“Preventing Adverse Drug Events and Harm”

Frank Federico, RPh, IHI Executive Director
Steve Meisel, PharmD, IHI Faculty

March 13th, 2012
12:00 - 1:00pm ET
Beth O’Donnell, MPH, Institute for Healthcare Improvement (IHI), is responsible for managing and coordinating strategic partnerships. Ms. O’Donnell received her undergraduate degree at St. Lawrence University and her graduate degree from The Dartmouth Institute for Health Policy and Clinical Practice. She joined IHI in August.
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
Dial-in Info: Communicate / Join Teleconference (in menu)
When Chatting…

Please send your message to All Participants
Let’s Practice Using “Chat”

Please take a moment to chat in your organization name and the number of people on the call with you.

Ex. “Institute for Healthcare Improvement – 2”
Overall Objectives

Participants will be able to:

• Identify opportunities to decrease Adverse Drug Events (ADEs)

• Describe three process changes needed to reduce ADEs

• Discuss what measures are needed to determine the impact of interventions
Frank Federico, RPh, Executive Director, Strategic Partners, Institute for Healthcare Improvement (IHI), works in the areas of patient safety, application of reliability principles in health care, preventing surgical complications, and improving perinatal care. He is faculty for the IHI Patient Safety Executive Training Program and co-chaired a number of Patient Safety Collaboratives. Prior to joining IHI, Mr. Federico was the Program Director of the Office Practice Evaluation Program and a Loss Prevention/Patient Safety Specialist at Risk Management Foundation of the Harvard Affiliated Institutions, and Director of Pharmacy at Children's Hospital, Boston. He has authored numerous patient safety articles, co-authored a book chapter in Achieving Safe and Reliable Healthcare: Strategies and Solutions, and is an Executive Producer of "First, Do No Harm, Part 2: Taking the Lead." Mr. Federico serves as Vice Chair of the National Coordinating Council for Medication Error Reporting and Prevention (NCC-MERP). He coaches teams and lectures extensively, nationally and internationally, on patient safety.
Steven Meisel, Pharm.D., Director of Patient Safety for Fairview Health Services, an integrated health system based in Minneapolis, Minnesota. In this role he is responsible for all aspects of patient safety improvement, as well as related measurement, reporting, educational and cultural initiatives. Dr. Meisel has served as faculty for the Institute for Healthcare Improvement safety since 1997. Dr. Meisel is the recipient of numerous awards, including the 2005 University Health-System Consortium Excellence in Quality and Safety Award. He is the author of several publications.
Session Agenda

• Homework – What did you learn?
• Medication Reconciliation
• Health Literacy and Medication Adherence
• Patient Involvement
• Q&A
• Homework
Review of Homework

• Review your system for ensuring safety with anticoagulants
• Examine standardized processes around anticoagulation medication. If in place, are processes used as designed?
• Identify one change you will test to improve management of one of the anticoagulants.
• What outcome and process measures are you using, or will use?
Medication Reconciliation
It’s not just for marriage problems
Case Study # 1

- Patient with prostate cancer and multiple medical problems prescribed ketoconazole. Patient also on simvastatin. Admitted with weakness of unknown origin. Medication reconciliation completed but drug interaction not recognized. Patient discharged to transitional care facility but readmitted 3 days later with weakness. Diagnosis of severe rhabdomyolysis.
Case Study # 2

• Patient with seizure disorder noted to have a phenytoin level <3; dose increased to 200mg BID. Several days later level still <3; patient given a loading dose of 2000mg and the oral dose was increased to 400 mg BID. One week later level = 15 mg/L (desired: 10-20 mg/L), no further levels checked during hospital stay. Patient discharged one week later; no orders for further phenytoin level monitoring. Pt. re-admitted via ED 2 weeks later with phenytoin toxicity (31.5 mg/L).
Case Study # 3

- Multiple discharge meds from rehab including Amiodarone, Digoxin and Metoprolol. ICU admission H & P noted rehab discharge meds, including these three, with plan to continue all medications except warfarin. Some medications ordered for patient but not these three; patient developed atrial fibrillation.
Case Study # 4

- Written home medication list provided by patient listed diazepam 20 mg po QID. High dose verbally confirmed with patient, who was thought to be a good, well-versed historian. Medication reconciliation performed and this dose was continued. Six doses administered; patient went into respiratory failure requiring an ICU transfer. Subsequent investigation found that the patient was taking 2 mg QID, not 20 mg QID.
Case Study # 5

- Medication reconciliation was completed on admission based on hand-written medication list provided by the family. Carbidopa ordered based on this list. Several days later, patient discharged to a transitional care; carbidopa was re-ordered via discharge reconciliation. Pt had decreased mobility and decreased ability to function to the point where she was not moving and requiring complete assist for ADLs that prompted a rehospitalization 14 days later. A neurology consult progress note indicates the patient should have been on carbidopa + levodopa.
What is reconciliation?

- Standard definition: Reconciliation is a process of identifying the most accurate list of all medications including name, dosage, frequency, and route a patient is taking and using this list to provide care for a patient in whatever their setting.
The word “reconciliation” is by definition rework.
A Better Definition?

All medications appropriately and consciously continued, discontinued, or modified.
A Better Definition?

All medications appropriately and consciously continued, discontinued, or modified.

This definition forces you to think about your aim.
What is your aim?

- To meet a regulatory requirement?
- To reduce errors?
- To reduce adverse drug events?
- To reduce the hassle factor?
Reconciliation should accomplish all of these aims. Any system that is perceived to be win:win will have the greatest likelihood of long-term success and sustainability.
Improve Discharge Medication List

Include Rx from All Specialists
Include OTCs And Herbals

Documentation Collaboration Involve Patients

Improve Ambulatory Medication List

Admission List Available Throughout Hospitalization

Improve Admission Medication List

Understanding Medication Reconciliation
Medication Reconciliation at Fairview

- Has evolved over the years with differing electronic medical records
- History-taking varies by site on the basis of resources (pharmacist, pharmacy tech, nurse)
- Basic admission process has been for the history to be taken, an order form with the history is presented to the physician, the physician decides to continue, discontinue, hold, or modify the drug, and the orders are then processed.
Medication Reconciliation at Fairview

• Discharge process has involved printing an order form from the electronic medical record that includes home and hospital medications. The physician uses this as the discharge orders and a copy serves as the prescription.

• More recently, all of this work is accomplished electronically with the enhancement that medications prescribed in the office automatically populate the medication history.
Data are the percent of patients with 100% of their medications reconciled.
2011 Performance

Data are the percent of medications reconciled.
If performance is so high, why do events continue?
Reconciliation: Technical Fix or Adaptive Change?
Focus

- Work must be done in 3 realms:
  - Tools
  - Processes
  - Accountabilities

- Focus on just 1 of those realms will doom you to failure.

- But perfecting all 3 of these while not addressing the adaptive changes will doom you to a false sense of security.
Adaptive Change Considerations

• Reconciliation is an opportunity to critically evaluate all aspects of care at the various transition points. This opportunity can only be realized if it is valued by the providers.
  —Stories, not data
  —Top of license, not bottom of license
Adaptive Change Considerations

• Reconciliation need high reliability design.
  — Deference to expertise: Top of the license
  — Reluctance to simplify: Just because something is listed on a wallet card, an electronic list, or a retail pharmacy list does not make it right for that patient
  — Preoccupation with failure: it is not a question of “could the order be right?”. Instead, it is a question of “is the order right?”
  — Attend to operations (staffing, computer systems, technical design)
  — Build resilience: post-discharge care
Adaptive Change Considerations

• Reconciliation is set up to be a task to be performed at certain milestones. It is more effective to consider it as a continuous process.
  — Medication therapy management (MTM)
  — Care planning
  — Care transitions
  — Post-discharge follow-up visits
Adaptive Change Considerations

• Reconciliation is not a technical alignment of lists. Instead, it is a component of a healing relationship.
  — Involve the patient with the history, trust but verify
  — Assess the health literacy capacity of the patient and the family
Health Literacy and Medication Adherence
You Can’t Tell By Looking

Frank Federico
Institute for Healthcare Improvement
Your Experience…

• Have you ever been in a situation when someone shared information in a manner that was difficult to understand?

• What did you do?

• Apply that situation to health care
Health Literacy

• Health literacy has been defined as a patient's ability to read, comprehend, and act on medical instructions.

• Limited health literacy is common among elderly patients, patients with chronic diseases, and patients of lower socioeconomic status or educational attainment.
Health care practitioners literally have to understand where their patients “are coming from” – the beliefs, values, and cultural mores and traditions that influence how health care information is shared and received.

The discrepancy between patient literacy levels and readability and comprehension of written materials is well documented.
The Consequences of Inadequate Health Literacy

- Poorer health status
- Lack of knowledge about medical care and medical conditions
- Decreased comprehension of medical information
- Lack of understanding and use of preventive services
- Poorer self-reported health, poorer compliance rates
- Increased hospitalizations, and increased health care costs
  - 6% more hospital visits
  - 2 day longer length of stay
The Consequences of Inadequate Health Literacy

- 958 patients followed prospectively for 2 years at an urban teaching hospital
- Patients with low literacy were twice as likely to be hospitalized (32% vs. 15%)

Understanding Basic Instructions

• 50% of all patients take medications as directed
• Those with poor health literacy are 5 times more likely to misinterpret their prescription
• Of 177 older adults in public housing, 25% say they have difficulty reading information given to them by doctors
The Face of Low Literacy

- We CANNOT “tell”
  - Patients’ reading ability cannot be judged from physical appearances.
- Depending on level of health literacy required, many educated people may have low health literacy
- Total of 90 million adult Americans have difficulty understanding the health care information they receive.
Is There An Easy Way to Determine Literacy?

Informal methods of determining whether patients can read:

• Ask open-ended questions to assess understanding of written materials.
• Ask patient to read a prescription label
• Ask patient to answer specific questions about instructions they have received.
• Give patients written material upside down while discussing it and observe whether they turn it right side up.
• Other signs include an inability to keep scheduled appointments, follow medical instructions, or adhere to prescribed therapies.
Strategies to Improve Patient Education

• Use plain language
  — Not offensive to patients with higher literacy
  — Not condescending
  — Use common, simple words:
    ➢ ‘chemotherapy’ becomes ‘drug to fight cancer’
    ➢ ‘instill’ becomes ‘put’
    ➢ ‘take’ becomes ‘swallow’
  — Conveys the same level of information
  — Benefits people with higher literacy more than those with lower literacy

• Speak more slowly
Strategies to Improve Patient Education

• Emphasize desired behavior rather than the medical facts
• The ‘teachable’ moment
• Limit education to 1 or 2 important objectives
• Use visual aids
  — Supplement text with pictures
  — Videotaped patient education materials
• Photographs and illustrations can improve comprehension of information by readers with low literacy
For your safety!

- During take off and landing
  1. Sit in proper position
  2. No smoking
  3. Fasten seat belt

- Emergency oxygen

- Emergency brace position
How Bad Is Your Congestive Heart Failure?
You can tell how well your heart is doing by how you feel and what you can do.

**SWELLING**
- Good - No swelling
- OK - Swelling in ankle or shin
- Bad - Swelling in knee area

Call the UNC Clinic / 919-843-6480

**WALKING**
- Good - You can walk easily with no shortness of breath
- OK - Shortness of breath when walking fast
- Bad - Short of breath at rest

Call the UNC Clinic / 919-843-6480

**SLEEPING**
- Good - Sleeping flat, no shortness of breath
- OK - Needing 2 pillows or more to avoid shortness of breath
- Bad - Have to sleep upright to avoid shortness of breath

Call the UNC Clinic / 919-843-6480

Copyright 2003 UNC
Why Don’t Patients Adhere?

- Do not understand instructions
- Do not believe that medications will help
- Fear side effects
- Cannot purchase medications
- Cannot reach a pharmacy
- Find schedules inconvenient
How Do We Motivate Patients?

• Understand why will take or not take medications
• Find motivation
• Address concerns/fears
• Develop schedule to fit patient convenience
  — Tailor medication schedules to fit a person’s routine
  — Use daily events as reminders
Strategies to Improve Patient Education

• Encourage participation
• Encourage questions
• Solicit feedback
• Invite accompanying family members/friends
• Teach-Back
  — In your own words…..
• Show-Back
  — Show me how you will…..
References


• Wagner EH. Chronic disease management: What will it take to improve care for chronic illness? Effective Clinical Practice. 1998;1:2-4
References


- Schillinger et al, Association of Health Literacy with Diabetes Outcomes. JAMA, July 2002; V288: No 4: 475-82

- UNC: Managing Your Health With Heart Failure
  - [http://www.hsl.unc.edu/Services/Guides/focusonhealthlit.cfm](http://www.hsl.unc.edu/Services/Guides/focusonhealthlit.cfm)

- Health Literacy
  - IOM Health Literacy report [www.nap.edu/catalog/10883.html](http://www.nap.edu/catalog/10883.html)
  - [www.healthliteracy@ama-assn.org](http://www.healthliteracy@ama-assn.org)
  - [http://gseweb.harvard.edu/~ncsall/](http://gseweb.harvard.edu/~ncsall/)
  - Informed Consent [www.naph.org](http://www.naph.org)
References

• Health Literacy continued:
  ➢ Partnership for Clear Health Communication
    www.clearlanguagegroup.com
    www.AskMe3.org
  ➢ Value www.literacynet.org/value
  ➢ World Education
    http://www.worlded.org/projects_region_us.html#nelrc
  ➢ Health Literacy (NALS) Data www.nifl.gov
  ➢ www.micropowerandlight.com/rdplus.html
  ➢ www.psych-ed.org/Download/Fryra.htm
  ➢ http://en.wikipedia.org/wiki/Flesch-Kincaid_Readability_Test
  ➢ http://www.hsph.harvard.edu/healthliteracy/

• Models for Collaboration, Improvement and Spread
  — Institute for Healthcare Improvement: www.IHI.org
References


• New England Healthcare Institute, *Thinking Outside the Pillbox: A System-wide Approach to Improving Patient Medication Adherence for Chronic Disease* (August 2009),

Homework for Next Call

- Review your system related to medication reconciliation and health literacy.
- Examine standardized processes around medication reconciliation. If in place, are processes used as designed?
- Identify one change you will test to improve either medication reconciliation and/or health literacy.
- What outcome and process measures are you using, or will use?
Next Call

Session 5 – Technology Solutions

Date: Tuesday, March 13th
12:00-1:00pm ET
Listserv

- ade_expedition@ls.ihi.org
- Send and receive questions and comments to/from faculty and participants
- To be added to the listserv please email bodonnell@ihi.org