
Are Behavioral Health Providers Located in Areas of Deprivation?

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Introduction

Evidence exists demonstrating that access to the behavioral health care workforce is not equally distributed on a national scale.^{1,2} Access to both the behavioral health workforce and the treatment facilities that provide care are stymied by geographic disparities.³ For example, office-based mental health settings are less likely to be located in lower-income communities, while higher level of care settings like mental health treatment facilities are located in high-need communities.⁴ To date, little work has explored whether individual behavioral health clinicians (BHCs) are positioned in high-need or disadvantaged areas. Inadequate distribution of BHCs in these areas is a major concern as behavioral health needs in marginalized communities are likely to be high, yet these areas may be the least likely to have access to BHCs and services. Understanding the distribution of BHCs is an important indicator of the behavioral health workforces' ability to address increasing behavioral health needs in areas of disadvantage.

Research Questions

To examine the proportion of the behavioral health workforce located in areas of high need, this study analyzed the geographic location of three types of BHCs across a standardized index of area disadvantage. The study sought to answer two research questions: 1) How is the behavioral health workforce distributed in areas of high social need, as measured by the area deprivation index (ADI)? and 2) Are there differences in the proportion of behavioral health workforce in areas of high ADI by BHC type (e.g., counselors, social workers, psychologists) and rurality?

Methods

Data were drawn from the publicly available Centers for Medicare and Medicaid National Plan and Provider Enumeration System's (NPPES) National Provider Identifier (NPI) database in fall 2021. Three BHC provider types were included in the sample identified by NPI taxonomy codes: Social workers, counselors, and psychologists. To measure the level of community social disadvantage the area disadvantage index (ADI), a measure of how social needs and risk factors in communities impact the health of the population at the census block-group level, was used. The ADI measures neighborhood-level social determinants of health and collates multiple aspects of disadvantage using 17 indicators, including housing quality, employment, and average income. BHC practice addresses were geocoded using the ESRI StreetMap® database and ESRI ArcGIS. Practice geocodes were mapped to neighborhood tract-level units which were

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associated with an ADI score that ranged from 0 (no need) to 100 (highest need). The rate of BHCs per 100k people per decile of ADI was calculated. Bivariate statistics were used to compare differences in the proportion of BHCs by the population, ADI level, provider type, and rurality.

Key Findings

A total of 836,780 BHCs were included in the analysis (51.5% counselors, 34.5% social workers, and 14.0% psychologists). On average there were 259.1 BHCs per 100,000 people in the U.S. Of all census block groups (271,739), 47.9% had at least one BHC present. When examining the rate of BHCs per 100,000 by ADI in areas of lowest social need, there were 351 BHCs per 100,000 as compared to 267 BHCs per 100,000 in areas of highest need. Psychologists and social workers had a much higher rate of clinicians per 100,000 in areas of lowest need (82.5 and 128 respectively) than in areas of highest need (89.1 and 19.1). However, there were more counselors per population in areas of highest need when compared to areas of lowest need (140 vs. 158). Similarly, there were fewer BHCs per population in rural than in non-rural areas. In block groups that were rural, there were 177 BHCs per 100,000 as compared to 277 BHCs per 100,000 in block groups that were not rural. Across all three BHC types there were more clinicians per population in non-rural areas as compared to rural.

The difference in rate of BHCs per population in areas of high and low need was attenuated when examining rurality. After excluding rural block groups, the difference in the rate of BHCs per 100,000 was smaller at 353.8 BHCs in low-need areas and 297.8 per 100,00 people in high-need areas. Surprisingly, there were more BHCs in higher-need communities that were rural than in lower-need communities that were rural. For psychologists and social workers, there were more than two times as many clinicians practicing in non-rural areas of low need as compared to rural areas with low need (Psychologists: 83.4 vs. 33.5; Social workers: 129.4 vs. 58.7). Fewer counselors per 100K population practiced in rural areas, but there were more counselors in areas of high social need as compared to low. With respect to the zero-inflated portion of the models, results indicated that increases in level of social disadvantage were associated with significant increases in the odds of a census-block not possessing social workers (OR = 1.42, $p < .001$), psychologists (OR = 1.29, $p < .001$), or counselors (OR = 1.27, $p < .001$). Increases in ADI were associated with decreases in the expected rate of social workers (IRR = 0.99, $p < .001$) and psychologists (IRR = 0.92, $p < .001$), and increases in ADI were associated with an increase in the expected rate of counselors (IRR = 1.02, $p < .001$).

Policy Implications

This study expands on previous work examining the maldistribution of the behavioral health workforce in four important research areas: 1) the distribution of non-prescriber BHCs; 2) the distribution of the behavioral health workforce using a standardized measure of social disadvantage; 3) the rate of BHCs at the block group level; and 4) the relationship between ADI and rurality for the distribution of BHCs. Results indicate a striking maldistribution of BHCs in communities with greater social disadvantage, with areas of higher social disadvantage having

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significantly fewer BHCs practicing in their community. Addressing rural behavioral health needs is considered a top priority for states and federal agencies, though more knowledge is needed on how health care resources may vary in high- and low-need rural communities.

Developing and implementing policies that support BHCs practicing in high-need communities is greatly needed considering the current behavioral health crisis. Refining and examining behavioral health service catchment areas is one strategy that may better allow researchers and policy makers to assess the adequacy and distribution of the behavioral health workforce: factors such as neighborhood red lining may impact how a workforce is distributed.⁵ An additional method for addressing gaps in behavioral health workforce is to leverage the existing workforce in areas of high need by expanding reimbursement options and providers who can deliver care.⁶ Anticipated changes to Medicare reimbursement policy in 2024 will allow for counselor reimbursement,⁷ potentially improving access to behavioral health services. Lastly, policymakers might consider broadening and improving mechanisms to incentivize different BHC types to work in areas of high need, such as through state and federal loan repayment programs⁸ and increased reimbursement rates for BHC service provision. Increasing research efforts examining the proportion of BHCs who accept Medicaid and Medicare and the mechanisms to increase public insurance acceptance could increase access to care in communities of high social disadvantage. Only when payment policies and practice regulations support the provision of behavioral health services in high-need areas can there be improvements in individual and population-level behavioral health.⁶

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Figures

Figure 1. Behavioral Health Clinicians by 100k Comparing Rural and ADI

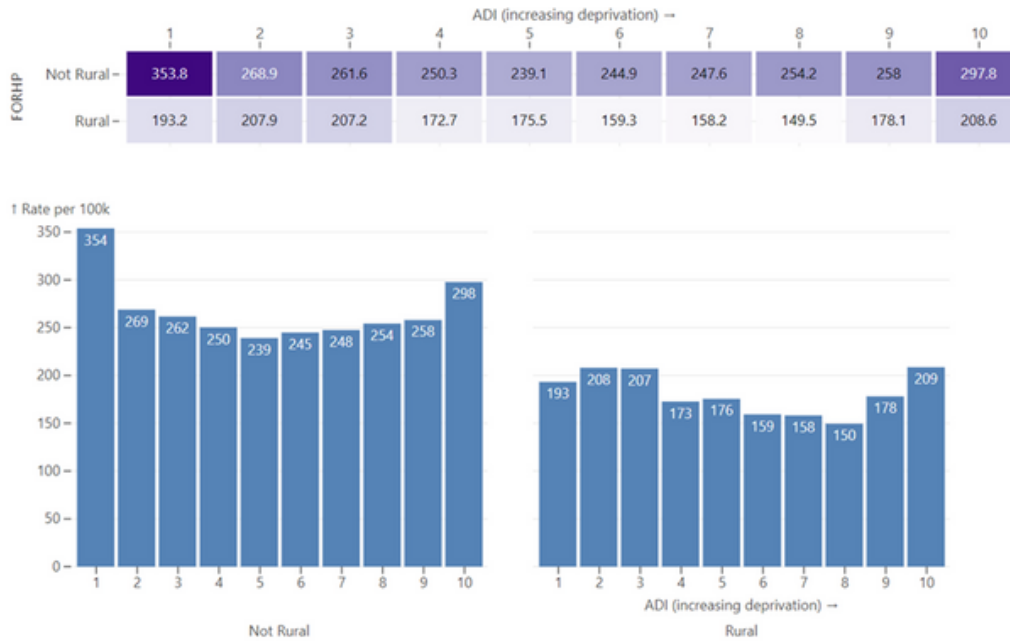
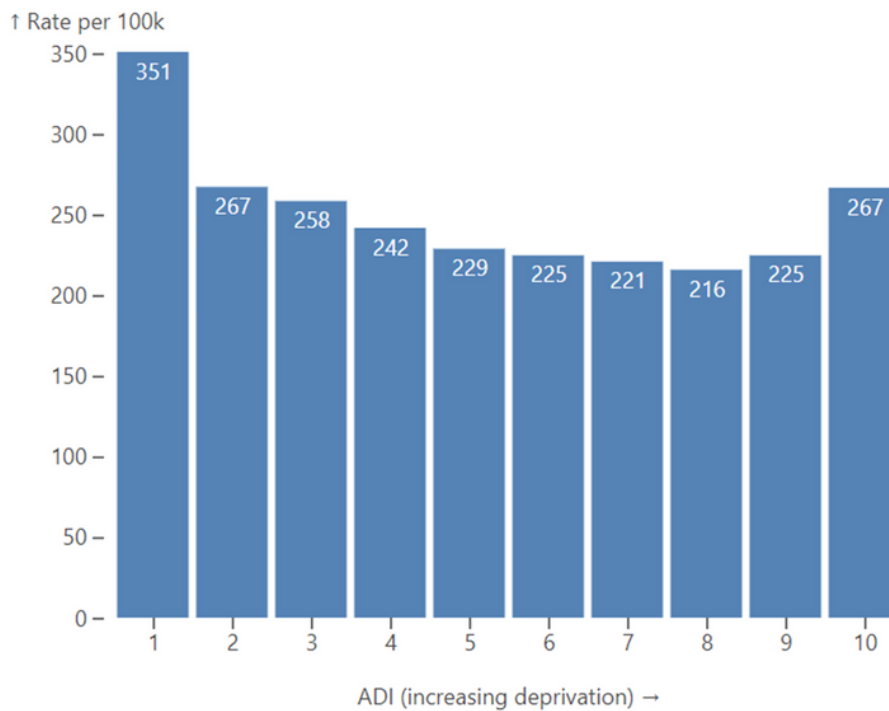


Figure 2. Behavioral Health Clinicians by ADI

All Behavioral Health (Counselors, Social Workers, Psychologists)



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Figure 3. Social Workers per 100k by ADI

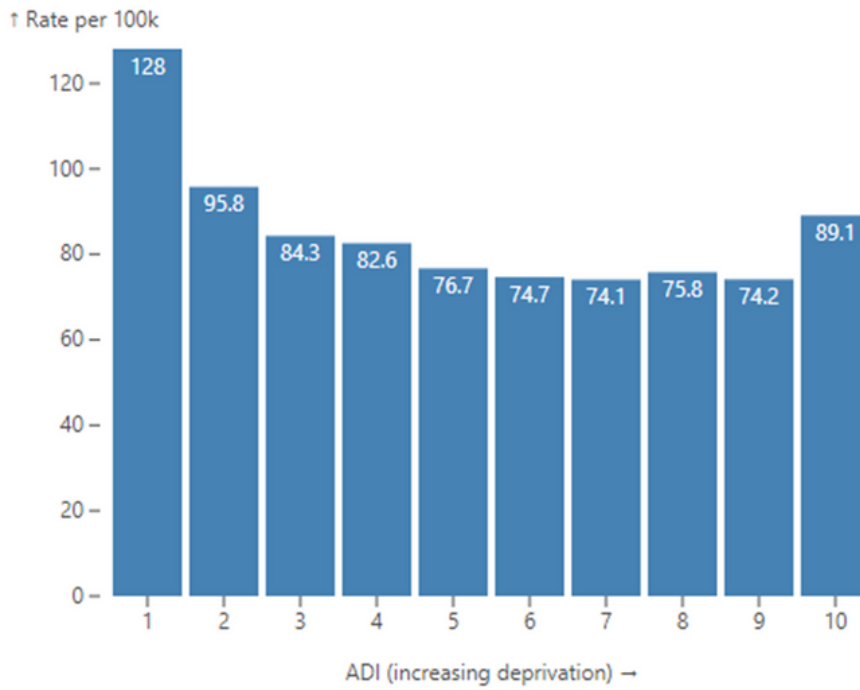
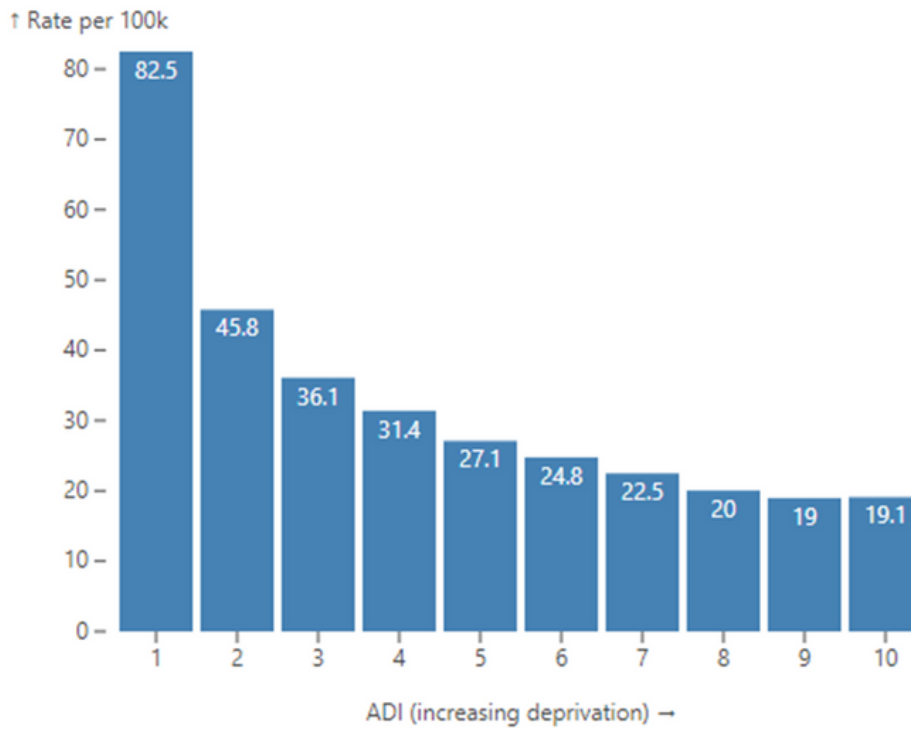


Figure 4. Psychologists per 100k by ADI



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Figure 5. Counselors per 100k by ADI

