

The Patient Protection and Affordable Care Act Six Years Later

Are We Healthier? Has the Quality of Care Improved?

by Barry Liss

The Patient Protection and Affordable Care Act has a wide array of provisions intended to improve health and the quality of care.¹ In addition to expanding health insurance coverage, more than 70 sections aim to improve the healthcare delivery system itself.² For instance, the Center for Medicare & Medicaid Innovations was created to test innovative healthcare service and delivery models that could reduce cost and preserve or enhance quality.³

This article examines, from an empirical perspective, whether the health status of Americans and the quality of care they receive has improved six years after the Affordable Care Act was enacted.

Are We Healthier?

The relationship between health insurance and health status is well established. In its summary of research evidence, the Institute of Medicine concluded, "Health insurance is integral to personal well-being and health."⁴ Approximately 16.4 million previously uninsured people now have health insurance,⁵ and one can safely conclude the U.S. population, in the aggregate, is healthier.⁶

Having health insurance improves the health of both adults and children. For example, when children obtain

health insurance they are more likely to obtain immunizations, prescription medications, asthma care and dental services.⁷ Serious child health problems are identified earlier when children have health insurance and children are more likely to have access to specialists.⁸ Evidence shows that children with health insurance receive more timely diagnosis of serious



health conditions, have fewer hospitalizations and have better outcomes if they have asthma.⁹

Adults who have health insurance are more likely to receive preventative services. They are less likely to forego physician visits and delay clinically effective treatments, such as taking prescription medication.¹⁰ Insured adults who have cancer are more likely to have it detected earlier. Uninsured adults with cancer, cardiovascular disease, stroke, respiratory failure, COPD, asthma, hip fracture, seizures and serious injury are more likely to have poorer health outcomes, limitations on quality of life and premature death.¹¹

One of the more compelling studies involves the estimated increased utilization of HPV vaccine by women between the ages of 19-26.¹² HPV (human papillomavirus) is “the most common sexually transmitted infection in the United States.”¹³ The vaccine is expensive and its high out-of-pocket cost deters utilization.¹⁴

The Affordable Care Act established extended dependent coverage provisions (until age 26).¹⁵ It also requires coverage for certain preventative health services, including those recommended by the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention.¹⁶ One such recommendation is coverage for the HPV vaccine. Accordingly, a measurable increase in the rate of HPV vaccine uptake since 2010 (when these two provisions in the Affordable Care Act went into effect) can be reasonably attributed to the act.

In their study published in the May 2015 edition of *Health Affairs*, Brandy J. Lipton and Sandra L. Decker, both from the Office of Analysis and Epidemiology, National Center for Health Statistics, concluded the Affordable Care Act’s dependent coverage provisions and preventive health provisions were indeed associated with an increase in the per-

centage of women who had initiated and completed the three-dose vaccine series.¹⁷ They estimate the increase in vaccine uptake equates to approximately 1.1 million women initiating the vaccine and 854,000 completing the full series.¹⁸

The Affordable Care Act has been credited with earlier detection in cervical cancer. Using a hospital-based cancer registry of 70 percent of all cancer cases in the United States, researchers compared two groups of women with cervical cancer (ages 21–25 and ages 26–34) before and after the Affordable Care Act went into effect.¹⁹ They found the percentage of women diagnosed early had increased for the younger group, but remained flat in the older group. Because the Affordable Care Act allows dependents to continue coverage until age 26, it impacts women in the younger group but not the older group. The researchers thus concluded the increased early diagnoses of women in the younger group were attributable to the extended dependent coverage provision in the Affordable Care Act.²⁰ Earlier diagnosis of cervical cancer improves prospects for survival and improves a woman’s chances of preserving fertility during treatment.²¹

Another study looked at the effect of the Affordable Care Act with respect to treatment for diabetes.²² Derek Brown and Timothy McBride, both faculty at Washington University’s Brown School, report in their original research article published in the May 2015 edition of *Preventing Chronic Disease* that diabetes was diagnosed in 29 million Americans in 2012, and millions of diabetics were uninsured.²³ Using data from the Medical Expenditure Panel Study Survey, they estimated that between 2011 and 2012, nearly 2 million of the 13 million adults (aged 19–64) with diabetes were uninsured.²⁴ They found those without insurance were less likely to obtain prescriptions, make office visits to physicians and

have a “usual source of care.”²⁵ Accordingly, Brown and McBride concluded, “the extent to which the ACA increases access and coverage, insured people with diabetes are likely to significantly increase their health care use, which may lead to reduced incidence of diabetes complications and improved health.”²⁶

Putting the issue in its starkest terms, being uninsured is, quite simply, associated with death.²⁷ In their 2009 article published in the *American Journal of Public Health*, Andrew Wilber and others authors (all authors at the time affiliated with Harvard Medical School) estimated that approximately 45,000 deaths of Americans aged 18–64 in the year 2005 were associated with lack of health insurance.²⁸

The link between having health insurance and better health is, therefore, well established, and yields a relatively straightforward analysis of how increasing the percentage of insureds in a population leads to improved health for that population.

On the other hand, the link between the Affordable Care Act’s provisions intended to improve the quality of care rendered, and assessing whether the quality actually rendered has improved, is less straightforward.

Do the ACA Quality Incentives Work?

As noted above, the Affordable Care Act not only intends to improve access to healthcare services, it also intends to improve the quality of those services.²⁹

By embracing concepts such as ‘value-based purchasing,’ the Affordable Care Act endorses models of healthcare delivery that have been implemented in various settings within the past 10 years.³⁰ The discussion below explores what has been learned about whether the healthcare delivery models adopted by the Affordable Care Act actually result in improved clinical care (*i.e.*, process³¹) and, ultimately, improved outcomes.

A comprehensive report published by RAND Corporation that was sponsored by the Office of the Assistant Secretary for Planning and Evaluation in the U.S. Department of Human Services analyzed scores of studies on this subject.³² In the RAND report, Cheryl Damberg (and other authors affiliated with RAND) further broke down the types of value-based purchasing models into three categories: 1) pay for performance; 2) accountable care organizations (ACO); and 3) bundled payments.

Of the 49 studies evaluated by Damberg *et al.* that examined clinical quality (*i.e.*, process measures) in connection with pay-for-performance models, 37 focused on physician services, 11 focused on hospital services and one involved a global risk-sharing arrangement with a large commercial payor that included both hospital and physician services.

The more rigorous studies reviewed by Damberg *et al.* indicated that the effects attributable to the pay-for-performance arrangements were relatively small. On the other hand, those studies characterized as having ‘weaker’ study designs showed a significant association between the pay-for-performance model and improved clinical quality—some of which were reported to be substantial.³³

Damberg, *et al.* also examined studies addressing the effectiveness of pay-for-performance models in physician settings with respect to health outcomes.³⁴ Overall, the results were favorable, albeit not very dramatic. For example, one study focusing on prenatal care found that although the pay-for-performance model led to a reduction in neonatal admissions, it did not lead to a reduction in low birth weight.³⁵ Another study that focused on intermediate outcome measures for diabetes found the pay-for-performance approach was not associated with an increase in the percentage of patients with HVA1c lipid control, when compared to a comparison group.³⁶ Other

studies have been found to show mixed results, *i.e.*, either no effect or slight improvements in quality (*e.g.*, slight reduction in hospital admissions).³⁷

Outcome studies of pay-for-performance models in hospital settings have also been mixed. Most of these studies measured differential mortality rates. For example, one study found no evidence the CMS Hospital Quality Incentive Demonstration Program (HCQID), designed to reward hospitals based on their performance, resulted in a decrease in the rates of any of the following: 30-day mortality for heart attack; heart failure; pneumonia; or coronary artery bypass graft.³⁸ Another study found no empirical support to conclude the HCQID program led to improvements in in-hospital mortality.³⁹ A study that examined five states’ Medicaid pay-for-performance programs in nursing homes found slight improvement regarding the percentage of residents physically restrained, in moderate to severe pain, and having developed pressure sores; however, other quality measures targeted in the study were either not changed or declined.⁴⁰

The RAND report also discussed six ACO studies that examined the effect an ACO model has on clinical quality. Some of these studies showed improvements in quality of clinical care rendered compared to controls, but not on all indicators.⁴¹ Overall, the RAND study concluded it is simply premature to determine whether the ACO model, in fact, delivers higher quality of care by virtue of the fact that it is an ACO⁴² (although the RAND study did report evidence that ACOs reduce readmission rates).⁴³

The Government Accounting Office (GAO), on the other hand, in its April 2015 report to the House Ways and Means Committee, provided a somewhat more encouraging analysis of how the ACO model may lead to improved quality.⁴⁴ The GAO compared quality

measures reported by 23 pioneer ACOs for the years 2012 and 2013 (the most recent data available).⁴⁵ Under the pioneer ACO model, participating ACOs must report data pertaining to 33 quality metrics in the following four ‘domains’: patient experiences; care coordination and safety; preventative healthcare; and disease management for at-risk populations.

A comparison of ACO quality metrics reported in 2012 versus 2013 shows favorable increases from one year to the next in two thirds of those metrics.⁴⁶ For example, among other statistically significant quality improvements, the pioneer ACOs’ average scores improved more than 10 percentage points from 2012 to 2013 with respect to the following: percentage of patients screened for future fall risk (+ 22 percent);⁴⁷ percentage of patients who received flu vaccine (+11 percent); percentage of patients who received body mass index screening and follow-up if required (+11 percent); percentage of patients screened for depression and provided a follow-up plan if required (+24 percent); percentage of patients who received colorectal screening (+11 percent). One quality measure declined in 2013 compared to 2012, *i.e.*, the percentage of admissions for patients with congestive heart failure increased (+.2 percent).⁴⁸

While the GAO report did not compare the ACO model to, say, a non-ACO comparison group, the results nevertheless suggest that having payment contingent on achieving certain quality standards may, not surprisingly, lead to better quality.

Bundled payment is another model embraced by the Affordable Care Act.⁴⁹ Damberg *et al.* reported on one study that found positive results of a bundled payment model, where adherence to 40 clinical care measures were increased from 59 to 100 percent.⁵⁰ However, those results may not be generalizable to other settings.⁵¹ Overall, research results

are mixed regarding whether bundled payment models lead to better quality of clinical care.⁵² In a report prepared by RAND for the Agency for Healthcare Research and Quality of the U.S. Department of Human Services, Peter Hussey and others reviewed 58 studies in the literature and concluded that although bundled payments may be successful at reigning in costs, the model has not been shown to have major effects on quality of care.⁵³ With respect to outcome studies, Damberg *et al.* report that one bundled payment study found the model had no effect on healthcare outcomes.⁵⁴

Conclusion

Evidence from studies that examine the connection between health and health insurance is consistent and clear: Having health insurance is associated with better health. Studies that control for variables such as socio-economic status and a litany of other variables consistently show that having health insurance leads to increases in vaccination rates, earlier diagnosis of a wide range of child and adult diseases and health conditions, increased use of prescribed medication, and ultimately longer life. By enrolling 16.4 million individuals into some form of health insurance, the Affordable Care Act makes a large swath of the U.S. population, in the aggregate, healthier.

On the other hand, evidence from studies that examine the connection between clinical quality and new models of healthcare delivery that are explicitly endorsed by the Affordable Care Act (*i.e.*, pay-for-performance, bundled payments and ACOs) is somewhat underwhelming. Quality improvements observed in pioneer ACOs reported by the GAO are encouraging and support the underlying premise of the ACO model (*i.e.*, the necessity of reporting quality metrics as a condition of participation). However, the GAO's results

have not yet been convincingly replicated, and the results of other studies are mixed. It may be too early to tell if these models of healthcare delivery will indeed lead to better clinical care.

Overall, the evidence reveals that value-based purchasing initiatives may lead to slight, if undramatic, improvements in clinical care. This suggests these models might be more accurately characterized as cost reduction/quality stabilization measures, rather than groundbreaking quality improvement policies. ◊

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ENDNOTES

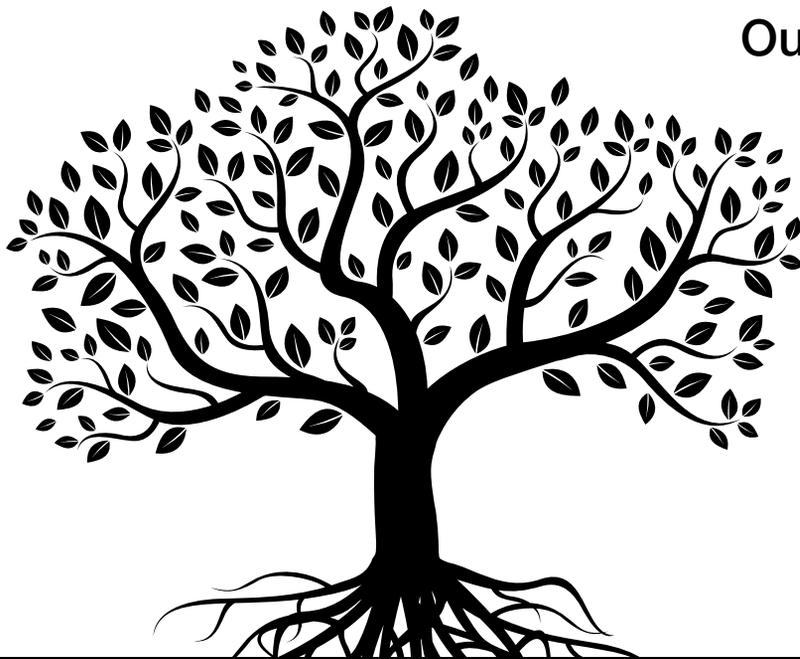
1. Pub. Law No. 111-148.
2. Title I ("Quality and Affordability for All Americans") and Title II ("Role of Public Programs") include the primary provisions of the act establishing laws that decrease the rates of the uninsured. The following titles, for example, include numerous and wide-ranging provisions having the goal of improving the quality of healthcare, many of which clearly contemplate a long-term return on investment: Title III ("Improving the Quality and Efficiency of Health Care"); Title IV ("Prevention of Chronic Disease and Improving Public Health"); Title V ("Health Care Workforce"); and Title X ("Strengthening Quality, Affordable Health Care for All Americans").
3. Pub. Law No. 111-148, Sec. 2021(a).
4. America's Uninsured Crisis: Consequences for Health and Health Care, Institute of Medicine of the National Academies, Report Brief, Feb. 2009, at 2.
5. According to the U.S. Department of Human Services, since passage of the Affordable Care Act, 16.4 million previously uninsured people have obtained health insurance. "The Affordable Care Act is

Working" available on the HSS website: hhs.gov/healthcare/facts/factsheets/2014/10/affordable-care-act-is-working.

6. This conclusion assumes that newly insured individuals can indeed afford the out-of-pocket expenses associated with their new coverage. Much has been written, for example, about the unaffordability of deductible requirements required by health insurance made available through the ACA marketplace plans. (See, Many Say High Deductibles Make Their Health Insurance All but Useless, *New York Times*, Nov. 14, 2015). According to a report issued by the Kaiser Family Foundation, the average deductibles for plans with combined medical and prescription drug coverage are \$5,765 for bronze, \$3,064 for silver, \$1,247 for gold and \$21 for platinum marketplace plans in the 38 states with federally facilitated or partnership exchanges in 2016. (See M. Rae, L. Levitt, G. Claxton, C. Cox, M. Long, and A. Damico, Patient Cost-Sharing in Marketplace Plans, 2016, Henry J. Kaiser Family Foundation, Nov 13, 2015.) Although there do not appear to be reported studies showing the benefits of having health insurance made available under the Affordable Care Act have been effectively neutralized by their cost sharing requirements, there can be no doubt that high-cost sharing requirements could diminish the health status benefits of having health insurance otherwise reported in the literature.
7. *Id.*, at 3.
8. *Id.*
9. *Id.*
10. *Id.*, at 4.
11. *Id.*
12. B.J. Lipton, S.L. Decker, ACA Provisions Associated With Increase in Percentage of Young Adult Women Initiating and Completing The HPV Vaccine, *Health Affairs* 34, No. 5 (2015): 757-764.
13. *Id.*, at 757.
14. For example, Lipton and Decker report that 30 percent of unvaccinated adult women who said they would not pay the out-of-pocket price of \$390, said they would obtain the vaccine if it was more affordable. *Id.*, at 757-758.
15. Pub. Law No. 111-148, Sec. 2714.

16. Pub. Law No. 111-148, Sec. 2713(a)(2).
17. Lipton and Decker, at 762.
18. *Id.*, at 757.
19. S. Tavernise, Rise in Early Cervical Cancer Detection is Linked to Affordable Care Act, *New York Times*, Nov. 24, 2015; A.S. Robbins, X. Han, E.W. Ward, D.P. Simard, Z. Zheng, and A. Jemal, Association Between the Affordable Care Act Dependent Coverage Expansion and Cervical Cancer Stage and Treatment in Young Women, *JAMA*, Vol. 314, No. 20 (2015): 2189-2191.
20. S. Tavernise, Rise in Early Cervical Cancer Detection Is Linked to Affordable Care Act, *New York Times*, Nov. 24, 2015.
21. *Id.*
22. D.S. Brown, T.D. McBride, Impact of the Affordable Care Act on Access to Care for US Adults With Diabetes, *Prev. Chronic Disease*, Vol. 12, (May 2015): 2011-2012.
23. *Id.*, at 3.
24. *Id.*
25. *Id.*, at 4.
26. *Id.*, at 1.
27. A.P. Wilber, S. Woolhandler, K. Lasser, D. McCormick, D. Bor, and D.U. Himmelstein, Health Insurance and Mortality in US Adults, *American Journal of Public Health*, Vol. 99, No. 12, (Dec. 2009): 2289-2295, at 2289.
28. *Id.*, at 2292.
29. P.L. 111-148, Title III.
30. Value-based purchasing is a response to escalating healthcare expenditures arising from a healthcare delivery system that is historically based upon the provision of healthcare services without regard to the results (*i.e.*, value) of those services.
31. Assessments of 'clinical quality' focus on the 'process' of the delivery of healthcare services, rather than 'outcomes' related to those services. For more on these distinctions, see A. Donabedian, The Quality of Care How Can It Be Assessed?, *JAMA* Vol. 260, No. 12 (1988):1743-1748.
32. C.L. Damberg, M.E. Sorbero, S.L. Lovejoy, G. Martsoff, L. Raaen, and D. Mandel, Measuring Success in Health Care Value-Based Purchasing Programs, Summary and Recommendations, Research Report, RAND Corporation, (2014): 19-21. (Sponsored by the Office of the Assistant Secretary for Planning and Evaluation in the U.S. Department of Health and Human Services.) Damberg *et al.* define value based as follows:

a broad set of performance-based payment strategies that link financial incentives to providers' performance on a set of defined measures in an effort to achieve better value by driving improvements in quality and slowing the growth in health care spending. *Id.*, at iii.
33. Damberg *et al.*, at 20.
34. R.M. Werner, T. Rita, M. Kim, Quality Improvement Under Nursing Home Compare: The Association Between Changes in Process and Outcome Measures, *Medical Care*, Vol. 51, No. 7 (2013) :582-588; D. Hit-



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35. M.B. Rosenthal, Z. Li, A.D. Robertson, A. Milstein, Impact of Financial Incentives for Prenatal Care on Birth Outcomes and Spending, *Health Services Research*, Vol. 44, 5 Pt 1, (2009):1465-1479. (cited in Damberg *et al.*).
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A recent study published in the *Journal of the American Medical Association*, which examined the effect financial incentives had on lipid levels, found that improved outcomes were observed when the incentives were available to both patients and physicians. These results, while not a direct measure of the Affordable Care Act's effectiveness, nevertheless lend support to the theory that financial incentives can lead to better health outcomes. (See D.A. Asch, A.B. Troxel, W.F. Stewart, T.D. Sequest, J.B. Jones, A.G. Hirsch, K. Hoffer, J. Zhu, W. Wang, A. Hodlofski, A.B. Frasch, M.G. Weiner, D.D. Finnerty, M.B. Rosenthal, K. Gangemi, and K.G. Volpp, Effect of Financial Incentives to Physicians, Patients, or Both on Lipid Levels, *JAMA*, Vol. 314 No. 18 (2015): 1926-1935.)

38. A.M. Ryan, Effects of the Premier Hospital Quality Incentive Demonstration on Medicare Patient Mortality and Cost, *Health Services Research*, Vol. 44 No. 3 (2009):821-842. (cited in Damberg *et al.*).
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40. Werner and Kim, cited by Damberg *et al.*
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42. *Id.*
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45. The GAO study is based upon data from 23 pioneer ACOs. CMS had originally contracted with 32 pioneer ACOs. However, due to withdrawals from the program by some ACOs, only 23 had reported data for the GAO study period. *Id.*, at 10. As of Dec. 2014, 13 had withdrawn leaving 19 current Pioneer ACOs in place. See: innovation.cms.gov/initiatives/Pioneer-aco-model; *Id.* at 2.
46. *Id.*, at 16.
47. Percentages are rounded.
48. Although relatively small, this increase is nevertheless statistically significant at the .05 level.
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50. A.S. Casale, R.A. Paulus, M.J. Selna, M.C. Doll, A.E. Bothe Jr., K.E. McKinley, S.A. Berry, D.E. Davis, R.J. Gilfillan, B.H. Hamory, ProvenCareSM: A provider-driven pay-for performance program for acute episodic

cardiac surgical care, *Annals of Surgery*, Vol. 246, No. 4 (2007):613- 623 (cited in Damberg *et al.*).

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52. *Id.*
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54. Casale *et al.*, cited by Damberg *et al.*