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Abstract

In this brief, we describe the breadth of physician provider networks offered on the health insurance marketplaces in 2016, and present differences by plan type, physician specialty, and state. We also compare networks in 2016 to those in 2014. We find little change in overall prevalence of narrow networks, but we find important geographic shifts and a trend towards x-small networks among plans with narrow networks. We discuss the policy implications of our findings for consumers, regulators, and health plans.

Keywords

Narrow Networks Project

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TRENDS IN PHYSICIAN NETWORKS IN THE MARKETPLACE IN 2016

Daniel Polsky, Yuehan Zhang, Laura Yasaitis, and Janet Weiner

In this brief, we describe the breadth of physician provider networks offered on the health insurance marketplaces in 2016, and present differences by plan type, physician specialty, and state. We also compare networks in 2016 to those in 2014. We find little change in overall prevalence of narrow networks, but we find important geographic shifts and a trend towards x-small networks among plans with narrow networks. We discuss the policy implications of our findings for consumers, regulators, and health plans.

INTRODUCTION

With the fourth open enrollment period underway and with election results behind us, the health insurance Marketplace is experiencing uncertainty, instability, and [turmoil](#). In 2017, premiums increased by 22% and many issuers declined to participate in the public marketplace. The designs of the plans offered, however, have remained fairly stable, reflecting a regulatory environment that has community rating, essential health benefits, standardized actuarial levels characterized by metal level, and no dollar limits on benefits. Insurers still have flexibility in plan design through the provider networks of qualified plans.

It is possible that the breadth of plan networks has changed, either because insurers have increased their offerings of narrow networks, or because insurers with broader networks have disproportionately exited the marketplaces. The only longitudinal data we have comes from [McKinsey & Co.](#), who categorized network size by the proportion of participating hospitals in a rating area. They found that the proportion of plans with narrow hospital networks (defined as a network with fewer than 70% of hospitals in a rating area) stayed relatively flat from 2014-2016 (42% in 2014, 39% in 2015, 43% in 2016).

In this brief, we describe the physician provider networks offered in the marketplace in 2016, and compare how networks have changed from 2014 to 2016. We describe the steps we took to develop comparable data across years, and present summaries of network size overall, by plan type, [specialty](#), and by state.

BACKGROUND

Because the breadth of a provider network can dictate how consumers access care covered by their health plan, they should be aware of the breadth of network of the plan they are choosing. While network breadth is not the only characteristic of a provider network, we showed in our [first brief on this topic](#) that this measure is easily calculated and can quickly capture the relative differences in provider networks across plans.

Transparency of provider networks is particularly important given the price sensitivity of Marketplace consumers, who tend to prefer [lower-premium plans](#), and lower price plans tend to be narrow network plans. In a Health Affairs [article](#), we quantified how much consumers were saving by choosing a narrow network on the marketplace. Within a market,

for plans of otherwise equivalent design, a plan with an extra-small network had a monthly premium that was 6.7% less expensive than that of a plan with a large network. For a typical plan, consumers were saving between \$212 and \$339 a year.

To date, consumers have had little indication of network size when choosing a plan. Many marketplaces have a [feature](#) that allows consumers to search for a specific provider or to see all participating providers by specialty, but the overall breadth of the network remains opaque. To address the issue of transparency, for Plan Year 2017 the Centers for Medicare and Medicaid Services (CMS) is piloting a display of [network breadth information](#) on the marketplaces in four states: Maine, Ohio, Tennessee, and Texas. During open enrollment, consumers in these states see information classifying the breadth of the plans' provider networks, as compared to other plans in the county. Consumers can compare networks for three provider types, including adult primary care providers, pediatricians, and hospitals. The new labels categorize a network as 'Standard' if within a standard deviation of a baseline Provider Participation Rate, or 'Broad' or 'Basic' if above or below it respectively.

Another concern raised by narrow networks is one of adequacy. In a [study](#) of 2015 federal Marketplace plans, nearly 15% had no in-network physicians within 50 miles for at least one specialty. Endocrinology, rheumatology, and psychiatry were the most common excluded specialties. The ACA set a [national standard for network adequacy](#) requiring “a network that is sufficient in number and types of providers,” and that “all services will be accessible without unreasonable delay.” But the interpretation of “sufficient” and “reasonable” was left to the states. To guide state adequacy standards, in November 2015 the National Association of Insurance Commissioners [updated](#) its 1996 *Managed Care Plan Network Adequacy Model* and renamed it the [Health Benefit Plan Network Access and Adequacy Model Act](#). The Act specifies that state insurance commissioners, not health plans, determine if provider networks are adequate, sets standards for the accuracy of provider directories, and includes consumer protections against “surprise medical bills” when out-of-network providers deliver care in in-network facilities. However, the NAIC model act did not recommend quantitative standards of adequacy, nor is it binding on states.

Amid the slow progress addressing transparency and adequacy of networks, two recent studies quantified the changes in health care use and spending attributable to a narrow network. In the context of a state employee plan, [Gruber & McKnight](#) found that consumers were very price sensitive when given the option of a narrow network plan, and that it was an effective strategy for controlling costs. Those who switched to a narrow network plan (10% of employees) spent almost 40% less on medical care, with savings primarily coming from specialist and hospital care. In the context of a small group market, [Atwood & Lo Sasso](#) found an overall spending reduction of 25% associated with enrollment in a narrow network plan, with reductions in primary care, specialist care, allied health, and prescription drugs.

WHAT WE DID

From the 2016 list of all 5,022 qualified health plans (and 108,448 unique plan/county combinations) sold in the marketplaces for all 50 states plus DC as provided by the [RWJF HIX Compare dataset](#), we identified

544 unique provider networks offered by 292 different issuers. We obtained the list of providers participating in each of these networks from [Vericred](#), a healthcare data services company. The provider network data used in this research was obtained by Vericred in September 2016 either directly from insurers or through machine readable provider directories released by the insurers.

Providers were matched to the National Provider Identifier (NPI) registry, available from CMS, to obtain a consistently coded specialty, provider type, and location. We restricted the list to matched providers and verified physicians as active by matching listed physicians to the SK&A office-based physician dataset. The

CONSUMERS SAVED 6.7% ON PREMIUMS BY CHOOSING NARROW NETWORK PLANS, BUT CONCERNS ABOUT TRANSPARENCY AND ADEQUACY REMAIN.

SK&A dataset telephone verifies location and specialty information every six months and thus provides validated, updated, and consistently collected specialty and location information for 594,776 physicians. For these physicians we use SK&A specialty and location information.

We excluded 13 networks managed by 11 issuers where we had no valid data. Our analysis dataset consisted of 523,503 physicians participating in plans issued by the 281 carriers across 531 networks. We matched 392,856 of these physicians to the SK&A file. For the 130,557 unmatched, we used the specialty and location information from the NPI data. We also created a dataset of the 229,644 physicians that were found to not be participating in any marketplace network and were verified as active office-based physicians by the SK&A data.

In addition to describing the networks in the Marketplace in 2016, we compared how networks have changed from 2014 to 2016. The

process of collecting the 2014 data is described in our previous [Data Brief](#). Because methods of data collection and cleaning have improved since that time, we returned to the 2014 file to reconcile differences. This primarily required identifying one unique geographic location per provider based on SK&A data when matched, and based on NPI data when not matched. Because the 2014 data were collected for silver plans only, all comparisons are restricted to silver plans.

QUANTIFYING PHYSICIAN NETWORK SIZE

We estimate network size only for the parts of a state where plans are sold using that particular provider network. Network size is estimated by the ratio of the number of physicians participating in each network to the total number of physicians eligible for that network in each state. A physician’s eligibility to be included in a network was determined by whether he or she was practicing in a county where a plan associated with the network was sold. Likewise, participating physicians were only counted in the numerator of this measure if their practice location was within a county where a plan associated with the network was sold. As in 2014, we categorized network size into five groups using arbitrary cutoffs that might provide meaningful information to consumers: x-small (< 10%), small (10%-25%), medium (25%-40%), large (40%-60%), and x-large ($\geq 60\%$).

We assess the number of plans with networks of each size. Networks are typically attached to multiple plans, but we use the plan as the unit of analysis. (Our first brief used the network as the unit of analysis, but because consumers purchase plans rather than networks, we believe plans are the most appropriate level of analysis.) To adjust for the fact that some plans are only offered regionally within a state while others are sold state-wide, we summarize plans by weighting by the fraction of the state’s population living in counties where the plan was offered. We chose this approach as it reflects consumers’ experiences in choosing between different plans, rather than networks. We examined network sizes associated with different types and levels of plans, as well as among several different physician specialty subsets.

WHAT WE FOUND

The distribution of physician networks, overall and by metal tier, in 2016 are shown in Figure 1. By our measures, 31% of networks are small or x-small: 12% of networks are x-small, meaning they include less than 10% of office-based practicing physicians in the area and another 19% are small, including between 10% and 25% of physicians. At the other end of the spectrum, 15% are x-large, which we define as networks that include at least 60% of physicians. There is little difference in network breadth across metal tiers, except for the platinum plans, which feature more small networks. However, the platinum tier has just 5% of the plans offered.

Most networks offered on the marketplace are Preferred Provider Organizations (PPOs) or Health Maintenance Organizations (HMOs): 28% are PPOs, 53% are HMOs, 9% are Exclusive Provider Organizations (EPOs), and 10% are Point of Service (POS) plans. Within each plan type we categorize network size, as shown in Figure 2. We found meaningful differences across type, with 44% of HMOs having x-small or small networks, compared to 35% of PPOs. HMO plans have twice as many x-small networks as PPOs (14% vs. 7%). POS plans have a surprisingly large proportion of x-small plans (27%), while on the other extreme, EPOs have a large proportion of large and x-large networks (63%).

We then characterize network size within broad specialty group categories and display results in Figure 3. The most common specialty groups among practicing physicians are primary care (29%), hospital-based (17%), and surgery-related (16%). We find a striking similarity in network sizes across specialty groups with the exception of hospital-based specialties (radiology, anesthesiology, emergency medicine, and pathology). Network size for primary care physicians is very similar to overall network size with 31% having x-small or small networks. For pediatrics, only 23% of plans have small or x-small networks. With the notable exception of psychiatrists, specialist groups are less likely to be narrow networks compared to primary care groups. The one striking outlier are hospital-based specialty groups, where 72% of plans have either x-small or small networks. This is notable given that this is the group of physicians most likely to lead to a [surprise out-of-network bill](#).

Figure 1. Network size categories, overall and by metal

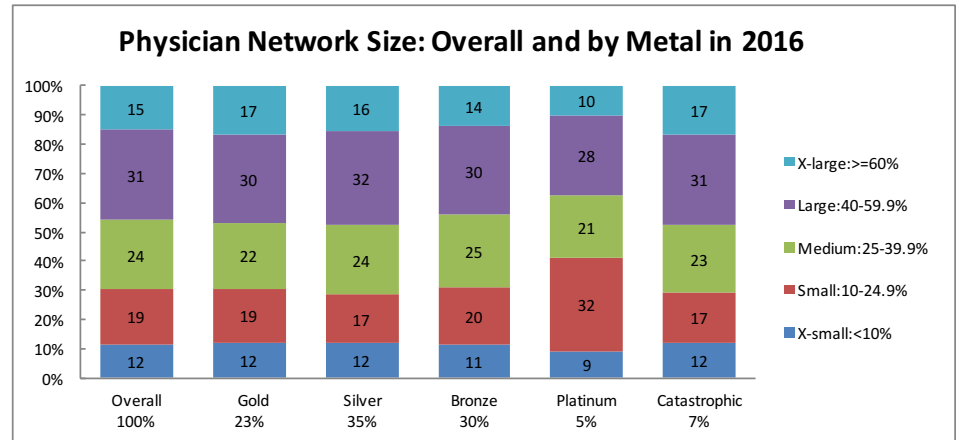


Figure 2. Network size categories, overall and by plan type

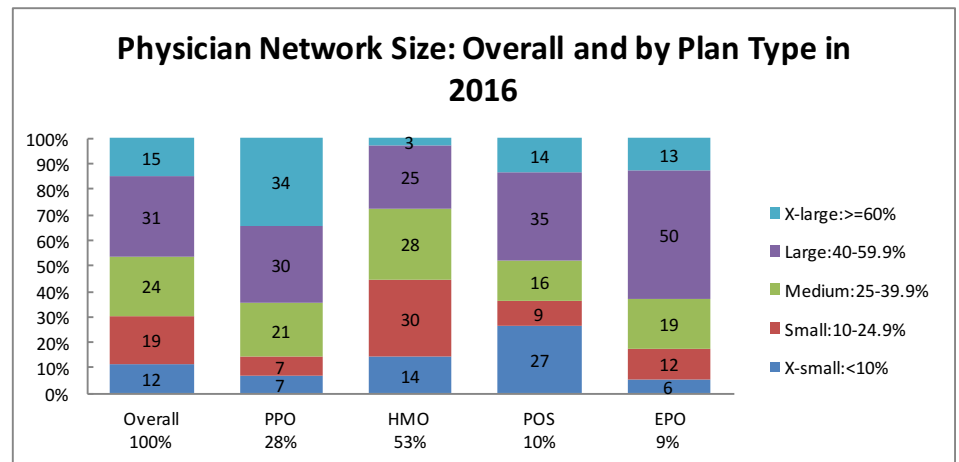


Figure 3. Network size categories, overall and by provider specialty group

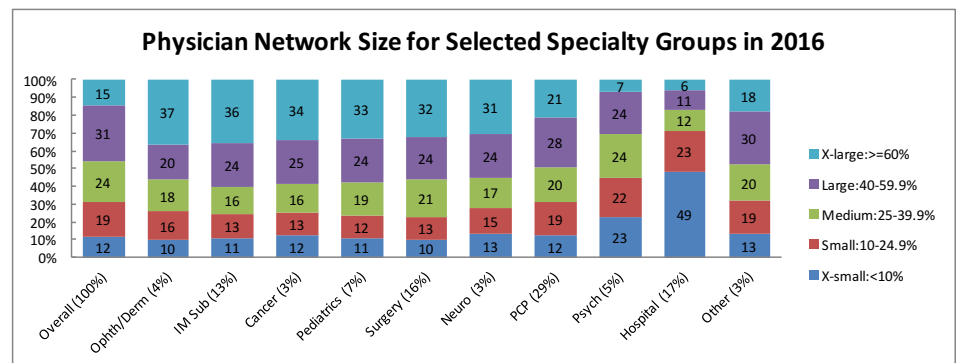
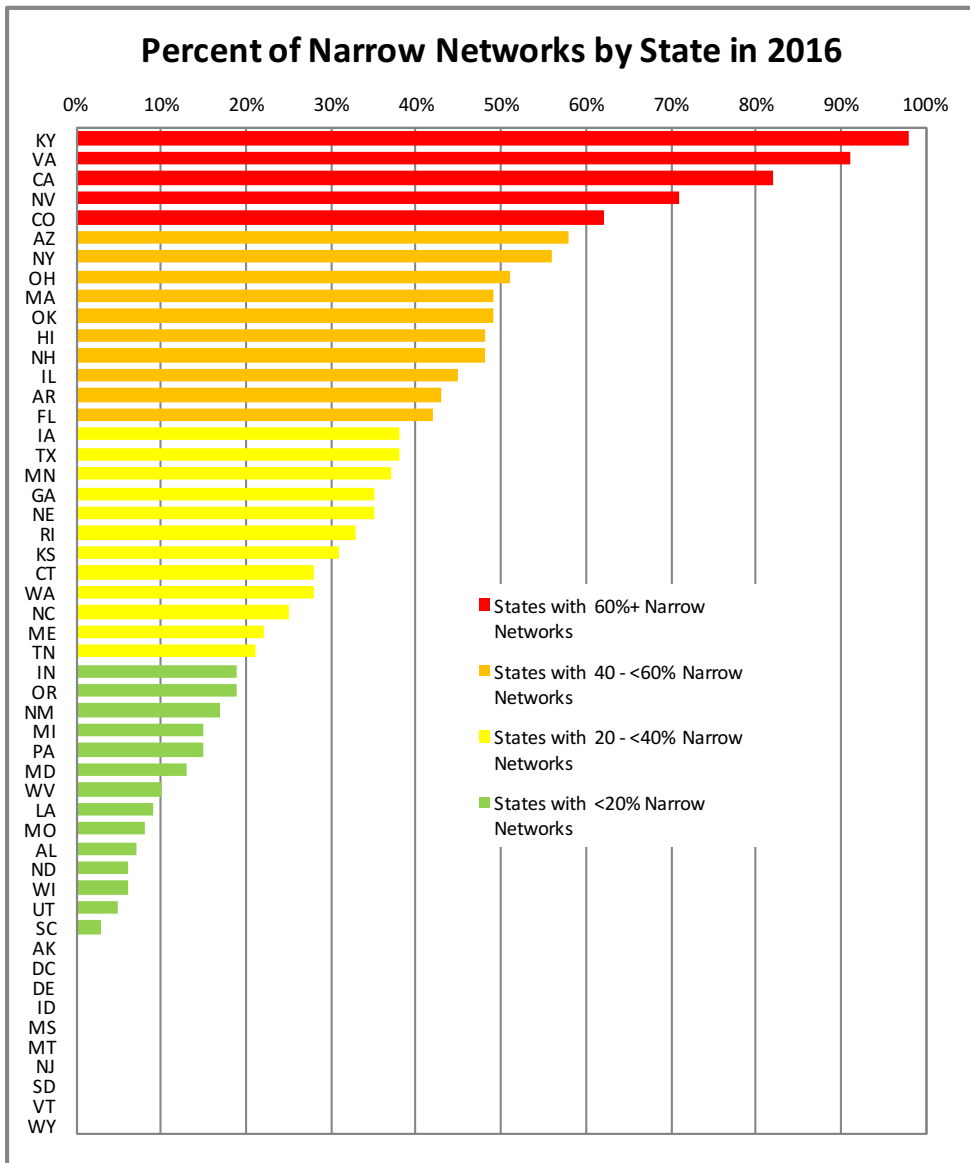


Figure 4. State-level percentage of narrow networks (plans associated with network sizes < 25%)



We found meaningful differences in the prevalence of narrow networks by state. In Figure 4, we summarize this information using states grouped by their propensity to offer narrow networks (x-small or small) in their plans. As shown, plans in some states offer mostly narrow networks, (KY, VA), while in other states, narrow networks are quite rare or non-existent.

Comparing Network Size in 2014 and 2016

We found relative overall stability in network size when we compared 2014 and 2016 silver plans, except among the narrowest networks, where the number of plans with x-small networks doubled from 6% to 12%. As shown in Figure 5, the sum of x-small and small networks declined slightly: from 31% to 29% and the fraction of plans with larger network sizes also remained remarkably stable. Thus the doubling of x-small networks was matched by the reduced prevalence of small networks.

What might account for the increase in x-small networks? We explored shifts in the distribution of plan types given the noted higher prevalence of narrow networks among HMO plans. We find that the prevalence of PPOs and HMOs changed from 2014 to 2016: 29% are PPOs (down from 36% in 2014) and 51% are HMOs (up from 46% in 2014). As shown in Figure 6, the shifts in the prevalence of different plan types are not as meaningful as the shifts within plan type. We find the greatest jumps in x-small networks among HMO plans and POS plans.

On a state level, the propensity to offer narrow networks changed considerably, with narrow networks emerging in some states that had none (IA, AR, NH) while disappearing in others in which they had been prevalent (for example, NJ, AK). Figure 7 shows these differences by state.

Figure 5. Comparison of network size for silver plans in 2014 and 2016

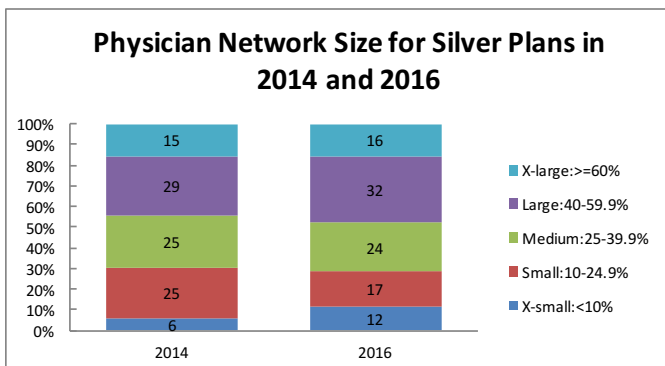


Figure 6. Comparison of network size for silver plans overall and by plan type in 2014 and 2016

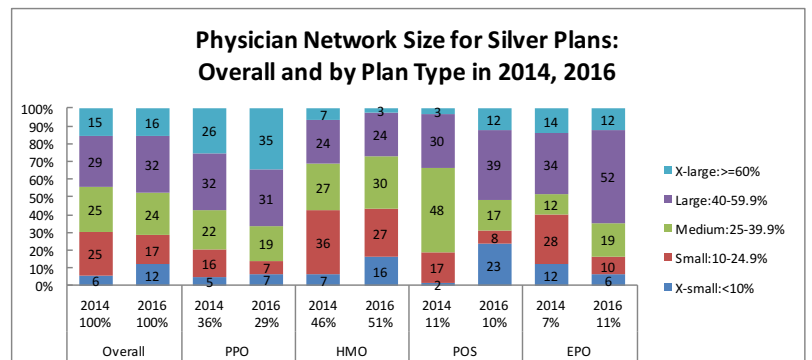
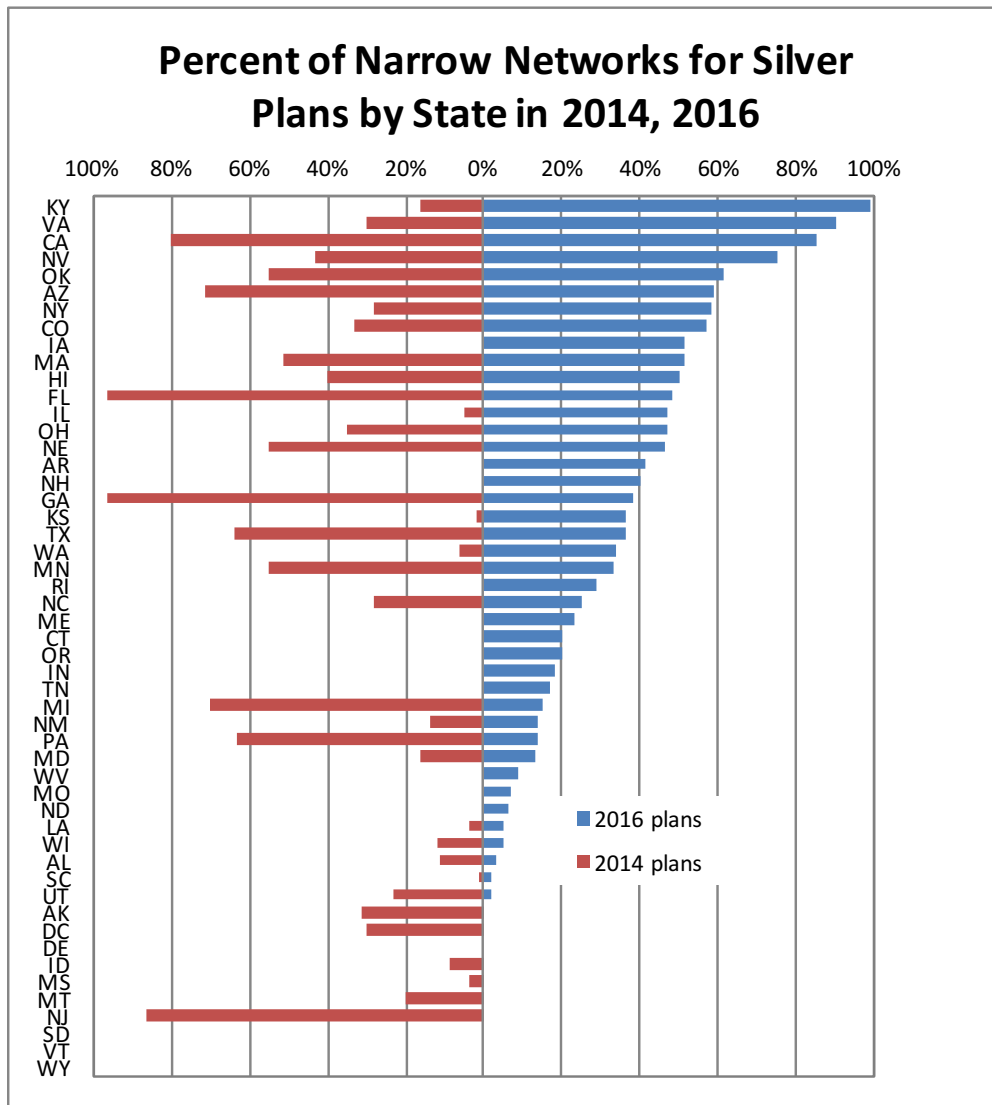


Figure 7. State-level percentage of narrow networks for silver plans in 2014 and 2016



POLICY IMPLICATIONS

We found narrow physician provider networks in 31% of all qualified silver plans offered in 2016, compared to 29% in 2014. While the average prevalence of narrow network plans has remained stable over time, there are important shifts in the plans with narrow networks. X-small networks have doubled from 6% of silver plans to 12% of silver plans. On a state level, the propensity to offer narrow networks changed considerably, with narrow networks emerging in some states that had none (IA, AR, NH) while disappearing in others in which they had been prevalent (for example, NJ, AK).

The trend of more x-small networks highlights key issues for narrow networks going forward. Enforcing adequacy standards and further developing enforceable adequacy standards in all states has been a challenge, but the increasing prevalence of x-small networks adds pressure and immediacy to the task. Providing greater transparency regarding networks is critical for consumers who shop based on price and possibly whether their primary care physician is in their desired plan. These consumers, when seeking care, may find themselves with a plan they would not have selected had they know more about the choices of physicians available to them. The CMS pilot to label network breadth and offer this information to consumers when selecting plans is an important development.

The high prevalence of narrow networks among hospital-based physicians, however, is stunning. Given that these physicians are the ones most likely to send surprise out-of-network bills, this remains a concern for those with narrow network plans and broad plans.

The emergence of narrow networks is an important health plan innovation, as it offers the opportunity for providing lower-priced plans in the marketplace. For this innovation to be executed fairly and safely for consumers, it must be accompanied by continued innovation among regulators to ensure transparency, network adequacy, and elimination of surprise out-of-network bills.

ABOUT LDI

Since 1967, the Leonard Davis Institute of Health Economics (LDI) has been the leading university institute dedicated to data-driven, policy-focused research that improves our nation's health and health care. Originally founded to bridge the gap between scholars in business (Wharton) and medicine at the University of Pennsylvania, LDI now connects all of Penn's schools and the Children's Hospital of Philadelphia through its more than 200 Senior Fellows.

LDI Data Briefs are produced by LDI's policy team. For more information please contact Janet Weiner at weinerja@mail.med.upenn.edu.