The Patient Protection and Affordable Care Act (ACA), passed in 2010, contained a number of provisions with potential to directly or indirectly affect cancer care.\[1\] Value for patients was widely discussed throughout the bill, and the Centers for Medicare and Medicaid Services (CMS) indicated that CMS embraces value as a priority. Nonetheless, serious questions remain as to whether the ACA has improved the value Americans receive in cancer care. Value in cancer care balances outcomes that matter to patients and the costs incurred to achieve those outcomes.\[2\] Here we review the goals of each cancer provision of the ACA and discuss the effects each has had to date.

Access to Cancer Care

Highest-value cancer care can only be achieved if all Americans have access to the best possible cancer care outcomes. A prominent pillar of the ACA is its vision of improving access to healthcare through improved health insurance coverage. The legislation authorized development of state and federal health exchanges, created individual and employer mandates, and authorized expansion of Medicaid. By 2016, 31 states and the District of Columbia had expanded Medicaid.\[3\] Thirteen states created their own exchange; the rest relied on the federal exchange or used federal and state funding to develop an exchange through partnerships. As a result of these measures, 16.4 million citizens who were uninsured at the time of ACA enactment had gained health insurance coverage by May 2015,\[4\] and the uninsured rate declined from 18% in 2013 to 12% today.\[5\] Although data are anecdotal, there is no question that the increased numbers of patients with insurance resulted in cancer patients receiving care they previously could not.

ACA provisions prohibit denying coverage or charging higher premiums for pre-existing conditions. While few data illustrate the impact of these provisions, they have momentous implications for many cancer patients, including pediatric cancer survivors, one-third of whom develop a secondary severe or life-threatening condition after their treatment has ended.\[6\]

Unfortunately, not all effects of the increased access to insurance under the ACA have been positive. Narrow networks created by some insurers to control costs in response to expanded insurance coverage requirements have limited access to care. Medicare Advantage enrollment has increased from 28% of total Medicare beneficiaries in 2013 to 31% in 2015.\[7,8\] Despite the demands of CMS network adequacy criteria, limited provider access in Medicare Advantage organizations still poses a threat to cancer patients. A recent Government Accountability Office report highlighted uncontrolled network formation and undisclosed terminations among Medicare Advantage organizations and recommended better oversight of network adequacy by CMS.\[9\] Furthermore, federal regulations guiding each state’s Medicaid managed care organization standards do not address specific metrics for network adequacy, despite the rapid increase in Medicaid managed care enrollment that came with Medicaid expansion.\[10\]

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Cancer center exclusion from private insurance networks was quantitatively demonstrated in a 2014 survey of 19 nationally recognized comprehensive cancer centers: only 4 of the surveyed centers were covered in all their state exchange plans.[11] We similarly reported that of the 11 stand-alone cancer centers that make up the Alliance of Dedicated Cancer Centers, two are no longer covered by local exchange plans.[12] Several of these cancer centers expressed an inability to track which of their patients possess exchange plans, impeding study of the impact of the ACA on patient access to cancer care. Furthermore, a 2015 survey shows 9% of employers offering plans with narrower networks.[13] As a result of limited coverage options, which for the most part are the product of cost-reduction strategies, millions of cancer patients remain deprived of opportunities for best-quality cancer care at the nation’s leading cancer hospitals.

**New Reimbursement and Care Delivery Models**

Value for cancer patients can be improved tremendously if costs are controlled. Yet, costs of cancer care delivery are rising, including the costs to individual patients, due to increased cost sharing, as well as skyrocketing drug prices.[14] Cancer care is pricey, with a reported $124 billion of expenditures annually across all payers at the time of ACA enactment.[15] There are wide variations in the cost of cancer care delivered (the regions that spend the most on cancer care spend between 32% and 41% more than the regions that spend the least), with no relation to survival outcomes,[16] making cancer care a prime target for alternative payment and delivery models.

In an attempt to contain escalating national healthcare costs, the ACA and CMS established the Center for Medicare and Medicaid Innovation (CMMI) to develop and test new reimbursement and care delivery models. The Secretary of Health and Human Services has legal authority, without further congressional approval, to implement throughout Medicare any payment models that demonstrate savings while maintaining quality.[17] Subsequently, in January 2015, CMS announced its intention to shift payments from volume to value through the use of alternative payment models, establishing a priority of tying 50% of traditional fee-for-service (FFS) payments to new reimbursement models (such as bundled payments and value-based purchasing) and to alternative delivery systems (such as accountable care organizations [ACOs] and patient-centered medical homes [PCMHs]) by 2018.[18]

**New Reimbursement Models: Bundled Payments and Value-Based Payments**

Traditional FFS reimbursement is based on the quantity of services provided without incentive to improve quality or reduce costs. In contrast, bundled payments provide a single payment for all services related to a specific condition or for treatment across a predefined time period—and, ideally, are linked to clinical outcomes, aligning payment with quality and efficiency. Time periods covered can range from acute hospitalizations to 90 days, as in the upcoming Medicare bundle for knee replacement surgery.[19] Some argue that to have the greatest gains in cost savings and quality improvement, bundles should focus on complex chronic diseases, such as cancer, and should use time periods beyond the 3 months allotted in the Medicare joint replacement bundle.[20]

Bundles for cancer care remain in their infancy, and data on their impact are limited. A published UnitedHealthcare pilot of five medical oncology groups used bundles for breast, lung, and colon cancer across time periods ranging from 4 to 12 months, demonstrating significantly decreased costs compared with a national registry of FFS patients over similar time periods, with no differences in various quality metrics.[21] These positive results led the insurer to pilot a year-long prospective bundled payment for head and neck cancer at the University of Texas MD Anderson Cancer Center. Preliminary information suggests that revenue cycle tools currently used for FFS claims management are ineffective at processing bundled payment claims from both providers and payers.[22]

CMMI’s upcoming Oncology Care Model, introduced as a bundled payment model (although it is not), will use 6-month episodes of care for patients receiving chemotherapy, combining limited monthly per beneficiary per month allocations with performance-based retrospective payment adjustments in an attempt to incentivize high-quality care.[23] Applicants selected for use of this model will be notified in late 2016.[24]

The ACA also specified that value-based purchasing pilot programs be conducted in cancer care by January 1, 2016.[25] Although these pay-for-performance pilots have not yet been initiated

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by CMS, private insurers are testing pay-for-performance in some markets.

**New Care Delivery Models: ACOs and PCMHs**

As a delivery model, ACOs encourage integration of care across a population of patients. ACOs also utilize alternative payment models, with capitated payments for patients in the ACO and cost savings shared by payer and provider organizations. Two oncology-specific ACOs were formed through contracts with the insurer Florida Blue. The Miami-Dade Accountable Oncology Program (MDAOP), an oncology-specific ACO, was formed in 2012 through a partnership with Baptist Health South Florida and Advanced Medical Specialties. [26] The contracted payment structure included sharing of any savings over 2%, provided certain quality metrics were met. After 1 year, MDAOP reported cost savings of $250,000,[27] flattening the rate of growth of Florida Blue's cancer costs, which previously had grown 10% annually. Three years after its formation, the ACO reported continued cost reductions and shared savings.[28] Soon after forming MDAOP, Florida Blue partnered with Moffitt Cancer Center to form another oncology-specific ACO. Preliminary results demonstrate a reduction in inpatient admissions/readmissions, improved generic drug prescribing, and increased guideline concordance.[29,30]

PCMHs are physician-led, patient-focused care teams that direct disease management, care coordination, adherence to guidelines, and patient engagement and education. Through improved central coordination of care, PCMHs strive to improve quality and reduce costs of care. While adoption and implementation of PCMHs has been slower in oncology than in primary care, early examples exist of oncology-based PCMH success. The first oncology practice to be recognized by the National Committee for Quality Assurance was Consultants in Medical Oncology and Hematology (CMOH), a nine-physician single-specialty practice in Pennsylvania. CMOH successfully minimized unnecessary resource use, as evidenced by a 68% reduction in emergency room visits and a 51% reduction in hospital admissions per patient treated with chemotherapy.[31] Similarly, the Michigan Oncology Medical Home Demonstration Project had reduced both emergency room visits and inpatient admissions 1 year after implementation.[32] To test scalability, in 2012 CMMI awarded a 3-year grant to Innovative Oncology Business Solutions to replicate and scale their oncology-specific PCMH to seven oncology practices nationwide, with early results suggesting feasibility.[33]

**Coverage of Clinical Trials**

Clinical trials are essential for the advancement of cancer treatment, yet there are many barriers to patient enrollment. Studies show that up to 14% of patients are denied coverage for clinical trials, suggesting that inadequate insurance coverage represents a barrier to clinical research.[34] Prior remediation attempts include the National Institutes of Health Revitalization Act of 1993 and the Medicare Coverage Determination program in 2001. However, concern remained for the 85% of the population not receiving insurance through Medicare.[35]

The ACA addressed this issue by prohibiting insurance plans, after January 1, 2014, from denying coverage for participation in approved clinical trials. To date, 38 states and the District of Columbia have met these requirements.[36] However, this regulation does not apply to grandfathered health plans, defined as plans that cover beneficiaries who enrolled before the ACA was enacted. To our knowledge, there are no data published on the impact of the ACA on clinical trial enrollment.

**Quality Reporting**

The ACA mandated that quality reporting for the cancer centers in the Alliance of Dedicated Cancer Centers begin in 2014. Despite the requirement that these multidimensional measures include outcomes, costs, structure, process, efficiency, and patients’ perceptions of care, to date these public reports have been limited to process measures, which are meaningless to cancer patients attempting to select a care delivery site.[37] Quality measures that focus on outcomes, structure, efficiency, and cost remain aspirations.

**Cancer Screening and Prevention**

To improve prevention, the ACA waived deductibles for colorectal cancer screening, mandated coverage for breast cancer screening, and implemented a 10% excise tax on tanning facilities. Colorectal cancer screening prevalence increased from 57.3% to 61.2% between 2008 and 2013, with the increase confined to patients with low socioeconomic status, suggesting an early beneficial effect.[38] This same study showed no impact on breast cancer screening, regardless of socioeco-
nomic status. Taxes collected from tanning facilities to date are one-third of what was anticipated, but nearly 10,000 such facilities have closed. The impact on skin cancer has not been assessed.[39]

Clinical Effectiveness Research
In 2010, Congress authorized the establishment of the Patient-Centered Outcomes Research Institute (PCORI), with the goal of giving patients information that would enable them to make informed decisions reflecting their desired health outcomes. PCORI attempts to achieve this goal by funding clinical effectiveness research (CER), with a particular focus on research that involves patient engagement and patient-reported outcomes. As of September 2015, PCORI had funded over $1 billion in research projects.[40] PCORI has since been designated by the National Cancer Institute as an approved funding organization, and has an approximately $80 million portfolio in approved projects (as of June 2014) designed to help patients make better-informed cancer treatment decisions.[41] The ultimate impact of these efforts will be seen in coming years.

The ACA and Cancer: Now and in the Future
While the ACA succeeded in getting more Americans insured, access to quality cancer care has been plagued by the emergence of narrow networks in both public and private insurance programs. Since consumers are increasingly responsible for making coverage decisions, future regulation of narrow networks must ensure uniform access to high-quality cancer care.

New reimbursement and delivery models are being tested, yet their ability to improve quality and reduce costs remains unproven. In fact, as cancer costs continue to grow, one could argue that value for cancer patients is declining despite the ACA. While access to clinical trials and preventive services and spending on CER have been increased, improved quality reporting focused on outcomes of care remains elusive.

Within a year, a new administration will be in Washington. While it is difficult to predict the result, each current candidate has a healthcare platform. Republican approaches include repealing the ACA and replacing it with something else, with minimal details forthcoming from campaigns. Most candidates agree we need to achieve full access to healthcare for all citizens, but they poorly define paths to the achievement of this goal.

Future policy for cancer care delivery must address and embrace value for patients as the primary goal,[2] meaning that all Americans have access to the very best cancer outcomes at the lowest possible cost to individuals and society. To make more progress in providing value to cancer patients, we need improved cancer care delivery integration, with a greater focus on team-based cancer care through integrated practice units whenever possible. Cancer outcome measures must drive care improvement and be available to patients so they can make informed choices about where they seek care.

We need accurate measurements of true care delivery costs and active cost control approaches that include control of escalating cancer drug prices, elimination of unnecessary diagnostics and treatments, improvements in efficiency and care coordination, and reduction of administrative costs in all healthcare sectors. We need broader testing of alternative payment methods, including bundled payments, representing a transition away from FFS. Delivery systems must become true systems, and should include centers of excellence reserved for the management of difficult and rare cancers, with community practices treating more routine cases, but still allowing access to the latest care recommendations. The latter can only be accomplished by accelerated deployment of information technology systems to facilitate care, provide care recommendations, and allow for secure exchange of health information—ie, information technology systems that improve care rather than impede it.

Implementation of a true value-based cancer care delivery system, into which new discoveries aimed at eliminating cancer are integrated, will enable future generations to experience life without the constant fear of a cancer diagnosis.

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KEY POINTS
• While overall access to healthcare under the Affordable Care Act has improved, access to cancer care has been limited by narrow networks in both public and private insurance markets.
• While CMS and CMMI have developed innovative payment and care delivery models, data on whether these models have improved value for cancer patients remain limited.
• Future policy decisions for cancer care must continue to embrace value for patients through improved cancer care delivery coordination, better measurement of outcomes that matter to patients, more accurate calculation of the true costs of care, and broader testing of alternative payment and delivery models.

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