POLICY BRIEF

Behavioral Health Provider Geographic Distribution and Reimbursement Inequities

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Background

Behavioral health care is considered the country's most costly health condition, at an estimated annual expenditure of $201 billion.[1] Despite the significant expense associated with behavioral health care, unmet need remains high. Behavioral health provider shortages and associated maldistribution of practitioners across the country may contribute to suboptimal behavioral healthcare availability,[2–7] with an estimated 59.8% of the 5,035 mental health provider shortage areas in the U.S. located in rural and partially rural areas.[8]

This study examines the relationship between reimbursement and provider shortages within the behavioral health workforce. We hypothesize that variation in reimbursement across the country contributes to disparities in the geographic distribution of behavioral health providers, and that these providers are responsive to variation in reimbursement through their practice location. This population is anticipated to be particularly vulnerable to geographic disparities in pay owing to consistently lower reimbursement rates than their non-behavioral health peers. Although federal and state policies, namely parity laws, intend to address inequitable design of reimbursement rates between behavioral health and non-behavioral health providers, disparities remain in payment.[9,10] We hypothesize that reimbursement within a geographic area will be positively correlated with number of behavioral health providers in this region using a case study of licensed psychologists in metropolitan areas.

Methods

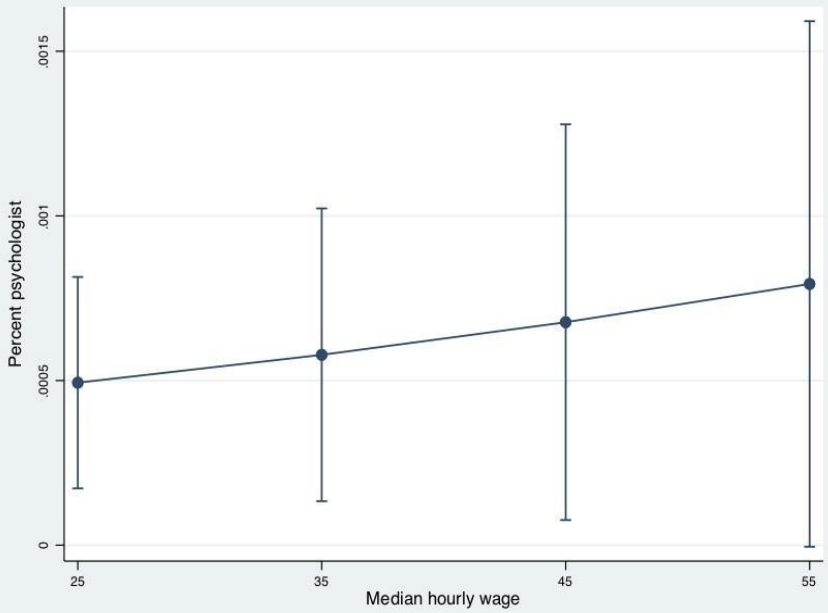
This cross-sectional study used data from the 2017 Bureau of Labor Statistics Occupational Employment Statistics system and the 2017 American Community Survey 1-year files. We conducted all analyses using Stata, version 15.1. Data from both sources were merged using core-based statistical area codes for metropolitan areas. A generalized linear model with a log link and a gamma distribution was used to examine the association between median hourly wage and psychologist provider distribution.

Key Findings

The number of psychologists as a percentage of the total non-civilian institutionalized population was <1% across all metropolitan areas with an interquartile range equal to 0.02% (25th percentile: 0.02; 75th percentile: 0.04). Median hourly wage ranged from approximately $20.00 to >$56.00 per hour with an average wage of $33.69 across metropolitan areas. Only four metropolitan areas contained <50% of its residents identifying as Hispanic or non-Hispanic white. Of the 230 metropolitan areas, 68.70% had ≥75% residents identifying as white.

The results from the generalized linear model assessing the association between median hourly wage and percentage of non-civilian institutionalized population who are psychologists indicate that the coefficient on hourly median wage is positively correlated with the percentage of residents who identify as psychologists. In addition to percentage of psychologists, percentage of total non-institutionalized civilian population employed and white is also correlated with the number of psychologists in a metropolitan area.

Figure 1. Average marginal effects of median hourly wage on percentage of psychologists with 95% CIs (N=230)



Conclusions & Policy Implications

This study explored the relationship between reimbursement inequities and provider geographic using a sample of the behavioral health workforce. We identified a positive correlation between hourly median wage and percentage of the population that identified as a psychologist in metropolitan areas, a relationship that persisted when controlling for racial distribution, employment, veteran status, household income, education, and disability. By demonstrating the positive relationship between hourly wage and number of psychologists in a metropolitan area, we highlight an inequity within a provider group that may contribute to the unmet need for behavioral health services[11] and associated provider shortages.[3–5,8]

Future policies should focus on addressing inequities both within provider groups by geographic area and across comparable clinical categories. A potential expansion of the National Health Service Corps Loan Repayment program may address inequitable geographic distribution amongst the psychologist's workforce through loan repayment for behavioral health providers who agree to a 2-year service contract in a health profession shortage area.[12] Policymakers may also consider increasing public reimbursement for behavioral health services to increase the number of practitioners accepting public insurance. Policy may also be able to address inequitable distribution of psychologists through education of providers on billing practices in a continuing education, residency, or postgraduate internship context.

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References

1. Roehrig C. Mental disorders top the list of the most costly conditions in the United States: $201 billion. *Health Aff (Millwood)*. 2016;25(6):1130-1135.
2. Olfson M. Building the mental health workforce capacity needed to treat adults with serious mental illnesses. *Health Aff (Millwood)*. 2016;35(6):983-990. doi:10.1377/hlthaff.2015.1619.
3. 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):1271-1277. doi:10.1377/hlthaff.2015.1643.
4. Thomas KC, Ellis AR, Konrad TR, Holzer CE, Morrissey JP. County-level estimates of mental health professional shortage in the United States. *Psychiatr Serv*. 2009;60(10):1323-1328.
5. Ziller EC, Anderson NJ, Coburn AF. Access to rural mental health services: service use and out□of□ pocket costs. *J Rural Health*. 2010;26(3):214-224. doi:10.1111/j.1748-0361.2010.00291.x.
6. Shipman SA, Lan J, Chang C-h, Goodman DC. Geographic maldistribution of primary care for children. *Pediatrics*. 2011;127(1):19-27. doi:10.1542/peds.2010-0150.
7. Baicker K, Chandra A, Skinner J. Geographic variation in health care and the problem of measuring racial disparities. *Perspect Biol Med*. 2005;48(1):42-S53. doi:10.1353/pbm.2005.0020.
8. Health Resources and Services Administration. Fourth quarter of fiscal year 2018 designated HPSA quarterly summary. https://ersrs.hrsa.gov/ ReportServer?/HGDW_Reports/BCD_HPSA/ BCD_HPSA_SCR50_Qtr_Smry_HTML&rc:Toolbar=false. Published 2018. Accessed October 1, 2019.
9. Mark TL, Olesiuk W, Ali MM, Sherman LJ, Mutter R, Teich JL. Differential reimbursement of psychiatric services by psychiatrists and other medical providers. *Psychiatr Serv*. 2018;69(3):281-285. doi:10.1176/ appi.ps.201700271.
10. Melek S, Perlman D, Davenport S, Matthews K, Mager M. Impact of Mental Health Parity and Addiction Equity Act. 2017:7. http://www.milliman.com/uploadedFiles/insight/2017/impact-mental-health-parity-act.pdf. Published November 2017. Accessed October 4, 2019.
11. Substance Abuse and Mental Health Services Administration. Key substance use and mental health indicators in the United States: results from the 2017 National Survey on Drug Use and Health (HHS Publication No. SMA 18-5068, NSDUH Series H-53). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. https:// www.samhsa.gov/data/. Published 2018. Accessed October 1, 2019.
12. Health Resources and Services Administration. NHSC Loan Repayment Program. http://nhsc.hrsa.gov/ loan-repayment/nhsc-loan-repayment-program.html. Accessed October 2, 2019.