IHI Expedition

Antibiotic Stewardship Session 5:
Focus on: 72 Hour Antibiotic “Time-out”

Scott Flanders, MD
Jeff Rohde, MD
Megan Mack, MD
Matt Tupps, PharmD, MHA
Diane Jacobsen, MPH
Today’s Host

Sarah Konstantino, Project Assistant, Institute for Healthcare Improvement (IHI), assists in programming activities for expeditions, as well as maintaining Passport memberships, mentor hospital relations and collaboratives. Sarah is currently in the Co-Operative Education Program at Northeastern University in Boston, MA, where she majors in Business Administration with a concentration in Management and Health Science. She enjoys cooking, traveling, and fitness.
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Welcome to today’s session!
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When Chatting...

Please send your message to All Participants
Diane Jacobsen, MPH, CPHQ, Director, Institute for Healthcare Improvement (IHI) is currently directing the CDC/IHI Antibiotic Stewardship Initiative, NSLIJ/IHI Reducing Sepsis Mortality Collaborative. Ms. Jacobsen served as IHI content lead and improvement advisor for the California Healthcare-Associated Infection Prevention Initiative (CHAIPi) 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 – what are you testing/learning?
- **Focus on:** 72 Hour Antibiotic “Time-out”
- Action Period Assignment
Expedition Objectives

At the end of this Expedition, participants will be able to:

- Describe the impact of overuse and misuse of antibiotics on cost of care, antimicrobial resistance and patient complications, including *Clostridium difficile*.
- Establish a multidisciplinary focus to embed antibiotic stewardship into the process of care.
- **Identify and begin improving at least one key process to optimize antibiotic selection, dose, and duration of antibiotics in the patient care setting.**
Schedule of Calls

Session 1 – “Making the Case” for Antibiotic Stewardship
Date: Thursday, March 20th  2:30 PM – 4:00 PM ET

Session 2 – Promoting a Culture for Optimal Antibiotic Use
Date: Thursday, April 3, 3:00 – 4:00 PM ET

Session 3 – Our Learning Journey: IHI & CDC Partnership
Date: Thursday, April 17, 3:00 – 4:00 PM ET

Session 4 – Embedding Stewardship Processes into Care Delivery
Date: Thursday, May 1, 3:00 – 4:00 PM ET

Session 5 – Focus on: 72 Hour Antibiotic “Time-out”
Date: Thursday, May 15, 3:00 – 4:00 PM ET

Session 6 – What Are We Testing & Learning?
Date: Thursday, May 29, 3:00 – 4:00 PM ET
Ground Rules

- We learn from one another – “All teach, all learn”
- Why reinvent the wheel? – Steal shamelessly
- This is a transparent learning environment – Share Openly
- All ideas/feedback are welcome and encouraged!
Action Period Assignment

Test one idea related to introduce/enhance:

**Embedding Stewardship Processes into Care Delivery**

**Assess the current state:**
MDR’s already in practice?
No formal MDR’s? Opportunity to engage 1 Frontline Provider, 1 RPh, 1 RN on 1 unit

**Small test of change:** Discuss/review antibiotics/documentation during rounds:
- Engage MDR team or “team of the willing” to review documentation of AB in the record during rounds: AB, indication, day of therapy, duration
- track compliance
- Discuss barriers (difficult to find, takes too much time, etc.)
- Elicit ideas from the team for “next cycle” of test
Action Period Assignment

Please share an “offer” and an “ask” related to testing *Embedding Stewardship Processes into Care Delivery*:

- **OFFER**: What insight or learning can you offer to other hospitals based on your test(s)?

- **ASK**: What input/advice would you like related to a barrier/pushback you experienced in testing?
Discussion....

Raise your hand

Use the Chat
Focus on: 72 Hour Antibiotic “Time-out”

Scott Flanders, MD
Jeff Rohde, MD
Megan Mack, MD
Matt Tupps, PharmD, MHA
**Barriers**

- Time constraints on MDRs
- Difficult on first day of service, when learning a new set of patients
- Attempting timeouts on Mondays when physicians typically have a service that’s new to them
HOSPITALIST-LED ABS LEARNINGS
72 hour AB time out
(AB, dose, indication & expected duration)

**Facilitators**
- Strong ID pharmacist and engaged pharmacy staff to facilitate collaborative troubleshooting and overcome barriers
- Nursing champions to facilitate nursing engagement in stewardship issues during rounds
- Ongoing review of reasons physician did not change/de-escalate AB based on pharmacy recommendations.
- Scheduling AB timeout on specific sequence to best support hospitalist rounding, ie:
  - M/W/F or T/Th more feasible than 72 hours
- Use of mobile computers at MDRs to access culture results, etc. before or during rounds
- **Encouraging pharmacists, nursing, quality to ask clarifying questions**
Scott Alan Flanders, M.D.

Scott A. Flanders, MD, MHM, is currently Professor in the Division of General Internal Medicine at the University of Michigan, where he serves as Associate Division Chief of General Medicine for Inpatient Programs and Associate Director of Inpatient Programs for the Department of Internal Medicine. Dr. Flanders was a founding member of the Board of Directors of the Society of Hospital Medicine (SHM) and is a Past-President of SHM. In addition to these activities, Dr. Flanders has been active in quality improvement and patient safety at the University of Michigan. His research interests include hospitalists, hospital-acquired conditions and their prevention, dissemination of patient safety and quality improvement practices, and the diagnosis and treatment of lower respiratory infections.
Jeff Rohde, MD, is currently an Assistant Professor in the Division of General Internal Medicine at the University of Michigan, where he serves as Medical Director for the 7A general medicine/telemetry inpatient unit, General Medicine Quality Committee Chair and is an active hospitalist. In addition to these activities, Dr. Rohde has been active in quality improvement and enhancing transitions of care. His research interests include transfusion medicine, hospitalists, health-care associated diseases and their prevention, and quality improvement practices.
Megan Mack M.D. is a Clinical Instructor in the Division of General Internal Medicine at the University of Michigan with dual appointment as a hospitalist at the Ann Arbor Veterans Affair Hospital. She serves as an Assistant Hospitalist Service Director which aims to improve the infrastructure of the hospitalist service, and also serves on the Infection Control Committee and Inpatient Care Guidelines Committee. Her clinical interests include antibiotic stewardship, transplant infectious disease, and quality improvement projects aimed to streamline and standardize care of the hospitalized patients.
Matt Tupps, PharmD, MHA, is currently a Clinical Generalist Pharmacist in the Department of Pharmacy Services at the University of Michigan and Adjunct Clinical Instructor in Pharmacy at the University of Michigan College of Pharmacy. Matt serves as the Medicine Team Lead in the Pharmacy Department and work with quality improvement initiatives throughout the organization. In addition to these activities, Dr. Tupps has been active in quality improvement activities and enhancing pharmacist’s presence as a member of the care team. His research interests include antimicrobial stewardship, process improvement, and the impact of pharmacist involvement with the medical care team.
Overview

• Background of the “time out”
• Applying “time outs” to antibiotic stewardship
• The University of Michigan Experience
• Future directions
A Surgical Safety Checklist to Reduce Morbidity and Mortality in a Global Population

Alex B. Haynes, M.D., M.P.H., Thomas G. Weiser, M.D., M.P.H.,
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Marie Carmela M. Lapitan, M.D., Alan F. Merry, M.B., Ch.B., F.A.N.Z.C.A., F.R.C.A.,
Krishna Moorthy, M.D., F.R.C.S., Richard K. Reznick, M.D., M.Ed., Bryce Taylor, M.D.,
and Atul A. Gawande, M.D., M.P.H., for the Safe Surgery Saves Lives Study Group*
Background: The Surgical “Time Out”

- 8 hospitals participated in World Health Organization’s Safe Surgery Saves Lives program
- Each hospital implemented a 19-point checklist of oral confirmation of key steps from beginning to end of surgery
- Significantly reduced rates of surgical complications and death
Background: The Surgical “Time Out”

Time out
Before skin incision, the entire team (nurses, surgeons, anesthesia professionals, and any others participating in the care of the patient) orally:

- Confirms that all team members have been introduced by name and role
- Confirms the patient's identity, surgical site, and procedure
- Reviews the anticipated critical events
  - Surgeon reviews critical and unexpected steps, operative duration, and anticipated blood loss
  - Anesthesia staff review concerns specific to the patient
  - Nursing staff review confirmation of sterility, equipment availability, and other concerns
- Confirms that prophylactic antibiotics have been administered ≤60 min before incision is made or that antibiotics are not indicated
- Confirms that all essential imaging results for the correct patient are displayed in the operating room

Haynes AB et al. NEJM. 2009
What makes the “time out” successful?

- Team-based: all hands on deck, everybody is equally important/accountable
- Systematic: applied universally for each case, across all institutions
- Efficient: easily embedded into workflow
- Valued: buy-in at the leadership and individual level
The CDC recommends that stewardship programs include 7 components:

- Dedicated human, financial, and technology resources
- A physician or other leader responsible for overall outcomes
- A pharmacist leader focused on prescribing
- An action to improve prescribing, such as requiring reassessment of prescriptions after 48 hours for drug choice, dose, and duration
- Monitoring of prescribing and resistance patterns
- Regular reporting of resistance information to clinicians
- Education about resistance and judicious prescribing

JAMA. 2014;311(15):1485-1486
Background: 72 Hour Antibiotic “Time Out”

- Established as 1 of 3 effective interventions during IHI pilot testing across 8 hospitals
  - Point of care documentation
  - 72 hour antibiotic timeout
  - Guidelines accessibility

- Incorporated into antibiotic stewardship goals for 5 hospitals at CDC/IHI kickoff
The University of Michigan experience

• “Time out” was conducted on Monday, Wednesday, Friday
  • Fit current schedule of Pharmacist/Attending rounding
• Rounds consisted of 30 minutes set aside (afternoon) where Pharmacist/Attending can meet to discuss patients
  • Informal sit down rounds
The University of Michigan experience

- Pharmacist would review patients prior to rounds and review the 3 documentation needs for patients on antibiotics
  - Indication, duration, and day of therapy
- Pharmacist would then identify and suggest changes in the four following criteria:
  - Change in a different antibiotic, change to oral antibiotic, stop antibiotic, or adjustment in dose / dosing interval / duration
  - Each suggested change was then documented as either accepted or rejected
The University of Michigan Experience

N = 582

- No Change: 72%
- Rejected Change: 21%
- Accepted Change: 34%
- Adjusted dose/interval/duration: 18%
- Changed to different agent: 27%
- Stopped antibiotics: 25%
- Changed to Oral: 0%
The University of Michigan Experience
Barriers

- **Resources (team based):**
  - Started off with the clinical assistants
  - Much more effective with Pharmacists

- **Incorporating into daily workflow:**
  - Getting the PharmDs and MDs to be able to round
  - Ensuring that the interaction is efficient and valued

- **Being systematic (later on):**
  - All MDs are involved
  - All patients are rounded on
  - There will always be people who game the system
Introduction of Surgical Safety Checklists in Ontario, Canada

David R. Urbach, M.D., Anand Govindarajan, M.D., Refik Saskin, M.Sc., Andrew S. Wilton, M.Sc., and Nancy N. Baxter, M.D., Ph.D.

CONCLUSIONS

Implementation of surgical safety checklists in Ontario, Canada, was not associated with significant reductions in operative mortality or complications. (Funded by the Canadian Institutes of Health Research.)

Learning From checklists

- It is not the act of using a timeout or a checklist that reduces complications, but performance of the actions it calls for
  - The timeout or checklist is simply a tool for ensuring that team communication occurs

- Fully implementing the checklist is difficult
  - Although the tasks on the timeout or checklist may seem straightforward, many do not occur
  - Key is realizing that changing practice is a social problem of human behavior and interaction, not a technical problem by simply performing a timeout or checklist

Adopting The 72 Hour “Time Out”

- How do we start this in our group?
- What if we don’t have clinical pharmacy rounds?
Questions?

Raise your hand

Use the Chat
Facilitators to Adoption of Best Practices

- Multidisciplinary team
  - 1 clinical pharmacist: 3-4 hospitalist teams
- M-F face-to-face rounds
- MWF: Antibiotic timeout
  - IV → PO?
  - Discontinue?
  - Deescalate?
Action Period Assignment

- Test one idea to introduce/enhance: *Antibiotic Time Out*

- Small test of change:
  - Define Initial sequence: M/W/F? T/Th? Other?
  - Define “team”: (clinical) pharmacists, MD, RN
  - Review/Adjust:
    - Right Diagnosis
    - Right drug
    - Right dose and duration

- Share your test/learnings on the listserv **AND** Come prepared to share your plans at the next session
Expedition Communications

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

Thursday, May 29th, 3:00 PM – 4:00 PM ET

Session 6 – What Are We Testing & Learning?

Arjun Srinivasan MD
Scott Flanders MD