

#### Treatment Advocacy Center

#### OFFICE OF RESEARCH AND PUBLIC AFFAIRS

Research Summary
January 2024

# Estimating Psychiatric Bed Need in the United States

Shanti Silver

Like any other chronic medical condition, people with severe mental illness experience symptoms that vary in severity over time. In times of acute symptom severity, inpatient care may be required to protect the health of an individual. However, due to the current shortage of psychiatric beds in the United States, people seeking admission to a psychiatric hospital may not be able to access a bed, even when one is desperately needed.

Despite evidence of bed shortages nationally, there are no official recommendations for the number of beds needed to ensure that all who may need an inpatient bed are able to access one. While this research summary explores recent recommendations and bed need estimates, the federal government should consider investing in research to provide official estimates of hospital bed need by type, facility and location.

Experts have generated several estimates for the number of psychiatric beds needed to maintain community health. However, recent estimates for the necessary number of beds needed lie between

AN ABSOLUTE MINIMUM

30
BEDS PER
100,000
POPULATION



AN OPTIMAL NUMBER OF

BEDS PER
100,000
POPULATION

### Estimating Psychiatric Bed Need Per Capita

Experts have generated several estimates for the number of psychiatric beds needed to maintain community health. However, recent estimates for the necessary

number of beds needed lie between an absolute minimum of 30 beds per 100,000 population and an optimal number of 60 beds per 100,000 population:

- An international panel of 65 experts
   who were selected based on relevant
   contributions to mental health research
   found that "Sixty psychiatric beds per
   100 000 population were considered
   optimal and 30 the minimum, whilst
   25–30 was regarded as mild, 15–25 as
   moderate, and less than 15 as severe
   shortage."
- In a 2021 study of psychiatric beds in California from the RAND Corporation, researchers "us[ed] observed occupancy rates, wait list volumes, and requested transfers [to] estimate that California requires 50.5 inpatient psychiatric beds per 100,000 adults: 26.0 per 100,000 at the acute level and

- 24.6 per 100,000 at the subacute level, or 7,945 and 7,518 beds, respectively."<sup>2</sup>
- One model published in 2021 found that the United States needs 35 beds per 100,000 population to have sufficient capacity to address community need. However, this model was used to assess the need for psychiatric under a hypothetical scenario where an optimal level of community mental health services is provided.<sup>3</sup>
- In an international model based on "rates of psychiatric disability, community mental health services, and socioeconomic indicators", "overall levels of need were found to be 45.5 beds per 100,000, with a 95-percent probability that the true level is within the 36.5 to 54.5 range."4
- A 2008 Treatment Advocacy Center study that "solicited opinions from 15 experts on psychiatric care in the United States" found that "almost all 15 experts estimated a need for 50 (range 40 to 60) public psychiatric beds per 100,000 population for hospitalization for individuals with serious psychiatric

disorders." These estimates assumed the availability of good outpatient programs and assumed the availability of outpatient commitment, which is not available in most counties.<sup>5</sup>

### Current Psychiatric Bed Capacity in the United States

Whether using a benchmark of 30 or 60, it is clear that the United States does not have enough inpatient psychiatric services to address community need. In 2022, there were only approximately 18 inpatient hospital beds per 100,000 population according to data from the Substance Abuse and Mental Health Services Administration (SAMHSA).

However, some states are closer to meeting community need for 24-hour inpatient psychiatric hospital beds than others (Table 1). States such as Kansas, Hawai'i, West Virginia, Montana, Mississippi, Arkansas, Wyoming, and the District of Columbia currently have at least 30 beds per 100,000 population, while other states such as Minnesota and Maryland have less than 10 beds per 100,000 population.

Table 1: Total number of mental health 24-hour inpatient beds in hospital inpatient settings on March 31, 2022<sup>6</sup>

State	Total number beds	Beds per 100,000	Beds needed to reach absolute minimum necessary number of beds (30 per 100,000)	Beds needed to reach optimal number of beds (50 per 100,000)
Alabama	649	12.8	873	1,888
Alaska	172	23.4	48	195
Arizona	1,591	21.6	617	2,089
Arkansas	1,121	36.8	0	402
California	5,703	14.6	6,006	13,812
Colorado	1,156	19.8	596	1,764
Connecticut	891	24.6	197	922

State	Total number beds	Beds per 100,000	Beds needed to reach absolute minimum necessary number of beds (30 per 100,000)	Beds needed to reach optimal number of beds (50 per 100,000)
Delaware	252	24.7	54	257
District of Columbia	314	46.7	0	22
Florida	4,325	19.4	2,348	6,797
Georgia	1,140	10.4	2,134	4,316
Hawaii	484	33.6	0	236
Idaho	362	18.7	220	608
Illinois	2,676	21.3	1,099	3,615
Indiana	1,730	25.3	320	1,687
lowa	340	10.6	620	1,260
Kansas	890	30.3	0	579
Kentucky	1,268	28.1	86	988
Louisiana	822	17.9	555	1,473
Maine	314	22.7	102	379
Maryland	397	6.4	1,452	2,685
Massachusetts	884	12.7	1,211	2,607
Michigan	1,945	19.4	1,065	3,072
Minnesota	243	4.3	1,472	2,616
Mississippi	1,032	35.1	0	438
Missouri	1,797	29.1	56	1,292
Montana	386	34.4	0	175
Nebraska	386	19.6	204	598
Nevada	499	15.7	454	1,090
New Hampshire	230	16.5	189	468
New Jersey	2,091	22.6	688	2,540
New Mexico	202	9.6	432	855
New York	2,527	12.8	3,376	7,312
North Carolina	1,746	16.3	1,464	3,603
North Dakota	128	16.4	106	262
Ohio	1,950	16.6	1,577	3,928
Oklahoma	774	19.3	432	1,236
Oregon	783	18.5	489	1,337
Pennsylvania	3,765	29.0	127	2,721
Rhode Island	145	13.3	183	402
South Carolina	1,100	20.8	485	1,541
South Dakota	217	23.9	56	238
Tennessee	1,851	26.3	264	1,675
Texas	4,387	14.6	4,622	10,628

State	Total number beds	Beds per 100,000	Beds needed to reach absolute minimum necessary number of beds (30 per 100,000)	Beds needed to reach optimal number of beds (50 per 100,000)
Utah	713	21.1	301	977
Vermont	117	18.1	77	207
Virginia	1,722	19.8	883	2,620
Washington	1,109	14.2	1,227	2,784
West Virginia	609	34.3	0	279
Wisconsin	743	12.6	1,025	2,203
Wyoming	275	47.3	0	16
United States	60,953	18.3	39,033	105,691

It is important to note that many of these beds may be located in private hospitals and may not be accessible to many people with serious mental illnesses, particularly those who have been committed to receive treatment through the criminal system.

Additionally, because individuals with the most severe and chronic mental illnesses experience high rates of unemployment, poverty and homelessness, they often do not have personal resources or health insurance to pay for their hospitalization, which discourages hospitals from admitting them.<sup>7</sup>

As La and colleagues write in their 2015 report on psychiatric bed supply and demand in North Carolina, "state psychiatric hospitals are the ultimate safety net for people with mental illness." Yet the number of available psychiatric beds grows smaller every year. In 1955, there were an estimated 559,000 state psychiatric hospital beds, or nearly 340 beds per 100,000 people. By early 2023, the state hospital bed population had dropped almost 94%, to 36,150 or 10.8 beds per 100,000 people. Of these, over half were occupied by criminal offenders with serious mental illness; barely five beds per 100,000

people remained for individuals with acute or chronic psychiatric disease who had not been charged with crimes.<sup>9</sup>

## **Consequences of Psychiatric Bed Shortages**

When states face psychiatric bed shortages, the consequences appear to be many and far-ranging. Across the nation, emergency rooms are often overwhelmed by people in psychiatric crisis, resulting in critically ill psychiatric patients waiting days and even weeks to be admitted to a hospital. When patients are admitted to hospitals, they are sometimes 'treated and streeted' through insufficiently short hospital stays in order to open up beds more quickly. When people with mental illness are turned away from emergency departments or discharged before their symptoms have fully stabilized, they may go on to engage in disruptive or even violent behaviors, particularly violence directed towards themselves in the form of severe self-harm and suicide attempts.

After being unable to receive adequate treatment in a hospital, some people with SMI may also deteriorate and be arrested. After being brought to jail, many inmates

with mental illness still wait months for beds to open so they can proceed to trial. While waiting in jail for a bed to open, people with severe mental illness can experience deterioration, worsening psychotic symptoms, and even death from preventable causes such as dehydration. These long wait times for inmates have also led to hundreds of millions of dollars in fines for states nationally, particularly Washington State, which was fined \$100 million for their failure to provide timely treatment to people with severe mental illness who require competency restoration services.<sup>11</sup>

However, despite evidence of national bed shortages, the government has yet to release official recommendations for the number of psychiatric beds needed to maintain community health in the United States. In addition to providing baseline data for bed availability nationwide, the federal government should assess hospital bed need by type, facility and location.

To read more about trends and consequences of state hospital bed shortages, read Treatment Advocacy Center's 2024 report <u>"Prevention Before Punishment"</u> here.

#### **REFERENCES**

- <sup>1</sup> Mundt, A. P., Rozas Serri, E., Irarrázaval, M., O'Reilly, R., Allison, S., Bastiampillai, T., ... & Priebe, S. (2022). Minimum and optimal numbers of psychiatric beds: expert consensus using a Delphi process. Molecular Psychiatry, 27(4), 1873-1879.
- <sup>2</sup> McBain, R.K., Canton, J.H., Eberhart, N.K., Huilgol, S.S., Estrada-Darley, I. (2022). Adult Psychiatric Bed Capacity, Need, and Shortage Estimates in California—2021. *RAND Corporation*. https://www.rand.org/pubs/research\_reports/RRA1824-1-v2.html.
- <sup>3</sup> Hudson, C. G. (2021). Benchmarks for needed psychiatric beds for the United States: a test of a predictive analytics model. International Journal of Environmental Research and Public Health, 18(22), 12205.
- <sup>4</sup> Hudson, C. G. (2020). Benchmarking psychiatric deinstitutionalization: Development, testing, and application of a model using predictive analytics. Best Practices in Mental Health: An International Journal, 16(1), 12—31.
- <sup>5</sup> Treatment Advocacy Center. (2008). Psychiatric Bed Supply Need Per Capita. https://www.treatmentadvocacycenter.org/storage/documents/the\_shortage\_of\_publichospital\_beds.pdf
- <sup>6</sup> Substance Use and Mental Health Services Administration. (2022). 2022 National Substance Use And Mental Health Services Survey (N-SUMHSS) Detailed Tables. https://www.samhsa.gov/data/report/2022-n-sumhss-detailed-tables
- <sup>7</sup> Parks, J., & Radke, A. (Eds.). (2014). The vital role of state psychiatric hospitals. Alexandria, VA: National Association of State Mental Health Program Directors. Retrieved from http://www.nasmhpd.org/sites/default/files/The%20Vital%20 Role%20of%20State%20Psychiatric%20HospitalsTechnical%20Report\_July\_2014. pdf
- <sup>8</sup> La, E. M., Lich, K. H., Wells, R., Ellis, A. R., Swartz, M. S., Zhu, R., & Morrissey, J. P. (2015). Increasing access to state psychiatric hospital beds: Exploring supply-side solutions. Psychiatric Services, 67, 523—528. Retrieved from http://ps.psychiatryonline.org/doi/abs/10.1176/appi.ps.201400570.
- <sup>9,10</sup> Silver S., Hancq, E.S. (2024). Prevention Over Punishment: Finding the right balance of civil and forensic beds. *Treatment Advocacy Center*
- <sup>11</sup> Jimenez, E. (2023, July 7). Federal judge fines WA agency \$100 million for mental health failures. *The Seattle Times*. https://www.seattletimes.com/seattle-news/mental-health/federal-judge-fines-wa-agency-100-million-for-mental-health-failures/