555	Assessment	507
Human Factors	*614*	Physical Environment	284	Physical Environment	238
Information Management	*250*	Information Management	226	Information Management	169
Leadership	*653*	Operative Care	160	Operative Care	150
Medication Use	*83*	Care Planning	135	Care Planning	114
Operative Care	*138*	Continuum of Care	112	Continuum of Care	102
Physical Environment	*237*	Medication Use	86	Medication Use	64

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 Third Quarter 2011 (N=782) *The majority of events have multiple root causes*	
Leadership	649
Communication	536
Human Factors	496
Information Management	279
Operative Care	271
Assessment	259
Physical Environment	77
Patient Rights	48
Anesthesia Care	42
Continuum of Care	28

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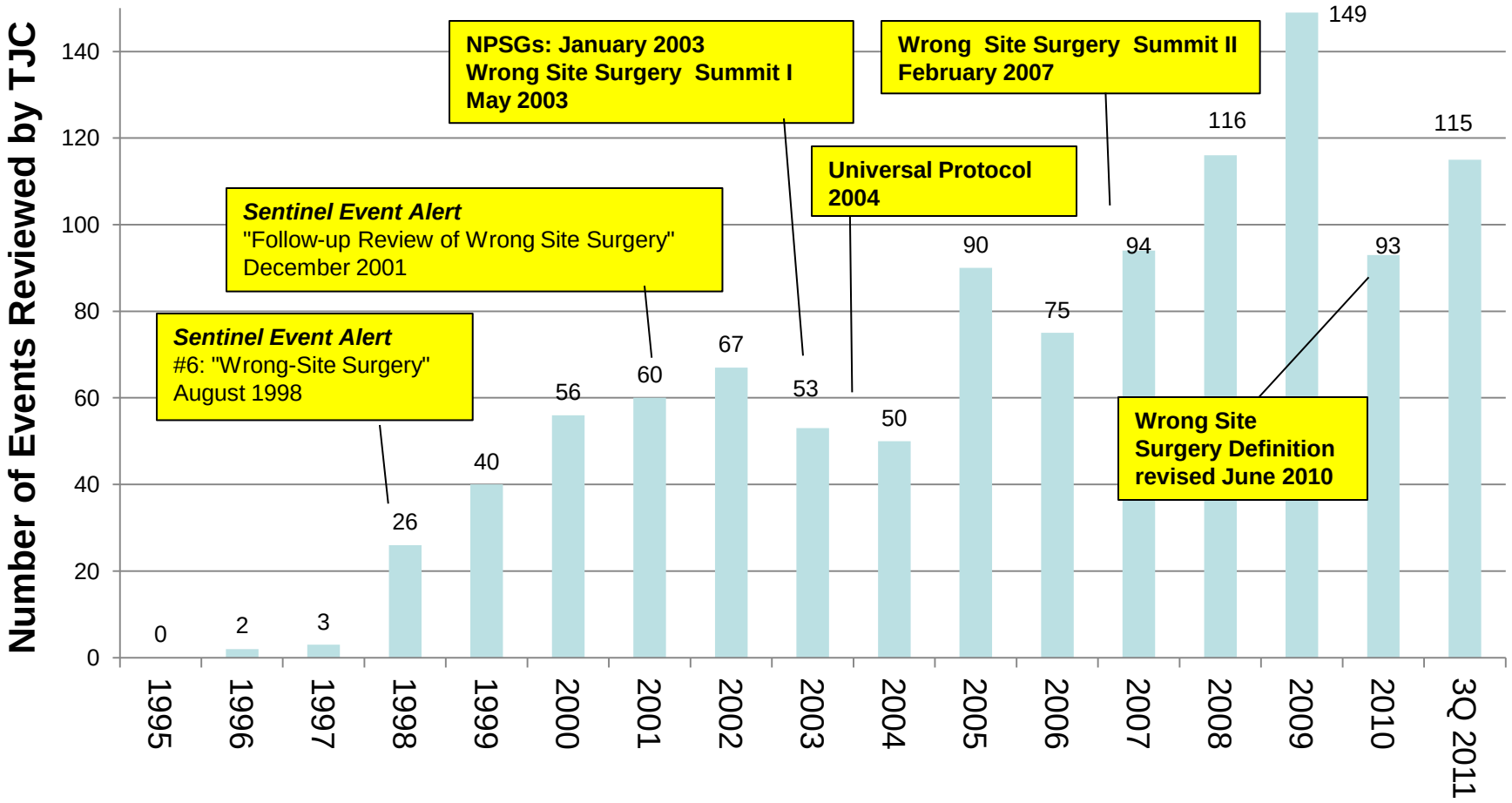
Wrong-patient, Wrong-site, Wrong-procedure Events Reviewed by The Joint Commission

(Regardless of the magnitude of the procedure)



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