

Drugs & Healthcare Economics:

What Can We Do About It?

*University of Minnesota
Retirees Association*

Minneapolis, Minnesota
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Stephen W. Schondelmeyer
Professor and Director
PRIME Institute
University of Minnesota

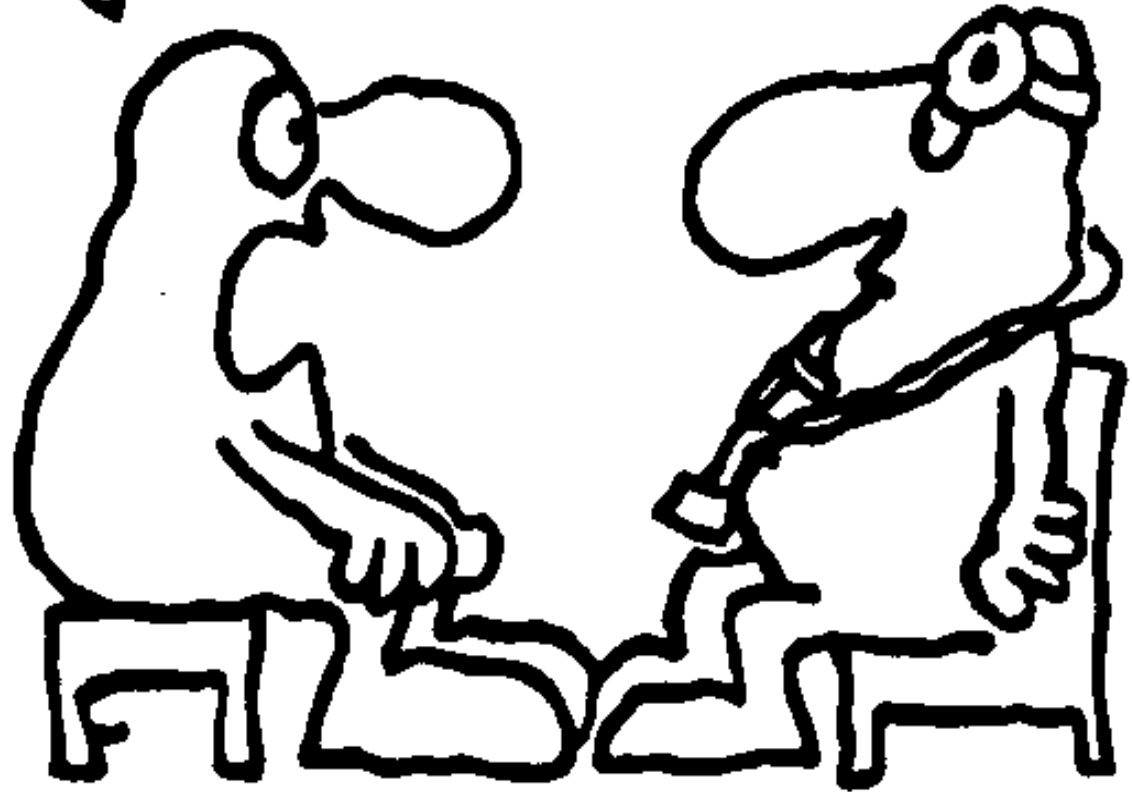


**Is there anyone who has never
been sick a day in their life?**

**Is there anyone who has not needed
(or used) a prescription drug?**

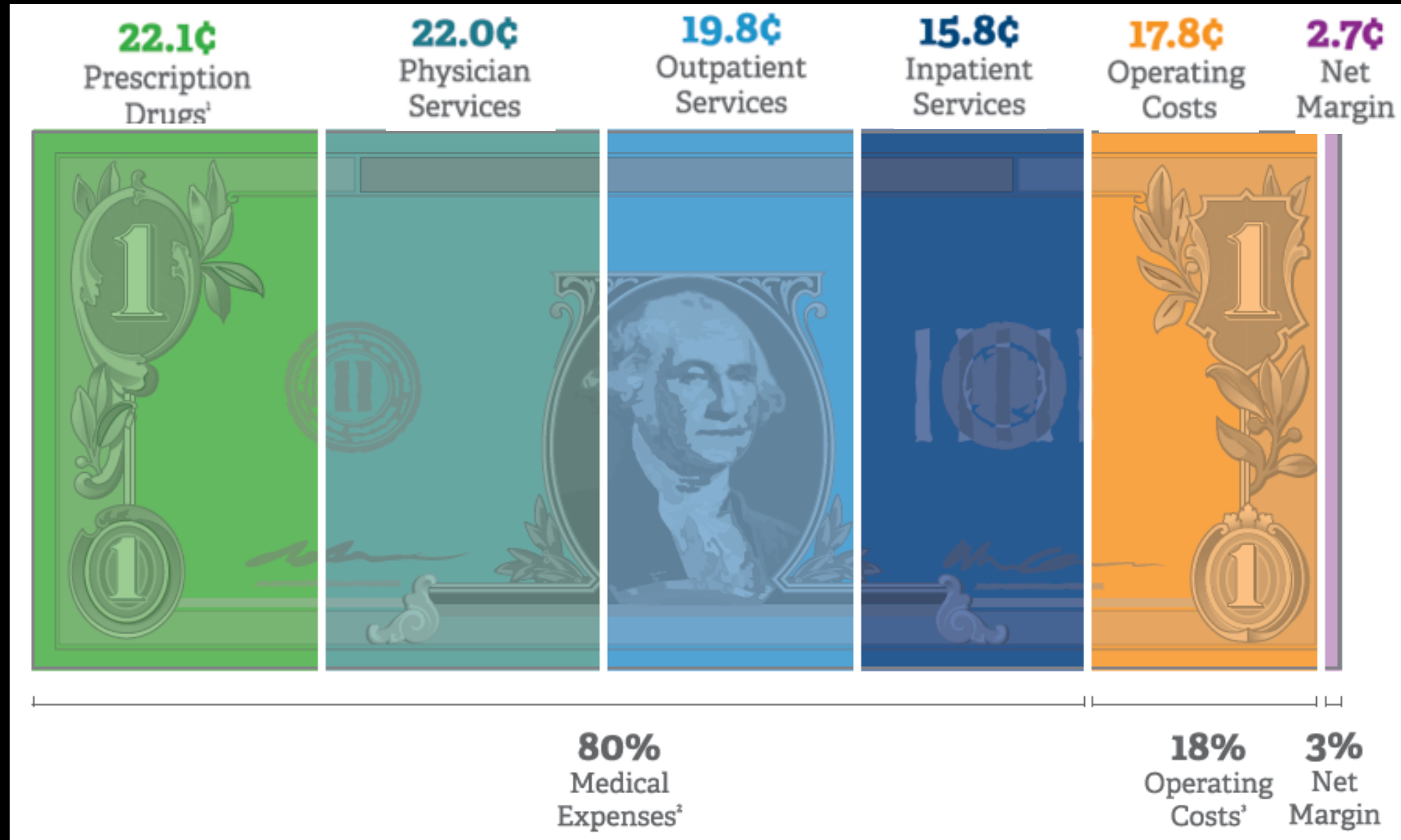
*Virtually everyone needs, has used,
or will use drugs in their lifetime.*

DOCTOR, HOW SICK
AM I - IN DOLLARS
AND CENTS?



Where Does Your Premium Dollar Go?

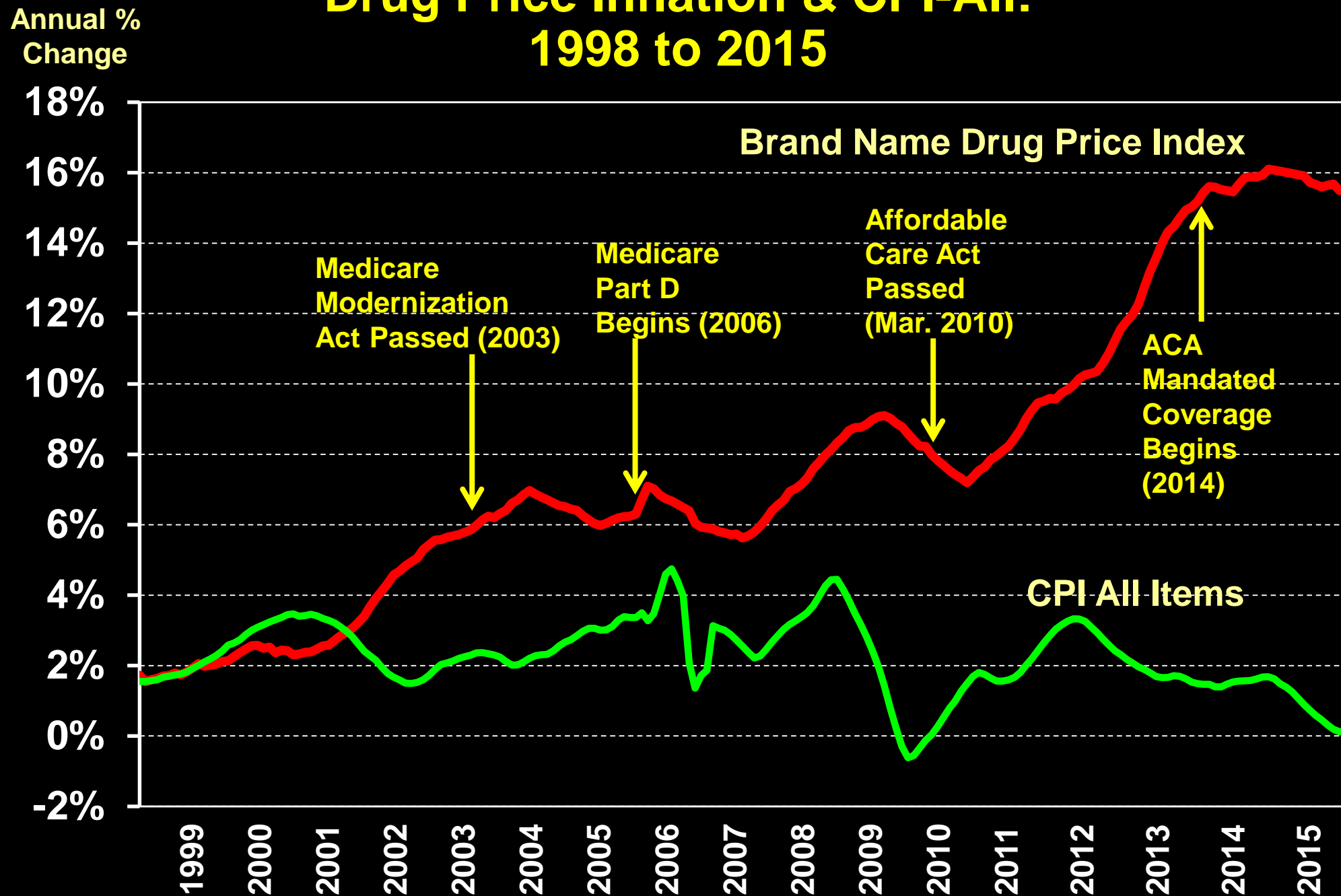
Characterizes how a dollar of commercial health insurance premium was spent in 2014.



Source: America's Health Insurance Plans, Where Does Your Premium Dollar Go? 2017.

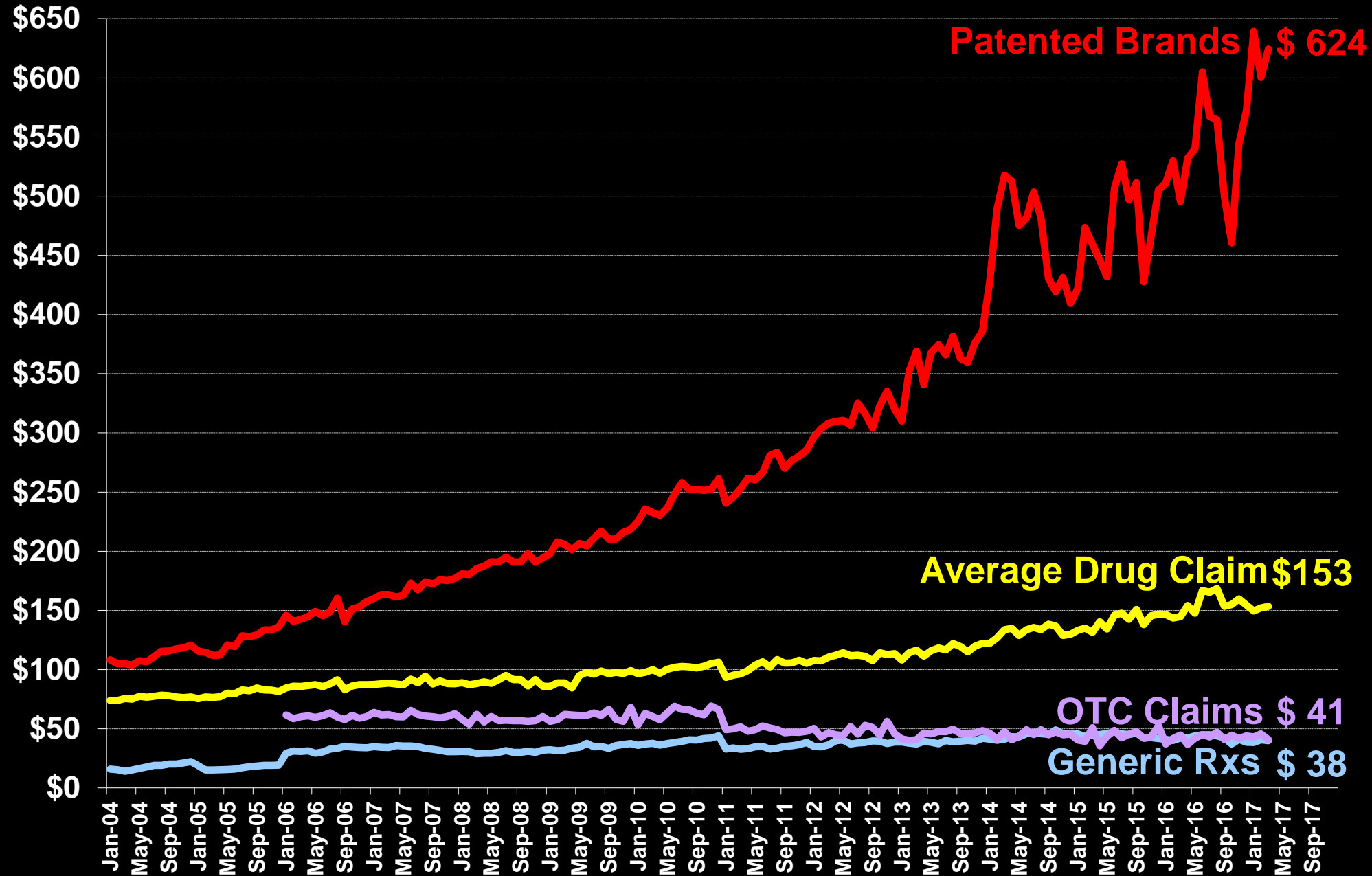
**Are Drug Prices
Still an Issue?**

Top Brand Name Drugs Most Used by Elderly Drug Price Inflation & CPI-All: 1998 to 2015



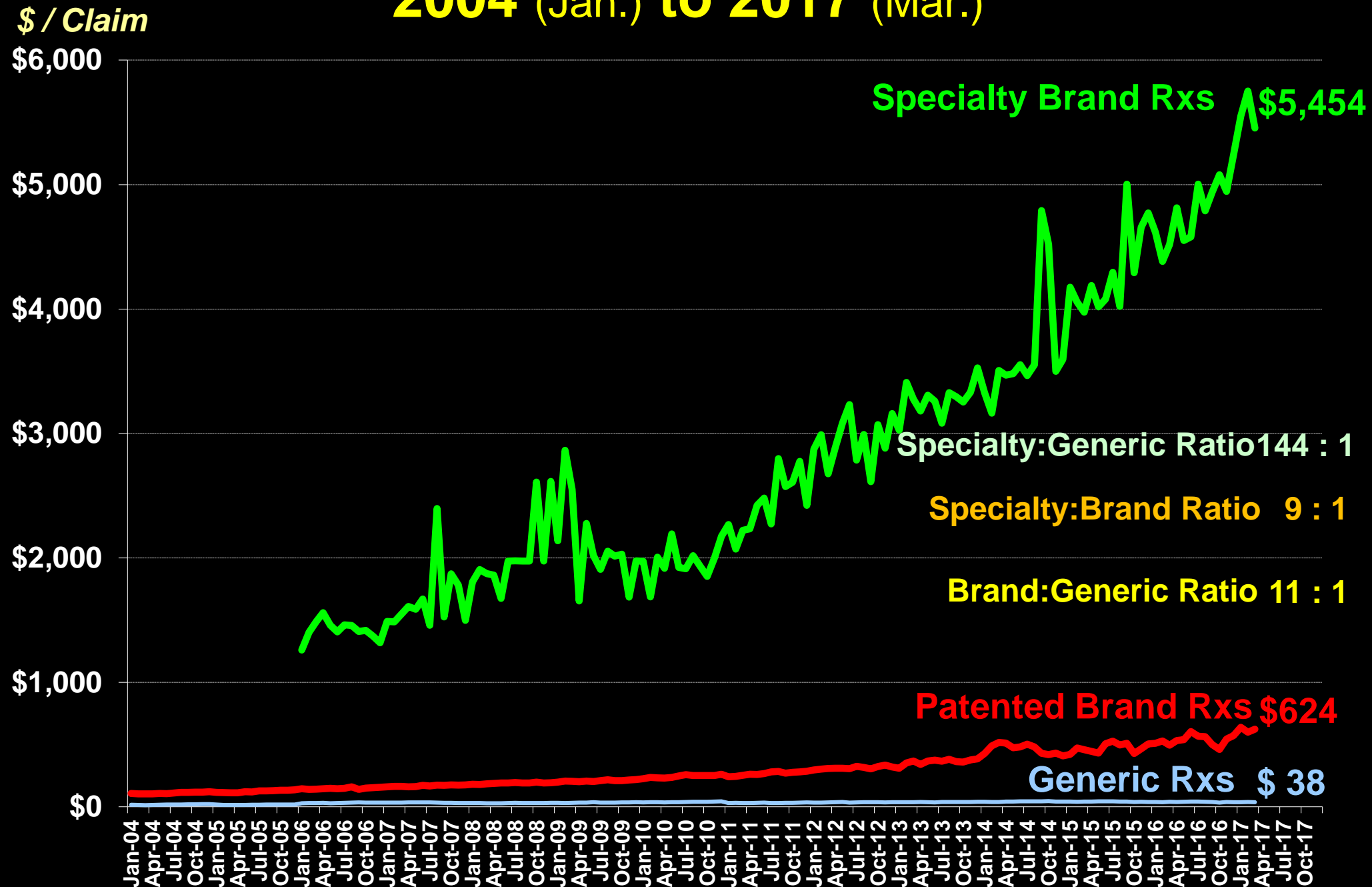
Total Paid (\$) per Claim by Drug Type: 2004 (Jan.) to 2017 (Mar.)

\$ / Claim



Based on data from Univ. of Minnesota self-insured drug benefit (UPlan) 2004 to 2017 & compiled by PRIME Institute, University of Minnesota.

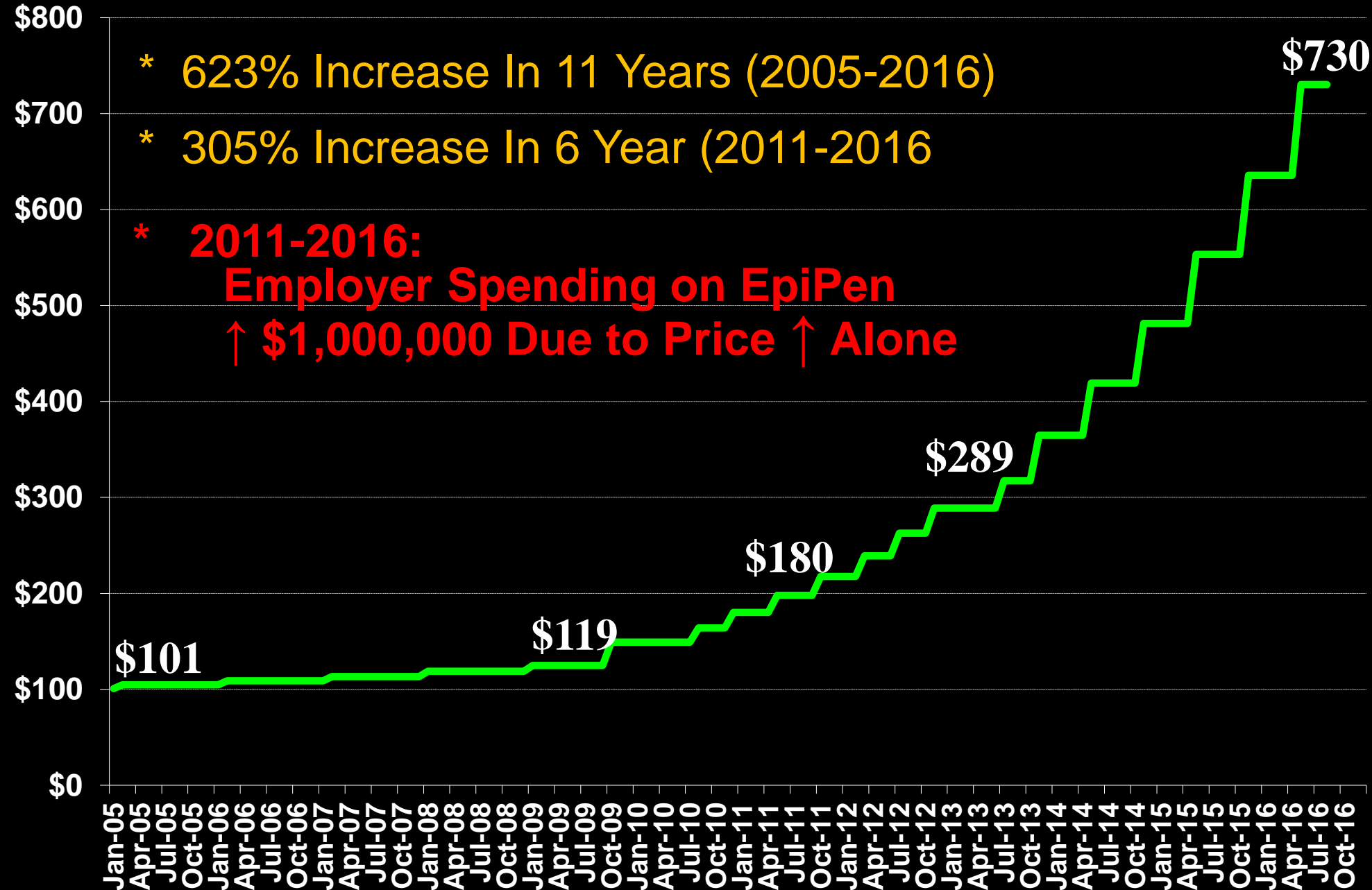
Total Paid (\$) per Claim by Drug Type: 2004 (Jan.) to 2017 (Mar.)



Based on data from Univ. of Minnesota self-insured drug benefit (UPlan) 2004 to 2017 & compiled by PRIME Institute, University of Minnesota.

\$/EpiPen (2-pak) for Self-Insured Health Plan: 2005-2016

\$ Paid /
Claim



Market Observations

EpiPen prices ↑ 623% in 11 years from \$101 (2005) to \$730 (2016).

While epinephrine is off-patent, the auto-injection device is not.

A potential competitor to EpiPen (Auvi-Q) entered the market in April 2018.

The 'competitive' price of the new product (Auvi-Q) was \$4,500/2-pak* → 6 times the price of EpiPen.

Is \$4,500 vs. \$730 the price you would expect from a competitor?

---No

This Market is Broken.

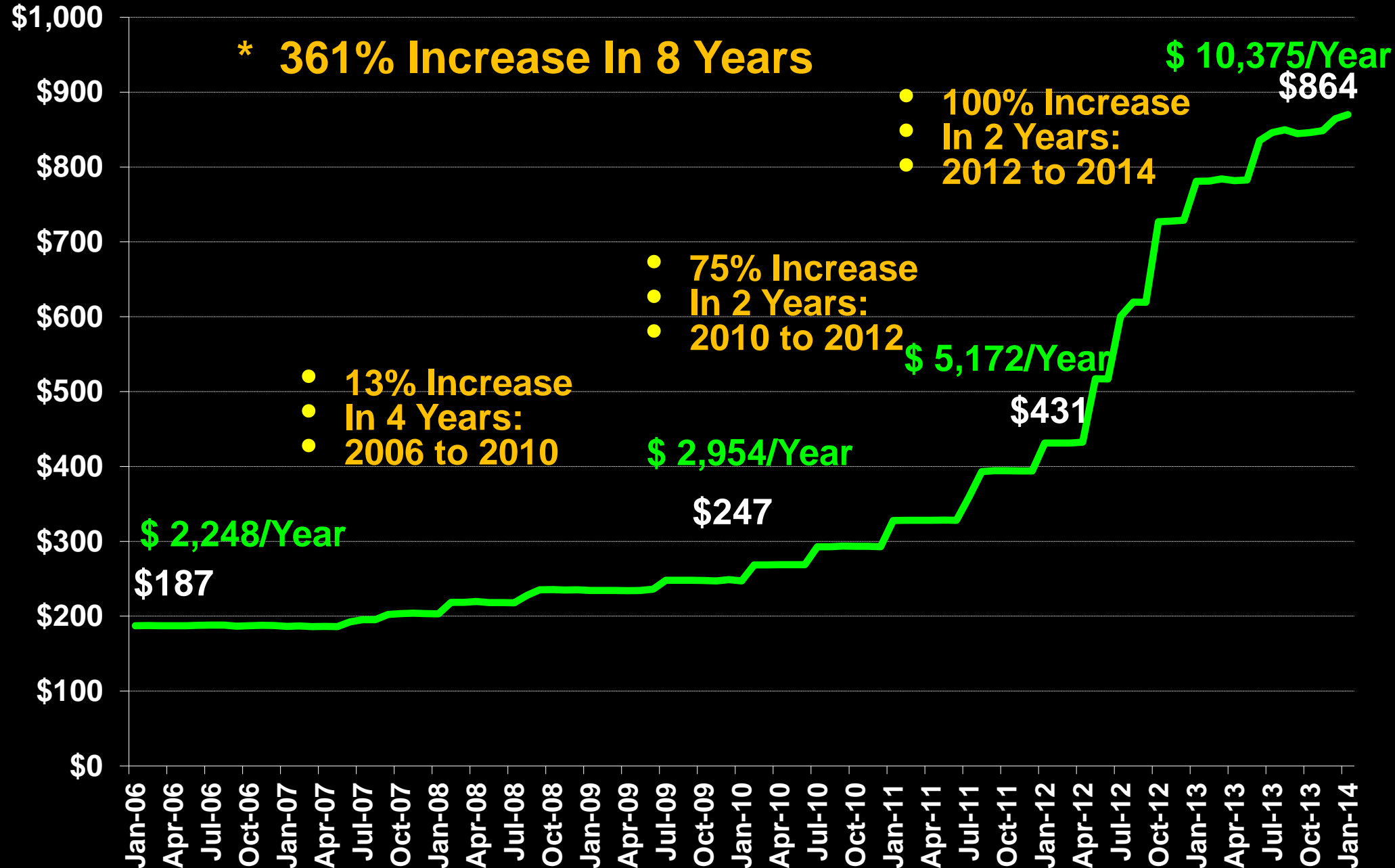
Based on data from self-insured drug benefit 2004 to 2016 & compiled by PRIME Institute, University of Minnesota.

* Reported in Karlin-Smith, Sarah, "EpiPen competitor to cost seven times more", Politico, January 19, 2017 as found at:

<https://www.politicopro.com/health-care/whiteboard/2017/01/kaleo-to-undercut-epipen-price-with-upcoming-alternative-082511>

Humulin U-500: Average \$/Month for Commercial Insurance: 2005-2013

\$ / Month



Market Observations

Insulin has been on the market since the 1930s.

The price of insulin has ↑ >4-fold over 8 years.

The annual cost of insulin grew from ~\$2,500 (2006) to >\$10,000 (2014).

Insulin prices have continued to grow.

Patients have died because they could not afford their insulin.

This Market is Broken.

Based on data from self-insured drug benefit 2004 to 2014 & compiled by PRIME Institute, University of Minnesota.

**When a drug has a
100% increase in price
does the patient's
diabetes get 100% better?**

NO !!!

***Are We Getting Our Money's Worth?
Is the Market Really Working?***

***This Is Not an Efficient Market
Or Value-Based Pricing !***

Annual Cost of Multiple Sclerosis Therapies in the U.S. from 1993 to 2013

We Assume That More Competitors Will Make the Market Work !

What Happened With MS drugs as more competitors entered the market?

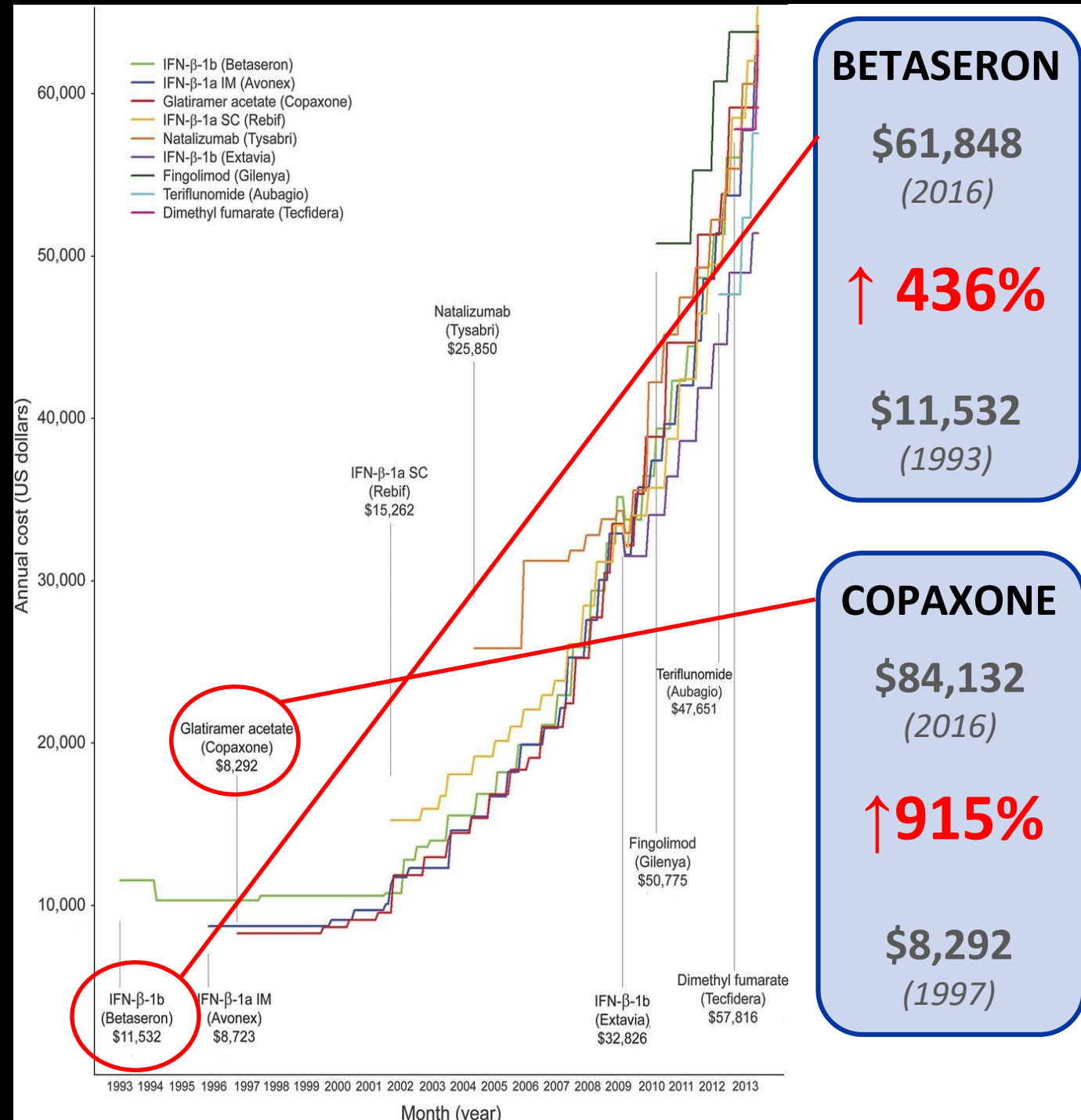
**MS Therapy Prices
↑ 500% to 1,000%
When 9 Competitors
Entered Over 20 Years.**

**Is This Market Competitive
& Economically Efficient?**

Source:

The cost of multiple sclerosis drugs in the US and the pharmaceutical industry: Too big to fail?

Daniel M. Hartung, PharmD, MPH
Dennis N. Bourdette, MD
Sharia M. Ahmed, MPH
Ruth H. Whitham, MD



Market Observations

Multiple Sclerosis Therapy had an annual cost of about \$10,000 from 1993 to 2002.

The 2nd & 3rd MS therapies entered the market at a lower annual cost of about \$8,000.

One would expect the annual cost to decline as more competitors enter the market.

From 2002 to 2016, 6 new MS therapies entered the market & the annual price reached \$60,000 to \$80,000.

An economically competitive market would be expected to result in lower, rather than higher prices.

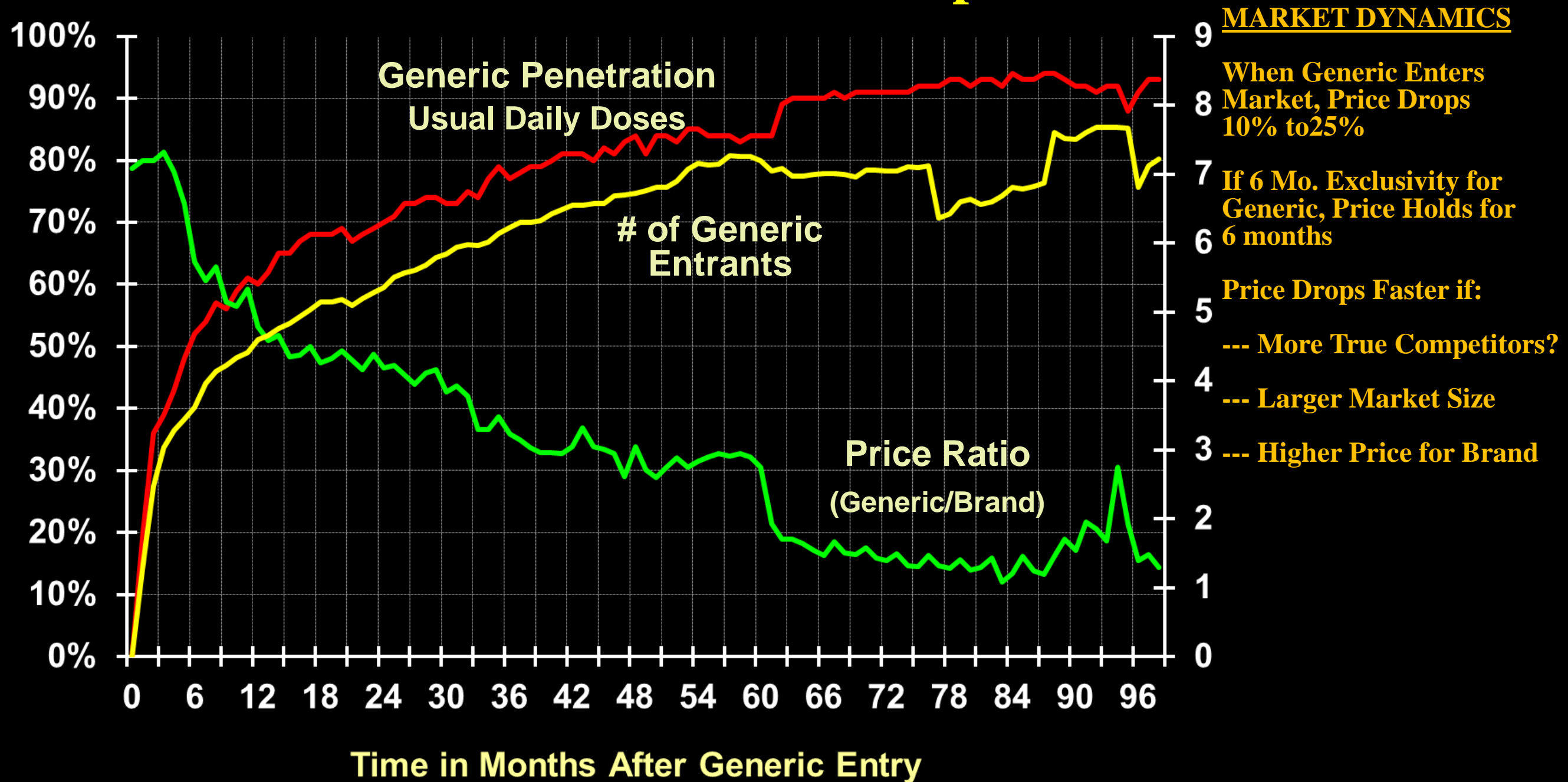
More competitors for MS therapy resulted in prices that ↑ 6-fold to 8-fold

This Market is Broken.

**Do Generic Prices
Still Go Down
Over Time?**

Usually But Not Always

Do Generics Compete on Price: Patterns of Generic Competition



Brand vs. Generic Prices

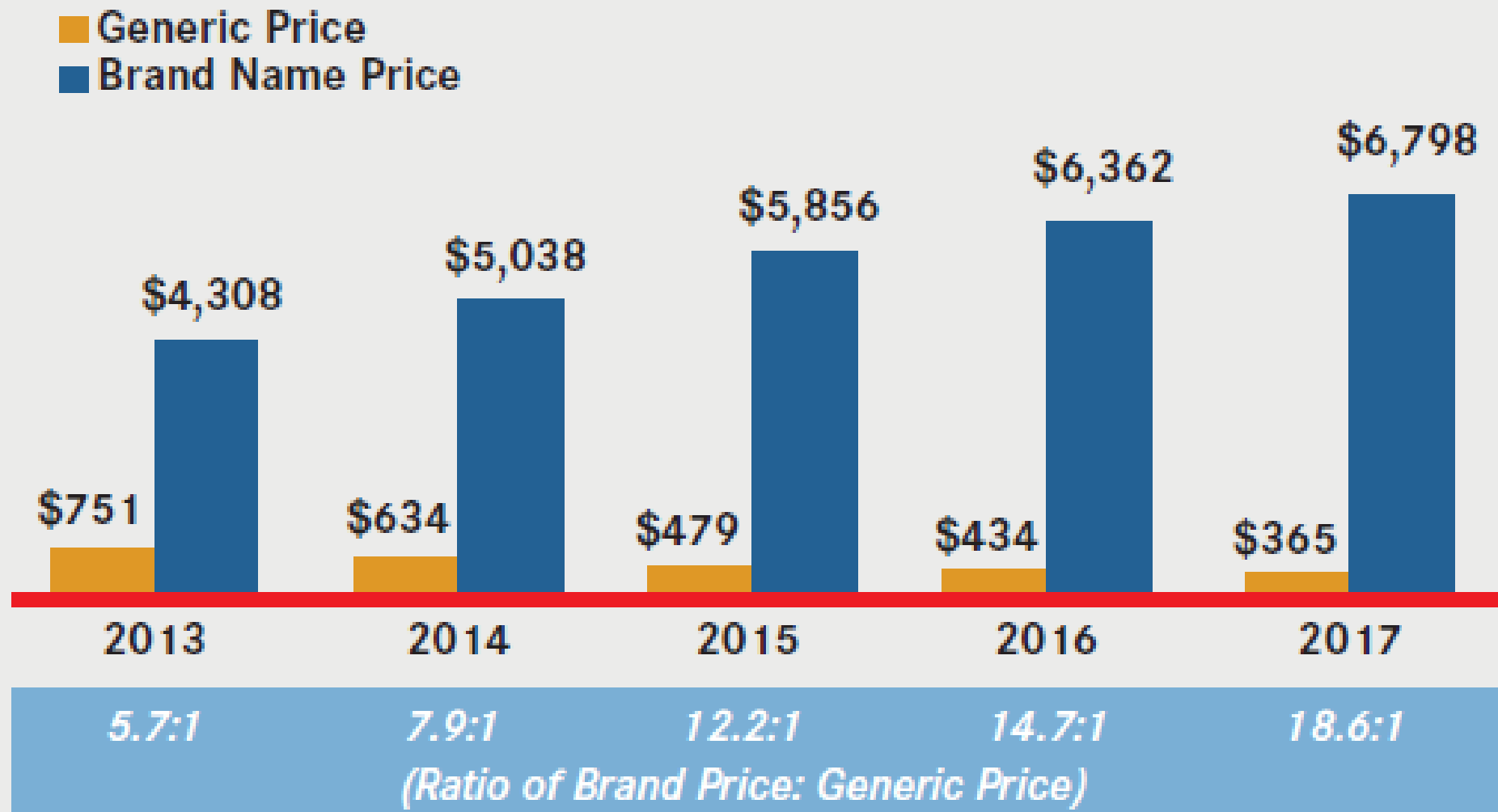
MARKET DYNAMICS

Between 2013 & 2017:

--- Brands have \uparrow 57.8%

--- Generics have \downarrow 51.4%

--- Ratio of Brand:Generic
was $> 5 : 1$ in 2013
grew to $> 18 : 1$ in 2017



Prepared by the AARP Public Policy Institute and the PRIME Institute, University of Minnesota, based on data from Truven Health MarketScan® Research Databases.

Drop Down Menu for Metformin

Does not include price.

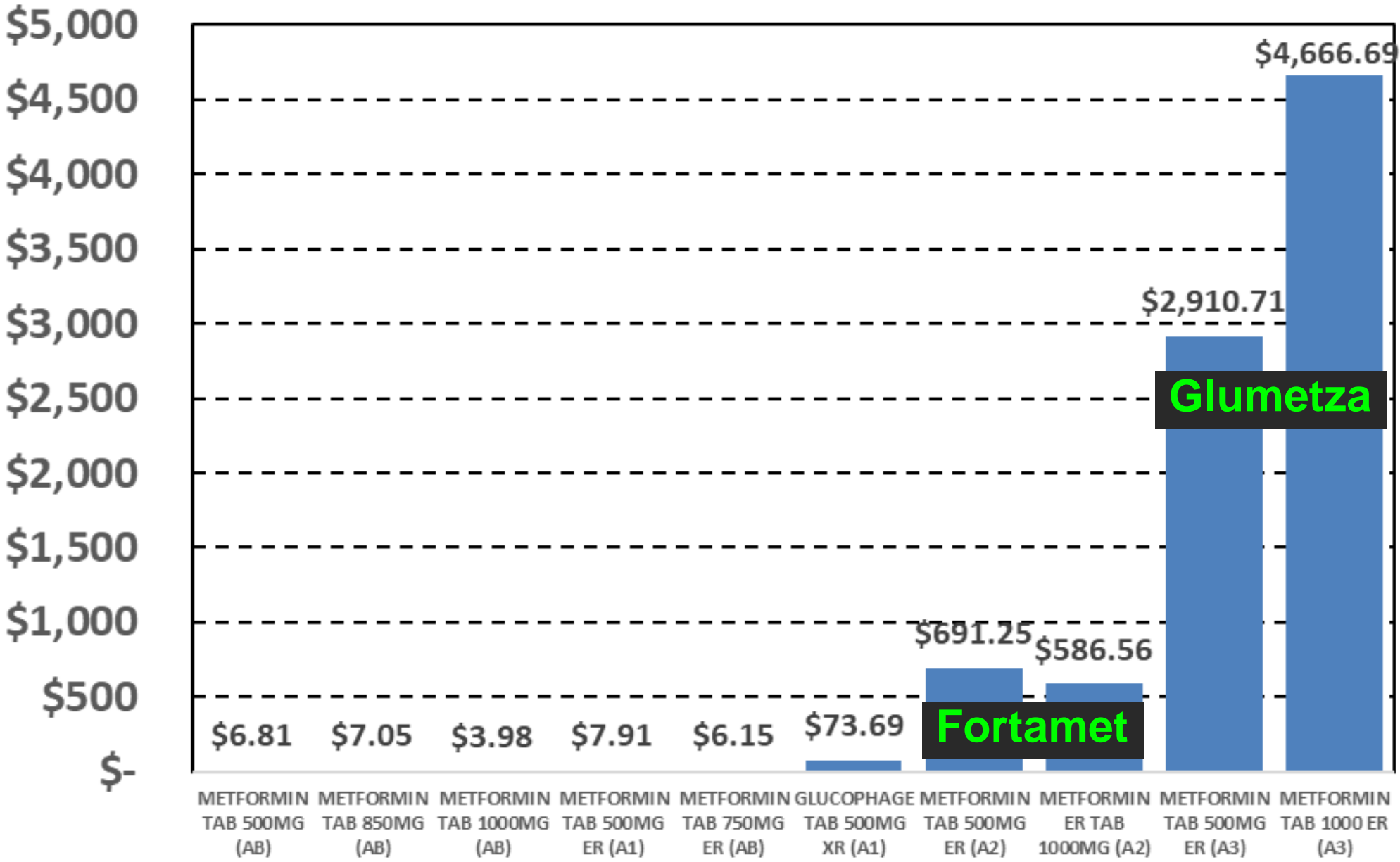
Which product would you choose?

What is the cost/month?

Name	Med Form	Disp	Route	Pref List	Code	Copay	Coverage	For Type
glyBURIDE-metFORMIN (GLUCOVANCE) 5-500 MG tablet	Tablet		Oral	MEDICATI...	43940			Generic Rx, Compound
metFORMIN (GLUCOPHAGE) 1000 MG tablet	Tablet		Oral	MEDICATI...	28569			Generic Rx
metFORMIN (GLUCOPHAGE) 500 MG tablet	Tablet		Oral	MEDICATI...	28557			Generic Rx
metFORMIN (GLUCOPHAGE) 850 MG tablet	Tablet		Oral	MEDICATI...	39510			Generic Rx
metFORMIN (GLUCOPHAGE-XR) 500 MG 24 hr tablet	Tablet Extended Release...		Oral	MEDICATI...	44296			Generic Rx
metFORMIN (GLUCOPHAGE-XR) 750 MG 24 hr tablet	Tablet Extended Release...		Oral	MEDICATI...	51543			Generic Rx
metFORMIN ER osmotic (FORTAMET) 1000 MG 24 hr tablet	Tablet Extended Release...		Oral	MEDICATI...	54357			Generic Rx
metFORMIN ER osmotic (FORTAMET) 500 MG 24 hr tablet	Tablet Extended Release...		Oral	MEDICATI...	54356			Generic Rx
metFORMIN modified (GLUMETZA) 1000 MG 24 hr tablet	Tablet Extended Release...		Oral	MEDICATI...	1059...			Generic Rx
metFORMIN modified (GLUMETZA) 500 MG 24 hr tablet	Tablet Extended Release...		Oral	MEDICATI...	91704			Generic Rx

\$ 3.03
\$ 1.39
\$ 2.43
\$ 3.77
\$ 6.95
Brand (A2) \$ 467.14
Brand (A2) \$ 307.71
Brand (A3) \$6377.34
Brand (A3) \$6265.09
Generic (A3) \$2078.97

Amount Paid (\$)/30-Day Prescription: Metformin by Product Type

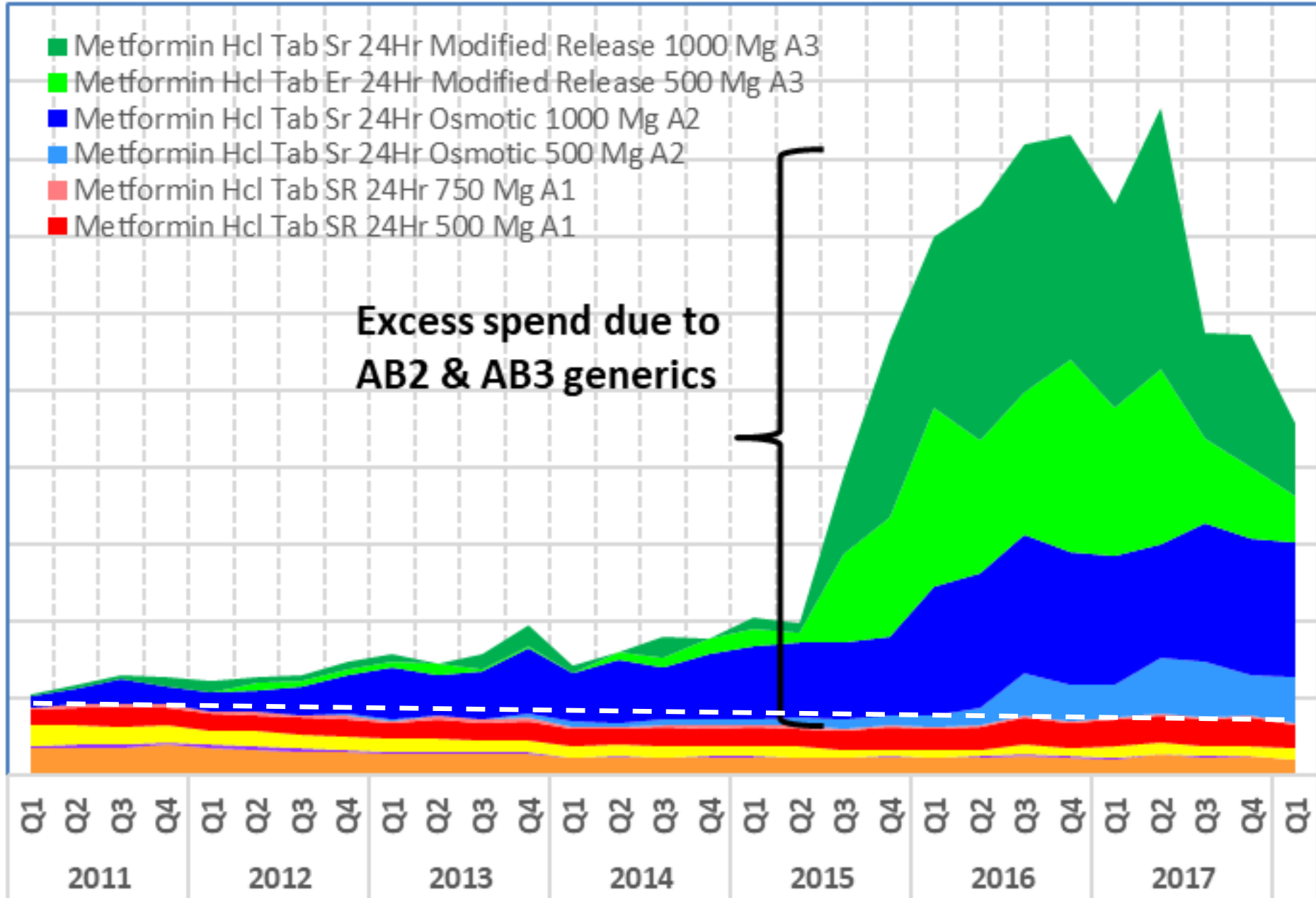


Fortamet

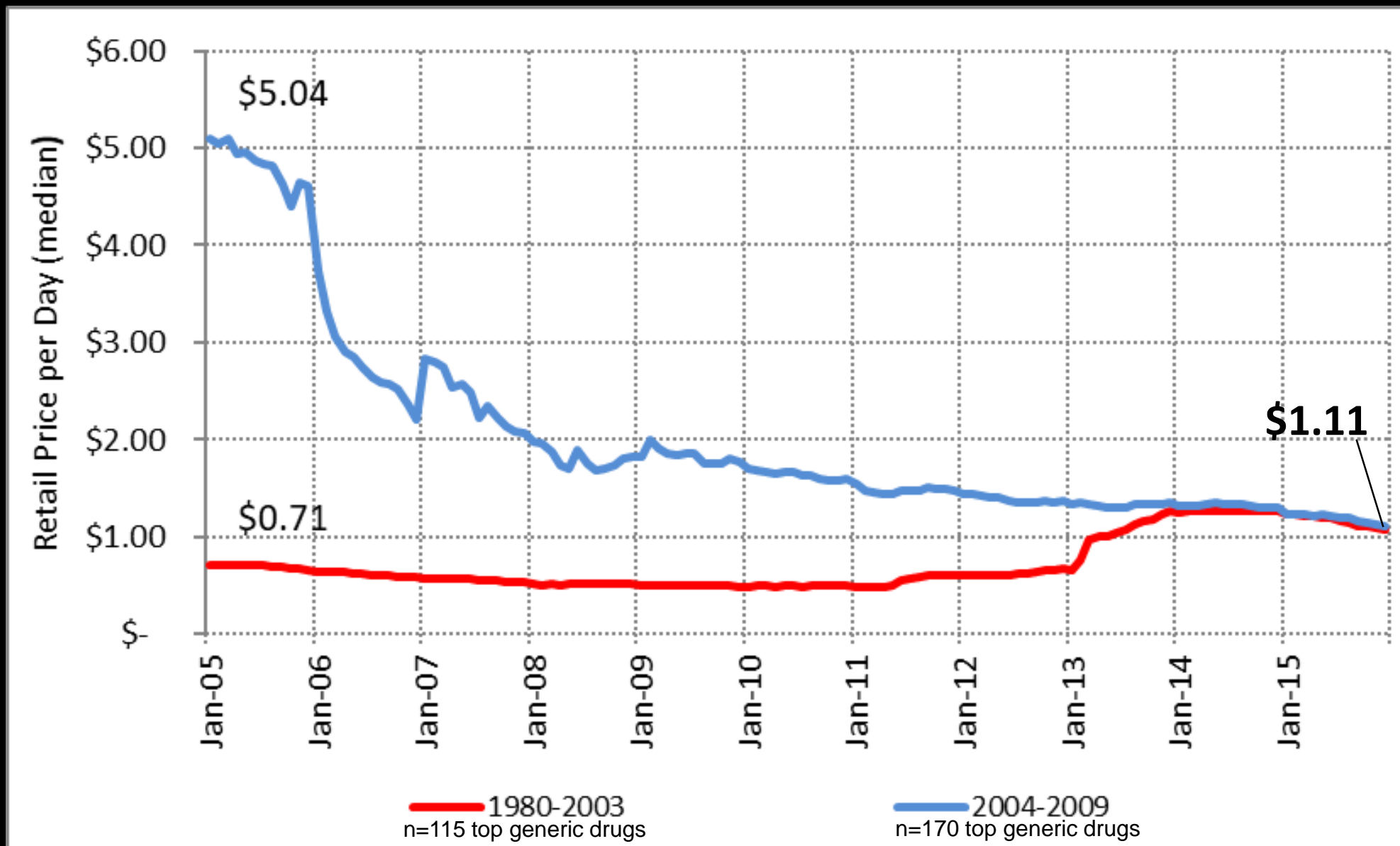
Glumetza

Total Amount Paid by Quarter for Metformin Tab: All Forms & Strengths for Q1 2011 to Q1 2018

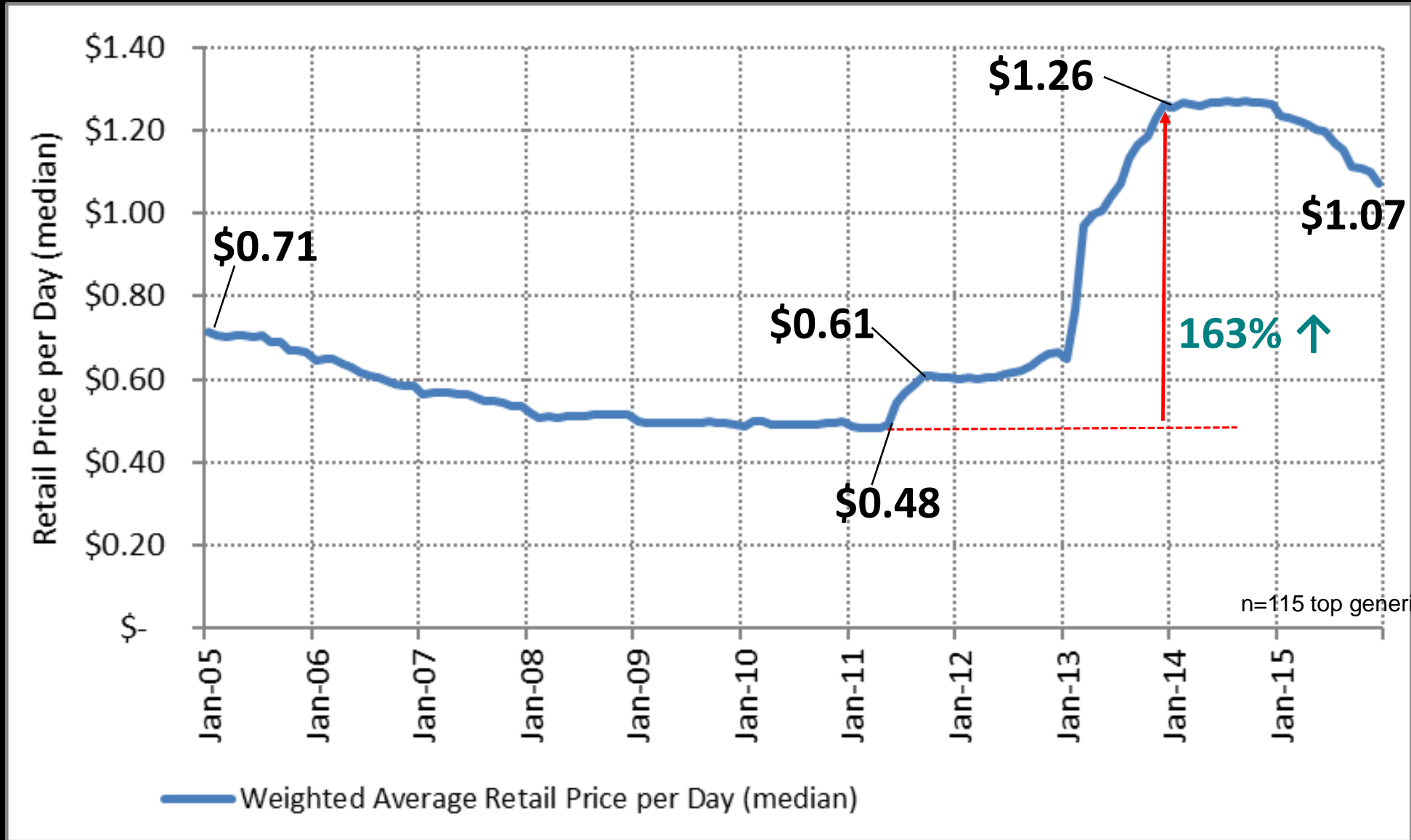
\$200,000
\$180,000
\$160,000
\$140,000
\$120,000
\$100,000
\$80,000
\$60,000
\$40,000
\$20,000
\$-



Weighted Average Retail Price per Day (median) from 2005 to 2015 For Older Generic Cohort (1980-2003) & Newer Generic Cohort (2004-2009)



Weighted Average Retail Price Paid per Day for Older Cohort (1980-2003) of Most Widely Used Generic Prescription Drugs: 2005 to 2015

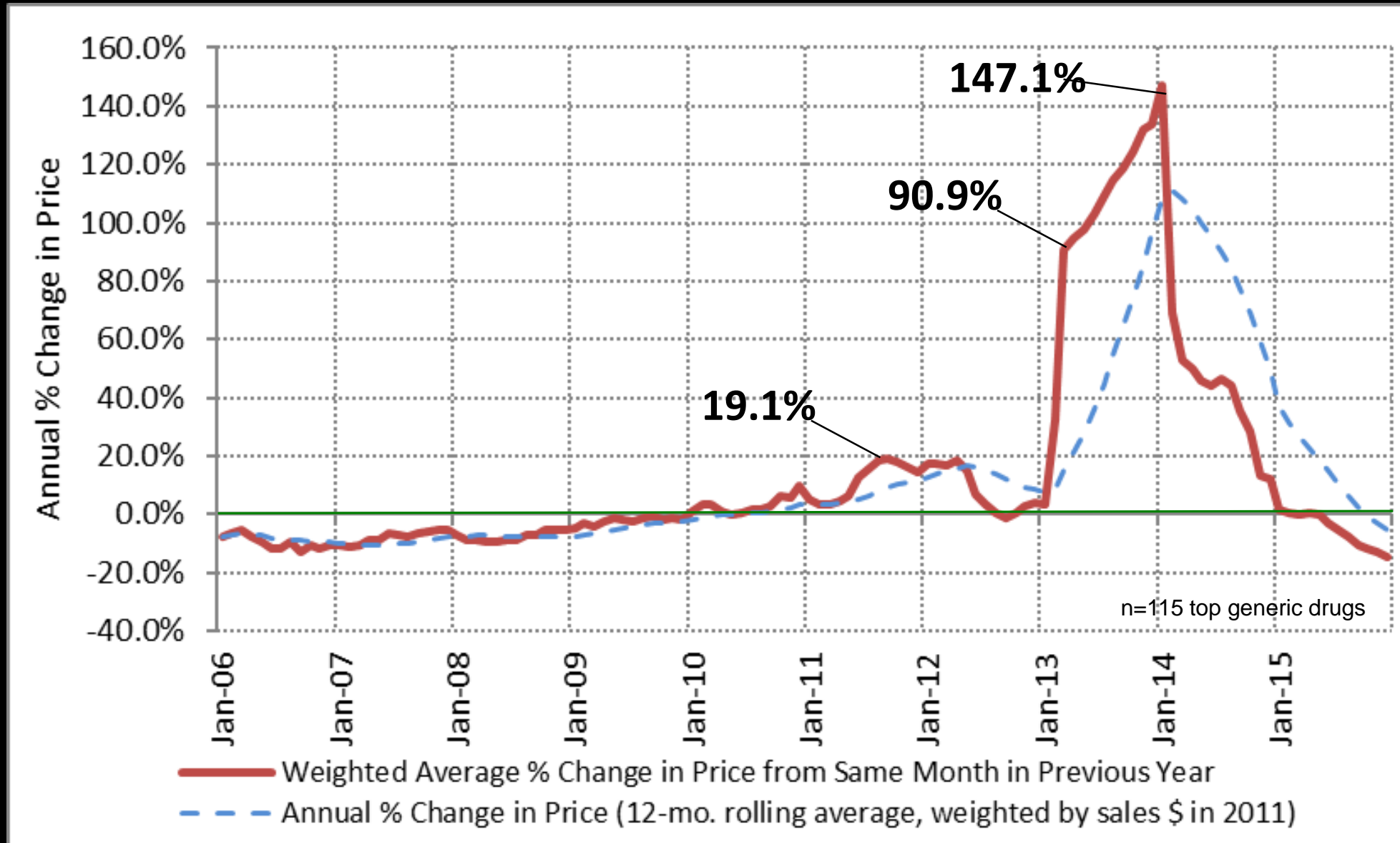


MARKET DYNAMICS

Generics with large increases (examples):

- Doxycycline 1789%
- Amitriptyline 262%
- Nystatin 223%
- Methylprednisolone 312%
- Digoxin 429%
- Lovastatin 229%
- 76 of 115 Generic Drugs Had Price ↑ > 25%

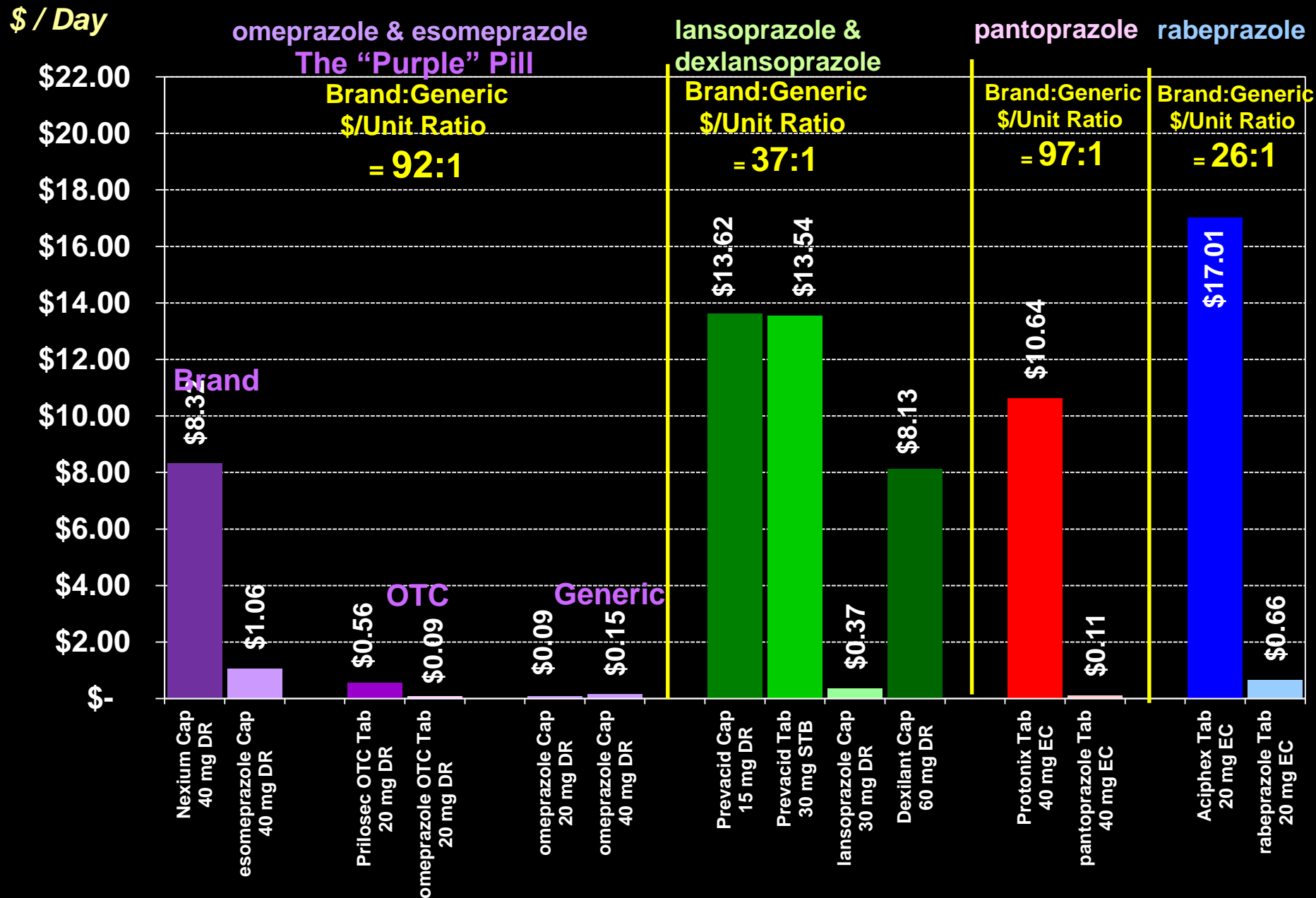
Weighted Average Annual Percent Change in Retail Price for Older Cohort (1980-2003) of Most Widely Used Generic Prescription Drugs, 2006 to 2015



Role of Generics

Be Wise & Beware

Proton Pump Inhibitors \$ Cost/Unit for Self-Insured Employer*: 2016



NEW GENERIC GAMES

- * **New Combination:**
Zegerid (omeprazole & sodium bicarb.)
Price: \$17,000/Rx (\$95 / tab)
(Valeant. 90-day supply)
- * **Generic Version of Zegerid**
(Oceanside, 90-day supply)
\$12,000/Rx (30% discount off brand)
- * **Generic Version of Omeprazole & Sod. Bicarb.**
\$17/Rx (90-day supply)
- * **Brand to Generic Ratio**
(1,000 : 1)

BENEFIT DESIGN ISSUES

What Should You Do With Drugs Like Zegerid?

- Cover Them? or
- NDC Block Them?

Should You Cover OTCs?

Should You Cover Brands With Price Ratios > 25:1 ?

* Compiled by the PRIME Institute, University of Minnesota from actual claims data for total amount paid by a self-insured employer for calendar year 2016.

What Do You Take to the Bank?



**Government
Policy
Directions**

OVERVIEW

- **Everything old is new again**
- **Some new ideas on the scene**
- **Administration remains very engaged**

Donald Trump on Health Care



**“Healthcare is an unbelievably complex subject.
Nobody knew that healthcare was so complicated.”**

President Donald J. Trump, Feb. 27, 2017, <http://time.com/4684068/Donald-trump-health-reform-complicated/>

President Trump on Drug Prices



U.S. drug prices have been “outrageous.”^{*1}
Pharmaceutical firms are “getting away with murder.”^{*2}

¹ President Donald J. Trump, March 21, 2017, <http://fortune.com/2017/03/21/trump-pharma-stocks-drug-prices/>

² President Donald J. Trump, January 11, 2017, <http://fortune.com/2017/01/11/donald-trump-press-conference-biopharma-stocks/>



Reforming Biopharmaceutical Pricing at Home and Abroad

The Council of Economic Advisers
February 2018

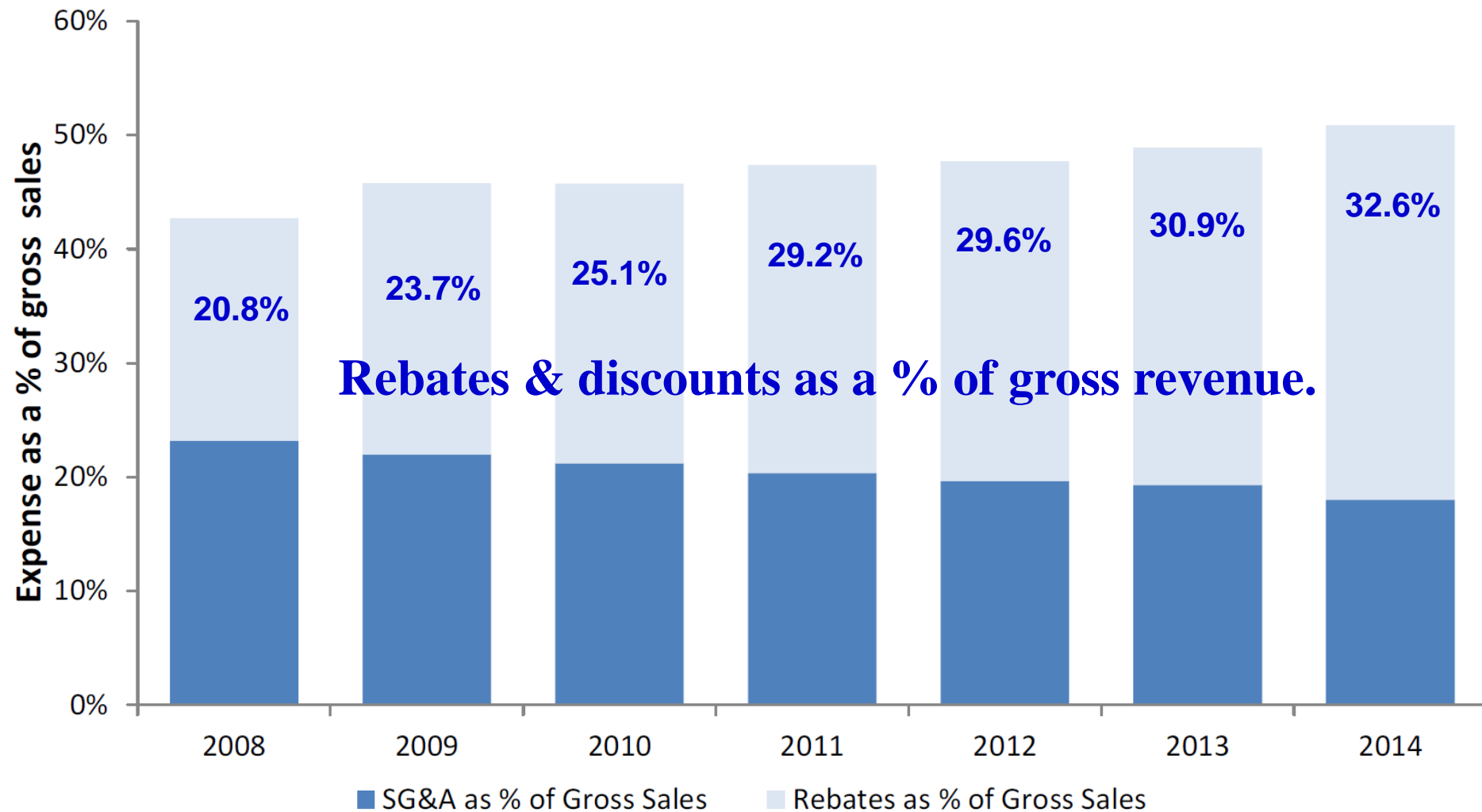
“The Blueprint”



- Does a great job of describing the problem...
- Touches on large number of potential solutions
BUT unclear how they would be implemented or when
 - Some would require legislation
- Does not address manufacturer pricing behavior

Trump on Prescription Drugs

Figure 8: Overall promotional expenses still rising, even if reported SG&A as % is falling



Source: Company data, Credit Suisse estimates

Market Observations

Rebates have grown to account for 1/3 of total drug firm revenue reported to Wall Street.

Rebates lead to inflated list prices & increased up-front payments for drugs so that the PBM can collect a rebate from the drug manufacturer 9 to 12 months without interest on the time value of money.

Rebates are a very inefficient means for providing discounts on prescription drug prices.

Lack of transparency on rebates & other fees makes it nearly impossible for plan sponsors to hold PBMs & drug firms accountable for prices & rebates.

Some rebates may be passed on to the plan sponsor and/or the patients.

There are many other types of fees & economic consideration between drug firms & PBMs.

Focus on Rebates

Meet the Rebate, the New Villain of High Drug Prices

A growing chorus, including the Trump administration, is calling for a rethinking of after-the-fact drug discounts that some say contribute to rising prices.

- Drug companies provide rebates to secure place on plan formularies, then raise list prices to maintain their profits and offer even bigger rebates
- Pharmacy benefit managers, wholesalers and pharmacies are also paid based on a percentage of the list price
- A few approaches in play:
 - Point-of-sale rebates under Medicare Part D
 - Eliminate rebates entirely

Secretarial negotiation is incredibly popular

- 92% of the public supports allowing Medicare to negotiate lower drug prices
 - 96% of Democrats
 - 92% of independents
 - 92% of Republicans
- BUT: support isn't as solid as it seems



So what is everyone talking about in 2019?

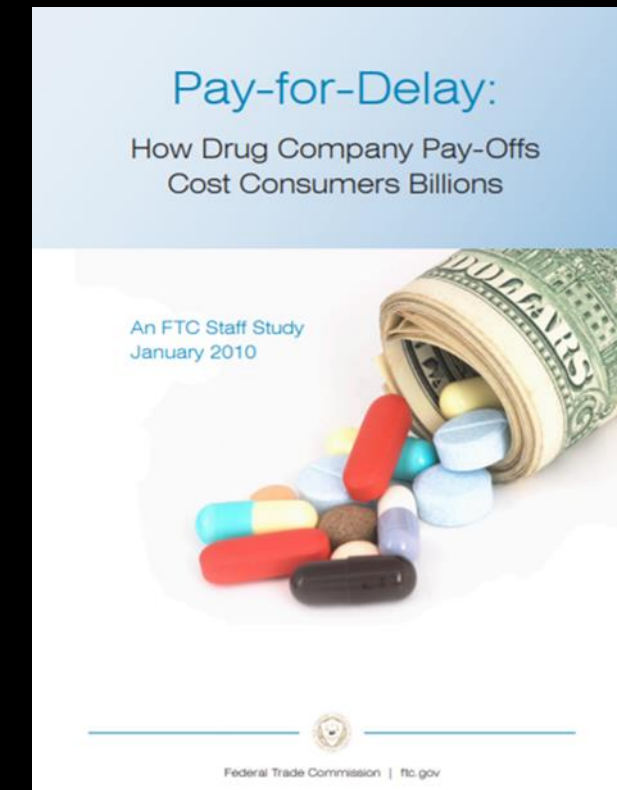
- ◆ Secretarial negotiation



- ◆ Importation



- ◆ Eliminate pay-for-delay



Some things are pretty much guaranteed...

- More Congressional hearings
- Continued bad behavior by some manufacturers as they return to business as usual.
- Issue will likely continue to get attention as more and more people become unable to afford necessary medications.



International reference pricing

- Limits payments to the price paid by another country or a market basket of countries
 - ◆ Widely used in other countries
 - ◆ Like importation, fits with larger narratives of “free-riding” and “fairness”





Nuclear options are increasingly on the table

- ◆ Revisiting when & how patents & exclusivity are granted
- ◆ Revoking patents and/or exclusivity for bad behavior (compulsory licensing)

2017/2018 State Rx Legislation

- 2018 Session: 171 Bills (up from 100 bills in 2017)
- 28 States Enacted 45 New Laws on Drug Costs

Major Categories of Legislation:

- **PBM Oversight** – 92 Bills (31 laws in 20 states)
- **Transparency** – 26 Bills (7 laws: OR, VT, ME, NH, CT, CA*, NV*)
- **Price Gouging** – 13 Bills (1 law: MD*)
- **Wholesale Importation** – 9 Bills (1 law: VT)
- **Bulk Purchasing** – 4 Bills
- **Drug Affordability Review Boards** – 3 Bills: MD, NJ, MN;

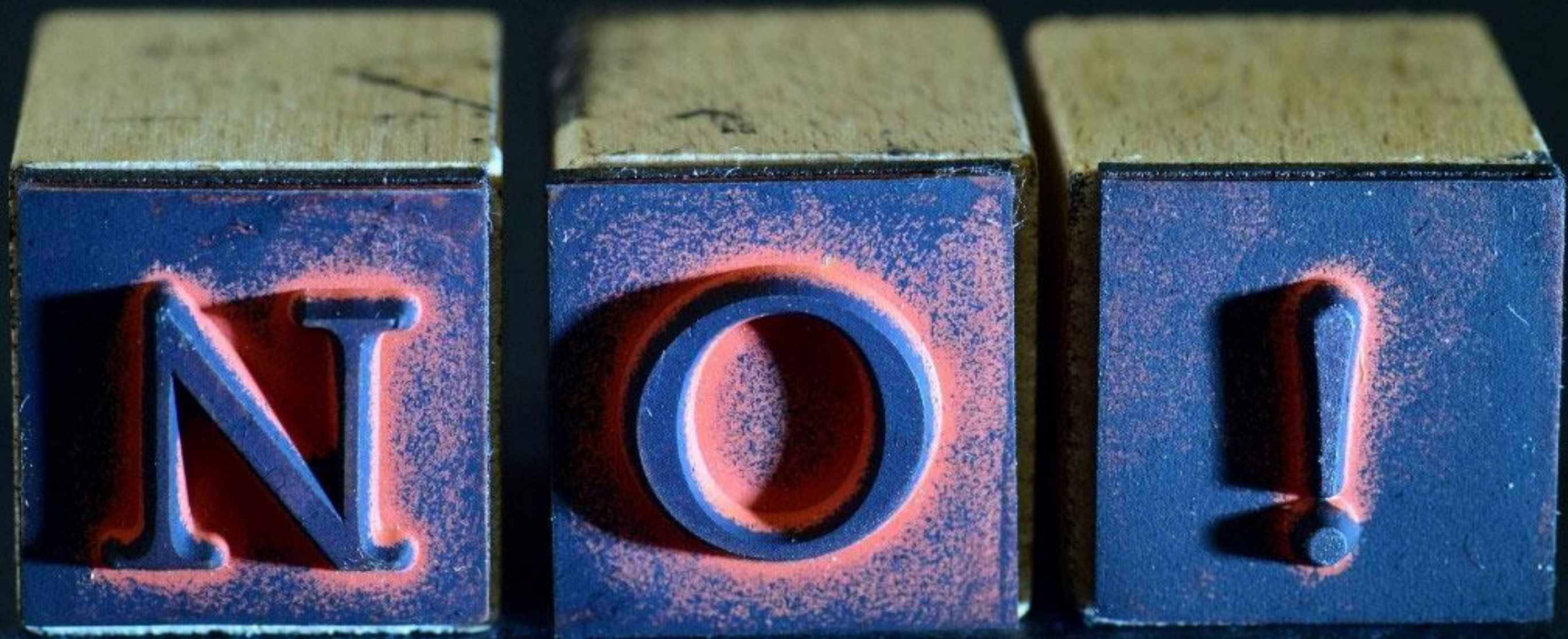
*= enacted in 2017

So What Does the Future Hold?



The Drug Market is Broken !

- ◆ **FDA Approves Drugs That Are Better Than Placebo**
- ◆ **Medicare & Medicaid Must Cover FDA Approved Drugs**
- ◆ **Drug Firms Set Any Price They Want (a blank check)**
- ◆ **Coverage Has Been Broadened to Include Most People**
(> 90% of U.S. Residents)
- ◆ **Increased Cost-Sharing for Rx Coverage**
- ◆ **The Cost is on Individuals, Employers, or Govt.**
- ◆ **Cost-Sharing Does Not Increase Resources**
- ◆ **Cost Shifting → Income Re-Distribution**



Are Drug Firms ... **or PBMs or Drug Chains or Health Systems**



Too Big to Fail ?

Criteria for a Public Good

What is a public good?

- ▶ ● **Monopoly Position** (Natural or Legislated)
- ▶ ● **Universal Demand** (Good or Service)
- ▶ ● **Essential to Life & Existence**
- ▶ ● **Common Benefit to Society**

Some New Drugs Enter the Market at an Annual Cost of:

- ◆ **A Week's Vacation** (\$1k to \$9k)
(Average Brand Name Prescription Claim)
- ◆ **A New Economy Car** (\$10k to \$25k)
(Insulin, PCSK9s for cholesterol)
- ◆ **A New Luxury Car** (\$30k to \$100k)
(Harvoni & Hep C drugs, Gilenya & MS drugs)
- ◆ **A New House** (\$200k to \$500k)
(Opdivo, Yervoy, Cancer & orphan drugs)



Economics of Prescription Drugs

**“A drug that
one can not afford is
neither safe nor effective.”**

-- Stephen W. Schondelmeyer

Value is Essential

***PRICE is not the ONLY issue,
but Price is always
an important issue in VALUE.***

-- Stephen W. Schondelmeyer

Health Value is About:

Efficient Resource Use

The Most Health Outcome

for the Limited Dollars Spent

on Health Care.

Value

*A Life & Death
Matter*

How Much is Your Life Worth?

**How Much Do You Have
in the Bank?**

Can You Afford Yourself ?

**What Happens When Our
Expectations Exceed Our Resources**

**Our Expectations & Choices
May Not Be Sustainable!**

What Can I Do About Drug Cost?

- ◆ Know the cost of the drugs you are prescribed.
- ◆ Ask for generic drugs when they are safe & effective.
- ◆ Don't assume that all generics are always cheaper.
- ◆ Avoid 'Branded' Generics.
- ◆ Avoid Combination drugs and check the cost.
- ◆ Know your drug coverage plan and how it works.
- ◆ Coupons don't always save \$ & sometimes cost more.
- ◆ **Be a prudent buyer for your prescriptions !**

Questions ? & Discussion . . . !



PRIME Institute

Pharmaceutical *Research In Management & Economics*

University of Minnesota