

# Why is Healthcare so Expensive:

## A Discussion about the Future of Healthcare Reform

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**ABSTRACT** The United States healthcare system is known as expensive but not effective. This paper aims to find a possible solution for the current health care affordability difficulties in different areas. The paper examines four existing issues with the current healthcare system including unnecessary usage of technology, non-uniform pricing system, lack of preventative measures, and insufficient insurance coverage. It proposes the following solutions: entrepreneurial innovations, standardized pricing systems, selected preventative measures and regulated insurance coverage respectively. The next stage of the research is to quantify the research through financial modeling and find the most optimized public funding allocation.

### INTRODUCTION

The current situation of the American healthcare system can be summarized by one word: overpriced. The nation's health care expenditure reached \$2.8 trillion in 2012, or \$8,915 per person (Center for Medicare and Medicaid Services). The health care sector takes 17.9% of U.S. GDP, while this number is 10.2% of the world average. (the World Bank). The main problems causing this situation in the current U.S. system are the unnecessary usage of advanced technology, a complex pricing system, the lack of preventative medical treatments, and a few pending insurance policies. To improve this situation, the U.S. Government should encourage social entrepreneurship to change the focus of medical innovation, make transparent pricing standards to reduce medical expenses, take more preventative measures, and implement health care insurance coverage policies.

#### Obsessed with Technology

The first drawback of the U.S. healthcare system is the use of unnecessary advanced technology, which can be solved by encouraging social entrepreneurship innovation. Advanced technologies generated high research and development costs as established players in the industry spent billions of dollars to research a medical product before it can be made available to the market. The large amount of investments pull up the drug distribution price and affects medical affordability; however, the necessity of these investments remains questionable for some health care products. In some less developed countries, a disease can be cured with much lower costs thanks to social entrepreneurs, and these curing treatments should be provided in the U.S. for patients as an option.

A possible source of affordable healthcare is social entrepreneurship, which focuses on the use of innovation to bring down the price of healthcare products. Social entrepreneurs are usually driven by their social concerns and passions for improving the world instead of attaining financial returns for their research. They are geared to help the general public and hence are willing to make compromises on the price of medication. One example of a social entrepreneur who has had many positive impacts on making drugs affordable is the founder of Project Impact, David Green. Green formed a partnership with Indian scientists in Aurolab and strove to make high quality, yet affordable products. He brought down suture prices by 75 percent in the Indian market and supplied surgical suture, an ophthalmic product to more than 150 countries. According to the Harvard Business Review, "Aurolab was able to drive down the selling price of a box of sutures from \$200 to just \$30 or \$40. As of 2005, Aurolab supplied ophthalmic suture to many countries and had 50 percent of the Indian market" (Danzon & Furukawa 4). The social entrepreneur's efforts shake down the monopoly position in Indian market and makes established players lower their prices. As a result of Green's innovation, the suture price is reduced significantly and made available to much more society members who need related ophthalmic surgeries.

Since social entrepreneurship is highly effective in bringing innovation to the industry, why is it still rare in the U.S.? A major limitation of the social entrepreneurship model is the low profitability. As non-profit organizations do not aim to maximize corporate profits, the financial rewards for scientists' research are limited. It reduces motivation for talent to contribute to this area. Many scientists and healthcare companies are capable of creating affordable medical devices but they are re-

luctant to do so because the return on investment will be much lower than it is in for-profit corporations. Therefore financial rewards and acknowledgments should be given to those who are passionate and capable to create public welfare with affordable medical devices.

In order to solve this issue, social entrepreneurs should be rewarded by financially supporting their achievements. One way is to have government subsidies on entrepreneurial product price reduction at a certain percentage. Consider a scenario where a medical product price is driven down from \$100 to \$10 by a technology innovation (assume reimbursement rate is 50 percent). Each product saves \$90 for patients and generates government reimbursements at 50 percent of the \$90 selling price difference. The company gets an extra \$45 of revenue for each product sold. For each citizen who uses this medical product, he or she saves \$90 with each purchase, which becomes an additional disposable income. Assuming product sales is 10,000 pieces per month, the company will save \$450,000 due to the government subsidy policy and the citizens will have additional \$900,000 disposable income. Both results make this policy profitable for the government.

On the one hand, the company's additional sales will increase government tax revenue. With an increased sale, the company will have more financial resources to fund its research activities and to develop more affordable products. This reimbursement will draw more demand-pulled sales and increased tax revenue.

On the other hand, citizens' additional disposable income will boost the economy, which benefits the government in many ways. In this scenario, citizens will have an extra \$900,000 disposable income which can be either spent or saved in the bank. If the money is spent, consumption will get a boost; if the money is saved, it can be loaned for business activities.

Both ways will generate more tax income for the government. As a result, domestic demand for goods and services are encouraged and economic activities are boosted, and not to mention the multiplier effect. The government is going to generate economic benefits and social welfare from the reimbursement. This process is summarized in figure 1, showing the entrepreneurial benefits on the government, customers, and entrepreneurial companies. Therefore supporting social entrepreneurs makes economic sense for the government to encourage those entrepreneurs who can bring down medical costs. Also scientists are more financially mo-

tivated to bring innovations to the market at affordable prices.

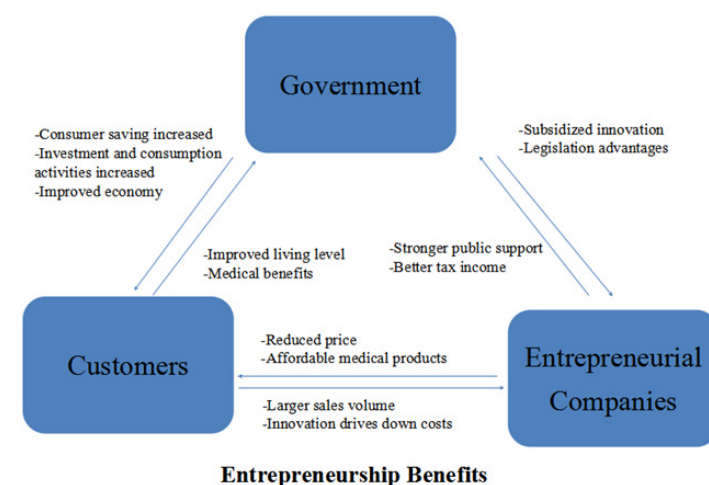


Figure 1. Entrepreneurship benefits overview.

Since non-profit health care providers have an advantage over product prices, why aren't they dominating the current medical care industry? The reasons that non-profit companies do not simply replace for-profit companies lie in three aspects: operational efficiency, funding options, and the size of target customers. Firstly, most for-profit medical companies are driven by profit and sales. They are more motivated to constantly improve their operation efficiency than non-profit organizations. Secondly, fund sources of for-profit companies are retained earnings, stock sales, and high-profit margin products. Non-profit companies raise funds in limited ways, usually by collecting donations. Hence, a non-profit company would face more difficulties in researching and developing medical products than for-profit companies. Thirdly, most of existing non-profit companies are set up for specific purposes and do not serve the entire general public. For instance, some non-profit hospitals only take children with skin cancers; some medical centers are dedicated to take care of their own religious groups, etc. In conclusion, non-profit health care providers are less advantageous in efficiency, funding, and target customer size. More positively, non-profit companies can help satisfy heterogeneous needs in the market and reach people who cannot afford advanced medical products. Social entrepreneurs expand the market potential instead of sharpening the industry competitiveness. Therefore, efforts can be made to expand non-profit companies and

increase access to more affordable medical services.

### Complex Pricing System

Another challenge faced by American healthcare system is its complex delivery system, which generates a non-uniform pricing system. David A. Squires points out that prices for the 30 most commonly used prescription drugs were a third higher in the U.S. compared to Canada and Germany, and were more than double the amount paid for the same drugs in Australia, France, the Netherlands, New Zealand, and the United Kingdom (Squires 6, see Figure 2). Magnetic imaging (MRI) and computed tomography (CT) scans were also more expensive in the U.S., and American physician charges are the highest for primary care office visits and hip replacements (Squires 9).

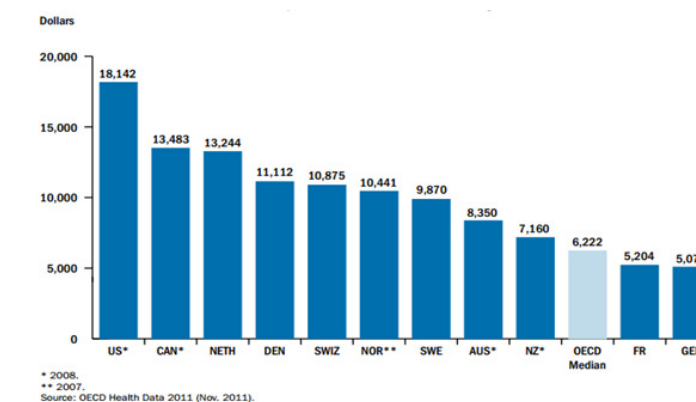


Figure 2. An international drug price comparison in different countries.

Not only are medical products more expensive in the U.S., services are charged a higher price than in other countries. One reason for its higher costs is that the medical personnel are prescribing more services than needed. There are two incentives for personnel to do so. Physicians are incentivized to have patients undergo more services so they are more compensated under a "fee-for-service" system; also when a physician invests in an equipment, they tend to prescribe more services to patients using equipment so that their investments on the equipment is more valuable. Hence physicians tend to use more medical services to compensate of their time and investment, which in turn raises medical bills.

Similarly, in an academic study, "Defensive medicine among high-risk specialist physicians in a volatile

malpractice environment" (2005), Dr. Studdert and his colleagues investigated behaviors of 824 Pennsylvania physicians and found that 93 percent of them practice "defensive medicine", which means prescribing unnecessary diagnostic procedures (Studdert 2005). As Organization for Economic Cooperation and Development (OECD) surveyed in 2011, the United States does a lot of expensive diagnostic activities and elective surgeries that are "the sort of activities where it is not always clear cut about whether a particular intervention is necessary or not" (OECD 2011, see Table 1). These extra services add no value to the medical care for patients but significantly increase medical costs.

	United States	Rank compared with OECD countries	OECD average
MRI units	25.9 per million population	2 <sup>nd</sup>	12.2 per million population
MRI exams	91.2 per 1 000 population	2 <sup>nd</sup>	46.6 per 1 000 population
CT scanners	34.3 per million population	5 <sup>th</sup>	22.8 per million population
CT exams	227.9 per 1 000 population	2 <sup>nd</sup>	131.8 per 1 000 population
Tonsillectomy	254.4 per 100 000 population	2 <sup>nd</sup>	133.8 per 100 000 population
Coronary angioplasty	377.2 per 100 000 population	3 <sup>rd</sup>	187.6 per 100 000 population
Knee replacements	212.5 per 100 000 population	1 <sup>st</sup>	118.4 per 100 000 population
Caesarean sections	32.3 per 100 live births	8 <sup>th</sup>	25.8 per 100 live births

Table 1. Comparison of various countries in medical technology usage. Source: "Why is Health Spending in the United States so High?" Organization for Economic Cooperation and Development. Accessed August 6, 2013.

The reason for non-uniform prices can be the lack of a regulatory organization to set forward a transparent pricing system for goods and services. Price level should be set based on demand and supply instead of on suppliers' profits, and the amount of services required should be guided. The Japanese healthcare model is a good example of adopting a more transparent health care pricing system. Japan's government regulates health care prices and allots a budget for healthcare as a guideline. A known pricing system can affect the whole industry by making sure every party in the industry knows what to expect from the others. This transparent pricing system is significantly advantageous. As shown in table 2, Japan's price differences between public distribution and manufacturing prices are much lower than they are in the U.S. This strongly suggests the strong control on distribution prices in Japan. On the national level, Japan spent as low as 9 percent of gross domestic product (GDP) on health care in 2009 while the U.S. spent up to 17.9 percent (see Figure 3). Moreover, Japan is the most aged country and has the highest life expectancy in the world demonstrating its superior treatment effectiveness, while the life expectancy rate in the U.S. is the lowest among developed countries.

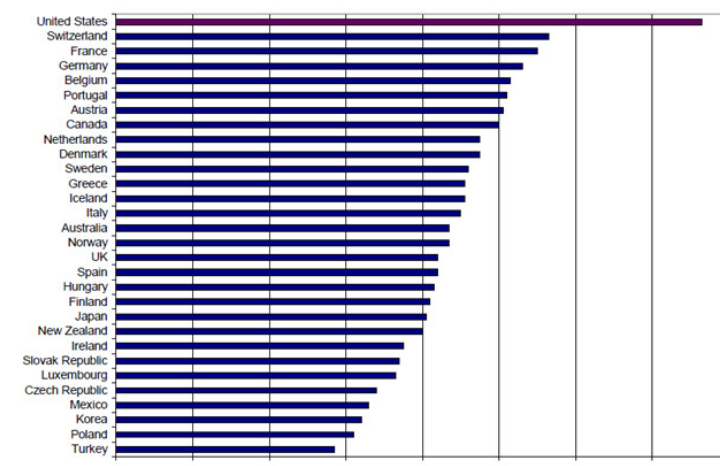


**Table 2. International Comparison of Pharmaceutical Price in 2005.** Source: Danzon, Patricia M., and Michael F. Furukawa. "International Prices and Availability of Pharmaceuticals in 2005." *Health Affairs* 27, no. 1 (2008): 221-233.

**Pharmaceutical Price Indexes, Relative to U.S. Prices (U.S. = 100), 2005**

Country	Comprehensive Indexes <sup>a</sup>				Originator versus generic <sup>b,c,d</sup>			Rx versus OTC <sup>b,c,d</sup>	
	Manuf. <sup>d</sup> at exch. rates <sup>c</sup>	Public <sup>e</sup> at exch. rates <sup>c</sup>	Public <sup>e</sup> at GDP PPPs <sup>f</sup>	Manuf. <sup>d</sup> normalized by income <sup>g</sup>	Originator		Branded and unbranded	Rx	OTC
					Single-source	Multi-source			
U.S.	100	100	100	100	100	100	100	100	100
Canada	81	81	79	103	74	60	133	79	189
France	74	91	78	100	64	37	108	69	262
Germany	75	90	95	106	74	65	151	77	192
Italy	67	87	82	94	55	68	150	63	527
Spain	59	69	71	93	62	40	109	57	377
U.K.	72	81	68	93	76	61	131	77	202
Japan	111	99	80	151	81	99	211	101	362
Australia	69	70	66	90	63	62	138	70	195
Brazil	69	80	68	336	62	109	128	64	186
Chile	56	65	119	206	56	55	138	58	312
Mexico	102	107	157	414	80	87	216	110	218

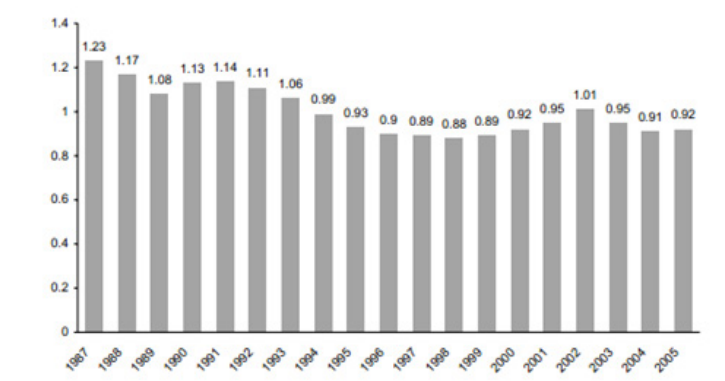
**SOURCES:** World Development Indicators, 2005; and authors' calculations based on data from IMS Health MIDAS database, 2005.  
**NOTE:** ATC3 is Anatomical Therapeutic Classification.  
<sup>a</sup> Bilateral matching with U.S. by molecule-atc3.  
<sup>b</sup> Bilateral matching with U.S. by molecule-atc3-form-strength.  
<sup>c</sup> Prices converted to U.S. dollars at exchange rates.  
<sup>d</sup> Manufacturer prices.  
<sup>e</sup> Public prices.  
<sup>f</sup> Prices converted to U.S. dollars at gross domestic product (GDP) purchasing power parities (PPPs).  
<sup>g</sup> Price index normalized by GDP per capita.



**Figure 3. International Comparison of Health Care Spending as a share of GDP based on 2006 data.** Source: "The Economic Case for Health Care Reform." The Executive Office of the President. Accessed August 8, 2013.

As shown in figure 3, the percentage of health care spending over national GDP in Japan is much smaller than it is in the U.S. In other words, Japan is capable of satisfying more medical needs so its citizens can live longer and spending less to do so. Although life expectancy is related to many other factors including life style and income inequality, the strong contrast suggests that the Japanese uniform pricing healthcare system has a distinctive advantage in improving cost effectiveness. With a uniform pricing system, Japan is able to better control its health care budget.

Another instance that demonstrates strong potential of government regulation on medical pricing system is Canada. Canada sets up the Patented Medicine Prices Review Board (PMPRB) to regulate manufacturing prices of medical products. The effects are evident. Canadian patent drugs prices fell consecutively under PMPRB regulations (see Figure 4).



**Figure 4. Ratio of Canadian patented drug prices to median international prices for patented drugs shows a declining trend, 1987- 2005 (PMPRB 2006).** Source: Paris, Valérie, and Éliane Docteur. *Pharmaceutical Pricing and Reimbursement Policies in Canada*. OECD, 2006.

As shown in figure 4, Canadian patented prices in 1987 were more than 20 percent higher than the median prices in a selected set of countries, and by 2005 drug prices in Canada were 10 percent lower than the median prices. In "Pharmaceutical Pricing and Reimbursement Policies in Canada", Paris and Docteur state that "on average, patented drug prices are between 35 and 45 percent lower in Canada than in the United States, the country with the highest prices for patented medicines.

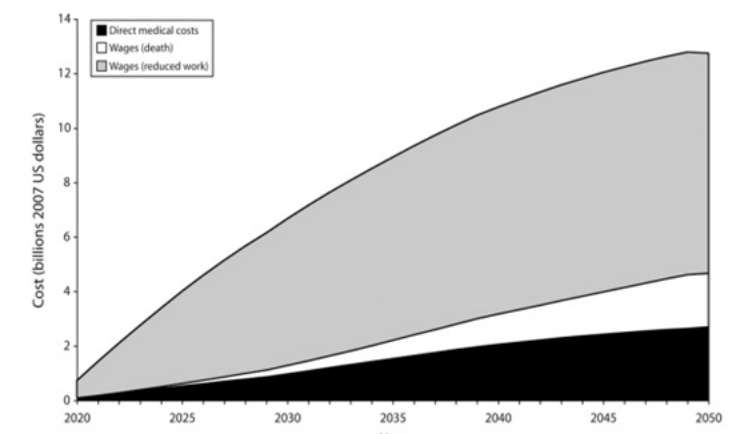
In contrast, such differences in U.S. prices are not observed for generic products. In fact, Canadian generics appear to be priced higher than they are in other countries (including the U.S.)" (Paris & Docteur 51). This proves that the disparity of patented drug price changes is due to impactful Canadian regulations. These data from Japan and Canada prove the effectiveness of scrutinized medical price control, which I believe is an inevitable area to regulate medicine prices in the U.S.

**Lack of Preventative Measures**

For the U.S. healthcare system, the lack of preventative measures in the industry is another factor that causes difficulty in reducing healthcare prices. According to a study done by the National Commission

on Prevention Priorities, "preventive health services can save lives and also a significant amount of money, ... preventive services such as daily aspirin use, tobacco cessation support, and alcohol abuse screening can potentially save 2 million lives and nearly \$4 billion annually" (Currie 2010).

One strong evidence that American healthcare needs preventative measures is the big potential savings on obesity. Evidence show that obesity causes a range of high-risk diseases such as hypertension, type 2 diabetes, stroke, osteoarthritis, sleep apnea, and colon cancers, posing a major challenge to reduce health care expenditures. Although obesity is a worrying health issue, research shows that it can be controlled by preventative measures. A group of researchers implemented preventative measures on a group of teenagers and followed up with their medical costs for years. They found that approximately \$130 million in 2020 or over \$10 billion in 2050 direct medical costs can be saved by applying preventative practices (Lightwood 2223). Their research also estimates the wage losses due to dropped productivity, absence from work, and premature death and shows that obesity or obesity-related diseases indirectly incurred \$942 million costs in 2020. This figure roars up to \$36 billion in 2050 (see Figure 5).



**Figure 5. Direct and indirect medical cost comparison.** Source: Lightwood, James, Kirsten Bibbins-Domingo, Pamela Coxson, Y. Claire Wang, Lawrence Williams, and Lee Goldman. "Forecasting the Future Economic Burden of Current Adolescent Overweight: an Estimate of the Coronary Heart Disease Policy Model." *Journal Information* 99, no. 12 (2009).

In another research on obesity, scientists calculated the actual preventative spending and found that the net benefit is 1.55 to 1.89 times the spending. They conclude that although the initial intervention cost was calculated to be \$44,039, the net benefit was higher (es-

timated to be \$68,125 -\$83,368) (Bertucci, see Table 3).

**Net Benefits (NB) and Cost-Effectiveness Ratio (CER) US\$ Per QALY saved**

Overall		
	I	II†
Intervention Cost	US\$44,039	US\$44,039
Cases Overweight Averted	14.93	14.93
QALYs Saved	8.55	8.55
Medical Costs Averted	US\$36,348	US\$51,590
Costs of lost labor productivity averted	US\$75,816	US\$75,816
Cost-effectiveness ratio	US\$900	0
Net Benefit	US\$68,125	US\$83,368

† Using female obesity medical costs 40-64 used in Wang et al. [35]

**Table 3. Obesity prevention measures benefits estimation.** Source: Bertucci, Maggie, Alex Miller, Stephen Jaggi, and Steven Wilding. "Cutting the Fat on Healthcare: An Investigation of Preventive Healthcare and the Fight on Obesity." *Undergraduate Research Journal for the Human Sciences* 9, no. 1 (2010).

The benefits of preventative measures are not only for obesity, but also for a wide range of diseases. Some argue that preventative measures are burdens on the whole society while they do not reduce expenses effectively. Truly preventative measure is not a solution to heal every disease, but research show that preventative measures help a wide range of diseases. It will make a big difference if we deploy those measures that are already proven efficient. In the article "Does Preventative Care Save Money? Health Economics and the Presidential Candidates", Cohen qualifies the effectiveness of preventative measures and interventions for existing conditions (Cohen 663). The author calculates the cost-effective ratio by using incurred costs divided by treatment benefits, the "quality-adjusted-life-year" (QALY). The higher the ratio, the more money will be saved if preventative measures are employed (see Table 4).

The data above clearly shows that the effectiveness of preventative measures for specific diseases can be quantified and evaluated. For some diseases, preventative measures are more cost-effective to apply than other measures. The value of these resources lies in identifying those measures that can effectively save healthcare spending with little expenditure. In the article, Cohen concludes:

"In the face of increasingly constrained resources, there is a realistic way of achieving better health results: conduct careful analysis to identify evidence based opportunities for more effective delivery of healthcare ...



and then restructure the system to create incentives that encourage the appropriate delivery of efficient interventions.” (Cohen 663)

Cost-Effectiveness of Selected Preventive Measures and Treatments for Existing Conditions (2006 Dollars).*	
Intervention	Cost-Effectiveness Ratio
<b>Preventive measures</b>	
<i>Haemophilus influenzae</i> type b vaccination of toddlers	Cost-saving
One-time colonoscopy screening for colorectal cancer in men 60–64 years old	Cost-saving
Newborn screening for medium-chain acyl-coenzyme A dehydrogenase deficiency	\$160/QALY
High-intensity smoking-relapse prevention program, as compared with a low-intensity program	\$190/QALY
Intensive tobacco-use prevention program for seventh- and eighth-graders	\$23,000/QALY
Screening all 65-year-olds for diabetes as compared with screening 65-year-olds with hypertension for diabetes	\$590,000/QALY
Antibiotic prophylaxis (amoxicillin) for children with moderate cardiac lesions who are undergoing urinary catheterization	Increases cost and worsens health
<b>Treatments for existing conditions</b>	
Cognitive-behavioral family intervention for patients with Alzheimer’s disease	Cost-saving
Cochlear implants in profoundly deaf children	Cost-saving
Combination antiretroviral therapy for HIV-infected patients	\$29,000/QALY
Liver transplantation in patients with primary sclerosing cholangitis	\$41,000/QALY
Implantation of cardioverter–defibrillators in appropriate populations, as compared with medical management alone	\$52,000/QALY
Left ventricular assist device, as compared with optimal medical management, in patients with heart failure who are not candidates for transplantation	\$900,000/QALY
Surgery in 70-year-old men with a new diagnosis of prostate cancer, as compared with watchful waiting	Increases cost and worsens health

\* The cost-effectiveness ratio is the incremental costs divided by the incremental benefits, relative to a comparator. The comparator is omitted from the intervention’s description if it was no treatment or current treatment or if the intervention was added to, rather than substituted for, another treatment. The cost-effectiveness estimates listed are point-estimate values from the original articles (a more detailed table appears in the Supplementary Appendix, available with the full text of this article at [www.nejm.org](http://www.nejm.org)). Preventive measures are those designed to avert the development of a condition. Treatments for existing conditions include both those designed to prevent the progression of a condition and those designed to ameliorate the effects of a disease or condition. QALY denotes quality-adjusted life-year. For more information see [www.tufts-nemc.org/cearegistry](http://www.tufts-nemc.org/cearegistry).

Table 4. A higher “quality-adjusted-life-year” (QALY) ratio indicates more money will be saved if the corresponding preventative measures is applied. Source: Cohen, Joel W., Steven B. Cohen, and Jessica S. Bantnin. “The Medical Expenditure Panel Survey: a National Information Resource to Support Healthcare Cost Research and Inform Policy and Practice.” *Medical care* 47, no. 7\_Supplement\_1 (2009): S44-S50.

### Expanding Insurance Coverage

There is sufficient evidence to show that preventative control is cost effective. With policy makers’ appropriate awareness and resource restructuring on preventative measures, significant financial burden can be removed in health care industry.

Another leading issue in the current health care system is the lack of insurance coverage. The current private health care system imposes high premiums on insurance buyers and discriminates on people who need insurance the most. To solve this problem, government can intervene more in both private and public insurance industries.

In the private insurance industry, the government is regulating insurance suppliers to bring down high

premium prices. The average health care spending for each person is \$8,680 per year in 2013 (Fox News), which is 17.56 percent of the median American household income. It is a large amount of money for an average American household, and for some people, buying health care premium is too expensive to be worth it. In addition, there are persistent issues for specific groups to get insurance as well. Several acts in the Affordable Care Act (ACA) will regulate private insurance industry by controlling premium increases and its usage, removing limit on ages, as well as lifting caps on amount spendable.

Firstly, ACA requires insurance companies to report any significant premium increase to control private sectors. The increase rate is at least 50 percent from 2003 to 2010 according to figure 6. If it is maintained at this rate, by 2020 the average premium for family coverage will reach \$24,000 (see figure 6).

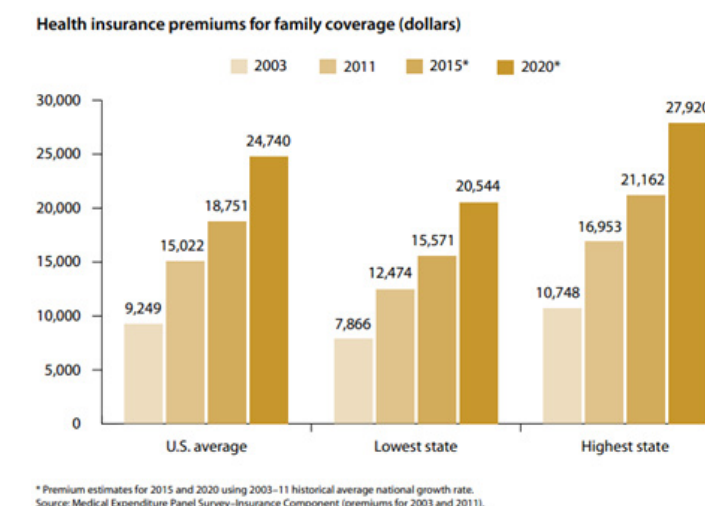


Figure 6. Total Premiums for Family Coverage, 2003, 2011, 2015, and 2020. Source: Schoen, Cathy, Ashley-Kay Fryer, Sara R. Collins, and David C. Radley. “Realizing Health Reform’s Potential.” (2011).

As shown in figure 6, insurance premiums are increasing sharply. To address this issue, ACA enables the government to control private insurers’ premium raises by annual reviews. According to the ACA,

“In every State and for the first time ever, insurance companies are required to publicly justify their actions if they want to raise rates by 10 percent or more and more states have the authority to reject unreasonable premium increases.” (Whitehouse.gov)

Secondly, in 2011, ACA set the 80/20 rule to ensure that premiums are spent in the right place for pa-

tients. This will ensure the private insurance industry’s transparent operations and prevent premium increases due to frauds. According to Whitehouse.com,

“For plans sold to individuals and small employers, at least 80% of the premium must be spent on benefits and quality improvement. If insurance companies do not meet these goals because their administrative costs or profits are too high, they must provide rebates to consumers”. (Whitehouse.gov)

Thirdly, the government will enforce laws to remove limitations on people with pre-existing health problems. According to Whitehouse.gov:

“Insurance companies can no longer deny coverage to children because of a pre-existing condition like asthma and diabetes ... providing peace of mind for parents of the more than 17.6 million children with pre-existing conditions.” (Whitehouse.gov)

Fourthly, the total spending limit on insurance coverage will be removed, which helps insured population get more coverage and benefits. According to Whitehouse.com,

“Before the health care law, many health plans set an annual limit — the dollar limit on their yearly spending for your covered benefits. Many plans also set a lifetime limit — the dollar limit on what they would spend for your covered benefits during the entire time you were enrolled in that plan. ....Under the (ACA) law, lifetime limits on most benefits are prohibited in any health plan or insurance policy issued or renewed on or after September 23, 2010.” (Whitehouse.gov)

In addition to regulating private insurance companies, the health care reform also requires the public to be involved for the benefits of their own health. The Act says that U.S. citizens and legal residents are required to have qualifying health coverage. According to the Kaiser Family Foundation’s ACA summary, there is a penalty for not having insurance coverage.

“Those without coverage pay a tax penalty of the greater of \$695 per year up to a maximum of three times that amount (\$2,085) per family or 2.5 percent of household income” (3). (Kaiser Family Foundation)

Although it incurred additional costs, the full insurance coverage has a few advantages such as in-time financial assistance, regular medical access and lower premium price. One benefit of having universal health-care coverage is that it provides families financial protections in the event of unexpected serious illnesses or injuries that easily cost over 10,000 dollars. Another ad-



vantage of universal insurance is that people are more motivated to access medical assistance such as regular health check; hence they are more likely to detect health problems at early stages and pay less to heal. As a result it benefits insurance buyers in the long run. In addition, the full health insurance brings down premiums. When more people buy insurances, private insurers are able to make a profit at a lower premium price. Therefore enforcing these insurance coverage rules on individuals is one of the solutions to bring down premiums.

In a nutshell, in private insurance industries, the ACA raises expectations on both insurance providers and individuals in order to bring down health care costs. Private insurance industry players should provide more cost-effective insurance packages, and residents are required to buy insurance.

On the other hand, in the public insurance industry, the government will strengthen Medicare and Medicaid to take care of people in need, mainly seniors and low-income households.

For seniors, prescription drug expenses will be discounted and covered if one uses up the yearly limit: “3.6 million people received a 50 percent discount—worth an average of \$604 each—on brand name prescription drugs.”(Whitehouse.com). For low income households, Medicaid eligibility expands to 133 percent FPL and premium credits will be given to households with income level between 100 - 400 percent Federal Poverty Level (FPL) (Kaiser Family Foundation). In other words, the government shares a part of elderly’s health bills, and increases the household eligibility to get premium discounts.

To expand insurance coverage is a costly investment, but in the long run, it will reduce the government deficit. According to the Congressional Budget Office, a family of four could save up to \$2,300 on premiums by 2014 with the reform, and the health insurance reform will eventually reduce the fiscal deficit by more than one trillion dollars in ten years (Whitehouse.gov). These policies will bring benefits to insurance buyers and suppliers. However, there is still room for improvement for the public insurer to provide efficient assistance on country’s heavy health financial burden, two possible references of government interventions is Singapore’s Central Provident Fund (CPF) and Australia’s public insurance coverage.

	Singapore	United States
Total Population	4,737,000	314,659,000
World Health Organization (WHO) health system ranking	6	37
Gross national income per capita	47,970	46,790
Life expectancy at birth m/f (years)	79/84	76/81
Number of hospital beds per 10000 population (2008)	31	31
Physicians density (per 10 000 population)	18.33	24.33
Total expenditure on health per capita	2,086	7,410
Total expenditure on health as % of GDP	3.9	16.2

**Table 5. Comparison between health expenditure per capital and health capital. Source: Bai, Y., Shi C., Li, X., & Liu, F. Healthcare System in Singapore**

**Table 6. Comparison of national health expenditures, the U.S., Australia, and Singapore. Source: Lim, M. K. (2004). Shifting the Burden of Health Care Finance: a Case Study of Public-private Partnership in Singapore. Health Policy, 69 (1), 83-92.**

Comparison of national health expenditures: Singapore and selected OECD countries (ranked in order of public health expenditure as % of total health expenditure)

Country	Public health expenditure as % of total health expenditure <sup>a</sup>	Private health expenditure as % of total health expenditure <sup>a</sup>	Total health expenditure as % of GDP <sup>a</sup>	Per capita expenditure in PPP \$ <sup>c</sup>
Sweden	84.3	15.7	8.1	2145
United Kingdom	83.7	16.3	6.7	1675
Japan	79.5	20.5	7.4	2243
France	77.7	22.3	9.4	2288
New Zealand	77.3	22.7	7.6	1163
Germany	76.6	23.4	10.5	2697
Australia	68.3	31.7	8.4	1714
United States	45.5	54.5	13.0	4271
Singapore	25.6 <sup>b</sup>	74.4 <sup>b</sup>	3.0 <sup>b</sup>	678

Sources:

<sup>a</sup> World Health Organization.

<sup>b</sup> Ministry of Health Singapore (2000).

<sup>c</sup> UNDP Human Development Report 2002 (1998, figures).

datory individual saving, contributed by personal income (by seven to nine percent) and his or her employers. Personal responsibility is encouraged in Singapore and the government sets “stringent qualifying requirements for public assistance”, according to a research that claims “the public assistance rates are by policy design kept between 5 and 10 percent of per capita income”(Asher & Nandy 2008). As a result, Singaporean health care system significantly improves health care efficiency, but this system has drawbacks too.

A major issue of this insufficient healthcare coverage is that it burdens society welfare workload. This suggests a higher percentage of poor population in Singapore are disqualified for health assistance and left untreated. This is ethically arguable and financially burdensome. These people can become unfit to work due to lack of medical treatments, and consequently turn to social welfare.

In contrast, Australian health care system has a heavy percentage of public health insurance coverage. Australia’s public insurer coverage amounts to almost three times Singapore’s coverage for citizens’ medical expenses (see Table 6).

In Australia, an extra income tax is contributed and government fully pays citizens’ health care expenses. The advantage is that Australians need not to pay out-of-pocket for their healthcare, and they have a high level of satisfaction on their medical system. But one disadvantage is the waiting time of public hospital will increase so they have to turn to private care in emergency cases.

After examining the U.S. public insurance industry, we can conclude that the upcoming ACA laws will improve the U.S. health coverage and efficiency. After the recent administrative difficulties are solved, the country will reduce budget deficits under ACA. For the long run reform possibilities, good reference are Singaporean and Australian models. Singaporean model emphasizes on personal accountability and private savings to pay medical expenses, and public expenditure takes a small portion of the nation’s total health expenditure. In Singapore, the government’s role is more like a regulator than an expenses payer. In contrast, Australian health model is a good example to maximize citizens’ benefits; its government pays for a large percentage of health care insurance with slightly higher taxes.

The American situation is more complicated due to uneven income levels across the country, political

disagreements on tax policies, and financial deficits. So in order to improve insurance coverage, the government can initially act as a regulator while focusing on improving issues such as living levels, and gradually increase its support. This way in the future U.S. citizens will hopefully enjoy fully covered public insurance.

### Conclusion

U.S. healthcare can become more productive and efficient with entrepreneurship innovation, pricing standards, implements of preventative measures and regulated insurance coverage. It is important to raise awareness and find a strategic combination that suits America the best. When resources and funds are put in the right place, everyone in the country benefits: the medical industry players will have less confusion figuring out pricing regulations, the government will lower its fiscal deficit, and citizens will enjoy better welfare and more affordable health care services. According to the White House report “The Economic Case for Health Care Reform”, Executive Office of the President Council of Economic Advisers stresses that American healthcare spending can be reduced by about five percent of GDP by improving health care efficiency (Whitehouse.gov). Improving the health care industry is a complicated process that takes time and effort, but this will pay off. It is also necessary as healthcare improvements do well for all of citizens who rely on healthcare services and will enable them to lead a long and quality life. As a result of the health care reform, the government will save billions of dollars in unnecessary spending. If healthcare industry is more affordable and efficient, the government will be able to use the money that is freed up and fund other tasks that would be beneficial for the nation.

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