Clinical Informatics Leadership

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Objectives

• Describe strategic partnerships that contribute to meaningful use of health information technology.

• Compare governance structures that support clinical informatics leadership and meaningful use.

• Identify clinical informatics initiatives that provide value for clinical population management, your organization, and your discipline.
Bryn Mawr, Lankenau, Paoli, Riddle Memorial, Bryn Mawr Rehab Hospitals

10,280 Employees

2,519 Nursing Staff

1,168 Licensed Beds

1,933 Medical Staff Members

65,824 Admissions

12,536 Cardiovascular Discharges

7,456 Births

803,459 Outpatient Visits

15,510 Inpatient Surgeries

148,188 Emergency Visits

19,339 Outpatient Surgeries

7,456 Births

148,188 Emergency Visits

15,510 Inpatient Surgeries

2010
Main Line Health Information Services

- Support 93 Clinical, Financial and Administrative Applications
- Centralized IS department for support of all Acute and Ambulatory campuses
- Primary Vendors:
  - Siemens - HIS, Radiology, Pharmacy, MAK, Patient Accounting, Interface Engine. Soarian for Results, Clinical Documentation, Orders, and CPOE.
  - Cerner Millennium – CPOE, Pharmacy, BMA, Clinical Documentation, Results
  - McKesson - Enterprise Radiology & Cardiology PACS, Medication dispensing (robot-rx), HomeCare
  - PeopleSoft HR, GL and AP
  - CareFusion – Smart IV Pump, Pyxis
  - Variety of other vendors for departmental and specialized functions. GE Centricity; T-system
Informatics Sub-specialties include…

- Clinical
- Nursing
- Imaging
- Consumer health
- Public health
- Dental
- Pharmacy
- Clinical research

“Health Informatics is the interdisciplinary study of the design, development, adoption and application of IT-based innovations in healthcare services delivery, management and planning.”

**Definition:** the intersection of information science, medicine, and health care.

**Focus:** Resources, devices and methods required to optimize the acquisition, storage, retrieval and use of information in health and biomedicine. Health informatics tools include not only computers but also clinical guidelines, formal medical terminologies, information and communication systems.
Strategy and Partnerships
Strategy Requires Vision

• Clinical practice leadership to achieve seamless integration of technology and process improvement with the transformation of clinical practice

• Leadership of the design, implementation, and maintenance of the intersection among technology, safety, quality, and process improvement, using evidence based practice and shared interdisciplinary decision-making
Strategy Requires Goals

• Align clinicians, management, informatics, information services, quality, technology, and financial resources to achieve quality outcomes

• Build on a nursing evidence based practice focus
  – Validate standards and best practices
  – Adopt system performance improvement framework
  – Identify key metrics, measure outcomes
  – Disseminate findings internally and externally

• Establish nursing/clinical informatics infrastructure building on and refining current accomplishments
Partnerships and Alignment

- Critical Linkages Including Consumers
- Aligning with Organizational Strategies
- Quality, Safety, Finance
- Clinical Informatics: Infrastructure and Platform
Nursing Partnerships with Key Organizational Roles:
CNO, CMO, CMIO, VP for Quality, and CIO

Clinical Practice Automation and Technology

System Learning

System Outcomes

Policy/Business Implications

Best Practices In Selection, Design, Build, Education and Implementation Meaningful Use

Applying PI to system evaluation
- Clinical workflow
- Optimization
- Intended and unintended consequences

Establish efficient and reliable infrastructure for queries and reporting of clinical process and outcomes data

Improved clinical outcomes data for regulatory requirements, clinical programs and services, and system investments

System Learning

System Outcomes

Policy/Business Implications
Governance
Supporting
Clinical
Informatics
Leadership
Principles Essential to Achieving Meaningful Use

1. “Investment in people, as well as technology;
2. Users need EHR systems that provide cognitive support and evidence-based functionalities; and
3. Adoption of EHR systems requires a balancing of benefits and burdens that users will accept.”

“If evidence is to be applied to practice and enabled through information technology and the EHR, then that evidence must be encoded and communicated in such a way that it is semantically clear, interoperable between systems, retrievable, and secure.” ONC 2010.
Reminder of Meaningful Use Tenets
Rosemary Kennedy

1. Meaningful Electronic Documentation
2. Quality Measurement as a By-Product of Electronic Documentation
3. Quality Measures from Electronic to Paper Format
4. Comprehensive Health/Quality Information Exchange and Measurement of Performance
Regional and Local Governance

- Building new collaborations and meaningful exchange of data
- State and community initiatives for health information exchange
- Multi-hospital systems and delivery networks
- New models of care delivery with new care continuity and information requirements
Goals – Grounded in National Policy and Leadership

• National Policy Influence – Public, Advocacy, Private Sector
  – Office of the National Coordinator
  – National Quality Forum
  – The Joint Commission
  – Nursing Alliance for Quality Care
  – Agency for Healthcare Research and Quality (AHRQ)
  – Institute for Healthcare Improvement
  – NDNQI, NCNQ, and ANCC
  – IOM
Goals – Grounded in National Policy and Leadership

• Clinical Informatics National Leadership
  – ANIA - Caring
  – AMIA
  – HIMSS – Health Information Management Systems Society

• Clinical and Quality Programs of Research

• Academic, Business, and Provider Partnerships

• Clinical Advocacy Groups and Professional Societies
Clinical Informatics Initiatives
Evidence Based Practice: Building an Infrastructure

Capacity and Capability

Clinical Practice Partnerships

The Knowledge Cycle

Practice Standards, Guidelines, Best Practices

Evaluate Results

Use Outcomes To Increase Knowledge and Improve Practice
What does it take?
System and Role Capabilities

Functional
• Application Designers, Builders, Implementers
  • Project Management
  • User Education
• Nursing Informatics Certification Expertise
• Standards of NI Practice

Technical
• Subject Matter Experts
• Researchers
• Content Providers
• PI Teams
• Knowledge Management

Integration
• Clinical User support
  • Workflow optimization
  • Conversion of captured data
  • User-friendly, actionable reports for quality improvement, regulatory requirements, research, and practice
• Education to support system evaluation, reporting, adoption and improvement
Today: Components of Alignment

Clinical Practice Automation and Technology

Best Practices in Selection, Design, Build, Education and Implementation Meaningful Use

System Learning

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System Outcomes

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Policy/Business Implications

Improved clinical outcomes data for regulatory requirements, clinical programs and services, and system investments

Red – highest initial investment

White – developing effort and support
Demonstrating Value

- **Internal Systems**
  - Alignment of key stakeholders
  - Establish metrics
  - Direct links to corporate safety and quality strategic objectives
  - Leverage system capabilities – reporting, analytics, workflow

- **External Partnerships**
  - Macro System partnerships
  - Community partnerships
  - Education/Academic/Research
  - Corporate User Groups
  - Professional and Policy Associations
Clinical Technology Roles for Process Improvement and Quality

- Evaluate Clinical Workflows
- Support for Super Users
- Apply Best Practices and Standards
- Local Support Aligned with Clinical Informatics
- Participate in PI Efforts rel. to Clinical Systems and Reporting
- Clinical User Training
- Support for Managers if Compliance Issues

Not just use: Adoption and Action
Partnerships are Key

• Who are your vendor or business partners?
• How can you influence system development and demonstrate positive outcomes?
• Who are your academic partners?
• What unique capabilities do partners bring to demonstrating meaningful use, quality outcomes, and value to consumers?
Metrics and Outcomes

• Utilization – how often are clinicians responding to decision support?
• Efficiency – does it save time? For whom?
• Outcomes – does it make a difference? For whom and at what level of magnitude?
• Support for best practice, evidence-based practice, standards of care
Clinical Informatics Challenges

Focus on building quality infrastructure while supporting ongoing implementations and a growing clinical user base

- User support and workflow assessment metrics
- Reporting: Quality, Regulatory, Compliance, Magnet
- System alignment: IT, PI, Mgt, Disciplines
- Build EBP Knowledge Management and Research
Results are the focus, not the Infrastructure

Effective Communication of Value