

POLICY BRIEF

Estimating the Distribution of the U.S. Psychiatric Subspecialist Workforce



Project Team

Angela J. Beck, PhD, MPH
Cory Page, MPH, MPP
Jessica Buche, MPH, MA

Danielle Rittman
Maria Gaiser

Background

Given the nationwide shortage of psychiatric providers^{1,2} and the discrepancy in the supply of providers between rural and urban areas³⁻⁶, understanding how psychiatrists are distributed across the country is important for addressing issues around access to care. Psychiatric subspecialists who treat vulnerable populations like child and adolescent psychiatrists (CAPs), geriatric psychiatrists (GPs), and addiction psychiatrists (APs) are in far fewer supply than general psychiatrists, and their relative distribution is not readily accessible. The purpose of this study was to conduct a county-level analysis of these psychiatrists and determine whether supply in rural and metropolitan communities significantly differed.

Methods

Data were received from the American Medical Association (AMA) Physician Masterfile, which included the number of active physicians who identified as psychiatrists, CAPs, GPs, or APs per U.S. county.⁷ U.S. Census Bureau 2017 county population estimates⁸ were used to better contextualize the prevalence of physicians per county. Ratios of providers per 100,000 population were calculated, with CAPs being compared to county population under the age of 18 and GPs being compared to county population over the age of 64. Rurality of each county was determined by using the Federal Office of Rural Health Policy's list of U.S. counties by metropolitan status.⁹ Two-sample *t*-tests were conducted to compare the average number of psychiatrists per 100,000 urban population to the number of psychiatrists per 100,000 rural population.

Key Findings

Of the 3,149 counties in the U.S., 1,473 had at least one psychiatrist of any type (46.8%) (Table 1). Predominately, psychiatrists were located within the northeastern U.S.; some small pockets of concentrated psychiatrists practiced along the west coast. Findings showed that rurality was associated with a statistically lower ratio of these psychiatrist categories per 100,000 population (Table 2).

Table 1. Select National Psychiatrist Statistics

| | Psychiatrists | Child and Adolescent Psychiatrists | Geriatric Psychiatrists | Addiction Psychiatrists |
|---|----------------------|------------------------------------|-------------------------|-------------------------|
| National Total | 41,133 | 9,956 | 1,265 | 836 |
| Providers per 100,000 State Population | 12.6 | 14.9* | 2.6** | 0.3 |
| State with Highest Count of Providers | California (5934) | California (1215) | New York (218) | New York (170) |
| State with Highest Ratio per 100,000 Population | D.C. (47.6) | D.C. (65.4*) | Rhode Island (14.4**) | Connecticut (1.1) |
| State with Lowest Ratio per 100,000 Population*** | Idaho (5.0) | Idaho (5.1*) | Oklahoma (0.2**) | Tennessee (0.01) |
| County with Highest Ratio per 100,000 Population | New York, NY (108.3) | Fairfax, VA (2659.8*) | St. Louis, MO (932.8**) | Pawnee, KS (15.0) |

* Per 100,000 Population Under Age 18

**Per 100,000 Population Age 65 and Older

***Discounting states without any such provider

Table 2. Mean Supply of Psychiatrists by Rural/Urban County Status

| | Urban Counties | Rural Counties | t | P-value |
|--|----------------|----------------|-------|----------|
| Counties (n) | 578 | 2568 | | |
| Mean Ratio of Psychiatrists per 100,000 Population (Standard deviation) | 9.30 (12.21) | 3.01 (6.13) | 12.06 | <0.00001 |
| Mean Ratio of CAPs per 100,000 Population Aged 17 and Younger (Standard deviation) | 35.93 (200.09) | 6.41 (62.50) | 3.51 | 0.0004 |
| Mean Ratio of GPs per 100,000 Population Aged 65 and Older (Standard deviation) | 8.21 (60.31) | 0.82 (8.74) | 2.94 | 0.0034 |
| Mean Ratio of Aps per 1,000,000 Population (Standard deviation) | 0.19 (0.75) | 0.04 (0.42) | 4.43 | <0.0001 |

Conclusions & Policy Implications

According to the key findings of this study, psychiatrists and psychiatric subspecialists could benefit from such policies as:

- Tracking whether the federal National Health Service Corps, having expanded its mission in fall.
- Developing partnerships between rural health provider locations and medical schools to locate residents in rural areas, and encouraging them to practice there after graduation.
- Utilizing telepsychiatry to leverage the existing psychiatric workforce to its maximum capacity, by building necessary telecommunications infrastructure, reimbursing it through Medicaid, and adjusting state regulations that could create barriers to interstate care provision.
- 2018 to place psychiatrists into medically underserved areas in exchange for loan repayment, creates significant changes in the distribution of new psychiatrists across the country.

References

1. Cummings JR, Wen H, Ko M, Druss BG. Race/ethnicity and geographic access to Medicaid substance use disorder treatment facilities in the United States. *JAMA Psychiatry*. 2014;71(2):190-196.
2. National projections of supply and demand for behavioral health practitioners: 2013-2025. HRSA.gov. <https://bhw.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/behavioral-health2013-2025.pdf>. Published 2015. Accessed June 4, 2018.
3. Schwartz RH, O'Laughlen MC, Kim J. Survey to child/adolescent psychiatry and developmental/behavioral pediatric training directors to expand psychiatric-mental health training to nurse practitioners. *J Am Assoc Nurse Pract*. 2017;29(6).
4. Workforce maps by state. AACAP.org. https://www.aacap.org/aacap/Advocacy/Federal_and_State_Initiatives/Workforce_Maps/Home.aspx. Published 2018. Accessed June 4, 2018.
5. Juul D, et al. Subspecialty training and certification in geriatric psychiatry: a 25-year overview. *Am J Geriatr Psychiatry*. 2017;25(5):445-453.
6. Tinsley J. Workforce information on addiction psychiatry graduates. *Acad Psychiatry*. 2004;28(1):56-59.
7. Physician mailing lists marketing. MMSlists.com. <https://mmslists.squarespace.com/physician-lists-data>. Published 2018. Accessed June 4, 2018.
8. County population totals and components of change: 2010-2017. Census.gov. <https://www.census.gov/data/datasets/2017/demo/popest/counties-total.html>. Published 2018. Accessed June 4, 2018.
9. Federal Office of Rural Health Policy (FORHP) data files. HRSA.gov. <https://www.hrsa.gov/rural-health/about-us/definition/datafiles.html>. Updated October 2017. Accessed June 4, 2018.