

NIH Clinical Center Patient and Worker Safety Metrics and Initiatives

John I. Gallin, MD
Laura M. Lee, MS, RN
Michele Evans, DrPH

Overview

Topics for Discussion

Patient Safety Metrics and Initiatives

- Performance Metrics
- What Safety Measures Matter to Patients
 - Public display of metrics
 - White boards for inpatient rooms to identify patient doctor and nurse/daily schedule/patient preferences
- Identifying Harm and Mitigating Risks
 - Daily Safety Huddles
 - Event Reporting Systems
 - Trigger Tool--Harm Investigation (ICU and other AE cases)
 - 24 hour death reviews
- Communication with Staff about Safety and Quality
 - NIH Clinical Safety Rounds
 - Patient Safety and Quality Liaisons

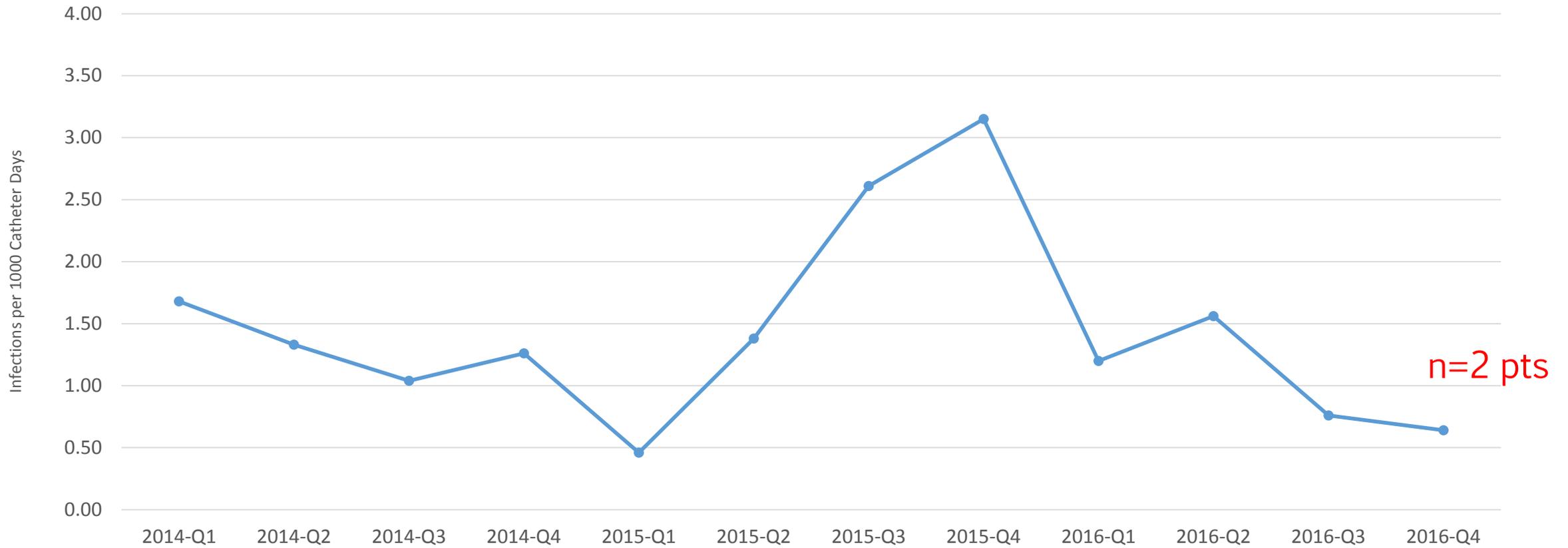
Topics for Discussion (continued)

Worker Safety: Occupational Injuries and Illnesses-Managing Risk

- Safety Goals for Clinical Center Employees
- Processes to Achieve Safety Goals
 - Proactive measures
 - Response to occupational injury or illness
 - 2016 incident case rates
 - Focus on musculoskeletal injuries during patient transfers
 - Continuing Challenges

Performance Metrics

Whole-house Central-Line Associated Bloodstream Infection (CLABSI) Rate



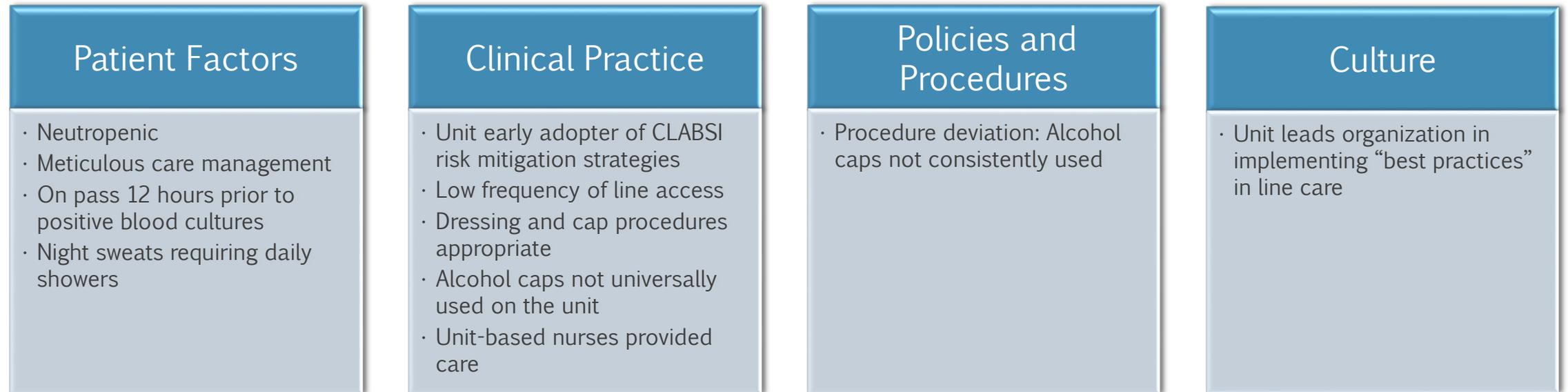
Intensive Analysis: CLABSI



Patient #1

- 28 y/o male patient with ALL and prolonged neutropenia and relapsed disease
- Organism: *Staphylococcus epidermidis*

Analysis of care 48 hours prior to infection



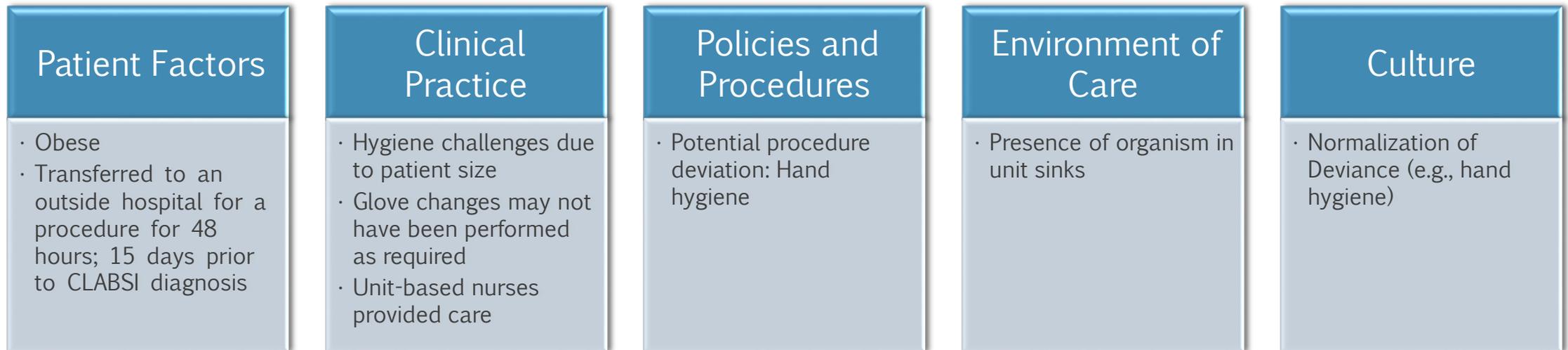
Improvement Strategies

- Investigate factors associated with inconsistent use of caps
- Reinforce meticulous line care with patients – especially when on pass or off unit

Patient #2

- 20 y/o male with Large B-cell lymphoma and XMEN disorder, fatty liver, obesity
- Organism: *Sphingomonas sp.*

Analysis of care 48 hours prior to infection



Improvement Strategies

- Investigate factors/lapses in appropriate procedures; role of normalization of deviance
- *Sphingomonas* environmental sources investigated and remediation plan in place

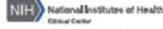
What Safety Measures
Matter to Patients?

Key Safety Issues of Importance

- Conference call with 10 patients on the Patient Advisory Group
- Issues/Measures of Concern
 - Hospital acquired infections
 - Medication errors
 - Rapid Response Team activation
 - Communication with care team
 - Event reporting
 - Staff education about safety
- Communicate results frequently and publically
- Stressed the importance of knowing about improvement strategies

Looking Forward...

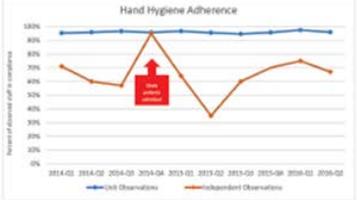
- Increase engagement of patients
 - Improvement teams
 - Hospital committees
- Public display of metrics




Quality and Safety

CHECK UP

Department Name Here DATE

PATIENT EXPERIENCE	HAND HYGIENE
	 <p style="font-size: small;"> Over 90% of patients admitted to the NICU are under management either due to the patient's underlying illness, prematurity or high acuity, or as a result of treatment and therapy. To ensure that this potentially vulnerable patient population is protected from harm, the prevention of nosocomial infections is a primary focus of all healthcare providers. The NICU Infection Surveillance Team has an aggressive surveillance program to identify infection events of risk as well as to track the infection control and prevention program. The NICU is subject to Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO) based hygiene guidelines. The NICU employs two methods to assess hand hygiene adherence: 1. Unannounced observations conducted monthly (data for an entire month). These observations are based on 100% compliance and 100% adherence. These observations include the following: - appropriate hand hygiene more than 90% of the time. 2. The Hospital Epidemiology Service employs independent, "secret shopper" observations. These observations include and collect hand hygiene adherence data in the patient care units and clinic. Additional data obtained by the epidemiology service are considered lower risk data consisting of the unit based observations and are more aligned with hospital wide hygiene adherence data reported to the hospital. Moving forward, the Hospital Epidemiology Service will work with the Nursing Department to review the unit based observations to assist in ensuring that the data collection reflects an aligned and more comprehensive data set across groups. Thank you to the Hospital Epidemiology Service for their support and assistance for all data collection. </p>
FALLS	QUALITY PROJECTS

Identifying Harm and Mitigating Risk

Daily Safety Huddles

Huddles

- Representatives from all NIH CC departments and most ICs
- Attendees check-in with department/IC prior to Huddle
- Gather from 8:40 am - 9:00 am
- Report out on safety events that occurred in the last 24 hours and look forward to possible future issues
- Outcome: Improved communication about events and more efficient and immediate action



Event Reporting Systems



Occurrence Reporting System

Anonymous Reporting Hotline

October 2016

393

2

November 2016

366

3

December 2016

268

3

Trigger Tool – Harm Investigation

Trigger Tool

▪ Trigger Types

- Inpatient deaths
- ICU admissions
- Unplanned readmission within 30 days
- Returns to the Operating Room
- Use of pro- or anti-coagulants
- Medications
 - Narcan
 - Protamine sulfate

▪ ICU Case Reviews Conducted (since January 2016)

- Total ICU cases reviewed: 730
- Intensive harm reviews conducted: 59

“n” = 59 cases

Expected Event

- Known event or complication
- Rate noted in the literature (while not desired, can be expected in some patients undergoing the procedure)

Unexpected Event

- Outcome/complication not expected given patient co-morbidities or type of procedure

Non-Preventable Harm

- Inherent to medical therapy
- No deviation in procedures

17

14

Preventable Harm

- Deviation from procedure
- Delay in care

21

7

- Deep vein thrombosis
- Pulmonary embolism
- Post-operative infection
- Bacteremia

- Bowel perf with abscess
- Recurrent post-op infection
- Fluid overload requiring ICU admission
- Medication interaction
- Delay in palliative care procedure

Improvement Strategies Deployed

- Medical Morbidity and Mortality Rounds
 - “Recognizing Early Signs of Sepsis”
 - Over 250 attendees
- Peri-operative anticoagulation guidelines developed
- Engagement of surgical staff re: peri-operative antibiotic choices
- Discussion of a Infectious Diseases Consult Clinic for patients with long term infections (e.g., transplant-related infections, unresolved/recalcitrant post-operative infections)

Communicating with Staff about Safety and Quality

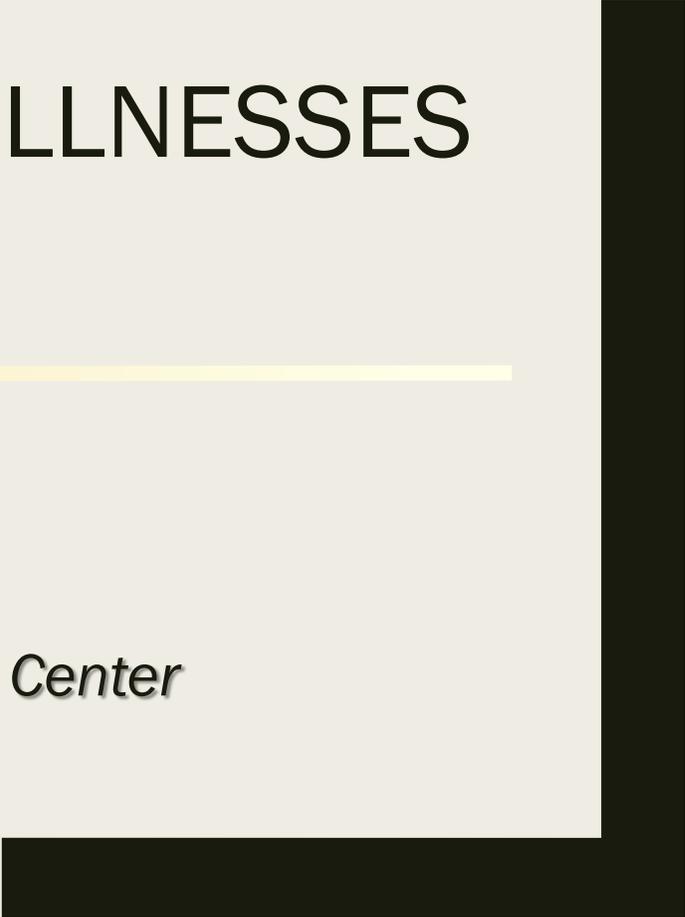
Strategies to Improve Communication

- *“NIH Clinical Safety Rounds”*
 - DDIR or CC Director message
 - “5 Things to Know”
 - “From the Patient Safety Huddle”
 - Occurrence Reports
 - Principle of patient safety
 - Other tidbits
- Huddles
- Institute Patient Safety and Quality Liaison role

Patient Safety and Quality Liaisons

- Primary point of contact for all things PATIENT SAFETY AND QUALITY
- Attend daily patient safety huddles
- Manage and follow-up with all patient safety events related to IC-based care and protocol issues, as appropriate – in collaboration with CC and IC partners
- Coordinate data management (collection, analysis, reporting) of IC-based performance metrics
- Assist in coordinating and responding to Root Cause Analyses and Failure Mode and Effects Analyses
- Active member of the Clinical Quality Committee (or new future group?)
- CC will facilitate formal training in patient safety/quality improvement

Comments/Questions?



OCCUPATIONAL INJURIES AND ILLNESSES MANAGING RISKS

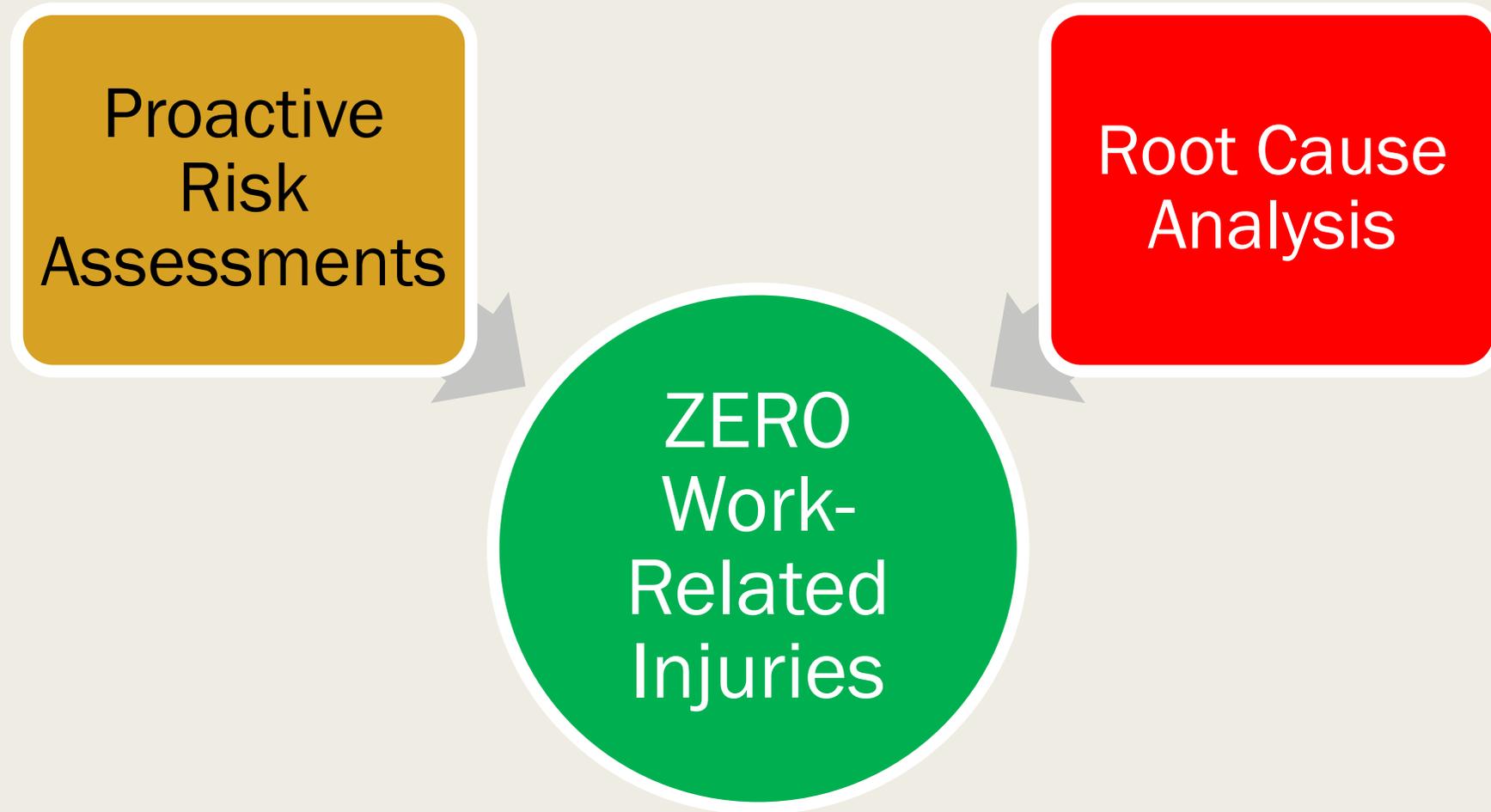
Michele R Evans, DrPH

Environmental Safety Officer, NIH Clinical Center

Safety Goals for Clinical Center Employees

- Zero Occupational Injuries and Illnesses
- Maximize Lessons Learned from Each Occupational Injury and Illness

Processes to Achieve Safety Goals



Proactive Measures

- Tell all new employees of the value they provide to the organization and share with them leadership's commitment to their wellbeing and safety.
- Plan, construct, renovate and maintain environs that meet the needs of the occupants as well as nationally recognized codes and standards.
- Address workers' concerns to stakeholders and leadership through formal and informal communications, e.g., Hospital Safety Committee.
- Develop and implement policies and procedures to manage workplace hazards.
- Institutional and Job Specific Education and Training.

Proactive Measures

- Complete systematic and systemic workplace assessments
 - *Safety Officer, managers and front line staff meet to identify site-specific occupational risks and assess effectiveness of existing controls*
- Complete 'Environment of Care' Tours
 - *Multidisciplinary subject experts and department staff survey all areas of the hospital as an ongoing improvement process.*
- Assess occupational risks associated with new technologies, i.e., Failure Mode and Effects Analysis
- Maintain and apply knowledge and best practices from creditable sources.

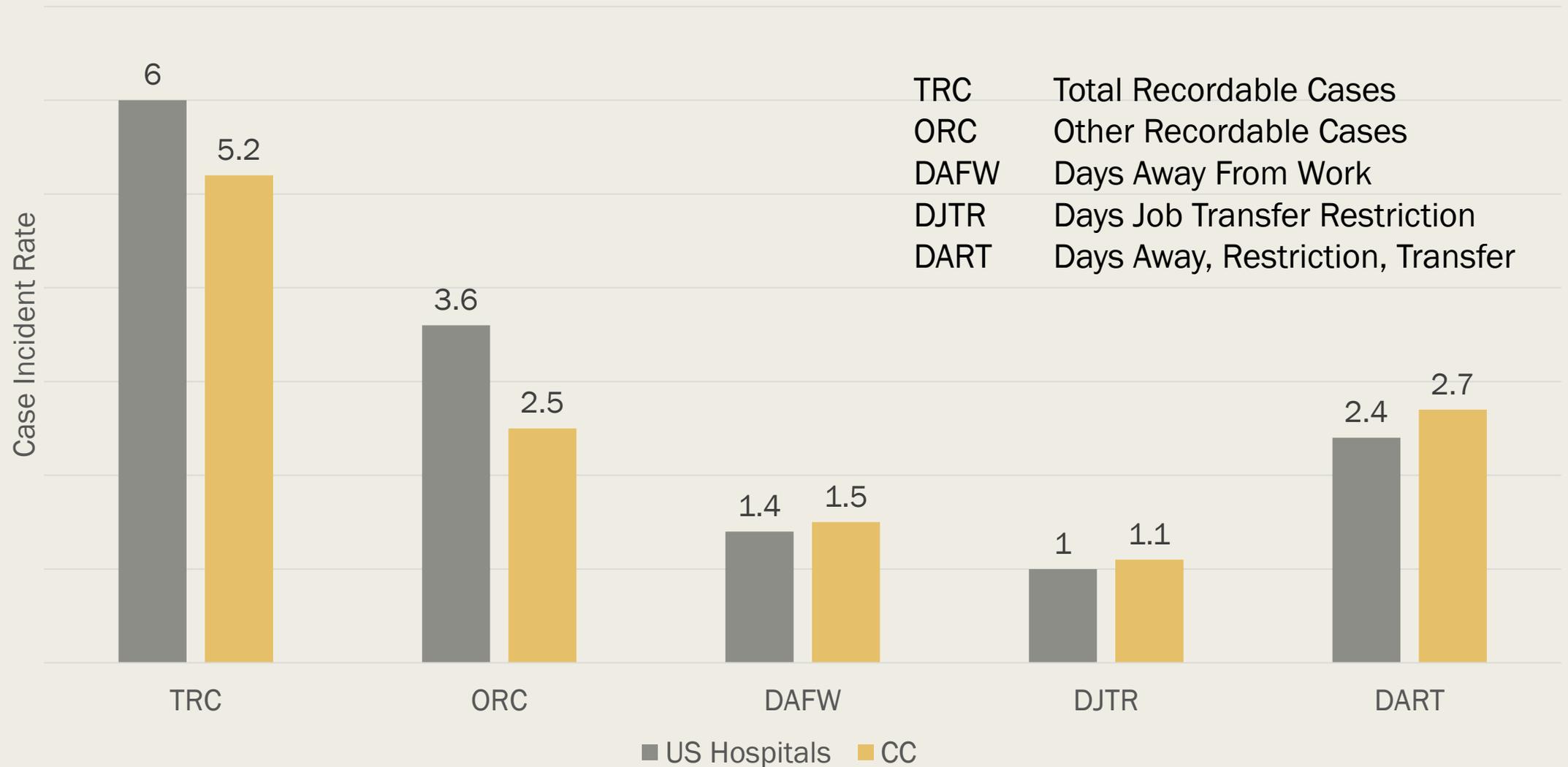
Response to an Occupational Injury or Illness

- Review and triage each occupational injury and illness report in timely manner.
- Interview the employee.
- Take action to mitigate hazard.
- Implement process for light duty or alternate work assignment.

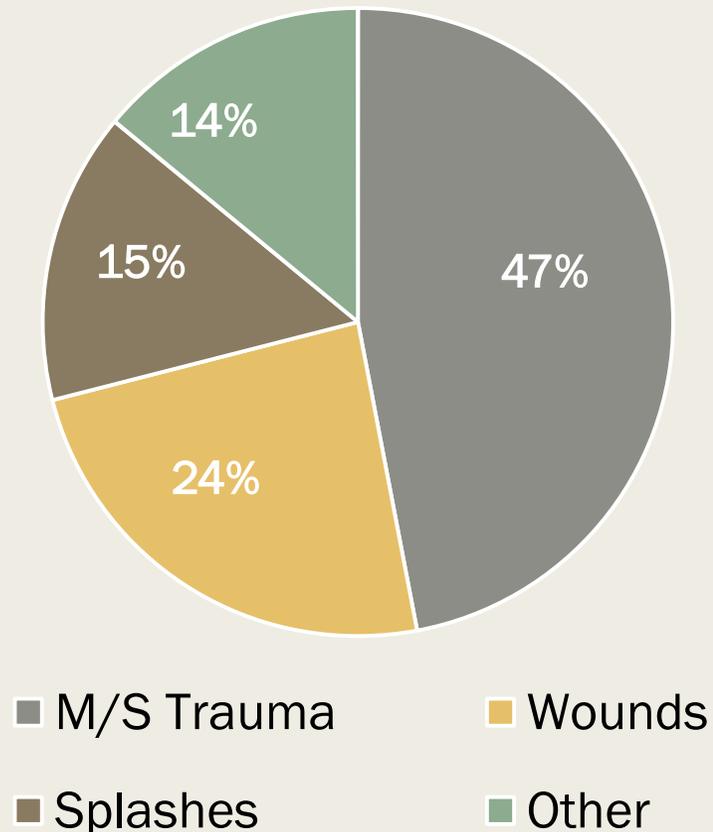
Response to an Occupational Injury or Illness

- Analyze incident reports from various sources to identify trends and 'red flag' events that caused or may cause an injury or illness.
- Complete root cause analysis for 'high risk' near misses as well as sentinel events.
- Audit corrective actions for sustainability and effectiveness.

Occupational Injury and Illness Incident Case Rates for Hospitals Nationwide in 2015 Compared with Incident Case Rates for the Clinical Center in 2016 (N= 95)



All CC Occupational Injuries and Illnesses Reported to Occupational Medical Service in 2016 (N= 190)



Musculoskeletal (M/S) Trauma accounted for:

- 86% of the Days Away From Work
- 76% of the Days Job Transfer Restriction

What worked well in 2016?

Reduced musculoskeletal injuries during patient transfers by 50% (8/16)

Multifactorial Approach

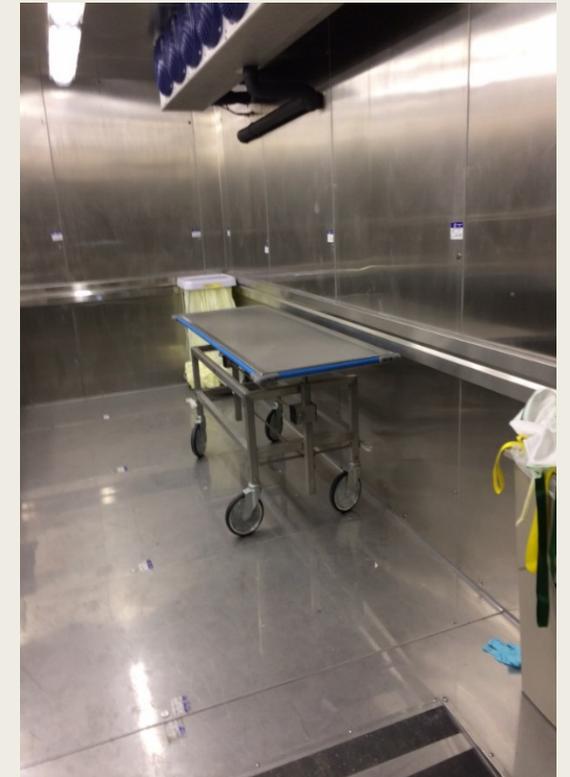
- Renovated the facility to eliminate the risk.
- Installed permanent lifts for patient transfer in the ICU.
- Enhanced program and practices to reduce patient falls.
- Raised awareness of proper body mechanics in clinical areas.

Transfer of Decedent to Morgue

Before



Now



Continuing Challenges

- ❑ Musculoskeletal Trauma Without Patient Contact
 - Mitigate pedestrian trip hazards
 - Remove and/or adjust tension on door closures
 - Ensure adherence to safety measures when cleaning floors
 - Revisit options for chairs with wheels
- ❑ Wounds
 - Optimize safety while handling 'sharps' during bone marrow procedures
- ❑ Light Duty and Alternate Work Assignment Process
 - Improve intra-department communications & timeliness of placement
- ❑ Resources



DISCUSSION

