Topic 1:

Driving Safety through Good Design

Presenter:

Kathy Reno, PhD, MBA, RN EDAC
Safe Health Design Managing Consultant
Driving Safety Through Good Design: Goals

- Discuss Healthcare’s Current Safety Challenges
- Review Standards-Driven Design Integrated with Evidence-based Design Principles
Safe Health Design

- Safety
  - Standards-Based Design
- Quality
  - Evidence-Based Design
- Reliability
  - Global Best Practices
Where do you consider TJC?
Provision of Care

- Seeks to reduce physical, language, cultural and other barriers to access and delivery of services.
Provision of Care

- Collaborate to analyze and to integrate patient assessments
- Laboratory safety program
- Radiation safety program
Provision of Care

- Care of elderly patients, disabled individuals, children and populations at risk
- Food preparation, handling, storage and distribution are safe and comply with laws, regulations and current acceptable practices
- Care of the dying patient optimizes his or her comfort and dignity
Provision of Care

- Physiological status during anesthesia is continuously monitored

- Physiological status is continuously monitored during and immediately after surgery
Operative and Post-Operative Events

- Sentinel Event Alert #12: "Operative and Post-Operative Complications"
  February 2000
Reducing Pre and Post Surgical events

- Direct visualization of patients pre and post operatively

- Safe transfer plans for direct admit to unit from Surgery
Delay in Care

Number of Events Reviewed by TJC

Sentinel Event Alert
#26: "Delay in Treatment"
June 2002


1 3 7 18 18 35 36 37 50 54 42 78 103 123 95 138

0 20 40 60 80 100 120 140 160
Reducing Delay in Care

- Adjacencies of critical support functions, e.g. CT and Emergency Department
- Standardization of placement on headwalls and equipment
- Observation in Rooms
- Reduced travel distances
- Sufficient Elevators
- Transportation of specimens
Unanticipated Events

(Resulting in death or permanent loss of function—such as: asphyxiation, choking, drowning, found unresponsive)
Reducing Unanticipated Events

- Direct visualization of patient in room, therapies, diagnostic and treatment areas
- Alarms for patients or providers to utilize
- Family zone in patient room
Medication Management

- Medications are properly and safely stored.
- Medications are prepared and dispensed in a safe and clean environment.
Medication Errors

Sentinel Event Alerts
#11: "High-alert meds" November 1999
#16: "Mix-up leads to a Med Error" February 2001
#19: "Look-alike/sound-alike" May 2001
#23: "Abbreviations" September 2001
#35: "Medication reconciliation" January 2006
#39: "Pediatric med Errors" April 2008
#41: "Anticoagulants" September 2008

Number of Events Reviewed by TJC

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Reducing Medication Errors

- Reduce distractions during key processes:
  - Ordering
  - Filling
  - Administering

- Drug Dispensing close to patient
Rights and Responsibilities of the Individual
Patient and Family Centered Care

- Support spaces for family
  - Nourishment
  - Rest/respite
  - Toileting and Bath
  - Work space

- Family Zones in rooms
Rights & Responsibilities of the Individual

- Patient Privacy
- Protect Patients’ Belongings
- Protect Patients
Infection Prevention and Control

- Based on current scientific knowledge, accepted practice guidelines, applicable laws and regulations, and standards for sanitation and cleanliness.

- Reduces the risks of healthcare-associated infections in patients and health care workers.

- Reduces the risk of infections by ensuring adequate equipment cleaning and sterilization and the proper management of laundry and linen.
Infection Prevention and Control cont.

- The organization provides barrier precautions and isolation procedures that protect patients, visitors, and staff from communicable diseases.

- Gloves, masks, eye protection, other protective equipment, soap and disinfectants are available and used correctly when required.
Infection
Reducing Infections

- Managing air quality, e.g. Hepa Filters, UV lights, Laminar flow, air exchanges
- Managing water quality storage, access, waste
- Hand Hygiene with sinks and gel conveniently placed to use between patients
- Ante-rooms for environmental protection rooms either positive or negative
- Sealing Seams of wall and flooring finish products
- Washable surfaces
- Flooring and wall and furniture finishes
- Water Features
Performance Improvement

- Leaders participate in planning and measuring a quality improvement and patient safety program.

- Leaders designs new and modified systems and processes according to quality improvement principles.
Leadership

- The leaders identify and plan for the type of clinical services required to meet the needs of the patients served by the organization.

- Equipment, supplies and medications recommended by profession organizations or by alternative authoritative sources are used.

- Director recommends space, equipment, staffing and other resources needed by the department or service.
Environment of Care & Life Safety

- The organization complies with relevant laws, regulations, and facility inspection requirements.

- Inspects all patient care buildings to provide a safe physical facility for patients, families, staff, and visitors.

- Handling, storage, and use of hazardous materials and the control and disposal of hazardous materials and waste.
All occupants are safe from fire, smoke or other emergencies in the facility.

Potable water and electrical power are available 24 hours a day, seven days a week.
Medical Equipment Related Events

Sentinel Event Alerts
# 15: "Infusion Pumps" November 2000
#21: "Medical Gas Mix-ups" July 2001
#36: "Tubing Misconnections" April 2006
#38: "MRI" February 2008

Bar chart showing the number of events reviewed by TJC from 1995 to 2011.
Reducing Potential Equipment Failure

- Know your contractors
- Inspect the work throughout the process
- Commissioning
Criminal Events: Assault/Rape/Homicide

[Bar chart showing the number of events reviewed by TJC from 1995 to 2011.]

Sentinel Event Alert
#45: “Preventing Violence In Healthcare Settings” June 2010
Reducing Physical Assaults

- Secure Holding rooms
- Video cameras
- Observational windows for rooms
- Security doors
Elopement
Reducing Elopements

- Secure Hold Rooms for Emergency Department
- Locked units for Psychiatry
- Alarm Systems for Dementia units
Abduction

Sentinel Event Alert
#9: "Infant Abductions"
April 1999

SUCCESS
Strategies to Reduce Abduction

- Securing the environment
  - Electronic
  - Manual
- Coded Badges
- Parent training
Each staff member receives ongoing in-service and other education and training to maintain or to advance his or her skills and knowledge.
Sentinel Alert!

- Healthcare Worker Fatigue
- Alarm Fatigue
National Patient Safety Goals

- #7 Reducing HAI’s
- #9 Harm from Falls
- #15 Suicide Risk
Fatal Falls

Sentinel Event Alert
#14: "Fatal Falls-Lessons for the Future"
July 2000
Reducing Falls

- Lower Beds
- Open Access to Bathroom, visually and physically
- Lifts into bathrooms
- Lifts in corridors for rehab centers
- Handrails
- 90° pivot turns for toilet transfer
- Convenient sink placement
- Flooring?
Suicide

Number of Events Reviewed by TJC

- Sentinel Event Alert #7: "Inpatient Suicides: Recommendations for Prevention" November 1998
- Definition revised to include suicide within 72 hours of discharge: March 2005

Sentinel Event Alert #46: "A Follow-Up Report on Preventing Suicide" November 2010
Self Inflicted Injuries

Number of Events Reviewed by TJC

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Reducing Self Inflicted Injuries and Suicide

- Secure Holding Rooms
- Direct Visualization of patients with severe behavioral issues
Information Management &
Record of Care, Treatment and Services

- The patient’s record(s) is available
- Information privacy and confidentiality are maintained
- Information security is maintained
- Records and information are protected from loss, destruction, tampering and unauthorized access or use
Emergency Management

- Decontamination
- Surge
Transplant Safety

- Storing Tissues and biologicals
Waived Testing

- Space for equipment
- Proximity to POC
Topic 2:

Engaging JCR in Your Next Project with the Safe Health Design™ Service

Presenter:
David Grazman, PhD
Global Manager, Safe Health Design
Engaging JCR in Your Next Project: Goals

- Overview of Joint Commission Organization
- Foundations of the Safe Health Design™ Service
- Review of other JCR Resources useful to Healthcare Architects and Planners
An Overview of the Joint Commission

Joint Commission Resources
Knowledge transfer agent of the Joint Commission
- Founded in 1986, conducts all consulting, education and publishing for the Joint Commission
- Patient safety and quality innovations

Joint Commission International
Improving the quality and safety of patient care in the international community
- Founded in 1998
- 520+ accredited organizations in more than 53 countries

The Joint Commission
Leading accrediting body for healthcare institutions in the US
- Founded in 1951
- 20,000+ accredited institutions

Joint Commission Center for Transforming Healthcare
Transforming healthcare into a high-reliability industry
- Founded in 2007
- Utilizes a systematic approach to analyze the root causes of breakdowns in care
Joint Commission Accreditation and Consulting in the U.S. and Abroad

Organizations in the U.S.

Outside the U.S.
TJC Standards and the Built Environment

- International Patient Safety Goals
- Access to Care and Continuity of Care
- Patient and Family Rights
- Assessment of Patients
- Care of Patients
- Anesthesia and Surgical Care
- Medication Management and Use
- Patient and Family Education
- Quality Improvement and Patient Safety
- Prevention and Control of Infections
- Governance, Leadership, and Direction
- Facility Management and Safety
- Staff Qualifications and Education
- Management of Communication and Information
A Foundation for Safe Health Design™

Safety
Reliability
Quality
Evidence
Integration of Evidence-based design principles, Joint Commission standards, and the best practices of our experienced practitioners to achieve the best possible outcomes for new healthcare facilities
Global Presence: Safe Health Design™
Safe Health Design™ Modules

Early Planning
• Establish Guiding Principles for Safety by Engaging Stakeholders

Facility Design
• Review Hospital Schematics and Plans against Joint Commission Standards, Evidence-Based Design and Clinical Best Practices

Readiness Preparation (during construction)
• Design processes, policies and educate staff on how to utilize new space, with an eye towards Standards and Best Practices

Pre-Occupancy (months and weeks prior to occupancy)
• Identify and minimize safety risks in new building by executing safety scenarios and systems testing prior to go-live date

Post-Occupancy (weeks and months after occupancy)
• Ensure systems, processes and staff are operating well in terms of safety and in preparation for accreditation
SAFE HEALTH DESIGN™ Framework

Flows
- Patients
- Providers
- Information
- Supplies/Waste
- Equipment
- Medication
- Family/Visitors

Functions
- Patient Safety
- Access
- Efficiency
- Care Provision
- Technology
- Infection Control
- Education/Training
- Privacy/Confidentiality
- Waiting/Delays
- Storage
- Regulatory Compliance
- Facility Management (LSC, Disaster, Security, EOC)
Benefits of Safe Health Design™

1. Greater focus on patient safety throughout project, which contributes to better safety outcomes and operations throughout entire life of the building.

2. Adjustment of schematics earlier to reduce cost of rework, while ensuring standards compliance for hospital.

3. Better alignment of built environment with care environment, helping to create conditions for reduced patient safety errors and cost savings.

4. Faster adoption and refinement of process and policies aimed at minimizing preventable safety risks, such as falls, medication errors, HAI’s, etc.

5. Proactively identifying and addressing safety risks arising from the built environment, the care environment, and how they interact.

6. Increased staff preparedness and confidence (1) to competently and safely provide care in new facility, and (2) to successfully participate in accreditation survey.
Other Related JCR and JCI Resources

Books, Periodicals & Manuals

Software Solutions

http://store.jcrinc.com/

Education

Safe Health Design™ Learning Academy
Step 1: Choose the Standards

The Joint Commission Resources ECM Plus Interactive Smart Chart

Select Standards and/or EPs

- Accreditation Participation Requirements (APR)
- Emergency Management (EM)
- Environment of Care (EC)
  - EC.01.01: The hospital plans activities to minimize risks in the environment of care.
  - EC.02.01: The hospital manages safety and security risks.
  - EC.02.01.03: The hospital prohibits smoking except in specific circumstances.
  - EC.02.02: The hospital manages risks related to hazardous materials and waste.
  - EC.02.03: The hospital manages fire risks.
  - EC.02.03.03: The hospital conducts fire drills.
  - EC.02.03.05: The hospital maintains fire safety equipment and fire safety building features.
  - EC.02.04: The hospital manages medical equipment risks.
  - EC.02.04.03: The hospital inspects, tests, and maintains medical equipment.
  - EC.02.05: The hospital manages risks associated with its utility systems.
  - EC.02.05.03: The hospital has a reliable emergency electrical power source.
  - EC.02.05.05: The hospital inspects, tests, and maintains utility systems.
  - EC.02.05.07: The hospital inspects, tests, and maintains emergency power systems.
  - EC.02.05.09: The hospital inspects, tests, and maintains medical gas and vacuum systems.
  - EC.02.06: The hospital establishes and maintains a safe, functional environment.
  - EC.02.06.01: The hospital manages its environment during demolition, renovation, or new construction to reduce risk to those in the organization.
  - EC.03.01: Staff and licensed independent practitioners are familiar with their roles and responsibilities relative to the environment of care.
  - EC.04.01: The hospital collects information to monitor conditions in the environment.
  - EC.04.03.03: The hospital analyzes identified environment of care issues.
### Step 2: Choose the Locations

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### Step 3: SmartChart Created

**The Joint Commission Resources ECM Plus Interactive Smart Chart**

1. Select Standards and/or EPs
2. Select States
3. Go To Results

#### Environment of Care (EC) > EC 01.01.01: The hospital plans activities to minimize risks in the environment of care. > EP 1: Leaders identify an individual(s) to manage risk, coordinate risk reduction activities in...

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<th>Condition of Participation (CoP)</th>
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<td>EP 1: Leaders identify an individual(s) to manage risk, coordinate risk reduction activities in the physical environment, collect deficiency information, and disseminate summaries of actions and results. Note: Deficiencies include injuries, problems, or use errors.</td>
<td>§482.41(a): Condition of Participation: Physical Environment; Standard: Buildings</td>
<td>TAG: A.0701: Condition of Participation: Physical Environment; Standard: Buildings</td>
<td>77 Ill. Adm. Code 250.130(c)(3); Administration by the Department; 77 Ill. Adm. Code 250.160(A)(19)(L); Incorporated and Referenced Materials; 77 Ill. Adm. Code 250.620; Radioactive Isotopes; 77 Ill. Adm. Code 250.630; General Policies and Procedures Manual</td>
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Thank You and Contact Information

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Global Manager, Safe Health Design
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