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Effects of Affordable Care Act Marketplaces and Medicaid Eligibility Expansion on Access to Cancer Care

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Abstract

Purpose—To inform oncologists about how repealing the ACA may affect their ability to provide cancer therapies for people with cancer enrolled in ACA health plans, and why proposals to change Medicaid funding may make it even more difficult for Medicaid beneficiaries to access cancer treatments.

Methods—We examined the regulations and provisions of the ACA related to how health insurance impacts access to diagnostic testing and treatments for people with cancer, including access to clinical trials. Similarly, we examined federal and state rules affecting Medicaid beneficiaries' access to cancer treatments.

Results—Repealing various provisions of the ACA will restrict who has access to both current and new cancer treatments. Such changes also will impact oncology research that depends on having heterogeneous people in clinical trials.

Discussion—Significant changes to the ACA will affect oncology treatment choices of everyone with health insurance – not just the 10 million people newly covered by ACA health plans and the 70 million people with Medicaid coverage.

This is an incredibly exciting time for people involved in cancer research and providing care to individuals with cancer. Possible treatments are changing dramatically – we appear to be on the verge of breakthroughs connected to two different ways to treat a variety of cancers. The first involves genetic typing of tumor cells to determine whether the tumor type matches those that a drug has been found to be effective in reducing. These scientific discoveries are the basis of the National Cancer Institute's MATCH trial, which aims to establish which "actionable" mutations respond to specific treatments.^{1,2}

On a second front, there is hope for dramatic changes in treatments based on recent advances in our understanding of how T cells' ability to identify cancer cells as "non-self" is suppressed by cancer cells. These advances have led to new immunotherapy drugs that counter the effect of the cancer cells and cause the T cells to fight the cancer cells.³ Many immunologists and oncologists believe that such advances will cause a wide variety of cancers to be treated like other chronic diseases or conditions.⁴

The pace of discovery and success of these two avenues of oncological care depend, however, on (1) the ability of scientists to gather information needed to advance research and (2) people having access to current treatments and clinical trials of possible new treatments. These two needs are intertwined, and they have been substantially affected by the Affordable Care Act (ACA) of 2010.

An estimated 20 million people obtained health insurance coverage through provisions in the ACA,⁵ but changes to the law being debated in Congress will affect access to cancer treatments for nearly everyone under age 65. Especially because of the promise – and costs – of new treatments, oncologists and the public need to be aware of these changes and their potential impact on access to new and existing cancer therapies. That is the goal of this article.

In what follows, we first describe how health plans available in the ACA marketplaces and Medicaid affected access to diagnostic testing and treatments for people with cancer. We do not discuss all the details of the ACA but rather focus on provisions that increased individuals' ability to access and afford cancer care. We also review what is currently required in terms of assuring ACA health plans and Medicaid enrollees' access to clinical trials. In the third section, we address elements of insurance plan designs common under the ACA, such as narrow provider networks and high deductible health plans, that may limit access to cancer treatment. Such plans are available in greater numbers in some parts of the country, contributing to current disparities in access to care for cancer. Since there is every indication at the end of January 2017 that Congress will repeal or substantially reform the ACA, we turn in the fourth section to showing how the repeal of various provisions pertinent to cancer care will affect access to both current and newly developing cancer treatments. We then conclude with some further comments about how such repeals will affect everyone with health insurance – not just people covered by ACA health plans and Medicaid.

Overview of ACA Marketplaces and Medicaid Expansion

Health Insurance Marketplaces and Regulatory Changes

At the heart of the ACA's reforms are fundamental changes to the insurance markets where individuals and small employers purchase health insurance plans directly from insurers. As of mid-2016, the individual, non-group insurance market (henceforth, "marketplaces") covered about 7 percent of the nonelderly U.S. population, though this number was expected to grow in the coming years if the ACA remained intact.⁶

The ACA's insurance reforms pertinent to people with cancer include changes that all states must abide by and other changes that are left to states to determine within guidelines set by the federal government. Four nationwide changes significant to people with cancer or who might be diagnosed with cancer are: (1) guaranteed coverage for all applicants; (2) no medical underwriting of premiums or coverage exclusions based on pre-existing conditions; (3) annual limits on patients' out-of-pocket spending for in-network care; and (4) no annual or lifetime caps on insurers' liability for in-network care.

Prior to the ACA, cancer patients were disproportionately affected by practices that allowed insurers to refuse to cover applicants with pre-existing conditions and/or to insure people (even those who had coverage when they were diagnosed with cancer) only if they paid a higher than standard premium, a practice known as medical underwriting. Cancer patients were hurt especially by these practices because increased survivorship has led to more individuals with a “pre-existing” history of cancer, and the sudden onset of cancer symptoms often led to job loss and the need for new sources of coverage due to loss of employer-based insurance benefits.^{7–15} To put this in some context, the National Cancer Institute estimated that 15.5 million Americans in 2015 were living beyond a cancer diagnosis.¹⁶

The other two nationwide regulatory changes with particular relevance to cancer patients apply to both individually-purchased plans and the vast majority of employer-sponsored plans. The ACA set annual limits on patients’ out-of-pocket financial exposure for in-network services (\$7,150 for an individual plan and \$14,300 for a family plan in 2017) and also banned lifetime and annual caps on insurers’ liability for covering those services.

Given the high costs of cancer treatments, these changes have clear benefits for people with a cancer diagnosis. In 2009, just before the ACA was passed, 59 percent of employer-insured adults and 89 percent of those insured through the non-group market had plans with lifetime caps, and these caps affected between 20,000 to 25,000 people annually.^{17,18} As of 2016, only 2 percent of employer-insured individuals do not face an out-of-pocket cap, and of course, all plans sold on the ACA’s non-group marketplaces do not have such caps.¹⁹

The law left many other important decisions to the states. For people with cancer, perhaps the most important is that states determine which services can be included in ten “essential health benefit” categories (Table 1). To qualify as health coverage, all non-group and small-group health plans must cover these services unless they meet a few criteria for exemptions. The ACA did not prescribe specific services within each category but rather required that each state select a range of services that is equal in scope to benefits offered by a “typical employer plan” within the state.

Finally, the ACA also required that marketplace plans cover any additional state-specific coverage mandates such as the requirement that insurers cover off-label drug use for cancer treatment; Figure 1 summarizes state mandates for coverage related to clinical trials and for off-label drug use in place as of 2016; these state mandates are also important for our discussion of ACA replacement plans later on.

Health Plan Designs: Cost-Sharing and Subsidies

The designs of the health plans that can be sold in the ACA insurance marketplaces also have implications for people with cancer. In particular, the degree of enrollee cost-sharing (i.e., co-payments, deductibles and coinsurance amounts) and whether the plans have limited provider networks affect premiums for the plans. For cancer patients, these design differences also have an impact on access to diagnostic and treatment options that are, in many cases, directly related to life expectancy and quality of life.

All health plans sold in the ACA's insurance marketplaces must cover the ten essential health benefit categories outlined above. Beyond this uniformity, plans differ in terms of the share of overall costs covered by the insurer, with plans categorized into four metal tiers (Bronze, Silver, Gold and Platinum) based on their actuarial value (AV) (Table 2). The actuarial value is the percentage of expected medical costs across the ten essential health benefit categories that are covered by the insurer. To provide some context, an employer-based health maintenance organization (HMO) plan without a deductible has an AV of approximately 93% while an employer-based PPO plan has an AV of around 80–85%.²⁰

The trade-off for increasing AV is that plans have higher premiums but lower deductibles and lower patient cost-sharing requirements (e.g., coinsurance and copayments for in-network services). The ACA leaves it to the states to decide which cost-sharing designs are permissible (e.g., \$4,000 deductible and lower copayments for medical services versus \$2,500 deductible and higher copayments), provided the plan meets the AV requirement for its metal tier.

The ACA also included income-based premium and cost-sharing subsidies that are federally funded. Premium subsidies take the form of a tax credit available to people with income between 100% and 400% of the federal poverty line (FPL) who enroll in an ACA marketplace plan. An additional cost-sharing subsidy is available to people with incomes between 100 and 250 percent of FPL who choose a Silver plan; the subsidy effectively raises the overall generosity of the Silver plans (see Table 2). All insurers participating in the ACA's marketplaces must offer at least one Silver plan, and as of the end of 2016, about two-thirds of all people enrolled in a marketplace plan were in Silver plans (Table 2).

Additional cost-reducing programs frequently used by cancer patients, such as third-party cost-sharing and premium assistance programs run by drug companies, hospitals and non-profit foundations, have received scrutiny in connection with the ACA. These programs lower and can even eliminate insured patients' out-of-pocket liabilities for cancer treatments through rebates, co-payment refunds, or by assisting in monthly premium payments for private insurance to avoid coverage changes that may disrupt cancer treatment. However, these programs have raised concerns over whether certain patient assistance programs are designed to extract the maximum amount possible from insurers. This, in turn, may contribute to greater growth in the cost of cancer therapies overall.^{21,22}

Marketplace insurers also have strongly objected to third-party premium payment due to concerns that they are keeping high-cost patients in private plans (with higher reimbursement rates) when they would otherwise be eligible for and enroll in lower-cost public insurance.^{23,24} Under federal anti-kickback statutes, patients enrolled in Medicare and Medicaid cannot receive direct assistance from pharmaceutical companies to help pay for cancer treatment, and guidance from the Department of Health and Human Services (HHS) has been inconsistent over whether those statutes also apply to plans purchased through the ACA's marketplaces.²³ As of this writing, with few exceptions, HHS has discouraged but not prohibited insurers from accepting certain third-party payments. Thus, final regulatory decisions on whether patient assistance programs will be allowed largely hinge on the outcome of repeal and reform efforts discussed below.

Medicaid

The ACA also expanded eligibility of the Medicaid program to individuals with income up to 138% of the FPL. While Medicaid expansion was originally intended to apply nationwide, the Supreme Court ruled in 2012 that the expansion could only proceed as a state option. As of January 2017, 31 states (plus D.C.) have expanded Medicaid eligibility. Moreover, the particular design of the ACA's premium tax credits and cost-sharing subsidies – which, as noted above, are defined only for those with income above 100% of the FPL – means that individuals in nonexpansion states whose incomes are under the poverty line, and who are not otherwise eligible for Medicaid, have no subsidized insurance option available; this is often referred to as the ACA's "coverage gap." Consequently, the reduction in the number of uninsured has been much lower in nonexpansion states as compared to expansion states.

Because Medicaid is a program for poor and near-poor individuals, Medicaid generally has zero premiums and only a few states require beneficiaries to pay a modest copayment for medical care services. By federal statute, states may not require beneficiaries to pay more than 5 percent of their income for premiums and copayments. Consequently, and given the large amount of treatment and follow up care for cancer patients, Medicaid has been linked with lower odds of foregoing care due to costs among cancer survivors.²⁵

Although Medicaid beneficiaries who are diagnosed with cancer do not face anywhere near the cost-sharing expenses of people in a marketplace plan, their treatment (and diagnostic) options are often constrained. Almost every state now has contracts with managed care plans to manage the costs and care of all but the most disabled beneficiaries. Medicaid managed care plans may restrict access to providers who are in their provider network and may not easily approve "off label" use of chemotherapy drugs or drugs to counteract the side effects of chemotherapies or radiation therapy; importantly, many of the state-mandated coverage safeguards outlined in Figure 1 apply only to the privately insured and not to Medicaid beneficiaries.

Possible Access Barriers to Cancer Care

Insurers have three primary mechanisms for controlling health care spending by their enrollees: utilization management, limits on the scope and size of their provider networks, and setting high deductibles so enrollees have to pay "out-of-pocket" for all medical care expenses below the deductible threshold before the insurance begins to pay for care. Plans with such designs are prominent under the ACA, and are of particular salience for people with cancer.

Utilization Management

Both the ACA health plans and Medicaid managed care plans use utilization management tools to try to constrain costs of oncology medicines. One study found that just between 2015 and 2016, utilization management of oncology drugs increased from 34 to 50 percent of all drugs.²⁶ ACA health plans tend to list oncology drugs on the specialty tier of the drug

formularies they use for setting cost sharing for prescription drugs – thereby increasing the out-of-pocket costs for enrollees with cancer.

Narrow Network Plans

Insurers have limited ability to control medical expenditures of people with high-cost chronic illnesses such as cancer if they quickly reach their deductible or receive patient assistance payments that limit their out-of-pocket exposure. As a result, so-called “narrow-network” plan designs, which aim to control healthcare costs through exclusive (lower-priced) contracts with a small set of physicians and hospitals, have become popular among insurers. More than half of all plans available in the ACA marketplaces have limited provider networks, and increasingly employers are including such plans among their plan options for employees.^{27–29}

Federal regulators have largely deferred to the states for determining whether plan networks meet minimal adequacy standards.³⁰ Concerns have been raised as to whether such plans limit access to care, particularly at higher-cost facilities (often teaching hospitals with ongoing clinical trials), office-based oncology practices, comprehensive cancer centers and specialty providers.^{30,31} In addition, there is also concern – as well as some early evidence – that insurers may strategically limit their provider networks (as well as prescription drug formularies) to make plans unattractive to high-cost patients.^{32–34}

Building on prior work,³⁵ we analyzed 2016 marketplace plan networks in 34 states and found that 72% of narrow network Silver plans included a hospital with an accredited cancer program, as compared to over 90% for plans with broader networks offered in the same geographic area (See Table 3). Similarly, narrow network Silver plans included only 36% of office-based oncologists, which was 28 percentage points lower than other broader-network plans available in the same area. These findings are important for cancer patients since many of the patient protections outlined above—such as annual limits on patients’ out-of-pocket spending, and the prohibition of annual and lifetime caps—apply only to in-network care. In other words, patients enrolled in a narrow network plan and who have a new cancer diagnosis may find limited referral options for in-network oncologists, and the care they receive at an out-of-network provider or hospital may be subject to balance-billing, and may not be subject to an annual cap on out-of-pocket costs.^{36,37}

High-Deductible Health Plans

High-deductible health plans (HDHPs) are another way to control enrollee health care spending. In 2017, an HDHP that meets federal requirements to be accompanied by a tax-preferred savings account option is one that has a deductible of at least \$1,300 for an individual and \$2,600 for a family. Because of the actuarial value requirements of the different metal level plans, about 90 percent of enrollees in ACA plans in 2016 were in plans with a deductible above these thresholds.³⁸ Workers with employer-sponsored health plans also are increasingly enrolling in such plans. According to one survey, enrollment in HDHP plans has increased from 17 percent of covered workers in 2011 to 29 percent in 2016.³⁹ HDHPs are a concern to people with cancer because they require an individual to pay all expenses for care up to the deductible before the insurance pays anything towards the cost of

medical care. The high deductible is a significant deterrent to obtaining care or even diagnostic tests for lower-income people.

Access to Clinical Trials

The number of people with cancer who participate in clinical trials of potential treatments is very small – only about 5 percent or less of all the people who have cancer participate in a trial.^{40–42} Nonetheless, the option to participate in a clinical trial is frequently viewed as an important marker of access to frontier treatments when all other treatments fail to combat the cancer.

The Department of Health and Human Services issued new regulations under the Public Health Service (PHS) Act (which is what the ACA amends) to address the question of whether ACA health plans were obliged to cover medical costs associated with clinical trials if their enrollees participate in clinical trials. The regulations state that people covered by ACA health plans may participate in a clinical trial if (1) they meet the qualifications (according to a trial protocol) for an individual to participate and the referring health provider has determined that it is appropriate for the individual to participate in the trial, and (2) if the clinical trial is an “approved clinical trial” – defined as “a phase I, phase II, phase III or phase IV clinical trial that is conducted in relation to the prevention, detection, or treatment of cancer...and is further described in PHS Act section 2709(d).”⁴³ Further, the health plans “may not deny (or limit or impose additional conditions on) the coverage of routine patient costs” – which are defined in PHS Act section 2709(a)(2) as including “all items and services consistent with the coverage provided in the plan... that are typically covered for a qualified individual who is not enrolled in the clinical trial.” Medical and non-medical costs directly due to the clinical trial are the financial responsibility of the clinical trial.

Strikingly, access to clinical trials for people covered by Medicaid is very different. There are no statutory requirements that states pay for routine medical care costs of a Medicaid beneficiary participating in a clinical trial. As of February 2013, only California, Indiana, Michigan, Texas, Vermont, and West Virginia had laws requiring Medicaid coverage for clinical trials.^{44–46}

Notably, the PHS Act says people enrolled in ACA health plans are eligible for clinical trials *if* they are deemed “qualified to participate in an approved clinical trial” – which means the trial must be approved or funded by the NIH or CMS or under an application to the FDA. Moreover, whether or not an individual can participate in a clinical trial hinges on whether a referring physician decides that the individual is qualified to participate. The regulations are undoubtedly intended to protect cancer patients from unscrupulous researchers who would like more participants in a clinical trial. But the regulations also grant primary care physicians and referring oncologists significant power to decide that someone may or may not be an appropriate candidate for a clinical trial. This is particularly worrisome if such decisions reflect subconscious biases of physicians about the socio-economic circumstances of a patient – or, as we discuss in the next section, if the tests to determine who may be qualified are based on data that do not include data from a variety of different racial/ethnic population groups.

How Repealing the ACA Will Affect Access to Evolving Cancer Treatments

As of February 2017, the Trump administration and the Republican Congressional leadership have announced that they plan to repeal the ACA. Details about what might replace the ACA have not been revealed. Although there are promises to protect people with pre-existing medical conditions from losing access to health insurance, the discussions about possible protections have focused on shifting people with chronic pre-existing medical conditions such as cancer to high-risk pools.⁴⁷ But such high-risk pools have not worked well in the past; they have been under-funded, required people to pay high premiums, and in 2004 (the last year when high-risk pools were seriously considered) fewer than 200,000 people were enrolled in such plans in the 33 states that had them.⁴⁸

The new administration also has proposed that federal funding for Medicaid shift from being a share of total Medicaid spending to a “block grant” for each state so that federal responsibility for Medicaid financing would be limited.⁴⁹ This would mean that higher costs for new treatments and pharmaceuticals would become the responsibility of states. Since many states with large numbers of poor people and elderly are already struggling with paying for their share of Medicaid expenses, the proposal to block grant Medicaid has significant implications for individuals with cancer. As the costs of new chemotherapies and other oncology treatments rise, concerns have been voiced by Governors and others that states will have difficult choices as to which types of drugs and treatments will be approved for Medicaid reimbursement.⁵⁰

President Trump’s first executive action was to direct all federal agencies that have any jurisdiction over aspects of the ACA to loosen any requirements that could be eased. It is not yet clear how that directive will be carried out but expectations are that the requirement that people have coverage or pay a tax penalty would be relaxed or eliminated. Similarly, regulations requiring health plans to cover the federal minimum essential health benefits and costs related to clinical trials might be eased so that plans could cover a reduced set of services. Replacement options that have been mentioned in general terms would allow for the sale of insurance plans across state lines.⁴⁷ While cross-state sales might facilitate further competition and lower premiums, particularly in states with a single dominant insurer, one concern is that cross-state insurance sales would dilute or even effectively eliminate many of the state-specific coverage mandates for cancer patients summarized in Figure 1. This would occur because, under some proposals, multi-state insurers would declare a “home state” and would be subject only to the coverage mandates of that state.⁵¹

Beyond the 12 million people enrolled in marketplace plans, the 177.5 million people covered by employer-sponsored plans in 2015 stand to be affected by a repeal of the ACA.⁵² As noted above, the law required that everyone have minimum essential coverage or pay a tax penalty if they do not qualify for an exemption. Plans that qualify as minimum essential coverage include employer sponsored plans and once the law is repealed it is likely that many employers will return to sponsoring policies with limits on annual and lifetime covered expenses, as well as plans that require higher cost-sharing for cancer related drugs. Individuals with employer-based coverage also would be affected if the annual out-of-pocket maximums for patients were eliminated. Thus, a repeal of the ACA without protections for

people with pre-existing conditions will affect millions of people in all income groups who currently are being treated for cancer and millions of others who will develop cancer in the coming years.

Implications for Oncology Research

Repealing the ACA also has implications for oncology research, particularly research related to documenting the extent of differences in genetic markings of tumors and cancers among people of different racial/ethnic groups (and genders), and understanding how such differences affect responses of cancers to different therapies. The prevalence rates of particular genetic markers for various cancers are known to differ among population subgroups. As a result, oncologists (and ethicists) are increasingly concerned that diagnostic tests used to determine if a person's cancer would be a good match for a particular drug or treatment may be poor indicators for people who are not middle-class Caucasians. Data about how various cancers have responded to new drug therapies or treatments are based on trials with groups of people who are predominantly white. Thus, anyone who is non-white is at a disadvantage when his or her tumor biomarkers are compared to a distribution of how well tumor biomarkers from a clinical trial responded to a particular drug therapy. Clinical research needs larger numbers of people from diverse racial/ethnic groups to contribute genetic information about their cancers and information about how they respond to different treatments.⁵³ Without such information, a non-white individual's tumor biomarkers are being compared to a distribution that does not contain a statistically relevant sample for non-whites, and the person may be categorized, perhaps incorrectly, as an inappropriate candidate for a new drug or treatment.

Although one of the goals of the NCI-MATCH initiative is to collect more genetic profiling of cancer cells and tumors from all types of individuals, that objective requires that people with cancer have access to health care providers. The ACA health plans and Medicaid provide financial access to health care providers for people who are quite heterogeneous. Repealing the ACA and reducing funding for Medicaid may hinder efforts to collect genetic data for cancers from more people of different minority racial/ethnic groups. Moreover, repeal of the ACA has implications for efforts to collect tumor biomarker data from people with employer-sponsored insurance. The ACA's minimum essential coverage requirements for all health plans greatly expanded the number of people of different racial/ethnic backgrounds who now have health coverage that permits them to participate in clinical trials of oncology drugs.

Final Comments

As of the beginning of February 2017, it is unclear exactly what the new administration and the Republican Congressional leaders will do to the ACA. Despite the lack of details, the timing of Republican proposals to substantially change health insurance markets and Medicaid coincides with when significant breakthroughs are expected in the treatments for cancers. The proposed insurance coverage changes may preclude many low-income people from having access to health insurance that would pay for what are anticipated to be new cancer treatment options. Repeal of the ACA also significantly reduces the chances that

lower income people among under-represented minorities will be able to participate in clinical trials of promising new treatments. As a result, disparities in cancer survival rates that exist now between higher and lower-income people and whites and non-whites may increase.

Moreover, health insurance changes affecting people with employer-sponsored plans that are likely to follow the repeal of the ACA leave open the very real possibility that advances in cancer care will be available primarily to people with more generous health plans and people with higher incomes and education. Employer plans with narrow provider networks also may not have oncologists who are up to date on advances in treatment options or may not suggest to a person that they could be screened for eligibility in a clinical trial.

If cancer patients do not know about new treatment options or cannot gain access because of being in limited provider network plans, socio-economic and educational disparities in access to treatment can result. This is not what was intended with the ACA's focus on expanding access to health insurance and access to "middle-class" or "standard" medical care – especially medical care for diagnosing and treating cancers.

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Figure 1. State Coverage Mandates In Place as of 2016

Notes: Figure shows states with laws (black) or cooperative agreements with insurers (grey) that require plans in the individual (non-group) health insurance market cover the costs of clinical trials (top panel) or off-label drug use.

Source: Centers for Medicare and Medicare Services and American Society of Clinical Oncology

Table 1

Essential Health Benefit Categories

1.	Ambulatory patient services
2.	Emergency services
3.	Hospitalization
4.	Maternity and newborn care
5.	Mental health and substance use disorder services, including behavioral health treatment
6.	Prescription drugs
7.	Rehabilitative and habilitative services and devices
8.	Laboratory services
9.	Preventive and wellness services and chronic disease management
10.	Pediatric services, including oral and vision care

Table 2**Marketplace Plan Characteristics and Enrollment**

	Actuarial Value	Median 2016 Deductible	Share of 2016 Enrollment
Zero Cost Sharing	100%	\$0	<0.5%
Silver - High Cost-Sharing Assistance (<150% FPL)	94%	\$0	33%
Platinum	90%	\$0	1%
Silver - Medium Cost-Sharing Assistance (150–200% FPL)	87%	\$500	19%
Gold	80%	\$1,000	6%
Silver - Moderate Cost-Sharing Assistance (200–250% FPL)	73%	\$2,500	9%
Silver - No Cost-Sharing Assistance	70%	\$3,000	12%
Bronze	60%	\$6,300	21%
Catastrophic	50–60%	\$6,850	1%
Total		\$850	100%

Notes: The actuarial value is the percentage of expected medical costs covered by the insurer. FPL = Federal Poverty Line; Enrollment percentages may not add to 100% due to rounding.

Source: Centers for Medicare and Medicaid Services.

Table 3**Network Characteristics of Silver Marketplace Plans**

Domain	Network Breadth	Mean [SD]	Unadjusted Difference (95% CI)	Adjusted Difference (95% CI)
Network Includes Hospital With an Accredited (ACS) Cancer Program	Narrow	71.9 [44.9]	−19.4 (−25.6 to −13.1)	−23.6 (−25.1 to −22.1)
	Standard	91.3 [28.2]	Reference group	Reference group
	Broad	91.0 [28.6]	−0.2 (−5.5 to 4.9)	8.2 (6.0 to 10.3)
Percentage of Local Office-Based Oncologists In Network	Narrow	36.0 [25.4]	−27.5 (−31.5 to −23.5)	−28.3 (−29.6 to −26.9)
	Standard	63.5 [24.4]	Reference group	Reference group
	Broad	92.2 [17.2]	28.7 (24.7 to 32.6)	18.5 (16.6 to 20.5)

Notes: Data are from analyses of Silver plan characteristics in 34 states, based on data from the Centers for Medicare and Medicaid Services and issuers' provider networks. States included Alabama, Alaska, Arizona, Arkansas, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Michigan, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming. The unit of observation is the market–plan dyad, with markets defined by health insurance rating areas within each state (N=8,824). The 95% confidence intervals (CI) were calculated with the use of bootstrapping. Adjusted differences are the average differences among comparisons of plans within the same market (see supplemental material in Garthwaite and Graves (2017) for methodological details). The network-breadth measures quantify the percentage of local hospitals or physicians (by specialty) within the plan's network (i.e., the provider participation rate). Narrow-network plans are those with a hospital participation rate of 33% or less; standard plans are those 33–95% and broad plans have a hospital participation rate of 95% or more. ACS = American College of Surgeons.