The presentation will begin shortly

Division of Cancer Control and Population Sciences
Healthcare Delivery Program
Series Purpose – for NCI

• Solicit opinions from three sectors of the community regarding problems in the quality of cancer care
  ▪ Providers, Researchers, Health Care Purchasers
• Identify potential research topics that might address those problems
• Focus a research agenda on major underlying factors affecting the processes of cancer care.
For Participants

• Understand the perspectives of three communities with respect to problems in cancer care delivery
• Learn conceptual, analytic, and practical approaches to understanding and addressing problems in cancer care delivery
• Contribute to the development of NCI’s research agenda
CONTROL PANEL AND FULL SCREEN FEATURES

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Instructions – Q&A session

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Instructions

1. All lines will be in listen-only mode. If you have technical difficulties or questions during the webinar,
   • please type into the “Questions” box
   • or contact us at (703) 276-6969
   • or HCTcyberdiscussions@nih.gov.

2. If you need to view live closed captioning, please click on the link that will appear in the Chat box.
When HIT and Communication Collide: Consequences and Implications for Cancer Care

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Disclosures

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Review Case Study
Case Study in an Ambulatory Oncology Clinic with an EHR

- Kathleen is a 54 yo F with non-Hodgkin’s lymphoma who is receiving CHOP/rituximab.
- PMH: obesity, Type II diabetes, CAD, and chronic depression.
- She smokes, lives alone, has poor social support, and is on disability pay because of a back injury.
- VS: HR 117; BP 188/105; RR 32; T 98°F; HA1C 9.5%
Case Study (cont’d)

- On Cycle X, she is 45 minutes late and misses getting labs drawn before the MD sees her.
- The MD places the chemo order in the EHR and leaves the clinic.
- While her port is being accessed, Kathleen complains to the RN of fatigue and a “funny feeling” in her chest.
- The RN is concerned about the way Kathleen looks, and pages the MD.
Case Study, (cont’d)

• Lab results: Hgb 8.2, Hct 23; K⁺ 3.1.
• The MD accesses the results from her office, but not the VS, as this information would take several clicks, and is not easy to find (for the MD).
• The MD assumes the RN has paged her about the lab values and orders K-Dur via CPOE.
• The RN doesn’t see the order until after Kathleen has left.
• The RN must phone in the prescription to a pharmacy, causing a delay in treatment.
Comments on Case?
Outline

• Intended and unintended consequences of HIT
• From HIT to communication: what lies in between?
• The concept of media richness
• An alternative definition of communication
Consequences of HIT

• Intended:
  – Allows asynchronous exchanges
  – Accessible from many sites simultaneously
  – Standardization and built-in safety features

• Unintended:
  – Can constrain clinical judgment
  – Reduces opportunity for direct communication
  – Can disrupt communication and workflow patterns
Communication technology

Communication Practices
- Use of rich media
- Location and availability of computers

Work Relationships
- Hierarchy
- Team Stability

Communication
HIT and Communication Technology

• A systematic review in 2008 concluded that CPOE can reduce the risk of medication errors and ADEs.¹

• A more recent review on the effectiveness of medication management IT showed small to no improvements in clinical outcomes.²

• We have little understanding of how to implement and use HIT safely.³
Communication Practices

• Location and availability of computers
  – Communication patterns can change\(^4\)
  – Clinicians each go to a separate workstation, with consequences for solving complex problems\(^5\)
  – A study in primary care clinics found that by communicating solely through EHR there were less opportunities for follow-up questions
  – The lack of opportunities were viewed as communication failures by providers.\(^6\)

• Use of rich media
The Concept of Media Richness

Medium
Face-to-face conversations
Video chat/conference, “FaceTime”
Telephone: landline, smartphone, etc.
Voice Mail
Personal pager & email messages
Communication through CPOE
Mass (impersonal) Email messages
Physician and nurse progress notes
(on an EHR)
White Boards
Paper and pencil/pen

Media Richness

Effective Communication

Complexity of information
Work Relationships

• Hierarchy
  – Authority gradient impedes communication and contributes to sub-optimal care\(^7\)
  – Nurses and physicians often prioritize messages differently\(^8\)

• Team stability
  – Relationships facilitate understanding of various perspectives\(^9\)
  – Stable teams develop “common ground”\(^10\)
Communication

- HIT enhances but also may disrupt standard modes of communication.\textsuperscript{11}
- HIT adds structure to communication, but can also create ambiguity and reduce flexibility.\textsuperscript{12}
- HIT is based on models of individual decision-making and may not be sufficient for decisions requiring input from multiple perspectives.\textsuperscript{13}
# A Tale of Two Definitions

<table>
<thead>
<tr>
<th>Transactional Definition</th>
<th>Transformational Definition</th>
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<tr>
<td>• Exchange of information between sender and receiver.</td>
<td>• Development of shared understanding by establishing, testing, and maintaining relationships</td>
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<tr>
<td>• Focus is on information transfer</td>
<td>• Focus is on action as a result of communication</td>
</tr>
<tr>
<td>• A transactional process</td>
<td>• A transformational process</td>
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<td>• Standardizes message</td>
<td>• Knowledge-building</td>
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<tr>
<td>• Can assure that certain key points are transmitted</td>
<td>• Varying perspectives are included</td>
</tr>
<tr>
<td>• Not useful for ambiguous or complex messages</td>
<td>• Clinical rotations can disrupt relationship building</td>
</tr>
<tr>
<td>• Little opportunity for receiver influence</td>
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Case Study, Part 2

- Kathleen continues to feel unwell, and the next day goes to the ED with chest discomfort.
- 12 lead EKG reveals ST segment depressions in leads II, III, aVF, suggestive of inferior wall ischemia.
- The ED physician can view the clinic EHR, but has difficulty putting the story together.
- Kathleen is admitted for further workup, under the care of a cardiologist.
Questions for Discussion

• What EHR features contributed to this chain of events?

• How could communication have been improved?
Conclusions

• Two take away points from the discussion today:
  – Expand the notion of communication to include the development of shared understanding
  – Match the medium to the message you want to convey


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Thank You!

Next Session

July 19, 2016
1:00pm – 2:00PM

David Westfall Bates, MD

*Effect of Computerized Physician Order Entry and a Team Intervention of Serious Medication Errors*

http://healthcaredelivery.cancer.gov/cyberseminars/