



U.S. Health Care Issues and Reform: An Informative Discussion

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The U.S. Health Care System

The US health care system is very complex, very difficult to characterize in a few words.

Health care coverage is very **fragmented**:

- derived from a variety of multiple private and public sources
 - private health insurance
 - Medicare, Medicaid, military programs

Most who have health insurance coverage get it through their employer.

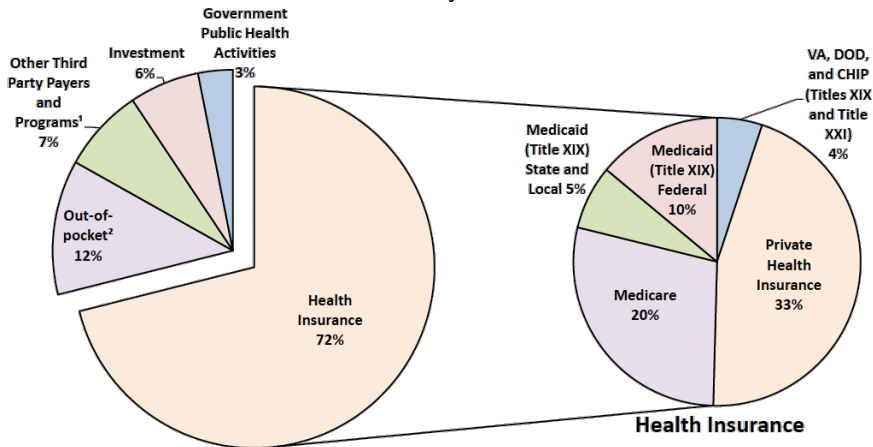
The US is one of only three (Mexico, Turkey are the other two) OECD countries that do not have universal health care insurance.

Indeed in 2010, roughly 50 million Americans did not have health insurance. (US population as of 2010: 300+ million)



Their health care dollar: who paid

Calendar year 2010



Source: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group



Footnotes from the source

Word-for-word footnotes from the source for the previous graph:

- ¹ includes worksite health care, other private revenues, Indian Health Service, workers' compensation, general assistance, maternal and child health, vocational rehabilitation, Substance Abuse and Mental Health Services Administration, school health, and other federal and state local programs.
- ² includes co-payments, deductibles, and any amounts not covered by health insurance.

Sources: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group



Health care providers

Hospitals: public, for-profit, not-for-profit

- paid through a combination of methods
 - per service, per-diem, per admission, capitation
 - capitation: pays set amount for each enrolled, regardless whether care is sought or not

Doctors/physicians: privately-owned clinics (solo or with others), many work for hospitals or other health institutions

Nurses:

- believed to be in short supply
- generally do more than they probably are trained to
- nurse aides



The U.S. Public Health System

At the national level, the US has a very well-developed and extremely effective public health system.

- envy of the world
- Department of Health and Human Services:
 - “improve health, safety, and well-being of Americans”
 - Center for Disease Control and Prevention (CDC)
 - Center for Medicare and Medicaid Services (CMS)
 - Food and Drug Administration (FDA)

The country makes huge investment in medical research:

- National Institute of Health (NIH) provides and oversees funding
- clinical trials



Health care in the United States

Some facts:

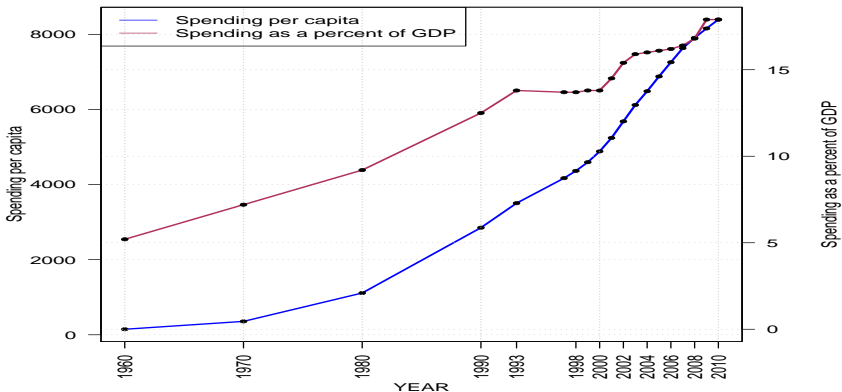
- rapid rise in cost
 - increasing health insurance premiums
- lack of access
 - growing number of uninsured
 - underinsured

Some perceived views:

- ineffective outcome of improving health care
 - quality of care
 - waste, unnecessary treatments
 - does not always translate to improved mortality



Rising health care spending



Source: Centers for Medicare and Medicaid Services



Rising health care spending (continued)

In 1980:

- spending per capita is \$ 1,112.20
- spending as a percentage of GDP is 9.2%

In 2010:

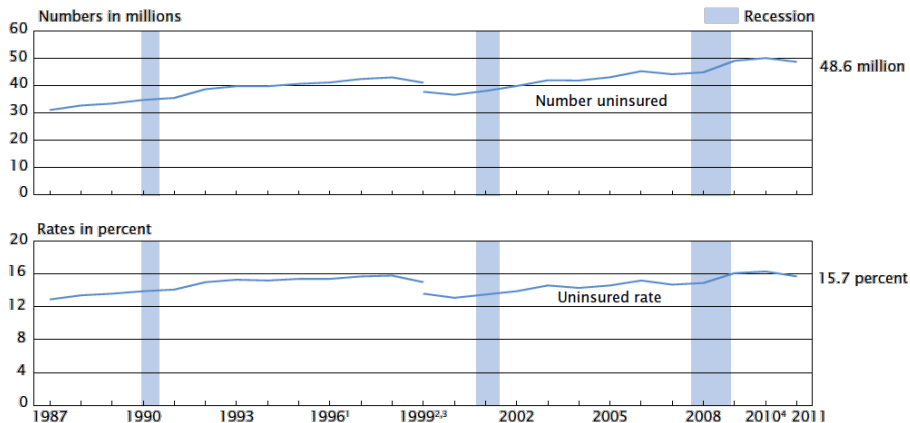
- spending per capita is \$ 8,393.50
- spending as a percentage of GDP is 17.9%

That translates to about 5.5 times more spending in the last three decades.

Comparatively, a \$1 in 1980 is worth about \$2.6 in 2010.



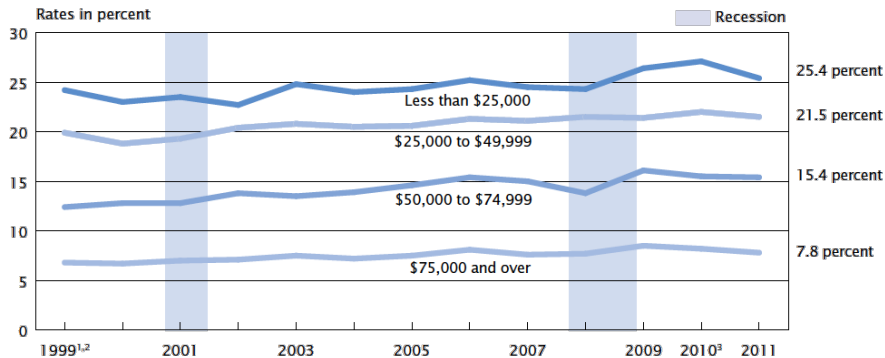
The uninsured: 1987 to 2011



Source: Centers for Medicare and Medicaid Services

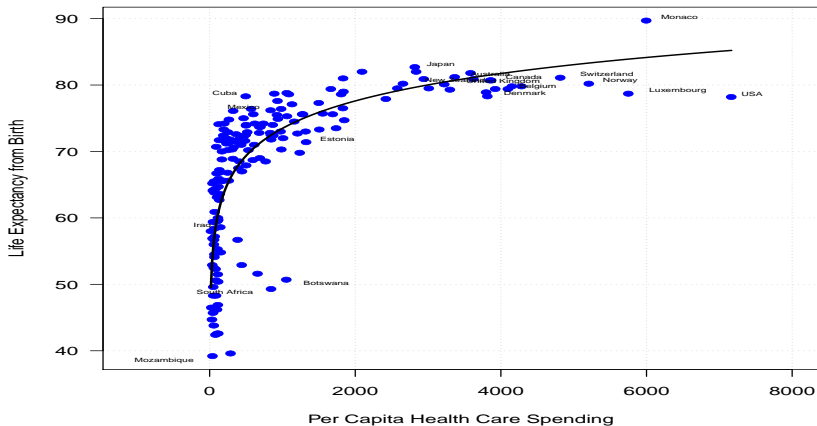


The uninsureds by household income



Source: Centers for Medicare and Medicaid Services

Spending and Longevity

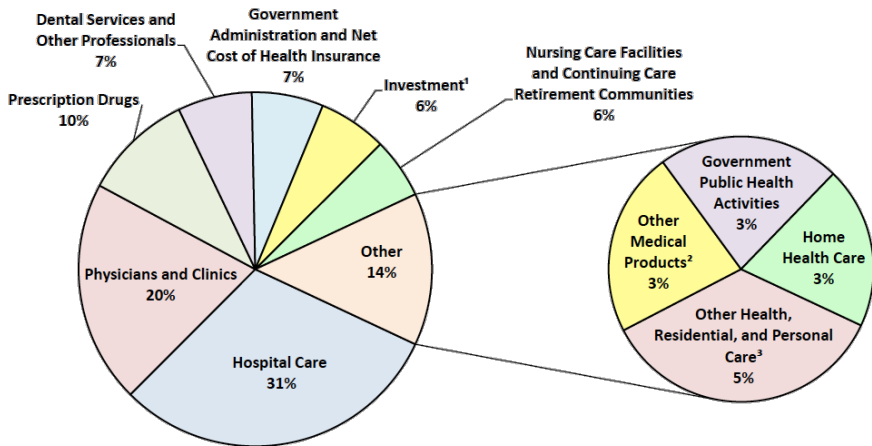


Data source: World Health Organization, 2009



Their health care dollar: where it went

Calendar year 2010



Sources: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group



Footnotes from the source

Word-for-word footnotes from the source for the previous graph:

- ¹ includes Research (2%) and Structures and Equipment (4%).
- ² includes Durable (1%) and Non-durable (2%) goods.
- ³ includes expenditures for residential care facilities, ambulance providers, medical care delivered in non-traditional settings (such as community centers, senior citizens centers, schools, and military field stations), and expenditures for Home and Community Waiver programs under Medicaid.

Note: Sum of pieces may not equal to 100% due to rounding.

Sources: Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group



Affordable Care Act

A federal statute, enacted by Congress, signed into law by President Obama on March 23, 2010.

- Originally called “Patient Protection and Affordable Care Act”, PPACA, for short;
- other names: *Obamacare*, *federal health care law*
- The PPACA, together with the Health Care and Education Reconciliation Act, became the now-known **Affordable Care Act**.
- In some sense, the PPACA was amended to include riders such as the Student and Fiscal Responsibility Act where the Pell Grants were removed.
- The “Pell Grants” provided scholarships for needy students to be able to go to college.



- continued

On the health care portion of the Act:

- The law aims to:
 - improve access to health care (thus, hoping to improve the health of the general population)
 - improve quality and delivery of care (government intervention on insurance, medical providers)
 - reduce per capita spending on health care
- How will the law do this?
 - mandates, subsidies, tax credits
 - regulate insurance companies without eliminating, but rather encouraging, competition
 - reforms to improve quality of delivery of health care



Improving access

Moving people out of uninsured:

- individual mandate (most controversial)
- expand Medicaid eligibility
- federal subsidies to low-income individuals and families
- encourage employer-sponsored health plans, with subsidies

Expanding standards and coverage for health insurance plans:

- guaranteed issue: no regard to gender, pre-existing conditions
- ban annual and lifetime coverage limits
- children may stay on family health plan until age 26
- free services on certain preventive care
- eliminate co-payments, deductibles, co-insurance, to some extent



Individual mandate

All individuals not covered by

- employer-sponsored health plan, Medicaid, Medicare, or other public insurance programs

must secure a private insurance policy, or pay a “penalty”, with few exceptions (e.g. membership in a recognized religious sect, financial hardship).

Several sued claiming this mandate, and other PPACA provisions, were unconstitutional, e.g. violation of the **Anti-Injunction Act**:

- National Federation of Independent Business v. Sebelius
- US Supreme Court upheld constitutionality of these provisions on June 28, 2012

From an actuarial point of view, the individual mandate is necessary to avoid the issue of adverse selection that may result because of “guaranteed issue”.



Health insurance exchange

A mega-place to buy health insurance plans:

- state-run, must be federally certified, fully operational by the start of year 2014
- began making them available on October 2013, but have had some problems (e.g. individuals unable to log-in to system to enrol)
- government-regulated
 - standardized health care plans
 - control, to some extent, premium and profit
 - 80/20 rule: 80 cents for every dollar of premium to go towards health care
 - double digit increases must be justified
- federal subsidies
- increase in transparency: individuals able to choose and compare
- hope is to increase competition, and hence, affordability
- I believe so far only 19 of the 50 states have such exchanges.



Cost and who will pay

The Congressional Budget Office (CBO) price tag estimate: \$1.76 trillion over a 10-year period

This will be funded through a combination of:

- new taxes,
- fees,
- penalties, and
- spending offsets

on individuals, businesses, and the health care industry. Accordingly, the PPACA is not expected to add to the budget deficit, but is expected to be paid for.

No subsidy in other words from federal budget.



Breakdown of the total estimates: 2013-2022

In \$ billion, on a PV basis:

gross spending estimates	-1,677
Medicare cuts	415
investment income tax	318
insurance expansion benefits	216
manufacturer/insurer fees	165
Medicare Advantage cuts	156
penalty payments by employers	117
"cadillac plans" excise tax	111
disproportionate share hospital cuts	56
penalty payments by individuals	55
other cuts	114
total funding	1,723

Source: M. Tarpey, Senior Honors Thesis on the Cost Analysis of Obamacare, U of Connecticut, 2013.



For the individuals

A sampling of some of these costs directly passed on to the individuals:

- additional Medicare tax rates of 0.9% imposed on wages and (at possibly higher rate) investment income
- penalties for having no health care insurance
- excise tax on health insurance premiums above a threshold
- higher threshold for itemized medical expense deductions: from 7.5% to 1% of Adjusted Gross Income (AGI)
- tax on indoor tanning
- limiting contributions to pre-tax flexible spending accounts (FSA)



For the health care industry

A sampling of some of these costs to be borne by the health care industry:

- an annual fee on health insurance providers
- an annual fee on manufacturers and importers of branded drugs
- additional tax on manufacturers and importers of certain medical devices
- excise taxes on high cost employer sponsored health coverage
- a limitation on remuneration paid by health insurance providers



Some challenges and opportunities to actuaries

- Implementation:
 - uncertainty, inconsistency and lack of guidance, deadlines, decisions
 - both at the federal and state level
- PPACA requirements are not quite clear when it comes to:
 - changes in product design
 - rating assumptions
 - rate filings, changes in forms to fill
 - regulatory requirements
- Actuaries are now limited or restricted to the use of certain variables for setting premiums:
 - age, tobacco use, geography, family size
 - use of gender is being phased out



Limitations of use of age as rating factor

- The premium rate cannot vary by more than some relative ratios according to a standard age curve; the most such ratio is 3 to 1 (relative to 21+ years old)
- For premium rating purposes, the age used is the age at time of policy effective or renewal date.
- For any variation in rate, it must be *actuarially justified* for individuals under age 21, consistent with a uniform rating curve:
 - child age bands: 0-20 years old; single age band
 - adult age bands: 21-63 years old; one-year age band
 - older adult age bands: 64+ years old; single age band
- Narrower ratios for states may be permitted subject to approval and justification.



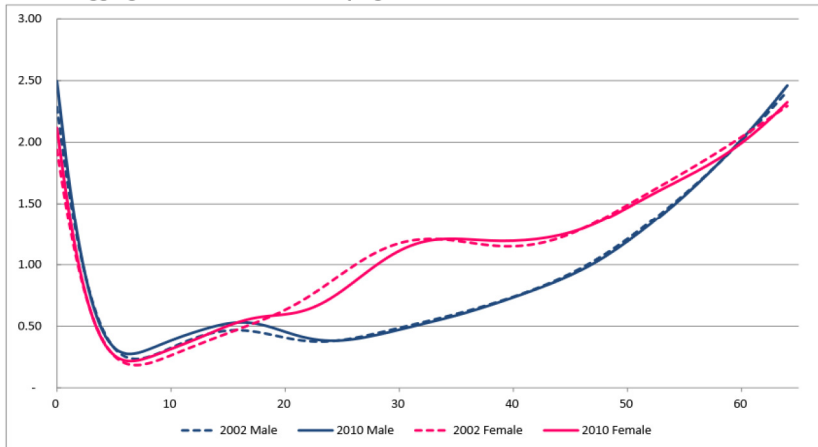
Proposed federal standard age curve

Age	Premium Ratio	Age	Premium Ratio	Age	Premium Ratio
0-20	0.635	35	1.222	50	1.786
21	1.000	36	1.230	51	1.865
22	1.000	37	1.238	52	1.952
23	1.000	38	1.246	53	2.040
24	1.000	39	1.262	54	2.135
25	1.004	40	1.278	55	2.230
26	1.024	41	1.302	56	2.333
27	1.048	42	1.325	57	2.437
28	1.087	43	1.357	58	2.548
29	1.119	44	1.397	59	2.603
30	1.135	45	1.444	60	2.714
31	1.159	46	1.500	61	2.810
32	1.183	47	1.563	62	2.873
33	1.198	48	1.635	63	2.952
34	1.214	49	1.706	64+	3.000

Source: Center for Medicare and Medicaid Services

Relative per capita health care costs

Chart 1: Aggregate Commercial Costs by Age 2002 and 2010



Source: (without permission) Health Care Costs - From Birth to Death by D.H. Yamamoto, 2013



Levels of benefit coverage

- The health insurance package do not have to be **uniform** or the same for all.
- So long as there is a minimum level of “essential health benefits” (or EHB) provided by the coverage.
- The idea is to give choice to the individuals or members of a group plan, making it affordable to all.
- Layers of coverage could be classified as: bronze, silver, gold, platinum, or even some kind of a catastrophic plan.



The 3R federal programs

- The federal **R**einsurance program
 - a 3-year transitional program, federally administered
 - to help reduce premium for individual risk pool and redistribute costs to groups
 - partially supported from US treasury
- **R**isk corridor payments
 - reimburse insurers for excess/high costs and charge those with significant financial gains
 - in order to protect health insurers against severe financial losses
- **R**isk adjustment payments
 - redistribute premiums among small individual and small group health insurers within each state
 - based on the health status of individuals enrolled in each state



Video: Health Reform Hits Main Street



Concluding remarks

To no surprise, there are quite a number of skeptics about the long term impact of this new federal health law:

- Largest potential positive success: increasing access to health care for almost everyone.
- For driving down the health care costs is a wait-and-see:
 - all the fees and excise taxes imposed on the health care industry may revert back to the consumers
- For improving quality of health care is also a wait-and-see:
 - pressure for health care providers to deliver care at a lower cost
 - possible need to increase number of nurses, doctors, surgeons, etc.

The government, insurance companies and health care providers are expected to continually work together and assess the most cost-efficient delivery of health care without compromising quality.

It is also said that the government will form an advisory council to assess the progress of the law over time.



Sources of information

I am thankful of these websites for most of the information drawn on this talk:

- U.S. Department of Health and Human Services (www.hhs.gov)
- U.S. Census Bureau (www.census.gov)
- Centers for Medicare and Medicaid Services (www.cms.gov)
- Health Reform Explained Video: “Health Reform Hits Main Street” - produced by The Kaiser Family Foundation (available on youtube at www.youtube.com/watch?v=3-I1c5xK2_E)
- “Patient Protection and Affordable Care Act” on wikipedia
- Memo dated on 27 Feb 2013 on Final Rules published by the Health and Human Services Department.



- Thank you -