



Unlocking the Power of Health Information HL7 22nd Annual Plenary Meeting

September 21, 2009
Atlanta, GA

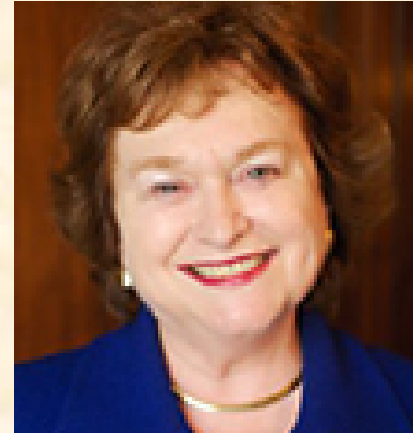
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“Response from the Clinical Community”

- How is health care delivery changing in response to service demand?
- Quality, safety and accountability
- Access (insurance and workforce) and cost of care – health care reform this year??
- Emphasis on Primary Care – small, medium and large group practice
- Rethinking delivery - new models
- Roles of HIT and medical informatics

Quality

“...improvements and reforms are needed in nearly every area of our health care system and we need to look broadly at issues of health care quality and efficiency. Payment reform, the reorganization of our health care system, and support of infrastructure and information systems are all needed to ensure the U.S. health care system lives up to its full potential.” (2009)



Karen Davis - Commonwealth Fund

Cost

“Rising healthcare costs pose fundamental risk to U.S.” (2008)

Peter Orszag - Office of Management and Budget



Increasing Demand for Health Care Services

- **Population and service demand growing**
 - U.S. population projected to be 349 Million by 2025
 - 902 million visits were made to physician offices in the US in 2006 - 2/3 Primary care - IM, Peds, and FP
- **Aging and chronically ill population**
 - 20% over 65 (Medicare) by 2030
 - 50% increase of 85 and over from 2000 to 2010
 - 83% of current Medicare patients have one or more chronic conditions
 - 23% of current Medicare patients have 5 or more chronic conditions, account for ~ 3/4 of Medicare spending, see about 14 different physicians in a year and have about 40 office visits
 - American College of Physicians. How Is a Shortage of Primary Care Physicians Affecting the Quality and Cost of Medical Care?. Philadelphia: American College of Physicians;2008: White Paper
 - Anderson GF. Medicare and Chronic Conditions. Sounding Board. N Engl J Med.2005;353(3):305-9

Complex Delivery “System”

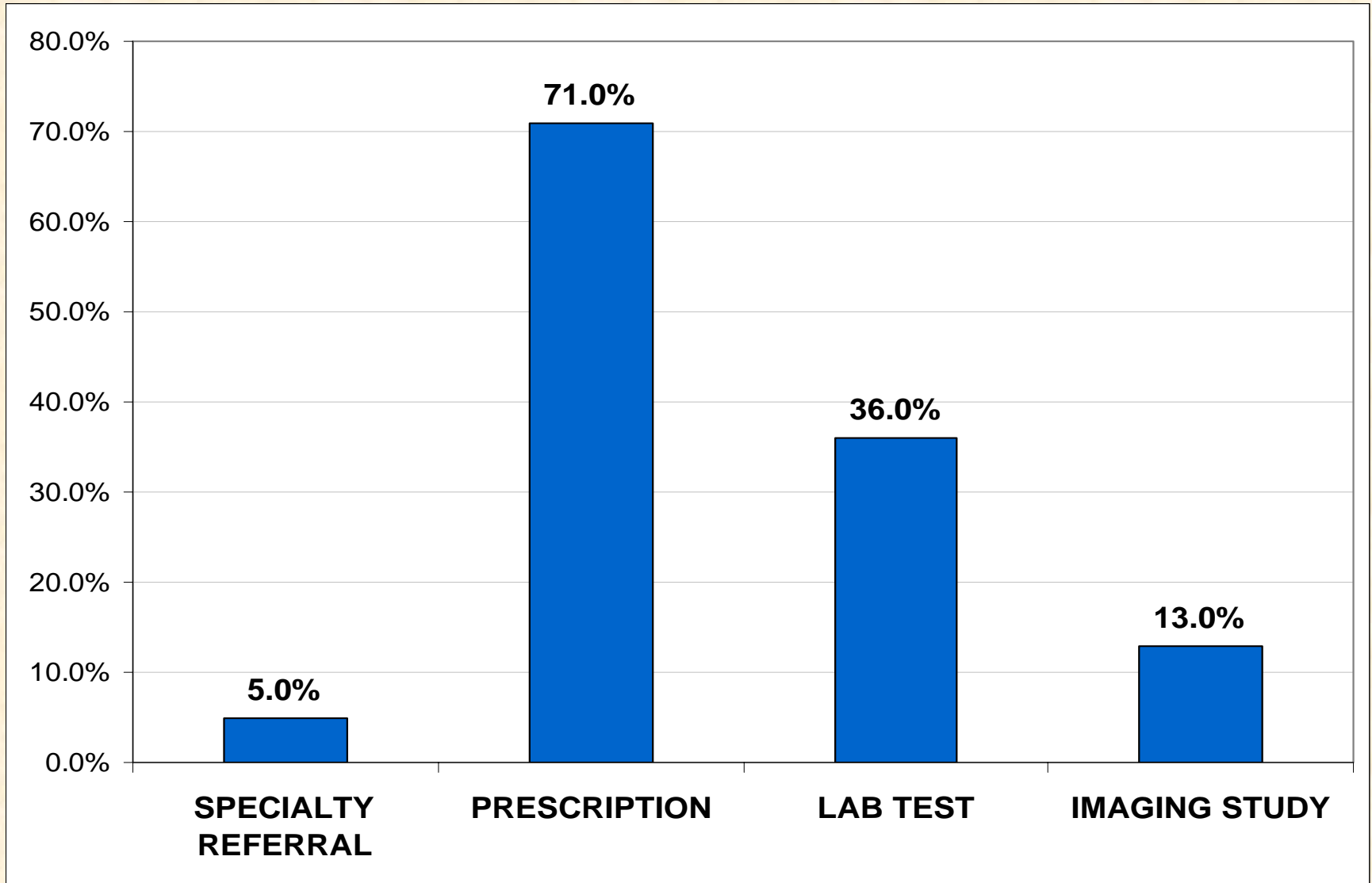
- Health care delivery is complex – e.g., the typical primary care physician has to coordinate care with 229 other physicians working in 117 practices
- To coordinate care for every 100 Medicare beneficiaries treated by a primary care physician in 2005, the physician typically would have to communicate with 99 physicians in 53 practices



H H Pham, et al *Ann Intern Med.*
2009;150:236-242

% of Primary Care Visits Requiring Care Coordination

From Bodenheimer (2007)



Fragmented Delivery “System”

- Most care is not integrated within the community where patients live
- 90% of physician practices are 4 or less

Kaushal, R. et al
Ann Intern Med.
2005;143:165-173



Organizing Patient Care to Improve Quality and Reduce Costs

Model

- **Disease-specific experts**

- **Advantage: Expert care for a particular disease**

- **Limitations:**

- **However, 47% of chronic disease patients do not have a dominant disease but have multiple chronic diseases**

- **No incentive to reduce costs**

- Bodenheimer, et al Health Affairs 28, no. 1 (2009): 64–74

Organizing Care to Improve Quality and Reduce Costs

Model

- **Primary care Fee For Service**

- **Advantage:**

- **“The availability of primary care is positively and consistently associated with improved outcomes, reduced mortality, lower utilization of health care resources, and lower overall costs of care.”**

- **Limitations:**

- **50 percent of patients leave primary care visits not understanding what they were told by the physician**
 - Bodenheimer, et al Health Affairs 28, no. 1 (2009): 64–74
- **Payment incentives not aligned – e.g., care coordination - The practice is not paid for care coordination beyond the FTF encounter with the patient**
 - How Is a Shortage of Primary Care Physicians Affecting the Quality and cost of Medical Care? American College of Physicians; November 2008: White Paper

Organizing Care to Improve Quality and Reduce Costs

Refining the Primary Care Model (looking forward 3-5 years)

Attributes of the proposed model:

- **Multidisciplinary primary care team, including patients; care is coordinated**
- **Informed, activated patients take a larger role in their care and, decisions are shared with patients**
- **Information systems key**
- **The “community”, including public health, is engaged.**
 - Bodenheimer, et al Health Affairs 28, no. 1 (2009): 64–74
- **Payment is aligned – e.g., incenting care coordination**

Multidisciplinary Primary Care Team Model

Patient-Centered Medical Home

- **Medical Professionalism Charter (2002)**

- Patient welfare
- Autonomy
- Social justice

- ***Primary Care Principles***

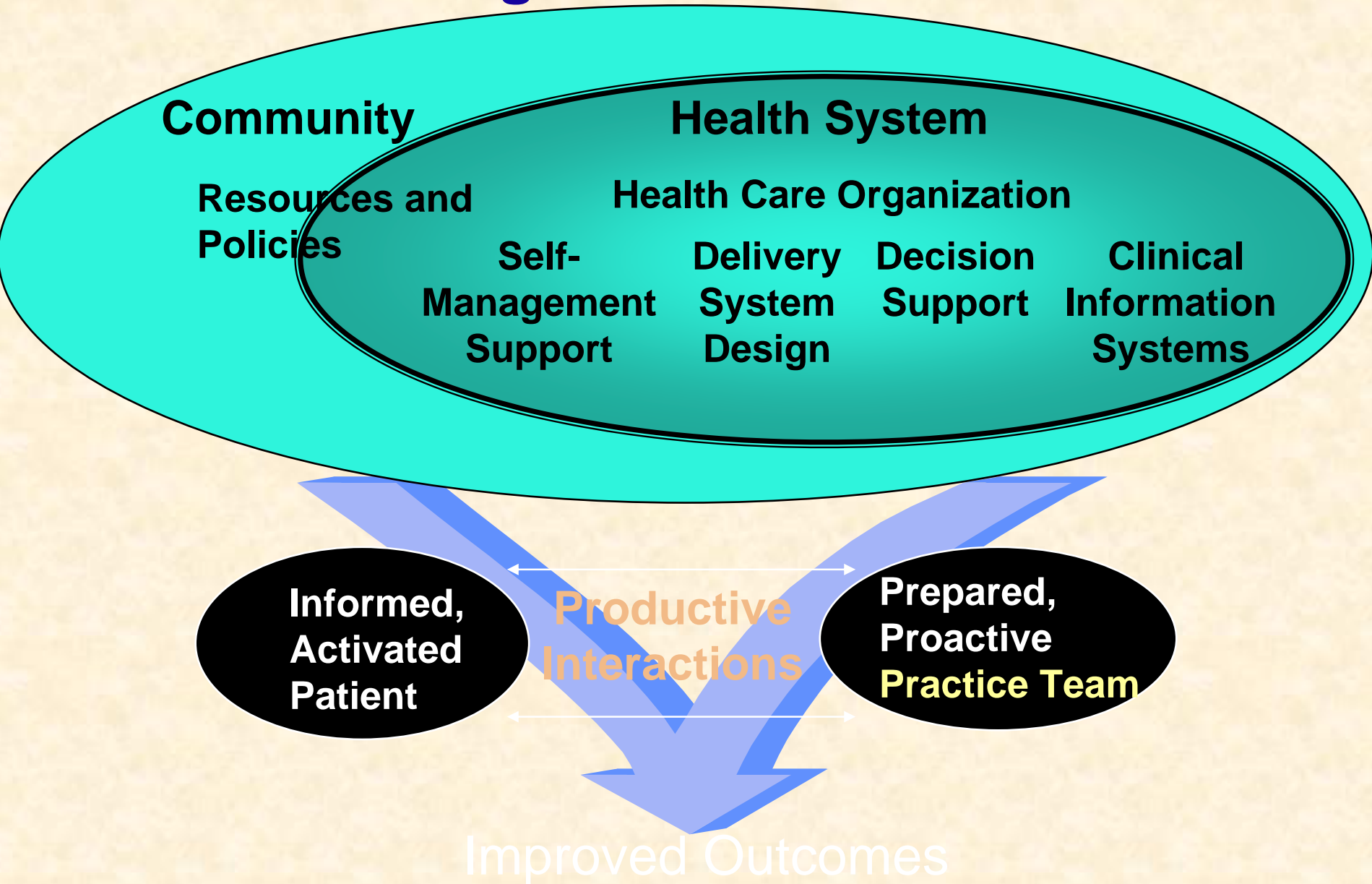
- First Contact
- Continuous
- Comprehensive
- Coordinated



- **Wagner Chronic Care Model**

- The goal – Informed, activated patients working with a prepared, proactive team

Wagner Chronic Care Model



Getting Clinical Information Systems in Practice

American Recovery and Reinvestment Act of 2009 (ARRA)

HITECH Provisions

- The use of certified electronic health records to improve the quality of health care, such as by promoting the coordination of health care and improving continuity of health care among health care providers, by reducing medical errors, by improving population health, by reducing health disparities, by reducing chronic disease, and by advancing research and education.
 - “Meaningful Use” - Starting in 2011, providers deemed to be “meaningful users” of EHR systems will be eligible to receive \$40,000 - \$60,000 in incentive payments paid out over five years in the form of increased Medicare and Medicaid premiums
- A nationwide health information infrastructure that supports exchange of health information
- The use of a certified health record for each person in the US by 2014
- Technology to protect privacy and security

ARRA – Comparative Effectiveness Provisions Implications for Medical Informatics

What is Comparative Effectiveness Research (CER)?

“The direct comparison of existing health care interventions to determine which works best for which patients and which poses the greatest benefits and harms”

Utility of CER

“Generating better information about the costs, risks, and benefits of different treatment options—through research on the comparative effectiveness of those options—and combining this information with incentives to change practice could help reduce health care spending without adversely affecting overall health”

Peter Orzag, then Director Congressional Budget Office report, December 2007

- Description
- Indications
- Contraindications
- Alternatives
- Details
- Complications
- Patient Education
- Follow-up
- Guidelines

- Tables
- Figures
- References
- Glossary
- What's New
- Patient Information

Description

- Stress tests:
 - Two types of stress can be used for diagnostic and prognostic testing:
 - Dynamic exercise (usually treadmill or cycle)
 - Pharmacologic
 - Drugs that increase myocardial demand for oxygen (arbutamine, dobutamine)
 - Agents that cause coronary steal to good vessels from occluded vessels (adenosine and persantine which releases adenosine at the tissue level)
- Exercise is the preferred stress whenever possible because it permits a measurement of exercise capacity (estimated by the workload or using expired gases) usually in METs, which provide valuable prognostic information.
- Imaging:

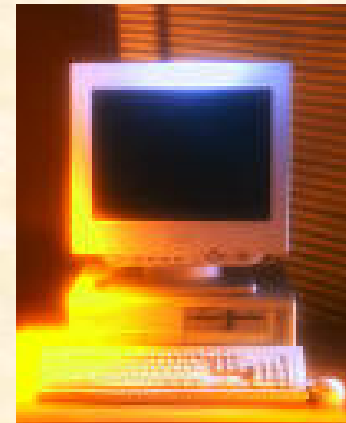
Concept to Reality

Joint Principles of the PCMH

Patient Centered Primary Care Collaborative

AAP, AAFP, ACP, AOA (March 2007)

- Whole person orientation
- Personal physician
- Physician directed medical team
- Care is coordinated and/or integrated
- Quality and safety accountability
- Enhanced access to care
- Payment to support the PCMH



The Value of a Medical Home

“In all countries, the study finds that having a ‘medical home’ that is accessible and helps coordinate care is associated with significantly more positive experiences”.

- **In each country, having a “Medical Home” that is accessible and coordinates care improves patient experiences with:**
 - **Patient safety**
 - **Care Coordination: with specialists/across sites of care; minimizing duplication and delays**
 - **Patient-centeredness and satisfaction**
 - **Managing chronically ill patients**

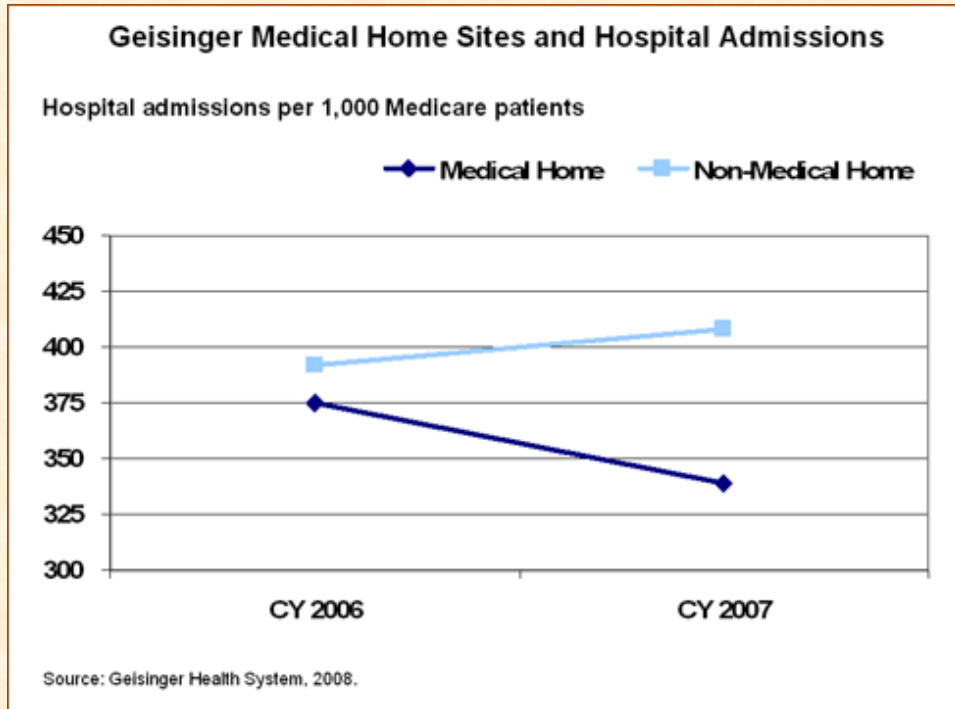
Toward Higher-Performance Health Systems: Adults' HealthCare Experiences In Seven Countries, 2007 Schoen, C. etal. Health affairs, October 2007

Outcomes of Implementing Patient-Centered Medical Homes

- Group Health Cooperative of Puget Sound (WA)
- Community Care of North Carolina
- HealthPartners Medical Group BestCare PCMH Model (MN)
- Geisenger Health System ProvenHealth Navigator PCMH Model (PA)
- Genesee Health Plan HealthWorks PCMH Model (MI)
- Colorado Medicaid and SCHIP
- Intermountain Healthcare Medical Group Care Management Plus PCMH Model (UT)
- Johns Hopkins Guided Care PCMH Model (MD)

Center for Excellence in Primary Care (UCSF) and PCPCC (2009)

Medical Homes – Geisinger Aligning Incentives and Infrastructure to Improve Care and Lower Costs



- Payments of \$1,800 per physician
- Stipends of \$5,000 per 1,000 Medicare patients to help finance additional staff, including care management
- Data show a 20 percent reduction in hospital admissions and 7 percent savings in total medical costs

Lessons

- **The clinical community is responding and innovating**
 - Patient Centered Care models
 - Payment reform
 - Controlling costs
 - Improving quality
 - Strong role for data, information and knowledge management

- **Work to do**
 - Need better cost containment and accountability models based on community integration and responsibility for cost and quality
 - Need to solve the access (insurance reform and workforce) challenges
 - Improve adoption of HIT and medical informatics and develop the related workforce