

Developing a Hospital-wide Approach to Healthcare Acquired Infections

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Situation Analysis

- A multi-hospital network with a national reputation for the provision of the highest quality in a community with a rising prevalence of MRSA (community and hospital acquired) and C. Difficile (community and hospital acquired, resistant) infections
- Despite the existence of best practice policy and procedure, a rising incidence of sentinel events related to MRSA and C. Difficile
- Rededicated commitment to process and outcomes

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■ Facts

- 7 hospitals
 - 11,200 employees
 - 2500 physicians
 - 150 employed physicians
 - Managed care organization
- Part of SSM Healthcare system, 2002 Malcolm Baldrige National Quality Award
- Network-wide ICP collaboration
- Missouri initiates mandatory HAI reporting 01/07

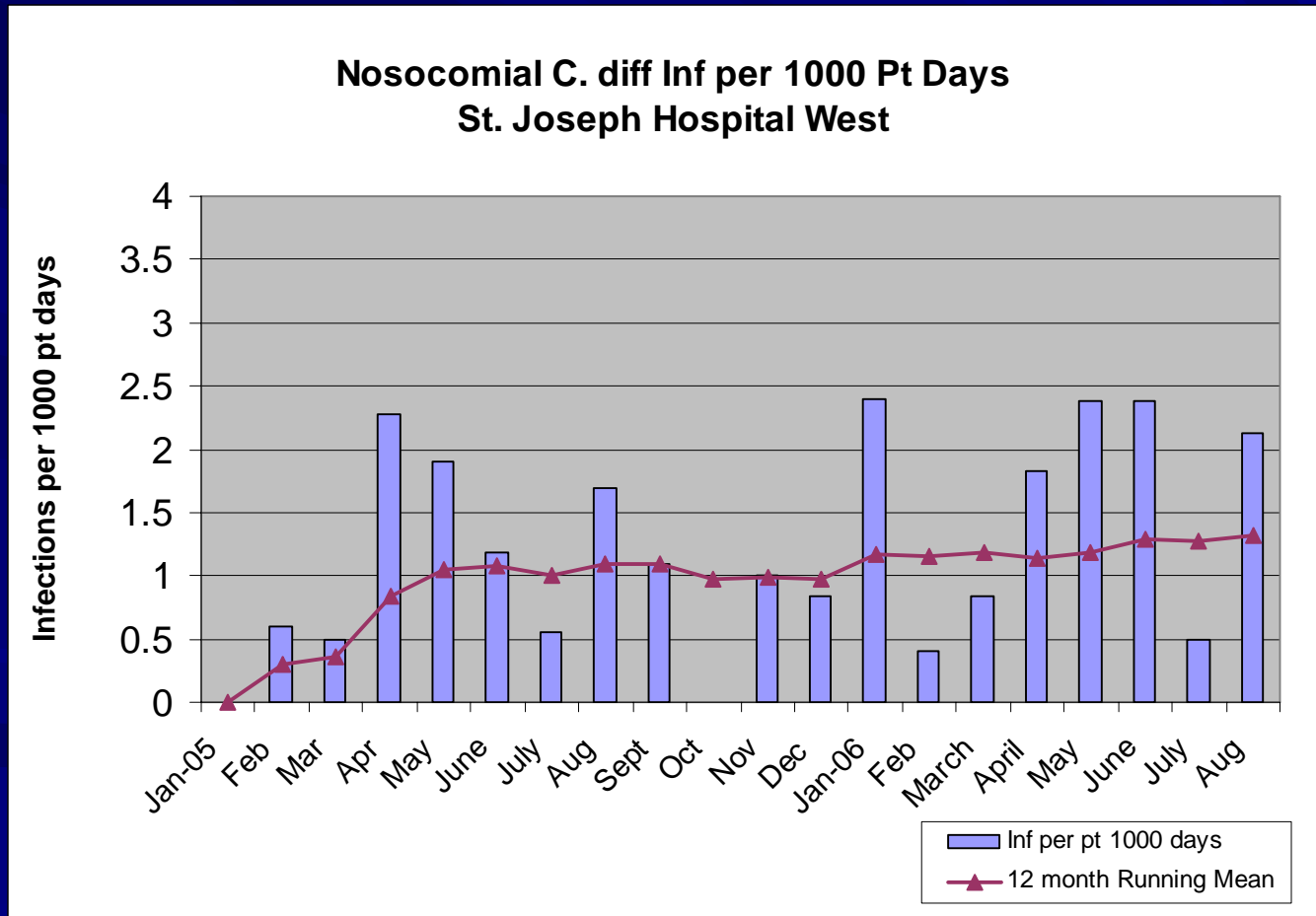
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- Broad participation in IHI 100,000 lives campaign and solid performance in reducing CABI and VAP incidence in the ICU
- At least one Infection Control Professional per hospital
- Publicly report patient safety indicators such as hand hygiene compliance, surgical site marking, medical abbreviation compliance
- At a system level, a huge variation in epidemiological environment, so interventions need to be community level initiatives

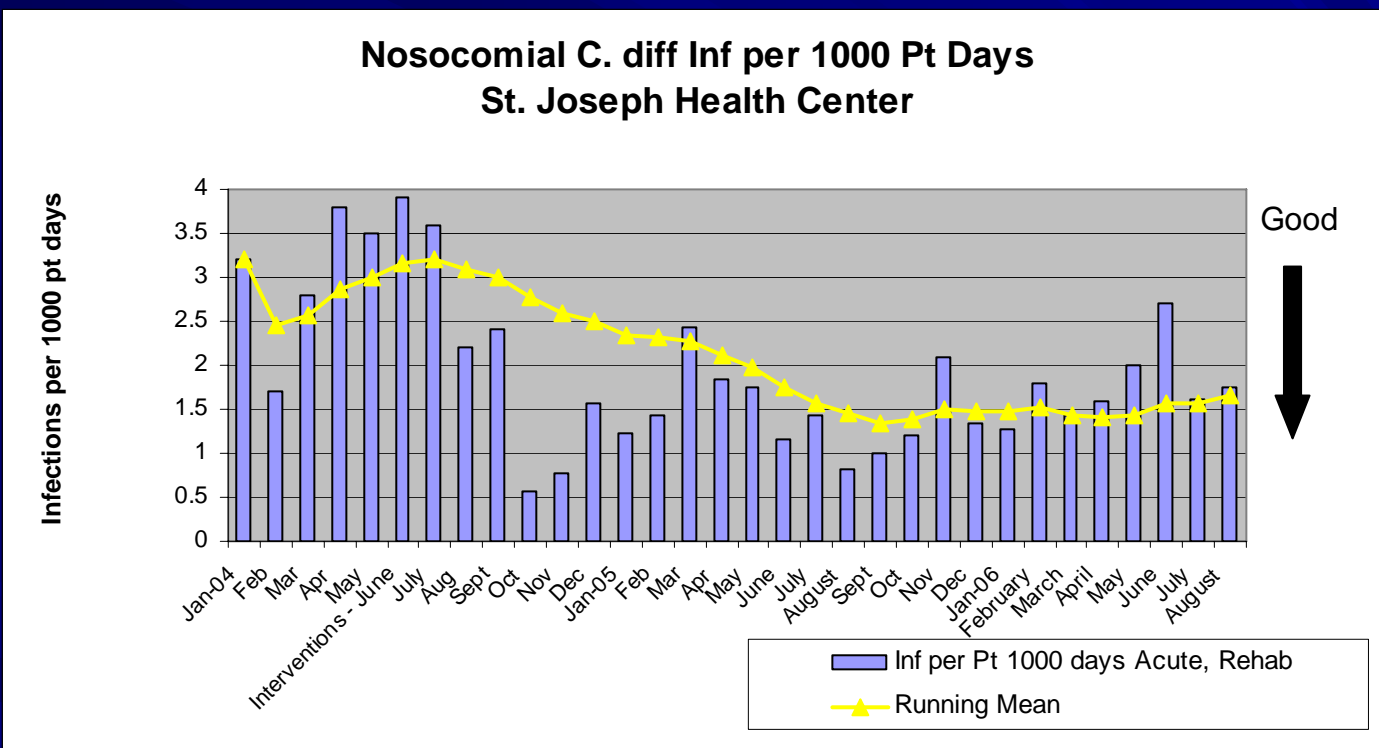
Policy and Procedure Analysis for the Prevention of C. Difficile: What we thought we were doing

- Antibiotic adjustment and education
- Broad definition of patients considered to have nosocomial C. Difficile
 - Any positive toxin in any patient hospitalized within the last 3 months
 - All patients included regardless of intervening stay in nursing facility, other hospital, etc.
- Using CDC guidelines for isolation, precautions, hygiene, etc.

Policy and Procedure Analysis for the Prevention of C. Difficile: Reality



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Policy and Procedure Analysis for the Prevention of C. Difficile: Reality

- Hand hygiene suboptimal
 - Wrong handwash
 - Caregivers inconsistently compliant
 - Visitors not participating
- Inconsistent signage
- Suspicion for C. Difficile limited to proven toxin positivity
 - e.g., a suspected patient not confirmed until post-discharge would not trigger isolation, room cleaning consistent with C. Difficile protocol, etc.

Policy and Procedure Analysis for the Prevention of C. Difficile: Reality

- Housekeeping not available 24 hours everywhere and nursing not expert in cleaning protocols
- Isolation status not communicated consistently
- Equipment cleaning not consistent
- Incorrect cleaning solution
- Formulary prefers Avelox (broader spectrum, high bowel concentration)

When the Holes Connect...

Wrong
Disinfectant

Poor Communication in Pt. Hand-Offs

Lack of
Recognition of
infection

Visitors not
wearing PPE

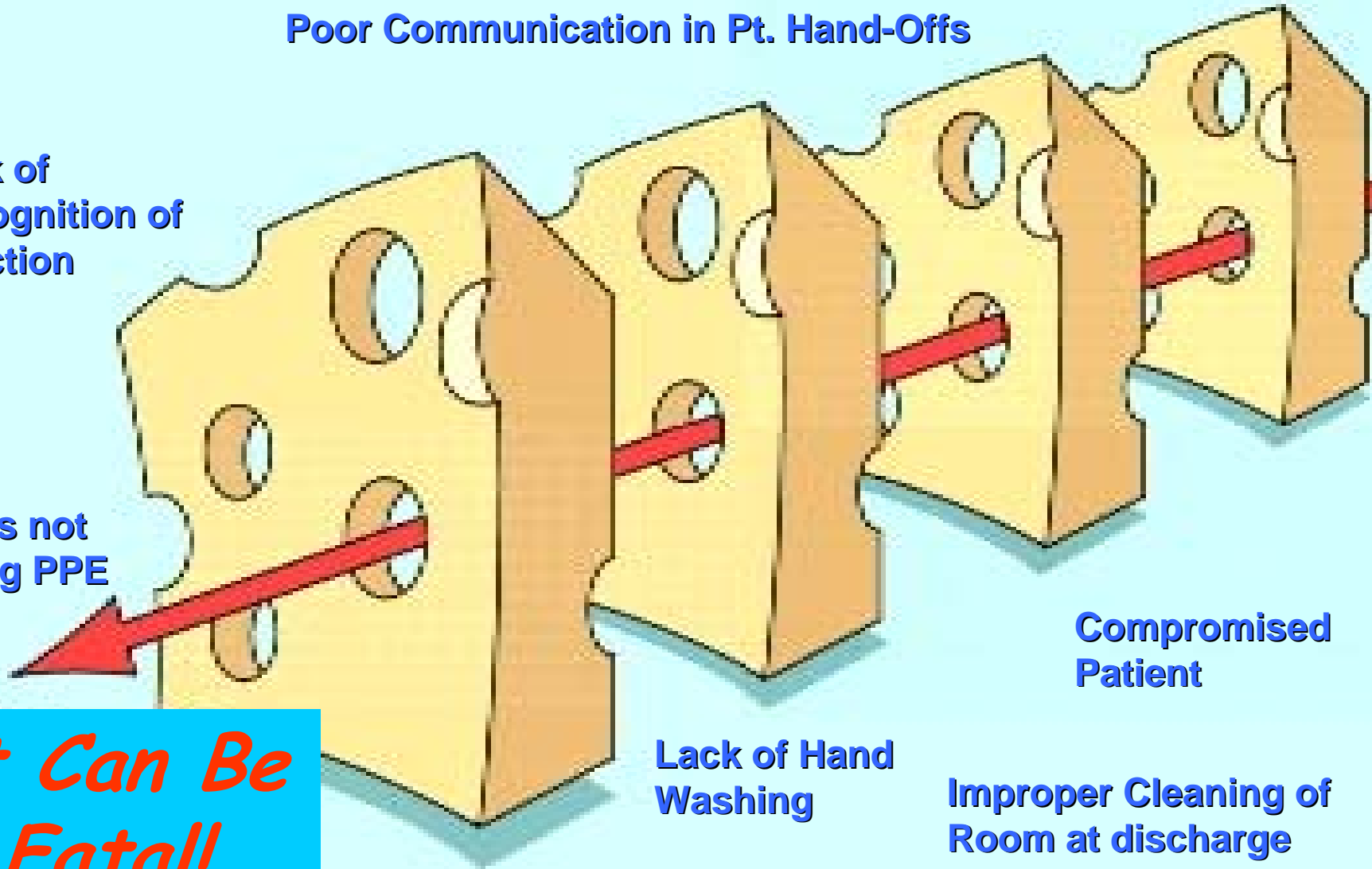
Compromised
Patient

***It Can Be
Fatal!***

Lack of Hand
Washing

Improper Cleaning of
Room at discharge

Poor Isolation Technique



Policy and Procedure Analysis for the Prevention of C. Difficile: Reality

- 2007 YTD
 - 6 HAI sentinel events
 - 4 C. Difficile
 - 5 deaths
 - 1 permanent disability

Lessons

- Even in a health system renowned for its quality, policy and procedures without vigilance deliver bad outcomes
 - Vigilance of the environment
 - Vigilance of your own behavior
- Even good policies that are followed can be worthless if they don't cross disciplinary boundaries
 - e.g., a good housekeeping policy that housekeeping follows impeccably won't work if housekeeping isn't available and their proxies don't know the policy

Actions

- Interdisciplinary policy development team created and empowered
 - Physicians
 - Nursing
 - Material management
 - Education
 - Housekeeping

Actions

■ Philosophy

- Increase the index of suspicion
 - Everyone with diarrhea is treated as C. Difficile positive for their entire hospitalization
 - Isolation
 - Cleaning protocols
- It is the responsibility of every employee to hold each other accountable
- Expectations of visitors are the same as for employees
- Non-confrontational and overly polite is a dangerous behavior when it comes to enforcing policy

Actions

■ Medical staff

- Levaquin becomes flouoroquinolone of choice
- Pneumonia order sets changed to reflect the change
- Antibiotic stop orders set at 7 days
- Biweekly antibiotic stewardship rounds developed to optimize antibiotic utilization

Actions

■ Nursing

- Automatic notification of Infection Control Professional when a C. Diff toxin is ordered or when a high risk patient is admitted with diarrhea
- Handoff tool changed to include communication regarding isolation status and enlarged to include handoff to ancillary departments

Actions

■ Material Management

- Increased number of isolation carts
- Reference guides
- Disposable equipment
 - Blood pressure cuffs
 - Thermometers
 - Stethoscopes
- Permanent equipment remains in room until room is cleaned and they are cleaned

Actions

■ Housekeeping

- Instituted house-wide bleach cleaning
- Purchased extra sets of curtains for ICU and Telemetry to allow cleaning between discharges
- Are empowered to hold all other disciplines accountable for compliance with proper isolation protocols

Impact

We'll see

Conclusions

- In the world of HAI's, the cost of doing business is eternal vigilance
- A great reputation and great policies are no insurance of great outcomes
- Multidisciplinary intervention is required
- Clinicians want to do the right thing and will do so if they have the right information
- Hard-wiring is the hard part and requires...see above