The Affordable Care Act (ACA), of 2010, or Obamacare, was the most monumental change in US health care policy since the passage of Medicaid and Medicare in 1965. Since its enactment, numerous claims have been made on both sides of the aisle regarding the ACA’s success or failure; these views often colored by political persuasion.

The ACA had 3 primary goals: increasing the number of the insured, improving the quality of care, and reducing the costs of health care. One point often lost in the discussion is the distinction between affordability and access. Health insurance is a financial mechanism for paying for health care, while access refers to the process of actually obtaining that health care. The ACA has widened the gap between providing patients the mechanism of paying for healthcare and actually receiving it.

The ACA is applauded for increasing the number of insured, quite appropriately as that has occurred for over 20 million people. Less frequently mentioned are the 6 million who have lost their insurance. Further, in terms of how health insurance is been provided, the majority the expansion was based on Medicaid expansion, with an increase of 13 million. Consequently, the ACA hasn’t worked well for the working and middle class who receive much less support, particularly those who earn more than 400% of the federal poverty level, who constitute 40% of the population and don’t receive any help. As a result, exchange enrollment has been a disappointment and the percentage of workers obtaining their health benefits from healthcare and actually receiving it.

The second category relates to cost containment. President Obama claimed that the ACA provided significant cost containment, in that costs would have been even much higher if the ACA was not enacted. Further, he attributed cost reductions generally to the ACA, not taking into account factors such as the recession, increased out-of-pocket costs, increasing drug prices, and reduced coverage by insurers.

The final goal was improvement in quality. The effort to improve quality has led to the creation of dozens of new agencies, boards, commissions, and other government entities. In turn, practice management and regulatory compliance costs have increased. Structurally, solo and independent practices, which lack the capability to manage these new regulatory demands, have declined. Hospital employment, with its associated increased costs, has been soaring. Despite a focus on preventive services in the management of chronic disease, only 3% of health care expenditures have been spent on preventive services while the costs of managing chronic disease continue to escalate.

The ACA is the most consequential and comprehensive health care reform enacted since Medicare. The ACA has gained a net increase in the number of individuals with insurance, primarily through Medicaid expansion. The reduction in costs is an arguable achievement, while quality of care has seemingly not improved. Finally, access seems to have diminished.
This review attempts to bring clarity to the discussion by reviewing the ACA’s impact on affordability, cost containment and quality of care. We will discuss these aspects of the ACA from the perspective of proponents, opponents, and a pragmatic point of view.

**Key words:** Affordable Care Act (ACA), Obamacare, Medicare, Medicaid, Medicare Modernization Act (MMA), cost of health care, quality of health care, Merit-Based Incentive Payments System (MIPS)

**Pain Physician 2017; 20:111-138**

The enactment in 2010 of the Affordable Care Act (ACA), also known as Obamacare, was the most monumental change in US health care policy since the passage of Medicaid and Medicare in 1965 (1-4). The ACA, despite its complexity, was enacted with 3 primary goals: increasing the number of insured, improving the quality of care, and controlling health care costs (2-10). The legislation, which was passed on partisan grounds, has had strong support from its proponents, while attracting ongoing criticism from its opponents. Increasing the number of insured has focused on insurance affordability, while the important related issues of access to services has enjoyed surprisingly little discussion.

Insurance affordability and access to coverage are 2 distinct but closely intertwined issues (1,11-13). Health insurance is not health coverage. Health insurance is a financial mechanism of paying for health care, whereas coverage refers to the health care services provided under that insurance (12). While the gap between health insurance and health care has been present for years, it has increased with the enactment of ACA. Without question, a singular achievement and major success of the ACA is the insurance of approximately 20 million Americans (5,6,8,14). However, the majority of the increases relate to expanded Medicaid coverage and some of the individuals insured under the ACA were in point of fact previously insured (5,14). Less commonly reported is the fact that millions have lost their health insurance coverage, and more Americans are foregoing necessary care (15-18). Beyond that, there is meaningful evidence demonstrating that the ACA model may leave some of those who are insured actually compromised (19-37). Thus, insurance (affordability) and coverage (accessibility) are 2 areas that are intertwined, and which provide a policy focus for the discussion as to whether to save, replace, or repair the ACA. The contentious nature of this debate is reflected in public polling showing that Obamacare is viewed as a triumph by 24% of the American population and a debacle by 27% (38). Supporters of the ACA appropriately focus on people who were helped by the law, seemingly ignoring those Americans who were hurt with much higher premiums, deductibles, and loss of access to coverage.

This review focuses on the effect of the ACA on affordability, including accessibility, cost containment, and quality improvement. The goal is to provide a framework under which the debate regarding saving, repealing, or repairing the ACA can proceed with some clarity as to what the issues are.

**Affordable Care Act**

President Obama’s record on health care has been summarized in 4 words: “The Affordable Care Act” (39). President Obama stated that the ACA’s passage and survival of multiple Supreme Court and congressional challenges was a political miracle (6,39,40). In fact, he said, “I will judge my first term as president based on … whether we have delivered the kind of health care that every American deserves and that our system can afford.” During the debate, House Speaker Nancy Pelosi famously said, “we have to pass the bill so that you can find out what is in it” (41).

The ACA was more than 2,500 pages and 500,000 words long (3,4,42). More than 70,000 pages of regulations have been written (43-47). Implementation of the ACA has resulted in the creation of dozens of new agencies, boards, commissions, and other government entities (2-4,42-48). Several parts of the law have been changed or postponed, often by executive order and the courts (5). With a lack of bipartisan support, the ACA has been extremely contentious, with a great deal of misinformation, conjuncture, innuendos, rumors, and controversies regarding its success or failure. Some are working to save the ACA, other to reform or repeal it. Rarely is there clarity as to what these terms mean.

**Impetus for Reform**

The provision of health care services has been a concern in the United States since the nineteenth century (49). Health care coverage for the elderly and indigent with the passage of Medicare and Medicaid in
1966 under President Lyndon B. Johnson was the most significant health care legislation in U.S. history (49). Despite this legislation, the U.S. health care system has been criticized because of cost, coverage, and quality (49-53). In 2014, The Commonwealth Fund, a think tank that promotes universal health coverage, ranked the United States as the worst among industrialized nations in terms of efficiency, equity, and outcomes, despite having the most expensive health care system as shown in Fig. 1 (53). However, ranking of United States as shown in Table 1 deteriorated from 5 of 11 in 2011 to 11 of 11 in 2014.

![Image](http://www.painphysicianjournal.com)  
**Fig. 1. Health expenditures per capita: A global comparison, 2009.**

National expenditures for health services and supplies escalated from $235.7 billion in 1980 to $3.03 trillion in 2014 as shown in Fig. 2 (52). President Obama rightly highlighted the problem of high health care costs in the United States, comprising 16% of the economy and increasing. He also noted that the high expenditures did not result in better outcomes for patients (5,53). Multiple issues of patient safety and the focus on treating the ill rather than maintaining health and fragmentation of care was also highlighted (5,53,54). Further, in 2008, one in 7 Americans were without health insurance coverage.

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* Expenditures shown in U.S. PPP (purchasing power parity); data for Australia from 2010.

Table 1. Historical ranking of health care quality with United States moving from 5 of 11 wealthy nations, deteriorating to 11 of 11 in the 2014 edition.

The high rate of “un-insurance” led to barriers to care, personal financial insecurity, and the increased incidence of poor health and preventable deaths. The health care system was strained by the burden of billions of dollars in uncompensated care, while workers were concerned about joining the ranks of the uninsured if they sought additional education or started a business (5).

Motivated by these concerns, the ACA was passed in 2010. In major contrast with Medicare, which was a bipartisan reform, the ACA was passed solely with Democratic support, with the use of arcane legislative maneuvers.

**Essential Benefits of Coverage under ACA**

ACA coverage includes 10 essential benefits; however, actual services provided under these
benefits are subject to interpretation of the insurance companies. These benefits for coverage include the following (3,4,41):

- Ambulatory patient services
- Emergency services
- Hospitalization
- Maternity and newborn care
- Mental health and substance abuse disorder services, including behavioral health treatment
- Prescription drugs
- Rehabilitative and habilitative services and devices
- Laboratory services
- Preventive and wellness services and chronic disease management
- Pediatric services, including oral and vision care

**Practical Aspects of Implementation**

The ACA’s expansive coverage requirements caused many existing insurance policies to not be in compliance, causing many of these noncompliant policies to be canceled. This disruption of insurance coverage was a major source of dissatisfaction with the law.

The generous benefit package has led to increasing premiums and reduced affordability. Those with incomes below 133% of the federal poverty level moved into Medicaid, while those with incomes between 133% and 400% of the federal poverty level were able to purchase highly subsidized insurance in newly created Health Insurance Exchanges. Those with incomes over 400% of the Federal Poverty Level were not subsidized and faced substantial insurance premiums and out-of-pocket expenses, with restricted coverage to the extent that many felt that insurance simply was not affordable.

The continued ability to have employer-based insurance be provided with pretax dollars, while individually purchased insurance is paid for with post-tax dollars, accentuated this problem. Former President Bill Clinton, while campaigning for his wife, Hilary Clinton, strikingly highlighted this issue when he said, “so you have got this crazy system where all of a sudden, 25 million more people have health care and then the people who are out there busting it, sometimes 60 hours a week, wind up with their premiums doubled and their coverage cut in half. It is the craziest thing in the world” (59).

A major consequence of the ACA is that State Republican and Democrat administrations are grappling with the cost of Medicaid expansion. Further, insurers threaten to leave the Obamacare exchanges as the failure of the young and healthy to sign up leaves the insurers without their premium dollars. The Democratic governor in Minnesota stated that under the ACA, “middle-class residents are getting crushed.” He was dealing with projected individual market plans cost increasing by as much as 67% (60).

**Affordability: Insurance Versus Coverage**

**Positive Views**

Insurance for Americans has been one of the most successful aspects of ACA (5,13-15). President Obama, writing in JAMA (5), described the landmark legislation’s success with the implementation of comprehensive reforms designed to improve accessibility, affordability, and quality of health care. Expansion of the coverage under ACA sharply increased insurance coverage with the uninsured rate declining by 43%, from 16% in 2010 to 9.1% in 2015 as shown in Fig. 3 (5,52,55-57). In addition, the number of uninsured individuals in the US declined from 49 million in 2010 to 27 million in 2016. Coverage of dependents up to age 27 expanded insurance coverage to over 2 million young adults (61-63).

The president also stated that early evidence suggests that expanded coverage is improving access to treatment, financial security, and health for the newly insured. The manuscripts the President quoted in his article show that following the expansion through early 2015, nonelder adults experienced substantial improvements in having a personal physician (3.5% increase), and easy access to medicine (2.5% increase) and substantial decrease in the share of those who are unable to afford care (5.5% decrease) and reporting fair or poor health (3.4% decrease) related to the pre-ACA trend (28,64,65).

The president dispelled widespread predictions that the law would be “a job killer” and stated that the private sector employment has increased in every month since the ACA became law and rigorous comparisons of Medicaid expansion and non-expansion states show no negative on employment in expansion states (66).

Other popular aspects of the insurance affordability included requiring insurers to offer coverage to all applicants and to guarantee renewal for all covered individuals. Health status underwriting was outlawed in all insurance markets, and a ban was placed on pre-existing condition exclusions. The ACA also established
the contentious individual mandate that required individuals who did not qualify for an exemption to obtain minimum essential coverage or pay a tax, and finally, it established temporary re-insurance and risk corridor programs, and a permanent risk adjustment program, to encourage insurers to take on higher risk enrollees and discourage risk selection.

Negative Views

The increase in number of insureds was largely based on expansion of Medicaid. Thirteen million of 20 million newly insured were confirmed to be enrolled in Medicaid. Butler (8) suggested that the ACA may be labeled “Medicaid Expansion Act.” This is illustrated in Fig. 4 with the majority of the enrollment growth occurring in Medicaid expansion (67-70). Medicaid expansion will strain state budgets due to the required contributions from states to their Medicaid expansion, which now is funded at 100% by the federal government.

The Congressional Budget Office (CBO) (71), in a March 2016 report, showed that while there has been a large reduction in the number of uninsured individuals, the source of coverage was significantly different from what was expected when the law was enacted. Medicaid and the Children’s Health Insurance Program (CHIP) covered an estimated 17 million more people in 2016 than the CBO’s earlier assessment. Enrollment in the ACA’s exchange has been disappointing, with an estimated 10 million fewer people enrolled compared to projections.

Enrollment in the exchanges has been less than expected because of high premiums and out-of-pocket exposures. Those who were subsidized were attracted to the exchanges, but those who were not found the costs daunting. Further, in addition to high out-of-pocket expenses, these policies are characterized by narrow networks, so that those covered have found that they have limited access to care: They could not keep their doctor. Thus, for many households, the President’s promise of affordable coverage rings hollow and has not been realized (8).

The percentage of workers receiving benefits from

Data are derived from the Gallup-Healthways Well-Being Index as reported by Witters (23. Witters D. Arkansas, Kentucky set pace in reducing uninsured rate. Gallup. http://www.gallup.com/poll/189023/arkansas-kentucky-set-pace-reducing-uninsured-rate.aspx) and reflect uninsured rates for individuals 18 years or older. Dashed lines reflect the result of an ordinary least squares regression relating the change in the uninsured rate from 2013 to 2015 to the level of the uninsured rate in 2013, run separately for each group of states. The 29 states in which expanded coverage took effect before the end of 2015 were categorized as Medicaid expansion states, and the remaining 21 states were categorized as Medicaid nonexpansion states.

Fig. 4. Decline in adult uninsured rate from 2013 to 2015 vs 2013 uninsured rate by state.
their employer has decreased from 62% in 1999 to 55% in 2016 (Fig. 5) (72). This decrease occurred despite an ACA provision that required larger employers to offer ACA-compliant policies to their employees.

**Pragmatic View**

The present evidence shows that there is a decrease in the number of uninsured individuals. This benefit has not come without a cost. A May 2015 RAND Corporation study (73,74) estimated that from September 2013 to February 2015, 22.8 million Americans became newly insured and 5.9 million lost coverage; for a net gain of 16.9 million newly insured Americans. Supporters of the ACA have not prominently mentioned the loss of coverage by 5.9 million; we believe it to be an important subgroup. Accurate, recent statistics are not available on the number of people that have dropped off the insurance rolls or who lost their insurance in the private market and joined Medicaid or the exchanges. Laszewski (75) showed that affordable care was deeply unpopular, with 51.4% of Americans opposing the law. Plan selection and enrollment in exchanges is strongly related to income level, with 76% at 100% – 150% poverty level, and it drops like a rock when the income level exceeds greater than 400% of poverty level to 2%, as shown in Fig. 6. Those who do not have to pay for coverage have tended not to participate. Consequently, only about 40% of the subsidy-eligible individuals have signed up and, with so many insurers declaring losses, the ACA is not financially sustainable because not enough healthy people are on the rolls to pay for the sick. Based upon the inability of the ACA to capture broad participation, Laszewski (75) predicted as early as June 2015 that the ACA was not sustainable.

Along with questions about the true reduction in uninsured rates, access to coverage has not met expectations. Not only are narrow networks and covered services an issue, but there is evidence showing that mental health coverage, which was a highlighted benefit of the ACA, has not improved (61-63). Further, a study of coverage and access for Americans with chronic diseases under the ACA (76) showed that while insurance coverage increased by 4.9 percentage points, not having to forego physician visits increased by only 2.4 percentage points, and having a check-up increased by only 2.7 percentage points. In addition, having a personal physician did not improve. This study (76) also showed approximately one in 5 African-Americans and one in 3 Hispanic persons with a chronic disease continued to lack coverage and access to care after ACA implementation. Overall, as we describe further below, due to high out-of-pocket expenses, narrow networks, and empowerment of insurers, many more Americans than

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*Estimate is statistically different from estimate for the previous year shown (P < .05).


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**Fig. 5.** Percentage of all workers covered by their employers’ health benefits, in firms both offering and not offering health benefits, by firm size, 1999 – 2016.
is appreciated have foregone coverage. This also has been experienced in Massachusetts, which passed near universal health insurance in 2006. Massachusetts had showed sustained gains in insurance affordability, but continues to have persistent gaps in coverage for vulnerable populations and faces ongoing challenges in access and affordability of coverage for those with insurance (13,77).

Long et al (13) concluded that while the sustained increase in insurance is impressive, a key lesson from Massachusetts was that insurance does not guarantee access to affordable health care – meaning coverage (Fig. 7). Massachusetts was among the states having lower provider availability and longer wait times for appointments (34). In Massachusetts, while the expansion of coverage led to improved access to and affordability of care in the early period of reform, those gains faded somewhat over time (78-81).

Overall, in 2015, more than one-third of full year insured adults reported going without some type of needed care including dental care or prescribed drugs during the prior year, with some of that unmet need reflecting difficulty finding providers who would see them and difficulty getting timely appointments. Osborn et al (29) showed that the lack of access to health care has been increasing specifically for low income workers (82-85). The ACA has rendered medical care less affordable for many across the nation (59,60,67-70,72-75,86-88).

Overall at least 50% of the uninsured from 2010 continue to be uninsured as of today as shown in Fig. 7. Thus, while the ACA improved affordability for some, specifically the subsidized, access to care has, across the board, not been improved.

![Fig. 6. Percentage of eligible individuals enrolled in exchange plans, by income.](image)

![Fig. 7. Trends in uninsurance in Massachusetts and the United States, 2005 – 2015.](image)
Cost Containment: Insurance Versus Coverage

Positive Views

After the passage of the ACA, national health spending growth was projected to average 5.6% per year from 2016 to 2025 (Figs. 8 and 9) (89-92). Health care expenditures reached $10,345 per person with annual expenditures of $3.35 trillion, or 18.1% of gross domestic product (GDP) in 2016. Based on these projections, it is expected that health care expenditures will reach over $4.6 trillion with 19.8% of GDP by 2025. At the same time, there were significant decreases in the rate of growth in health care spending. Many factors have been credited for the decrease in the rate of increase of health care costs, including the Great Recession (7-9), However, President Obama (5) and Obamacare supporters credit this decrease to only ACA.

The financial risk of workers to health care costs has improved, with a decrease in the number of workers without an annual limit in out-of-pocket costs as shown in Fig. 10. The president also showed the data that out-of-pocket spending as a percentage of total health care spending for individuals enrolled in employer-based coverage has been flat since 2010 (Fig. 11) (93-97).

The CBO scored the coverage provisions of the legislation, the Medicaid expansion and exchanges, as costing $938 billion over 10 years, from 2010 to 2019 (97). Control over costs under the ACA is based on reforming the health care delivery system. President

Fig. 8. Health care spending by year.
Obama stressed that the ACA has changed the health care payment system in several important ways (5). These include: changes in rates paid to Medicare and Medicare Advantage Plans, changes in private sector reimbursement, efforts to eliminate fraud and abuse, the implementation of value-based payments in Medicare fee-for-service (FFS), increasing price transparency, and the implementation of alternative payment models.

Source: CMS, Office of the Actuary, National Health Statistics Groups

Fig. 9. Annual growth on health care spending.

Data from the Kaiser Family Foundation/Health Research and Education Trust Employer Health Benefits Survey (69).

Fig. 10. Percentage of workers with employer-based single coverage without an annual limit on out-of-pocket spending.
Based on the ACA, Centers for Medicare & Medicaid Services (CMS) has tested multiple APMs. An estimated 30% of traditional Medicare payments flow through alternate payment models (APMs) that broaden the focus on payment beyond individual services, up from essentially none in 2010 (98). Consequently, President Obama stated that the trend in health care costs and quality under ACA has been promising with annual growth in real per enrollee Medicare spending being negative, down from a mean of 4.7% per year from 2000 through 2005 and 2.4% per year from 2006 to 2010 (99-101) as shown in Fig. 12. Cost trends have decreased significantly, as shown in Fig. 13.

The CBO projected that Medicare would spend 20% less, or about $160 billion, in 2019 alone (102,103). President Obama also claimed that the slower growth also has reduced the mean family premium for employer-based coverage, which would have been almost $2,600 higher in 2015 (69). He also said that the overall share of health care costs that enrollees and employer coverage pay out-of-pocket has been close to flat since 2010 (Fig. 11) (93-96). These accomplishments occurred against a backdrop of the Great Recession and other factors that played in reducing the health care costs (7-9).

Data for the series labeled Medical Expenditure Panel Survey (MEPS) were derived from MEPS Household Component and reflect the ratio of out-of-pocket expenditures to total expenditures for nonelderly individuals reporting full-year employer coverage. Data for the series labeled Health Care Cost Institute (HCCI) were derived from the analysis of the HCCI claims database reported in Herrera et al (93) HCCI 2015 (95), and HCCI 2015 (96); to capture data revisions, the most recent value reported for each year was used. Data for the series labeled Claxton et al were derived from the analyses of the Trueven Markets can claims database reported by Claxton et al 2016 (97).

Fig. 11. Out-of-pocket spending as a percentage of total health care spending for individuals enrolled in employer-based coverage.

Fig. 12. Rate of change in real per-enrollee spending by payer.
Negative Views

Many of the president’s assertions have been disputed. Some have stated that the ACA rendered medical care less affordable because of increases in the cost of health insurance coupled with out-of-pocket expenses, including higher premiums, deductibles, and co-insurance. Consequently, many people do not perceive the benefits described above (87,88,104-106). Out-of-pocket expenses increased 12% in a 3-year period from 2014 to 2017 (87,88). Further, out-of-pocket maximums also have increased from 2014 to 2017 from $6,350 for individuals to $7,150 and $12,700 for a family to $14,300. Moreover, premiums for employees have increased 20% from 2011 to 2016 compared to a 6% increase in overall inflation and an 11% increase in workers’ earnings (Figs. 14 and 15) (72). At the same time, the percentage of all workers covered by their employer’s health benefits decreased to 55% in 2016 from 60% in 2008 as shown in Fig. 5 (72). The financial burdens of high deductible plans have been well described (37). In fact, Medicaid appears to cover more services with lesser deductibles than insurance from affordable health care.

Savings in Medicare have been attributed to a reduction in provider payments, patient out-of-pocket expenses, and recipients avoiding services. These reductions would have been much higher if the administration followed the policy of promoting independent practices rather than promoting so-called hospital employment as hospitals get reimbursed more for that same physician services than do independent physicians (107). Further, the president’s assertions of decreasing health care costs for Medicare and slowdown of health care costs due to ACA has been described as unduly sanguine (8). This trend preceded the enactment of the ACA and many analysts are uncertain about the cause and likelihood of a continuation of the slowdown in the growth of health care costs, attributing much of the moderation to the Great Recession (7-9,101,105,108). The trend of a slowing rate of increase in costs reversed in 2015. The CBO and others expect spending to increase more rapidly in the future (Figs. 16 and 17) (52,55,87,88,90,93-97). Beyond that, many consider expansion into Medicaid as a negative factor rather than a positive one.

Abdus et al (37) described the financial burden of high deductibles noting concerns regarding high financial barriers to health care, particularly for low-income adults. They also showed that the share of high deductible plan enrollees who did not have a Health Savings Account (HSA). High out-of-pocket burdens can stem from out-of-pocket spending on premiums, health care services, or a combination of the 2. Abdus et al (37) highlighted the fact that spending 10% of family

![Medical cost trend over the years.](source: PwC Health Research Institute medical cost trends 2007-2017)
income on premiums and health care services can be burdensome for low-income families. Using 10% of family income as burden, burden rates exceeded 50% even for low-income families with low-deductible plans. Based on the prior research data, the prevalence of high-deductible health plans within the employer-sponsored insurance has more than doubled since the mid 2000s (37). This significant portion of the increase has been attributed to the implementation of the ACA.

Further, medical debt was reported by more than 20% of the Massachusetts insured adults. These patterns likely reflect, at least in part, an increase in consumer cost sharing in the state, which rose by 4.9% in the commercial market in 2014 (80). Overall, problems with access to and affordability of care (coverage) were most common for those in fair or poor health and for those having lower family incomes, despite having insurance. Further, hospitals frequently charge these patients without

*Percentage change in family premium is statistically different from previous five year period shown (P < .05).


Fig. 14. Cumulative premium increases for covered workers with family coverage, 2001 – 2016.


Fig. 15. Average annual health insurance premiums and worker contributions for family coverage, 2006 – 2016.
Fig. 16. Growth in national health expenditures (NHE) and gross domestic product (GDP), and NHE as a share of GDP, 1989 – 2015.

Source: Census Bureau, Quarterly Services Survey (hospital services & ambulatory services); Bureau of Economic Analysis National Income and Product Accounts (prescription drugs, population, GDP price index).

Fig. 17. Growth in nominal aggregate health care spending.

Source: Census Bureau, Quarterly Services Survey (hospital services & ambulatory services); Bureau of Economic Analysis National Income and Product Accounts (prescription drugs, population, GDP price index).
insurance much higher rates than those paid by either private health insurers or public programs, so that a major benefit of insurance is access to negotiated discounted rates (109,110). In 2015, nonelderly uninsured adults were over 2.5 times as likely as those with insurance to have problems paying medical bills (53% vs. 20%) (111). The uninsured, and to a lesser extent, the insured, are facing challenges with bankruptcy.

The CBO’s 2013 estimate of a cost of the ACA of almost $1.8 trillion was lower than its earlier estimates; this reduction is attributed to the Supreme Court decision making Medicaid expansion optional (111-114). Even then, if all additional costs are included, the ACA’s real 10-year cost appears to be much closer to $2.4 trillion. It is also estimated that an additional $1.16 trillion will be added to the national debt over that 10-year period (115).

Price, not utilization, is a major force behind the historical medical cost trend. One of the major concerns has been increasing drug costs, which have constituted a higher percent of health care expenditures over the years as shown in Fig. 17.

**Pragmatic View**

Peter Orszag, President Obama’s former Director of the Office of Management and Budget, boldly claimed that no one could have predicted in 2010 that Medicare spending per beneficiary would decline on an inflation-adjusted basis through 2014 (7). Health care costs have been fluctuating enormously during recent years (116). In 2012, health care increased a scant 0.8% per person, slightly less than the real GDP per capita. In contrast, spending has increased an average of 2.3 percentage points more than GDP growth since 1960 as shown in Fig. 13. Some argue that trends in health spending have always tracked with the general economy, except for rare exceptions (117). Consequently, the implication is that health care costs could surge as the economy recovers (118). Private insurance premiums have increased at a slower pace (90), but at the same time, real employment and inflation were also lower, along with increased out-of-pocket expenses as shown in Figs. 5, 14, 15, 18, 19, and 20 (69,72,87,88,105,106,116-123). MacRae et al (124) showed that since the establishment of Part D, or Medicare Modernization Act (MMA), which provided outpatient drug benefits to beneficiaries, the cost of drugs have increased substantially, despite reports in 2010 that an estimated 13% of Americans reported having unmet prescription drug needs. Further, the data on prescription spending in the United States shows that it increased nearly 20% between 2013 and 2015 (125). MacRae et al (124) showed that in spite of the ACA’s assurance of increasing health insurance for millions of Americans, evidence suggested that some patients may be at risk of high out-of-pocket cost per

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* Estimate is statistically different from estimate for the previous year shown (P < .05).
NOTE: These estimates include workers enrolled in HDHP/SO and other plan types. Average general annual health plan deductibles for PPOs, POS plans, and HDHP/SOs are for in-network services.

Fig. 18. Percentage of covered workers enrolled in a plan with a general annual deductible of $1,000 or more for single coverage, by firm size, 2006 – 2016.
specialty drugs. Dieleman et al (126) concluded that US spending on personal health care and public health showed substantial increases from 1996 through 2013, with spending on diabetes, ischemic heart disease, and low back and neck pain accounting for the highest amounts of spending by disease category.

Further, data by Martin et al (90) shows faster growth in national health spending primarily due to accelerated growth in spending for private health insurance of 7.2%, hospital care of 5.2%, and physician
and clinical services of 6.3%. A significant portion of these expenses can be attributed to spiraling growth of hospital employment and the decline of independent practices (26,43-48,127-136).

The public believes that hospital charges, fraud, and waste are the top reasons for rising health care costs as shown in Fig. 21 (137). Additionally, health care regulations have been incriminated for increasing health care costs. Implementation of new regulations has led to decreases in productivity and increases in health care labor expenses. Cutler and Sahni (122) showed that of the $2.6 trillion spent in 2010 on health care in the US, 56% consisted of wages for health care workers. Health care continues to be highly labor intensive to deliver. However, as a result of increased regulations, including certified electronic health record (EHR) technology, this labor intensiveness continues to increase with reduced productivity. Unlike virtually all other sectors of the US economy, health care continues to experience no gains over the past 25 years in labor productivity (138). Presumably, while some gains have been achieved in the quality, these are not reflected in productivity gains. If anything, productivity continues to dwindle (Fig. 22). Health care workers in 2010 constituted 11.8% of the total employed labor force. President Obama announced that health care is a major source of job creation and we have seen 12% job growth in health care over the past 5 years until 2011. A report by McKinsey Global Institute noted that 5.2 million, or 23%, of the jobs created would be in the health care sector if the United States achieves full employment (139). It was projected in 2011 that if we retain today’s labor structure, the expanding requirements for health care will lead to total health care costs increasing by $112 billion or 13%. Any efforts to control health care labor will be fruitless as regulations increase and productivity decreases. A 2012 survey of physicians showed frustration with high levels of government regulation, malpractice liability pressures, inadequate and inconsistent reimbursement, and eroding clinical autonomy as factors leading to discontentment (131).

From 1990 to 2012, health care jobs grew by 75%, far faster than patient volumes. Sixty percent of all non-physician jobs are purely administrative (131,139,140). Nearly 95% of the growth in health care labor is non-doctor workers, and the ratio of doctors to non-doctor workers shifted from 1 to 14 to 1 to 16, with labor costs per doctor of $823,000 per year. The problem with all of the non-doctor labor is that most of it is not primarily associated with delivering patient outcomes or lower-

Source: Kaiser Family Foundation Health Tracking Poll (conducted February 11-17, 2014)

Fig. 21. Hospital charges, fraud and waste viewed as top reasons for rising health care costs.
ing costs. Reducing regulatory hurdles represents a substantial opportunity to improve productivity by reducing fragmentation of clinical labor to eliminate many non-clinical jobs through standardizing and simplifying the revenue cycle process, supply chains, regulatory compliance, and information technology systems, which may then allow re-engineering administrative systems (128-135).

We believe that reductions in reimbursement for services is unlikely to translate into either lower total health care costs or improved quality unless the issue of productivity is addressed.

Overall, Accountable Care Organizations (ACOs) have been disappointing with mixed results at best with minor savings in the early phase (141-173).

A significant portion of Medicare savings have been secondary to Medicare Advantage plans (174). The Medicare Advantage program, also known as Medicare Part C, provides Medicare services for Part A and Part B, through a private, Medicare-approved insurance company instead of directly from Medicare. The originally conceived Medicare Advantage plans received a higher proportion than traditional Medicare premiums and delivered the same coverage as original Medicare Part A and Part B with extra benefits such as prescription drug coverage and routine dental services. However, because of many changes in the laws, including the ACA, many Medicare services require co-payments or co-insurance, and some plans have deductibles and premiums as high as $6,000. In addition, even though an individual is enrolled in Medicare Advantage plan, they still need to pay monthly Medicare Part B premiums. Enrollees describe multiple problems, including out-of-pocket expenses more than traditional Medicare, difficulty in obtaining emergency or urgent care, and narrow networks which affect the continuity of care (174). For practical purposes, physician visits, which are paid by Medicare with a supplemental insurance, cost from $25 to $75, while outpatient procedures may cost as high as $450 in the form of copays. Some have significant deductibles. Further, enrollment is limited to certain periods of time. Once a person is enrolled, it can be difficult to terminate the participation. Overall, Medicare plans may not be advantageous to the elderly and increase out-of-pocket expenses and reduce access to care.

Overall drug costs have increased substantially over the years since the passage of MMA (175) and further escalated after the passage of ACA (42). Trish et al (176) showed that annual total drug spending per specialty drug user studied increased considerably from 2008 to 2012 pharmacy claims data, from $18,335 to $33,301. Kesselheim et al (125) showed that per capita prescription drug spending in the United States exceeds that in all other countries, largely driven by brand name drug prices that have been increasing at a rate far beyond
the consumer price index. In 2013, per capita spending for prescription drugs was $858 compared with an average of $400 for 19 other industrialized nations. Further, prescription medications comprise an estimated 17% of overall personal health care services in the United States. High drug prices have been the result of the approach the United States has taken, including that of the ACA, of granting government-protected monopolies to drug manufacturers with the inability to reimport from Canada, combined with coverage requirements imposed on government-funded drug benefits. Specialty drugs, those costing at least $600 a month, which now account for one-third of total drug spending, are projected to cost $400 billion by 2020, up from $87 billion in 2012 (124,125,137,176,177).

Overall, the ability of ACA to bend the cost curve may be questionable. As discussed above, premiums continue to increase, worker participation in insurance is reduced, and out-of-pocket expenses continue to increase, specifically in some categories of vulnerable populations (178-180). This is in contrast to the President’s promise where he stated that every single good idea to bend the cost curve and start actually reducing health care costs is in the bill when signing the ACA (5). The major focus was on consolidation of practices, investments in health information technology (IT), and health care delivery and payment reforms, which seem to have further contributed to additional costs and increased the regulatory burden rather than reducing the costs (127-132,137,138,140). It would thus be difficult to assign full credit to the ACA for reducing the cost; however, it appears that the ACA has contributed to reductions in health care in multiple undesirable ways.

However, a silver lining of dynamic changes in the health care expenditures across the globe is that the United States per capita health care expenditures have declined from number one to number 3 in a global comparison from 2014; Switzerland and Norway have overtaken the United States (Fig. 23) (136). This essentially demonstrates that costs have been increasing across the globe or, on the other hand, one may provide credit to the ACA for reducing costs. These do not demonstrate overall health care expenditures, but only per capita expenses.

Quality Improvement: Insurance Affordability versus Access to Coverage

Positive Views

President Obama indicated that the United States has seen improvement in quality of care due to the ACA (5). For example, the rate of hospital acquired conditions such as adverse drug events, infections, and pressure ulcers have declined by 17% from 2010 to 2014 (5,181). Further, he also quoted the findings of the Agency for Healthcare Research and Quality (AHRQ), which estimated that the decline in the rate of hospital acquired conditions, has prevented 87,000 deaths over 4 years (5,182,183). President Obama also stated that tools created by the ACA and MACRA with creation of ACOs and APMs will play central roles in this important work (5,141-173,184-190).

Negative Views

Almost all the assertions have been disputed. One of the reasons for health reform was the purported focus on treating patients when they were sick, rather than focusing on keeping them healthy (5,54). However, the ACA has failed in this aspect with minimal contribution to preventive services and increased waiting times (26,27,29,31,34,37,97,191-195).

The second aspect of the ACA is the promotion of EHRs, the quality of which is currently measured by Meaningful Use (MU) will become the Advancing Care Information (ACI) performance category in the Merit-Based Incentive Payments System (MIPS) (26,43-48,127-132). While the EHR incentive programs were based on payments to purchase EHRs, failure to meet the MU criteria was associated with penalties. Further, the value-based payment system also is associated with penalties for the majority of physicians. Additional aspects of clinical improvement activities have been added to MIPS (184,185). A majority of physicians and legislators, patients, and finally, the Medicare Payment Advisory Commission (MedPAC), have expressed their skepticism regarding the quality improvement elements (185-188). The then acting administrator of CMS, Andy Slavitt, acknowledged that physicians are extremely frustrated with current EHR systems and that the dislike for these systems has increased from 38% in 2010 to 66% in 2014 (46,187). Unfortunately, thus far the results are dismal for both MU and Physician Quality Reporting Systems (PQRS) with providers only facing penalties with no improvement in the quality of care. The recent data showed that 470,000 providers were penalized for PQRS noncompliance at 1.5% of total revenues, and 209,000 physicians were also penalized for missing MU criteria with penalties of 2% of their Medicare reimbursement (189). Prior to the outrage from patients, physicians, advocacy groups, and Congress, CMS esti-
mated that about 80% of solo practitioners and 70% of practitioners in groups of less than 10 would be subject to negative payments or penalties ranging from 4% to 9% (127-129, 133-135, 184). Prior to changes made in the law, the potential impact on Part B payments for 2017 was likely to be from a 14% incentive down to a -4% penalty or a total of 18% top to bottom swing during the first year, increasing to 9% of penalty and potential bonuses as high 30% in 2021 performance year (127-129, 133-135, 184). Subsequent changes made to MIPS have mitigated this onerous system (190). Thus, the value-based payment models may not increase the quality (26, 43-48, 122, 127-135, 139, 140).

One of the less known, but very important aspects of the ACA, was the formation of the Innovation Center (CMMI). The CMMI is charged with developing alternative payment models (APMs) including ACOs (5). These have been designed as innovative models of care (143). The results of ACOs have generally been a disappointment with their lackluster inability to deliver better quality health care (27, 146-156).

Many surveys have been performed and numerous reports have been published describing to a lack of meaningful changes in access to and affordability of health care (26, 29, 191-194). Similarly, preventive health care, one of the central focuses of health care reform, has been a disappointment, with only 31% of large firms offering an incentive to complete a health risk assessment and 28% providing an incentive to complete a biometric screening (72). The United States spent less than $300 per person or 3% on public health in 2014, with a $9,523 per capita total health spending.

**Pragmatic View**

In practical terms, the gains in quality improvement appear to be small considering the vast number of regulations and their negative effects on the delivery of health care. While providing higher insurance affordability for more Americans, quality appears to have not increased or may have even deteriorated with EHRs and increased regulatory burdens (26, 43-48, 122, 127-132, 139, 140, 184-187, 189, 190). Sixty percent of labor costs are for administrative tasks. This regulatory burden is a barrier to quality.

President Obama used Massachusetts as a model of improvement in the number of insured and in quality; however, the experience from Massachusetts shows not only that health expenses are surging in Massachusetts, but quality has not improved (5, 13).
Conclusion

The ACA was the most consequential and comprehensive health care reform since Medicare was introduced as part of President Lyndon B. Johnson’s Great Society. The ACA, passed without any Republican support, was designed to improve accessibility and affordability, to control costs, and to improve the quality of health care. As President Obama chronicled in his JAMA manuscript, some of these goals have been achieved even though not to the extent that supporters of ACA might wish to believe. By the same token, critics have described the ACA as a failure, with rapidly rising premiums and deductibles, narrow networks, decreased access, and increased regulatory burdens hampering productivity gains. Neither supporters nor opponents are accurate in their characterizations. They have not clearly delineated the issues of insurance affordability and access to coverage as 2 distinct, but closely intertwined entities. The majority of the improvements in quality of care depend on access to coverage rather than insurance affordability (1,5,6,8,11-18).

Overall, the ACA has led to an increased number of individuals with insurance; however, in many ways, it has not improved the coverage. As a result, the quality of care has not been shown to have increased. Further, the majority of the increased insurance enrollment has been with Medicaid expansion. Consequently, Obamacare does not work well for the working and middle class who receive much less support, particularly those who earn more than 400% of the federal poverty level, who constitute 40% of the population and do not receive any help. Further, as so many individuals don’t do well under the ACA, only about 40% of those eligible for subsidies have signed up and, with multiple insurers declaring losses, the ACA is not financially sustainable because not enough healthy people are on the rolls to compensate for the sick. There is ample evidence that the reductions in costs and some improvements in quality of care are not entirely related to the ACA. Further, supporters of the ACA have neglected to consider the facts of increasing out-of-pocket costs, which affect the access to coverage substantially. Despite all the disadvantages discussed in relation to cost, a global comparison of health expenditures per capita in 2014 moved the United States from number one to number 3 with Switzerland and Norway now occupying spaces before the United States. This demonstrates global dynamic changes in health care expenditures and may also provide credit to the ACA for reducing individual health expenditures, without considering access. Future reductions in the cost of health care services and improvements in quality are unlikely to be achieved without changes in productivity, which can only occur with regulatory changes and a greater growth in employees providing health care services rather than administrative growth. This clarification of the benefits and shortcomings of the ACA will hopefully provide some refinement in the current discussion regarding whether to save, repeal, or repair the ACA.

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