CAUS

Concerned Actuaries of the U.S.

AMERICAN HEALTH CARE

Rethinking the Challenges, Opportunities and Possibilities

...a series of expert briefings on how the American Health Care economy affects the nation's overall economic well-being...

A collaborative initiative of the Committee for a Federal Budget and the Concerned Actuaries Group

American Health Care

Rethinking the Challenges, Opportunities and Possibilities

Who Pays

A look at the allocation and management of public and private costs and payments.

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Background

The Concerned Actuaries Group, Inc. (CBA The Concerned Actuaries of the U.S./CAUS) is a 501(c)(3) organization that grew out of a conviction on the part of a number of prominent actuaries that the nation's social insurance and public pension programswere not being financed or managed in a sustainable manner and were, as a result, creating significant generational equity concerns.

Dedicated to addressing these concerns, CAUS focuses on activities that increase the likelihood, "… that the nation's public finance and social insurance programs are designed and managed with theactuarial discipline and transparency such programs deserve and should require." In pursuit of that effort, the organization strives to encourage responsible change by developing and strategically disseminating, "…full, accurate, and easily understood analyses of the financial realities affecting the funding and security of our nation's public finance and social insurance programs."

CAUS directors concluded that furthering the organization's mission in an age of misinformation and polarized politics would require a more concentrated and collaborative effort. To that end, the CAUS decided to:

- focus on a high profile issue that had already captured policymaker, public, and media interest and that demonstrated the validity of our concerns;
- establish a formal working collaboration on that issue with another non-partisan organization that enjoys standing and reach with policymakers and the major news media; and
- over time broaden that collaborative effort to include others affected by and/or interested in and/ or with special skills related to the issue.

Since that time, the CAUS has:

- identified as its major issue of focus the fiscal and operational challenges, opportunities and possibilities facing American health care;
- entered into a formal collaboration agreement with the Committee for a Responsible Federal Budget (CRFB), a highly regarded 501(c)(3) organization that grew out of the 2010 National Commission on Fiscal Responsibility and Reform (often called the Simpson-Bowles Commission) that provides respected analysis of national fiscal policy; and
- designed, in collaboration with the CRFB, a public information outreach initiative called Rethinking the Challenges, Opportunities and Possibilities of American Health Care.

This article is one part of a portfolio of materials that includes: 1) a video presentation on Big Numbers; 2) a video presentation on Big Benefits; 3) this article; 4) an article by Mr. Marc Goldwein of the Committee for a Responsible Federal Budget; and 4) a pdf of the all of the charts and graphs used in this article and the video. CAUS is responsible for the content and comments in the video, this article and the charts and graphics. CRFB is responsible for the content and comments in Mr. Goldwein's article. All the materials referenced can be found at both **www.concernedactuaries.org** and **www.crfb.org**.

Introduction

The current national discussion about health care in America is not really about health care. It is about *paying for health care.*

As a result, the dialogue is concentrated on questions related to the structure and cost of public and private insurance coverage and the subsidies related to that coverage. In this narrowly defined arena, attainment of health insurance coverage is portrayed or seen as the solution to the nation's health care needs.

Policy makers, however, are not focused on how to improve the quality, availability, and management of health care. They are arguing instead about how many people are insured, whether people with pre-existing conditions are protected, the cost of premiums and the level of out-of-pocket expenses.

Coverage is, of course, *one* of the issues that must be addressed. But we cannot find the answers we seek and need, by addressing coverage in a vacuum that ignores the many challenges facing our health care system; the demographics driving both the usage and the cost of health care; the economic realities related to individual and institutional ability to pay and the economic implications of the policies currently already adopted; and a host of equity issues including the shifting of costs amongst current populations and to future generations. In short, as this two- dimensional debate rages, broader strategic and operational questions central to our health careneeds are being ignored; our understanding of the system is distorted; unintended adverse effects are obscured; and we are encouraged to ignore important actuarial, economic, and accounting principles.

In an effort to enhance public awareness and understanding, the Concerned Actuaries Group and the Committee for a Responsible Federal Budget are co-hosting a series of expert presentations and conversations on the broaderand more complex spectrum of issues that mustbe considered in the search for an equitable, sustainable American health care system.

The series, ***American Health Care: Rethinking the Challenges, Opportunities and Possibilities,*** first program, Big Numbers, focused on the interaction between population demographics,cost of care, and the impact on the payment for and delivery of health care.

In the second program, Big Benefits, we concentrated on the relationship amongst beenfits, usage and costs.

This third program looks at the allocation and management of public and private costs and payments.

In all of these presentations, we will highlight the conclusions we think critical to informed discussion of health care in America and share examples of the data and research findings that support those conclusions.

Key Take Aways

In all of these presentations, we highlight the conclusions we think critical to informed discussion of health care in America and share examples of the data and research findings that support those conclusions.

When talking about **Big Numbers**, for example, we make the points, among others, that:

- future health care spending will require a significantly larger, and arguably unmanageable, share of both individual household and government budgets
- the options being considered for changing the Affordable Care Act do not adequately address the needs, complexity of, or financial stability required by American health care; and that
- the country can't find the answers we need, without considering the demographics; the economic realities; and a host of equity issues including the shifting of costs to future generations.

Building on those conclusions, in the **Big Benefits** presentation, we made the points that

- the public tax-supported programs that account for roughly half of all health care payments do not meet basic risk management criteria and should not be viewed or managed as insurance products;
- the public programs are not financially sustainable as constituted; and that
- the allocation and distribution of payment of "benefits" has led to a series of use-driven distortions in America's health care system, which, we concluded are "…placing a very significant burden on the cost of doing business in the United States and eroding the quality of life in this country by forcing major damaging cuts in revenues for state and local services and funds needed for education.

This article, **Who Pays**, requires a "Spoiler Alert,"which is that the American Health Care business model is simply not working. That conclusion is supported by the three major take aways in the article, including:

- the numbers don't work in terms of sustainability or sufficiency;
- there are political and financial tensions in the American health care system that work against the system's need for public awareness, accountability, and capacity to address problems in a timely manner; and,
- the distribution of services, costs, and payments on the one hand and collection of taxes, premiums and fees to fund the payments on the other does not effectively recognize or manage either the differences between insurance coverage and different types of subsidized care or the redistribution of income required to support the subsidized care.

The Value Equation

Putting these conclusion in context requires taking a look at the basic value proposition that covers what most people seem to be saying they want when it comes to health care – that is, that in America everyone should be able to get the health care they need they need it. There are three deliverables implied in this proposition. The first is that access to quality care must be assured. The second is that care must be delivered in a timely manner. The third is that the delivery of and payment for health care will be triggered by a need for care, which raises the point that the system has a responsibility to define and delineate what constitutes "need" and how we define "timely." [1]

Making good on the value proposition requires linking it with a management and delivery proposition. For example, it seems reasonable to suggest that in America the system responsible for making good on the health care value proposition must be sustainable and the costs should be allocated fairly, which means that the main components have to be clearly identified and that the role of each of those components be defined and assigned. It also means that the costs must be transparent and that the financing be reliable over time. [2]

Determining whether or not financing is reliable requires looking not simply at ability to pay in any given year, but also considering ability to pay over time. This latter point is critical, for example, in determining whether aprogram such as Medicare is having it's costs being appropriately amortized from available revenues over time, including from FICA and other sources

Despite a longstanding tendency in America to talk, debate, and argue about the value proposition and the statement of operational requirements as though they were separate intellectual topics they are in fact inextricably linked and, we need to recognize that in America everyone is **not** able to access the care they need because the system, as currently operated, is simply not sustainable.

The Numbers Don't Work

The business model is not working because the numbers don't work in terms of sufficiency or sustainability.

Consider, for example, the nation's ability to sustain its health care commitments as enrollment, cost and usage numbers changed and expenditures increased.

We touched on the question of fiscal sustainability in both of the first two presentations, but we can add some depth to the issue here by comparing system costs pre-and post Medicare and Medicaid. Figures 1 - 3 show average per capita costs in 2017 dollars for 1960 - that is before Medicaid and Medicare existed, and in 1990 and 2017 when both programs were operating. [3]

Expenditures climbed primarily because more people were receiving care and because **more people** were seeking **more care**. For example, if we designate 1960 baseline data for insureds as "1," we can see that hospital out patient and clinic/physician frequency of use is up.

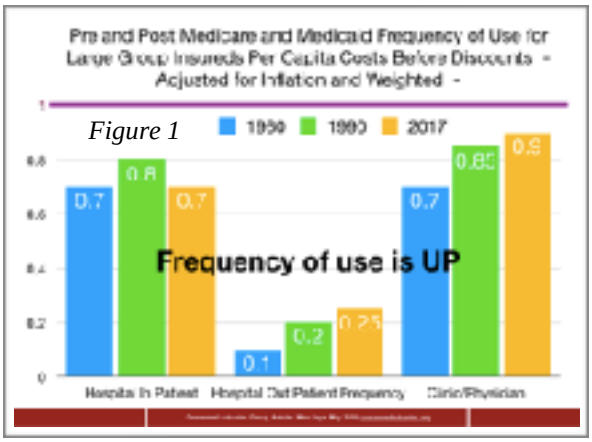


Figure 1

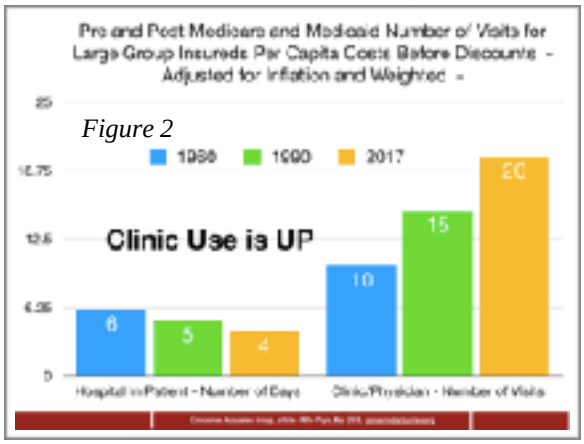


Figure 2

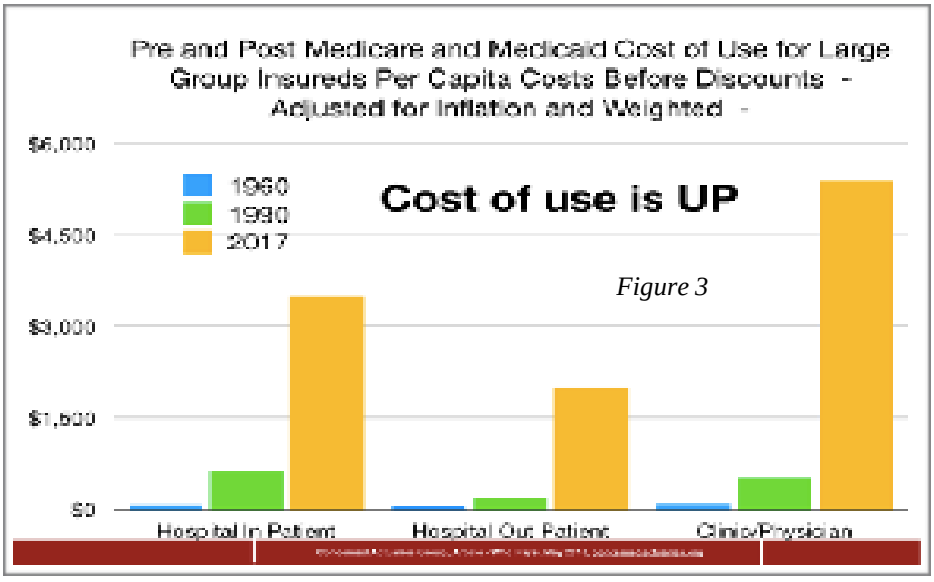


Figure 3

More specifically we can see that length of stays in hospitals has dropped but the number of visits to clinics has doubled, and not surprisingly, costs, including charges for services, have gone up.

Costs reflecting reimbursement rates before discounts, that is "retail" charges, and weighted to reflect age, income, benefit design, and other factors suggest that costs on this basis nearly tripled between 1960 and 1990 and then grew by more than four times as much between 1990 and 2017. [4]

You may remember from our Big Numbers presentation that between 2008 and 2017 Medicare and Medicaid enrollments increased by 40 million people.

Facing rising costs, both governments and private insurers began to escalate differentiated discounts to various populations while retail prices soared. This change may or may not have affected what care actually cost, but certainly affected what providers were paid for specific types of care. For example, the reimbursement rates set in 1990 paid approximately 90% of retail charges. In 2017 that average reimbursement rate had plummeted to 38% with huge differences between market segments.

By way of comparison, if the roughly 400% increase in health care costs had paralleled net growth in wages - that is growth over inflation – which was only 40% during the same time, average 2017 per capita costs for the insureds population would be less than $2,300.[5] *(See Figure4)*

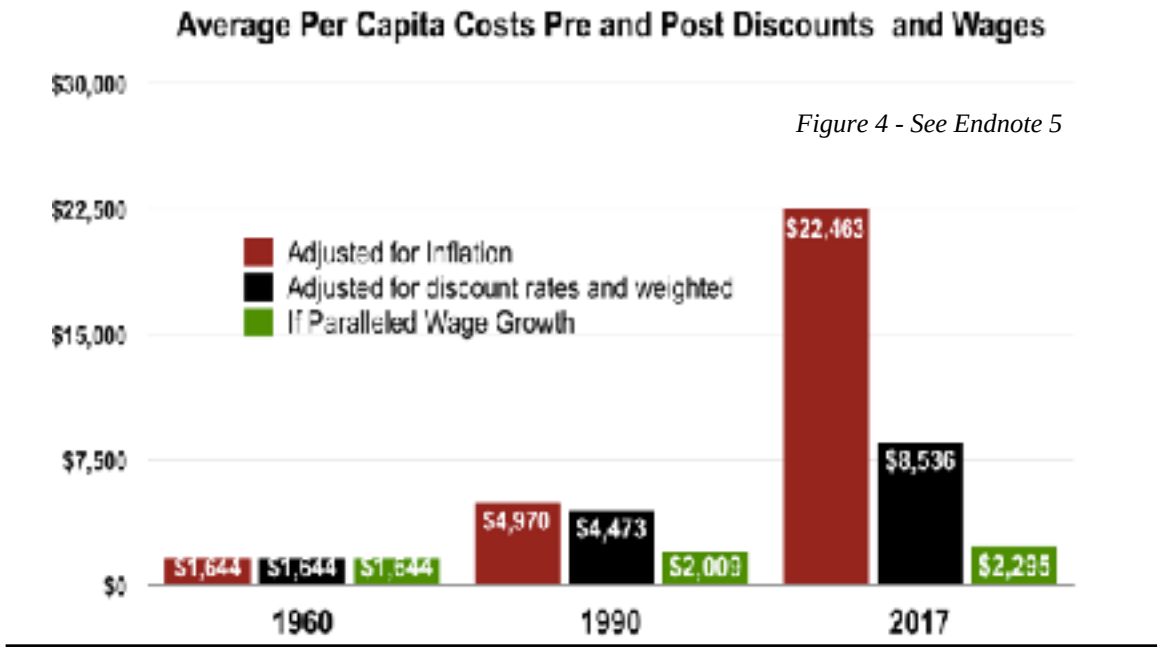


Figure 4 - See Endnote 5

Had health care costs kept pace with wages between 1990 and 2017, they would have been approximately 73% lower [6] and it is legitimate to ask how consumers might have spent that roughly $6,200 a year differently and what that might have meant for the economy as we went into and through the Great Recession.

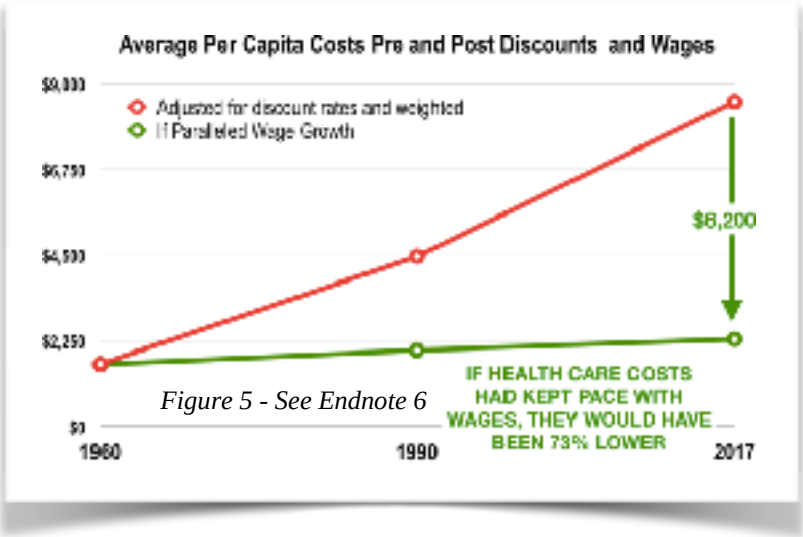


Figure 5 - See Endnote 6

This dramatic deterioration of affordability relative to wage growth parallels the dramatic use of large discounts in health care and the many unintended consequences noted previously in these presentations.

The system's lack of sustainability is also affected by the fact that it's current demand for revenues is forcing governments to reduce support for other public services. Note, for example, that Medicaid alone now consumes 67.5% of every federal dollar going to state and localgovernments including, up from 55% just eight years ago, an increase that parallels, for example, a significant decline in state and local infrastructure investments. [7]

And despite the huge reductions in reimbursements paid by governments to providers, the tax-payer supported programs are in ever increasing distress. In 2017, for example, using government reported information, not counting dual eligiblei ndividuals, we estimate expenditures in excess of revenues of $234 Billion for Medicare and $487 Billion for Medicaid, and those patients with both Medicaid and Medicare coverage incurred costs nearly $410 Billion more than revenues. That's combined expenditures over revenues in excess of $1 Trillion.[8]

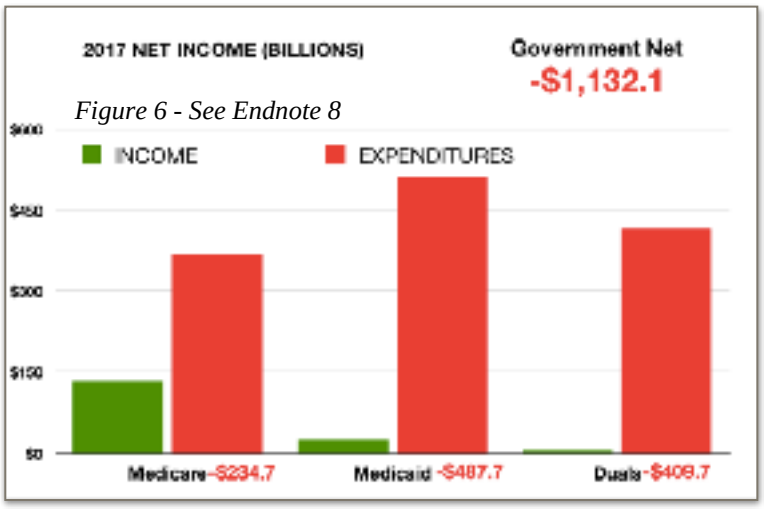


Figure 6 - See Endnote 8

And, as we noted in our Big Benefits presentation efforts to deal with the lack of sustainability and sufficiency are affecting people's ability to get the care they need when and where they need it, suggesting, for example, that more than 12,000,000 Medicaid patients don't have the access

they need and raising serious questions about whether or not rural patients can find the care they need when they need it.[9]

On top of all of this, the current financial realities and future projections indicate pretty clearly that a significant portion of these costs are being levied for payment on future generations. For example, health care accounted for approximately 36% of Federal spending financed by general revenues in 2017. Therefore, roughly 36% of the 2017 Federal deficit, or about $240 billion, was attributable to health care in 2017. That's nearly a quarter of a Trillion dollars we are handing off to our grandchildren just due to our health care system ...and that's just for one year.

There are political and financial tensions in the American health care system that work against the system's need for public awareness, accountability, and capacity to address problems in a timely manner.

It is important to note as we approach all of these issues that payments made directly to providers come from one of three direct payor categories.*(See Figure 7)* The first category consists of private sector third party payors – that is, insurers or self-insured employers, who pay benefits on behalf of individuals covered by health insurance plans and policies. The second category consists of government agencies that pay claims authorized under government programs including Medicare, Medicaid, CHIP and the Veterans Administration.

The third category of direct payors are individuals, who pay a portion of their health care costs at time of service out of pocket, including deductibles, copays, coinsurance and certain services not covered by third parties via private and social insurance.

Government payments are supported primarily by revenues from federal payroll and income taxes, state income and sales taxes, and Medicare Part B premiums. Private sector benefits payments are supported by revenues from premiums. Government in turn subsidizes some individuals by transmitting a portion of their individual health

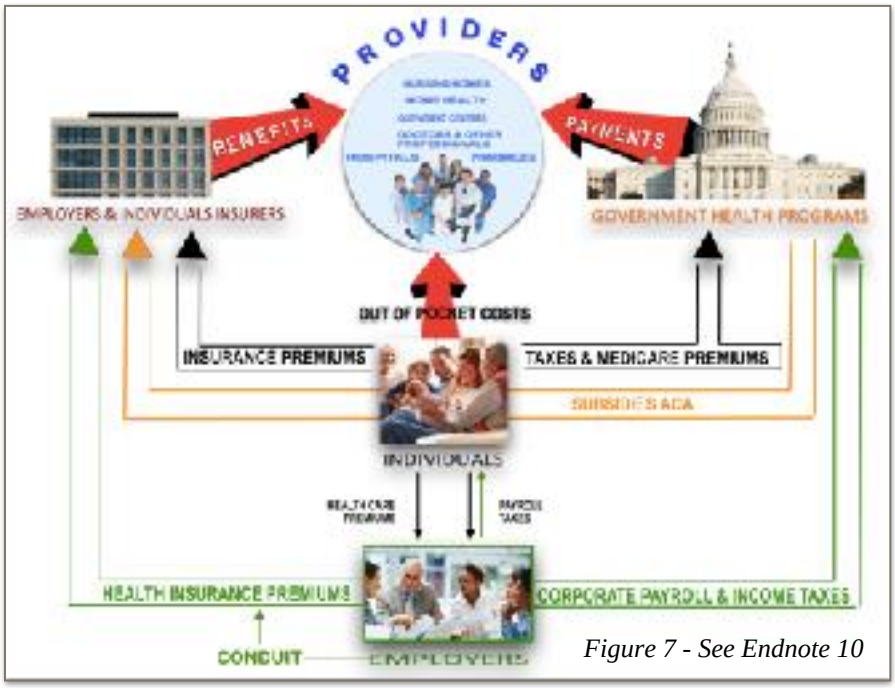


Figure 7 - See Endnote 10

insurance premiums and copays to insurers by means of ACA premium and cost-sharing subsidies. [10]

Looking at the various revenues to third party payors, it is important to note that people are the source of all of them. Employees are the source of all payroll taxes, since payroll taxes (both employer and employee portions) are employment costs. Corporate income taxes are costs absorbed by shareholders, who are individuals in the final analysis. And individuals are the sourceof all health insurance premiums, too, as employer provided health insurance premiums – like payroll taxes - are also employment costs. Employers, governments and insurance companies serve largely as financial conduits and administrative intermediaries between the people who collectively receive and pay for health care and the providers of such health care products and services.

Figure 7 shows how the $3.5 trillion in health care costs paid into the system by people are ultimately paid out by the system at of after time of service by the three direct payor categories - individuals, government and private insurers. But it does not show how those costs paid and services received are split among broad groups of people covered by the various types of benefit programs.

Figure 8 shows those covered by the primary government health care programs, Medicare and Medicaid, receive about $1.132 Trillion more in benefits from the system than they pay into the system in the form of premiums, taxes and out of pocket costs. For the Medicare and Medicaid programs, we have broken out the 11 million dual eligibles in a separate column. [11]

Those covered by secondary programs including veterans, are subsidized by an additional $104 billion.

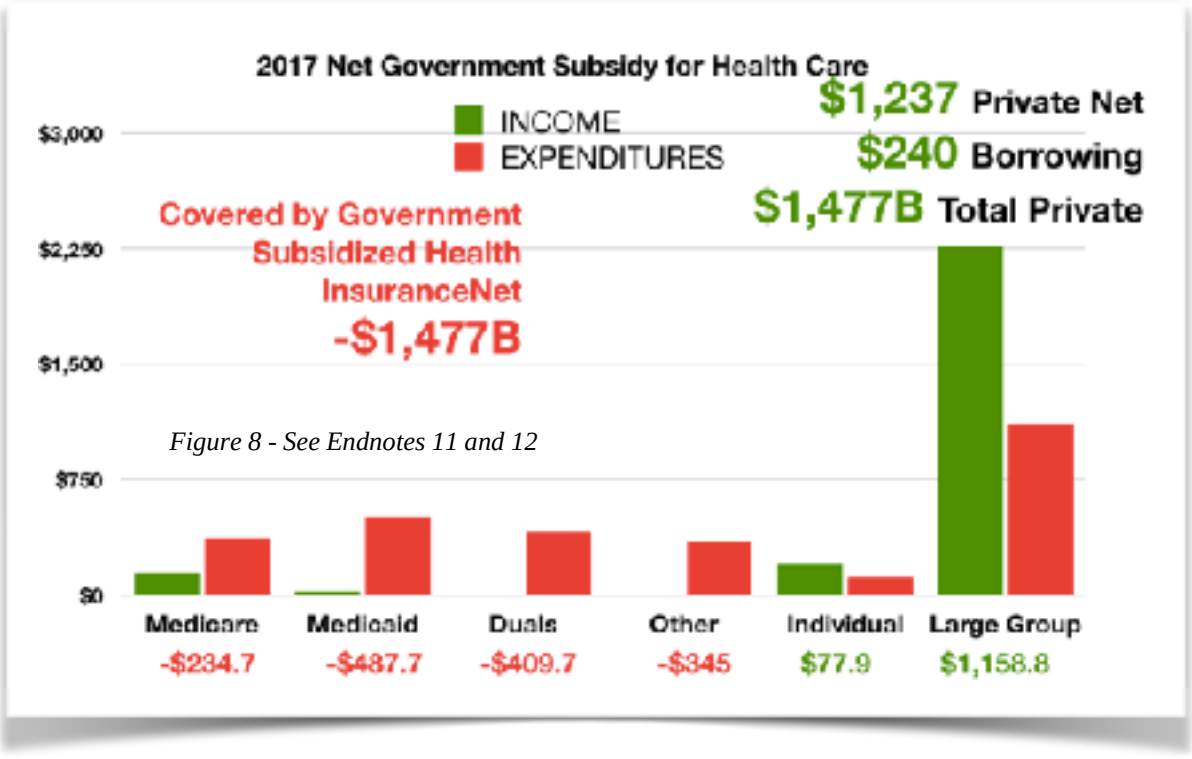


Figure 8 - See Endnotes 11 and 12

Looking at those not covered by such government programs, but who have to pay for their own coverage, we get the reverse picture in terms of net subsidies. About 160 million people are covered by employer sponsored health insurance (which some would argue they pay for via their pay package), while 16 million are covered by individual health insurance and 28 million are uninsured. These groups of people subject to coverage from the private side of the equation live a very different story, as the premiums, taxes and out of pocket costs that they pay exceeds the benefits they receive from third party payors by the same $1.237 Trillion. These groups collectively subsidize the other groups. However, it should be noted that some wealthy individuals covered by Medicare pay much more in taxes than they receive in benefits, while some individuals covered by ACA receive more in benefits than they pay in taxes and premiums, after their ACA subsidies are factored in.In short, roughly $1.2 trillion in subsidies is being transferred from those not covered by government health care programs to those who are covered by them. [12]

The fiscal imbalance between private and government outcomes as well as the aggregate deficit incurred and covered by borrowing generates political and financial tensions. These tensions are particularly noticeable between private insurance market participants required to cover their own costs and at the same time generate positive cash flow to subsidize others, and participants in government programs that have operational challenges subject to and driven by government decisions about: a) who gets what types and levels of care; b) how much the government is willing toreimburse providers to provide such levels of care; and c) how much the government is willing to impose on taxpayers via its taxing powers, all of which obscures the actual costs of governmental health care decisions and where the money comes from to pay for those decisions.

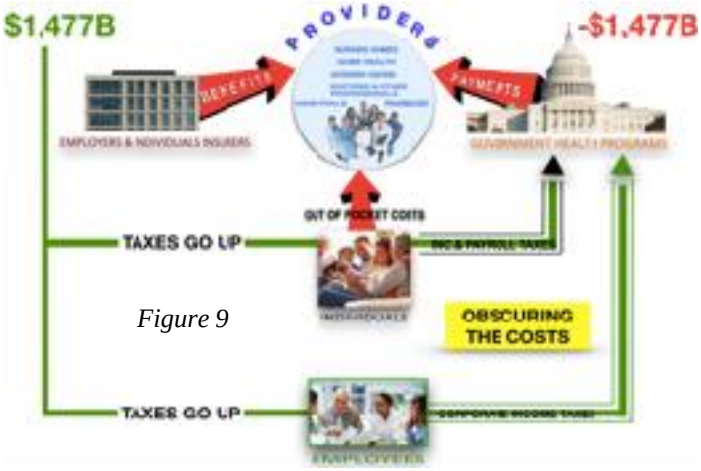


Figure 9

When taxes go up, for example, the fact that they are going up to pay for health care costs is not clear. Nor is it clear when revenues diminish for other governmental programs, as deficits accumulate and must be paid off, that those cuts can continue to be made to cover governmental health care losses going forward. [13]

Figure 10

The process also distorts understandingof the cost of private insurance because when changes in governmental reimbursement rates push providers to raise prices for the private insurers, most

people do not understand that part of the cost of governmental health care costs are being paid through their private insurer premiums. [14]

Those reimbursement rate reductions also distort our ability to see, let alone understand, the cost of care in our country. [15]

And, finally on this point, the current process either significantly diminishes the amount of revenue left to meet other public needs or compels a transfer to deficit funding not only for those in the next few years but to future generations who will see the effect of a cumulative build up of debt with interest.[16]

And, with projections that suggest health care spending will increase by $1.6 trillion per year by 2026, there will be even more bills that will burden generations to come at both the household level and the government level.

The distribution of services, costs, and payments on the one hand and collection of taxes, premiums and fees to fund the payments on the other does not effectively recognize or manage either the differences between insurance coverage and different types of subsidized care or the redistribution of income required to support the subsidized care.

Let's start our examination of this critical premise by looking at estimated income distributions within each of our 5 major groups by type of coverage. The group private insurance population, shown in Figure 11 represents about 54% of the total US population of 300 million. We have broken our estimates into four key income groups, including in descending order of income the top 1%; the next 49%; the next 35% of all earners; and the bottom 15% of earners. For this large group with employer coverage, approximately 2.3 million people or a little more than 1% fall in the top 1% of all earners with another 115.7 million people or 72% in

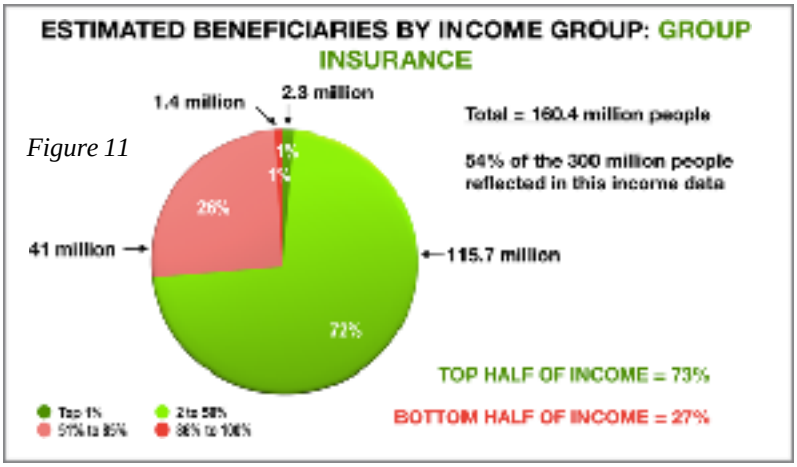


Figure 11

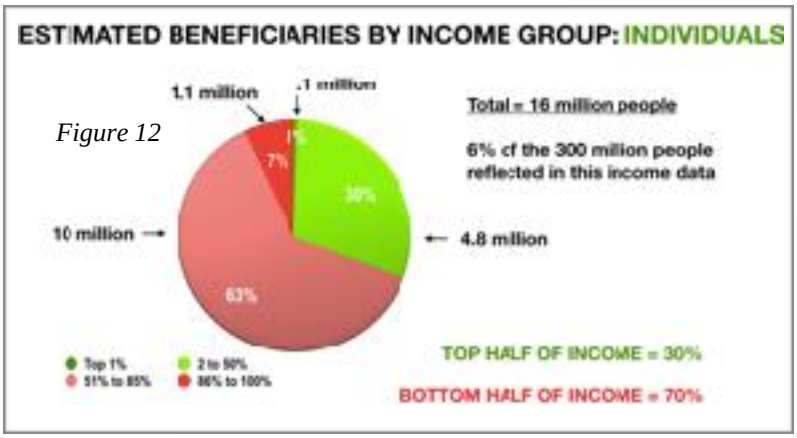


Figure 12

the next 49% of all earners, for a total of 118 million in the top half of income.[17]

The individual market includes about 6% of the population, but notice here that we estimate this user group has only 30% of its population in the top half of earners and 70% in the bottom half of all earners with more than a million people in the bottom 15% of earners.[18]

The Medicare population has 60% of its members in the top half of income, with a little less than one million in the top 1% of earners and more than 3 million people in the bottom 15%.[19]

Conversely, more than 90% of the Medicaid population fall into the bottom half of earners with more than half - nearly 37 million people - in the bottom 15% of all earners. [20]

And likewise, almost 90% of the dual population falls in the bottom 15%, while the remainder are in the 50%-85% category.[21]

Figure 13

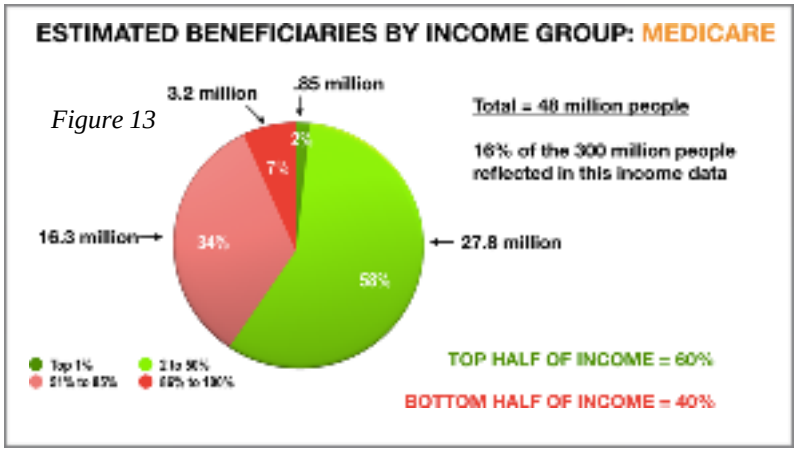


Figure 14

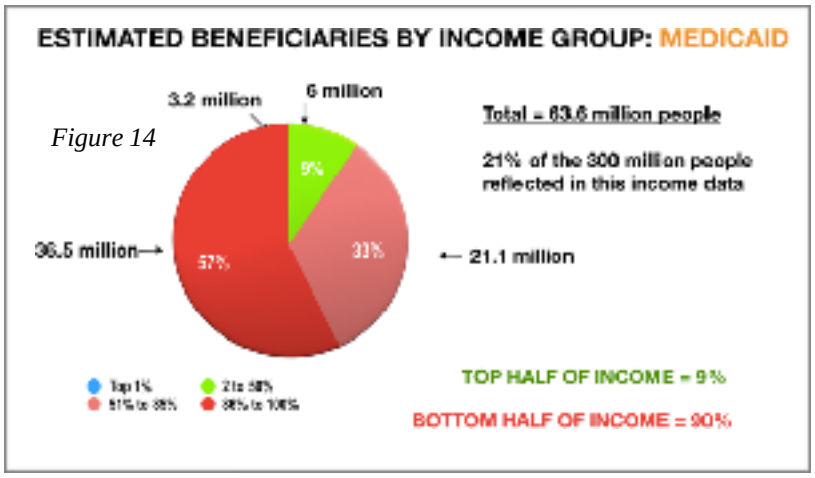
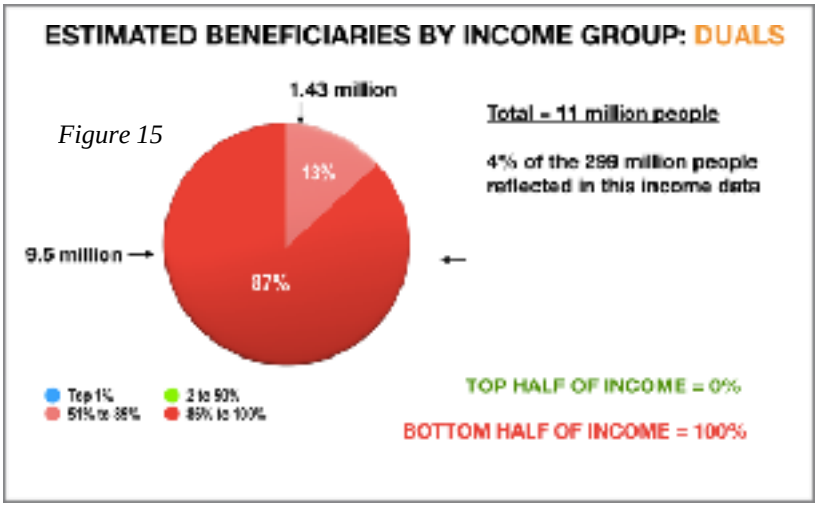


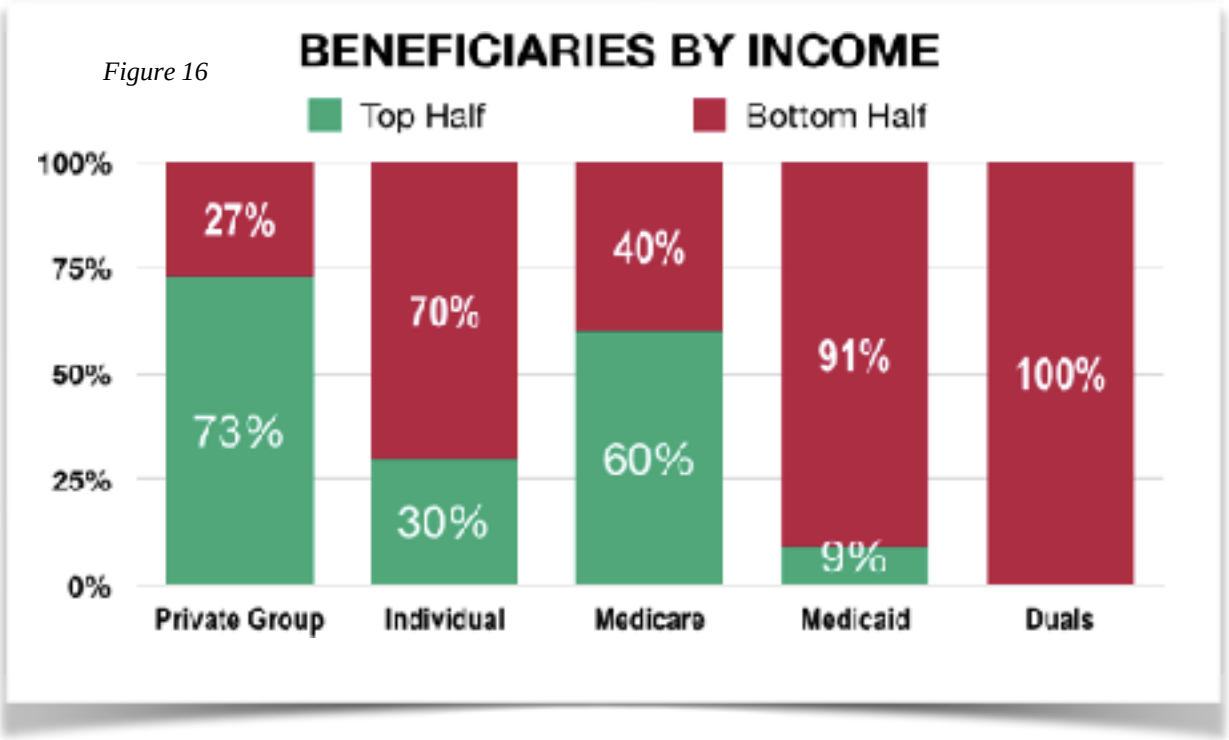
Figure 15



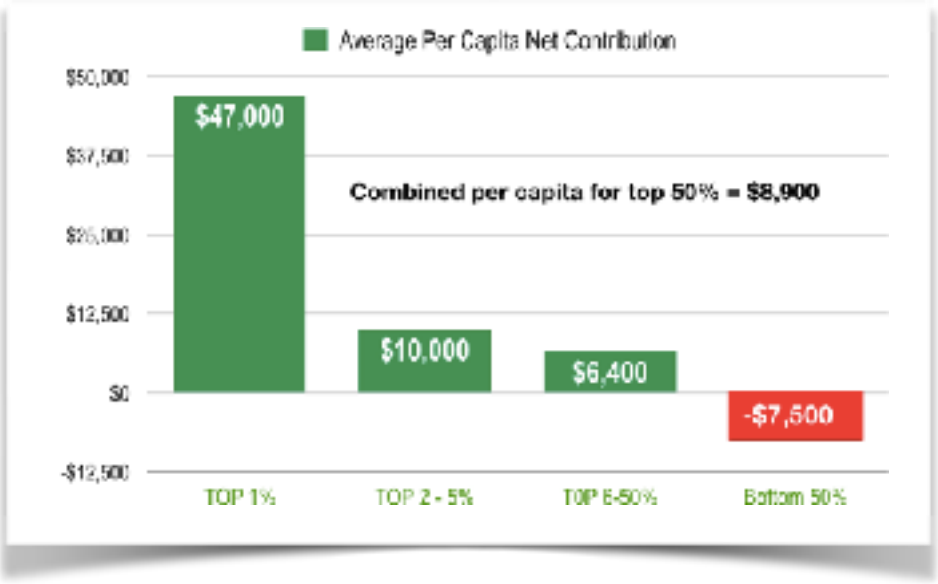
When one looks at the income make-ups of the various user groups side by side, it is apparent that gainful employment – past and present - is probably the major factor affecting income distribution.[22]

The cash flow numbers we viewed earlier make clear that while income contributes to positive revenue balances, usage contributes to negative balances. [23]

Figure 16



With that in mind, let's look at the per capita amount each of the different income brackets contributes to pay for health care in America. Here are the per capita net subsidy payments per income brackets. The Top 1% are contributing more than they receive in benefits by about $47,000 per person. The next 4% by income are contributing about $10,000 each in subsidies, while the next45% are subsidizing by about $6,400 perperson. Bycontrast, the bottom half of earnersare receiving about $7,500 per person on average in subsidized benefits.



Total subsidy estimates indicate that the top 1% are contributing about $150 Billion in subsidies, while the remaining 49% in the top half of earners contribute roughly another Trillion dollars.

When one looks at all of these numbers, it is not surprising that the nature of the health care required results in per capita payments that are considerably higher for the elderly and those who qualify for Medicaid.

But, from a responsible management point of view, it is surprising that the system has not done more to acknowledge the imbalance of revenues and done more to address that imbalance directly at the program level.

Keep in mind that these are just the dollar "costs." There are other costs related to access, availability, quality of life, generational equity and lost opportunity that we have commented on throughout these presentations.

Summary

Covering an issue as broad and complex as this one is not easy., particularly when trying to present the information in an easily accessible way intended to become part of a growing library of resource materials dedicated to encouraging and expanding public understanding of, andengagement with, the fiscal and managerial factors affecting their and the nation's health care.

We are dedicated to this effort because we believe that a very different, more informed conversation about America's health care challenges, opportunities and possibilities is essential. We hope that these three programs – Big Numbers, Big Benefits and Who Pays – will jump start that new conversation by providing interested citizens with a range of information and bydrawing attention to the data driven observations, assessments and concerns that we believe must be at the heart of that conversation.

To that end, we close by summarizing what we think are the four most important take- aways from the three programs:

First, we literally cannot afford to continue the "kick the can down the road and band-aid philosophy" we have now followed for many years to address what is wrong with the current health care system. The massive financial demands and the well-intended, but narrowly focused, reactive management of the current system are already adversely affecting the quality and availability of health care in the country and eroding our national and household quality of life bydiverting vast sums of money from necessary investments in education, infrastructure and social services. [23]

Second, the development of a sustainable, accessible effective health care system most people appear to want requires a far more holistic assessment and understanding of problems. Once the problems and needs of all parties are recognized, we can then debate and ultimately construct a vision for the efficient use of resources, including mechanisms for allocating corresponding costs in an equitable manner that recognizes a need for generational equity. [24]

Third, we need to distinguish between the roles of insurance coverages and subsidies, and how private and government revenues and expenditures best fit those roles. In so doing, we need to

ensure that the amortization schedules for insurance programs are realistic and that subsidized care supports broader efforts to help people improve their lives. [25]

Fourth, the magnitude of the public and private dollars spent on health care requires that:

- the pricing of services, drugs and care be rational, understandable, transparent and meet medical needs while satisfying affordability concerns;
- support for subsidized care recognize and be linked to the need to encourage greater patient awareness of and sensitivity to the relationship between cost and usage. [26]

Lastly, we offer this final thought for your consideration. The data makes clear that our capacity to pay for the health care we want is ultimately dependent on our having a workforce large enough and sufficiently compensated to pay for the care they need and to subsidize the care others may need on either a short-term or chronic basis. As we talk about addressing America's health care challenges and opportunities and possibilities, we know that helping people succeed economically improves the system's sustainability and affordability. We might also want to recognize, as we go forward, that a growing body of data suggests that helping people do well financially may also be one of the single best things we can do to improve their health.

END NOTES

1. Defining need and timely care requires input of the medical community (clinical principles) balanced against actuarial and economic principles.

2. Experience indicates that when a user of services has no idea of the costs associated with the services, he/she perceives that such services have little cost to them and are inclined to overuse such services. See actuarial and economic principles.

3. Health care costs in 1960, 1990 and 2017: Average annual health care costs increased per person annually by 8.8% from 1960 to 1990 and 4.8% from 1990 to 2017.

4. Retail charges tripled from 1960 to 1990 and grew by more than 4 times from 1990 to 2017: Annual retail charges per person for health care increased by 3.7% per year from 1960 to 1990 and 5.8% from 1990 to 2017.

5. Wages adjusted for inflation in 2017 are under $2,300 versus $1,644 for cost of living and $8,536 for health care. Annual wage growth per person increased by 5.8% from 1960 to 1990 and by 2.8% from 1990 to 2017.

6. Starting with $1,644 for 1960 costs adjusted to 2017 dollars, and applying the excess of wage growth over cost of living growth produces $2,295 in 2017 instead of $8,536. Average annual cost of living increased by 5.2% per year from 1960 to 1990 and 2.3% form 1990 to 2017.

7. Health care costs are consuming a larger share of government and private budgets, as shown in Big Number and Big benefits Presentations. For example, state and local government employment went down nationwide some 286,000 from 2008 to 2016; investments in infrastructure and shared revenue for local governments declined well. See the Wall Street Journal, March 29, 2018.

8. Subsidies from other avenues (taxes or fees) to cover Medicare and Medicaid is $1.132 T in 2017: Calculations reflect Medicare and Medicaid benefits paid out minus income and payroll taxes paid by individuals in 2017..

9. Due to low reimbursements by Medicaid to providers, particularly physicians, in conjunction with lower growth in the number of providers than the demand for services.

10. Too many subsidies combined with too much payment by non-users of services create too much moral hazard and averse selection, both contrary to actuarial principles.

11. Duals are people covered by both Medicare and Medicaid. This means these people are poor and either disabled and/or aged,. These risk factors and the type of coverage afforded these people results in very high average costs.

12. Subsidies provided by those in private markets ($1.237 T): These values reflect the taxes (income and payroll) and other fees paid to governments by these people versus the benefits paid by government.

13. A governmental health care spending deficit represents the excess of benefits paid in the form of subsidized care versus revenues received to provide subsidies on an annual basis and requires

government borrowing. This amount is $240 billion in 2017, or 1.477 of expenditures versus 1.237 of revenues.

14. Cost shifting of government to private markets (group and individual) by lowering reimbursements under Medicare and Medicaid relative to costs of providers results in less access to providers, supplies and treatment than in private markets, where reimbursements are higher. Medicaid reimburses roughly 60% of private costs and Medicare reimburses a little less than 70%of private costs.

15. As discounts skyrocketed from 1990 to 2017 the number of unintended consequences has skyrocketed. Some of these are covered in our previous presentations on Big Numbers and Big Benefits..

16. Government deficits are accelerating despite a growing and improving economy. The Federal deficit in calendar year 2016 was about $585, it was $664 in 2017 and is estimated to be approaching $800 billion in 2018.

21. These numbers are based on various government statistics, other studies and our own research. Totals for all markets plus the uninsured reproduce population and income totals for the entire United States.

17. As incomes increase, revenues increase and the need for subsidies usually decreases. The opposite is also true. As such, influences that increase economic growth and revenues usually result in doubly good budget outcomes, while those that decrease growth produce doubly bad results.

18. Ibid.

19. Ibid.

20. Ibid.

21. Ibid.

22. Higher incomes, relative to the cost of living, particularly for those with lower incomes, should reduce the need for subsidies. That is true unless the cost of living increases faster than wage growth. The opposite scenario produces an opposite result.

23. These are actuarial, economic principles and accounting principles. Actuarial principles can be found in literature of the Society of Actuaries (see Boston Meeting of 2007).

24. Amortization of deficits and subsidy payments should be accounted for consistent with actuarial, economic and accounting principles. Failure to do so leads to excessive borrowing, which can ultimately lead to higher interest rates and economic hardship without appropriate correction action.

25. Our Big Benefits presentation addresses this issue, and should be reviewed for comments in this area.