

# Best Care at Lower Cost

The Path to Continuously Learning Health Care in America

 **INSTITUTE OF MEDICINE** *OF THE NATIONAL ACADEMIES* **Advising the nation / Improving health**

## Committee Members

**Mark D. Smith (Chair)**

*President and CEO, California HealthCare Foundation*

**James P. Bagian**

*Professor of Engineering Practice, University of Michigan*

**Anthony Bryk**

*President, Carnegie Foundation for the Advancement of Teaching*

**Gail H. Cassell**

*Former Vice President, Eli Lilly and Company*

**James B. Conway**

*Institute for Healthcare Improvement*

**Helen B. Darling**

*President, National Business Group on Health*

**T. Bruce Ferguson**

*Professor and Inaugural Chairman, Department of Cardiovascular Sciences, East Carolina University*

**Ginger L. Graham**

*President and CEO, Two Trees Consulting*

**George C. Halvorson**

*Chairman and CEO, Kaiser Permanente*

**Brent James**

*Chief Quality Officer, Intermountain Healthcare, Inc.*

**Craig Jones**

*Director, Vermont Blueprint for Health*

**Gary Kaplan**

*Chairman and CEO, Virginia Mason Health System*

**Arthur A. Levin**

*Director, Center for Medical Consumers*

**Eugene Litvak**

*President and CEO, Institute for Healthcare Optimization*

**David O. Meltzer**

*Professor of Medicine & Economics, U. Chicago*

**Mary D. Naylor**

*Director, Center for Transitions and Health, University of Pennsylvania School of Nursing*

**Rita F. Redberg**

*Professor of Medicine, UCSF*

**Paul C. Tang**

*Chief Innovation and Technology Officer, Palo Alto Medical Foundation*

**INSTITUTE OF MEDICINE**  
*OF THE NATIONAL ACADEMIES*

**Advising the nation / Improving health**

## Why now?

- **Quality shortfalls**
- Unsustainable costs and waste
- Increasing complexity

## Quality

- **Patient harm** – Studies have found that between one-fifth and one-third of hospital patients are harmed during their stay; much of that harm is preventable.
- **Evidence not applied to care**– Americans receive only about half of the preventive, acute, and chronic care recommended by current research and guidelines.
- **Variations in outcomes**– If all states could provide care of the quality provided in the highest-performing states, there would have been 75,000 fewer deaths across the country in 2005.

## Why now?

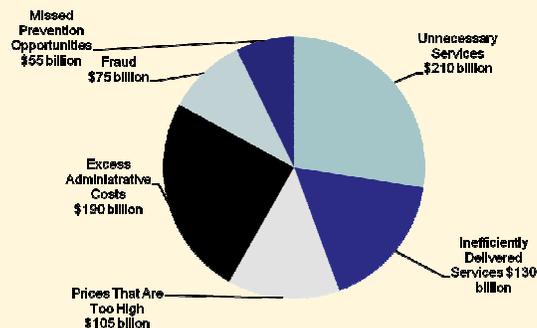
- Quality shortfalls
- **Unsustainable costs and waste**
- Increasing complexity

## Costs

- **Health care costs overall** – \$2.6 trillion (2009), 18% GDP
- **Comparing health care to wages** – 76% increase health costs in past 10 years, overwhelming the 30% gain in personal income
- **Comparing health care to overall economy** – For 31 of the last 40 years, health care has grown faster than the economy.
- **If prices of other products had grown as fast as health care since WWII–**
  - A dozen eggs: \$55
  - Gallon of milk: \$48
  - Dozen oranges: \$134

## Waste

### Wasted expenditures – \$750 billion (2009)



INSTITUTE OF MEDICINE  
OF THE NATIONAL ACADEMIES  
Advising the nation / Improving health

7

## Opportunity Costs

- Waste could pay the entire Department of Defense budget in 2009 and have \$100 billion left.
- Waste could pay salaries of all first response personnel for 12 years
- Waste could pay the entire nation's infrastructure costs for 1.5 years—roads, railroads, water, telecom, airlines...
- Waste could pay the health insurance premiums (employee and employer contributions) for 150 million workers
- Waste could pay the tuition and fees for every 18-24 year old to get 2 years of college.

INSTITUTE OF MEDICINE  
OF THE NATIONAL ACADEMIES  
Advising the nation / Improving health

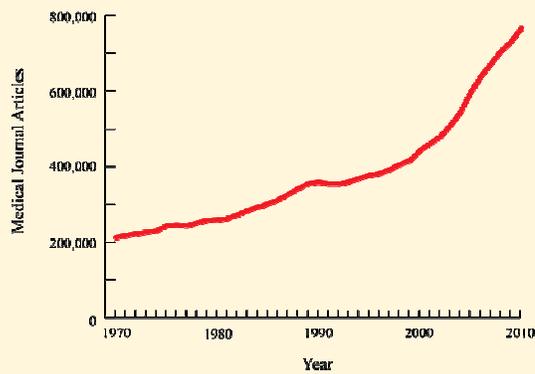
8

## Why now?

- Quality shortfalls
- Unsustainable costs and waste
- **Increasing complexity**

## Complexity

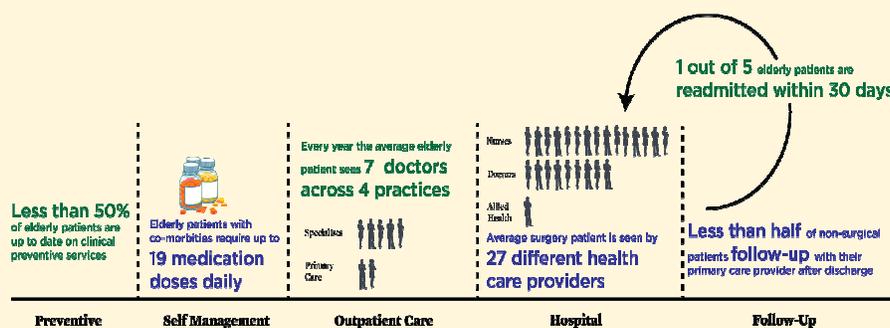
### Increasing information



## Complexity

- **More complexity for patients**—79 year-old patient with 4 common chronic diseases (osteoporosis, type 2 diabetes, hypertension, and chronic obstructive lung disease) will juggle 19 medications per day.
- **More clinicians involved in care**— The average primary care doctor must coordinate with over 200 other doctors just for treating his or her Medicare patients.
- **More to do**— ICU clinicians must complete 180 activities per person, per day

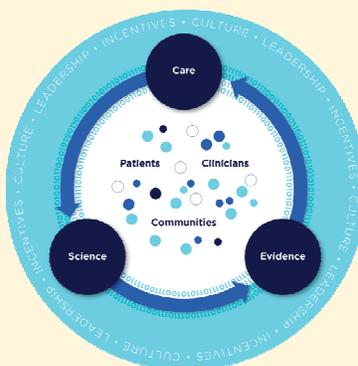
## The Result?



## Opportunities from Technology and Other Fields

- **Computing power**
  - Decision support technologies, analyzing health records for research, managing populations of patients
- **Connectivity**
  - Connecting patients and providers, allow for patients to access health information when and where needed
- **Improvements in organizational capabilities**
  - Systems engineering, patient flow management, modeling and simulation, supply chain management
- **Collaboration among patient-clinician teams**
  - Recognizing the need for teams to deliver care and having the patient be part of that team

## The Vision



## Recommendations

- **The digital infrastructure**  
Improve the capacity to capture clinical, delivery process, and financial data for better care, system improvement, and creating new knowledge.
  - ONC should further promote interoperability and capturing core data elements
  - HHS should expand open data initiatives for translating department health data resources to actionable knowledge
  - Research funding agencies should promote research designs that can be embedded in routine care and do not require purpose-built infrastructure.
  
- **The data utility**  
Streamline and revise research regulations to improve care, promote the capture of clinical data, and generate knowledge.
  - HHS should accelerate the review of HIPAA and IRB policies for actual and perceived impediments, and clarify regulations and interpretations to support the use of clinical data for science and care improvement.

## Recommendations

- **Clinical decision support**  
Accelerate integration of the best clinical knowledge into care decisions.
  - Research funding agencies should focus on the barriers to using evidence in care and support research into improving the usefulness of scientific evidence for care.
  - Health education should incorporate new methods for managing evidence, understanding human behavior and social science, and operating in teams.
  
- **Patient-centered care**  
Involve patients and families in decisions regarding health and health care, tailored to fit individual preference.
  - AHRQ, with CMS and others, should develop and test a core set of measures of patient centeredness.
  - Digital technology and product developers should support the development of tools that individuals can use for managing their own health and health care.

## Recommendations

- **Community links**  
Promote community-clinical partnerships and services aimed at managing and improving health at the community level.
  - Public payers should incorporate population health improvement in payment and contracting policies.
- **Care continuity**  
Improve coordination and communication within and across organizations.
  - Research funding agencies should support the development of measures for monitoring the effectiveness of care transitions.
  - Public payers should support effective care transitions through payment and contracting policies.
- **Optimized operations**  
Continuously improve health care operations to reduce waste, streamline care delivery, and focus on activities that improve patient health.

## Recommendations

- **Financial incentives**  
Structure payment to reward continuous learning and improvement in the provision of better care at lower cost.
  - Public payers should use outcome and value-oriented payment models, contracting policies, and benefit designs.
- **Performance transparency**  
Increase transparency on health system performance.
  - Public payers should promote transparency in quality, value, and outcomes to aid decision making.
- **Broad leadership**  
Expand commitment to the goals of a continuously learning health care system.

## Government as a payer

*For all governmental payers (federal government, states, exchanges) plus private coverage and consumers:*

- **Using purchasing power for improvement**—Use their purchasing power to drive improvement through contracting, provider networks, and incentives.
- **Incentivizing high-value care**—Incentivize the use of high-value providers and services based on clinical, patient experience, and value outcomes.
- **Actively support transparency**—Provide the necessary information to support high-value health care decisions.

## Government as a health care provider

*The federal government provides services through the military health system and veterans health administration, through support of federally-quality health centers, and other programs.*

- **Show what is possible**—Incorporate strategies for routinely delivering evidence-based, patient-centered, and safe care.
- **Promote organized systems of care**—While health care will continue to be practiced in many forms, these delivery systems can incorporate new delivery models for integrating care across the continuum and including community-based organizations and services.
- **Learn from other industries**—Adapt methods from other industries for reliability, safety, and managing large volumes of information, such as systems engineering methods and operations management.

## Government as regulator

- **Streamline production of new knowledge**—HHS should accelerate the review of HIPAA and IRB policies for actual and perceived impediments, and clarify regulations and interpretations to support the use of clinical data for science and care improvement.
- **Setting standards**—ONC should further promote interoperability and capturing core data elements.

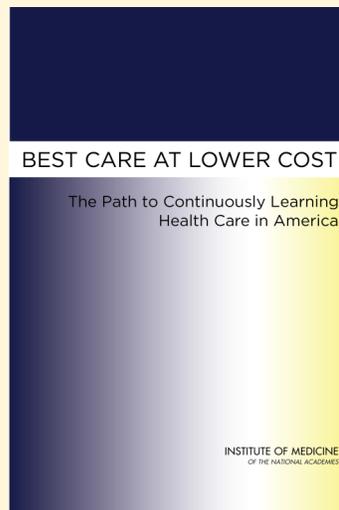
## Government as supporter of research

*The federal government supports clinical research through the NIH, AHRQ, VHA, and other agencies, along with public-private efforts like PCORI.*

- **Incorporate research into routine care**—Research funding agencies should promote research designs that can be embedded in routine care and do not require purpose-built infrastructure.
- **Increase the utility of evidence**—Develop and implement new models for clinical research that overcome the current limitations in terms of time, cost, and generalizability.
- **Understand barriers to use of evidence**—Research funding agencies should advance the science of dissemination and implementation, with a focus on practical strategies for accelerating dissemination of evidence.

Learn more at...

[iom.edu/bestcare](http://iom.edu/bestcare)



INSTITUTE OF MEDICINE  
OF THE NATIONAL ACADEMIES  
Advising the nation / Improving health

