AAMC
Tomorrow's Doctors, Tomorrow's Cures

Learn
Serve
Lead

Systems Based Thinking and Practice

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Jewish Healthcare Foundation
MIT Sloan School

Association of
American Medical Colleges

Why area we interested in this? The Emerging Vision for AMC's

"Emergence"
Emphasis on training
Emergence of AMCs as leading institutions for clinical delivery

"Deliver Advanced Care"
Ambulatory Centers
Advanced Technology
EMR's
Successful business models

"Clinical Systems"
Personalized Medicine – within a frame of population health
Manage the financial and performance risk with population health

"Islands of Care" → **"Systems of Care"**

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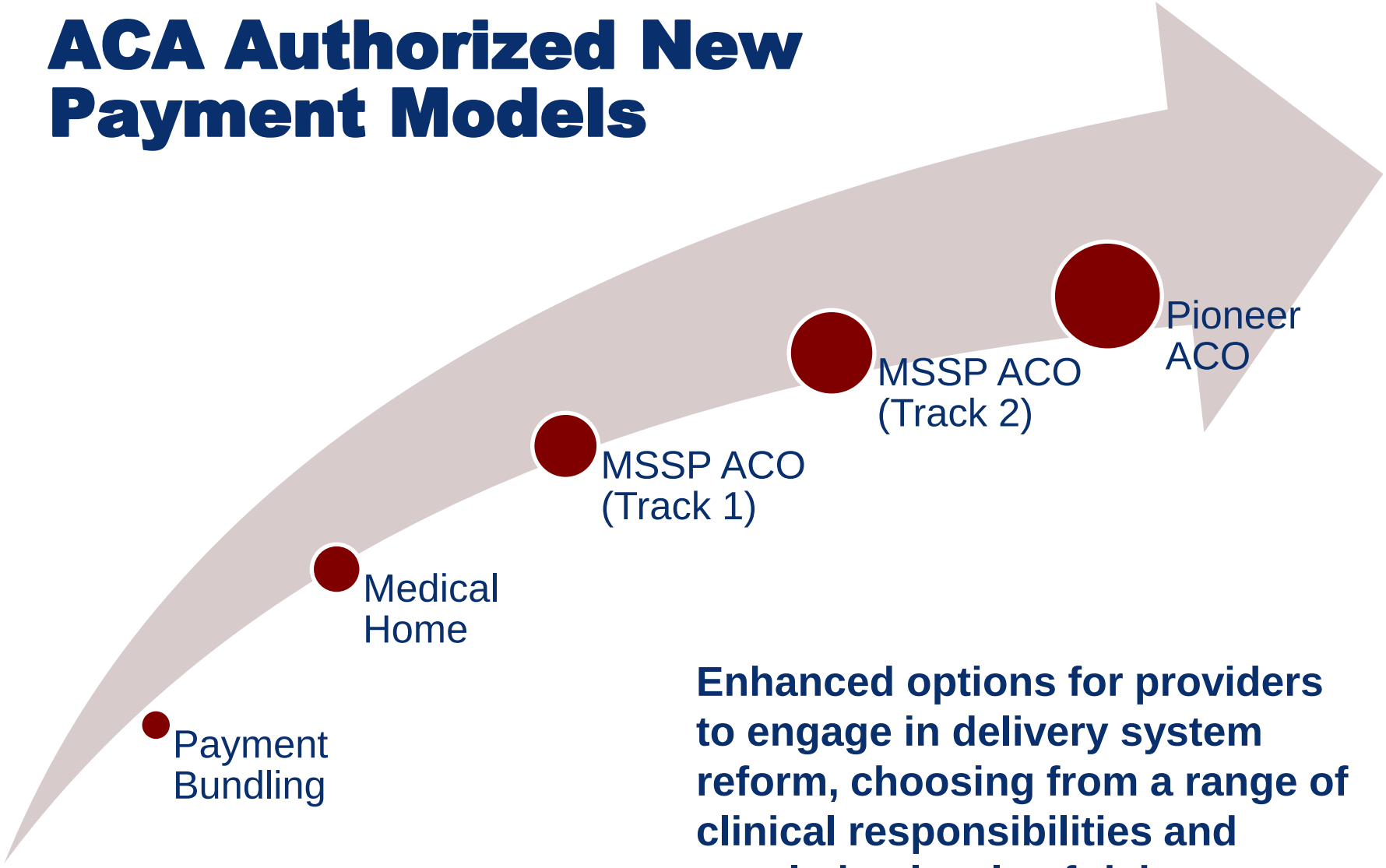
ACA Authorized New Payment Models



Enhanced options for providers to engage in delivery system reform, choosing from a range of clinical responsibilities and escalating levels of risk

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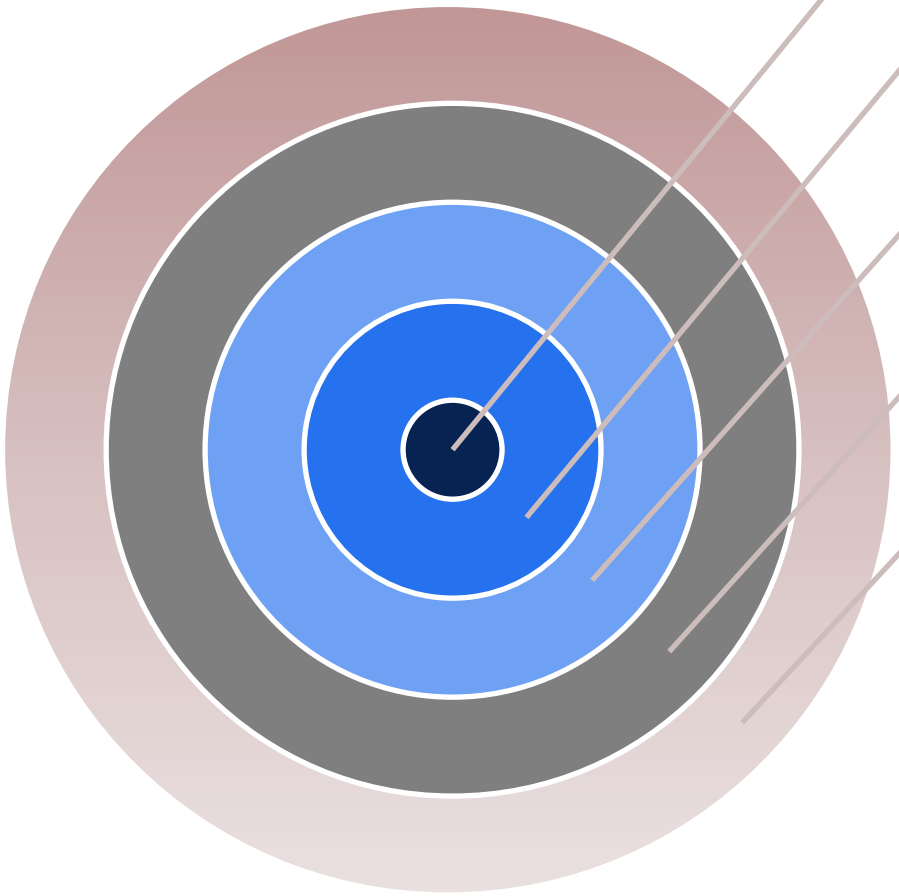
The Optics of Caring for Populations



Fee for service

Take care of the patient in front of me

Bundles/ P4P/ VBP

Take care of a patient across a continuum after an anchor admission

ACOs

Manage the care of patients that are attributed to me

Managed Medicaid/ Medicare Advantage/ Health Plan

Manage the healthcare costs of patients that are assigned to me

Population Health

Take care of lives in a community

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Systems Based Practice and Population Health

In order to train physicians for this future, the ACGME has outlined detailed expectations for systematic change which emphasizes the achievement of concrete milestones for each of six core competencies. Indeed, demonstration of systems-based practice (competency 6) and practice-based learning and improvement (competency 3) requirements are both included in the Next Accreditation System milestones.

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SBP Competencies

The components of SBP in which trainees must demonstrate proficiency are relatable to broader population health goals:

1. Work effectively in various healthcare delivery settings and systems relevant to their clinical specialties

2. Coordinate patient care within the healthcare system relevant to their clinical specialty

3. Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate

4. Advocate for quality patient care and optimal patient care systems

5. Work in interprofessional teams to enhance patient safety and improve patient care quality

6. Participate in identifying systems errors and implementing potential systems solutions

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Population Health management requires new and different *systems* in place to allow physicians and other staff to carry on a new mission.

Population Health education must prepare individuals to work within the context of these new and different *systems of care.*

Define Systems Thinking and how it could apply in healthcare delivery systems, such as academic medical centers and how it could accelerate change in practice and population health.

Advance the national conversation and result in an action agenda that could dramatically change how systems based thinking and practice are integrated into medical education and clinical care.

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Sponsored a meeting to explore Systems Based Thinking and Practice…invited:

- Business school leaders
- Public Health School representatives
- Nursing school representatives
- ACGME representatives
- Educational leaders….UME, GME, CME

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JHF meeting

The August 2013 meeting was designed to discuss the beginning of a national framework to address:

- Understanding and application of Systems Based Thinking in our industry and importance in population health
- Identify gaps in current activities and curriculum
- Interprofessional collaboration that prepares people for care transitions,
- Understand the roles and responsibilities of all participants, and the interdependencies between them
- Identify what skills new health professionals need for Systems Based Thinking and Practice?

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Systems Based Thinking

Professor Retsef Levi and Eric Bergemann

Sloan School of Management, MIT

System Thinking and Systematic Management in HC
AAMC, Jewish Healthcare Foundation
Pittsburgh, August 6, 2013

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What is Systems Thinking?

- **"There are many schools of systems thinking (for surveys, see Richardson, 1991 and Lane 1994). Some emphasize qualitative methods; others stress formal modeling. As sources of method and metaphors they draw on fields as diverse as anthropology, biology, engineering, linguistics, psychology, physics and Taoism and seek applications in fields still more diverse."**
  - **John Sterman, MIT Sloan School of Management,** *Business Dynamics* **(2000)**

- **There is a good deal of common ground among these schools –**
  - **The relationship between systems and behavior**
  - **The importance of mental models**
  - **Systems have properties that its parts don't possess individually**
  - **"The ability to recognize, understand, and synthesize the interactions, and interdependencies in a set of components designed for a specific purpose" (STS Manual Version 3-3-2011)**

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Organizational Systems

- **Goals and value creation – what the system is supposed to do**
- **Organizational structure – parts and resources allocation**
- **Process structure – work, information and decision flow**
- **Workforce structure – roles, skills**
- **Reward structure – how do we evaluate individuals and parts**
- **Environment structure – external entities interacting with the system**
- **Dynamics – how parts and individuals interact with each other and environment (Type I and Type II)**

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Challenges & Barriers

- **‘Visualization’ challenge (what is the system?)**
- **Habits and cultures**
- **The design of the system/processes/work does not fit people skills, competence and capabilities**
- **Conflicts on decision rights**
- **Delayed feedback from the environment (short vs. long term; planning vs. execution)**

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Application of Systems Thinking in Healthcare: Application to Population Health

Today, do we understand/ appreciate the importance of systems thinking in healthcare?

What are the corresponding actions, behaviors, language, models, tools, training and outcomes that would support expanded systems thinking as we develop curriculum that require a systems perspective?

Next Steps

How can we create synergy between a population health curriculum and a systems thinking initiative?

How would you introduce these two important concepts?

What should we do in 3 months, 6 months, a year?

How would we know if we are successful?

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