How can you be a part of meaningful and valuable redesign of the EHR in your practice setting? The lecture will focus on multiple aspects of EHR redesign as they relate to perianesthesia practice. The literature and expert consensus on redesign strategies and principles will be discussed. Perianesthesia data elements, care concepts and practice principles will be integrated into a broader discussion of how the EHR can be leveraged to improve safety, efficiency and quality. Exemplars will be presented to facilitate redesign at participant facilities that include organizational, logistical and technical considerations.

Outline

I. EHR Design Principles
   a. Basic EHR Design & Function
      i. Clinical Systems
      ii. Business Systems
      iii. Databases
      iv. User-interfaces (Provider & Patient)
   b. Meaningful Use as driver

II. Systems Development Life Cycle
   a. Role of the nurse and nursing practice considerations at each level
   b. Planning & Requirement Analysis
      i. Paper to digital translational issues
      ii. Workflow needs & task analysis
      iii. ASPAN Standards
      iv. Regulatory/reimbursement
      v. Knowledge work needs of nurses
   c. Design & Development
      i. Reimbursement
      ii. Regulatory reporting
      iii. Data collection
   d. Integration, Implementation & Testing
      i. Emergence of workarounds & other unintended consequences
      ii. Quality and safety needs
      iii. Mobile device tracking research
   e. Maintenance & Evolution
      i. Optimization and integration as precedent
      ii. Redesign as tertiary consideration

III. Integration of Standards into Redesign
   a. Project Management Theory
      i. Iron Triangle

IV. Redesign Considerations
   a. Organizational
      i. Building support from key stakeholders (providers, patients, allied health staff, information technology staff)
      ii. Informatics Competencies expansion
      iii. Multi-disciplinary open communication and survey
   b. Logistical
      i. Hitting a moving target of upgrades, regulatory and practice changes
      ii. Information flow
      iii. Staff resources (RN’s and technicians for planning & building)
c. Technical
   i. Persistent lack of technical standards
   ii. Functional limitations
   iii. Interfaces and interoperability
   iv. Graphical user interfaces congruent with decision support, cognitive science & usability principles

d. Practice
   i. Workflow & Workaround issues
   ii. Reducing practice variation
   iii. Error-prone practice improvement for safety (i.e. communication)
   iv. Medication near-miss counts example as key to baseline and outcomes measurement
   v. Documentation streamlining & reducing documentation burden (i.e. double sedation assessment and evidence-base for change)
   vi. Conceptual expressiveness (perianesthesia data elements and airway example)
   vii. Promoting meaningful use and reuse of data
   viii. Click count example: cutting down clicks

References


