

Information Systems to Support Population Health Management

Health Care Information Systems: A Practical Approach for Health Care Management
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Learning Objectives

- Understand the data and information needs of health systems in managing population health effectively under value-based payment models
- Discuss key health IT tools and strategies for population health management including EHRs, registries, risk stratification, patient engagement, and outreach, care coordination and management, analytics, health information exchange, and telemedicine and telehealth
- Discuss the application and use of data analytics to monitor, predict, and improve performance



Outline

- What is population health?
- Payment models
- ACO challenges
- Accountable care core processes
- Health IT capabilities
- Patient portals
- From the record to the plan

What is Population Health?

- First appeared in 2003
 - The health outcomes of a group of individuals, including the distribution of such outcomes within the group
- Today
 - Comprises the proactive application of strategies and interventions to defined groups of individuals to improve the health of individuals within the group at a lower cost
 - Interventions are designed to maintain and improve people's health across the full continuum of care
 - Preventative and medical care for the “population” of patients “attributed” to the organization

Payment Models

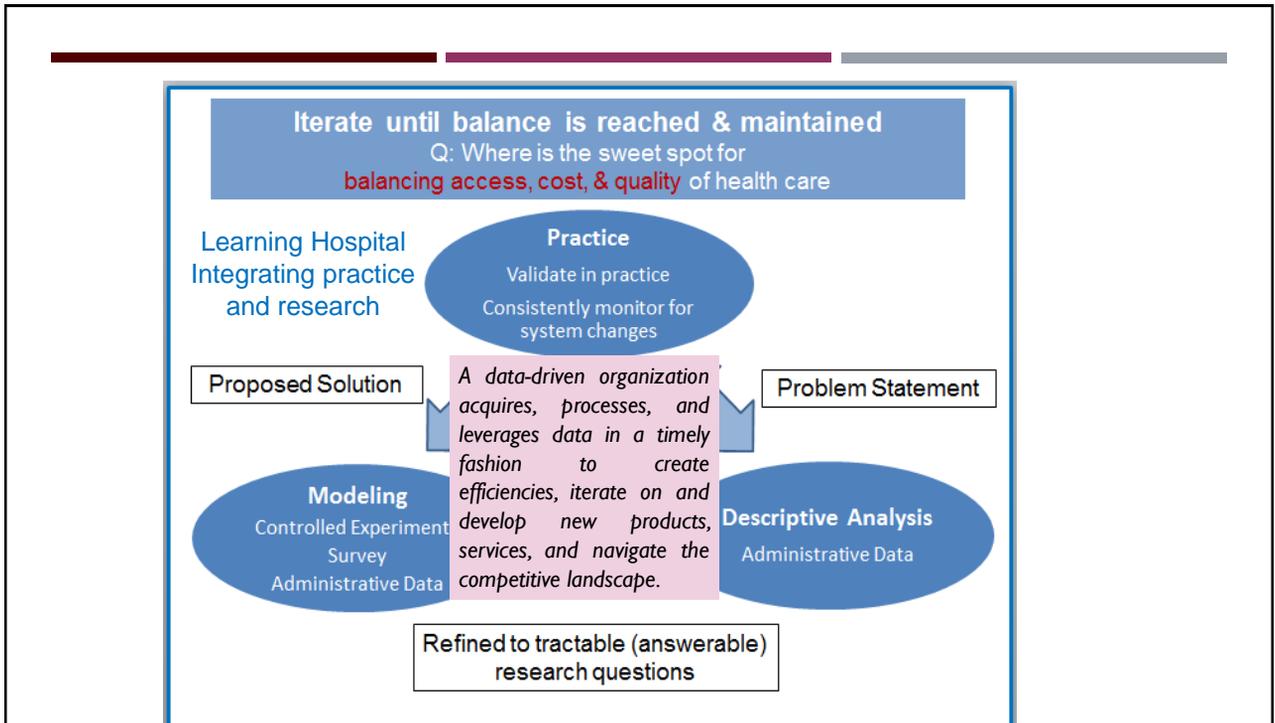
- Fee-for-service
- Value-based care: coordinated and integrated care in an evidence-based, Cost-effective way through effective management of information
 - **Patient-centered medical home (PCMH):** emphasizes the central role of primary care and care coordination
 - **Accountable care organization (ACO):** emphasizes the urgent need to think beyond patients to populations, providing a vision for increased accountability for performance and spending across the health care system

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Accountable care core processes

- Stratification
- Care management
- Managing contracts and financial performance
- Measuring, predicting, and improving performance
- Data preparation and automation

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Case Study

- Specialized Program for High Utilizers in One Hospital Network
 - innovative and effective High Alert emergency department overutilization program
 - "SETON's High Alert Program is a specialized, focused case management program. In this program, we develop individualized care plans based on the particular circumstances of individuals. These care plans can be electronically pushed into future clinical encounters to ensure the individualized plan is followed, resulting in consistent care directed at the specific patient."
 - Dr. Christopher Ziebell (Emergency Department Medical Director at the University Medical Center Brackenridge)
 - Dr. Ziebell serves on the Board of Trustees of SETON Healthcare and the Board of Managers of Emergency Service Partners; is Executive Director of Hospital Physicians in Clinical Research; and, chairs the EMS Steering Committee of the Travis County Medical Society.

Health IT Capabilities

- It's all about the data
 - Focus on data that power clinical decisions
 - Create a holistic view of the patients within a health care network
 - Data management is difficult because various IT systems don't always talk to each other
 - Establish master patient indices
 - Utilize a record locator service
- Beyond the EHR
 - Revenue cycle systems: must complement routine activities such as registering patients, scheduling appointments, administering patient billing

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Health IT Capabilities

- Care management systems
 - Enable proactive surveillance, automation, coordination, and facilitation of services for many differed subpopulations
 - Automation enables care managers to manage two to three times as many patients as they can with manual methods
- Rules and workflow engines
 - Monitor process performance and alerts staff members to missed steps, sequence issues, or delays
 - Workflow engines specialize in executing a business process

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Health IT Capabilities

- Data warehouse, analytics, and business intelligence
 - Predictive analytics tools can help caregivers identify patients who are likely to present in the ER or be readmitted so they can tailor interventions and avoid penalties for excessive readmissions
- Health Information Exchange (HIE)
 - Enables providers to obtain a composite clinical picture of the patient regardless of where that patient was seen
- Registries and scorecards
 - Enable providers to identify, score, and predict risks of individuals or populations to allow targeted interventions to be implemented

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Health IT Capabilities

- Longitudinal record and care plan
 - Record: presents a complete picture of the patient's medical history
 - Care plan: provides a consolidated, normalized view of indicators to be monitored, events due to happen, actions to be taken
- Patient engagement tools
 - Portals: securely communicate with providers, pay bills, obtain test results, view doctors' notes, refill prescriptions, schedule appointments, etc.
 - Social media
 - Automated messaging (via text, email, or phone)

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Health IT Capabilities

- Telemedicine/telehealth
 - Benefits
 - Makes care more accessible to those with mobility issues
 - Makes patient interactions more convenient
 - Expands geographic horizons where medical specialists are few in number
 - Captures and monitors data from patients at home
 - Concerns
 - Provider acceptance
 - Interstate licensure
 - Overall confidentiality and liability
 - Data standards
 - Lack of universal reimbursement for telemedicine services

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Summary

- What is population health?
- Payment models
 - Patient-centered medical home (PCMH)
 - Accountable care organization (ACO)
- ACO challenges
- Accountable care core processes
- Health IT capabilities
 - Analytics
 - Business intelligence
 - Health information exchange (HIE)
 - Patient engagement tools (patient portals, social media, etc.)
- Telemedicine/telehealth
- From the record to the plan
 - Care plan attributes
 - Plan-centric EHR
 - Business model shift

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Group Presentation

Next week

- Read Chapter 5
- Quiz 4
- Assignment 3 Due