A Summary of Research

for

Existing Direct Service workforce capacity Benchmarks

2024

SCHOOL OF MEDICINE

BOWEN CENTER FOR HEALTH
WORKFORCE RESEARCH & POLICY

Acknowledgements

This research was done under contract with the Indiana Family and Social Services Administration (FSSA). The Bowen Center for Health Workforce research and Policy would like to acknowledge the guidance and insight provided by the FSSA representatives in the development of this research. The information presented in this report should only be used for informing health workforce related research.

February 2024

Department of Family Medicine
Indiana University School of Medicine
1110 W. Michigan Street, Suite 200
Indianapolis, IN 46202

Introduction

Indiana's population is steadily getting older, with the median age increasing since 2000.[1] This, coupled with the growing desire of older adults to age at home, highlights the growing demand for direct service workers (DSW). While there are existing programs which support this service, there is a gap in tools and resources which could be used for measuring workforce capacity and identifying areas in need of workforce development assistance.

This report summarizes the research which has been done to identify existing resources and tools which could be used in Indiana for support DSW workforce development initiatives. It is important to note that this research focused only on DSWs that are regulated by the Indiana Department of Health. This includes certified nurse aides (CNAs), Qualified Medication Aides (QMAs), and Home Health Aides (HHAs).

Research Methodology

Data collection

The data collection process aimed to assess the adequacy of the Direct Service Workforce capacity through two key approaches: 1) Establishing national average population-to-provider ratios, and 2) developing state-level population-to-provider ratios. National average data comprised nationwide population and provider statistics, while state-level data encompassed state population figures, Medicaid enrollment data, and provider employment statistics. Both national and state-level datasets were instrumental in calculating the population-to-provider ratio, offering valuable insights for policymakers in formulating benchmarks for sufficient capacity within Indiana.

Data on CNA staffing ratios were incorporated as an additional resource to establish benchmarks. Given the various regulations of staffing ratios across states, this data serves as valuable information for shaping CNAs' high-quality and sufficient capacity benchmarks in Indiana. However, no similar data were found for QMAs and HHAs. Additional specifics regarding the data and their respective sources are outlined in Table 1. Results should only be used to inform workforce policy planning.

Table 1. Summary of data points included in the County-Level Needs Assessment

Domain	Data Element	Description	Data Source
National Average Population to Provider Ratios	National Population	The estimated nation-level population data.	County Population Totals: 2020-2022 (census.gov)
	National Providers	The estimated total number of each provider.	U.S. Bureau of Labor Statistics (bls.gov)
State-level Population to Provider Ratios	State Population Data	The estimated state-level population data.	State Population Totals: 2020-2023 (census.gov)
	State Medicaid Data	Medicaid coverage of the population by state	Health Insurance Coverage of the Total Population | KFF
	State Employment Data	The total number of employments of each provider by state.	Occupational Employment and Wage Statistics, Table created by BLS
Staffing Ratio	CNAs to Patient Ratios	The Legal CNA-to-Patient Ratio	CNA Patient Ratio Laws by State | IntelyCare Find the CNA-to-Patient Staffing Ratio in Your State (nursa.com)

[1] Population by Age: Indiana, 2000 – 2022. STATS Indiana. https://www.stats.indiana.edu/stats_dpage/dpage.asp?id=71&view_number=2&menu_level=&panel_number=. Accessed: January 12, 2024

Calculations

National Average Population to Providers Ratio

The national average population-to-provider ratios were derived by dividing the national population by the total number of national providers. Refer to the formula below:

$$National\ Average\ Population\ to\ Provider\ Ratio = \frac{Naitonal\ Population}{National\ Providers}$$

State-level Population to Provider Ratio

For the calculation of state-level population-to-provider ratios, comprehensive Excel sheets were created to compile state population data, state employment data of providers, and state Medicaid enrollment population data for each state in the United States, including Puerto Rico. Subsequently, population-to-provider ratios and Medicaid-to-provider ratios were computed using the formulas below. States with the higher population to provider ratio and Medicaid to provider ratio may indicate potential workforce shortages.

$$Population\ to\ Provider\ Ratio = \frac{State\ Population}{State\ Providers}$$

$$Medicaid\ to\ Provider\ Ratio = \frac{State\ Medicaid\ Enrollment\ Population}{State\ Providers}$$

Limitations

It is important to note that the population and provider data utilized in the analysis were collected from the years 2020 to 2022, which may not capture the latest trends and developments in the DSW workforce. The reliability and accuracy of this data from various sources may vary, particularly as Medicaid data and staffing ratio data were sourced from non-official government websites. Consequently, inaccuracies or biases within the data sources could potentially lead to misinterpretations of workforce capacity.

Additionally, while the national and state population to provider ratios offer valuable insights into workforce capacity across various states, it's important to approach generalizations to Indiana with caution. The definitions of CNAs, QMAs, and HHAs within Indiana may differ from those in other states. Additionally, Indiana's specific needs, priorities, and resource allocations may necessitate customized approaches to workforce development and support.

Finally, this report serves as an initial exploration of DSW workforce capacity, aiming to inform benchmark making for sufficient workforce in Indiana and highlight areas for improvement. However, it is essential to emphasize the need for ongoing monitoring and evaluation efforts to establish accurate benchmarks, enhance capacity, and refine policies for ensuring the adequacy and quality of DSW services in Indiana.

Certified Nurse Aides

- Please see population to CNA ratios at LTSS Benchmark.xlsx (sharepoint.com)
- CNA staffing ratio by state Find the CNA-to-Patient Staffing Ratio in Your State (nursa.com)
- More information about CNA Patient Ratio can be found at CNA Patient Ratio Laws by State | IntelyCare

State	CNA Staffing Requirement	Source
Arkansas	A required staffing ratio for CNAs is not specified. Current legislation enforces a mandatory average of 3.36 Hours Per Resident Per Day (HPRD).	Arkansas Act 715 Regular Session of 2021 Arkansas OLTC regulations
California	A specific ratio for CNAs is not provided. All skilled nursing facility residents must receive 3.5 HPRD, of which 2.4 HPRD must be provided by a CNA.	California Health and Safety Code HSC § 1276.65
Connecticut	In a "Rest Home," under licensed nurse supervision, there must be at least one CNA on duty on each resident floor at all times. Additionally, between 7 a.m. and 9 p.m., the nursing and CNA personnel must provide .70 HPRD, and between 9 p.m. and 7 a.m., nursing and CNA personnel must provide .17 HPRD. In a "Chronic and Convalescent Nursing Home," during the hours of 7 a.m. and 9 p.m., patients must receive 1.4 HPRD from nursing and CNA personnel. From 9 p.m. to 7 a.m., patients must receive .5 HPRD from nursing and CNA personnel.	Connecticut Public Health Code Title 19, Sec. 19-13-D8t. (m) Nursing Staff Effective on January 1, 2022, in Public Act 21-185, "the Department of Public Health shall establish minimum staffing level requirements for nursing homes of three hours of direct care per resident per day."
Delaware	CNA staffing ratios are as follows: Day: One CNA to seven residents Evening: One CNA to 10 residents Night: One CNA to 15 residents	Delaware Code Title 16 Health and Safety § 1162. Nursing Staffing (e) Effective May 2003.
Florida	A minimum ratio of one CNA per 20 residents is required. Residents must receive a minimum of two HPRD from a CNA.	Florida Statutes 400.23
Illinois	A specific ratio for CNAs is not provided; however, CNAs are identified as direct care staff. Staffing ratios must meet 3.8 HPRD for residents requiring skilled care and 2.5 HPRD for residents requiring intermediate care.	Illinois Administrative Code Title 77 Chapter 1. Section 300.1230 Direct Care Staffing
Indiana	A specific ratio for CNAs is not provided. Sufficient staff is required to provide nursing and related services to each resident.	Indiana Administrative Code 410 16.2-3.1-17 Nursing Services
Maine	Direct care staff-to-patient ratio for facilities shall not fall below the following: Day shift: one to five Evening shift: one to 10 Night shift: one to 15	Code of Maine Rules 10.144 Chapter 110 Section 9 Resident Care Staffing A.4. Minimum Staffing Ratios

State	CNA Staffing Requirement	Source
	(CNAs are considered direct care staff alongside RNs, LPNs, and personal support specialists.)	
Maryland	A specific ratio for CNAs is not provided. However, the ratio of "nursing service personnel" may not fall below one to 15.	Maryland Code Regulations 10.07.02.19 - Nursing Services - Staffing
Massachusetts	Residents must receive a minimum of 3.58 HPRD, .508 of which must be provided by an RN. Level III Facilities must have at least one CNA on duty during the night shift.	105 Code of Massachusetts Regulations 150.000: Standards for Long-Term Care Facilities Section 150.007 Nursing Services
Missouri	For SNFs, a specific ratio for CNAs is not provided. For residential care and assisted living facilities, minimum staff ratios are as follows: Day shift: one to 15 Evening shift: one to 20 Night shift: one to 25	Missouri Code of State Regulations Title 19 CSR 30-85.042 and CSR 30-86.043
North Carolina	A CNA should be on duty at all times on each patient floor.	North Carolina Administrative Code Title 10A 13D .2303 Nurse Staffing Requirements
New Mexico	A specific ratio for CNAs is not provided. However, the direct care staff ratios are as follows: SNF Day shift: one to seven Evening shift: one to 10 Night shift: one to 12 Intermediate Care Facilities Day shift: one to eight Evening shift: one to 10 Night shift: one to 13	New Mexico Administrative Code Effective June 2020, 7.9.2.51 Nursing Staff
New York	Effective on January 1, 2023, no less than 2.2 HPRD to be provided by a CNA.	New York Codes, Rules and Regulations Section 415.13 Nursing Services and Minimum Nursing Staff Requirements
Oregon	The minimum CNA-to-patient ratios are as follows: Day shift: one to seven Evening shift: one to 9.5 Night shift: one to 17	Oregon Administrative Rules 411-086-0100 Nursing Services: Staffing
Pennsylvania	Effective on July 1, 2023, the CNA-to-resident ratios are as follows: Day shift: one to 12 Evening shift: one to 12 Night shift: one to 20 Effective July 1, 2024, the CNA-to-resident ratios are as follows: Day shift: one to 10 Evening shift: one to 11 Night shift: one to 15	Pennsylvania Administrative Code Title 28 § 211.12. Nursing Services

Qualified Medication Aides

- There is very limited data on QMA.
- There are over 26,536 medication aides currently employed in the United States. (Medication Aide Demographics and Statistics [2023]: Number Of Medication Aides In The US (zippia.com))
- Based on the 2022 population - 333,287,557 from U.S. census data[2], the national average population to medication aide's ratio is 333,287,557 / 26,536 ≈ 12,560:1
- In Texas, the total number of medication aides decreased significantly but the population to medication aides ratio increased. (2022 Medication Aides (texas.gov))

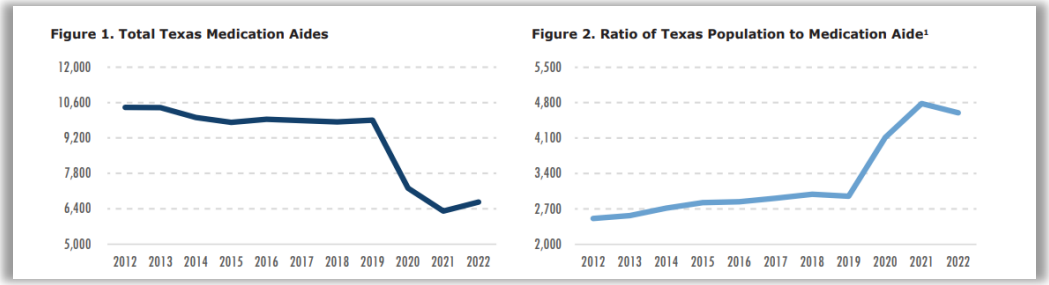

Table 1. Ratio of Texas Population to Medication Aide by Geographic Designation[1]

Geographic Designation	Ratio of Population to Medication Aide
Metropolitan	5,071:1
Non-metropolitan	2,536:1
Border	9,643:1
Non-border	4,363:1
Texas	4,600:1

- The ratio of the Texas population to one medication aide was higher in metropolitan counties compared to non-metropolitan counties.
- The ratio of the Texas population to one medicaton aide was higher in border counties compared to non-border counties.
- 51 counties had no medication aides (Figure 3).

[2] 2022 National and State Population Estimates Press Kit (census.gov)

Home Health Aides

- There are over 3,504,230 home health and personal care aides in the U.S. in 2022[3], and based on 2022 population - 333,287,557 from U.S. census data[4], the national average population to home health and personal aides' ratio is 333,287,557 / 3,504,230 ≈ 95:1
- Please see population to HHA ratios at LTSS Benchmark.xlsx (sharepoint.com)

[3] Home Health and Personal Care Aides (bls.gov)
[4] 2022 National and State Population Estimates Press Kit (census.gov)

Authored By

Yan Ge, Research Coordinator
Sierra Vaugh, Assistant Director of Data and Research

Recommended Citation

Ge, Y., Vaughn, S. A Summary of Research for Potential Director Service Workforce Benchmarks. Bowen Center for Health Workforce Research Policy. Indiana University School of Medicine

Correspondence

Please address any inquiry regarding this document to the Bowen Center for Health Workforce Research and Policy via email at bowenctr@iu.edu.