Why is American Health Care So Expensive?

Justin Moore, MD, FACP

Disclosures



Double Arrow Metabolism, LLC





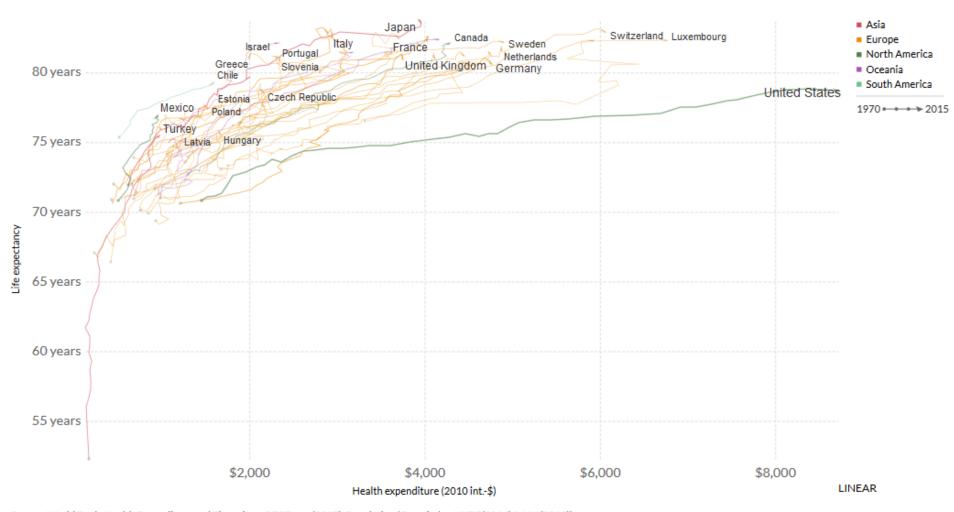
Objectives

- Understand that increased health care expenditures are not associated with improved outcomes
- Outline the possible societal benefits to excess health spending
- List the three dominant sources of excess cost in American health care
- Touch on potential policy strategies to reduce health care spending while maintaining or improving outcomes

Life expectancy vs. health expenditure, 1970 to 2015



Health financing is reported as the annual per capita health expenditure and is adjusted for inflation and price level differences between countries (measured in 2010 international dollars).

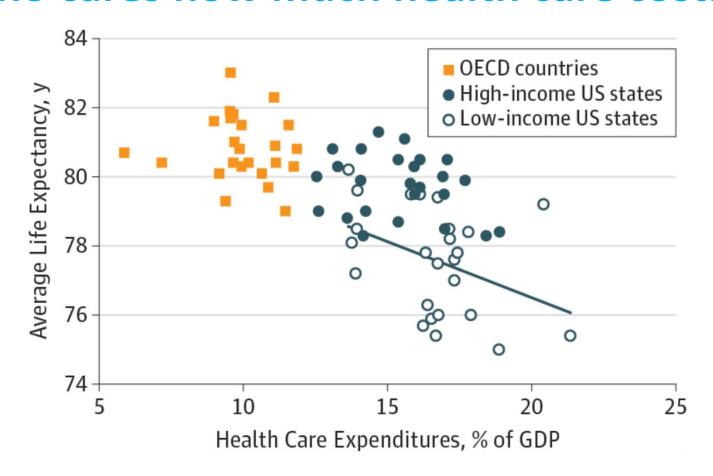


Source: World Bank, Health Expenditure and Financing - OECDstat (2017), Population (Gapminder, HYDE(2016) & UN (2019)) OurWorldInData.org/the-link-between-life-expectancy-and-health-spending-us-focus • CC BY

Bloomberg 2019 Healthiest Country Index

Rank 1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	Rank 6 1 2 7 3 8 5 4 11 9 10 14 12 15 13 17 24 19	Change +5 -1 -1 +3 -2 +2 -2 -4 +2 -1 -1 +2 -1 +1	Economy Spain Italy Iceland Japan Switzerland Sweden Australia Singapore Norway Israel Luxembourg France Austria Einland	Health Grade 92.75 91.59 91.44 91.38 90.93 90.24 89.75 89.29 89.09 88.15 87.39 86.94	96.56 95.83 96.11 95.59 94.71 94.13 93.96 93.19 93.25 92.01 92.03 91.70	Penalties -3.81 -4.24 -4.67 -4.21 -3.78 -3.89 -4.21 -3.90 -4.16 -3.86 -4.64
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	1 2 7 3 8 5 4 11 9 10 14 12 15 13 17 24 19	-1 +3 -2 +2 -2 -4 +2 -1 -1 +2 -1 +1	Italy Iceland Japan Switzerland Sweden Australia Singapore Norway Israel Luxembourg France Austria	91.59 91.44 91.38 90.93 90.24 89.75 89.29 89.09 88.15 87.39 86.94	95.83 96.11 95.59 94.71 94.13 93.96 93.19 93.25 92.01 92.03	-4.24 -4.67 -4.21 -3.78 -3.89 -4.21 -3.90 -4.16 -3.86 -4.64
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	2 7 3 8 5 4 11 9 10 14 12 15 13 17 24 19	-1 +3 -2 +2 -2 -4 +2 -1 -1 +2 -1 +1	Iceland Japan Switzerland Sweden Australia Singapore Norway Israel Luxembourg France Austria	91.44 91.38 90.93 90.24 89.75 89.29 89.09 88.15 87.39 86.94	96.11 95.59 94.71 94.13 93.96 93.19 93.25 92.01 92.03	-4.67 -4.21 -3.78 -3.89 -4.21 -3.90 -4.16 -3.86 -4.64
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	7 3 8 5 4 11 9 10 14 12 15 13 17 24 19	+3 -2 +2 -2 -4 +2 -1 +1 +2 -1	Japan Switzerland Sweden Australia Singapore Norway Israel Luxembourg France Austria	91.38 90.93 90.24 89.75 89.29 89.09 88.15 87.39 86.94	95.59 94.71 94.13 93.96 93.19 93.25 92.01 92.03	-4.21 -3.78 -3.89 -4.21 -3.90 -4.16 -3.86 -4.64
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	3 8 5 4 11 9 10 14 12 15 13 17 24 19	-2 +2 -2 -4 +2 -1 -1 +2 -1 +1	Switzerland Sweden Australia Singapore Norway Israel Luxembourg France Austria	90.93 90.24 89.75 89.29 89.09 88.15 87.39 86.94	94.71 94.13 93.96 93.19 93.25 92.01 92.03	-3.78 -3.89 -4.21 -3.90 -4.16 -3.86 -4.64
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	8 5 4 11 9 10 14 12 15 13 17 24 19	+2 -2 -4 +2 -1 -1 +2 -1 +1	Sweden Australia Singapore Norway Israel Luxembourg France Austria	90.24 89.75 89.29 89.09 88.15 87.39 86.94	94.13 93.96 93.19 93.25 92.01 92.03	-3.89 -4.21 -3.90 -4.16 -3.86 -4.64
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	5 4 11 9 10 14 12 15 13 17 24 19	-2 -4 +2 -1 -1 +2 -1 +1	Australia Singapore Norway Israel Luxembourg France Austria	89.75 89.29 89.09 88.15 87.39 86.94	93.96 93.19 93.25 92.01 92.03	-4.21 -3.90 -4.16 -3.86 -4.64
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	4 11 9 10 14 12 15 13 17 24 19	-4 +2 -1 -1 +2 -1 +1	Singapore Norway Israel Luxembourg France Austria	89.29 89.09 88.15 87.39 86.94	93.19 93.25 92.01 92.03	-3.90 -4.16 -3.86 -4.64
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	11 9 10 14 12 15 13 17 24 19	+2 -1 -1 +2 -1 +1	Norway Israel Luxembourg France Austria	89.09 88.15 87.39 86.94	93.25 92.01 92.03	-4.16 -3.86 -4.64
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	9 10 14 12 15 13 17 24 19	-1 -1 +2 -1 +1	Israel Luxembourg France Austria	88.15 87.39 86.94	92.01 92.03	-3.86 -4.64
11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	10 14 12 15 13 17 24 19	-1 +2 -1 +1	Luxembourg France Austria	87.39 86.94	92.03	-4.64
12 13 14 15 16 17 18 19 20 21 22 23 24 25	14 12 15 13 17 24 19	+2 -1 +1 -2	France Austria	86.94		
13 14 15 16 17 18 19 20 21 22 23 24 25	12 15 13 17 24 19	-1 +1 -2	Austria		91.70	4 79 45
14 15 16 17 18 19 20 21 22 23 24 25	15 13 17 24 19	+1				-4.76
15 16 17 18 19 20 21 22 23 24 25	13 17 24 19	-2	Einland	86.30	90.81	-4.51
16 17 18 19 20 21 22 23 24 25	17 24 19		Finland	85.89	90.18	-4.29
17 18 19 20 21 22 23 24 25	24 19	+1	Netherlands	85.86	90.07	-4.21
18 19 20 21 22 23 24 25	19		Canada	85.70	90.31	-4.61
19 20 21 22 23 24 25		+7	S. Korea	85.41	89.48	-4.07
21 22 23 24 25		+1	New Zealand	85.06	89.68	-4.62
21 22 23 24 25	23	+4	U.K.	84.28	88.74	-4.46
22 23 24 25	22	+2	Ireland	84.06	89.57	-5.51
23 24 25	18	-3	Cyprus	83.58	88.19	-4.61
24 25	21	-1	Portugal	83.10	87.95	-4.85
25	16	-7	Germany	83.06	88.10	-5.04
	27	+3	Slovenia	82.72	88.04	-5.32
26	28	+3	Denmark	82.69	86.47	-3.78
20	20	-6	Greece	82.29	86.92	-4.63
27	25	-2	Malta	81.70	86.07	-4.37
28	26	-2	Belgium	80.46	85.29	-4.83
29	30	+1	Czech Rep.	77.59	82.96	-5.37
30	31	+1	Cuba	74.66	79.42	-4.76
31	35	+4	Croatia	73.36	78.46	-5.10
32	38	+6	Estonia	73.32	78.47	-5.15
33	29	-4	Chile	73.21	77.70	-4.49
33	33	0	Costa Rica	73.21	76.88	-3.67
35	34	-1	U.S.	73.02	78.13	-5.11
	40	+4	Bahrain	72.31	76.96	-4.65
37	36	-1	Qatar	71.97	76.55	-4.58
38	41	+3	Maldives	70.95	75.37	-4.42
39	32	-7	Lebanon	70.53	76.10	-5.57
40	39	-1	Poland	70.25	75.93	-5.68
	V/A	N/A	Montenegro	69.69	75.62	-5.93
42	W/A	0	Bosnia & H.	69.66	74.96	-5.30

We've added 40 years to life expectancy. Who cares how much health care costs?

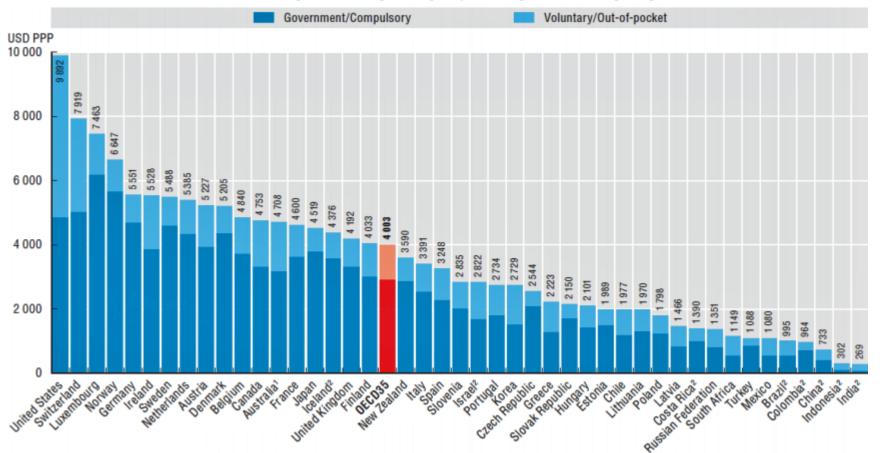


JAMA 2014, PMID: 25322201

$$Value = \frac{quality}{price}$$

Americans spend about \$1 trillion per year more on doctors, hospitals, and drugs than #2 (adjusted per capita)

Health expenditure per capita, 2016 (or nearest year)



Note: Expenditure excludes investments, unless otherwise stated.

- 1. Australian expenditure estimates exclude all expenditure for residential aged care facilities in welfare (social) services.
- 2. Includes investments.

https://tincture.io/u-s-healthcare-spending-outcomes-in-five-charts-epicfail-in-the-2017-oecd-statistics-9d997e66249b, accessed 4/16/19



Taxes that fund social insurance programs, primarily Social Security and Medicare's Hospital insurance program



Mandatory Spending

12.5% \$2.5 of GDP Trillion

Outlays

Medicaid

1.9% of GDP

\$389 Billion

Medicare 2.9% of GDP \$582 Billion

Social

Security

4.9% of GDP

\$982 Billion

20.3% \$4.1 of GDP Trillion

Nondefense 3.2% of GDP \$639 Billion

Defense

3.1% of GDP

\$623 Billion

Other 2.8% of GDP \$570 Billion

Net

Interest

1.6% of GDP

\$325 Billion

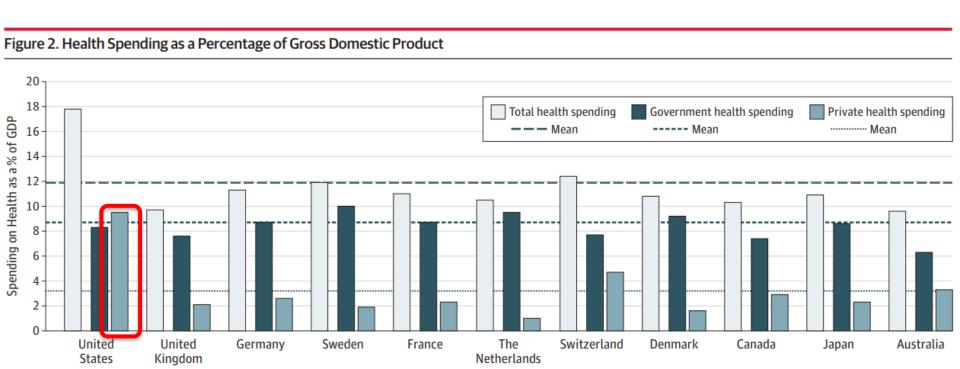
6.2% \$1.3 of GDP Trillion

Outlays for many programs related to transportation, education, veterans' benefits, health, housing assistance, and other activities

Outlays for Medicare minus Income from premiums and other offsetting receipts

Outlays for unemployment compensation, federal civilian and military retirement, some veterans' benefits, the earned income tax credit, the Supplemental Nutrition Assistance Program, and other mandatory programs, minus income from offsetting receipts

Most excess spending is private



JAMA 2018, PMID: 29536101

Do we get anything from our outsize spending?

- #1 (by far) in clinical trials¹
- #1 (by far) in Nobel Laureates in Medicine²
- #1 in patents³
- (probably) #1 in medical innovation overall⁴

```
<sup>1</sup>https://clinicaltrials.gov/ct2/search/map, accessed 1/3/17; <sup>2</sup>https://www.worldatlas.com/articles/countries-with-the-most-nobel-laureates-in-physiology-and-medicine.html, accessed 1/3/17;
```

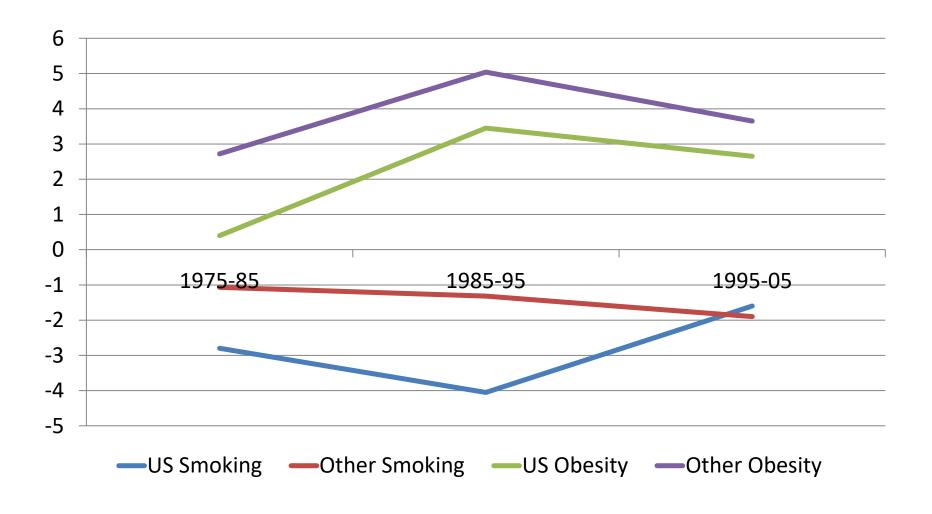
³http://martinprosperity.org/media/GCI%20Report%20Sep%202011.pdf, accessed 1/3/17;

⁴http://www.saworldview.com/scorecard/the-2016-scientific-american-worldview-overall-scores/, accessed 1/3/17

Why is medicine so expensive here?

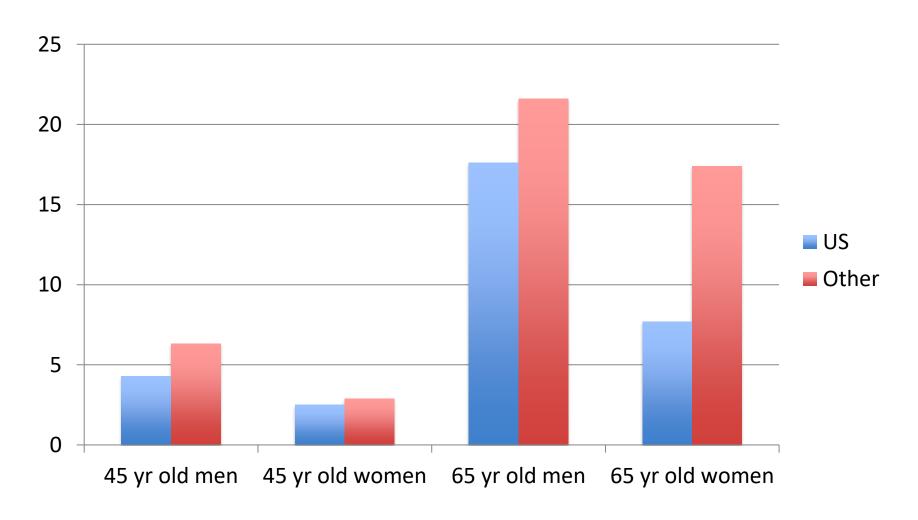


Americans don't have worse habits



Adapted from Health Aff 2010, PMID: 20930036

% Change in life expectancy, 1975-2005



Americans don't consume more health care

Rank (highest to lowest)	1	2	3	4	5	6	7	8	9	10	11	Mean
Discharges per 100 000 populati												1
Acute myocardial infarction	Germany 287	Sweden 273	CHE 223	Australia 196	Canada 193	US 192	NLD 175	Denmark 174	UK 160	France 124	Japan 89	190
Mental and behavioral	Germany 1719	CHE 1182	Sweden 1068	Denmark 892	Australia 856	US 679	Canada 629	France 368	Japan 319	UK 269	NLD 119	736
Pneumonia	Denmark 567	UK 459	Sweden 432	Germany 380	Japan 378	US 365	Australia 338	France 271	CHE 269	NLD 224	Canada 187	352
Chronic obstructive pulmonary disease	Germany 352	Australia 286	UK 251	Canada 241	Denmark 234	US 230	Sweden 186	NLD 161	CHE 142	France 138	Japan 45	206
Examinations per 1000 population	on											
Magnetic resonance imaging	Germany 131	US 118	Japan 112	France 105	Denmark 82	CHE 70	Canada 56	UK 53	NLD 52	Australia 41	Sweden NA	82
Computed tomography	U\$ 245	Japan 231	France 197	Denmark 162	Canada 153	Germany 144	Australia 120	CHE 100	NLD 81	UK 79	Sweden NA	151
Surgical procedures												
Total hip replacement per 100 000 population	CHE 292	Germany 283	Denmark 237	France 236	Sweden 234	NLD 216	US 20	UK 183	Australia 171	Canada 136	Japan 90	207
Total knee replacement per 100 000 population	US 22	Cermany 190	Australia 180	CHE 176	Denmark 168	Canada 166	France 145	UK 141	Sweden 124	NLD 118	Japan NA	163
Hysterectomy per 100 000 women	Germany 301	CHE 291	US 265	Australia 262	Canada 232	Denmark 197	Sweden 186	France 182	NLD 167	UK 161	Japan NA	225
Cesarean delivery per 100 live births	US 33	CHE 33	Australia 32	Germany 31	Canada 26	UK 23	France 21	Denmark 21	Japan 18	Sweden 17	NLD 16	25
Cataract surgery per 100 000 population	France 1207	US 1110	Canada 1060	Australia 1060	Denmark 1037	Sweden 1029	Germany 1027	NLD 1005	UK 736	CHE 438	Japan NA	971
Cardiovascular procedures per 1	00 000 popul	cion										
Coronary artery bypass graft surgery	US 79	Denmark 73	NLD 69	Germany 64	Canada 58	Australia 54	Sweden 31	France 29	UK 26	CHE NA	Japan NA	54
Coronary angioplasty	France 393	US 248	NLD 248	France 237	Sweden 205	Japan 193	Denmark 190	Australia 172	Canada 157	UK 128	CHE NA	217
Length of stay per capita, mean,	d											
Normal delivery	Japan 5.7	France 4.1	CHE 3.6	Germany 2.9	Denmark 2.7	Australia 2.7	Sweden 2.3	us 2	NLD 1.9	Canada 1.6	UK 1.5	2.8
Acute myocardial infarction	Germany 10.3	CHE 7.3	UK 7.1	France 6	NLD 5.6	Canada 5.5	US 5.	Australia 5.4	Sweden 4.7	Denmark 3.9	Japan NA	6.1

NA indicates not applicable. CHE indicates Switzerland; NLD, the Netherlands. See eTable 4 in Supplement 2 for data ordered by country.

Figure 8. Performance on Key Measures of Utilization B Consultations^a Hospital discharges Germany Japan Australia Germany The Netherlands Denmark Switzerland Canada Australia France Sweden France United Kingdom United Kingdom United States Denmark US: 43% primary care docs The Netherlands United States (the mean of 11 other Switzerland Japan countries) Canada Sweden 50 100 150 200 250 300 10 12 14 0 0 Hospital Discharges per 1000 Population Physician Visits per Capita in a Given Year C Hospital bed days D All-cause length of stay Japan Japan France Germany Germany France Switzerland Canada The Netherlands Sweden United Kingdom Australia United Kingdom Sweden The Netherlands Switzerland **United States** United States Australia Denmark Canada Denmark 0 0.5 1.0 1.5 2.0 2.5 0 8 10 12 14 16 18 No. of Hospital Bed Days per Inpatient Length of Stay per Inpatient, d

The vertical dashed lines indicate mean values.

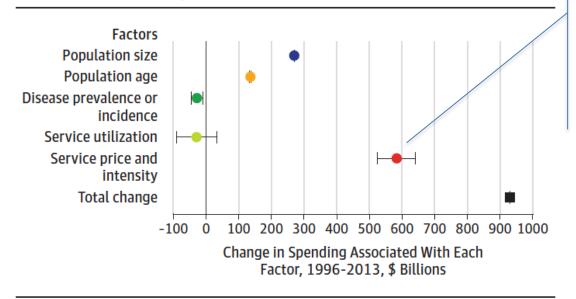
^a Consultations is the mean number of consultations or visits with a physician per person per year in all care delivery settings.

Three reasons:

- We pay ~3x what other countries do for drugs
 - 17% of excess health care spending

Everything we buy costs more

Figure 3. Changes in Annual Spending Associated With Each Factor in the 5-Factor Decomposition, 1996-2013



Data markers to the left of the black vertical line (no change) indicate factors associated with decreased spending; to the right of the line, factors associated with increased spending. Black square data marker indicates the total spending change between 1996 and 2013. Error bars indicate uncertainty intervals.

US per-capita drug spending \$1,443 (versus \$680 for other 11 countries)²

U.S. consumers:

- 27% of global income
- ~78% of global pharma profits³

¹JAMA 2017, PMID: 29114831;

²http://www.modernhealthcare.com/article/20180407/NEWS/18, accessed 4/18/18;

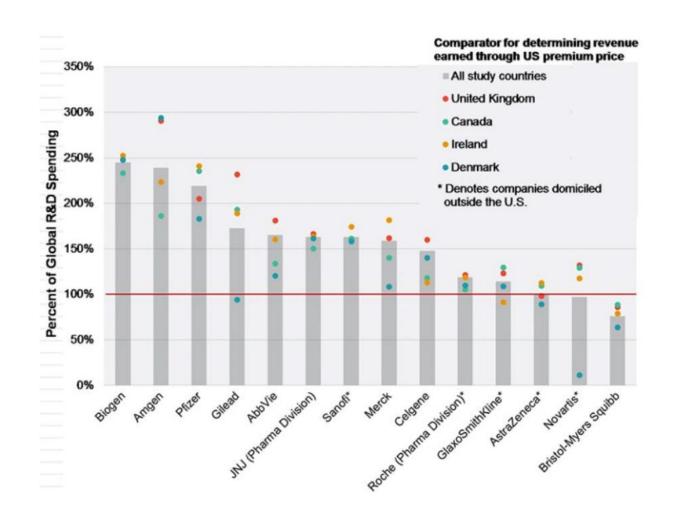
³https://healthpolicy.usc.edu/research/global-burden-of-medical-innovation/, accessed 2/12/18

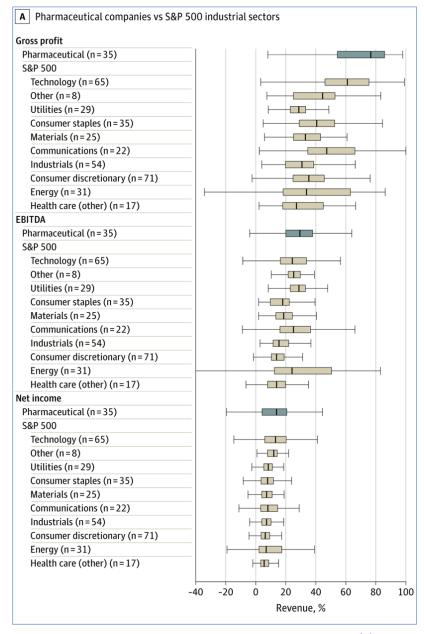
Figure 9. Pharmaceuticals

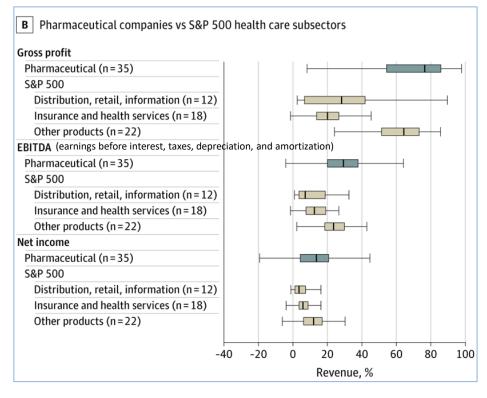
Rank (highest to lowest)	1	2	3	4	5	6	7	8	9	10	11	Mean
Total spending per capita, US \$	US 1443	CHE 939	Japan 837	UK 779	France 697	Denmark 675	Germany 667	Canada 613	Sweden 566	Australia 560	NLD 466	749
Retail pharmaceutical spending per capita, US \$	US 1026	CHE 776	Canada 587	Denmark 573	France 541	Sweden 501	Germany 480	Japan 443	UK 383	Australia 346	NLD 292	541
Prices, US \$ per mo ^a												
Crestor (cholesterol)	US 86	Germany 41	Canada 32	Japan 29	UK 26	France 20	Australia 9	Sweden NA	NLD NA	CHE NA	Denmark NA	35
Lantus (diabetes)	US 186	Canada 67	UK 64	Japan 64	Germany 61	Australia 54	France 47	Sweden NA	NLD NA	CHE NA	Denmark NA	78
Advair (asthma)	US 155	Canada 74	Japan 51	Germany 38	France 35	Australia 29	UK NA	Sweden NA	NLD NA	CHE NA	Denmark NA	64
Humira (rheumatoid arthritis)	US 2505	Germany 1749	Australia 1243	Canada 1164	UK 1158	France 982	Japan 980	Sweden NA	NLD NA	CHE NA	Denmark NA	1436
New chemical entities, No.b	US 111	CHE 26	Japan 18	UK 16	Germany 12	France 11	Sweden NA	NLD NA	Denmark NA	Canada NA	Australia NA	NA
Pharmaceutical expenditure by fina	ncing type,	% of total sp	ending									
Public spending	France 80	Germany 75	Japan 71	UK 66	NLD 65	Sweden 52	Australia 49	CHE 43	Denmark 43	Canada 36	US 34	56
Private insurance	US 36	Canada 30	CHE 8	Denmark 8	Germany 7	NLD 2	France 1	Japan 1	UK 0	Sweden 0	Australia 0	8
Private out-of-pocket spending	CHE 51	Denmark 51	Australia 50	Sweden 48	UK 36	Canada 34	NLD 33	US 30	Japan 28	France 19	Germany 18	36
Share of generics, % of total ^c												
Volume	US 84	UK 83	Germany 80	France 70	Canada 70	Japan 56	CHE 54	Denmark 54	Sweden 44	Australia 30	NLD 17	58
Value	Germany 37	UK 33	Japan 33	Canada 29	US 28	France 16	NLD 16	Sweden 15	Australia 15	CHE 14	Denmark 14	23
Antibiotic prescribing, defined daily doses per 1000 population ^d	France 29.9	Australia 28.3	Canada 25	US 24	UK 20.1	Denmark 16.6	Germany 14.4	Sweden 12.9	NLD 10.7	CHE NA	Japan NA	20.2

JAMA 2018, PMID: 29536101

Research and Development do not Account for High US Drug Prices

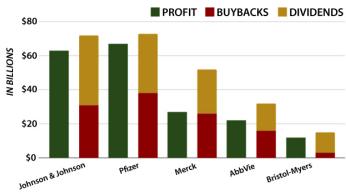






Shareholders Over Profits

Pharmaceutical company profit vs. buybacks/dividends (2013 to 2017)



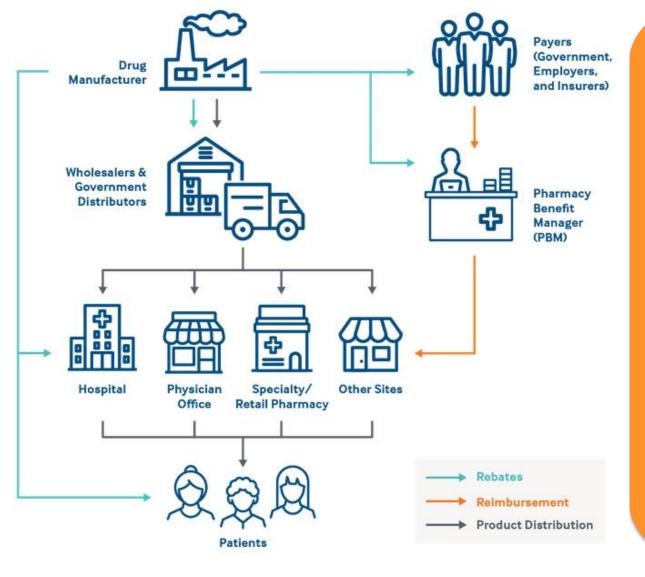
SOURCE: Company annual reports

JAMA 2020, PMID: 32125401; http://www.theairnet....

Lazonick.FCINIS-20190215.pdf, accessed 3/19/19

Pharmaceutical and Health Product Manufacturers Account for 7.3% of all Lobbying Money Spent in the US

- \$4.7 billion of \$64.3 billion between 1999 and 2018
- No other industry accounts for more than 5%



PBMs have three revenue sources:

- 1. Supply chain fees
- 2. "Spread pricing"
 (the difference
 between
 manufacturer and
 insurer prices)
- 3. Manufacturer rebates

Mean rebate 10.4% in 2008→26.1% in 2019 (mean 66% rebate for insulin)

2017, Express Scripts revenue = \$100 billion; Pfizer revenue = \$52 billion

https://www.commonwealthfund.org/publications/issue-briefs/2019/aug/reducing-wasteful-spending-employers-pharmacy-benefit-plans, accessed 3/2/20; JAMA 2019, PMID: 31219507; JAMA 2019, PMID: 30840047

Three reasons:

- 1. Excess drug costs (17% of excess health care spending)
- We pay our docs, pharmacists, allied health practitioners, and nurses a lot (11% of excess health care spending)

ited with Specific Health Care	e Categories of Spe	nding		
	US\$ per Capita			
Maan nov for US	United States ^b	Germany	The Netherlands	Sweden
	9403	5182	5202	6808
	712	693	536	397
	244	284	180	120
	468	409	356	277
	1443	667	466	566
	\1			
	135 (62.8)	Mean pay for US	24	
countries)	220 (73.3)	nurses: \$74,160	23	
	57.4 (36.8)	(\$51,795 for all 11	14.9	
	54.0 (33.9)	countries)	24.9	
gery	59.5 (37.4)		10.9	
	69.2 (40.7)		13.1	
	61.8 (43.2)		8.9	
	752	232	208	136
	Mean pay for US generalists: \$218,173 (\$133,723 for all 11 countries) Mean pay for US specialists: \$316,000 (\$182,657 for all 11 countries)	Mean pay for US generalists: \$218,173 (\$133,723 for all 11 countries) Mean pay for US specialists: \$316,000 (\$182,657 for all 11 countries) 135 (62.8) 220 (73.3) 57.4 (36.8) 54.0 (33.9) gery 59.5 (37.4) 69.2 (40.7) 61.8 (43.2)	Mean pay for US generalists: \$218,173 (\$133,723 for all 11 countries) Mean pay for US specialists: \$316,000 (\$182,657 for all 11 countries) 135 (62.8) 220 (73.3) 244 Mean pay for US specialists: \$316,000 (\$182,657 for all 11 countries) 135 (62.8) 220 (73.3) 57.4 (36.8) 59.5 (37.4) 69.2 (40.7) 61.8 (43.2)	Us\$ per Capita United States Germany The Netherlands

sisted With Specific Health Care Categories of Spending

Prices were obtained from the International Federation of Health Plans.³

prices are lower. An average price across the whole country is not available.

^b Per capita costs in parentheses are based on commercial payments at the 25th percentile to approximate lower prices for procedures in Medicare and Medicaid. For example, the 25th percentile for MRI is \$532 while the Medicare rate is \$590.75.

which used average US commercial prices from 2013. Medicare and Medicaid

JAMA 2018, PMID: 29536081

^a Figures for total health care costs, pharmaceutical spending, and administration taken from Papanicolas et al.² Other data were calculated by taking total volume, multiplying by prices, and dividing by population to obtain per capita costs. For instance, per capita costs of generalists are determined using data from Papanicolas et al Tables 1 and 4. There are 2.6 physicians/1000 Americans, of which 43% are generalists, at an average salary of \$218 173. Multiplying, that comes to total pay per capita of \$244.

Physicians choose their own prices

- AMA owns the Relative Value Scale Update Committee (RUC) to assist CMS with assigning and updating RVUs
 - RUC guides ~70% of all physician payment in the United States, equal to an estimated \$500 billion each year²
 - Most of the 31 members are assigned by professional societies
 - Recommendations made based on survey results of ~2% of physicians, updated every ~5-20 years²
- RUC recommendations are accepted without change by CMS more than 90% of the time¹
 - Commercial insurers base their payments on a multiple of the CMS Physician Fee Schedule

Three reasons:

- 1. Excess drug costs (17% of excess health care spending)
- 2. We pay our docs, pharmacists, allied health practitioners, and nurses a lot (11% of excess health care spending)
- 3. Much higher administrative cost/complexity (8% of excess health care spending)

Isn't this just "waste?"

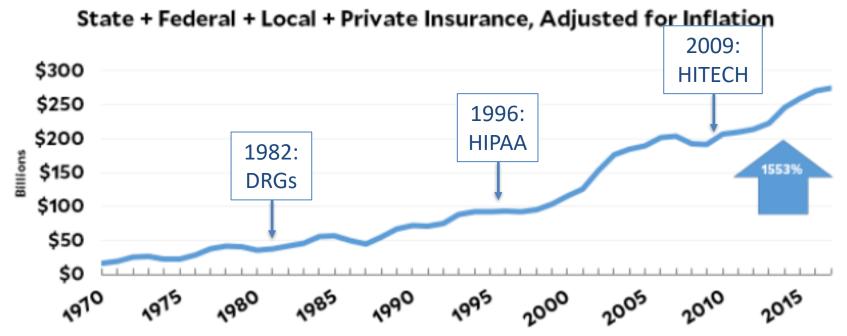
• "...by many pedigreed estimates, annual waste in US health care equals or exceeds the entire annual cost of Medicare plus Medicaid."

-Don Berwick, MD

Six domains of "waste"

- 1. Failure of care delivery
 - Lack of adoption of best practices
- 2. Failure of care coordination
 - Readmission or unnecessary ER visits
- 3. Overtreatment/low-value care
 - Antibiotics for colds
- 4. Pricing failure
 - What we pay for imaging, testing, etc
- 5. Fraud and abuse
- 6. Administrative complexity

Health Care Administration



US: 8% admin overhead (3x Canada); 14% overhead if insurance-related activities included

10 other wealth countries: average of 3% overhead

https://marginalrevolution.com/marginalrevolution/2019/08/are-health-administrators-to-blame.html, accessed 7/16/20; JAMA 2019, PMID: 31589283

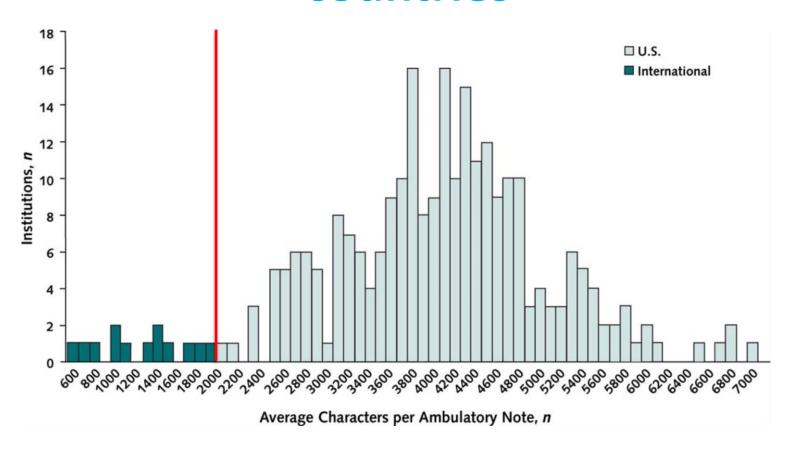
Billing-related costs per encounter

Table 1. Estimated Billing and Insurance-Related Administrative Costs by Activity^a

Costs and Processing Time	Primary Care Visit	Emergency Department Visit ^b	General Inpatient Stay ^c	Ambulatory Surgery	Inpatient Surgery
Total processing time, min	13	32	73	75	100
Total cost, \$ (%)	20.49 (100)	61.54 (100)	124.26 (100)	170.40 (100)	215.10 (100)
Cost breakdown by activity, \$ (%)	14.5%	25.2%	8.0%	13.4%	3.1%
Pre- and intraencounter costs					
Registration and preregistration	3.82 (19)	5.58 (9)	16.48 (13)	16.48 (10)	16.48 (8)
Physician time	6.36 (31)	10.97 (18)	13.29 (11)	51.20 (30)	51.20 (24)
Postencounter costs					
Professional billing	4.22 (21)	11.72 (19)	4.22 (3)	45.55 (27)	45.55 (21)
Hospital billing		13.70 (22)	44.43 (36)	17.44 (10)	44.43 (21)
Overhead	6.10 (30)	19.57 (32)	45.84 (37)	39.72 (23)	57.43 (27)

JAMA 2018, PMID: 29466590

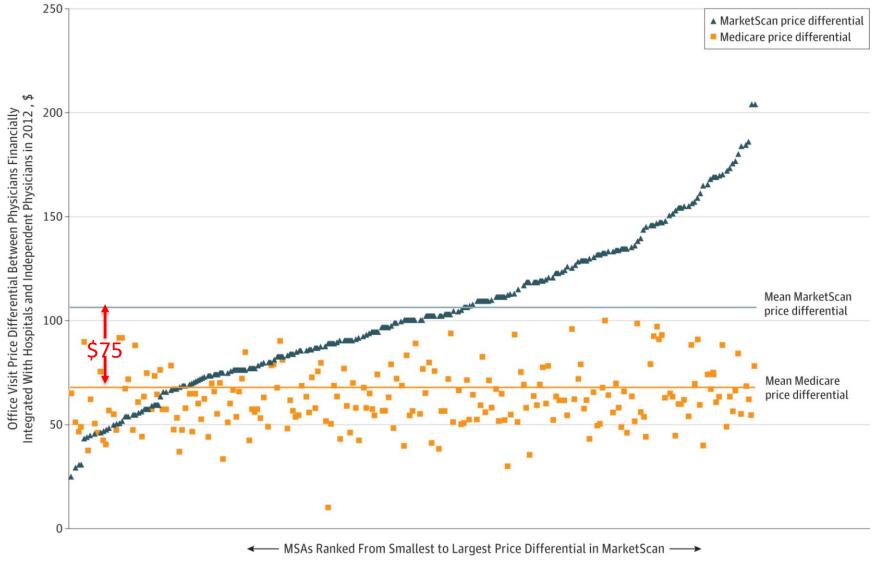
US notes are ~4x the length of other countries'



Average characters per ambulatory progress note in U.S. and international health systems.

Column height represents number of organizations. Dark columns represent 13 organizations outside the United States (140 000 notes from Canada, the United Kingdom, Australia, the Netherlands, Denmark, the United Arab Emirates, and Singapore). Light columns represent 254 organizations in the United States (10 million notes).

Ann Intern Med 2018, PMID: 29801050



- 2008 to 2012: 3.1% increase relative to mean outpatient spending in 2012 in practices financially integrated with hospitals (\$2407 [95% CI, \$2400-\$2414] per enrollee).
 - Driven almost entirely by price increases; associated changes in utilization were minimal
 JAMA Int Med 2015, PMID: 26501217

Roughly half of insurance sold is through a broker, with prices affected by commissions Higher Rates

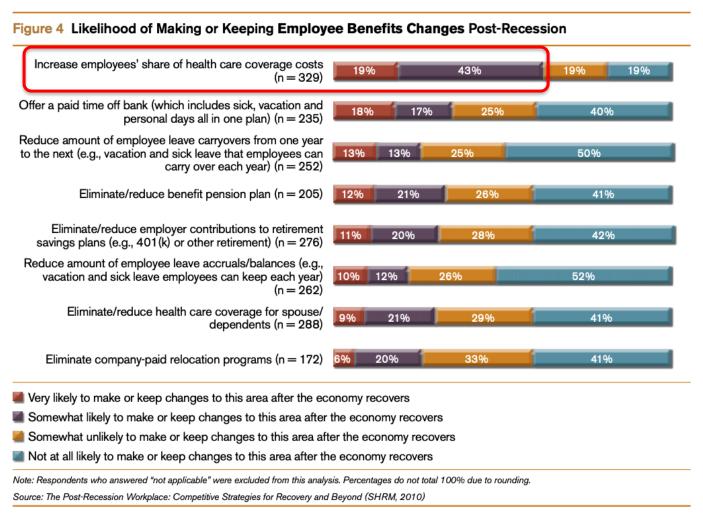
Higher Rates

You're crowned emperor of health care for the day. How do you increase value?

Health care expenses = Cost x Volume

- So to decrease health care costs, one has to:
 - Decrease the price of a service
 - Decrease the volume of the service
 - or both
 - Thus, regardless of the approach, the end result must affect price or volume

In spite of average utilization, we lean on employee cost sharing as a primary strategy



EBRI Issue Brief 2010, PMID: 20578430;

https://blog.shrm.org/sites/default/files/reports/SHRM%20Post%20Recession%20Workplace FI NAL-sm.pdf, accessed 7/13/20

Three reasons:

1. Excess drug costs (17% of excess health care spending)

How do we fix it?

- Make pharmaceutical trade easier ("a workaround born of desperation")
- Allow direct negotiation between CMS and drug manufacturers
- Institute value-based payments for drugs

Three reasons:

2. We pay our docs, pharmacists, allied health practitioners, and nurses a lot (11% of excess health care spending)

How do we fix it?

- Fund more residency positions
- Eliminate hurdles for foreign medical grads
- Fund fewer specialist positions
- Enforce rules that doctors cannot be paid for simple procedures
- Settle malpractice claims by referencing standards of care in other countries

Three reasons:

3. Much higher administrative cost/complexity (8% of excess health care spending)

JAMA 2018, PMID: 29536101; https://aspe.hhs.gov/pdf-report/observations-trends-prescription-drug-spending, accessed 4/8/19; Ann Intern Med 2020, PMID: 31905376

How do we fix it?

- Eliminate administrative burdens, particularly PBMs
- Reverse consolidation in health systems (i.e., anti-trust)
 - Too much negotiating power

Table 3. Estimates of Savings From Interventions That Address Waste

	Savings, \$US Billion				
Domain	Estimates	Total Range			
Failure of Care Delivery					
Interventions to address adverse hospital events and hospital-acquired infections ^{46,47,49}	5.4				
Incentives to increase physician efficiency ⁴⁸	47.5 million				
Integration of behavioral and physical health ⁵⁰	31.5-58.1	44.4-93.3			
Partnership for patients campaign ⁵³	3.4				
Standardized pathways in bundled payment models ^{51,52}	97.9-555.5 million				
Prevention initiatives to address diabetes, obesity, smoking, and cancer ^{25,26}	4.0-25.8				
Failure of Care Coordination					
Emergency department-based strategies ^{49,54}	3.8-7.4				
Care coordination in accountable care organizations55,56	8.3-13.1				
Health Information Exchanges ⁵⁷	205-410 million	29.6-38.2			
Transitional care programs ⁵⁸	9.2				
Effective care management for medically complex patients ⁵⁹	8.0				
Overtreatment/Low-Value Care					
Optimizing medication use ^{34,35}	8.8-21.9				
Prior authorization procedures ⁶⁰	250 million				
Pioneer accountable care organizations strategies to reduce overuse ¹³	199.7 million	12.8-28.6			
Shared decision-making tactics to reduce unnecessary procedures ⁶¹	3.2				
Expanding hospice access ⁶²	395 million-3.0 billion				
Pricing Failure					
Drug pricing interventions ^{63,64}	20.3				
Insurer-based pricing interventions ^{39,40}	31.4-41.2	81.4-91.2			
Laboratory and office visit pricing transparency ⁴¹	29.7				
Fraud and Abuse					
Recovery from convictions and fraud settlements ^{43,44,65}	2.1-5.1	22.0.20.0			
Legislative, administrative, and integrity strategies ^{65,66}	20.6-25.6	22.8-30.8			
Administrative Complexity					
Not applicable					
Total		191-282			





6

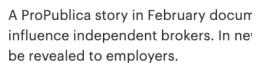
\$

🏶 Health Care





Senators Call and Fees Paid Brokers



by Marshall Allen, May 24, 2019, 11:40 a.m. ED

https://www.propublica.org/article/senators-call-for-disclosure-of-perks-and-fees-paid-to-health-benefits-brokers, accessed 7/18/20

The section on brokers proposes revising the Employee Retirement Income Security Act of 1974, better known as ERISA, which sets minimum standards for most private health and retirement plans. Brokers would have to disclose compensation from insurers and other vendors, in writing, at the time an employer signs up for benefits. The recommendation is similar to regulations for retirement benefit advisers.

"The goal of this provision is to provide employers with information about their brokers' incentives," said Taylor Haulsee, spokesman for the committee.

"Requiring disclosure and greater transparency will lead to a system that's more

accountable to employers and other purchasers," Thompson said.

The proposal has the support of Michael
Thompson, the president and CEO of the
National Alliance of Healthcare Purchaser
Coalitions, which represents groups of
employers that provide health benefits.
Thompson said employers often don't
recognize the biases at play when they
purchase benefits. Even large companies, with
experienced human resources managers, may
not understand all the ways their brokers
could be getting industry cash, he said.

ProPublica found that brokers cut a variety of side deals, from sending employers to a preferred vendor for a fee to sharing a slice of the revenue with a benefits provider. Brokers may also earn bonuses based on volume or retaining clients.

Read More



Behind the Scenes, Health Insurers Use Cash and Gifts to Sway Which Benefits Employers Choose

The insurance industry gives lucrative commissions and bonuses — from six-figure payouts to a chance to bat against Mariano Rivera — to the independent brokers who advise employers. Critics call the payments a "classic conflict of interest" that drive up costs.

"It is difficult to get a man to understand something when his salary depends on him not understanding it."

-Upton Sinclair



Questions?

"We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next 10."

- BILL GATES

- doublearrowmetabolism.com
- justin@doublearrowmetabolism.com