IHI Expedition

Impacting Hand Hygiene at the Front Line

Session 3

Tuesday, August 27, 2013

Diane Jacobsen, MD, MPH
Tom Talbot, MD, MPH
Lisa Maragakis, MPH, CPHQ

Expedition Coordinator

Kayla DeVincentis, CHES, Project Coordinator, Institute for Healthcare Improvement, currently manages web-based Expeditions and the Executive Quality Leaders Network. She began her career at IHI in the event planning department and has since contributed to the State Action on Avoidable Rehospitalizations (STAAR) Initiative, the Summer Immersion Program, and IHI’s efforts for Medicare-Medicaid enrollees. Kayla leads IHI’s Wellness Initiative and has designed numerous activities, challenges, and educational opportunities to improve the health of her fellow staff members. In addition to implementing the organization’s first employee health risk assessment, Kayla is certified in health education and program planning. Kayla is a graduate of Northeastern University in Boston, MA, where she obtained her Bachelors of Science in Health Science with a concentration in Business Administration.

nothing to disclose
WebEx Quick Reference

- Welcome to today’s session!
- Please use chat to “All Participants” for questions
- For technology issues only, please chat to “Host”
- WebEx Technical Support: 866-569-3239
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When Chatting...

Please send your message to All Participants
Expedition Director

Diane Jacobsen, MPH, CPHQ, Director, Institute for Healthcare Improvement (IHI) is currently directing the CDC/IHI Antibiotic Stewardship Initiative, NSLJI/IHI Reducing Sepsis Mortality Collaborative. Ms. Jacobsen served as IHI content lead and improvement advisor for the California Healthcare-Associated Infection Prevention Initiative (CHAIPPI) and directed Expeditions on Antibiotic Stewardship, Preventing CA-UTIs, Reducing *C. difficile* Infections, Sepsis, Stroke Care and Patient Flow. She served as faculty for IHI’s 100,000 Lives and 5 Million Lives Campaign and directed improvement collaboratives on Sepsis Mortality, Patient Flow, Surgical Complications, Reducing Hospital Mortality Rates (HSMR) and co-directed IHI’s Spread Initiative. She is an epidemiologist with experience in quality improvement, risk management, and infection control in specialty, academic, and community hospitals. A graduate of the University of Wisconsin, she earned her master’s degree in Public Health-Epidemiology.

Today’s Agenda

- Introductions
- Debrief Action Period Assignment
- Supplies, Equipment, and the Environment
- Action Period Assignment
Schedule of Calls

Session 1 – Call to Action for Hand Hygiene
Date: Tuesday, July 30, 2:30 PM – 4:00 PM ET

Session 2 – Measurement Approaches
Date: Tuesday, August 13, 2:30 PM – 3:30 PM ET

Session 3 – Supplies, Equipment, and the Environment
Date: Tuesday, August 27, 2:30 PM – 3:30 PM ET

Session 4 – Frontline Engagement
Date: Tuesday, September 10, 2:30 PM – 3:30 PM ET

Session 5 – Leadership and Culture for Hand Hygiene
Date: Tuesday, September 24, 2:30 PM – 3:30 PM ET

Session 6 – Marketing and Communications Campaigns
Date: Tuesday, October 8, 2:30 PM – 3:30 PM ET

Faculty

Tom Talbot, MD, MPH, FSHEA, FIDSA, Associate Professor of Medicine and Preventive Medicine, Vanderbilt University School of Medicine and Chief Hospital Epidemiologist, Vanderbilt University Medical Center, conducts research on healthcare epidemiology and infection control and oversees healthcare-associated infection prevention programs. Dr. Talbot currently serves as a member of the Centers for Disease Control and Prevention’s Healthcare Infection Control Practices Advisory Committee (HICPAC).
Faculty

Lisa Maragakis, MD, MPH is an Assistant Professor of Medicine at The Johns Hopkins University, Department of Medicine, Division of Infectious Diseases and the Hospital Epidemiologist and Director of the Department of Hospital Epidemiology and Infection Control at The Johns Hopkins Hospital. She received her medical degree and post-doctoral Infectious Diseases training at The Johns Hopkins University School of Medicine and a master’s degree in public health from The Johns Hopkins University Bloomberg School of Public Health. She recently served as a Councilor on the Board of Directors of the Society for Healthcare Epidemiology of America (SHEA), as Vice-Chair of the SHEA Guidelines Committee and as the liaison representing SHEA to the Healthcare Infection Control Practices Advisory Committee at the Centers for Disease Control and Prevention. Her research interest is the epidemiology, prevention and control of healthcare-acquired infections caused by antimicrobial-resistant gram negative bacilli.

Debrief: Action Period Assignment

- Test holding measurement rounds
  - Identify a unit with low compliance or challenges getting buy-in with hand hygiene
  - Schedule a time to round with key leader(s) on the unit (i.e., Nurse Manager, Medical director, Hospitalist)
  - Spend ~15 min rounding on the unit
  - Elicit feedback about barriers to measurement
  - Identify the obstacles to hand hygiene and identify 1 PDSA cycle
Guest Presenter

**Kristin O’Reilly, RN, MPH**, Project Manager, Critical Care Quality. Ms. O’Reilly served as a front-line clinical nurse at the Massachusetts General Hospital for five years before moving into the healthcare quality field and obtaining her Master of Public Health in Health Services, Management, and Policy. This unique combination of formal training and front-line, real-world healthcare experience has made her exceptionally effective as project manager in Critical Care Quality and Safety. For example, during her tenure, the BIDMC ICU’s were one of only 10 hospitals in the country (and the only major academic medical center) to receive the U.S. Department of Health and Human Services’ inaugural healthcare-associated-infection prevention award for prevention of both central-line infections and ventilator-associated pneumonia. Ms. O’Reilly will play a key role in keeping the outputs for the project both staff, and patient-family centered.
Guest Presenter

Samantha Ruokis is a management engineer in the Office of Business Transformation at Beth Israel Deaconess Medical Center (BIDMC). Over the last five years, Samantha has worked to diffuse Lean thinking at BIDMC by teaching formal classes, leading continuous improvement projects, and coaching leaders as they lead improvement work. Samantha’s work has spanned many areas of BIDMC including both ambulatory and inpatient care, and support services. Her most recent work includes: redesign of the medication management process in conjunction with a new eMAR (electronic Medication Administration Record), and using Lean methodologies to implement bundled care for sepsis. Samantha earned her Bachelor of Science in Industrial Engineering from Northeastern University.

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Guest Presenter

Kristin Russell, RN, MS, Nurse Manager of MICU 6 and MICU 7, Beth Israel Deaconess Medical Center
Reimagining Room Entry

Michael D. Howell, MD MPH
Kristin O’Reilly, RN MPH
Kristin Russell, RN MS
Samantha Ruokis, Management Engineer

Why work on room entry?

“All, aren’t you supposed to be working on hand hygiene?”
Problem with just focusing on hand hygiene

- **No Enthusiasm for another Hand Hygiene Campaign!**
- **Not really clear why this is so hard**
- **No real relationship to the critical care experience**

Why work on room entry?
Small Insight #1: Industrial scale process

Small Insight #2: Current configuration is biomechanically impossible

Small Insight #3: Many processes all at once

1. Industrial Scale Process
More than **14,000** room entries or exits per **day**

in our ICUs alone

In our ICUs …

10 room entries or exits per hour per room

Average daily census in our ICUs ~60

\[ 10 \times 60 = 600 \text{ entries or exits per hour} \]

\[ 600 \times 24 = 14,400 \text{ entries or exits EVERY DAY in our ICUs} \]

\[ 14,400 \times 365 = 5,256,000 \text{ entries/exits per year} \]
Here’s the scary thing

If you waste 10 seconds with every room entry or exit – in our ICUs alone
You’ve just wasted more than 7 FTEs of work.

“No way.”

5,256,000 entries/exits per year

10 seconds \( \times \) 5,256,000 = 52M seconds per year

52,560,000 seconds

876,000 minutes

14,600 hours / year

“Yowza.”

Given 2,080 hours/year/FTE ...

14,600 hours / year = 7.0 FTEs
2. The Biomechanical Impossibility of Room Entry

What we taught before
“Pump in, pump out”

What if you go and look?
The Biomechanical Impossibility of Doing the Right Thing
How can you possibly
- Carry in your central line kit (or 8am meds)
- Put on your gown
- Clean your hands
- Put on your gloves
- Close the curtain for privacy
- Tell the patient what you’re doing and why you’re there?
3. Many processes all at once

What did you just see Annalyn do?
Small Insight: Many processes all at once

- Carrying key things into room (meds, CVLs, etc.)
- Hand Hygiene
- Personal Protective Equipment
- Ensure patient privacy
- Patient/Family Communication

Not just hand hygiene!

There is actually a complex process here . . .

Mask
Put stuff down
Hand hygiene
Enter room
Open door/curtain
Put stuff down
Gown
Close door/curtain
Communicate to pt & family
Pick stuff up
Gloves
Starting from a Good Place
(after 7+ years of work)
BIDMC ICU Nosocomial MRSA

**Approach:**
Engineer all of the processes together, not as isolated pieces.
**Approach:**
Start with a leader, not a follower

**MICU 7 Hand Hygiene Compliance**
Staff say

92% don’t think we do the same thing/order

89% don’t think we greet patients the same way

My co-workers and I do the same thing in the same order every time we don personal protective equipment at room entry.

I include the same information in my greeting each time I enter a patient’s room.

What do you get if you lock an industrial engineer and a bunch of front-line ICU providers in a room to talk about room entry?
“You’re doing hand hygiene and personal protective equipment INSIDE the room?”

In the patient’s line of sight

Yes. In the room.
Clearly articulated standard work.

Still really early days for us! In general…

- The PPE & hand hygiene feels right – much better than the Biomechanically Impossible approach.

- Requires some “verticalization” of the precaution carts
Questions or Comments?

Raise your hand

Use the Chat

Action Period Assignment

- Observe the room entry process on one unit focusing on:
  - Hand hygiene
  - Carrying items into the room
  - Personal Protective Equipment (PPE)
  - Patient and family communication
- Elicit feedback from staff about obstacles to reliable hand hygiene related to the room entry process
- Based on what you observe & feedback from staff, identify one idea you could test to address a current obstacle in room entry process
  - Consider obstacles related to proximity & availability of soap/hand rub, availability of PPE as needed, managing items carried into the room
- Come prepared to share your insights and learning at Session 4
Expedition Communications

- Listserv for session communications: HandHygiene@ls.ihi.org
- To add colleagues, email us at info@ihi.org
- Pose questions, share resources, discuss barriers or successes

Next Session

**Tuesday, September 10, 2:30 PM – 3:30 PM ET**
Session 4 – Frontline Engagement