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Abstract
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Are Behavioral Health Providers Located in Areas of Deprivation?

Brianna Lombardi, PhD MSW, Lisa de Saxe Zerden, PhD MSW, Todd Jensen, PhD MSW, Evan Galloway, MPS, Maria Gaiser, MPH

Introduction

Access to behavioral health care services in the United States is significantly impeded by workforce shortages and maldistribution of behavioral health providers. To better understand the distribution and positioning of behavioral health clinicians (BHCs) in disadvantaged and vulnerable communities, this study analyzed the geographic location of three BHC types across a standardized index of area disadvantage. This study assessed: (1) How is the behavioral health workforce distributed in areas of high 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 provider type?

Methods

Data was drawn from the CMS National Plan and Provider Enumeration System's 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. BHC practice addresses were geocoded using the ESRI StreetMap® database and ESRI ArcGIS. Practice geocodes were mapped to neighborhood tract-level units which were associated with an ADI score that ranged from 0 (no need) to 100 (highest need). ADI measures neighborhood-level social determinants of health and collates multiple aspects of disadvantage using 17 indicators including housing quality, employment, and average income. 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.

Findings

The sample included 836,780 BHCs with 51.5% identified as counselors (n=430,751), 34.5% social workers (n=288,527), and 14.0% psychologists (n=117,502). Across all BHC types, the rate of BHCs per 100k people was 351 in the lowest area of need compared to 267 in the highest need areas. The BHC type was differently associated with the rate of BHC per 100k by ADI. For example, there were 128 social workers per 100k in areas of low need and 89 social workers per 100k in high need, as compared to psychologists which ranged from 82.5 per 100k in low need to 19.1 per 100k in high need areas.

Counselors' rates per 100k were inversely related with ADI with 140 in the lowest areas of need compared to 158 in the highest need neighborhoods. An interaction between ADI and rurality was also observed in that BHCs were least likely to be in areas of high need that were also rural.

Conclusions and Policy Implications

Findings highlight a maldistribution of BHCs in areas of social disadvantage which likely results in decreased access to behavioral health services in these areas. Leveraging the existing workforce in high-need areas by expanding reimbursement options and the provider types able to deliver care. Identifying additional strategies such as training, loan repayment, and payment parity for BHCs may support the provision of behavioral health services to areas with high ADI.