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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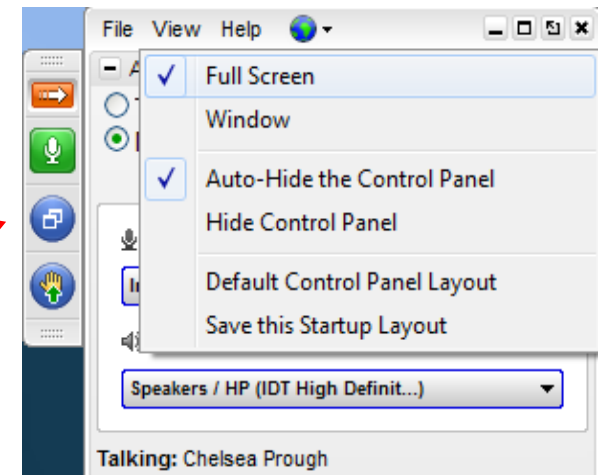
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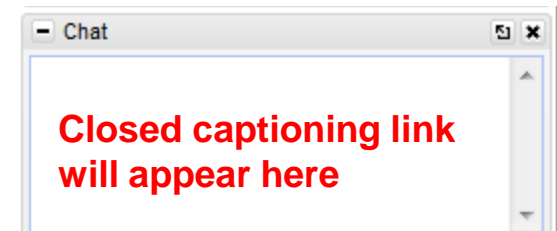
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When HIT and Communication Collide: Consequences and Implications for Cancer Care

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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 98^2 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

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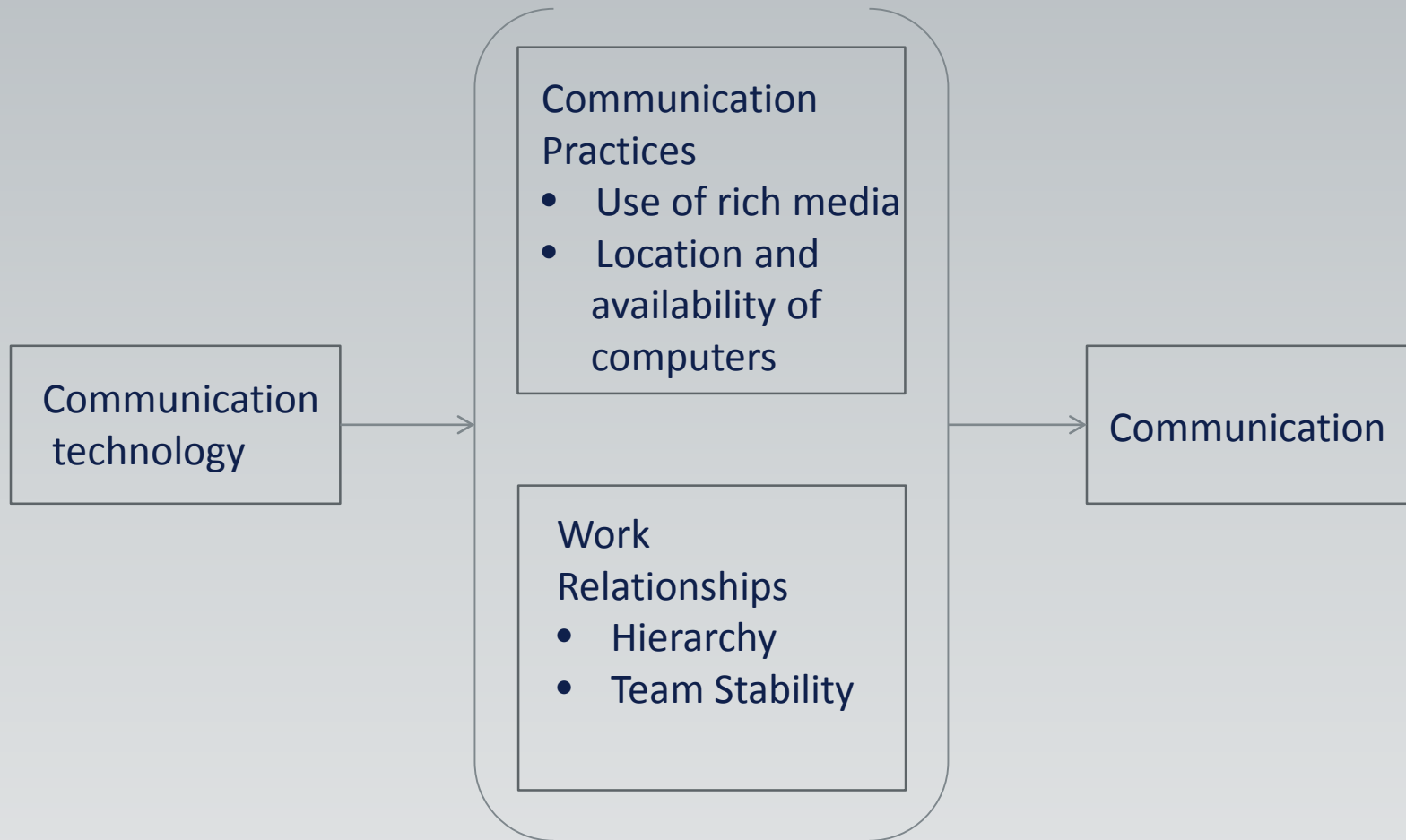
HIT and Communication Technology

- A systematic review in 2008 concluded that CPOE can reduce the risk of med 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

High

Medium

Low

Effective Communication

Low   Medium   High

Complexity of information
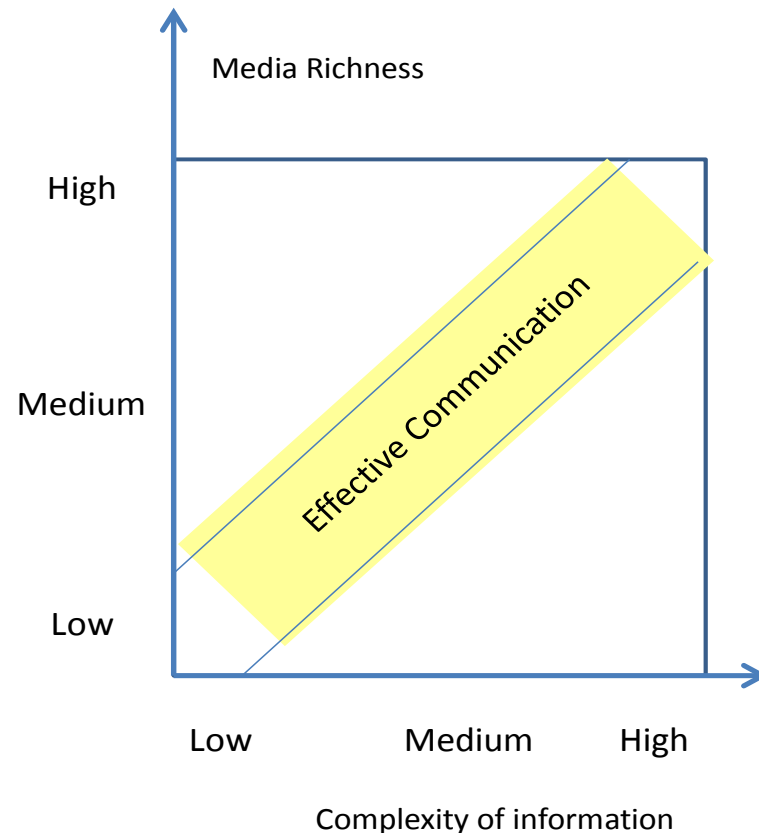
Work Relationships

- 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.[11]

- HIT adds structure to communication, but can also create ambiguity and reduce flexibility.[12]

- HIT is based on models of individual decision-making and may not be sufficient for decisions requiring input from multiple perspectives.[13]

A Tale of Two Definitions

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

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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.

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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/