

## DIABETES: AHCA and ACA, Service and Coverage Gaps in U.S. Health Care GMADELL 04/20/17

### ABSTRACT:

The nature of the human experience is that we sometimes learn from adverse circumstances and then advance in painful leaps – we resist necessary changes until a certain threshold is reached. Think of the voices warning of WWII in the 1930's that were ignored, and the painful human tragedy that resulted. Diabetes is one of several chronic diseases that illustrate the shift from infectious diseases to chronic diseases that are the leading causes of death in the US, and that are the leading drivers of increases in medical spending.

John Kingdon (1984) posited that fragmentation occurs more in governance in the U.S. than in other nations. And that policy development has a structure where, for an issue to get on the public agenda, three domains interact: 1) the problem is recognized 2) the solution is proposed 3) the political will is developed. Mechanic and Rochefort (1996) posit that: "What the convergence hypothesis implies ... is a certain macro process in which a narrowing of systems options takes place, compared with those theoretically possible, due to forces that generally lie beyond the control of particular national actors or institutions and to which more and more societies are being exposed." Both theories of policy development are relevant to our situation now, which really is about changes to the U.S. health care system within the global economic and political environment.

In my view, the global economy and political climate will accelerate the process of change for health care in the US. Looming federal deficits and the need to expand the U.S. economy will force the major parties to find consensus, but it may not be pretty. And it may not happen within a 10 year window (2025). As we look beyond 2025 to say 2050, our nation will be in shambles or we will have been humbled enough to find new solutions and consensus.

According to the CDC (Centers for Disease Control and Prevention), "diabetes is a group of diseases marked by high levels of blood glucose resulting from problems in how insulin is produced, how insulin works, or both. Insulin is the hormone that is required to lower blood glucose levels. People with diabetes may develop serious complications such as heart disease, stroke, kidney failure, blindness, and premature death." <sup>i</sup> "People with type 1 diabetes don't make enough insulin, while people with type 2 diabetes cannot use insulin properly. Insulin allows glucose (blood sugar) to enter cells, where it can be used for energy. When the body does not have enough insulin or cannot use it effectively, glucose builds-up in the blood. High blood sugar levels can lead to heart disease, stroke, blindness, kidney failure, and amputation of toes, feet, or legs." <sup>ii</sup> **(Figure 1, Glossary)**

Type 2 diabetes is 90% - 95% of all diagnosed cases, and type 1 is 5% of diagnosed cases. More than 29 million U.S. adults have diabetes, and 25% of them

don't know it. And, this may be under-reported (**Figure 2**). People with type 1 diabetes must have insulin by injection or pump to survive. Onset of type 1 diabetes can occur at any age, but the peak age is in the mid-teens, while adults are 5% of diagnosed cases. There is no known way to prevent type 1 diabetes. For people with type 2 diabetes, a mix of healthy life-style changes and medicines to lower blood sugar can work to prevent or delay complications. In adults, type 2 diabetes is 90% - 95% of all diagnosed cases. Risks for developing type 2 diabetes is associated with older age, obesity, family history of diabetes, impaired glucose metabolism, physical inactivity, and race/ethnicity: African Americans, Hispanics/Latinos, American Indians, some Asians and Native Hawaiians or other Pacific Islanders are at particularly high risk for type diabetes and its complications (**Figures 3, 4**). Children and adolescents are at lower risk, but among this group, the same race/ethnicities have higher risk. About 86 million U.S. adults (a third of the population) have prediabetes, and 90% of them don't know it - they remain undiagnosed. Prediabetes is a condition where blood sugar or hemoglobin A1C levels are higher, but not high enough to be classified as diabetes. People with prediabetes have higher risks of developing type 2 diabetes, heart disease, and stroke, but not all will progress to diabetes. The Diabetes Prevention Program showed that risks can be reduced and in some cases return blood glucose levels to within the normal range. Other international studies have shown similar results. People with prediabetes can cut their risk of developing type 2 diabetes by as much as 58% by taking preventive changes in life-style, recommended by the CDC.<sup>iii</sup>

The epidemiology of diabetes is that it is a chronic disease, a major public health problem, and an area where prevention can reap large rewards. The old homily, "an

ounce of prevention is worth a pound of cure” translates in modern medicine to, “strong prevention measures can reduce human misery, and save many lives and billions of dollars.” Analysis of trends has both bad and good news. The bad news is that the prevalence of diagnosed diabetes increased in the U.S. from 1958 – 2014. The prevalence of diagnosed diabetes increased from 0.93% in 1958 to 7.02% in 2014. In 1958 there were 1.6 million people with diagnosed diabetes, while in 2014 there were 21.9 million people **(Figure 5)**. The good news is that treatments for those diagnosed with diabetes have reduced complications **(Figures 6, 7, 8)**.

- More than 20% of health care spending is for people with diagnosed diabetes.
  - Total direct and indirect costs in 2012 are estimated at \$245 billion.  
**(Figure 9)**
  - And costs for endocrine diseases, including diabetes are a leading driver of medical spending growth, estimated at \$138 billion in 2012 **(Figures 10, 11, 12)**. Def, endocrine: biology. Of or relating to any of the organs of the body that make hormones (= chemicals which make the body grow and develop) and put them into the blood, or the hormones that they make. <sup>iv</sup>
- Diabetes was the seventh leading cause of death in the U.S. in 2013, and may be under-reported. In a contrasting 2016 Johns Hopkins study, medical errors are estimated in third place, and diabetes in seventh place.<sup>v vi</sup> **(Figures 13,14 )**
- Diabetes is the leading cause of kidney failure, lower-limb amputations, and adult-onset blindness.

Difficulties that have been associated with diabetes over the period 1958 – 2014 have elements of diagnosis, treatment and financing. It seems clear to me from

analyzing the trends, that technology and capability for diagnosis increased tremendously over this period, and treatments have become more effective over time. The implementation of Medicare and Medicaid in 1965 added government-funded resources and capabilities not present prior. Technology for diagnosis and detection has improved with research made possible by the NIH, universities, pharmaceuticals, and the scientific community at large. <sup>vii</sup>

As we look at the recent past in 2013, 44 million non-elderly people were uninsured. Non-elderly is so classified to differentiate from those covered by Medicare (age 65 and older). Most of these uninsured were poor and low-income adults (28% had incomes below poverty and 62% had incomes below 200% of poverty in 2013). The main reason they said they were uninsured was because of cost. <sup>viii</sup> Diabetes can be very expensive to treat, in part because of expensive medicines required to maintain blood sugar at normal levels, along with healthy life style changes. But it is more expensive without prevention and early diagnosis. As mentioned earlier, type 2 diabetes is most prevalent where healthy life-style changes along with medication can reduce risks by over 50%, and Type 1 patients require medications delivered by pump or injection to survive. In the pre-ACA period of 1958 – 2013 the uninsured had little or no effective insurance coverage, and many relied heavily on emergency room visits to address acute needs. In this health care system model, treatments tend to reactive and can be very expensive, relative to prevention, early diagnosis and health maintenance approaches of population health models. **(Figures 15 - 20).**

The Patient Protection and Affordability Care Act (ACA, aka Obamacare) was the biggest change in health care policy in the U.S. since Medicare and Medicaid were

enacted in 1965.<sup>ix</sup> ACA was enacted into law in 2010, but effectively enrolled many previously uninsured into coverage beginning in 2013 as it has been a massive policy to implement, requiring multiple phases. And, its many provisions are still unfolding because of the contentious political environment. Indeed, ACA can be characterized as having a troubled or slow-motion roll-out in implementation. Despite its limitations, since enactment in 2010 ACA has added an estimated 20 million Medicaid enrollees, adults made newly eligible by the expansion. And this number has continued to increase. While ACA has significantly reduced the uninsured, a sizeable pool of uninsured remains uncovered, about 24 million by some estimates. ACA was designed to increase coverage, but falls well short of universal coverage. Latinos are estimated as 40% of the remaining uninsured in 2016. The remaining uninsured are very poor.<sup>x</sup>

ACA redressed insurance industry practices of denying coverage to many for “pre-existing conditions”, and revoking coverage precipitously for many enrollees when high-expenses became known. ACA also gives mental health parity with other medical coverages, where mental health concerns have been “the poor, neglected stepchild” under pre-ACA insurance coverages. Insurance industry abuses were laid bare by insider executive Wendell Potter in his book, “Deadly Spin, 2011”.<sup>xi</sup> One of the other significant gaps in coverage, to be closed in phases under ACA provisions is the so-called “Donut Hole”. In this existing coverage provision, Medicare enrollees pay a share of costs up to a certain level, then hit the “Donut Hole” where they pay 100% of costs until a second threshold is reached. This gap can be crushing for diabetes and other chronic disease patients. ACA is an imperfect and incomplete health care policy, but it is a vast improvement on what existed prior. To simply repeal ACA seems to be major

fully on many levels. **(Figures 21 – 26).**

The future outlook for services and insurance coverage for diabetes health care coverage And other chronic diseases) if the American Health Care Act (AHCA) were somehow to resurface and become enacted look extremely bleak. While there are many unknowns regarding a revised or “final” AHCA, the rollback and/or repeal of ACA could reverse the progress in reducing the uninsured. The Congressional Budget Office (CBO) and Joint Committee on Taxation (JCT) estimate that 14 million more people would be uninsured under AHCA than under ACA. That number would increase to 21 million in 2020 and then 24 million in 2026. In 2026 an estimated 52 million people would be uninsured, compared to 28 million uninsured under ACA provisions. Beyond the carnage that could result from having 52 million people uninsured in 2026, there are the considerations of the damage to the machinery of the health care system, hospitals, physicians and others who provide health services. ACA added tremendous resources to state health systems through the expansion of Medicaid, and the untimely shut-off of this aid will impact not only patients, but the whole health delivery system in adverse ways. Other considerations are the loss of other design-considerations under ACA. ACA has many performance management provisions that strive to improve transparency, efficiency and quality of medical outcomes, as well as to encourage innovation. Some of the structures in practice under ACA are Accountable Care Organizations (ACO), Patient Centered Medical Homes (PCMH), and innovations in payment models shifting away from fee-based services to bundled care based on medical outcomes. ACO’s work to improve quality of medical outcomes while reducing costs and under ACA can share in

savings created. PCMH's are medical facilities that treat patients with complex conditions and multiple health issues including chronic diseases. This performance management design that seeks to improve health care delivery is one of the most important components of ACA. <sup>xii</sup> **(Figures 27 – 30).**

### **Conclusion.**

The nature of the human experience is that we sometimes learn from adverse circumstances and then advance in painful leaps – we resist necessary changes until a certain threshold is reached. Think of the voices warning of WWII in the 1930's that were ignored, and the painful human tragedy that resulted. Diabetes is one of several chronic diseases that illustrate the shift from infectious diseases to chronic diseases that are the leading causes of death in the US, and that are the leading drivers of increases in medical spending.

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GMandell

## **FIGURES & CHARTS RELATED TO DIABETES**

### **Figure 1 (CDC Glossary)**

#### Diabetes (1 and 2)

- A condition characterized by hyperglycemia (high blood glucose) resulting from the body's inability to use blood glucose for energy. Also see Type 1 Diabetes and Type 2 Diabetes.

#### Diabetic Ketoacidosis (DKA)

- An emergency condition in which extremely high blood glucose levels, along with a severe lack of insulin, result in the breakdown of body fat for energy and an accumulation of ketones in the blood and urine. Signs of DKA are nausea and vomiting, stomach pain, fruity breath odor, and rapid breathing. Untreated DKA can lead to coma and death.

#### Diabetic Retinopathy

- Causes vision damage to the small blood vessels in the retina. Loss of vision may result, and is also called diabetic eye disease.

#### Diagnosed Diabetes

- In the Diabetes Atlas application, a person is considered to have diagnosed diabetes if a doctor or other health professional had ever told that he or she had diabetes. Women who were told they only had diabetes during pregnancy are not considered to have diabetes.



**Figure 2**



CDC, 2014, National Diabetes Statistics report

<https://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-...web.pdf>

Figure 3

## Diagnosed and undiagnosed diabetes among people aged 20 years or older, United States, 2012

	Number with diabetes (millions)	Percentage with diabetes (unadjusted)
<b>Total</b>		
20 years or older	28.9	12.3
<b>By age</b>		
20–44	4.3	4.1
45–64	13.4	16.2
65 years or older	11.2	25.9
<b>By sex</b>		
Men	15.5	13.6
Women	13.4	11.2

Source: 2009–2012 National Health and Nutrition Examination Survey estimates applied to 2012 U.S. Census data.

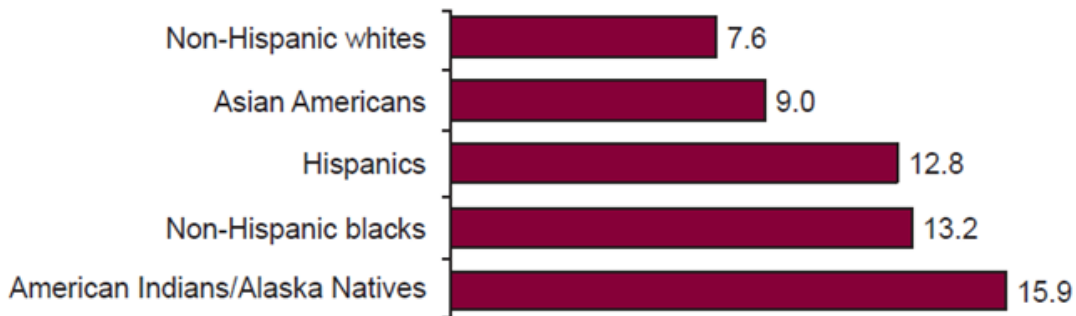
CDC, 2014, National Diabetes Statistics report

[https://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-\\_\\_\\_\\_\\_web.pdf](https://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-_____web.pdf)

Figure 4

## Racial and ethnic differences in diagnosed diabetes among people aged 20 years or older, United States, 2010–2012

### Age-adjusted\* percentage of people aged 20 years or older with diagnosed diabetes, by race/ethnicity, United States, 2010–2012



\*Based on the 2000 U.S. standard population.

Source: 2010–2012 National Health Interview Survey and 2012 Indian Health Service's National Patient Information Reporting System.

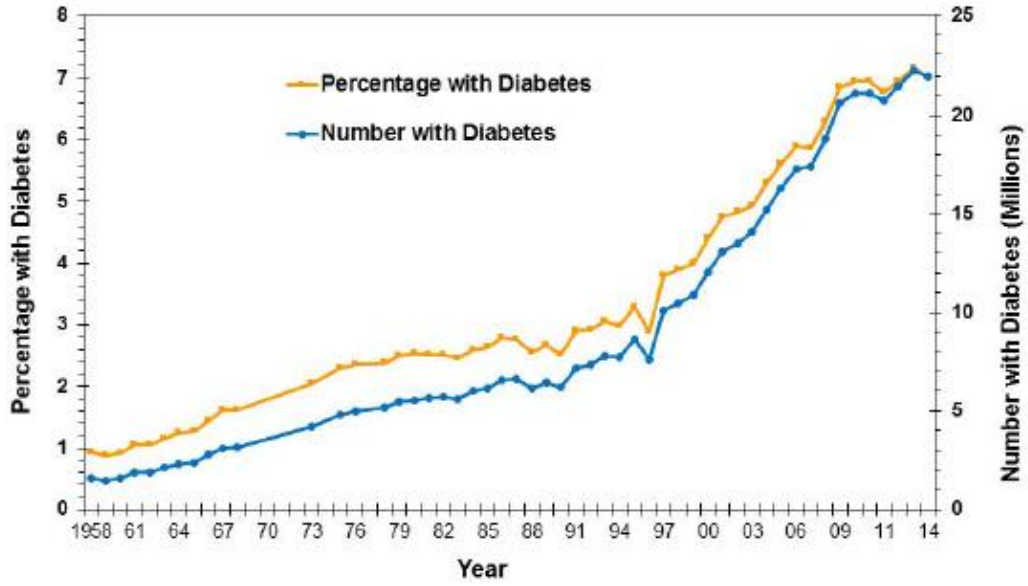
- Among Hispanic adults, the age-adjusted rate of diagnosed diabetes was 8.5% for Central and South Americans, 9.3% for Cubans, 13.9% for Mexican Americans, and 14.8% for Puerto Ricans.
- Among Asian American adults, the age-adjusted rate of diagnosed diabetes was 4.4% for Chinese, 11.3% for Filipinos, 13.0% for Asian Indians, and 8.8% for other Asians.
- Among American Indian and Alaska Native adults, the age-adjusted rate of diagnosed diabetes varied by region from 6.0% among Alaska Natives to 24.1% among American Indians in southern Arizona.

CDC, 2014, National Diabetes Statistics report

[https://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-\\_\\_\\_\\_\\_web.pdf](https://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-_____web.pdf)

Figure 5

Number and Percentage of U.S. Population with Diagnosed Diabetes, 1958-2014

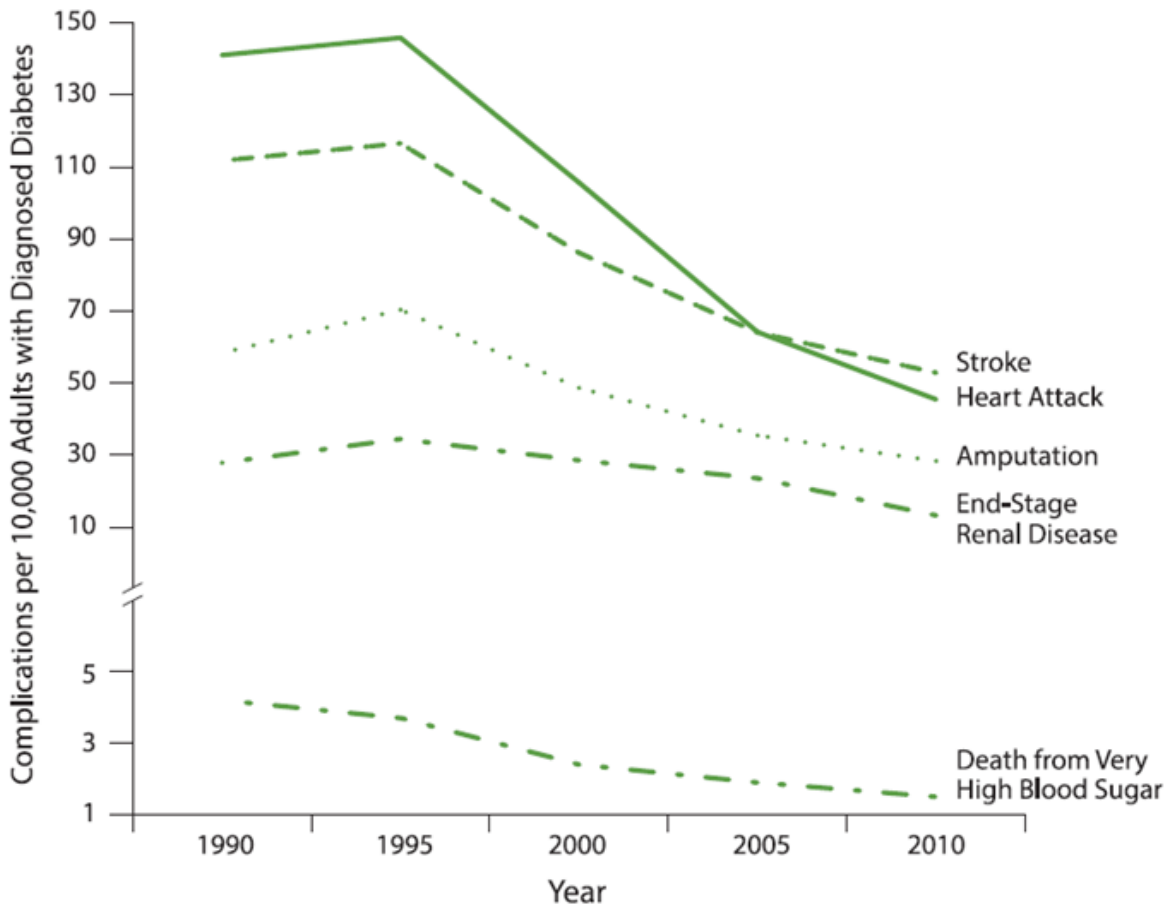


CDC's Division of Diabetes Translation, United States Diabetes Surveillance System available at <http://www.cdc.gov/diabetes/data>



**Figure 6**

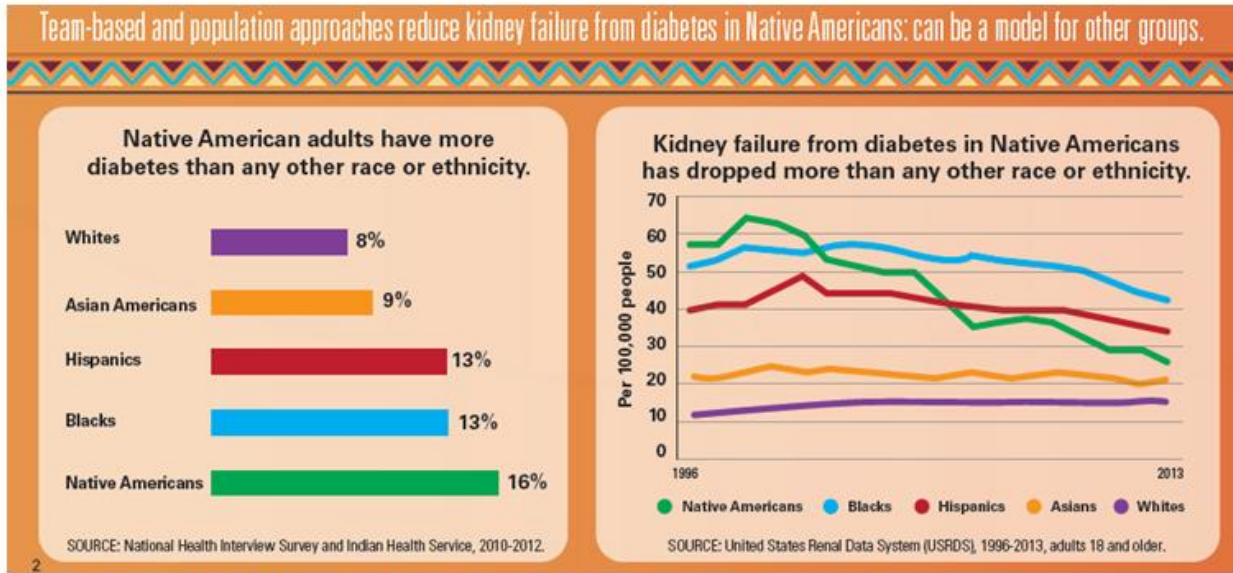
**Figure 7. Trends in Rates of Diabetes Complications Among US Adults with Diagnosed Diabetes, 1990-2010**



Adapted from: Gregg EW, Li Y, Wang J, et al. Changes in diabetes-related complications in the United States, 1990-2010. *N Engl J Med.* 2014;370:1514-1523.

CDC Report Card 2014, <https://www.cdc.gov/diabetes/pdfs/library/diabetesreportcard2014.pdf>

**Figure 7**

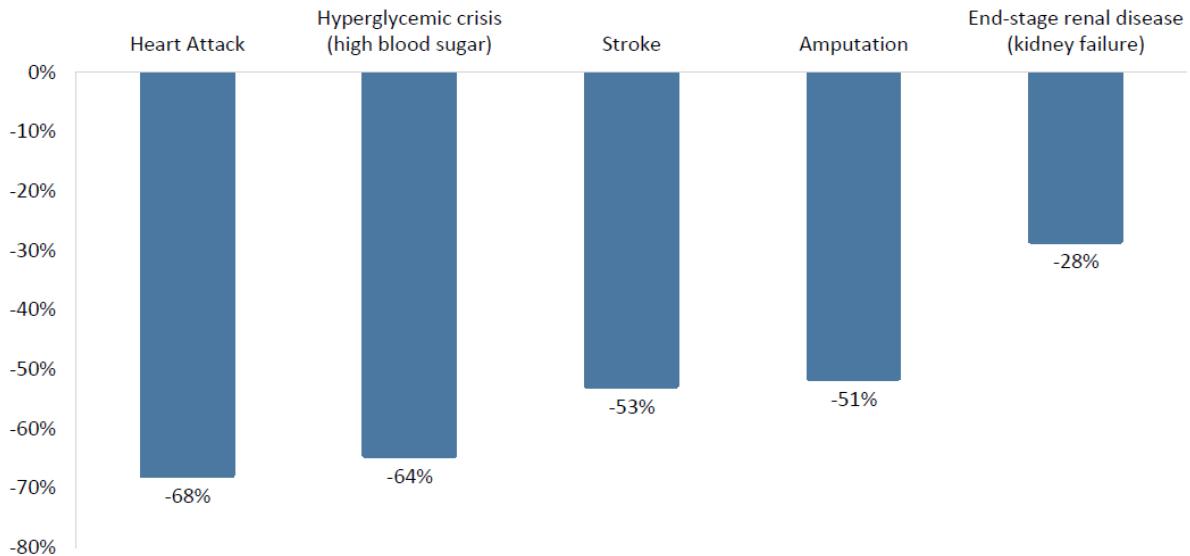


CDC, 2017, Vital Signs: Native Americans with Diabetes, <https://www.cdc.gov/vitalsigns/pdf/2017-01-vitalsigns.pdf>

**Figure 8**

## Rates of diabetes complications in the U.S. have decreased significantly from 1990-2010

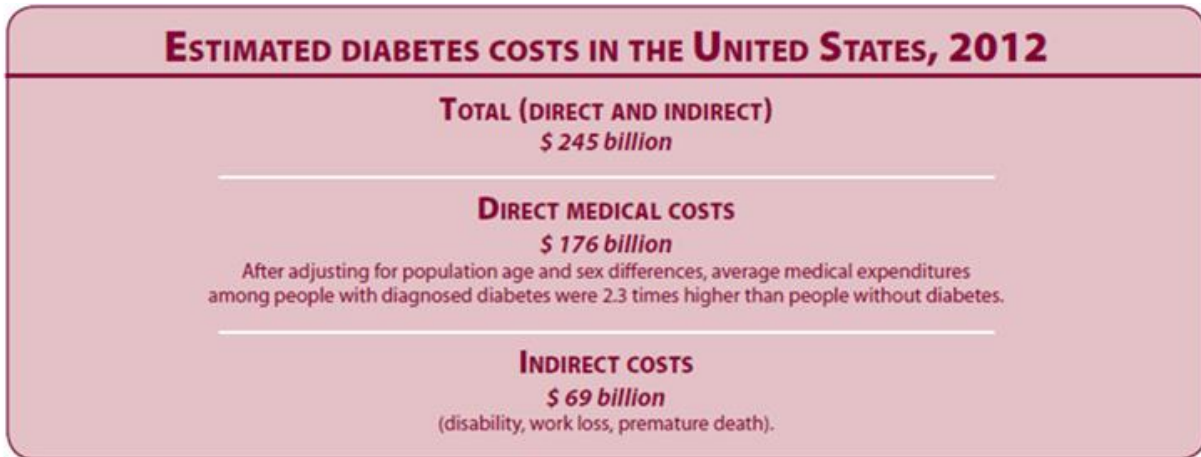
Percent change in age-adjusted rates of diabetes complications among adults ages 20 and older with diagnosed diabetes, 1990 - 2010



**Source:** Adapted from Gregg EW, Li Y, Wang J, et al. "Changes in Diabetes-Related Complications in the United States, 1990-2010", *New England Journal of Medicine*. 2014; 370:1514-1523. **Notes:** Numerators for rates of acute myocardial infarction, stroke, and amputation are from the National Hospital Discharge Survey. Numerators for rates of end-stage renal disease are from the U.S. Renal Data System, and numerators for death from hyperglycemic crisis are from the National Vital Statistics System. Denominators are from the National Health Interview Survey. Rates were age-standardized to the U.S. population in the year 2000.

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**Figure 9**



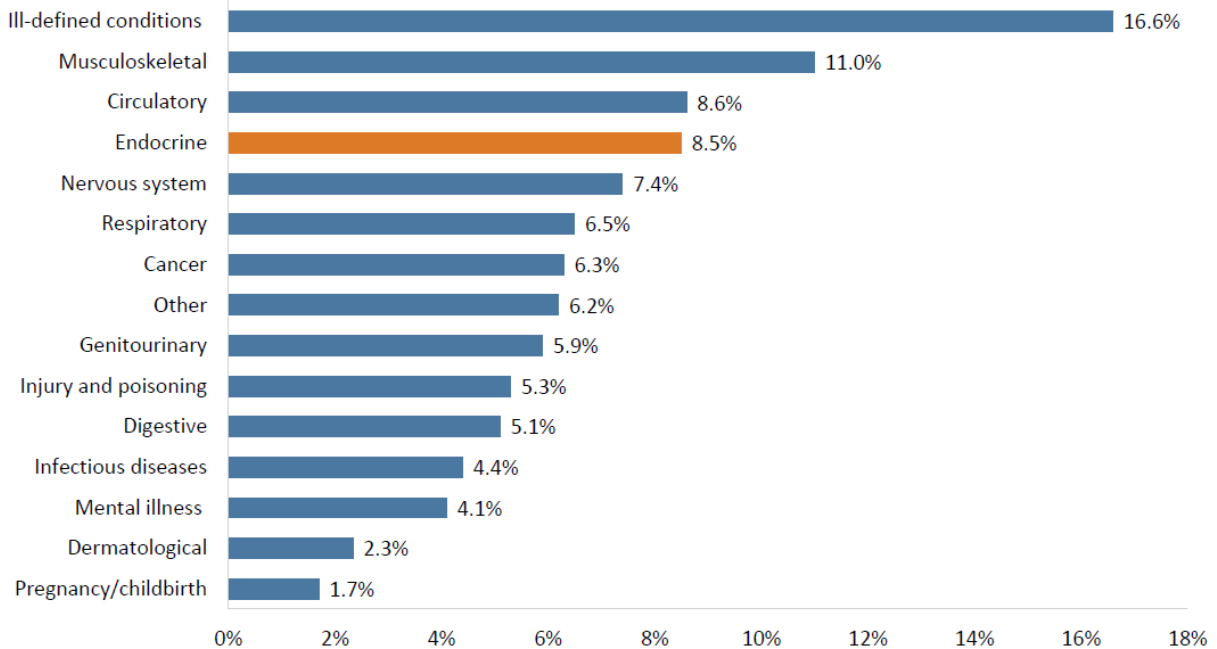
CDC, 2014, National Diabetes Statistics report

[https://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-\\_\\_\\_\\_\\_web.pdf](https://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-_____web.pdf)

**Figure 10**

### Endocrine diseases, including diabetes, are a leading driver of medical services spending growth from 2000-2012

Contribution to medical services expenditure growth, by disease, 2000-2012



Source: Kaiser Family Foundation analysis of Bureau of Economic Analysis Health Care Satellite Account (Blended Account)

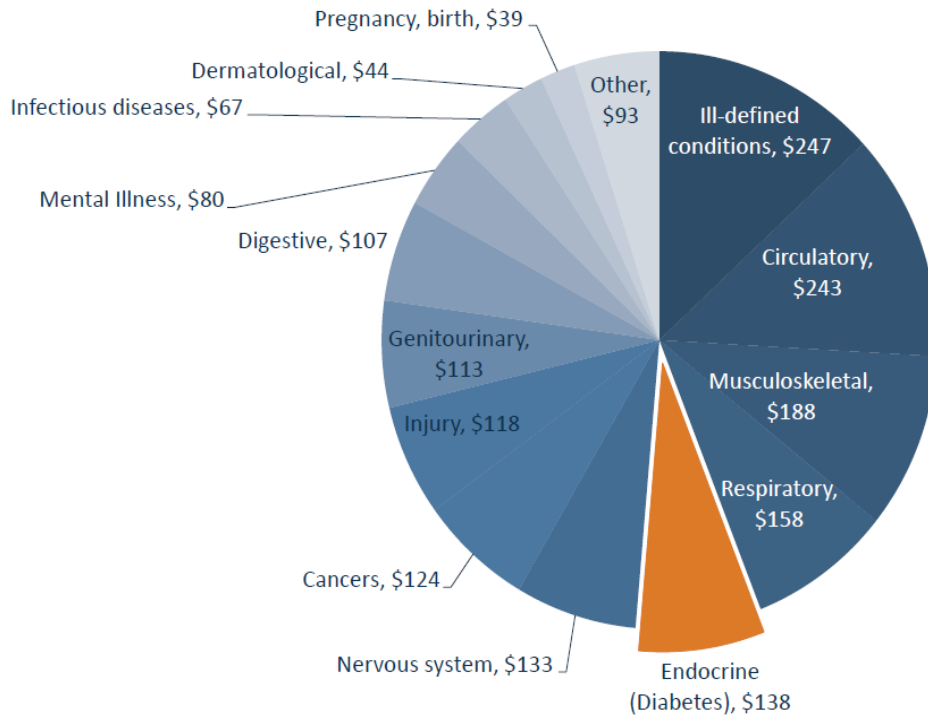
Note: Expenditures on nursing home and dental care are not included in health services spending by disease. Data last updated January 25, 2016.

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**Figure 11**

## Spending on endocrine diseases accounts for more than 7% of disease based health expenditures

Total expenditures in US \$ billions by disease category, 2012



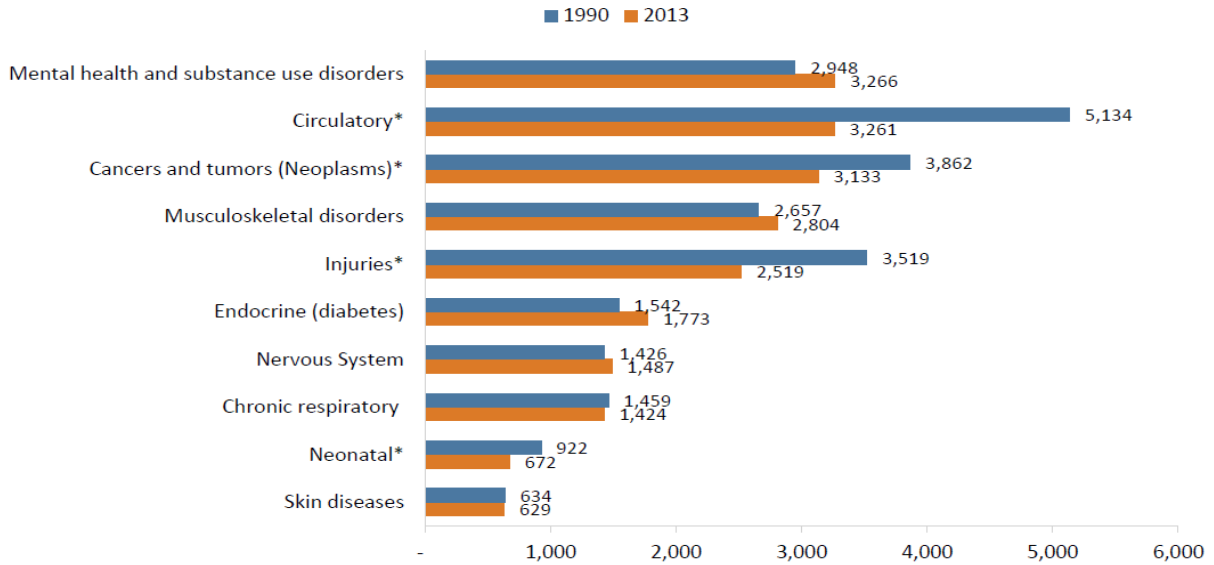
**Source:** Bureau of Economic Analysis Health Care Satellite Account (Blended Account) and National Health Expenditure Data **Note:** Spending on dental services, nursing homes, and prescriptions that cannot be allocated to a specific disease not included above. Data last updated January 25, 2016.  
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**Figure 12**

## U.S. disease burden for endocrine diseases has increased nearly 15% in the past 2 decades

Age-adjusted disability adjusted life years (DALYs) rate per 100,000 population, both sexes, 1990 and 2013



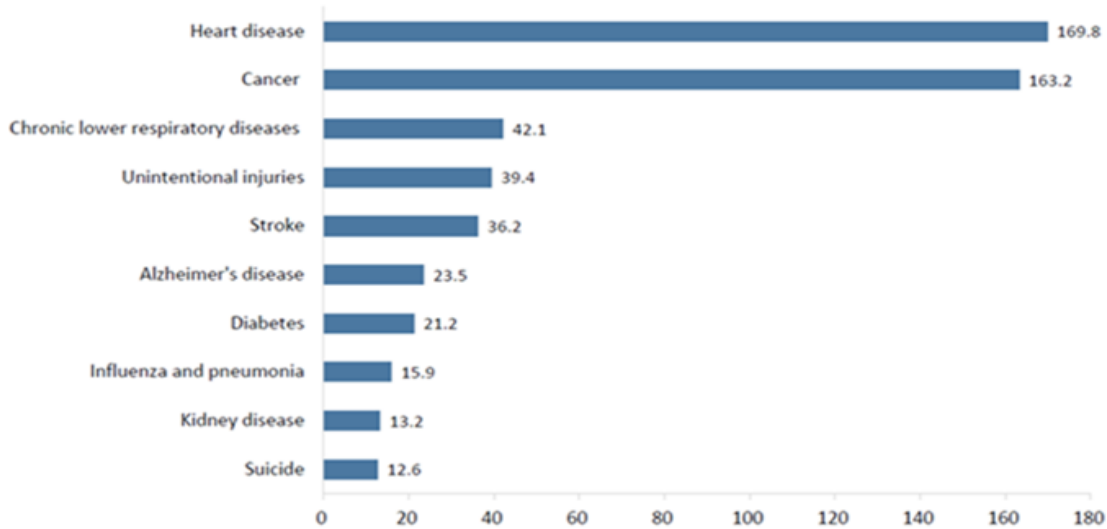
**Source:** Institute for Health Metrics and Evaluation. Global Burden of Disease Study Data Downloads, available here: <http://ghdx.healthdata.org/global-burden-disease-study-2013-gbd-2013-data-downloads> (Accessed May 11, 2016)

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**Figure 13**

## Diabetes is among the 10 leading causes of death in the United States

Age-adjusted death rates for the 10 leading causes of death per 100,000 population, United States, 2013



Source: CDC/NCHS, National Vital Statistics System, Mortality

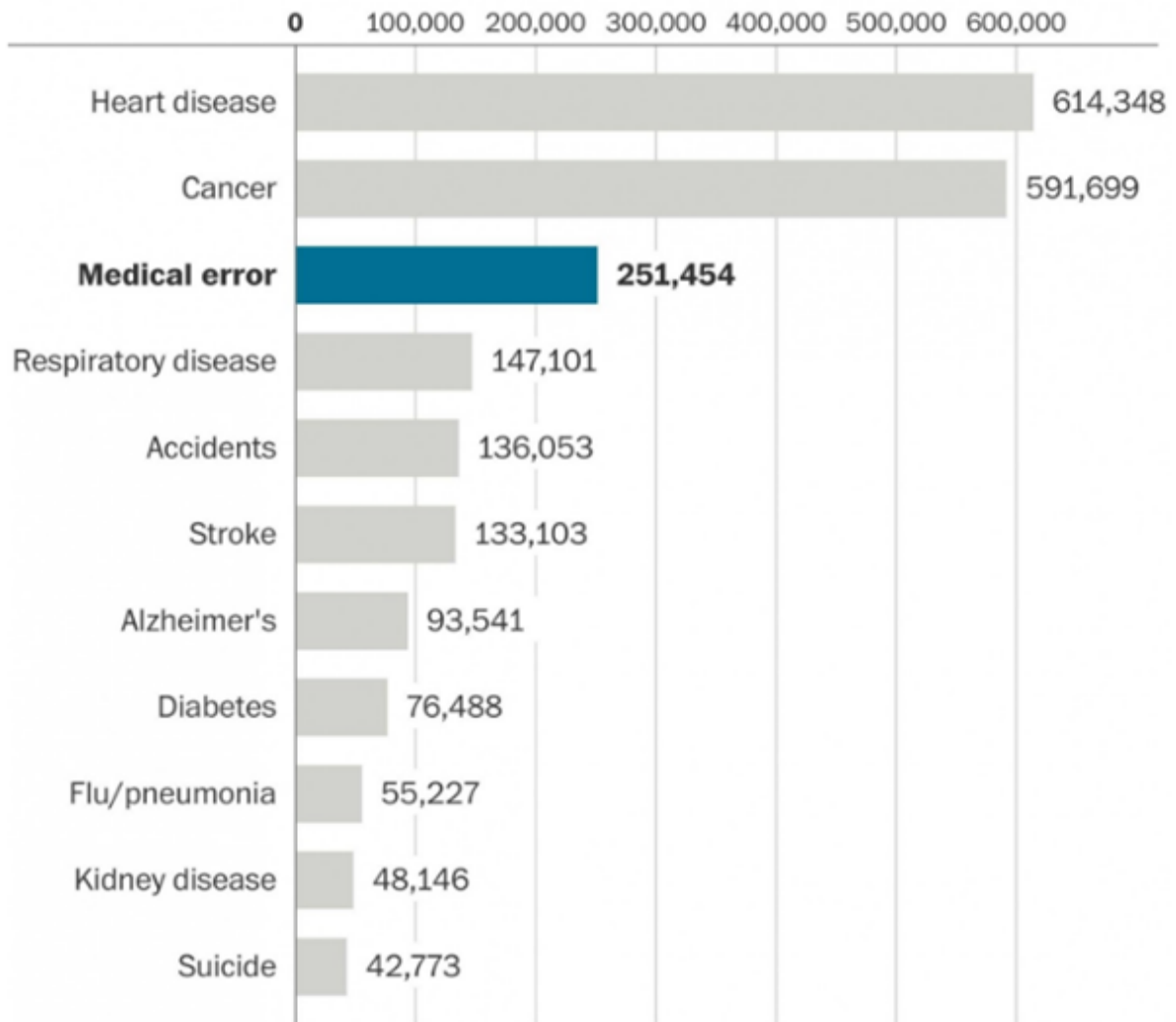
Peterson-Kaiser Health System Tracker

Kaiser Family Foundation, 2017, Peterson-Kaiser Health-System Tracker: How has diabetes care in the U.S. changed over time? <http://kff.org/slideshow/how-has-diabetes-care-in-the-u-s-changed-over-time/>

Figure 14

### Death in the United States

Johns Hopkins University researchers estimate that medical error is now the third leading cause of death. Here's a ranking by yearly deaths.



Source: National Center for Health Statistics, BMJ

THE WASHINGTON POST

Washington Post 05/03/16, Medical Errors

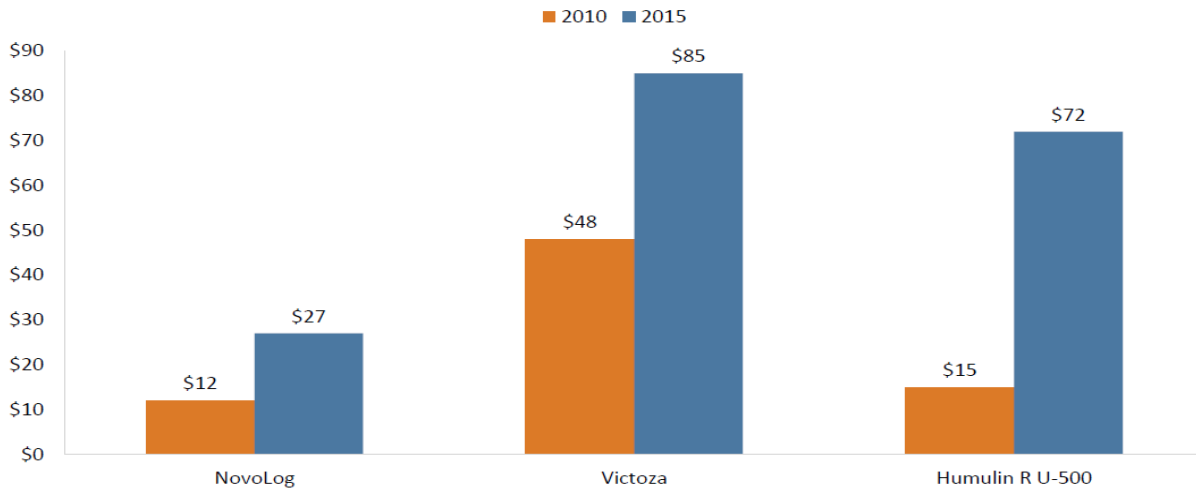
[https://www.washingtonpost.com/news/to-your-health/wp/2016/05/03/researchers-medical-errors-now-third-leading-cause-of-death-in-united-states/?utm\\_term=.d003a17627a6](https://www.washingtonpost.com/news/to-your-health/wp/2016/05/03/researchers-medical-errors-now-third-leading-cause-of-death-in-united-states/?utm_term=.d003a17627a6)

[http://www.cdc.gov/nchs/data/nvsr/nvsr64\\_02.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr64_02.pdf)

**Figure 15**

## Some diabetes injectable prescription costs have increased between 77% and 380% from 2010 – 2015

Diabetes injectable prescription costs per mL, 2010 and 2015



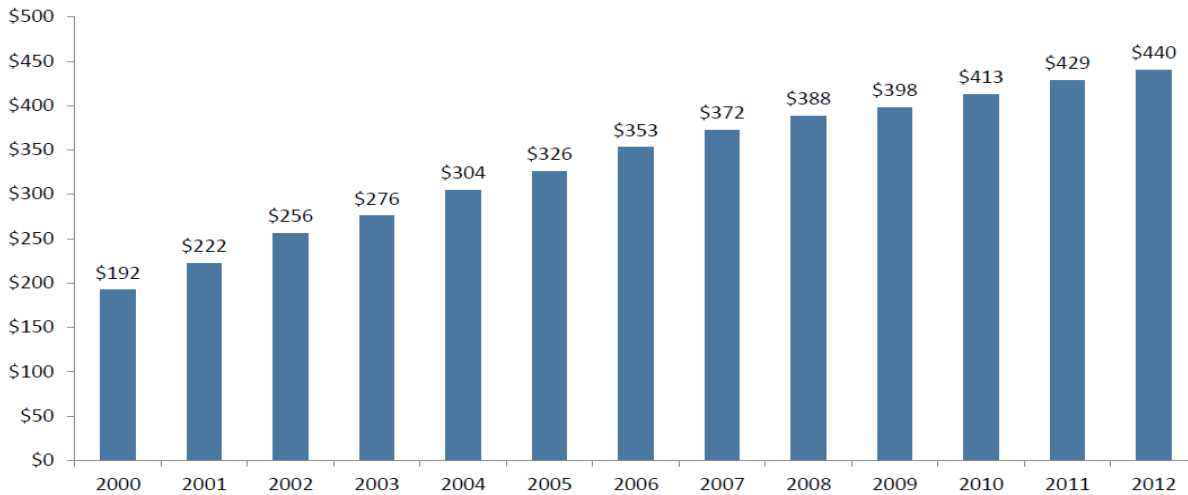
**Source:** Alliance of Community Health Plans presentation "High -Cost Drugs: A CEO's Perspective", October 16, 2015. **Notes:** Presentation data on diabetes drug pricing based on Medispan AWP (August 2015)

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**Figure 16**

## On a per capita basis, the U.S. spends about \$440 per year to treat endocrine diseases, up from \$192 in 2000

Per capita expenditures on the treatment of endocrine, nutritional, and metabolic diseases and immunity disorders, US \$, 2000 - 2012



**Source:** Kaiser Family Foundation analysis of Bureau of Economic Analysis Health Care Satellite Account (Blended Account)

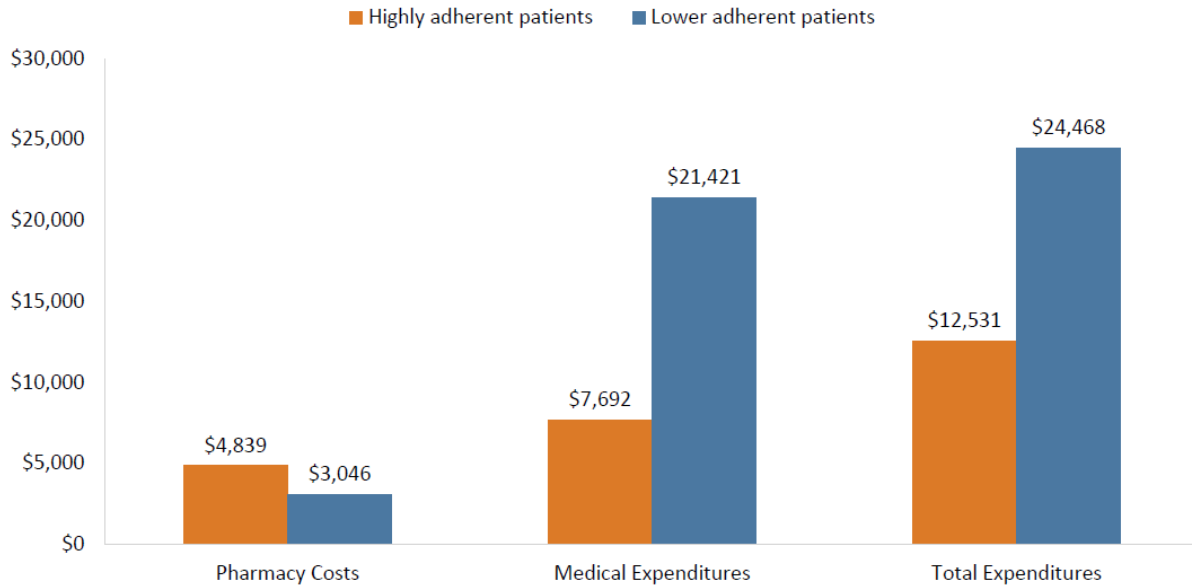
**Note:** Expenditures on nursing home and dental care are not included in health services spending by disease. Data last updated February 4, 2016.

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**Figure 17**

## Diabetic Medicare patients who are less adherent to prescribed medication have higher medical spending

Pharmacy costs, medical expenditures, and total expenditures for Medicare beneficiaries ages 65 and older with type 2 diabetes mellitus, 2006-2009



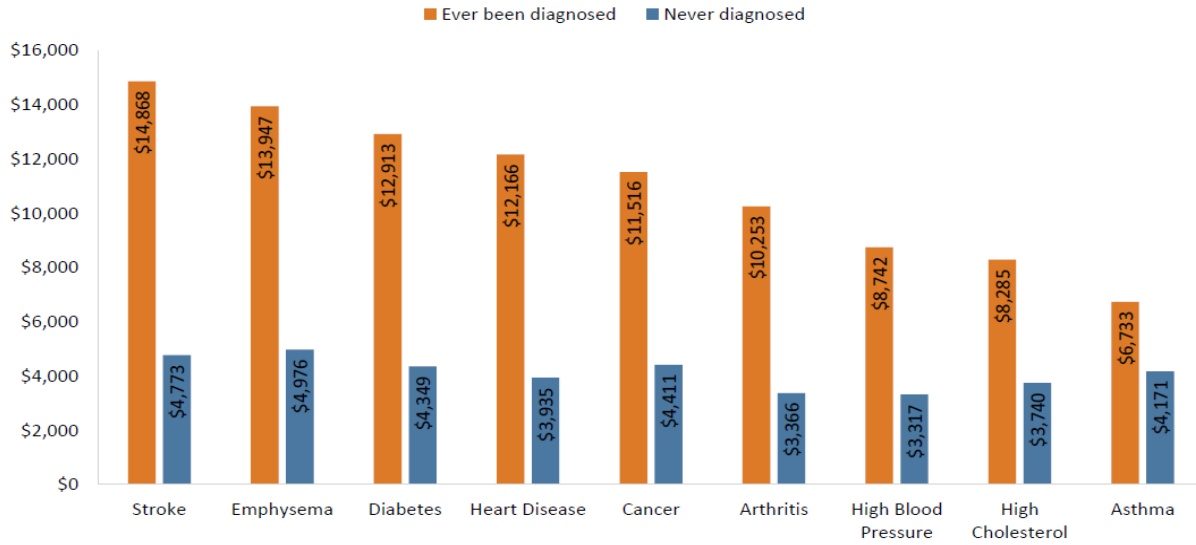
**Source:** "Penny-wise, pound-foolish: Association between Medication Adherence, Out-of-Pocket Expenses, and Health Care Costs in Medicare Patients with Type 2 Diabetes." Abstract presented by Joanna P. MacEwan at the 74<sup>th</sup> Scientific Session of the American Diabetes Association. **Notes:** For more information the abstract can be found here: <http://app.core-apps.com/tristar-ada15/abstract/160858d53930b598d64b10f393081d64>

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**Figure 18**

## Diagnosis with a serious or chronic health condition is associated with higher spending

Per capita health spending based on diagnosis status, in \$U.S. Dollars, 2013



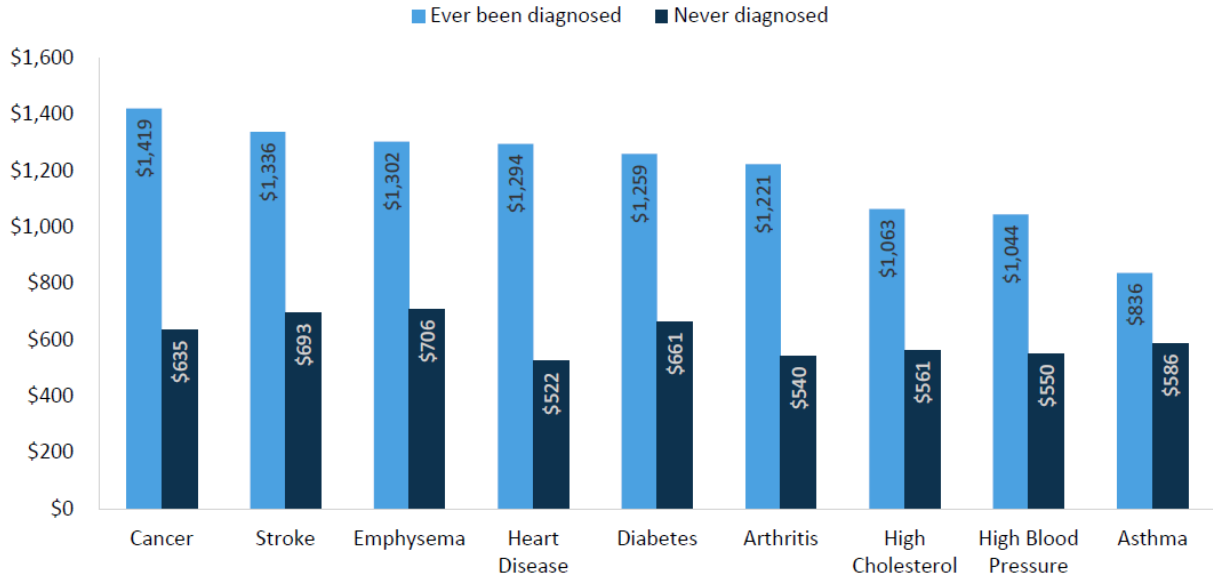
**Source:** Kaiser Family Foundation analysis of Medical Expenditure Panel Survey, Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services **Note:** For all diagnoses shown, with the exception of asthma, diagnosis status was asked only of respondents age 18 or older. All respondents were asked about their asthma diagnosis status.

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**Figure 19**

## People with a diagnosis of a serious or chronic health condition face higher average out-of-pocket costs

Average out-of-pocket spending per person based on diagnosis status, in U.S. Dollars, 2013



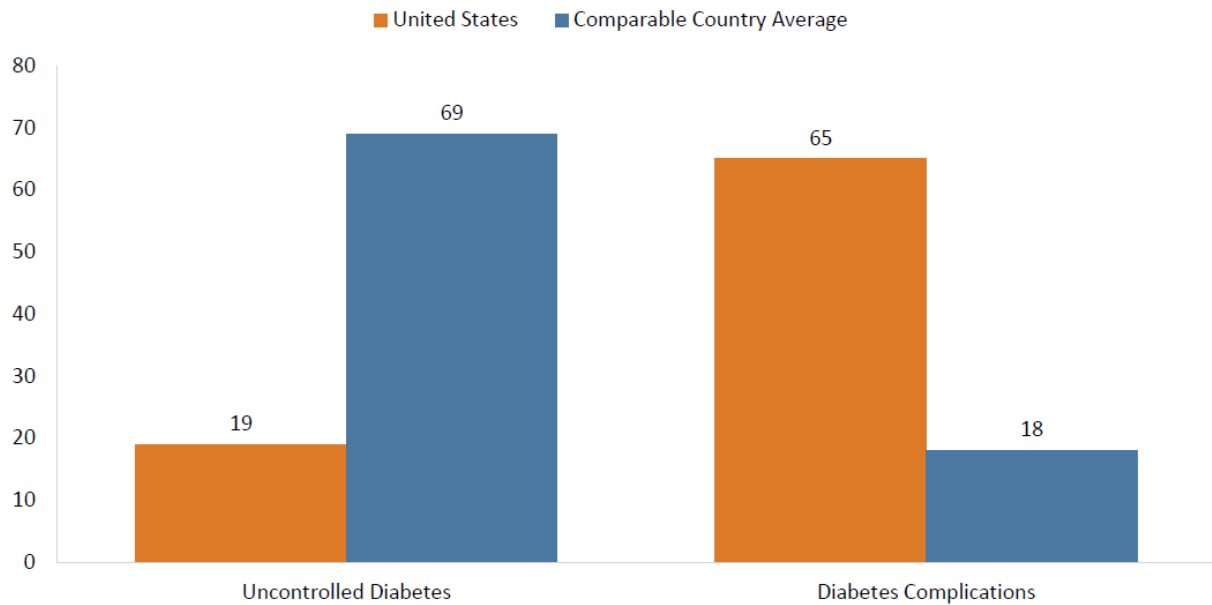
**Source:** Kaiser Family Foundation analysis of Medical Expenditure Panel Survey, Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services

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**Figure 20**

The U.S. hospitalization rate for uncontrolled diabetes is lower than in comparable countries, and higher for diabetes complications

Age-adjusted hospital admission rate per 100,000 population, for uncontrolled diabetes, and diabetes short term complications, ages 15 and older, 2010



Source: OECD (2013), "OECD Health Data: Health status: Health quality indicators", OECD Health Statistics (database).  
doi: 10.1787/data-00349-en (Accessed on March 2, 2015).

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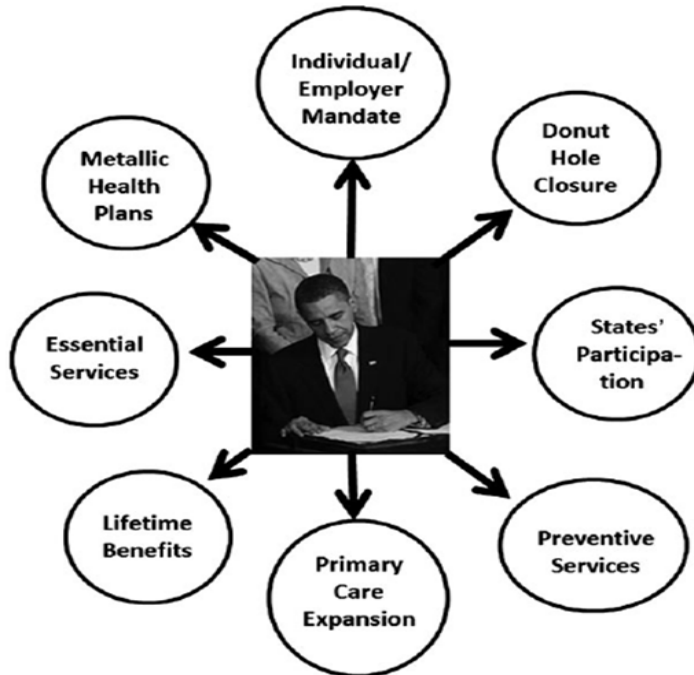


## Figure 21

DIABETES AND ACA

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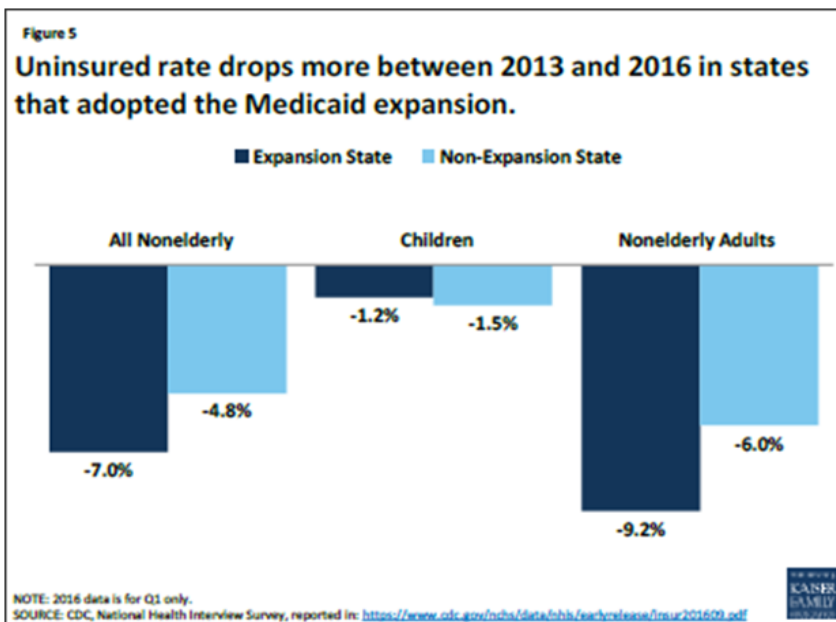
**FIG. 2.** Principal portions of the Affordable Care Act that may be of importance to caregivers of diabetes patients. Adapted from Mason<sup>5</sup> and the American Diabetes Association.<sup>6</sup>



Burge & Schade, 2014, Diabetes and the Affordable Care Act, DTT vol. 16, number 7, 2014 DOI: 10.1089/dia.2014.0171 Mary Ann Liebert, Inc.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4074744/pdf/dia.2014.0171.pdf>

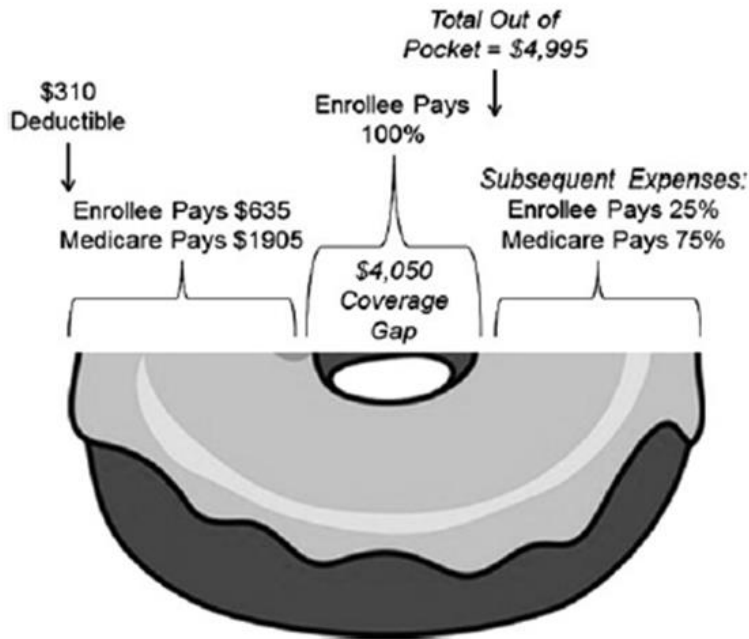
## Figure 22



Gunja, Collins, Doty & Beutel, Commonwealth Fund, 2017, Insurance Coverage, Access to Care, and Medical Debt Since the ACA: A Look at California, Florida, New York, and Texas <http://www.commonwealthfund.org/publications/issue-briefs/2017/mar/coverage-access-medical-debt-aca-california-florida-new-york-texas>

Figure 23

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**FIG. 3.** Schematic representation of how out-of-pocket expenses attributable to the donut hole would work in a typical case. Adapted from the Society for Cardiovascular Angiography and Interventions.<sup>62</sup>

Burge & Schade, 2014, Diabetes and the Affordable Care Act, DTT vol. 16, number 7, 2014 DOI: 10.1089/dia.2014.0171 Mary Ann Liebert, Inc.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4074744/pdf/dia.2014.0171.pdf>

## Figure 24

TABLE 1. GROUPS OF INDIVIDUALS NOT COVERED BY THE AFFORDABLE CARE ACT ESSENTIAL HEALTH SERVICES

1. Illegal immigrants (although they still remain eligible for emergency medical services under provisions of the Emergency Medical Treatment and Active Labor Act)
2. U.S. citizens who are eligible for Medicaid but who are not enrolled in this program
3. U.S. citizens not otherwise covered but who choose to pay the annual penalty instead of purchasing insurance
4. U.S. citizens whose insurance premiums would cost more than 8% of their household income (they are exempt from paying the annual penalty)
5. U.S. citizens who live in states that opt out of the Medicaid expansion and who qualify for neither Medicaid coverage nor are subsidized through these states' new insurance exchanges

Adapted from information on Wikipedia.<sup>1</sup>

Burge & Schade, 2014, Diabetes and the Affordable Care Act, DTT vol. 16, number 7, 2014 DOI: 10.1089/dia.2014.0171 Mary Ann Liebert, Inc. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4074744/pdf/dia.2014.0171.pdf>

## Figure 25

### Take-Away Points

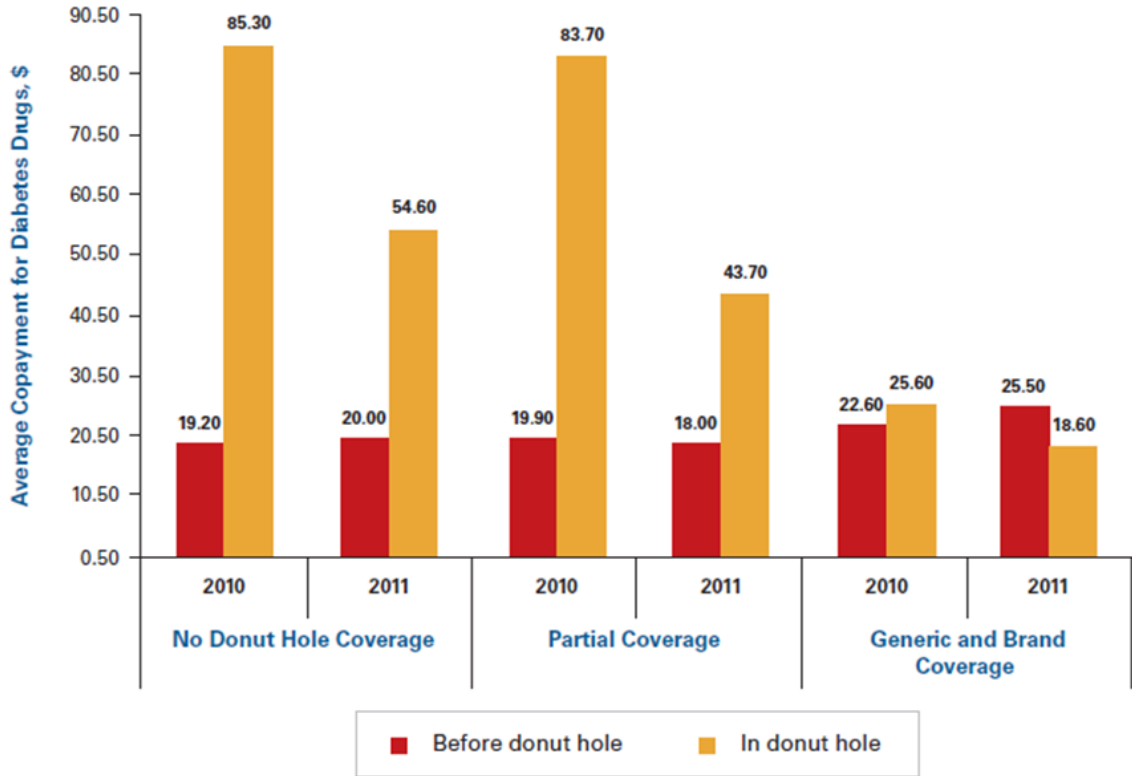
The Affordable Care Act mandated that Part D coverage gap be shrunk starting from 2011. The reform had an important impact on adherence to diabetes medications in the gap.

- The coverage gap reform decreased copayments for diabetes medications substantially in the coverage gap for all patients.
- Patients with no coverage and patients with partial coverage in the gap had significant improvements in adherence.
- Patients with full coverage in the gap had unchanged adherence to diabetes medications in the coverage gap in 2011.

Zeng, Patel & Brunetti, 2013, Effects of Coverage Gap Reform on Adherence to Diabetes Medications, AJMC, April 2013, pgs. 308-306, [file:///C:/Users/George/Downloads/AJMC\\_13apr\\_Zeng\\_308to316.pdf](file:///C:/Users/George/Downloads/AJMC_13apr_Zeng_308to316.pdf)

**Figure 26**

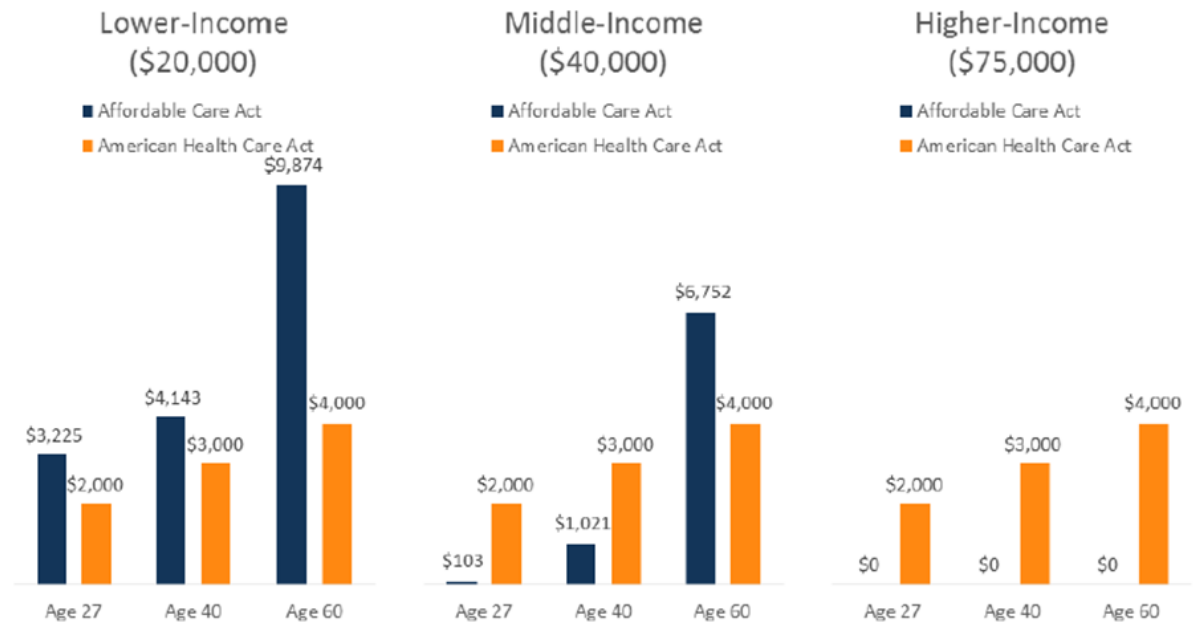
■ Figure. Average Copayment for Diabetes Medications, 2010 to 2011



Zeng, Patel & Brunetti, 2013, Effects of Coverage Gap Reform on Adherence to Diabetes Medications, AJMC, April 2013, pgs. 308-306, [file:///C:/Users/George/Downloads/AJMC\\_13apr\\_Zeng\\_308to316.pdf](file:///C:/Users/George/Downloads/AJMC_13apr_Zeng_308to316.pdf)

**Figure 27**

**How House Republicans' health reform plan might shift average health insurance tax credits, based on income and age, in 2020**



Source: Kaiser Family Foundation analysis. Note: Data for Affordable Care Act represent the average tax credit available across all counties in the United States, at a given age.

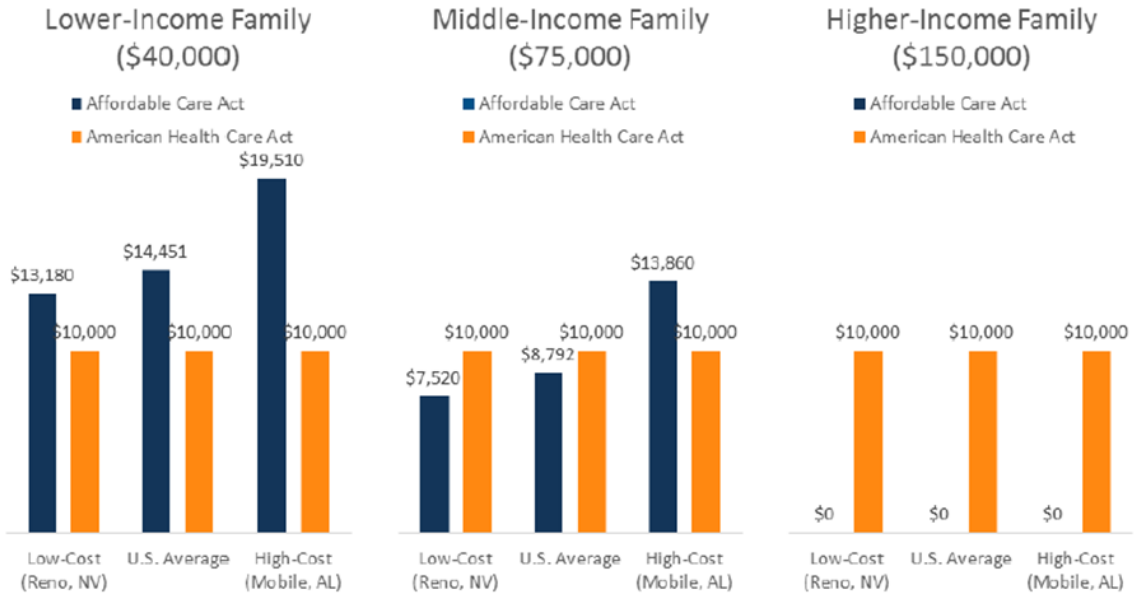


Kaiser Family Foundation, 2017, Issue-Brief-How-Affordable-Care-Act-Repeal-and-Replace-Plans-Might-Shift-Health-Insurance-Tax-Credits, <http://files.kff.org/attachment/Issue-Brief-How-Affordable-Care-Act-Repeal-and-Replace-Plans-Might-Shift-Health-Insurance-Tax-Credits>

**Figure 28**

**Figure 3**

**How House Republicans' health reform plan might shift health insurance tax credits for a family of four, by income & geography, 2020**



Source: Kaiser Family Foundation analysis. Notes: Data represent the tax credit available for a family of four with two 40-year-old adults and two kids. In the 2017 ACA exchange markets, premiums in Reno, NV and Mobile, AL are approximately representative of the 25th and 75th percentile, respectively. 2017 ACA premiums were increased according to National Health Expenditure projections for direct purchase.



Kaiser Family Foundation, 2017, Issue-Brief-How-Affordable-Care-Act-Repeal-and-Replace-Plans-Might-Shift-Health-Insurance-Tax-Credits, <http://files.kff.org/attachment/Issue-Brief-How-Affordable-Care-Act-Repeal-and-Replace-Plans-Might-Shift-Health-Insurance-Tax-Credits>

**Figure 29**

## **Estimates of Tax Credits Under the ACA and the American Health Care Act Over Time**

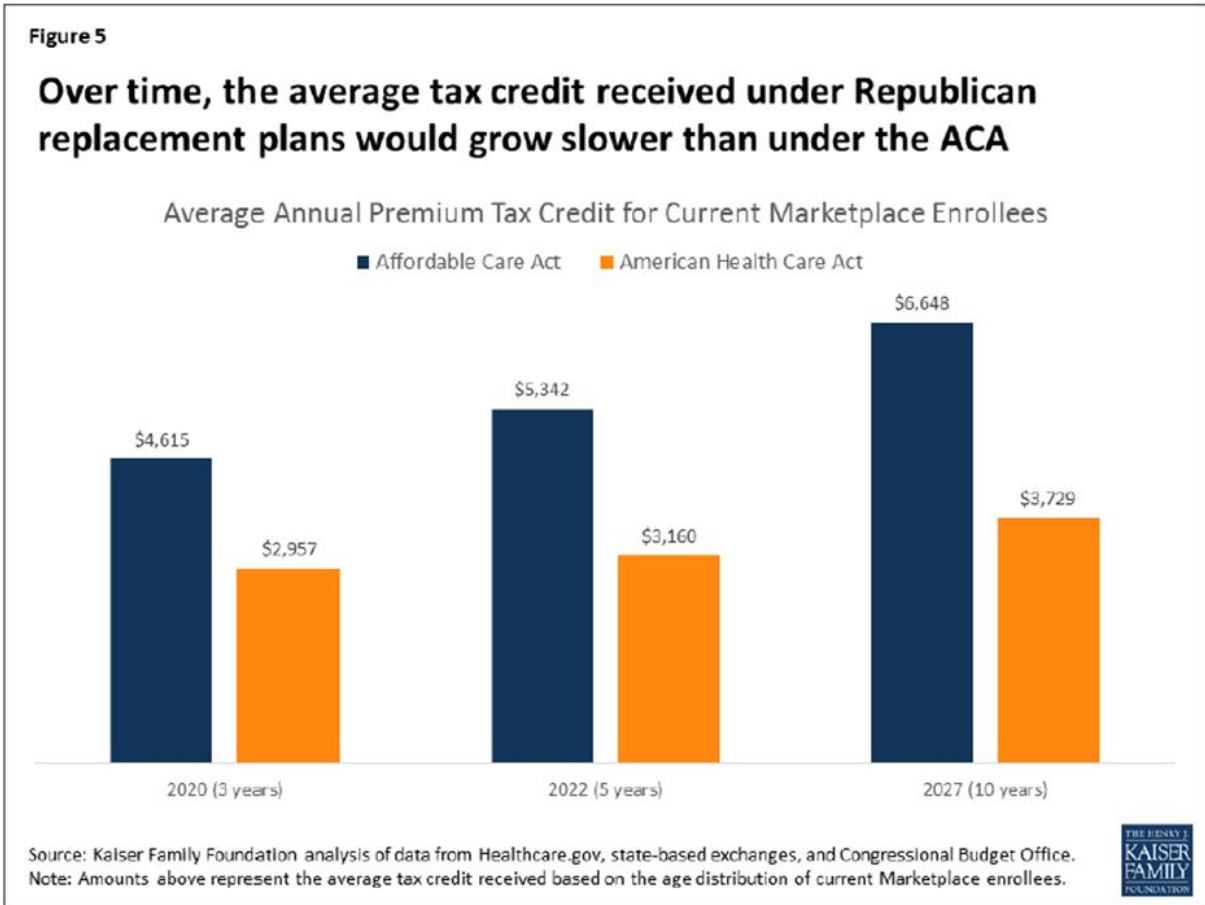
We estimated the average tax credits that current ACA marketplace enrollees are receiving under the ACA and what they would qualify for if the American Health Care Act were in place.

<b>Table 3: Average Annual Premium Tax Credit for Current Marketplace Enrollees under the Affordable Care Act (ACA) and the American Health Care Act 3-year, 5-year, and 10-year projections</b>			
<b>Year</b>	<b>Affordable Care Act</b>	<b>American Health Care Act</b>	<b>Change from ACA</b>
2020 (3 years)	\$4,615	\$2,957	-36%
2022 (5 years)	\$5,342	\$3,160	-41%
2027 (10 years)	\$6,648	\$3,729	-44%

Source: Kaiser Family Foundation analysis of data from Healthcare.gov, state-based exchanges, and Congressional Budget Office. Note: Amounts above represent the average tax credit received based on the age distribution of current Marketplace enrollees.

Kaiser Family Foundation, 2017, Issue-Brief-How-Affordable-Care-Act-Repeal-and-Replace-Plans-Might-Shift-Health-Insurance-Tax-Credits, <http://files.kff.org/attachment/Issue-Brief-How-Affordable-Care-Act-Repeal-and-Replace-Plans-Might-Shift-Health-Insurance-Tax-Credits>

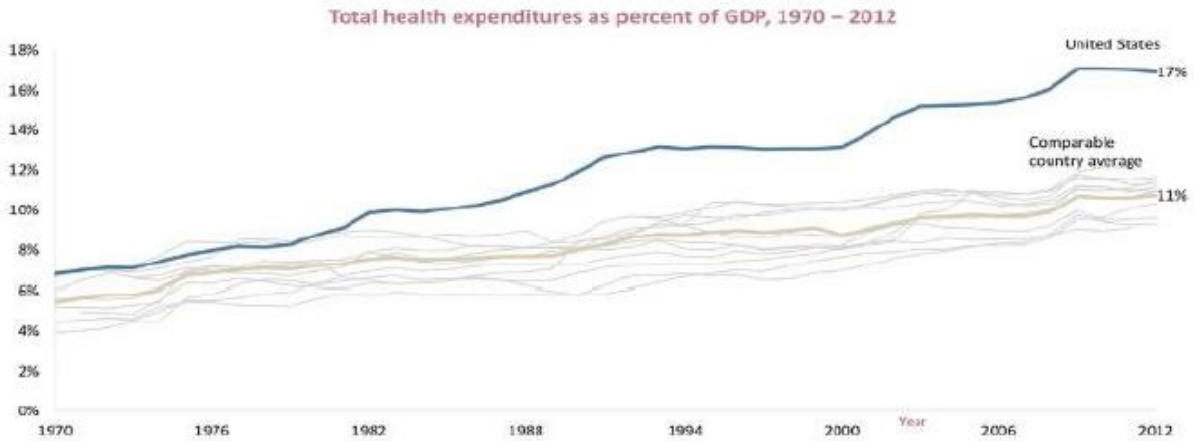
**Figure 30**



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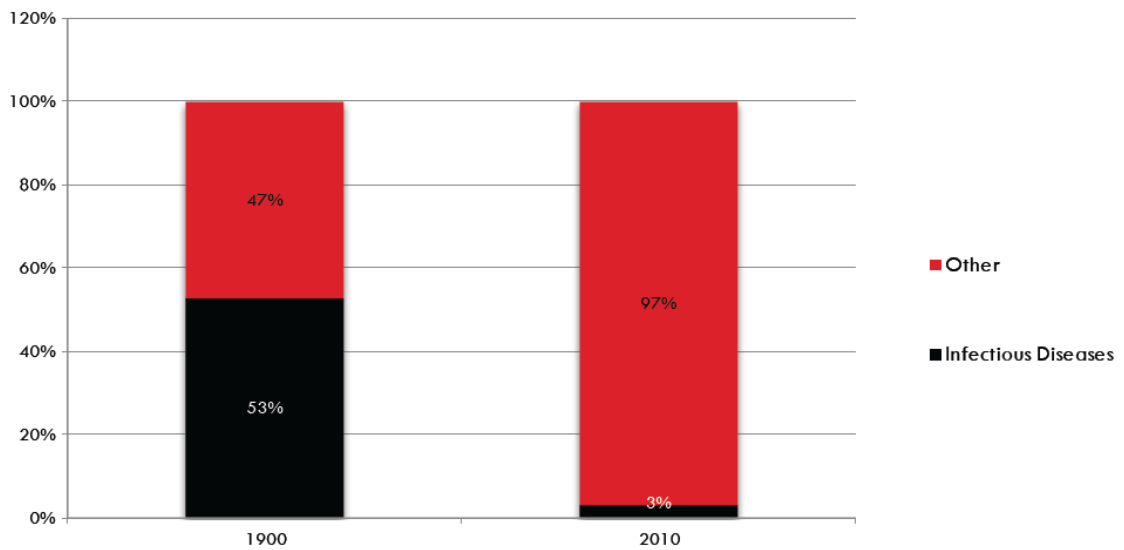
**Figure 31**  
**Much Higher Health Spending in the United States**



Source: Kaiser Family Foundation analysis of 2013 OECD data: "OECD Health Data: Health expenditure and financing: Health expenditure indicators", OECD Health Statistics (database). doi: 10.1787/data-602a0-en (Accessed on June 25, 2014). Notes: Data unavailable for the Netherlands in 1970, 1971, and 2012; Australia in 1970 and 2012; Germany in 1901; and France from 1971 through 1974, 1976 through 1979, 1981 through 1984, and 1986 through 1989. Break in series in 2003 for Belgium and France and in 2005 for the Netherlands. 2012 data for Canada and Switzerland are estimated values.

**Figure 32**  
**A Shift from Infectious to Chronic Illnesses**

**Causes of Mortality**  
**United States**  
**1900 and 2010**

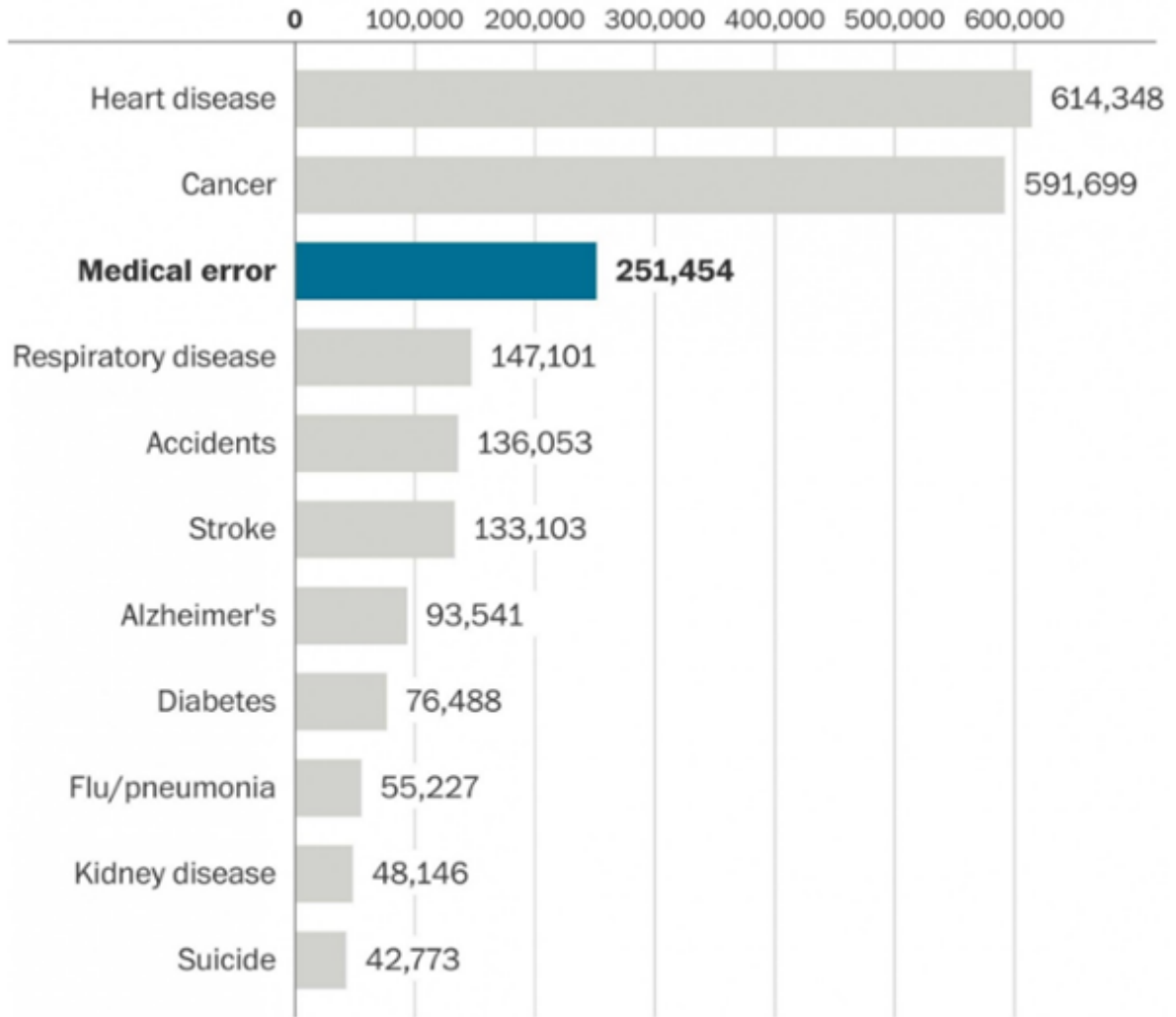


Source: Based on data from [www.cdc.gov](http://www.cdc.gov).

**Figure 33**

**Death in the United States**

Johns Hopkins University researchers estimate that medical error is now the third leading cause of death. Here's a ranking by yearly deaths.



Source: National Center for Health Statistics, BMJ

THE WASHINGTON POST

Washington Post 05/03/16, Medical Errors

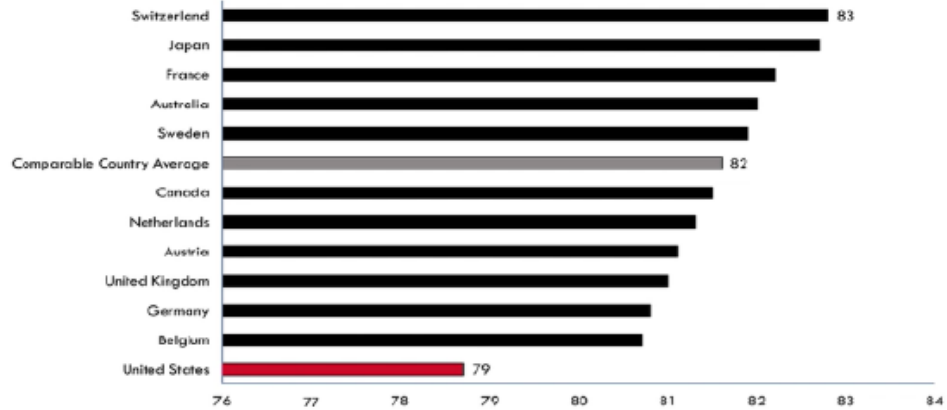
[https://www.washingtonpost.com/news/to-your-health/wp/2016/05/03/researchers-medical-errors-now-third-leading-cause-of-death-in-united-states/?utm\\_term=.d003a17627a6](https://www.washingtonpost.com/news/to-your-health/wp/2016/05/03/researchers-medical-errors-now-third-leading-cause-of-death-in-united-states/?utm_term=.d003a17627a6)

[http://www.cdc.gov/nchs/data/nvsr/nvsr64\\_02.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr64_02.pdf)

Figure 34

## Life Expectancy at Birth for OECD Nations

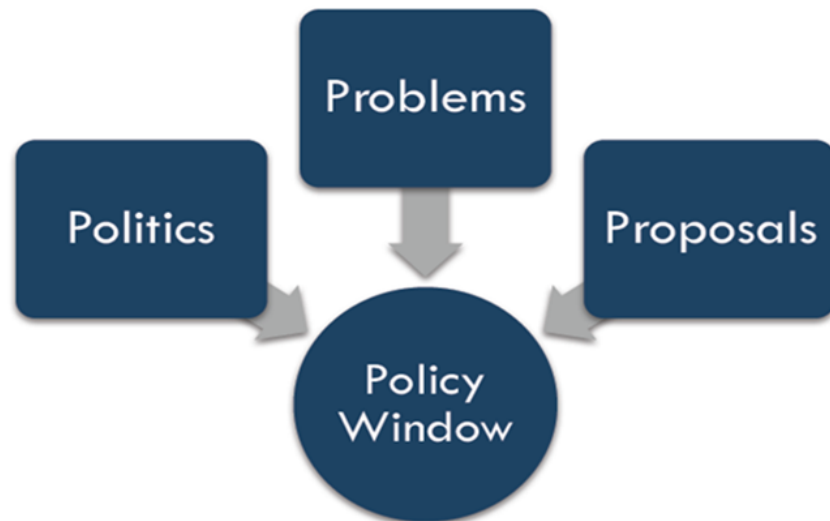
Life expectancy at birth in years, 2011



Source: Kaiser Family Foundation analysis of 2013 OECD data: "OECD Health Data: Health status: Health status indicators", OECD Health Statistics (database). doi: 10.1787/data-00349-en (Accessed on June 25, 2014).

Figure 35

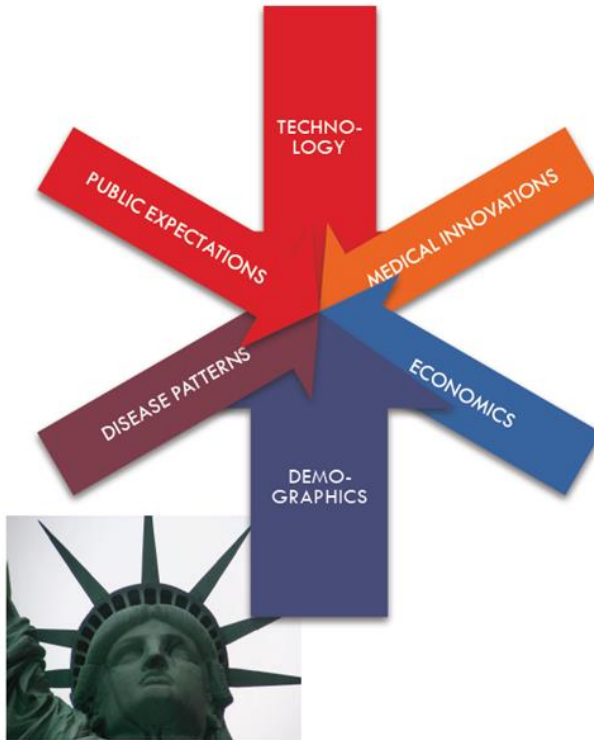
## Kingdon's Policy Streams Model



John Kingdon, 1984. Agendas, Alternatives, and Public Policies. Longman. ISBN-13: 978-0205000869 ISBN-10: 020500086X

Figure 36

## Convergence versus Exceptionalism



“What the convergence hypothesis implies ... is a certain macro process in which a narrowing of system options takes place, compared with those theoretically possible, due to forces that generally lie beyond the control of particular national actors or institutions and to which more and more societies are being exposed.”

Mechanic and Rochefort, “Comparative Medical Systems” (1996)

“[M]any social, historical, and situational factors affect the particularities of any medical system, and no exact form of organization is inevitable. At any point, there are alternative pathways a nation can follow.”

Mechanic and Rochefort, Comparative Medical Systems, Annual Review of Sociology, Vol.22:1-487 (Volume publication date August 1996) DOI: 10.1146/annurev.soc.22.1.239.

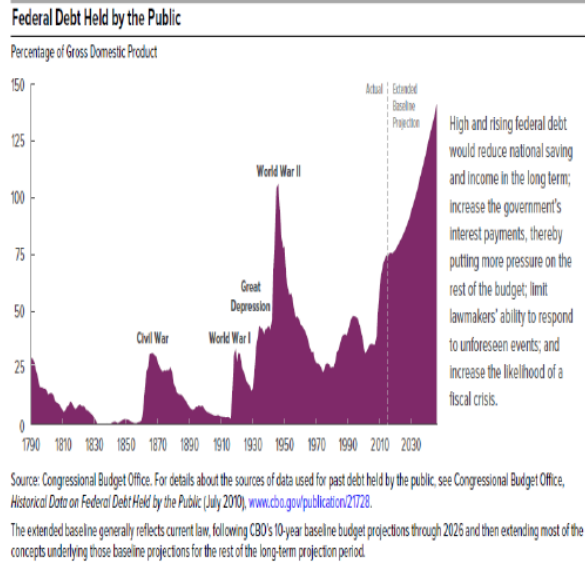
Figure 37

# U.S. HEALTH CARE IN 2025, WITHIN A GLOBAL PERSPECTIVE

- I think the global economy and political climate will accelerate the process of change for health care in the U.S.. Looming federal deficits and the need to expand the U.S. economy will force the major political parties to find consensus, but it may not be pretty. And it may not happen within a 10 year window (2025). As we look beyond 2025 to say 2050, our nation will be in shambles or we will have been humbled enough to find new solutions and consensus.

GMandell

Figure 1-1. [Return to Reference](#)



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## **FOOTNOTES**

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