



# TANGLED WEB OF HEALTH THE INNOVATION MILIEU

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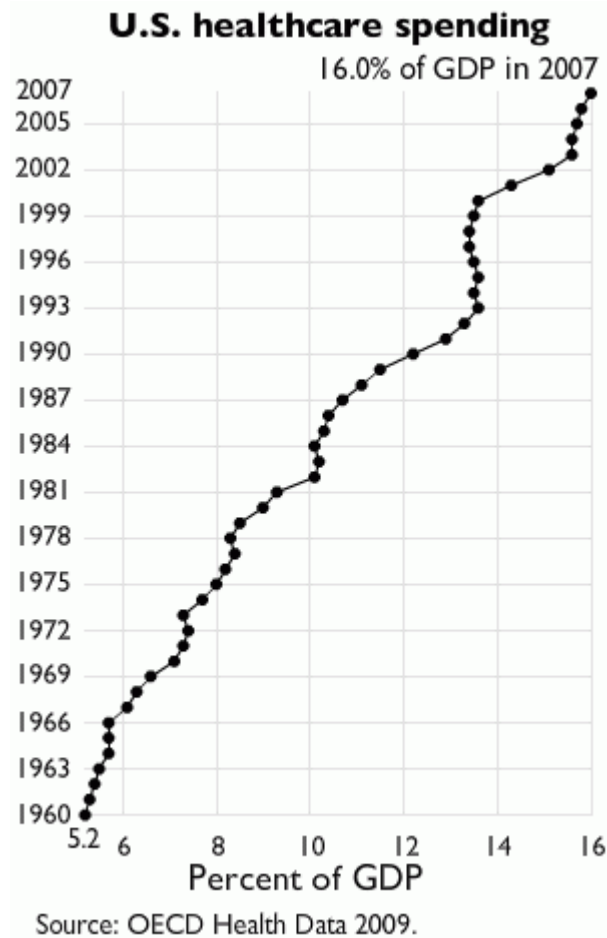
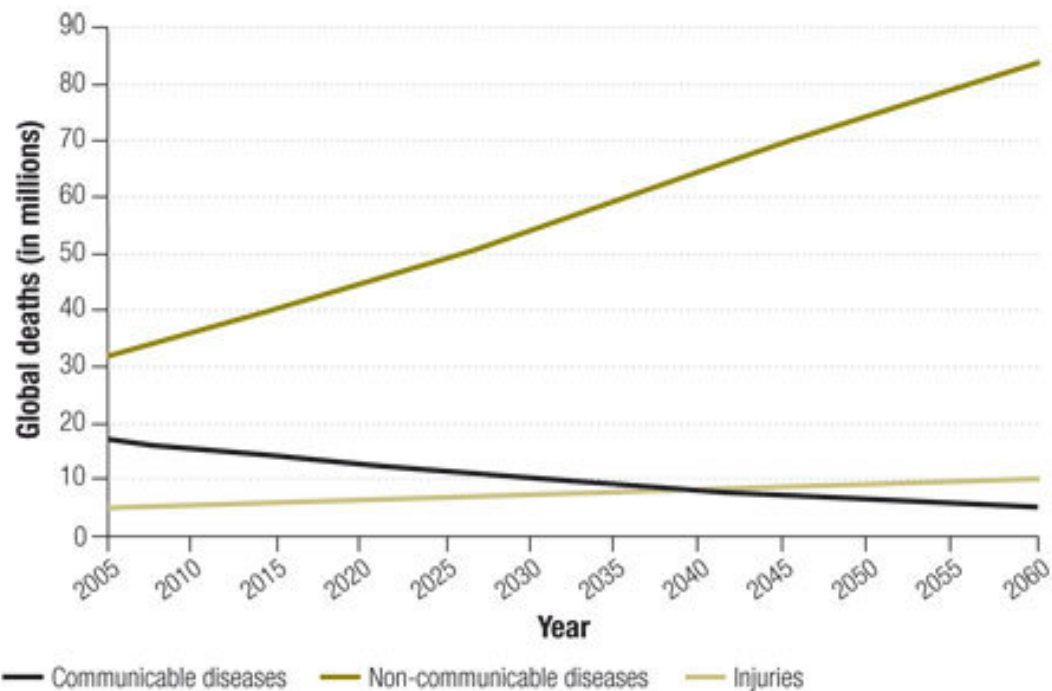
Vice-President Fortis Healthcare International

Executive Director, Lien Centre for Palliative Care, Duke-NUS GMS

Nov 2011



# A LOOMING CRISIS





**MORE EVIDENCE OF A HEALTH CARE SYSTEM IN CRISIS**

## Medical Bankruptcy in the United States, 2007: Results of a National Study

David U. Himmelstein, MD,<sup>a</sup> Deborah Thorne, PhD,<sup>b</sup> Elizabeth Warren, JD,<sup>c</sup> Steffie Woolhandler, MD, MPH<sup>a</sup>

*<sup>a</sup>Department of Medicine, Cambridge Hospital/Harvard Medical School, Cambridge, Mass; <sup>b</sup>Department of Sociology, Ohio University, Athens; and <sup>c</sup>Harvard Law School, Cambridge, Mass.*

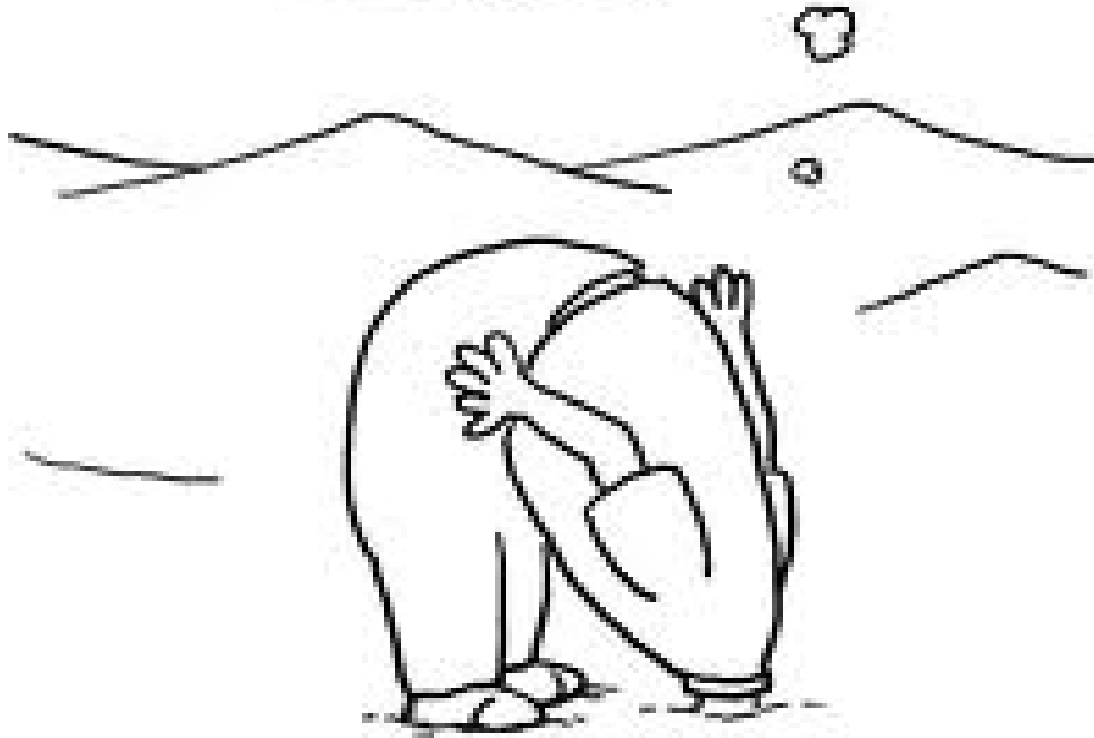
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“62.1% of all bankruptcies in 2007 were medical; 92% of these medical debtors had medical debts over \$5000, or 10% of pretax family income. The rest met criteria for medical bankruptcy because they had lost significant income due to illness or mortgaged a home to pay medical bills. Most medical debtors were well educated, owned homes, and had middle-class occupations.”

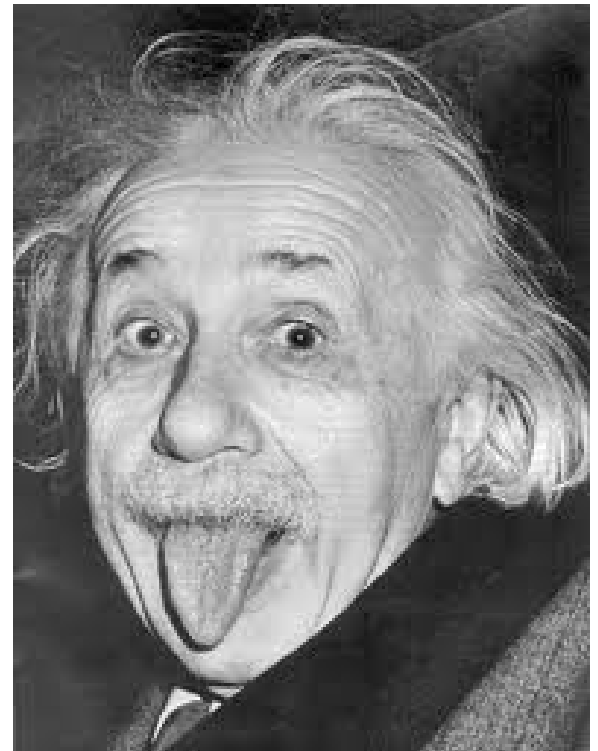
**“Unless you’re Warren Buffett, your family is just one serious illness away from bankruptcy.”**

David Himmelstein, Harvard Medical School

BURYING MY HEAD IN THE SAND  
OVER CLIMATE CHANGE IS MUCH EASIER  
NOW THAT HALF THE WORLD'S  
TURNED TO DESERT!



- Insanity: doing the same thing over and over again and expecting different results.



# THE INNOVATION MILIEU

“There are millions of ideas, [but] very few people are courageous enough to innovate, especially in healthcare.”

*Stephan Gutzeit, executive director of the Stiftung Charité, Germany*

“If ever a field needed a makeover, it's medicine.

**Chaotic, expensive, inefficient, and often ineffective, health care is dying for innovation.**

There's no shortage of clever ideas, but, barriers to innovation—everything from heart-stopping price tags for new technologies to doctors' famous crankiness about doing things differently—are just as abundant.”

Gardiner Morse, Harvard Business Review 2010

- Measurement & Accountability
- Systems Thinking & Continuous Improvement
- Aligned Financing





## Consensus Statement

[« SHOW](#)

JAMA. 1998;280(11):1000-1005. doi: 10.1001/jama.280.11.1000

# The Urgent Need to Improve Health Care Quality

## Institute of Medicine National Roundtable on Health Care Quality

Mark R. Chassin, MD, MPP, MPH; Robert W. Galvin; and the National Roundtable on Health Care Quality

[\[+\] Author Affiliations](#)

## ABSTRACT

**Objective.**— To identify issues related to the quality of health care in the United States, including its measurement, assessment, and improvement, requiring action by health care professionals or other constituencies in the public or private sectors.

**Participants.**— The National Roundtable on Health Care Quality, convened by the Institute of Medicine, a component of the National Academy of Sciences, comprised 20 representatives of the private and public sectors, practicing medicine and nursing, representing academia, business, consumer advocacy, and the health media, and including the heads of federal health programs. The roundtable met 6 times between February 1996 and January 1998. It explored ongoing, rapid changes in health care and the implications of these changes for the quality of health and health care in the United States.

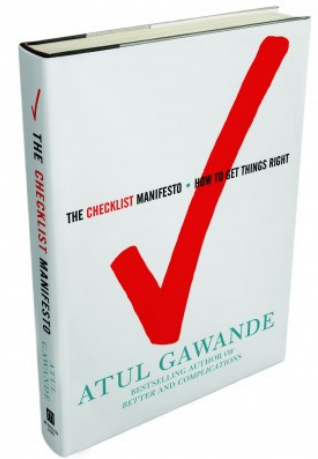
**“The quality of health care can be precisely defined and measured with a degree of scientific accuracy comparable with that of most measures used in clinical medicine.”**

## CASE STUDY: Minnesota Community Measurement



© Minnesota Community Measurement

- **What it does:** Collects and publishes comparative treatment processes and, where appropriate, patient outcome results online.
- **Why it's innovative:** It has shown that it is possible to overcome clinicians' reluctance to gather and publish transparent data about the true cost and effectiveness of medical intervention.
- **What it has achieved so far:** Comparative data lets patients and clinics know how they are doing. Locally, cancer screening and childhood immunisation rates have shot up, as has the number of diabetics reaching key targets. Future goals include data gathering on long-term patient outcomes.
- [www.mnhealthscores.org](http://www.mnhealthscores.org)



Number of diabetics achieving all their “D5” goals (lower blood pressure, cholesterol and blood sugar, quitting smoking and taking aspirin) more than tripled.

Screening for breast, cervical, and colorectal cancer >50%, an increase of more than 5% in one year

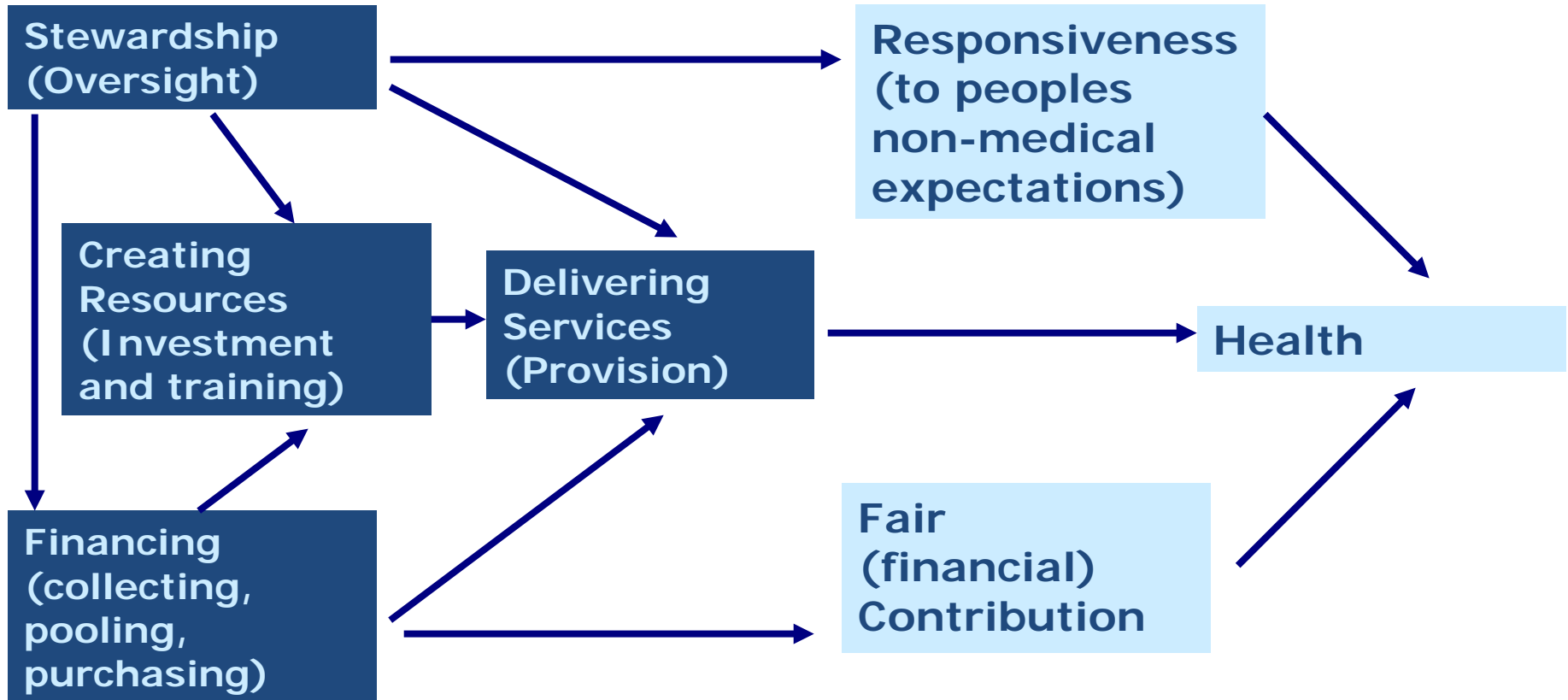
Since 2006, the rate of childhood immunisation has jumped from 52% to 78%.

(EIU 2009)



## Health System Functions

## Health System Objectives

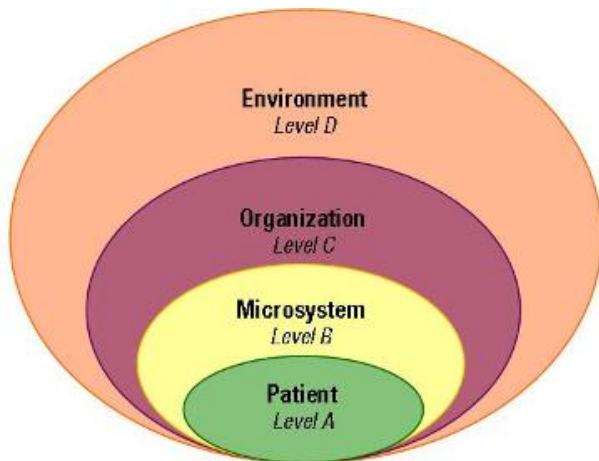


- A health system comprises all organizations, institutions and resources devoted to producing actions whose primary intent is to improve health.

(World Health Organization)



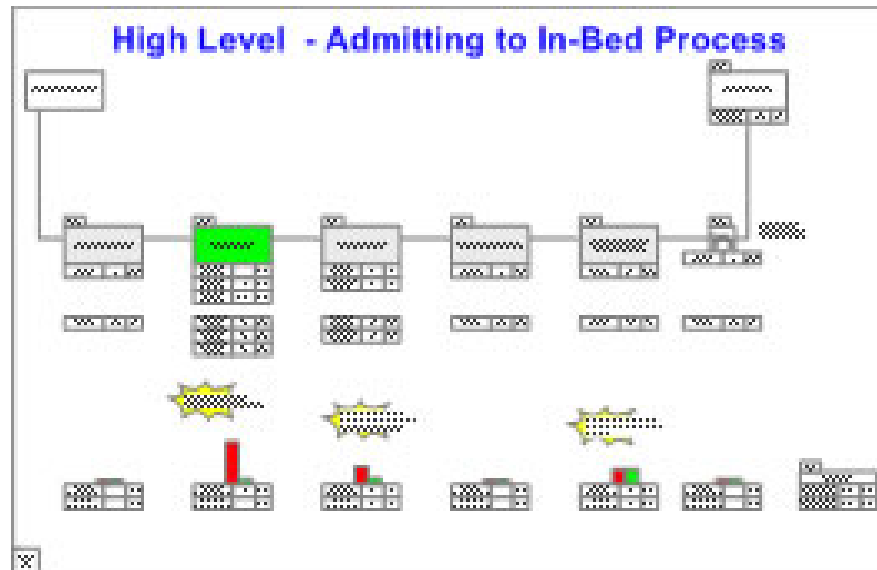
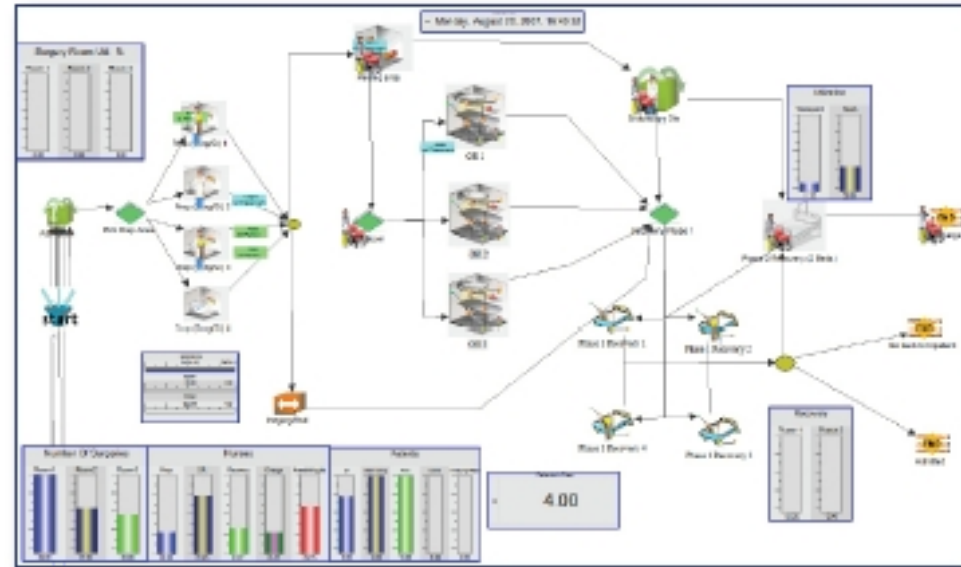
During the 20th century, the health and life expectancy of persons residing in the United States improved dramatically. Since 1900, the average lifespan of persons in the United States has lengthened by greater than 30 years; **25 years of this gain are attributable to advances in public health**



The Health Care System



Bunker JP, Frazier HS, Mosteller F. Improving health: measuring effects of medical care. *Milbank Quarterly* 1994;72:225-58



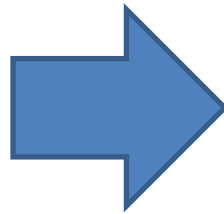
“Every system is perfectly designed to get the results it gets”

Paul Batalden, Dartmouth  
Medical School

# HEALTHCARE FINANCING

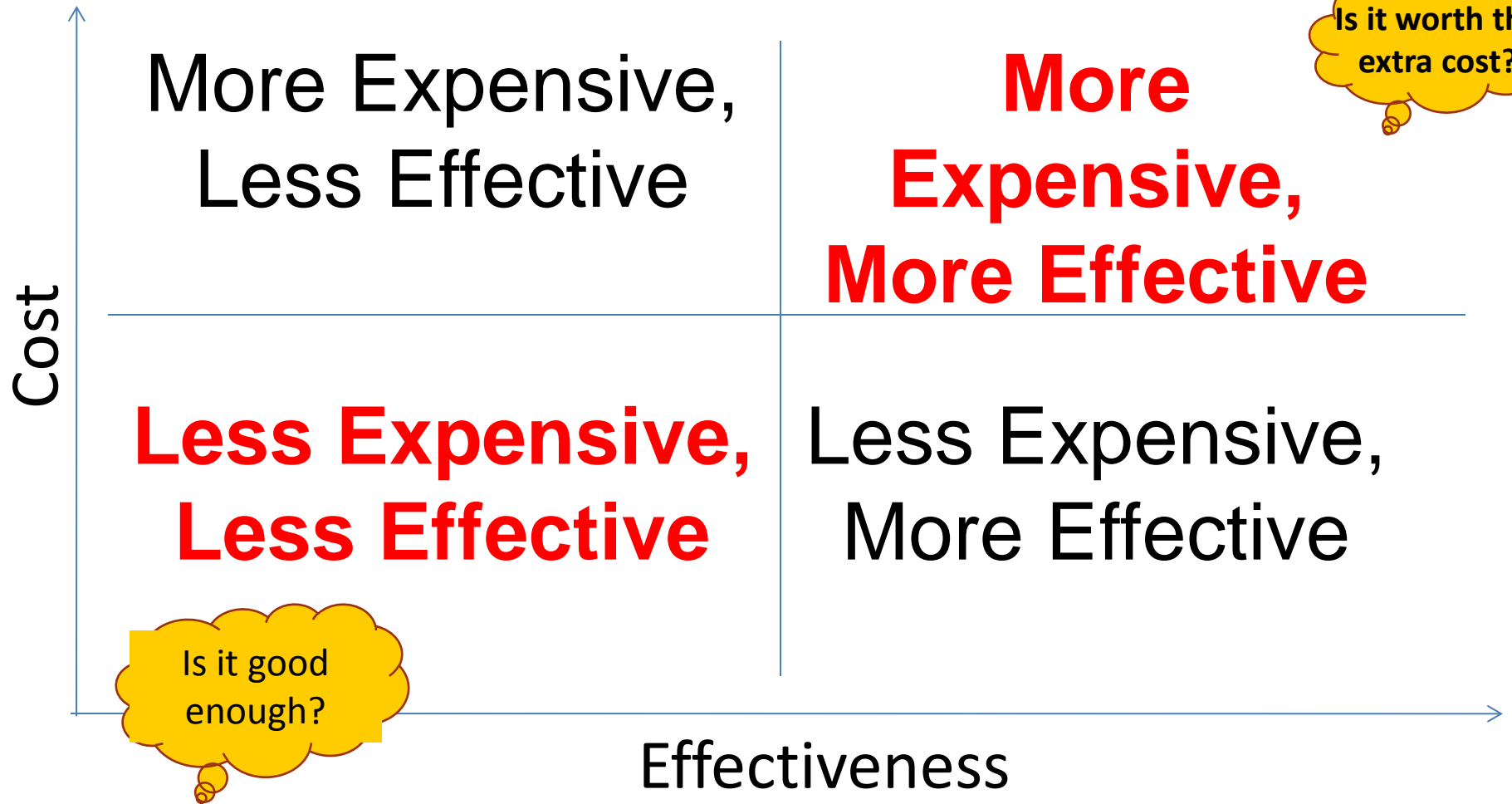
- How patients pay for healthcare
- How physicians and organizations are paid for delivering healthcare

**Paying for healthcare**  
**Paid for delivering**  
**healthcare**



**Paying for healthcare**  
**Paid for delivering**  
**healthcare**

# COST-EFFECTIVENESS MATRIX





**Table 1. Contrasting Characteristics of the Cultures of Physicians and Medicine in the 20th and 21st Centuries**

20 <sup>th</sup> -Century Characteristics	21 <sup>st</sup> -Century Characteristics
<ul style="list-style-type: none"><li>• Autonomy</li><li>• Solo practice</li><li>• Continuous learning</li><li>• Infallibility</li><li>• Knowledge</li></ul>	<ul style="list-style-type: none"><li>• Teamwork / Systems</li><li>• Group practice</li><li>• Continuous improvement</li><li>• Multidisciplinary problem solving</li><li>• Change</li></ul>

- Medicine continues to foster an aura of infallibility of the physician, and in many ways remains a "blame-and-shame" type of profession, in which the individual physician is supposed to know everything and not acknowledge when he or she is wrong or makes errors. Problem solving should be the 21st-century paradigm for the profession.
- Although the acquisition of new knowledge will remain important for the profession, it is the use of knowledge to produce change that should be a central feature of the knowledge effort in the 21st century.

(Kenneth Shine, 2001 Robert H. Ebert Memorial Lecture  
Health Care Quality and How to Achieve It )

# UNLEASHING INNOVATION

- Share information, especially on the outcome of treatments, to improve quality
- Bring outside entrepreneurship to healthcare
- Deliver integrated care based on medical conditions rather than provider expertise
- Treat patients as a source of innovation
- Use these ideas together



Commissioned by Philips

# THE INNOVATION MILIEU... IS IT PRESENT TO TRANSFORM CHRONIC DISEASE CARE?

“There are millions of ideas, [but] very few people are courageous enough to innovate, especially in healthcare.”

*Stephan Gutzeit, executive director of the Stiftung Charité, Germany*

“If ever a field needed a makeover, it's medicine. Chaotic, expensive, inefficient, and often ineffective, health care is dying for innovation. There's no shortage of clever ideas, but, barriers to innovation—everything from heart-stopping price tags for new technologies to doctors' famous crankiness about doing things differently—are just as abundant.”

Gardiner Morse, Harvard Business Review 2010

- Measurement & Accountability
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# The anti-tobacco campaign of the Nazis: a little known aspect of public health in Germany, 1933-45

Robert N Proctor

**Historians and epidemiologists have only recently begun to explore the Nazi anti-tobacco movement. Germany had the world's strongest antismoking movement in the 1930s and early 1940s, encompassing bans on smoking in public spaces, bans on advertising, restrictions on tobacco rations for women, and the world's most refined tobacco epidemiology, linking tobacco use with the already evident epidemic of lung cancer. The anti-tobacco campaign must be understood against the backdrop of the Nazi quest for racial and bodily purity, which also motivated many other public health efforts of the era.**

*BMJ* 1996;313:1450-3

propaganda. In a pattern that would become familiar in the United States and elsewhere after the second world war, several of these journals tried to dismiss the anti-tobacco movement as “fanatic” and “unscientific.” One such journal featured the German word for science twice in its title (*Der Tabak: Wissenschaftliche Zeitschrift der Internationalen Tabakwissenschaftlichen Gesellschaft*, founded in 1940).

We should also realise that tobacco provided an important source of revenue for the national treasury. In 1937-8 German national income from tobacco taxes and tariffs exceeded 1 billion Reichsmarks.<sup>12</sup> By 1941, as a result of new taxes and the annexation of Austria and Bohemia, Germans were paying nearly twice that.

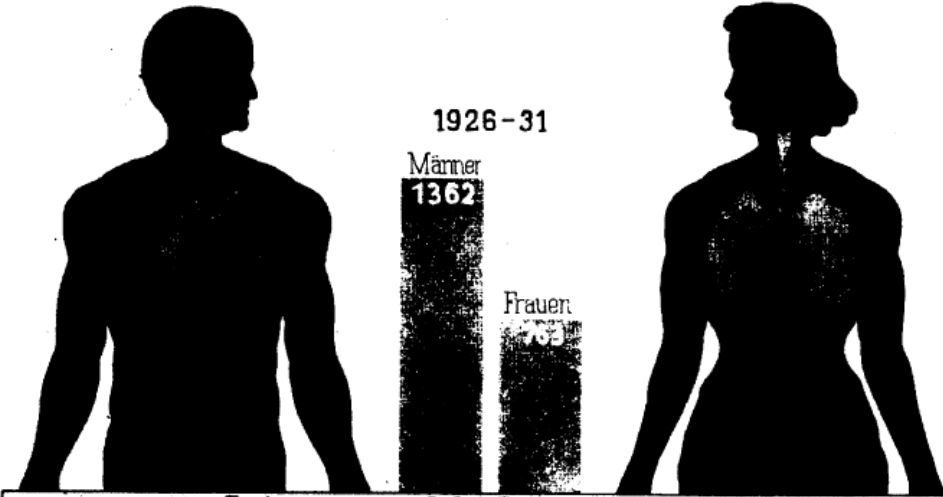
1938- Luftwaffe (German airforce and Post Office banned smoking

1939- NSDAP (Nationalsozialistische Deutsche Arbeiterpartei) banned smoking

1941- Smoking banned in street cars; tobacco taxes raised to 80-95% of retail price

1943- All under age of 18 years banned from smoking

1944- Smoking banned on all buses and trains



Ist es wirklich ein Zufall, daß Männer soviel häufiger an Erkrankung der Atmungsorgane leiden als Frauen?

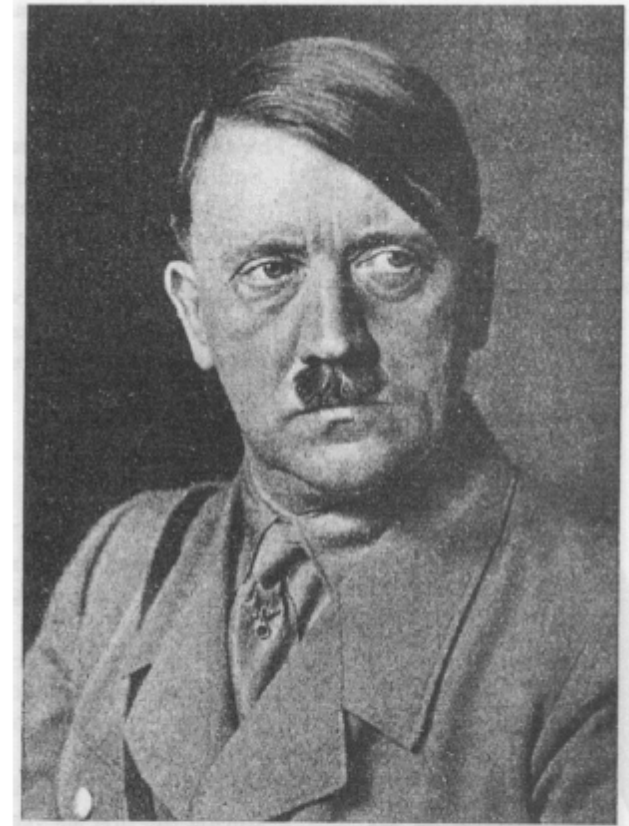


## Cigarettes per capita per year

	1932	1939
Germany	570	900
France	570	630

### Why?

- 'Cultural resistance'
- Undermining of efforts by industry-Counter-publications; pseudo-science
- 'Ambivalent' government- By 1941, tobacco taxes 1/12 of government revenues



#### **Unser Führer Adolf Hitler**

trinkt keinen Alkohol und raucht auch nicht. Ohne andere im geringsten in dieser Richtung zu beormunden, hält er sich eifern an das selbstauferlegte Lebensgefetz. Seine Arbeitsleistung ist ungeheuer. (Reichsjugendführer Balbur v. Schirach im Dudy: „Hitler, wie ihn keiner kennt.“)

## Reduced in-hospital mortality after improved management of children under 5 years admitted to hospital with malaria: randomised trial

Sidu Biai, director of paediatric ward,<sup>1</sup> Amabelia Rodrigues, senior epidemiologist,<sup>1</sup> Melba Gomes, projects manager,<sup>2</sup> Isabela Ribeiro, clinical epidemiologist,<sup>2</sup> Morten Sodemann, clinical epidemiologist,<sup>1</sup> Fernanda Alves, clinical epidemiologist,<sup>3</sup> Peter Aaby, professor<sup>1</sup>

doi:10.1136/bmj.39345.467813.80

HISTORIC	CONTROL	INTERVENTION
Poorly resourced- staffing, drugs	Education; Free treatment kits	Education; Free treatment kits; Close supervision; Financial payment
12%	10%	5%

# SUMMARY

- Healthcare, especially for chronic diseases is a looming crisis
  - More of the same will not help
- Health Systems Innovations vital
  - Favorable milieu essential pre-condition for innovation
    - Measurement and Accountability
    - Systems Thinking and Continuous Improvement
    - Aligned Financing



# TEN INNOVATIONS THAT WILL TRANSFORM MEDICINE

- **Checklists**
- **Behavioral economics**
- **Patient portals**
- **Payment innovations**
- **Evidence-based decision making**
- **Accountable care organizations**
- Regenerative medicine
- **Virtual visits**
- Genetic medicine
- Surgical robots

Harvard Business Review 2010



- “Twenty-first century medical technology is delivered with 19th century organisational structures... The most powerful innovation in the coming decade will be structural and organisational— new ways of working, new team approaches to delivering the full cycle of care.”



Professor Elizabeth Teisberg  
Darden School of Business  
University of Virginia



HEALTH

# *Thinking Out Loud Health Services Research: Past and Future*

**Robert H Brook, M.D., Sc.D., F.A.C.P.**  
**RAND Distinguished Chair in Health Care Services**  
**Senior Advisor, RAND Corporation**  
**Professor of Medicine, David Geffen School of Medicine, UCLA**  
**Professor of Health Services, UCLA School of Public Health**  
**Director of Robert Wood Johnson/UCLA Clinical Scholars Program**

# What Has Health Services Research Done for You?

1. Health can be measured
2. Quality of care can be measured
3. The more people pay for care out of their own pocket the less care they use – but they reduce their use of both appropriate and inappropriate care equally
4. At the margin reducing the use of medical services has little impact on health
5. Reducing health disparities as a function of where you live will require fundamental changes in the environment

# What Has Health Services Research Done for You?

6. Health professionals respond to money
7. Evidence-based medicine, patient decision-aids, and use of quantitative tools to make better decisions have been developed
8. We have designed health care to be wasteful
9. Depression is the leading cause of morbidity
10. Children need to feel safe to learn