Institutional Assessment: CPOE at Medical Center Enterprise Hospital

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Proposed Change

• Computerized Provider Order Entry (CPOE)
  – CPOE refers to any system in which clinicians directly enter medication orders (and, increasingly, tests and procedures) into a computer system, which then transmits the order directly to the pharmacy.

• Nature of Change
  – Hospital Policy

• Complex Change
Overview: CPOE

- Theories
- Stakeholders
- Guidelines and Policies
- Agency Mandates
- Major Problems
- Vested Interests
- Drivers and Resistors
- Implications
Unintended Consequences

- More/New Work
- Workflow Issues
- New System Demands
- Problems related to paper persister
- Negative Emotions
- Generation of New Types of Errors
- Overdependence of Technology
Change Theories

• Change theories:
  – Lewin
    • Unfreezing, Moving, Refreezing
  – Rogers
    • Awareness, Interest, Evaluation, Trial, Adoption
  – Lippitt
    • Phase 1- Diagnose the problem
    • Phase 2- Assess motivation and capacity for change
    • Phase 3- Assess change agent’s motivation and resources
    • Phase 4- Select progressive change objective
    • Phase 5- Choose appropriate role of the change agent
    • Phase 6- Maintain change
    • Phase 7- Terminate the helping relationship
Change Assessment

• Assessment segment
  – Lewin
    • Unfreezing- Disequilibrium is introduced into the system, creating a need for change
  – Rogers
    • Awareness- Problems are identified presenting need for change
  – Lippitt
    • Phase 1, 2, 3- Problem/need for change identified, capacity for change assessed, resources for change assessed
Needs Assessment
Lippitt’s 7 Phases of Change

• Phase 1: Diagnose the Problem

• Phase 2: Assess Motivation and Change Capacity

• Phase 3: Assess change agent’s motivation and resources
Lippitt’s 7 Phases of Change

- Phase 4: Select progressive change objective
- Phase 5: Choose appropriate role of the change agent
- Phase 6: Maintain change
- Phase 7: Terminate the helping relationship
Stakeholders

• Medical Center Enterprise
• Physicians
• Nurses
• Pharmacy
• Insurance companies
• Patients
Is there a mandate?
Meaningful Use: National Policy

- Adopted Electronic Health Record in 2005 as required by Meaningful Use
- Implemented CPOE as reimbursement incentive
Major Problems

• Resistance to change
  – Altering physician practices and nursing processes
  – Learning computer skills
  – Redesigning inpatient care processes affects physicians, pharmacists, nurses, and ancillary personnel
Addressing Major Problems

• Change strategies
  – Empirical-rational
  – Power-coercive
  – Normative re-educative
Change Strategy

• Empirical-Rational
  – Similar to evidence-based practice in which nurses and providers utilize research evidence to transform practice; appeals to rationality and patient-centered care
  – Natural resistance to change will be combated using tools from this theory such as education and communication
Change Theory

• Effective Leaders/“Impassioned Champions”
  – Essential in all change models, because they provide inspiration, vision and support to everyone involved
  – Physician champions- Believe in the change and work with colleagues to assist them in adapting to new system and serve as liaisons to the information systems group
Vested Interests

“a personal or private reason for wanting something to be done or to happen”
“a group enjoying benefits from an existing economic or political privilege”
Merriam-Webster, 2013

Gain from the change

- Hospital leaders
  - Less errors
  - Increased productivity
- Unit Clerks
  - Eliminates need to decipher physician handwriting
  - Saves time in order entry
- Nurses
  - Directly receive physician orders
  - Reduced need for order clarification
  - Eliminates need to decipher physician handwriting
- Ancillary staff, pharmacy staff
  - Reduced need for order clarification

View change as a loss

- Physicians
  - Additional job duty
  - Larger time commitment
- Unit Clerks
  - May fear their job is threatened
Human Drivers/Resistors

**Drivers**
- Hospital Executives
- Directors
- Managers
- Practitioners
- Nurses

**Resistors**
- Resource Management
- One Hospitalist out of two
- Select Surgeons
- Long time nurses
Resource Implications

• Variables:
  – Organization size
  – Number of sites
  – Single integrated clinical system vs. integrating CPOE system with existing systems for laboratory, pharmacy and radiology

• Implementation costs:
  – Network expenses (upgrading/purchasing wireless devices, adding additional workstations)
  – Software licensing
  – Contractor/consulting
  – User training
  – Information Technology (IT) support team resources
  – Ongoing operating/maintenance costs
Resource Implications

• Time
  – Time required to implement CPOE ranges from 12-24 months
  – Training for CPOE users
    • Physicians, nurses, unit clerks, pharmacists, and ancillary staff
  – Increased physician time spent on order entry
Evaluation Theories

• Utilization-Focused Evaluation
  – Based on the principle that an evaluation should be judged on its usefulness to its intended users

• Performance Measurement Matrix
  – Accommodates different data levels and data measures and traditional performance measures while taking into account the limitations of cost-to-benefit analysis
Conclusion

• Proposed Change: CPOE
• Assessment and Evaluation are ESSENTIAL
References

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References


