Health Affairs

At the Intersection of Health, Health Care and Policy

Cite this article as:
Jane M. Zhu, Yuehan Zhang and Daniel Polsky
Networks In ACA Marketplaces Are Narrower For Mental Health Care Than For
Primary Care

Health Affairs 36, no.9 (2017):1624-1631
doi: 10.1377/hlthaff.2017.0325

The online version of this article, along with updated information and services, is available at:

http://content.healthaffairs.org/content/36/9/1624

For Reprints, Links &

Permissions: http://content.healthaffairs.org/1340_reprints.php

Email Alertings: http://content.healthaffairs.org/subscriptions/etoc.dtl

To Subscribe : https://fulfillment.healthaffairs.org

Health Affairs is published monthly by Project HOPE at 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133. Copyright © by Project HOPE - The People-to-People Health Foundation. As provided by United States copyright law (Title 17, U.S. Code), no part of may be reproduced, displayed, or transmitted in any form or by any means, electronic or mechanical, including photocopying or by information storage or retrieval systems, without prior written permission from the Publisher. All rights reserved.

By Jane M. Zhu, Yuehan Zhang, and Daniel Polsky

DOI: 10.1377/hlthaff.2017.0325 HEALTH AFFAIRS 36, NO. 9 (2017): 1624–1631 ©2017 Project HOPE— The People-to-People Health Foundation, Inc.

Networks In ACA Marketplaces Are Narrower For Mental Health Care Than For Primary Care

Jane M. Zhu (zhuja@upenn .edu) is a National Clinician Scholar and fellow in the Division of General Internal Medicine at the University of Pennsylvania Perelman School of Medicine, in Philadelphia.

Yuehan Zhang is a statistical analyst in the Division of General Internal Medicine, University of Pennsylvania Perelman School of Medicine.

Daniel Polsky is the Robert D. Eilers Professor in Health Care Management and Economics and executive director of the Leonard Davis Institute of Health Economics, both at the University of Pennsylvania.

ABSTRACT There is increasing concern about the extent to which narrow-network plans, generally defined as those including fewer than 25 percent of providers in a given health insurance market, affect consumers' choice of and access to specialty providers—particularly in mental health care. Using data for 2016 from 531 unique provider networks in the Affordable Care Act Marketplaces, we evaluated how network size and the percentage of providers who participate in any network differ between mental health care providers and a control group of primary care providers. Compared to primary care networks, participation in mental health networks was low, with only 42.7 percent of psychiatrists and 19.3 percent of nonphysician mental health care providers participating in any network. On average, plan networks included 24.3 percent of all primary care providers and 11.3 percent of all mental health care providers practicing in a given state-level market. These findings raise important questions about provider-side barriers to meeting the goal of mental health parity regulations: that insurers cover mental health services on a par with general medical and surgical services. Concerted efforts to increase network participation by mental health care providers, along with greater regulatory attention to network size and composition, could improve consumer choice and complement efforts to achieve mental health parity.

arrow-network plans, which generally limit coverage to less than 25 percent of providers in a given market, are prevalent in the individual Marketplaces created by the Affordable Care Act (ACA). In 2016 approximately half of the plans offered in the Marketplaces had narrow networks.¹ There are two reasons for this. First, ACA provisions eliminated important tools—including standardization of benefits, limits on maximum out-of-pocket spending, and community rating—that insurers traditionally used to control costs. Narrownetwork design therefore is one of the few remaining cost-containing strategies available

to insurers, with early evidence pointing to the strong financial performance of plans with narrow networks compared to plans with broader networks.² Second, since insurers typically negotiate lower reimbursement rates with in-network providers, and narrow networks often remove high-cost providers, these plans are also associated with lower premiums.³ Because premiums remain the most important factor in plan choice for consumers,⁴ network size has become a critical factor in insurers' competition for price-sensitive consumers in the ACA Marketplaces.³

Narrow networks are valuable to consumers if low premiums allow meaningful access to a suf-

ficient set of providers. But if a network is too narrow, consumers could be forced to obtain out-of-network care, potentially jeopardizing access on the basis of affordability, provider quality, and availability. 1,3,5,6 This issue is particularly salient in the case of mental health care, which already faces significant access challenges.⁷ Recent parity laws, including the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 and provisions in the ACA, have sought to reduce coverage gaps between mental health and other medical and surgical conditions. While these policies have largely succeeded in guaranteeing basic financial protections for mental health care, 8,9 the achievement of parity may be hindered by difficult-toregulate plan features such as narrow networks.8 Early evidence from the ACA Marketplace plans suggests that psychiatry was among the most commonly restricted specialties in 2015, with approximately 15 percent of plans offering fewer than five in-network psychiatrists within a hundred miles.6

What drives the use of these narrow networks in mental health care is unclear. From an insurer's perspective, there may be incentives to contract with a limited set of providers or to exclude a specific set of providers altogether so as to avoid sicker, costlier patients who need broader networks of specialized care.8 From a provider's perspective, a number of unique factors including low reimbursement rates, a critical workforce shortage, and high demand for mental health care have historically translated into unwillingness to practice within a network.10 In a 2006 survey of physicians, for example, approximately 35 percent of psychiatrists did not contract with managed care organizations, compared to 8-12 percent of providers in other specialties.11 These complex dynamics suggest that the use of narrow networks could exacerbate existing challenges in meeting mental health care demands, which raises concerns about network adequacy. 10

The ACA attempts to allay such concerns by requiring Marketplace plans to maintain "a network that is sufficient in number and types of providers," including providers that specialize in mental health and substance abuse services, and to ensure access to services "without unreasonable delay." What constitutes "unreasonable delay" has been left to state interpretation, and there is no consensus about how to measure and regulate network quality.

Understanding the composition of narrownetwork plans is thus critical in determining whether any additional policy intervention is necessary. This study enhances the understanding of mental health care providers' participation, the provider mix, and the breadth of coverage in the ACA Marketplaces. We used national data for 2016 from the ACA Marketplaces at the plan, network, and provider levels to evaluate two main questions: First, how do mental health care providers compare to primary care providers in terms of their participation in networks and the size of the networks they are in? Second, in the context of efforts to achieve parity between mental health care and general medical care, to what extent is there parity in network size?

Study Data And Methods

DATA SOURCES Our overall approach was to combine data for 2016 at the plan, network, and provider levels from the ACA Marketplaces. We then used descriptive statistics to compare mental health and primary care providers.

To prepare our data set, we obtained a list of all providers participating in each provider network for each plan offered in the individual market in 2016. These data were obtained from Vericred, a company that maintains complete providernetwork data for individual and small-group plans, on and off the Marketplaces. We merged these data with information from the National Plan and Provider Enumeration System of the Centers for Medicare and Medicaid Services (CMS) to obtain provider characteristics such as providers' specialty, field, type, and geographic location. Data on plan characteristics came from the Robert Wood Johnson Foundation's Health Insurance Exchange (HIX) Compare data set. 13 This data set includes plan-level data on, for example, benefits, premiums, metal tier, plan type, and plan service area of the health insurance Marketplaces in all fifty states plus the District of Columbia. Our analysis data set included information on all provider networks that were connected to at least one qualified health plan sold in 2016 in any ACA Marketplace. Only 3 percent of plans did not have valid data for their provider networks, so our data constitute a nearly complete picture of plans in the Marketplaces.

PROVIDER GROUP DEFINITIONS We chose primary care providers as a comparison group because, as for mental health care providers, concerns have been raised about the adequacy of their numbers in networks. For this reason, CMS recently began evaluating data on network providers, emphasizing primary care physicians and mental health care providers.¹⁴

Our mental health care group included psychiatrists and the following nonphysician mental health specialty providers: psychologists; advanced practice nurse practitioners; physician assistants; and behavioral specialists, counselors, and therapists with master's or doctoral

degrees who work with people who have behavioral disorders. Our primary care comparison group included all physicians listed as having a primary care internal medicine specialty in the provider field of the National Plan and Provider Enumeration System, as well as a nonphysician group of primary care advanced practice nurses and physician assistants. These classifications from the Healthcare Provider Taxonomy Code Set came from the National Plan and Provider Enumeration System data set.15 These workforce numbers were benchmarked against publicly available national workforce data to assess the data's quality and integrity. 16-18 Providers deemed deactivated as a result of death, disbandment, fraud, or other reasons were excluded from our analysis.

ANALYSIS Descriptive analyses were conducted using Stata, version 14.2, and SAS, version 9.4. A provider was deemed eligible for network participation if he or she was practicing in a county where a plan associated with the network was sold. A provider was considered to be participating in a network if he or she was actually assigned to at least one network tied to a plan that was offered in the Marketplaces. Network size was estimated by the ratio of the number of providers participating in each network to the total number of providers eligible for network participation in each state, and by the ratio of the number of providers participating in each network to the total number of providers participating in at least one network in each state.

We also categorized network size with groups that have been used elsewhere¹⁹ to provide information to health plan consumers: extra-small, or those that include fewer than 10.0 percent of the total providers in given state; small, those that include 10.0–24.9 percent; medium, including 25.0–39.9 percent; large, including 40.0–59.9 percent; and extra-large, including at least 60 percent. Our definition of a narrow network—similar to that commonly used in the literature—is one that includes fewer than 25 percent of all providers in a given state.

Because multiple plans may share the same network of providers, we used the plan as the unit of analysis. To adjust for the fact that some plans are sold statewide, while other plans are offered only regionally within a state, we weighted our data by the fraction of the state's population living in the set of counties where a given plan was offered. Therefore, a plan that was offered in a small part of a state, or to a more rural population, was down-weighted in our analysis.

We used chi-square tests to examine whether network participation differed by provider field and type. To examine patterns of network inclusion across plans, we used the Spearman corre-

The use of narrow networks could exacerbate existing challenges in meeting mental health care demands.

lation coefficient to summarize the strength of the relationship between network size for mental health care providers and for primary care providers. A Spearman coefficient of close to 1 represents a strong correlation. Weighted generalized linear regression was used to assess whether network size was significantly different across provider field and type.

LIMITATIONS This study had several limitations. First, Vericred did not separately collect information on provider networks from behavioral health carve-outs, which use specialty management firms to administer the delivery of mental health care to enrollees. This could have resulted in our underreporting in-network behavioral health providers when carve-outs were in use.

Second, given the critical shortage of psychiatrists, an increasing number of primary care providers deliver mental health care, ^{16,20} and therefore some portion of our comparison group could also be counted as members of the mental health care workforce.

Third, we were unable to verify that each of the providers in the National Plan and Provider Enumeration System data set was active. We used national workforce data as a benchmark to help ensure a level of accuracy in our estimates. Because we assessed relative network participation and size, we assumed that any unmeasured factors affecting labor-force participation would affect different provider fields and types equally.

Finally, because of limitations in the taxonomy coding, we were not able to compile a comprehensive set of mental health care providers. For instance, we did not include social workers, who represent a large proportion of the mental health care workforce.

Despite these limitations, we believe that our results are at least indicative, if not representative, of the availability of mental health care providers in narrow-network plans in the Market-places.

Study Results

We identified 531 unique provider networks offered by 281 different insurance issuers in the Marketplaces in all fifty states plus the District of Columbia, using the HIX Compare list of 5,022 on-market qualified health plans. Our final analysis sample consisted of 535,114 primary care providers, of whom 280,201 (52.4 percent) were physicians and 254,913 (47.6 percent) were nurse practitioners or physician assistants (for greater details on numbers of providers, see online Appendix 1).21 There were 562,379 mental health care providers, of whom 51,499 (9.2 percent) were psychiatrists; 7,176 (1.3 percent) were nurse practitioners or physician assistants; 400,376 (71.2 percent) were nonphysician behavioral specialists, counselors, or therapists; and 103,328 (18.4 percent) were psychologists.

NETWORK PARTICIPATION Overall, 120,453 (21.4 percent) of the mental health care providers and 243,718 (45.6 percent) of the primary care providers in our sample participated in at least one ACA Marketplace network. Specifically, 42.7 percent of psychiatrists participated in at least one network, compared to 58.4 percent of primary care physicians (Exhibit 1), a difference of 15.7 percentage points. A similar difference was observed between the two fields among non-physician providers. Network participation was 23.4 percentage points higher among psychiatrists compared to nonphysician mental health care providers, also a significant difference.

NETWORK SIZE With respect to network size, plans appeared to offer narrower networks for mental health care than for primary care. For example, while 38.7 percent of plans had extra-small or small networks for primary care physicians, the share was 57.4 percent of plans for networks for psychiatrists (Exhibit 2)—another significant difference. Conversely, while 39.9 percent of plans offered large or extra-large networks for primary care physicians, only 17.9 percent of plans offered such networks for psychiatrists, 12.0 percent for nonphysician primary care providers, and 1.9 percent for nonphysician mental health care providers.

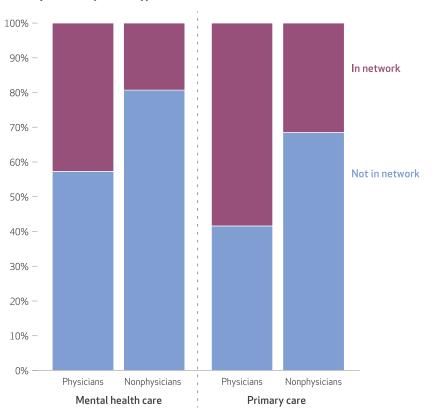
To explore whether network participation could be a reason for differences between the two fields in network size, Exhibit 3 shows average network size using two estimates: one that included all eligible providers in a market and the other including only providers who were already participating in at least one network. The average network included only 11.3 percent of all mental health care providers (95% confidence interval: 11.0, 11.6) and 24.3 percent of all primary care providers (95% CI: 23.8, 24.8) in a given market. Specifically, only 23.5 percent of all psychiatrists (95% CI: 23.0, 24.0) and

10.2 percent (95% CI: 9.9, 10.4) of all nonphysician mental health care providers in a given market participated in the average network. When we estimated network size based on providers who were already participating in at least one network, the difference between fields was reduced. The average network included 35.2 percent (95% CI: 34.6, 35.8) of the primary care physicians who were participating in at least one network, and 28.3 percent (95% CI: 27.7, 29.0) of the mental health care providers who were participating in at least one network. This suggests that much of the narrowness of mental health care networks is due to low provider participation.

We examined the extent to which networks were biased toward primary care versus mental health care providers. The majority of plans had larger networks for primary care than for mental health care (as shown by the dots in Exhibit 4 to

EXHIBIT 1

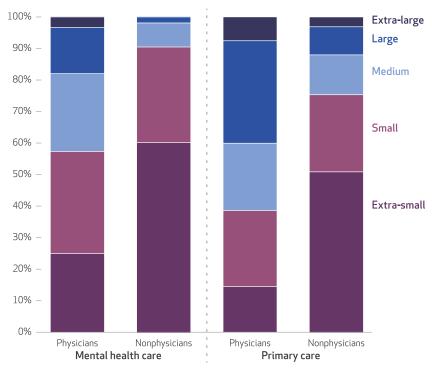
Percentages of eligible providers participating or not participating in at least one network in 2016, by field and provider type



SOURCE Authors' analysis of data from the Centers of Medicaid and Medicare Services' National Plan and Provider Enumeration System, the Robert Wood Johnson Foundation's Health Insurance Exchange (HIX) Compare data set, and a list of provider networks from Vericred. **NOTES** A provider was deemed eligible to participate in a network if he or she was practicing in a county where a plan associated with the network was sold. The differences between physicians and nonphysicians in both types of care were significant (p < 0.001), as were the differences between types of providers in mental health care and in primary care (p < 0.01).

EXHIBIT 2





SOURCE Authors' analysis of data from the Centers of Medicaid and Medicare Services' National Plan and Provider Enumeration System, the Robert Wood Johnson Foundation's Health Insurance Exchange (HIX) Compare data set, and a list of provider networks from Vericred. **Notes** Extra-small networks are those including less than 10.0 percent of the eligible providers in a given state. Small networks include 10.0-24.9 percent, medium networks 25.0-39.9 percent, large networks 40.0-59.9 percent, and extra-large networks at least 60 percent of the eligible providers. The differences between physicians and nonphysicians in both types of care were significant (p < 0.001), as were the differences between types of providers in mental health care and in primary care (p < 0.01).

EXHIBIT 3

Average network size estimates by practice type and field, for all eligible providers and providers participating in at least one network

	All eligible providers in the market	Providers participating in at least one network
MENTAL HEALTH CARE		
All providers Physicians (psychiatrists) Nonphysicians PRIMARY CARE	11.3% 23.5 10.2	28.3% 35.3 27.1
PRIMARY CARE		
All providers Physicians Nonphysicians	24.3 32.5 15.7	35.2 41.9 25.2

SOURCE Authors' analysis of data from the Centers of Medicaid and Medicare Services' National Plan and Provider Enumeration System, the Robert Wood Johnson Foundation's Health Insurance Exchange (HIX) Compare data set, and a list of provider networks from Vericred. **NOTES** Network size was estimated by the ratio of the number of providers participating in each network to the total number of providers eligible for that network in each state. Network size was calculated separately by provider practice field (primary care and mental health) and type (physician and nonphysicians).

the left of the line that indicates parity between the fields). Moreover, there was little correlation between network size for providers in the two fields—that is, plans with broader networks for primary care providers did not necessarily have larger networks for mental health care providers (Spearman's rank: 0.50). When we examined only providers who participated in at least one network (see Appendix 2), ²¹ the bias toward primary care was less pronounced, although correlation remained limited (Spearman's rank: 0.53).

Discussion

In this descriptive study of ACA Marketplaces in 2016, we found that provider networks for mental health care were far narrower than those for primary care. This finding was driven, in part, by lower rates of network participation among mental health care providers, compared to primary care providers.

ACA provisions require that all plans offered through the individual Marketplaces offer providers of care for mental health and substance use disorders, but consistent with previous research, we observed low levels of network participation among mental health care providers. Using national survey data, Tara Bishop and colleagues found that psychiatrists were the least likely among physicians to accept Medicaid, Medicare, and commercial insurance, and therefore to participate in provider networks. 10 There are several possible reasons for this abstention. It has been suggested that because of high demand for mental health services, psychiatrists have market power to choose not to participate in networks that may restrict their practice environment and reimburse them at low rates for time-intensive services such as care coordination, counseling, and psychotherapy. 10 As of 2008, for example, reimbursement for one outpatient psychotherapy session lasting 45-50 minutes was 40 percent less than reimbursement for three 15-minute medication management visits.²² Such differences may incentivize psychiatrists to change their practice patterns by opting out of the system altogether. Similar barriers are likely to exist for other mental health care providers. For example, a 2008 report from the Substance Abuse and Mental Health Services Administration cited a lack of reimbursement for case management and services provided by nonphysicians as major barriers to the provision of mental health care.23

Based on our findings, low network participation appears to contribute to the narrowness of mental health networks and may undermine the ability of both federal parity laws and the ACA to guarantee access to mental health care. Improv-

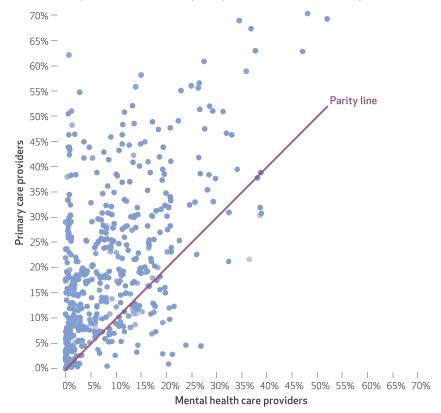
ing consumer choice and access will therefore require provider-side interventions that tackle the inadequacy of reimbursement rates, address the administrative burden and functioning of managed care, and help relieve a critical workforce shortage. Beyond these systemic changes, there is a need to expand network participation among high-quality, lower-cost, nonphysician mental health care providers to supplement or even substitute for some of the care traditionally provided by psychiatrists. Our findings of broader primary care networks and higher primary care provider participation also suggest an important supplementary access point for mental health care provision. As primary care physicians provide a growing volume of mental health services, implementing more effective models of collaboration between primary care physicians and mental health specialists will be increasingly vital. Insurers may need to direct greater attention toward measures of quality, care coordination, or health system integration, including in their network inclusion criteria, to accommodate and promote these models of care.

On the consumer side, we found a lack of correlation in network size for different provider types: Plans offering a relatively broad network of psychiatrists, for example, did not necessarily offer broad networks of psychologists or counselors. Nor did a greater choice of primary care providers imply a greater choice in mental health care providers. This heterogeneity in network size has the potential to reflect the variation in consumers' health care preferences, but a lack of transparency about insurers' network design may lead to uninformed decisions about plan selection. Recent surveys suggest that more than a quarter of consumers who selected plans with narrow networks were unaware of the network size of their plan.24 Since consumers appear to select plans based largely on price rather than on network characteristics,3 they may unwittingly trade choice of providers for lower premiums and therefore be vulnerable to access barriers and surprise out-of-network billing.3,25 Greater network transparency could ameliorate these problems.

Taken together, our findings are particularly salient in the context of ongoing parity efforts. The Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act required that existing mental health benefits be on a par with general medical and surgical benefits, but it also required parity in a wider set of health plan practices. These practices, called "non-quantitative treatment limitations," include tiered network design, network inclusion criteria, reimbursement rates, and any restrictions on provider specialty, and they must be "compa-

EXHIBIT 4

Correlation of plans' network sizes for primary care and mental health care providers, 2016



source Authors' analysis of data from the Centers of Medicaid and Medicare Service's National Plan and Provider Enumeration System, the Robert Wood Johnson Foundation's Health Insurance Exchange (HIX) Compare data set, and a list of provider networks from Vericred. **NOTES** Network size was estimated by the ratio of the number of providers participating in each network to the total number of providers eligible for network participation in each state. Each dot represents a single plan. Any dot on the parity line represents a plan with parity in network size between primary care and mental health care providers.

rable to [those in] and...applied no more stringently" to mental health care as compared to general medical and surgical care. 26

The ACA went further, mandating that mental health services be covered as one of ten essential health benefits. There are concerns that these regulations eliminate overt discrimination in coverage but may redirect insurers toward subtler tactics such as the use of restricted networks. In theory, insurers could offer lower-price plan options at the expense of in-network provider quality, or they could employ narrow mental health networks to discourage high-cost patients with mental illness from selecting certain plans.

While we were unable to identify the extent to which these practices are occurring among insurers, our findings confirm that overall plans in the ACA Marketplaces offer greater choice of primary care than of mental health care providers. This network structure is not undesirable in and of itself, given that some restriction of

specialty care is cost saving and likely necessary for managed competition. One concern, however, is that low rates of network participation by mental health care providers, compounded by narrow networks, may drive more enrollees toward out-of-network care. Use of out-of-network care is three times more common for mental health care than it is for general medical care²⁷ and is associated with higher cost sharing in the form of copayments, coinsurance, and deductibles. 28 An extension of federal parity laws to outof-network benefits could lessen these effects, 28 but it is still unclear what degree of out-of-network care adversely affects access and health outcomes. More research is needed to help guide state and federal policy toward network adequacy standards, as these standards must balance consumers' preferences for greater provider choice with insurers' interest in containing costs.

To some extent, market-level competition may serve to regulate network adequacy standards: In 2017, plans that exited the Marketplaces were more likely to have an unappealing combination of higher premiums and smaller networks of mental health care providers, compared to plans that stayed.²⁹ But greater monitoring and regulation is ultimately needed. While ACA provisions established national standards for network adequacy where none previously existed, the provisions nonetheless rely heavily on states to determine insurers' compliance. While some states are requiring insurers to meet additional quantitative standards such as minimum provider-to-enrollee ratios and maximum distance to providers,8 there is little practical consensus about what constitutes reasonable access to care. Moreover, twenty-one states still use qualitative language that is challenging to interpret. 12 Continued efforts at the state and federal levels to enhance network transparency, monitoring, and oversight will help improve this plan design

Low network participation may undermine the ability of both federal parity laws and the ACA to guarantee access to mental health care.

feature and help ensure that mental health care needs are met.

Conclusion

In this study of the ACA Marketplace plans, we found that networks for mental health care were narrower than those for primary care—a disparity likely exacerbated by very low network participation among mental health care providers, particularly those who are not physicians. We also saw considerable variation in plans' inclusion of mental health care versus primary care providers, potentially complicating consumers' understanding and selection of network composition. In the context of efforts to provide mental health benefits on a par with those for general medical conditions, these findings highlight important structural barriers to parity that not only necessitate provider-side interventions to encourage greater network participation, but also require consensus about and regulation of network adequacy standards.

NOTES

- 1 McKinsey Center for U.S. Health System Reform. Hospital networks: perspective from three years of exchanges [Internet]. New York (NY): McKinsey and Company; 2016 Mar 5 [cited 2017 Aug 14]. Available from: http://healthcare.mckinsey.com/ sites/default/files/McKinsey %20Reform%20Center_2016%20 Exchange%20Networks_FINAL.pdf
- 2 McKinsey and Company. Exchanges three years in: market variations and factors affecting performance [Internet]. New York (NY): McKinsey and Company; 2016 May [cited 2017 Jul 26]. Available from: http://healthcare.mckinsey.com/exchanges-three-years-market-
- variations-and-factors-affectingperformance
- **3** Polsky D, Cidav Z, Swanson A. Marketplace plans with narrow physician networks feature lower monthly premiums than plans with larger networks. Health Aff (Millwood). 2016;35(10):1842–8.
- 4 Hamel L, Norton M, Levitt L, Claxton G, Brodie M. Survey of non-group health insurance enrollees, wave 2 [Internet]. Menlo Park (CA): Henry J. Kaiser Family Foundation; 2015 May 21 [cited 2017 Jul 27]. Available from: http://kff.org/health-reform/poll-finding/survey-of-non-grouphealth-insurance-enrollees-wave-2/
- **5** Schleicher SM, Mullangi S, Feeley

- TW. Effects of narrow networks on access to high-quality cancer care. JAMA Oncol. 2016;2(4):427–8.
- **6** Dorner SC, Jacobs DB, Sommers BD. Adequacy of outpatient specialty care access in Marketplace plans under the Affordable Care Act. JAMA. 2015;314(16):1749–50.
- 7 Cunningham PJ. Beyond parity: primary care physicians' perspectives on access to mental health care. Health Aff (Millwood). 2009;28(3): w490–501. DOI: 10.1377/hlthaff .28.3.w490
- **8** McGuire TG. Achieving mental health care parity might require changes in payments and competition. Health Aff (Millwood). 2016;

- 35(6):1029-35.
- **9** Horgan CM, Hodgkin D, Stewart MT, Quinn A, Merrick EL, Reif S, et al. Health plans' early response to federal parity legislation for mental health and addiction services. Psychiatr Serv. 2016;67(2):162–8.
- 10 Bishop TF, Press MJ, Keyhani S, Pincus HA. Acceptance of insurance by psychiatrists and the implications for access to mental health care. JAMA Psychiatry. 2014;71(2): 176–81.
- 11 O'Malley AS, Reschovsky JD. No exodus: physicians and managed care networks [Internet]. Washington (DC): Center for Studying Health System Change; 2006 May [cited 2017 Aug 15]. (Tracking Report). Available for download from: http://research.policyarchive.org/21636.pdf
- 12 Quoted in Giovannelli J, Lucia KW, Corlette S. Implementing the Affordable Care Act state regulation of Marketplace plan provider networks [Internet]. New York (NY): Commonwealth Fund; 2015 May [cited 2017 Jul 27]. Available from: http://www.commonwealthfund.org/~/media/files/publications/issuebrief/2015/may/1814_giovannelli_implementing_aca_state_reg_provider_networks_rb_v2.pdf
- 13 Robert Wood Johnson Foundation. HIX Compare [Internet]. Princeton (NJ): RWJF; [cited 2017 Jul 27]. Available from: http://www.rwjf .org/en/library/collections/hixcompare.html
- 14 Giovannelli J, Lucia K, Corlette S. Health Policy Brief: Regulation of health plan provider networks. Health Affairs [serial on the Internet]. 2016 Jul 28 [cited 2017 Jul 27]. Available from: http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=160
- 15 CMS.gov. Taxonomy [Internet].
 Baltimore (MD): Centers for Medicare and Medicaid Services; [last modified 2016 Dec 5; cited 2017 Jul

- 27]. Available from: https://www .cms.gov/medicare/providerenrollment-and-certification/ medicareprovidersupenroll/ taxonomy.html
- 16 Heisler EJ, Bagalman E. The mental health workforce: a primer [Internet]. Washington (DC): Congressional Research Service; 2015 Apr 16 [cited 2017 Jul 27]. Available from: https://fas.org/sgp/crs/misc/R43255.pdf
- 17 Agency for Healthcare Research and Quality. The number of nurse practitioners and physician assistants practicing primary care in the United States [Internet]. Rockville (MD): AHRQ; [last reviewed 2014 Oct; cited 2017 Jul 27]. Available from: https://www.ahrq.gov/research/findings/factsheets/primary/pcwork2/index.html
- 18 Substance Abuse and Mental Health Services Administration. Behavioral health, United States, 2012 [Internet]. Rockville (MD): SAMHSA; 2013 [cited 2017 Jul 27]. Available from: https://www.samhsa.gov/ data/sites/default/files/2012-BHUS.pdf
- 19 Polsky D, Zhang Y, Yasaitis L, Weiner J. Trends in physician networks in the marketplace in 2016 [Internet]. Philadelphia (PA): University of Pennsylvania, Leonard Davis Institute of Health Economics; 2016 Dec [cited 2017 Jul 27]. (Data Brief). Available from: https://ldi.upenn.edu/sites/default/files/pdf/Narrow %20Networks%20in%202016_0.pdf
- 20 Bishop TF, Seirup JK, Pincus HA, Ross JS. Population of US practicing psychiatrists declined, 2003–13, which may help explain poor access to mental health care. Health Aff (Millwood), 2016:35(7):1271–7.
- 21 To access the Appendix, click on the Appendix link in the box to the right of the article online.
- 22 Mojtabai R, Olfson M. National trends in psychotherapy by office-

- based psychiatrists. Arch Gen Psychiatry. 2008;65(8):962–70.
- 23 Mauch D, Kautz C, Smith S. Reimbursement of mental health services in primary care settings [Internet]. Rockville (MD): Substance Abuse and Mental Health Services Administration; 2008 Feb [cited 2017 Jul 27]. Available from: https://store.samhsa.gov/shin/content/SMA08-4324/SMA08-4324/JMA08-4324/JMA08-4324/SMA08-
- 24 Bauman N, Coe E, Ogden J, Parikh A.
 Hospital networks: updated national
 view of configurations on the exchanges [Internet]. New York (NY):
 McKinsey and Company; [cited 2017
 Jul 27]. Available from: http://
 healthcare.mckinsey.com/sites/
 default/files/McK%20Reform
 %20Center%20-%20Hospital
 %20Center%20-%20national%20
 update%20%28June%202014
 %29_0.pdf
- 25 Cooper Z, Scott Morton F. Out-ofnetwork emergency-physician bills an unwelcome surprise. N Engl J Med. 2016;375(20):1915–8.
- 26 CMS.gov. The Mental Health Parity and Addiction Equity Act (MHPAEA) [Internet]. Baltimore (MD): Centers for Medicare and Medicaid Services; [cited 2017 Aug 14]. Available from: https://www.cms.gov/cciio/programs-and-initiatives/other-insurance-protections/mhpaea_factsheet.html
- 27 Kyanko KA, Curry LA, Busch SH.
 Out-of-network provider use more
 likely in mental health than general
 health care among privately insured.
 Med Care. 2013;51(8):699–705.
- 28 McGinty EE, Busch SH, Stuart EA, Huskamp HA, Gibson TB, Goldman HH, et al. Federal parity law associated with increased probability of using out-of-network substance use disorder treatment services. Health Aff (Millwood). 2015;34(8):1331–9.
- 29 Garthwaite C, Graves JA. Success and failure in the insurance exchanges. N Engl J Med. 2017;376(10):907–10.