

# Cultivating Collaborative And Coordinated Care:

## Opportunities and Challenges In Building Tomorrow's Health Care Work Force

Presentation by Susan Dentzer  
Editor-in-Chief, *Health Affairs*  
October 21, 2011

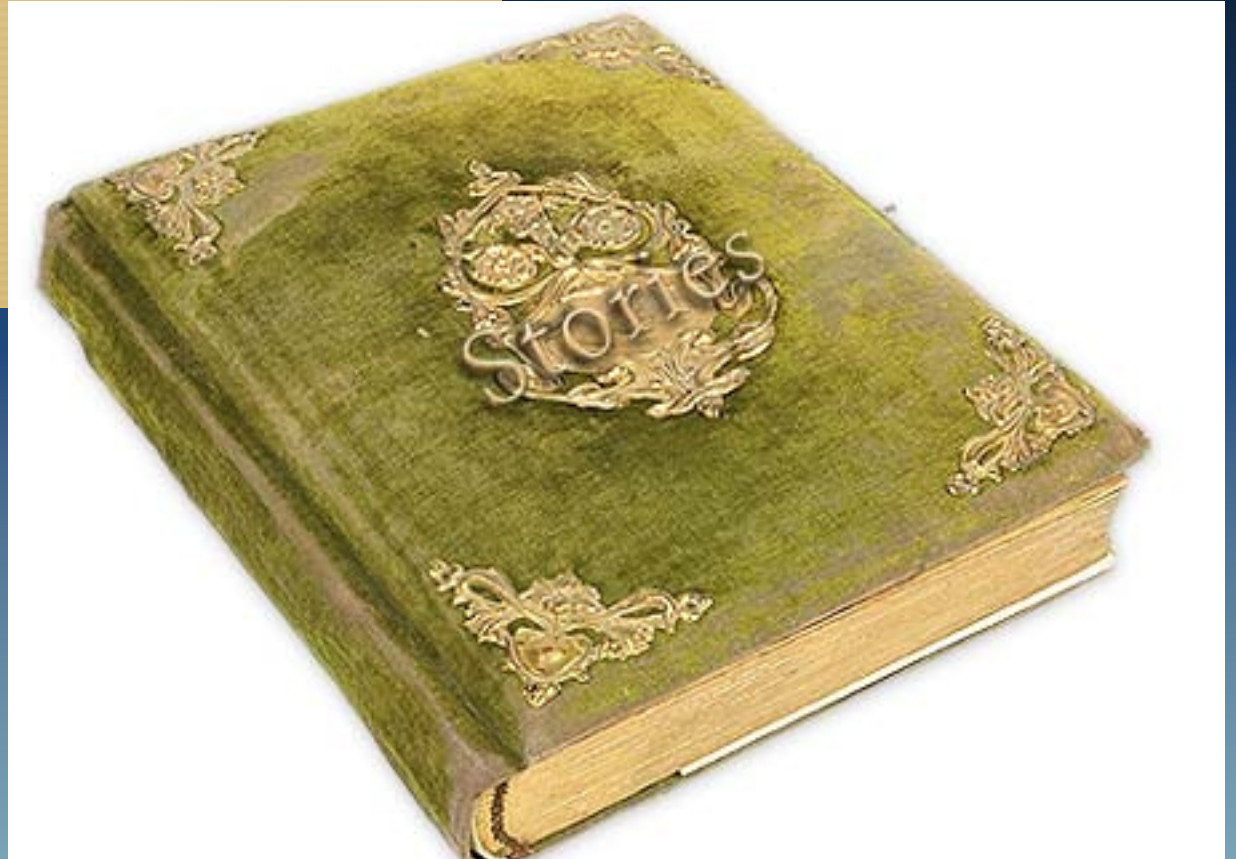


## This presentation at a glance

- State of coordination and collaboration in US health care
- New models, federal requirements and what kind of workforce they will require
- Opportunities and challenges in workforce education and training
- Some final concerns and conclusions

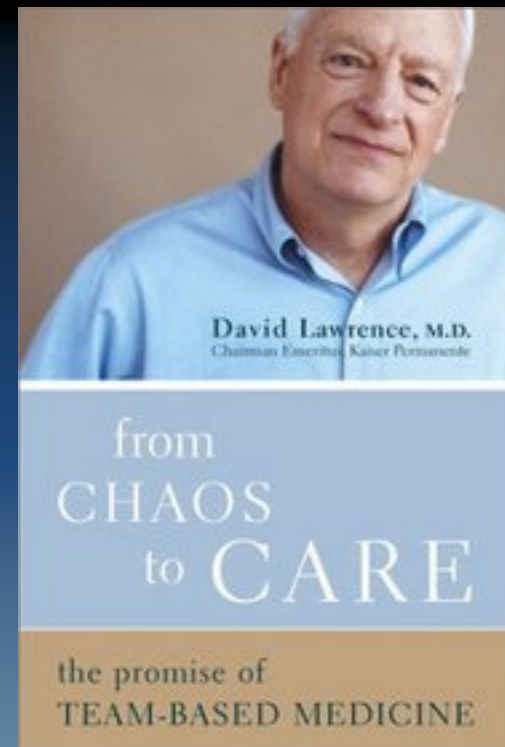
*Let's start with a story...*

*Once Upon A Time*



# “My Mother And The Medical Care Ad-Hoc-Racy”

- David M Lawrence, former Chairman and CEO, Kaiser Permanente
- Narrative Matters essay in *Health Affairs*, March/April 2003; 22(2): 238-242.



# What happened

- Lawrence's mother, at the time an 88 year-old widow, falls at friend's home and breaks femur just below hip
- Waits 30 minutes for ambulance; several hours in ED



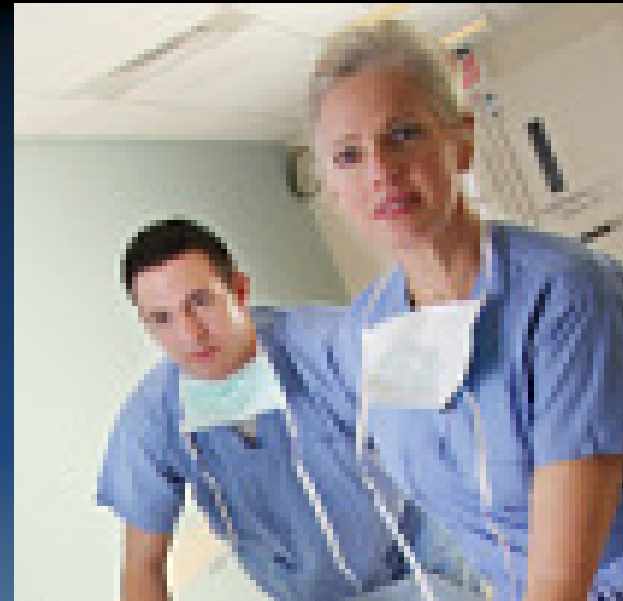
# What happened

- Two hour operation followed by 3 days in hospital; then discharged to a skilled nursing facility for intensive physical therapy
- Five months later, she moves home



# What really happened: The “complex web of care”

- Ten different doctors cared for her during hospitalization and nursing home stay
- At least 50 different nurses and a host of nurses' aides (from Ethiopia, Eritrea, El Salvador, Brazil, Cambodia and Vietnam)



# What really happened: The “complex web of care”

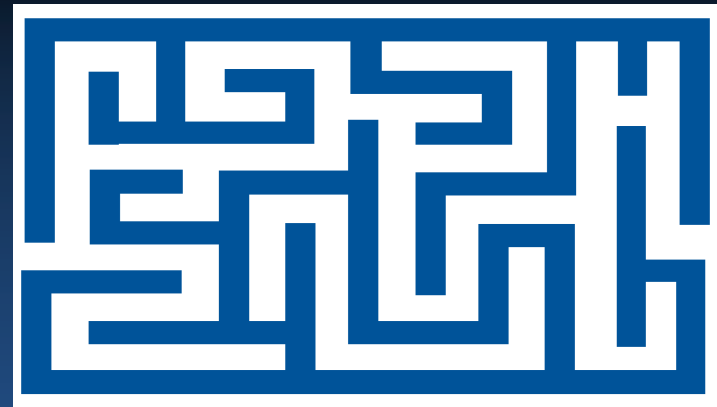
- Ten physical and occupational therapists
- Four social workers
- Grand total: **More than 80 different providers**





# Gaps and disconnects in care

- Hospital had electronic health record system but records had to be printed out and carried to the nursing home
- One physical therapist insisted patient could walk one week post-surgery even though surgeon had ordered otherwise
- Nurses disagreed about how to give her heparin injections and argued about it in her presence



# Sub-optimal quality and communication

- Lawrence's mother had previously had a cancerous growth removed from foot by dermatologist
- Wound had not healed and bled during physical therapy
- Dermatologist was on vacation and his records inaccessible



## What Happens Next...

- She is taken to wound care clinic where specialists discover that treatment dermatologist had given her was out of date and retarded healing process
- She begins proper treatment, having lost a week of physical therapy on top of unnecessary months of suffering



## “Pick-up soccer”

- “At times Mom’s care seemed like a pick-up soccer game in which the participants were playing together for the first time, didn’t know each other’s names, and wore earmuffs so they couldn’t hear each other.”



## “Ad-hoc-racy”

- “Her care seemed like an ‘ad-hoc-racy’ that involved well-trained and well-intentioned people, state-of-the-art facilities, and remarkable technologies –but was not joined into a coherent whole for the benefit of her or her family.”



How typical is this case?  
N = 1, or more?

# “Crossing the Quality Chasm: A New Health System for the 21<sup>st</sup> Century”\*

- US health care not sufficiently

- Safe

- Effective

- Patient Centered

- Timely

- Efficient

- Equitable

i.e., Coordinated

\*Source: Institute of Medicine, 2001

## Americans and Chronic Illness

- Chronic disease is the #1 cause of death and disability in the US
- Expenditures on chronic illness account for 75% of total US health spending
- About 2/3 of the rise in spending over the past 20 years is linked to rising prevalence of chronic disease



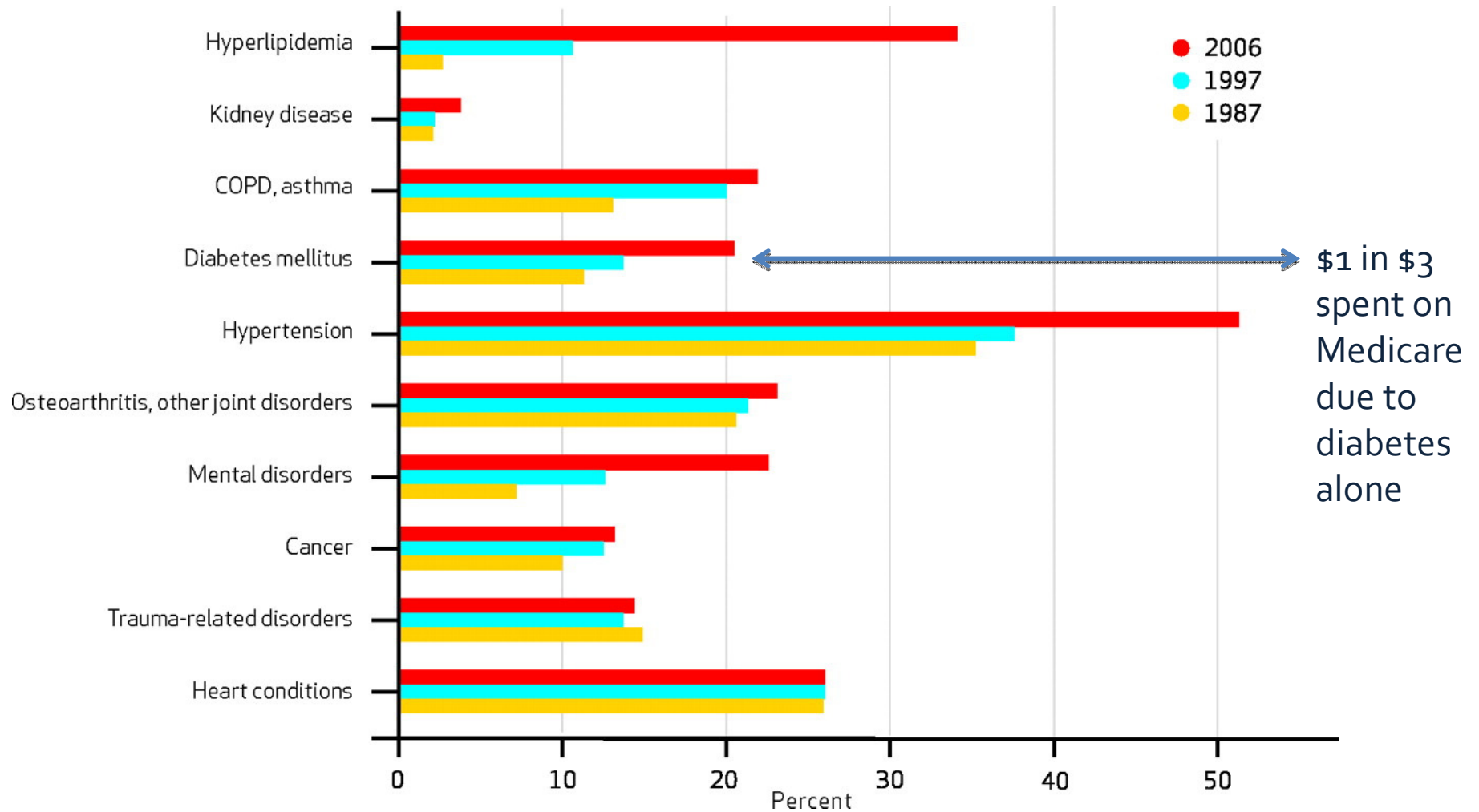
Source: Partnership to Fight Chronic Disease, Policy Platform, September 2007



## The “complexity consequences” of chronic illness

- Study of care patterns for 1.79 million Medicare beneficiaries
- For patients with chronic conditions, **even more physicians and practices**
- Over a given year, **average patient saw two primary care physicians and five specialists working in a median of 4 practices**
- Over a two year period, almost 1/2 of beneficiaries were assigned to a new physician
- Source: Pham HH et al, “Care patterns in Medicare and their implications for pay for performance,” NEJM 2007; 356: 1130-1139

## Treated Prevalence Of The Top-Ten Health Conditions Among Medicare Beneficiaries, 1987, 1997, And 2006.

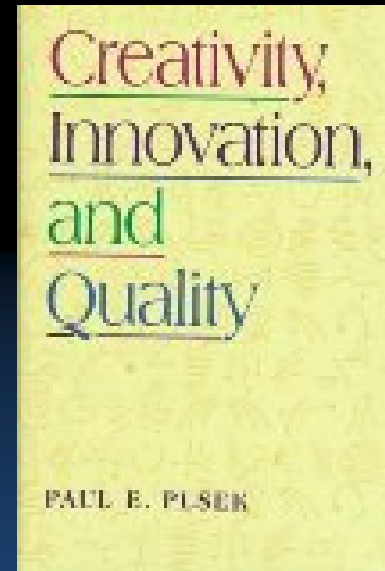


Thorpe K E et al. Health Aff 2010;29:718-724

HealthAffairs

# The challenge of complexity in health care

- Paul E. Plsek and Trisha Greenhalgh:  
Health care is a “complex adaptive system,” not a “clockwork universe”\*
- Complex adaptive systems characterized by collection of individual agents with freedom to act in ways that are not always totally predictable, and whose actions change the context for other agents
- \*Source: *British Medical Journal* 2001; 323:625-628



# The challenge of complexity in health care

- Plsek and Greenhalgh: Complex adaptive systems characterized by fuzzy boundaries between agents; membership can change; relationships are non-linear
- Like a termite colony; typical colony of 60,000 termites construct highest structures on planet relative to size of their builders, but there's no "chief executive termite" and no blueprint



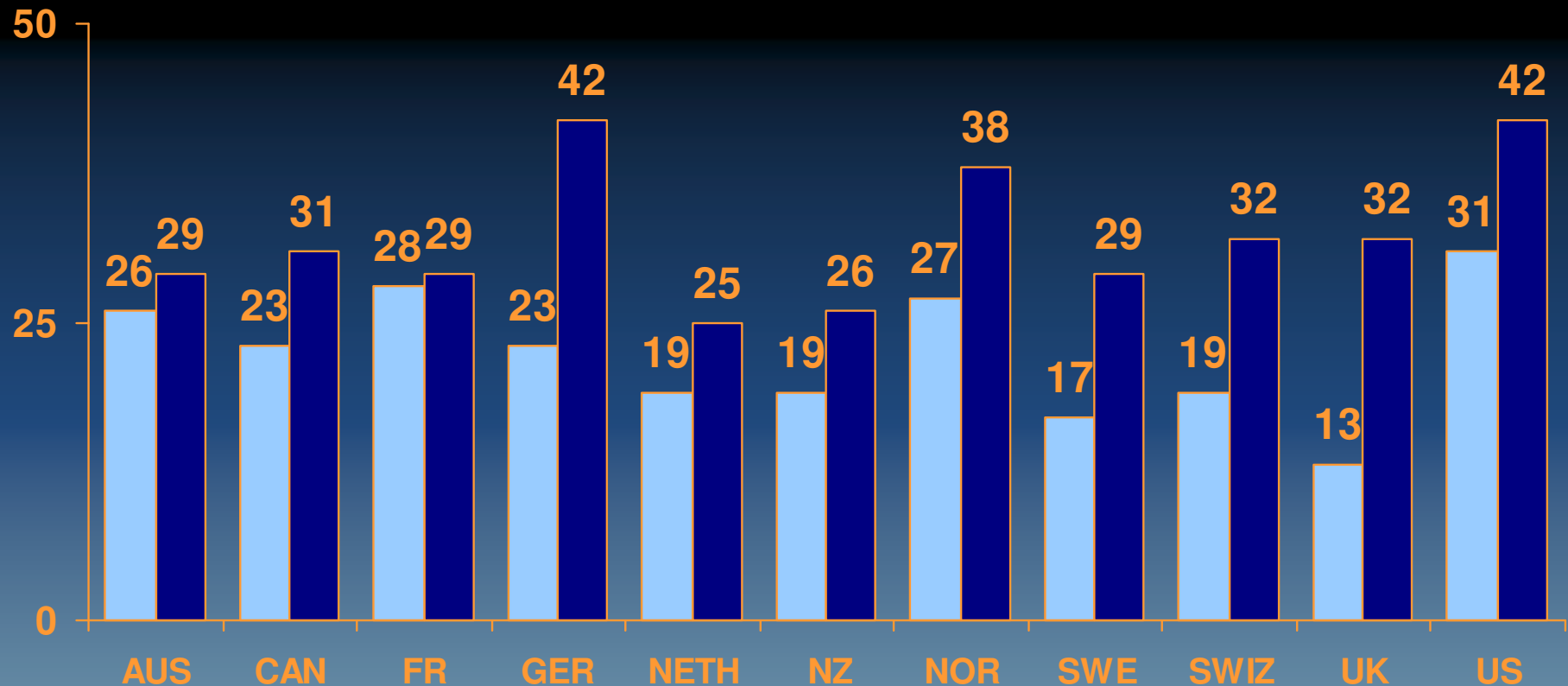
Size of termite:  
Up to  $\frac{1}{4}$  inch

Size of colony:  
average 8.2 feet

## Patients Reporting Coordination Problems in the Past Two Years, by Number of Chronic Conditions

Percent experienced *any of three* coordination problems\*

■ No chronic conditions  
■ 2 or more chronic conditions



\* Test results/records not available at time of appointment, received conflicting information from different health professionals, and/or doctors ordered test that had already been done.

Source: 2010 Commonwealth Fund International Health Policy Survey in Eleven Countries; *Health Affairs*, Nov. 2010

# “Still Crossing the Quality Chasm”

- April 2011 issue of *Health Affairs*
- Much progress; much remains to be done



# Patients' Safety: Still At Risk

- Adverse events in hospitals may be **10 times greater than previously measured**
- Exhaustive medical record review of 795 patient records at 3 unidentified tertiary care hospitals with advanced patient safety programs, during October 2004
- Showed adverse events occurred in **1 in 3 admissions**
- Medication-related errors and events related to surgeries and procedures were those with greatest severity level
- Source: *Health Affairs* 30, No. 4 (2011): 581-589

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# Disparities in Health Care and the Health Care Workforce

- US Department of Health and Human Services (HHS) *Action Plan to Reduce Racial and Ethnic Health Disparities*
- Major goals include transforming health care; strengthening the health infrastructure; promoting scientific knowledge in understanding disparities; and innovation in addressing them
- **E.g., Large racial and ethnic health disparities permeate the health care workforce; US faces “critical shortages of culturally competent health professionals to care for nation’s minorities, especially populations with limited English proficiency”**

# **Payment and Delivery System Transformation And Workforce Implications**

# Strategy

- **Reform payment on public and private side to drive delivery system reform**
- **Government and private initiatives**



# Centers for Medicare and Medicaid Services Payment and Delivery Reform Efforts

- Readmissions program
- Medical homes: All-payer national pilot; Medicaid “health homes”
- Community-based care transitions program
- Federal coordinated care office to better coordinate care of “dual eligibles” (Medicare + Medicaid)
- Bundled payment
- Value-based purchasing
- Accountable Care Organizations, including Medicare Shared Savings Program

# Reducing avoidable readmissions

- 1 in 5 Medicare patients who were hospitalized were re-hospitalized within 30 days after discharge
- 1 in 3 readmitted within 90 days
- Nearly half of the Medicare patients rehospitalized within 30 days **did not have a physician visit between the time of discharge and readmission.**

- Source: Jencks S.F., Williams M.V., Coleman E.A. N Engl J Med 2009; 360:1418 - 1428



# Reducing avoidable readmissions

- Beginning in FY 2013, Medicare payments reduced for hospitals with higher-than-expected readmissions rates
- Hospital performance evaluated based on the 30-day readmission measures for heart attack, heart failure and pneumonia



# Value-based Payment and Purchasing

- CMS will expand payments for value—in 2013—by rewarding better care
- Will be based on care for five of the most prevalent conditions
- Heart attack, heart failure, pneumonia, certain surgeries, hospital-acquired infections
- Value-based payment also to be extended to skilled nursing facilities, home health care providers, hospice care, rehabilitation hospitals, and ambulatory surgery facilities.

# Community- Based Care Transitions Program

- Created under Affordable Care Act
- \$500 million in grants to be awarded from 2011 to 2015 to health systems and community organizations that provide **at least one transitional care intervention** to high-risk Medicare beneficiaries
- Interventions may include timely post-discharge follow-up services to patients and their family caregivers; assessment and active engagement of patients and their family caregivers through self-management support; and comprehensive medication review and management.



# Community Partnerships

- State Action on Avoidable Rehospitalizations (STAAR) initiative
- Project of the Institute for Healthcare Improvement
- 148 hospitals and more than 500 “cross-continuum” team partners in four states (Massachusetts, Michigan, Washington, and Ohio)
- “Cross-continuum teams” =hospitals partnering with home health agencies, nursing facilities, office practices, community-based support services, and patients
- Multistakeholder state-level steering committees
- Source: Amy Boutwell et al, Health Affairs, forthcoming

# Interventions with Demonstrated Effectiveness In Improving Care Transitions

- **In-person home visits**
- **Comprehensive discharge planning with follow-up interventions that incorporate patient and caregiver goal setting**
- **Individualized care planning, educational and behavioral strategies, and clinical management**
- **Source: MD Naylor et al, The Importance Of Transitional Care In Achieving Health Reform, *Health Affairs*, April 2011**

## Interventions with Demonstrated Effectiveness In Improving Care Transitions

- **Telehealth-facilitated intervention emphasizing daily home videophone or telephone monitoring and transmission of physiologic measurements, self-care instruction, and symptom management**
- **Patient self-management**
- **Proactively connecting acute care providers with primary care physicians and other providers to forestall any problems coming from handoffs.**

# Critical Role of Nursing

- **All interventions that showed any positive impact on readmissions “relied on nurses as the clinical leader or manager of care.”**

- Source: MD Naylor et al, The Importance Of Transitional Care In Achieving Health Reform, *Health Affairs*, April 2011



# Accountable Care Organizations

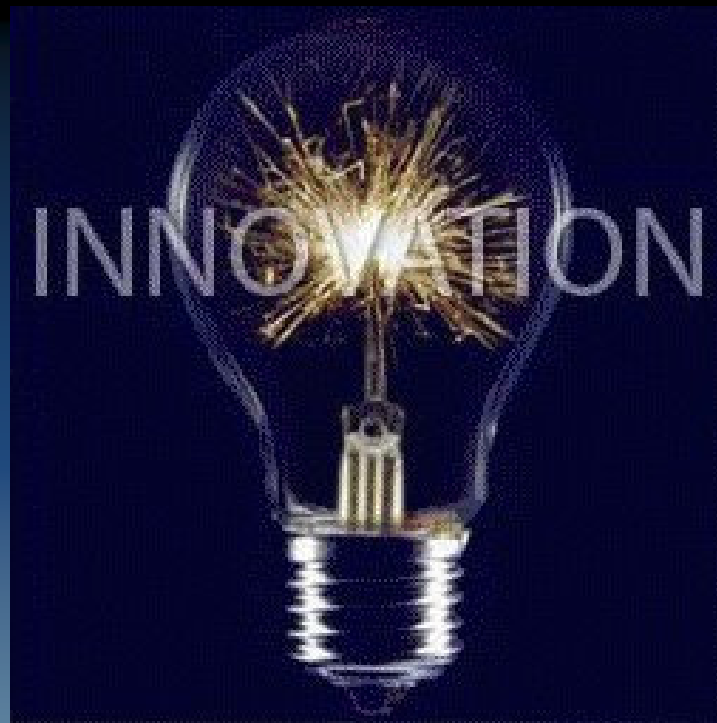
## ACO Principles

- Put the patient and family at the center
- Have a memory about patients over time and place
- Attend carefully to handoffs, especially as patients journey from one part of the care system to another.
- Manage resources carefully and respectfully
- Be proactive
- Be data-rich..
- Innovate in the service of the Triple Aim: better and better patient care, better population health, and lower cost through improvement.
- Continually invest in the development and pride of its own workforce, including affiliated clinicians.

## ACO coordination provision

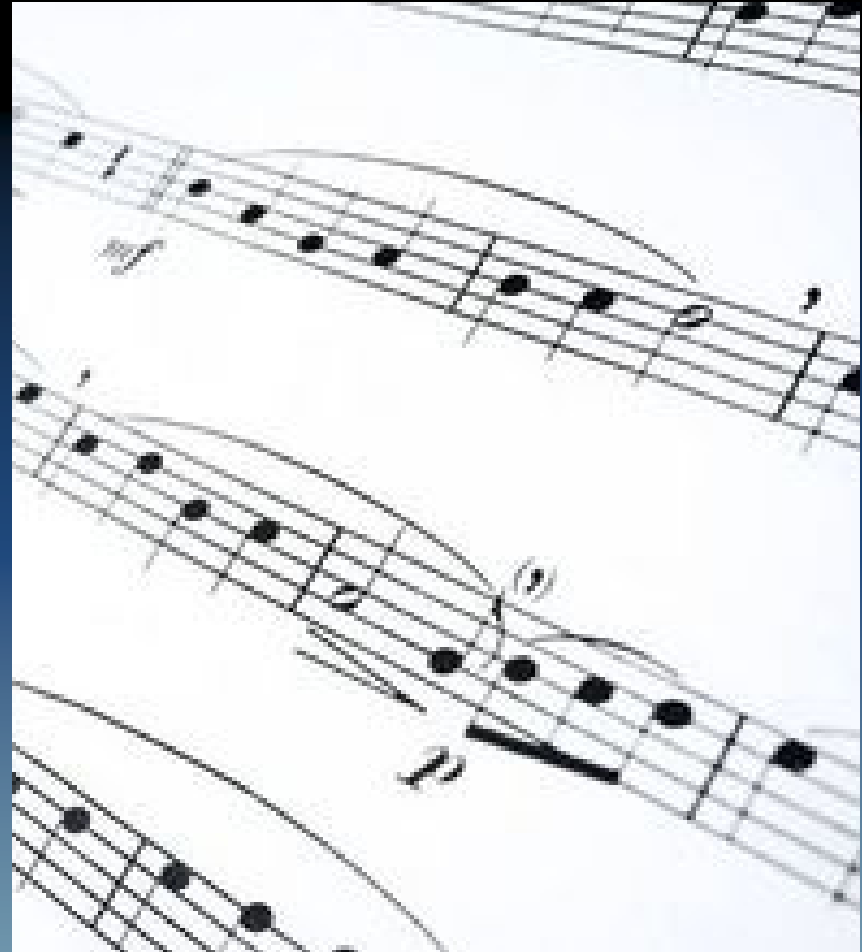
- Under the Medicare shared savings program (Section 3022), accountable care organizations required to submit performance data that may address care transitions across health care settings

# Innovations Under Way and Implications for Hospitals and Health Systems



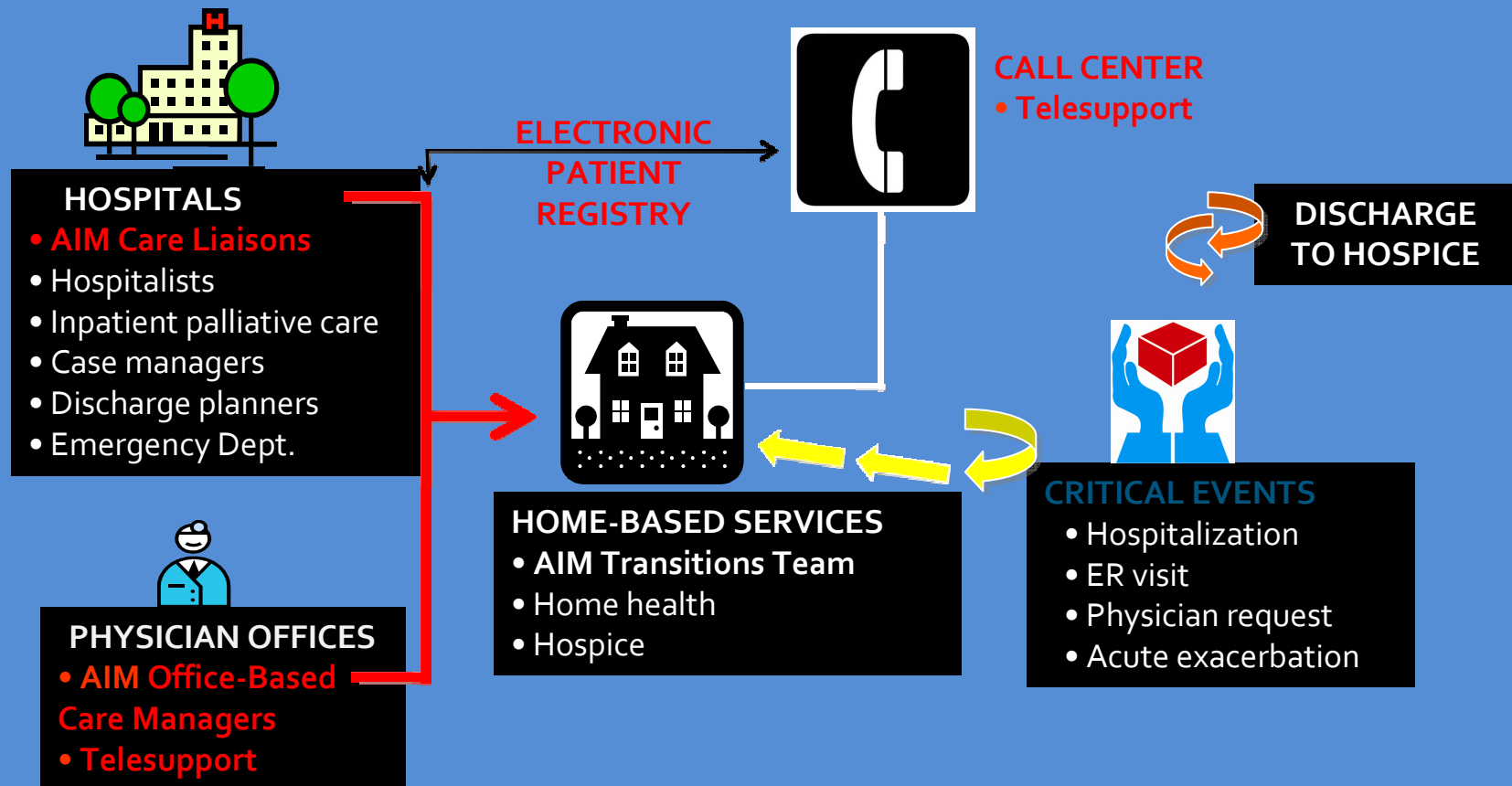
# The Big Themes for Hospitals

- Emphasis on **care coordination** across multiple organizations – including entities that hospitals may not own or control
- **Systematization**; mergers, consolidation, acquisition of physician practices
- **Taking out** unnecessary costs
- Living on **Medicare rates**

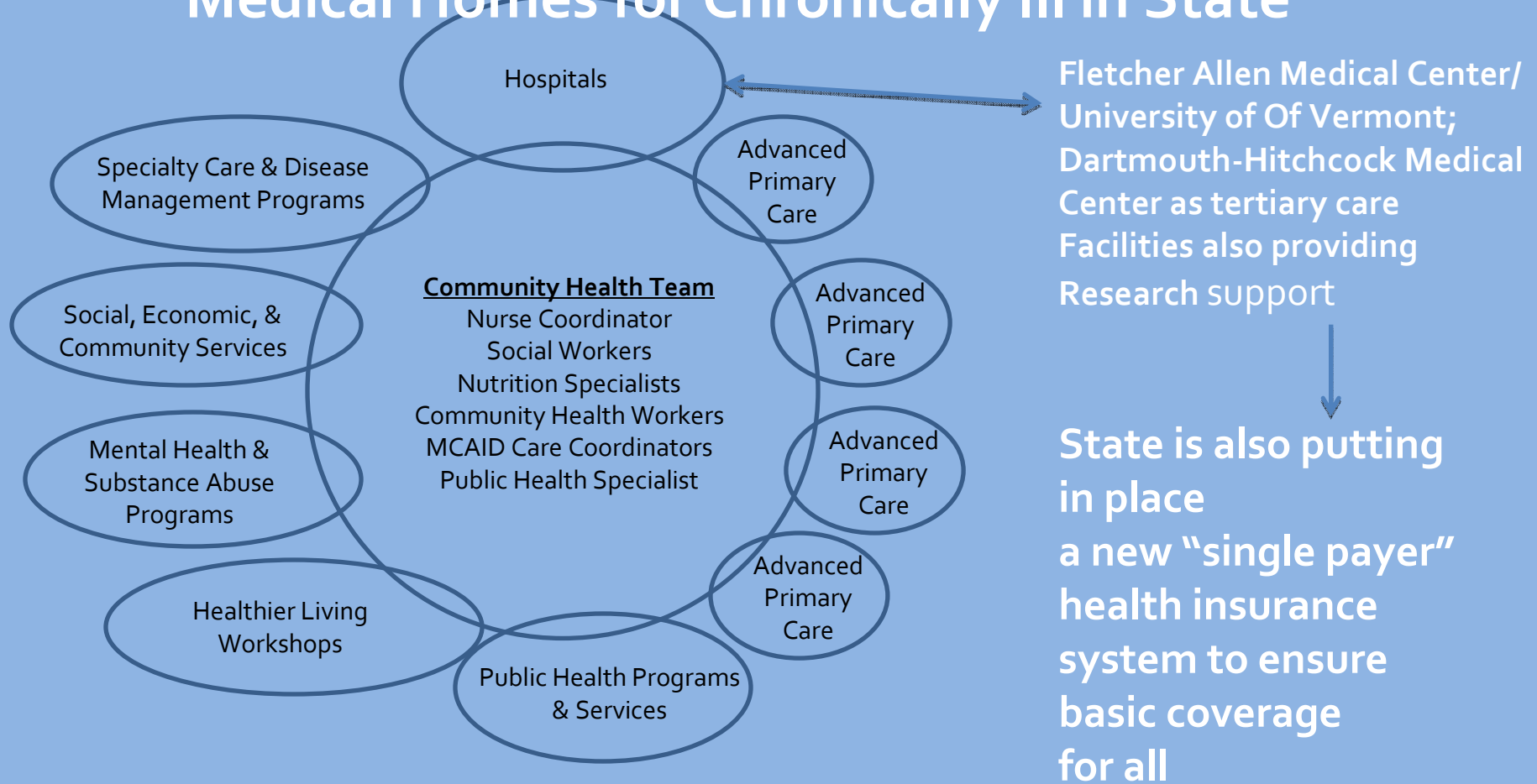




# Sutter VNA & Hospice: Care Coordination



# Vermont Blueprint for Health: New System of Medical Homes for Chronically Ill in State

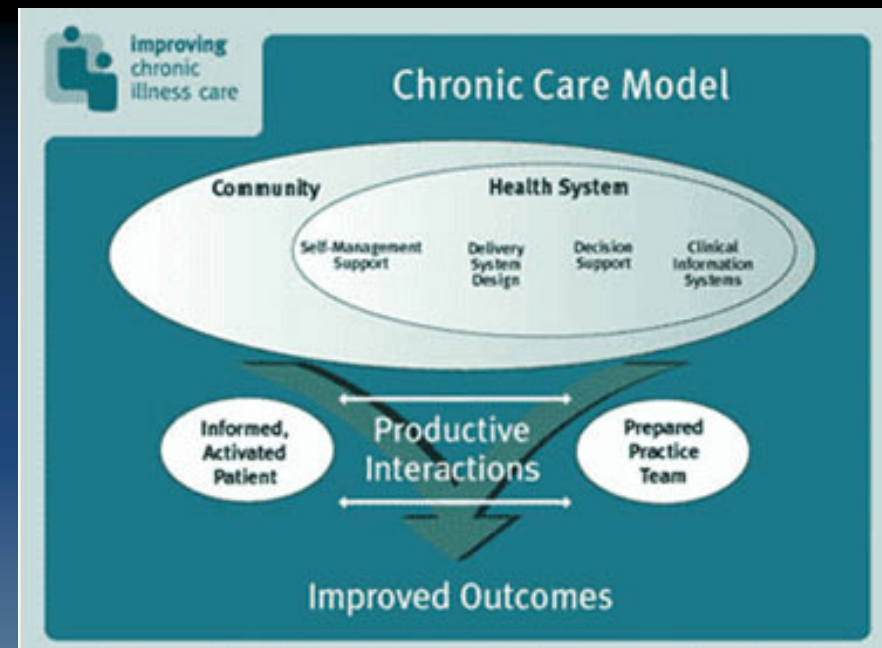


Health IT Framework

Evaluation Framework

# Chronic Care Model

- Includes:
  - organizational support
  - clinical information services and disease registries
  - team-based care
  - case management
  - regular follow-up
  - For patient: decision support, self-management support, community resources



# The Solutions?

- The “Patient-Centered Medical Home”\*
- Based on ongoing personal relationship with physician who provides and coordinates continuous and comprehensive health care through team of health care professionals
- Care is coordinated across health care system (hospitals, home health agencies, nursing homes, consultants etc.

- \*Source: American Academy of Pediatrics, American Academy of Family Physicians, American Osteopathic Association, American College of Physicians joint statement of principles, February 2007



# The Patient-Centered Medical Home

- Evidence-based medicine and clinical decision-support tools
- Physician accountability for continuous quality improvement through voluntary performance measurement
- Information technology supports optimal patient care, enhanced communication
- Open scheduling, expanded hours

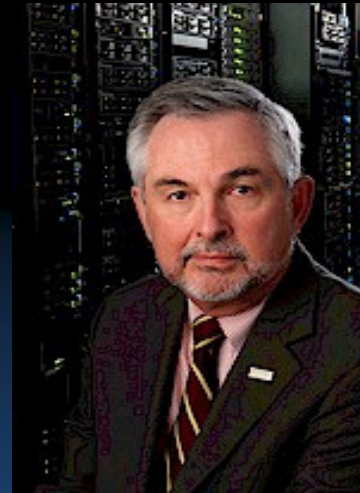


# Multi-Payer Advanced Primary Care Practice Demonstration

- 8 states now participating
- Maine, Vermont, Rhode Island, New York, Pennsylvania, North Carolina, Michigan, and Minnesota
- Demonstration will ultimately include up to approximately 1,200 medical homes serving up to one million Medicare beneficiaries
- Health professionals to receive “more coordinated” payment from Medicare, Medicaid and private health plans

# Geisinger's ProvenHealth Navigator

- **Chronic care management, Medical Home, and Patient-Centered Primary Care**
- **360-degree, 24/7 continuum of care**
- **System-wide EHR**
- **“Embedded” nurses in primary care practices**
- **Assured easy phone access**
- **Telephonic monitoring/case management**
- **Personalized tools (e.g., chronic disease report cards)**



Glenn Steele,  
CEO  
Geisinger



By Glenn D. Steele, Jean A. Haynes, Duane E. Davis, Janet Tomcavage, Walter F. Stewart,  
Tom R. Graf, Ronald A. Paulus, Karena Weikel, and Janet Shikles

ANALYSIS & COMMENTARY

## How Geisinger's Advanced Medical Home Model Argues The Case For Rapid-Cycle Innovation

**ABSTRACT** The Patient Protection and Affordable Care Act of 2010 provides for a number of major payment and delivery system initiatives. These potential changes need to be tested, scaled, and adapted with an urgency not evident in previous demonstration projects of the Centers for Medicare and Medicaid Services. We discuss lessons learned from our iterative tests of care reengineering at Geisinger—specifically, through our advanced medical home model, ProvenHealth Navigator<sup>SM</sup>, and the way we continuously modified the model to improve quality and value. We hypothesize that the most important ingredient in our model has been the embedding of nurse case managers into our community practices and the real-time feedback of data on the use of health services by the most complex patients.

“We hypothesize that the most important ingredient in our model has been the embedding of nurse case managers into our community practices and **the real-time feedback of data on the use of health services by the most complex patients.**”

Source:  
*Health Affairs*,  
2010 Nov; 29(11):2047-53.



## REENGINEERING THE DELIVERY SYSTEM

### EXHIBIT 2

Risk-Adjusted Acute Hospital Admission Rates Per 1,000 For Primary Care Patients In Geisinger Health System Clinics That Launched ProvenHealth Navigator™ In Different Years, By Year Before Or After The Intervention, 2006-9



SOURCE Geisinger Health System.

Geisinger  
Health  
System:  
Hospital  
Admission  
Rates  
For  
Patients in  
Medical Home

Source:  
*Health Affairs*,  
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# The “Human Element”

- “Physician Practices To Patient-Centered Medical Homes: Lessons From The National Demonstration Project”
- Report on the country’s first national medical home demonstration, June 1, 2006, to May 31, 2008
- 36 practices
- Conclusions: Transformation can be lengthy and complex
- Requires an internal capability for organizational learning and development
- Requires **changes in the way primary care clinicians think about themselves and their relationships with patients as well as other clinicians on the care team**
- Practices may require three to five years of external assistance” to change
- *Source: Paul Nutting et al, Health Affairs, March 2011 30:3439; 10.1377/hlthaff.2010.0159*

# Opportunities for Academic Medical Centers

- In Education, Teaching and Training:
  - ✓ Training tomorrow's medical professionals to work collaboratively and in teams
  - ✓ Training to focus on continuous quality improvement
  - ✓ Recruiting and training a larger corps of ethnic and racial minorities at all levels of the health professions
  - ✓ Training a new generation of culturally competent professionals
  - ✓ Training for lifelong learning

## Example: Dartmouth Medical School

- “Building Experiential Learning About Quality Improvement Into A Medical School Curriculum: The Dartmouth Experience” \*
- Greg Ogrinc, David W. Nierenberg and Paul A. Batalden et al, *Health Affairs*, April 2011
- Students engage in quality and system improvement projects such as analysis of how best to insure blood pressure control in an outpatient environment; how to insure urine sample screening of pregnant women in community clinics
- New curriculum will introduce systems design, improvement, teamwork and safety in year 1; in year 2, pathophysiology of system breakdowns; ongoing quality improvement efforts and capstone courses in years 3 and 4

\*Source: *Health Affairs* 30, no. 4 (2011): 716-722

# Opportunities for Academic Medical Centers

- **In Patient Care:**
  - ✓ **Leading way in making quality improvements that reduce costs and improve care for patients**
  - ✓ **Innovating in cost-saving and labor-saving uses of technologies in patient care**
  - ✓ **Eliminating remaining care disparities, in part by ensuring cultural competency of workforce**
  - ✓ **Continuously studying optimal labor rates and revisiting potential “cost disease” issues**

# Final Concerns



## The "Cost Disease"



String Quartet, Then

## The "Cost Disease"



String Quartet, Now



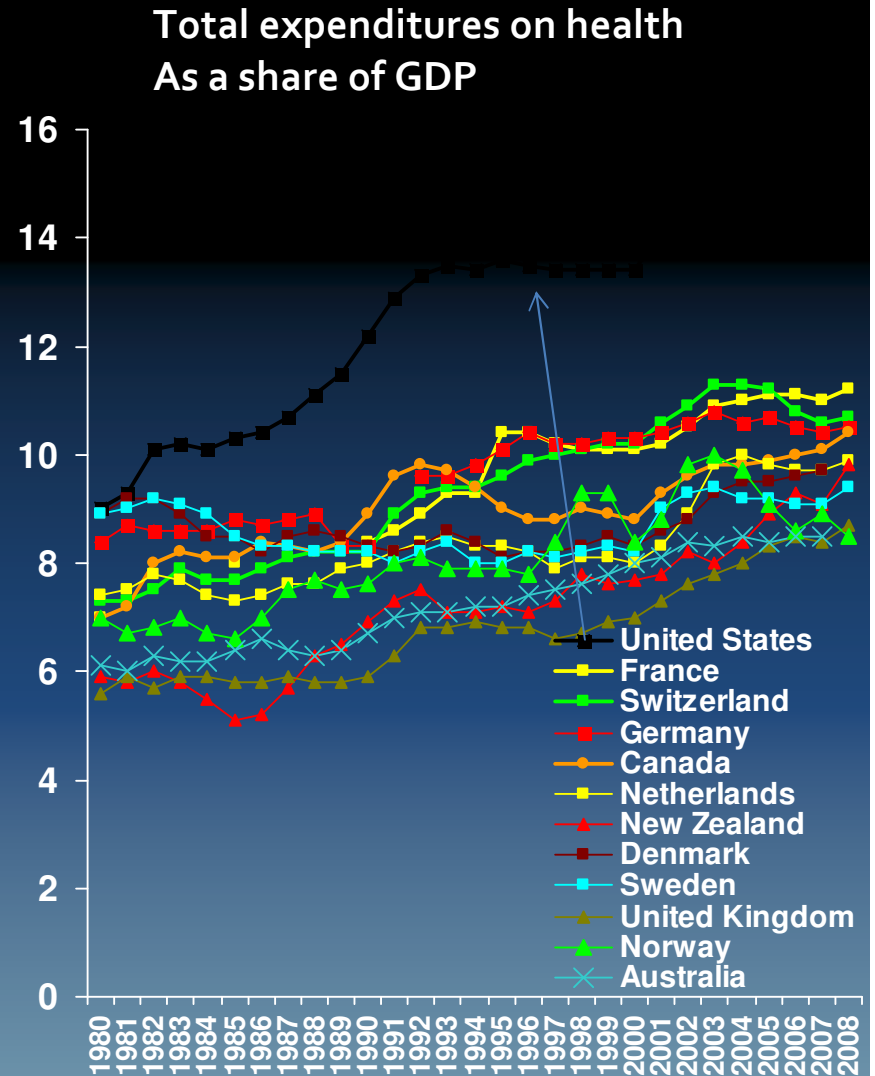
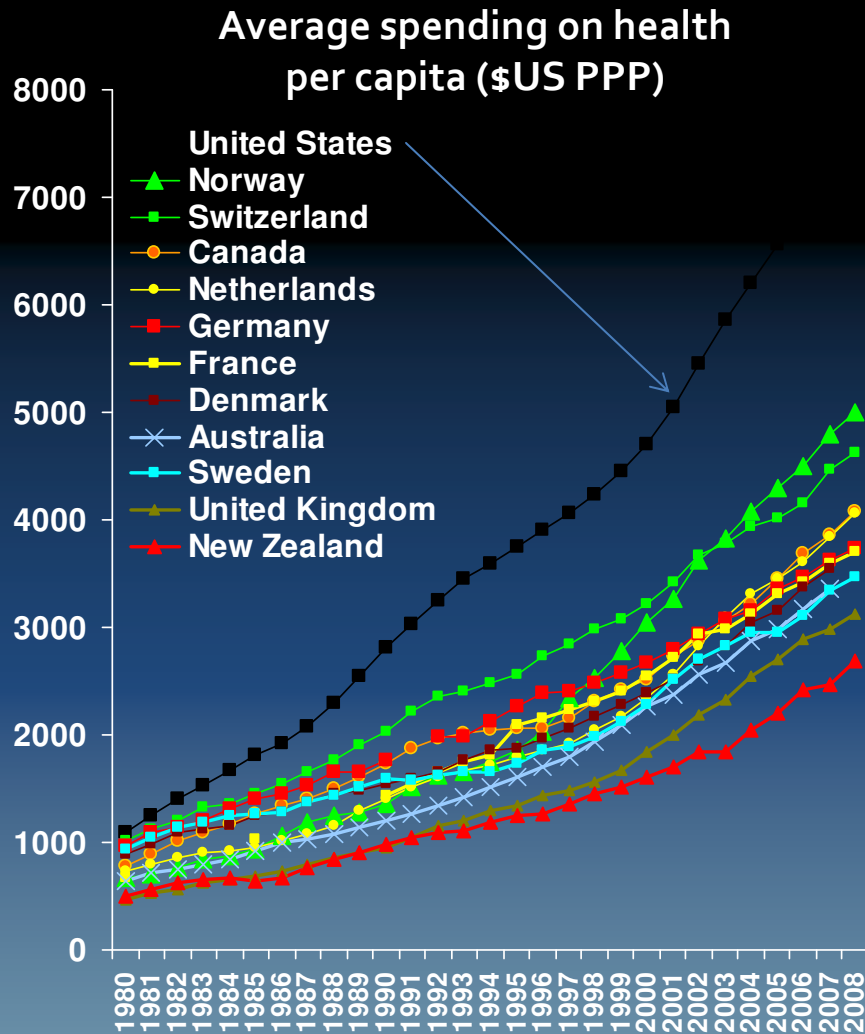
# The “Cost Disease”

- Economists William Baumol and William Bowen
- String quartet still same size, but musicians paid much more
- No greater productivity but have to compete for workers with other industries that have had labor productivity growth
- Health sector has less opportunity to capture productivity gains through capital
- How much is inevitable and fixed versus malleable and subject to change?

# What's Next? A Mahler-sized Orchestra?



# International Comparison of Spending on Health, 1980–2008



Source: OECD Health Data 2010 (June 2010).

# Reducing Costs and Improving Quality at Denver Health

- In 2010 Denver Health, Denver's major safety net system, ranked **first among US academic medical centers in terms of actual mortality observed relative to the national mortality rate.**
- System has used "Lean" methods to identify "value streams" and extract costs, now exceeding \$70 million per year
- If a safety net system/academic medical center can do this, how about the rest of us?
- Sources: Patricia A. Gabow and Philip S. Mehler, "A Broad And Structured Approach To Improving Patient Safety And Quality: Lessons From Denver Health." *Health Affairs*, 30, no.4 (2011):612-618. Also, Harris Meyer, Life In The 'Lean' Lane: Performance Improvement At Denver Health. *Health Affairs*, 29, no.11 (2010):2054-2060



**“We always need to remember that behind almost every great moment in history, there are heroic people doing really boring and frustrating things for a prolonged period of time.”**

**– Gail Collins, *The New York Times*, August 13, 2010**



The End