



Middlebury

Health Economics: A Primer

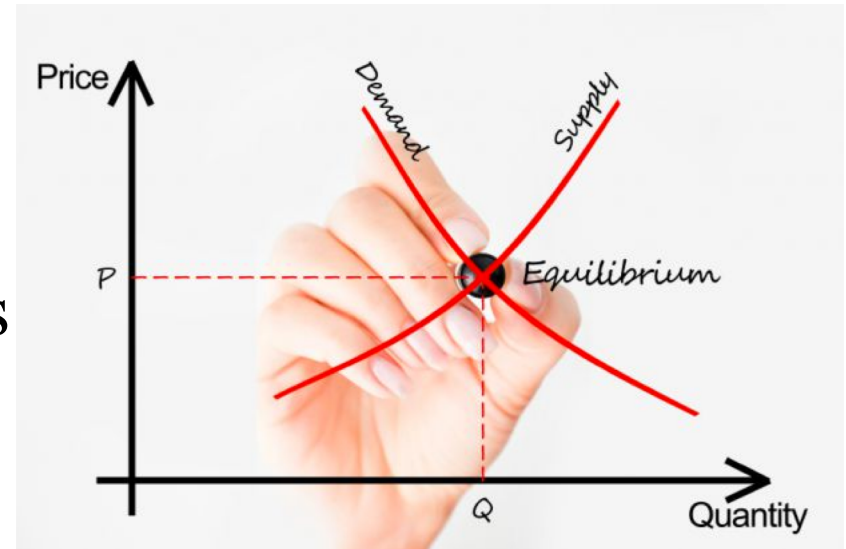
Jessica Holmes

Professor of Economics, Middlebury College

GMCB Board Member

What is Economics?

- Social Science—study of how humans allocate resources under conditions of scarcity.
- A few key concepts
 - Demand and Supply
 - Cost-Benefit Analysis
 - Incentives Matter



What is Health Economics?

- Study of how we allocate *scarce health care resources* and the impact of that allocation on the health status on population.
 - Resources are limited, wants are limitless. How do we allocate our resources to meet the greatest wants? We have to make trade-offs.



Is the Health Care sector unique?

Most markets have a few common features

1. Most transactions involve only a buyer and a seller.
2. Sellers can freely enter and exit a marketplace
3. Buyers have full information about the quality of the product/service and the price they will pay.
4. Buyers pay sellers directly for the goods/services being exchanged.
5. Market prices help coordinate the decisions of market participants and lead to efficient outcomes.



Is the Health Care sector unique?

In the Health Care sector...

1. Most transactions involve only a buyer and a seller. **NO!**

Presence of third parties in transactions—insurers and the government play a significant role in determining health care decisions.

2. Sellers can freely enter and exit a marketplace. **NO!**

Provider Licensing, CON laws, High Fixed Costs create barriers to entry.

3. Buyers have full information about the quality of the product/service and the price they will pay. **NO!**

Patients often don't know what they need and cannot evaluate the quality of their treatment. They often lack full information on quality and price.



Is the Health Care sector unique?

In the Health Care sector...

4. Buyers pay sellers directly for the goods/services being exchanged. **NO!**

Health care providers are most often paid by third parties (private or government health insurance)...after the transaction has occurred.

5. Free market prices coordinate the decisions of market participants and lead to efficient outcomes. **NO!**

The access and payment rules established by insurance companies and government payers largely determine the allocation of resources, and the resulting allocation may not be the most efficient.



Taking the pulse of the US Health Care system

Economists assessing the overall performance of a health care system focus on three key components (“Triple Aim”)

- Access
- Cost
- Quality



Access: What % of the population has access to health care?

- **Access to the health care system is tied to access to health insurance.**

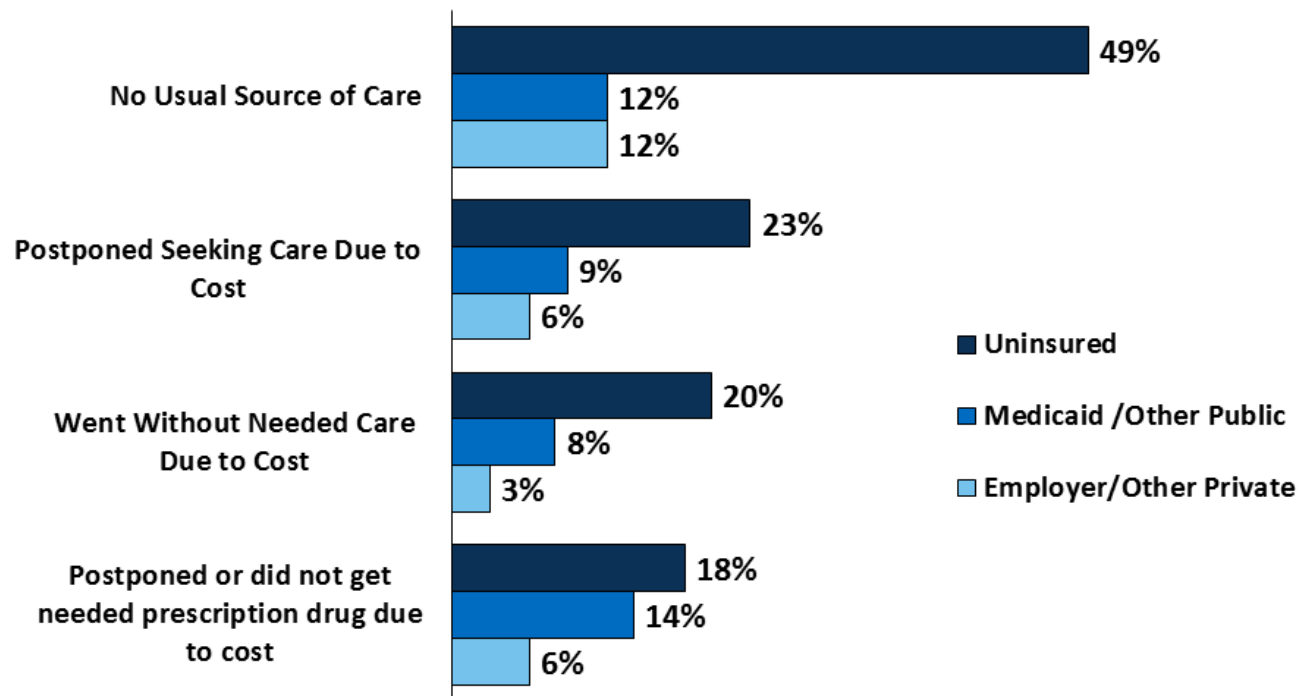
*“Health insurance makes a difference in whether and when people get necessary medical care, where they get their care, and ultimately, how healthy they are. Uninsured people are far more likely than those with insurance to postpone health care or forgo it altogether. The consequences can be severe, particularly when preventable conditions or chronic diseases go undetected.” **Key Facts about the Uninsured Population, Kaiser Family Foundation.***



Access: The importance of health insurance

Figure 9

Barriers to Health Care Among Nonelderly Adults by Insurance Status, 2016



NOTE: Includes nonelderly adults ages 18-64. Includes barriers experienced in past 12 months. Respondents who said usual source of care was the emergency room were included among those not having a usual source of care. All differences between uninsured and insurance groups are statistically significant ($p < 0.05$).

SOURCE: Kaiser Family Foundation analysis of the 2016 National Health Interview Survey.



Access: The impact of the Affordable Care Act (2010)

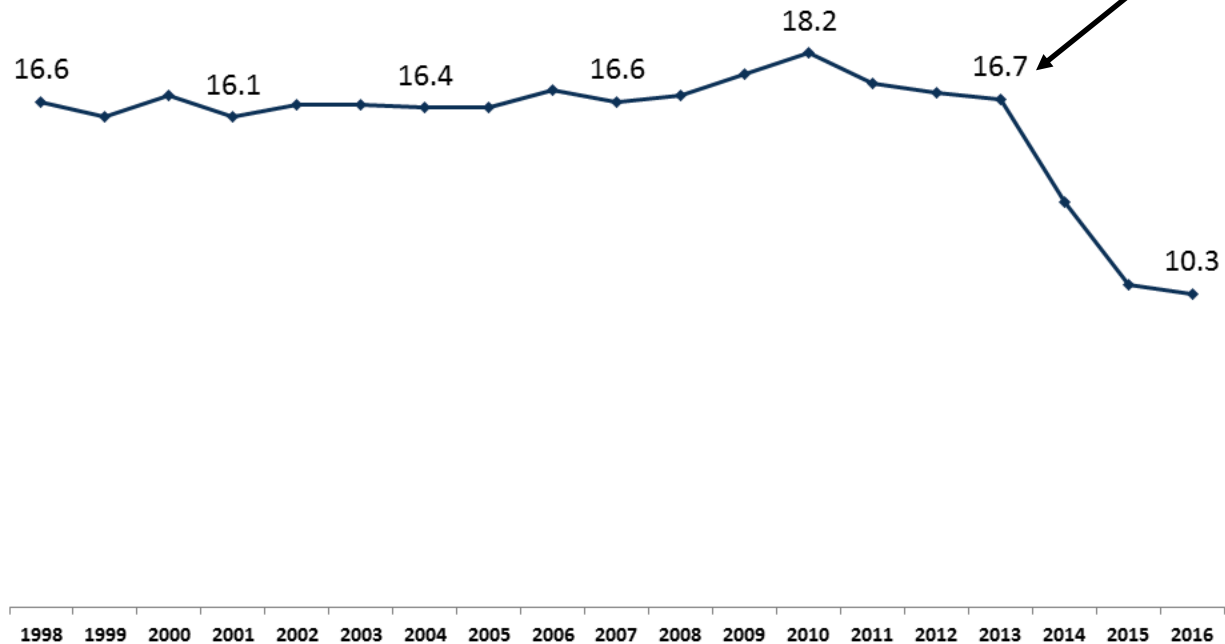
- Landmark legislation whose primary focus was increasing access to health insurance. How?
 - Imposed an Individual and Employer Mandate
 - Provided Funding for Medicaid expansion
 - Limited the ability of insurance companies to deny coverage to consumers with pre-existing conditions; eliminated lifetime caps
 - Imposed limits on what insurance companies could charge for smokers, older people, etc.
 - Allowed young people to stay on family coverage until age 26
 - Introduced premium tax credits and cost-sharing subsidies for those who purchase insurance on the Exchange



Access: The impact of the Affordable Care Act

Figure 2

Uninsured Rate Among the Nonelderly Population, 1998-2016



Most ACA Provisions took effect in 2014

NOTES: Includes nonelderly individuals ages 0-64.
SOURCE: Kaiser Family Foundation analysis of the 1998 - 2016 National Health Interview Survey.



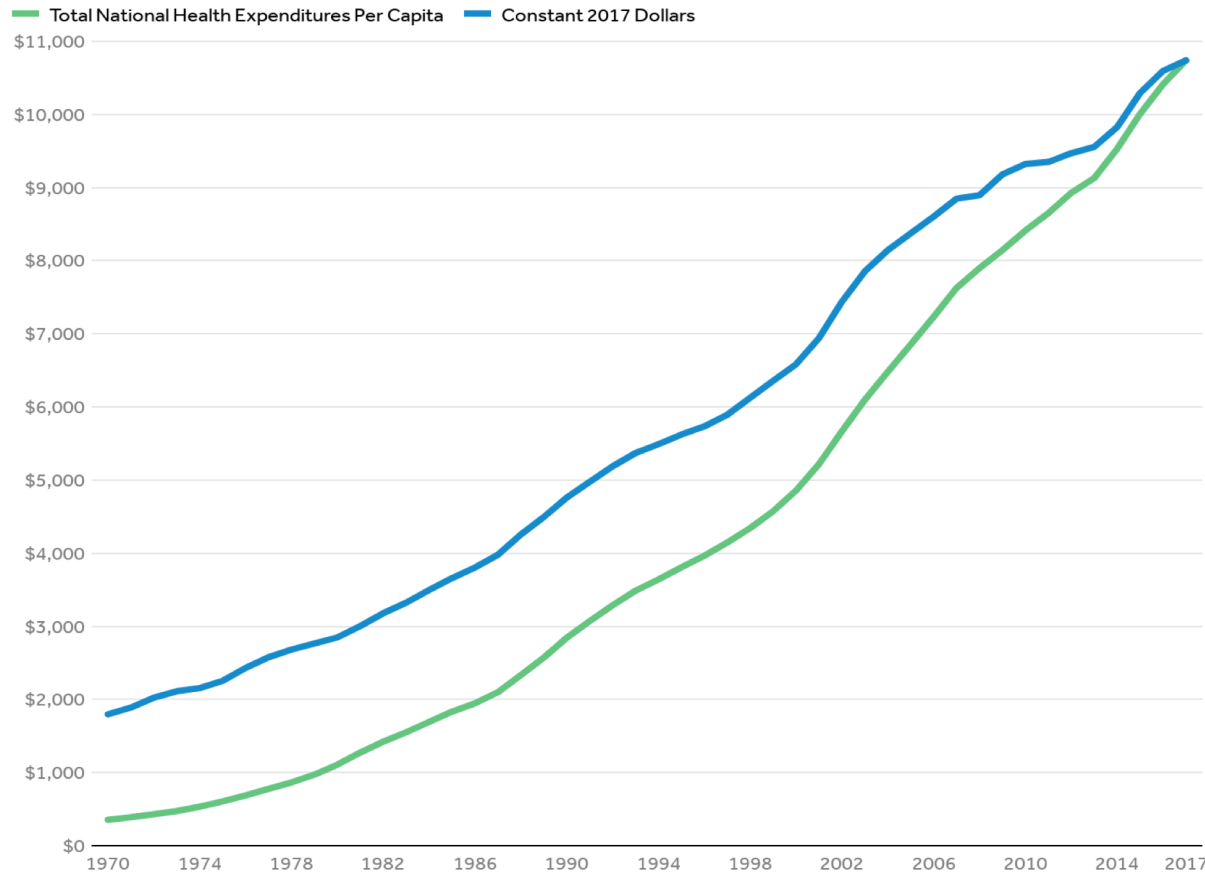
Access: Main Take-aways

- Health Insurance is the ticket into the health care system.
- Uninsured people often postpone health care or forgo it altogether. This can lead to poor outcomes for those with preventable conditions and chronic diseases.
- The Affordable Care Act made huge strides in reducing the numbers of uninsured but there are still more than 20 million Americans without health insurance.
- Safety net providers, including hospitals, community health centers, rural health centers, FQHCs and free clinics provide care to many people without health coverage.



Costs: Growth in per capita health care spending over time

Total national health expenditures, US \$ per capita, 1970-2017



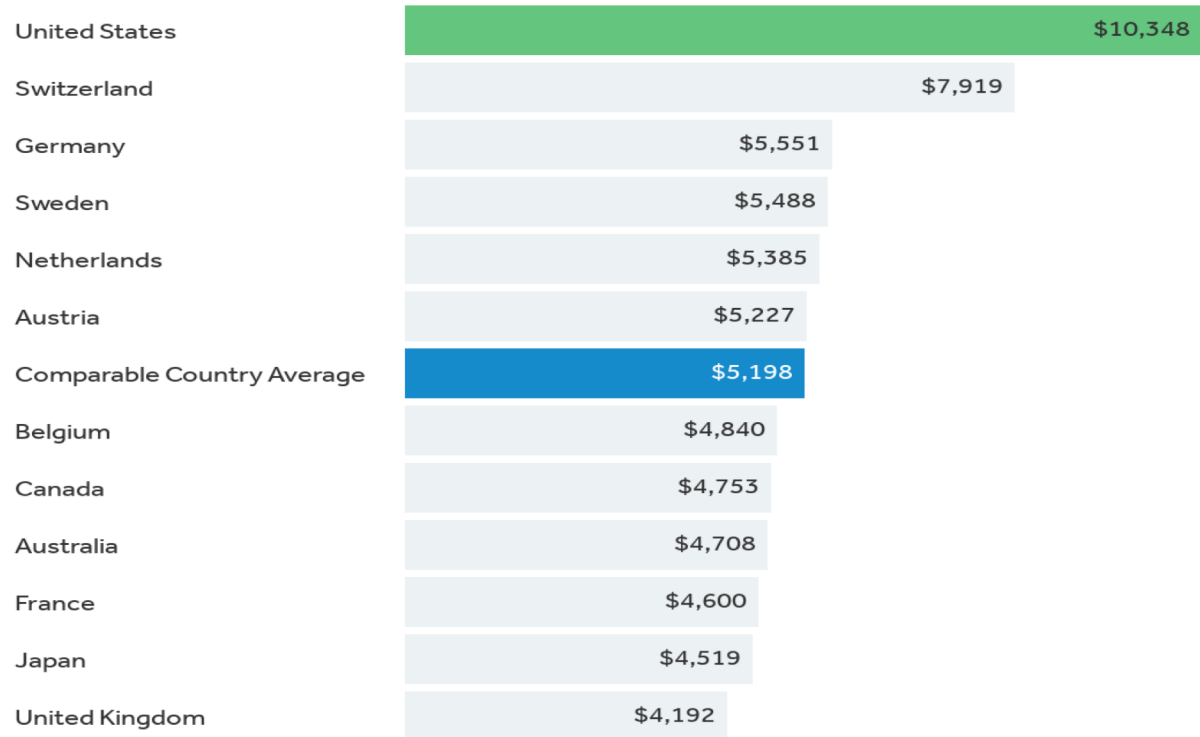
Source: Kaiser Family Foundation analysis of National Health Expenditure (NHE) data
• [Get the data](#) • [PNG](#)

Peterson-Kaiser
Health System Tracker



Costs: Cross-country comparison of expenditures per capita

Total health expenditures per capita, U.S. dollars, PPP adjusted, 2016



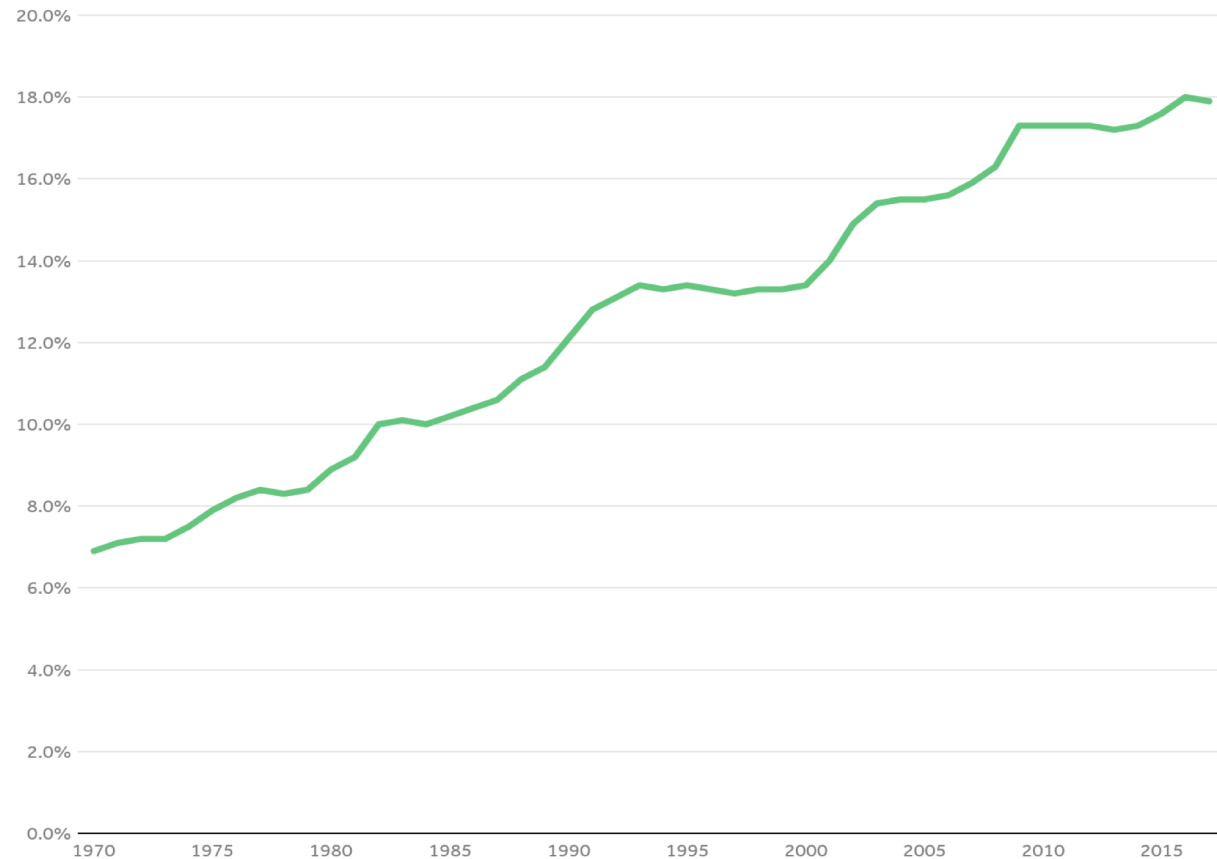
Source: Source: U.S. data are from the 2016 National Health Expenditures Account. Comparable country data are from OECD (2017), "OECD Health Data: Health expenditure and financing: Health expenditure indicators", OECD Health Statistics (database). DOI: 10.1787/health-data-en (Accessed on March 19, 2017) • [Get the data](#) • [PNG](#)

Peterson-Kaiser
Health System Tracker



Costs: Health Expenditures as a share of US GDP over time

Total national health expenditures as a percent of Gross Domestic Product, 1970-2017

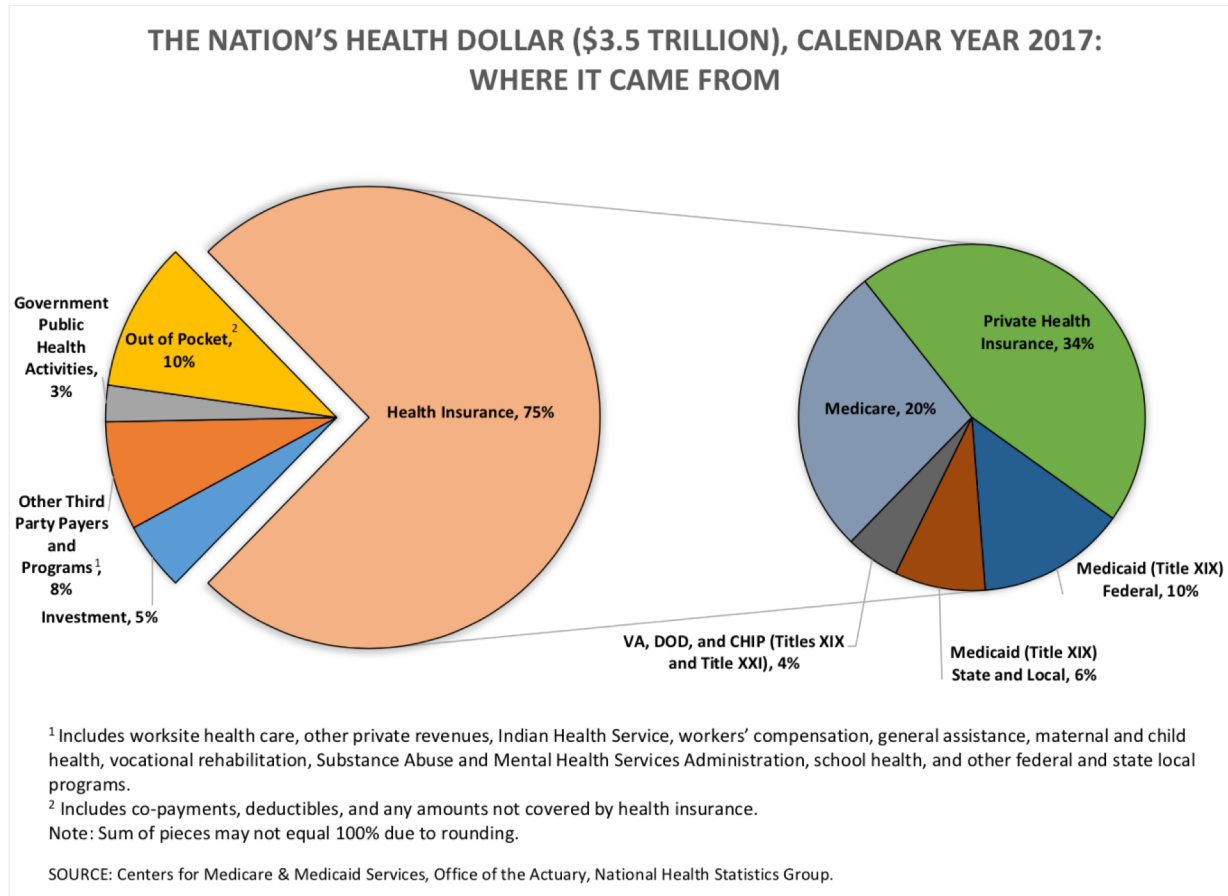


Source: Kaiser Family Foundation analysis of National Health Expenditure (NHE) data
• [Get the data](#) • [PNG](#)

Peterson-Kaiser
Health System Tracker

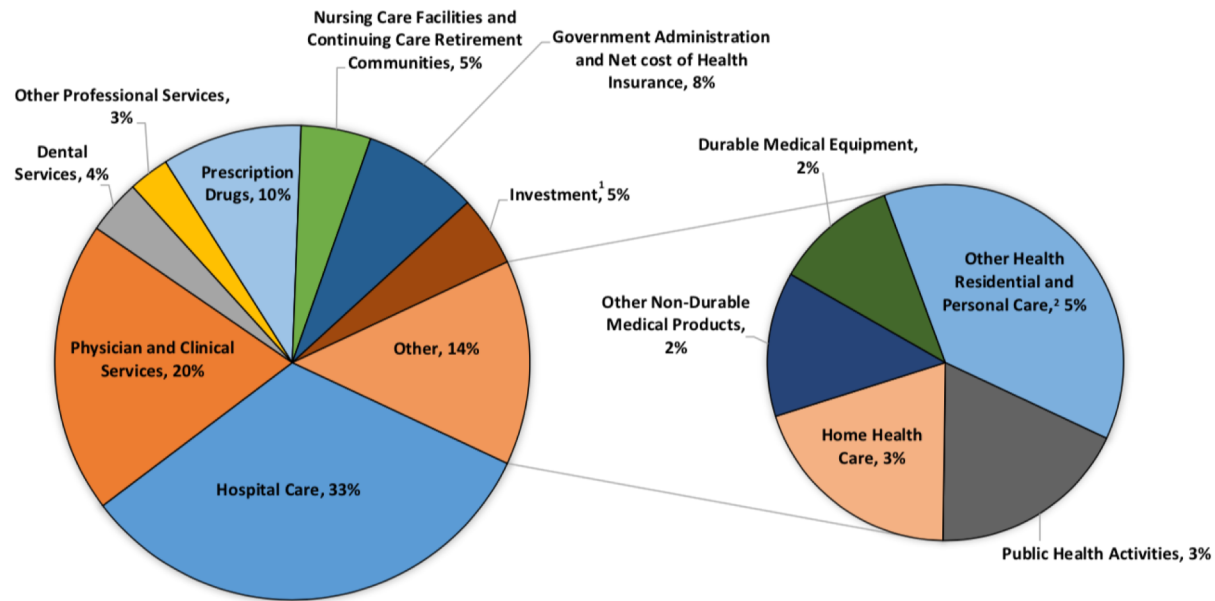


Costs: Sources of Spending, 2017



Costs: Uses of Spending, 2017

THE NATION'S HEALTH DOLLAR (\$3.5 TRILLION), CALENDAR YEAR 2017,
WHERE IT WENT



¹ Includes Noncommercial Research and Structures and Equipment.

² 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 100% due to rounding.

SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.



Costs: Main Take-aways

- We spend more per capita for health care than any other country in the world
- Our health care expenditures are growing faster than the economy which means health care is taking up more and more of our household, state and federal budgets.
- 75% of expenditures paid through health insurance and over 50% of expenditures are directed to hospitals and physicians and clinical services



Costs: What is driving up health care spending?

- *Growth of third party payers (people shielded from true cost of care demand more care — “moral hazard”)
- *Fee for service reimbursement system (incentivizes volume not value)
- *Technological growth
- *Increased specialization
- Aging of population
- Income growth



Quality: We are spending more...are we getting more?

- **Not so much.....**



Quality: We are spending more...are we getting more?

Health Care System Performance Scores



Note: See How This Study Was Conducted for a description of how the performance scores are calculated.
Source: Commonwealth Fund analysis.



The Commonwealth Fund

E. C. Schneider, D. O. Sarnak, D. Squires, A. Shah, and M. M. Doty, *Mirror, Mirror: How the U.S. Health Care System Compares Internationally at a Time of Radical Change*, The Commonwealth Fund, July 2017.



Middlebury

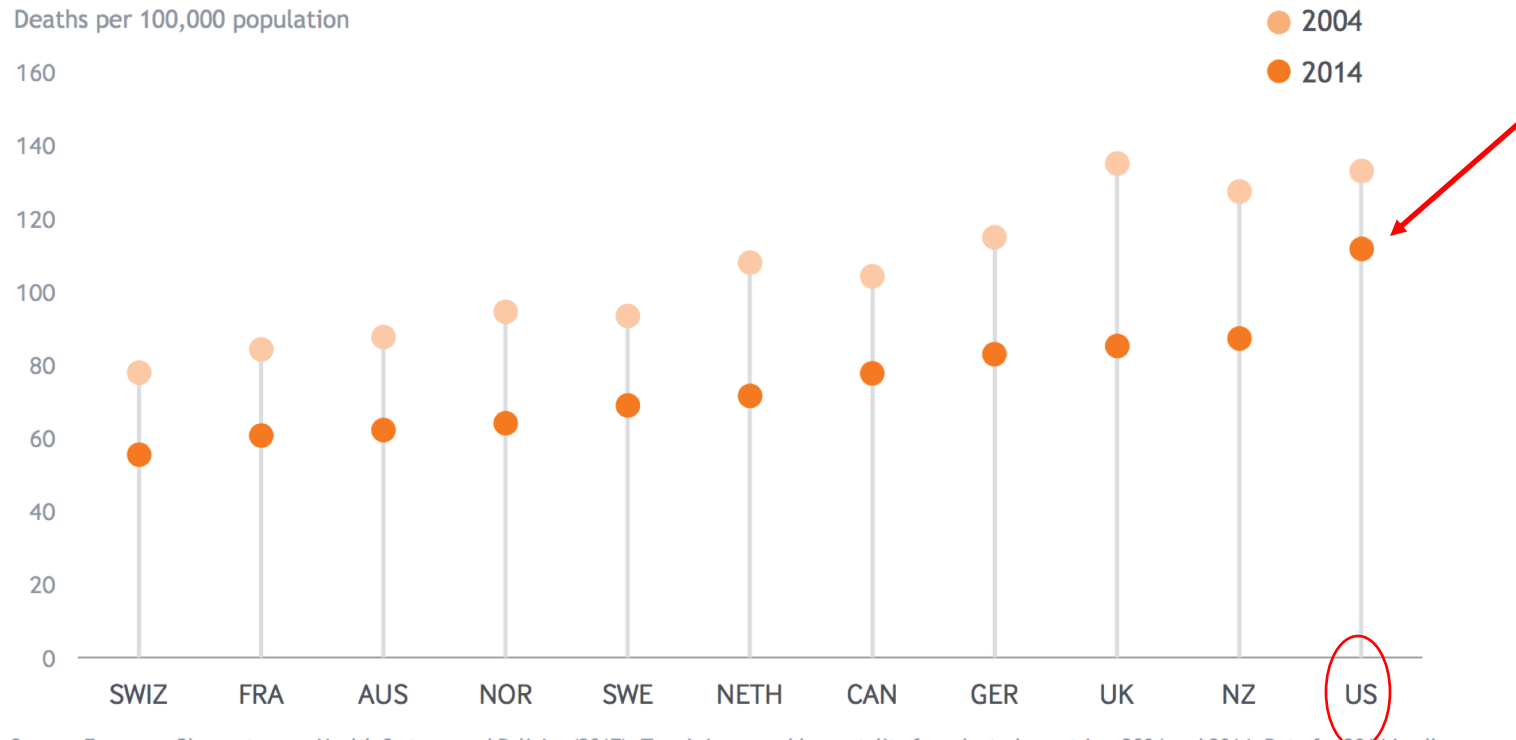
Quality: We are spending more...are we getting more?

- The US performs poorly on basic health measures such as **child and infant mortality** and **life expectancy** at birth.
 - From 2001-2010, the risk of death in the US was 76% greater for infants and 57% greater for children than the average across 20 high income nations. Thakrar et al., (2018) *Health Affairs*
 - In 2016, the US ranked *last* in life expectancy at birth among 18 high income countries. The gap between the highest performer and the US was almost 6 years for women and 5 years for men. Ho, (2018) *British Medical Journal*



Quality: We are spending more...are we getting more?

Mortality Amenable to Health Care, 2004 and 2014



Source: European Observatory on Health Systems and Policies (2017). Trends in amenable mortality for selected countries, 2004 and 2014. Data for 2014 in all countries except Canada (2011), France (2013), the Netherlands (2013), New Zealand (2012), Switzerland (2013), and the U.K. (2013). Amenable mortality causes based on Nolte and McKee (2004). Mortality and population data derived from WHO mortality files (Sept. 2016); population data for Canada and the U.S. derived from the Human Mortality Database. Age-specific rates standardized to the European Standard Population (2013).



The Commonwealth Fund

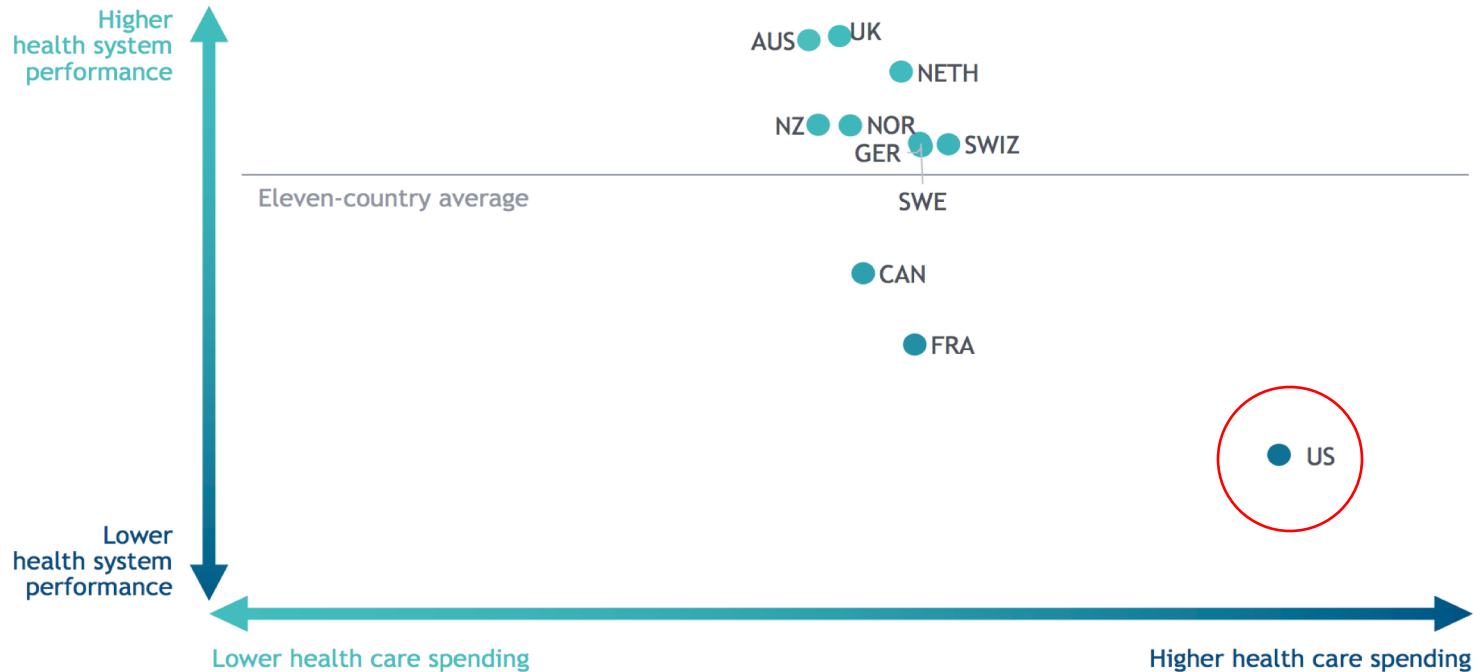
E. C. Schneider, D. O. Sarnak, D. Squires, A. Shah, and M. M. Doty, *Mirror, Mirror: How the U.S. Health Care System Compares Internationally at a Time of Radical Change*, The Commonwealth Fund, July 2017.



Middlebury

Quality: We are spending more...are we getting more?

Health Care System Performance Compared to Spending



Note: Health care spending as a percent of GDP.

Source: Spending data are from OECD for the year 2014, and exclude spending on capital formation of health care providers.



The Commonwealth Fund

E. C. Schneider, D. O. Sarnak, D. Squires, A. Shah, and M. M. Doty, *Mirror, Mirror: How the U.S. Health Care System Compares Internationally at a Time of Radical Change*, The Commonwealth Fund, July 2017.

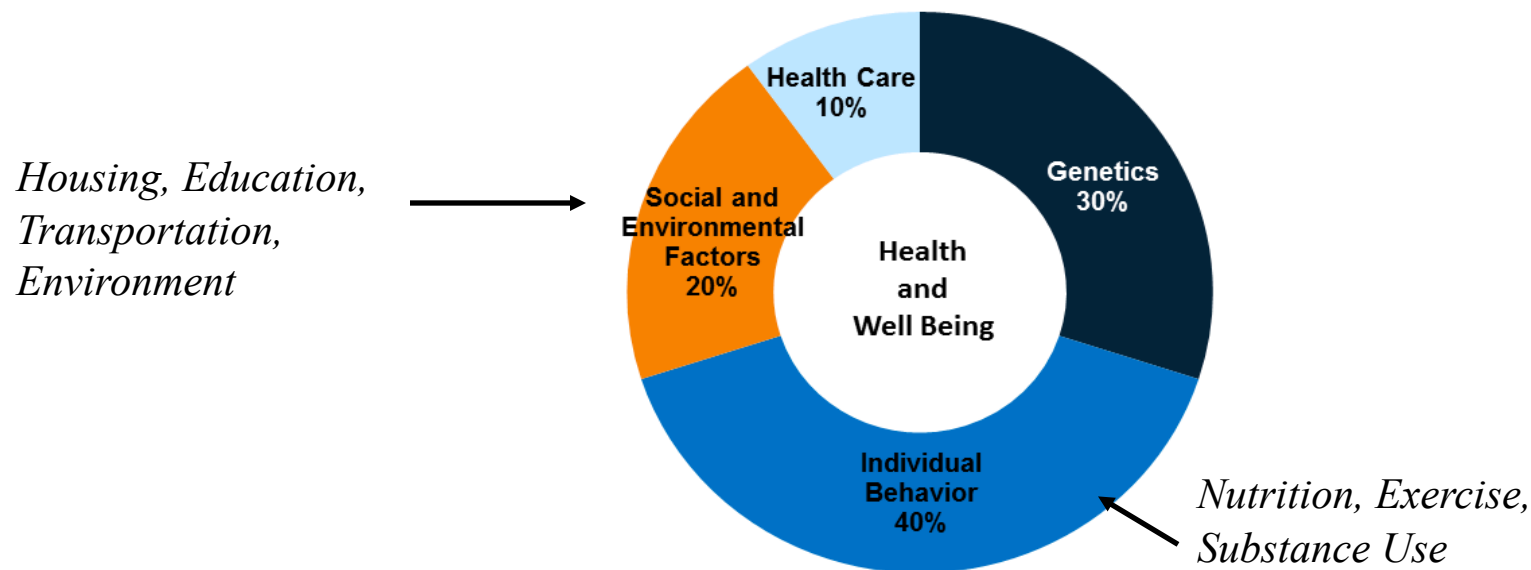


Middlebury

Determinants of Health:

How might we better allocate scarce resource dollars?

Figure 2
Impact of Different Factors on Risk of Premature Death



SOURCE: Schroeder, SA. (2007). We Can Do Better — Improving the Health of the American People. *NEJM*. 357:1221-8.

KFF
HENRY J. KAISER
FAMILY FOUNDATION



Middlebury

Determinants of Health:

How might we better allocate scarce resource dollars?

Research suggests...

- Ease access to health insurance to better ensure people have access to timely, preventative care
- Shift resources toward primary care and the social determinants of health
- Increase reliance on evidence-based medicine and cost-effectiveness research to reduce wasteful spending
- Align payment incentives with desired population health outcomes



Vermont's All-Payer Model:

Improving quality (population health) and reducing cost

Incentives Matter!

- Shifts payment from Fee-for-service to risk-adjusted capitated payment (*focus moves from sick care to well care, reduces wasteful spending/overutilization; incentivizes high impact investments (e.g.MH); encourages clinical innovation*)
- Shifts financial risk from payers to providers (*reduces wasteful spending/overutilization; incentivizes preventative care and early intervention*)
- Holds providers accountable for quality of care delivery and population health outcomes (*aligns patient and provider incentives*)
- Shift resources towards primary care and pays clinicians to coordinate care between providers of high risk patients (*breaks down care silos, improves clinical outcomes, reduces costly duplication of services and dangerous drug interactions*)
- Fixed population-based payments incentivize the investment in the *social determinants of health*





Middlebury

*Thank you for your time.
Questions?*