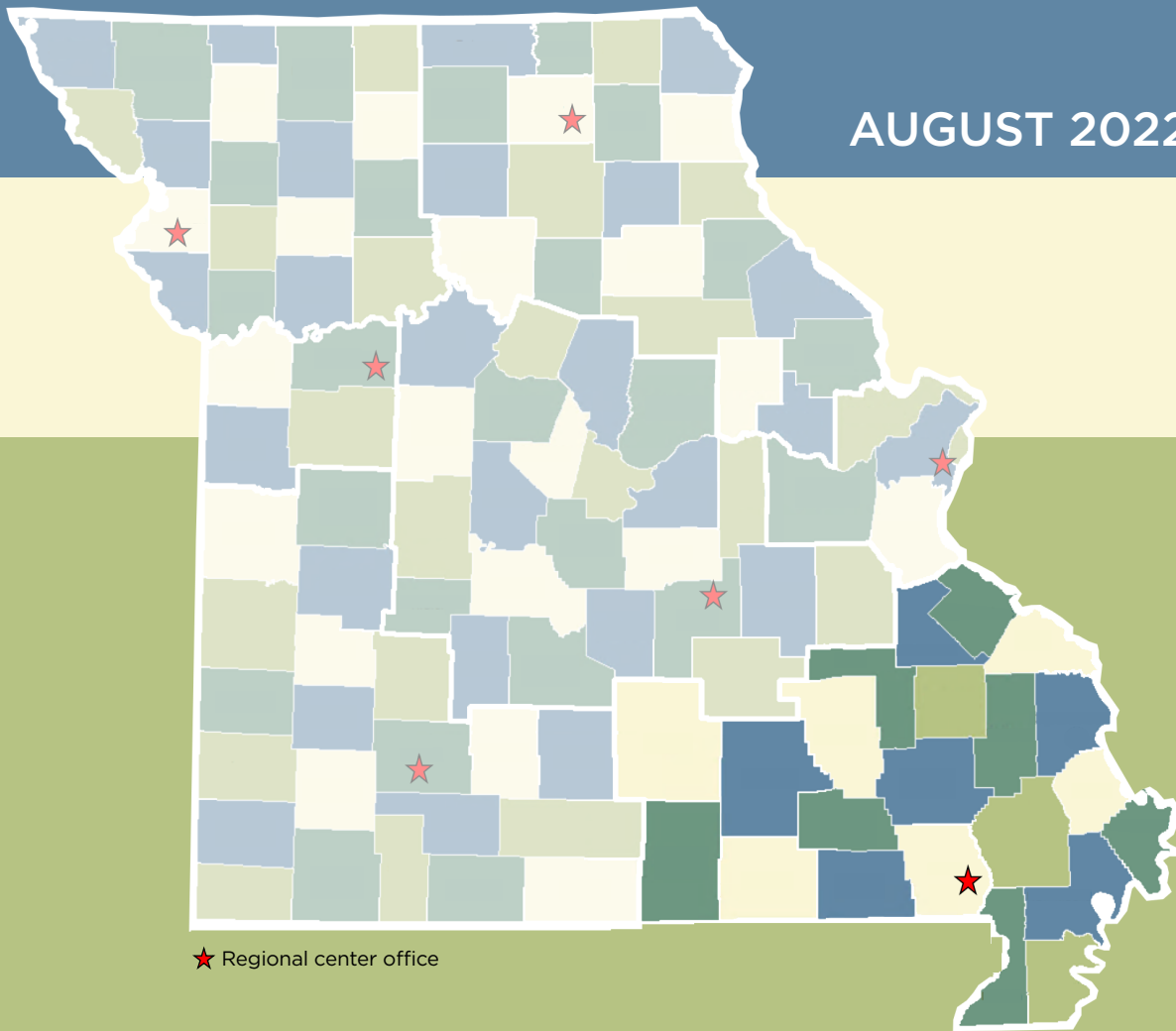


# *Southeastern Missouri Area Health Education Center Needs Assessment & Gap Analysis*

AUGUST 2022



By the University of Missouri Center for Health Policy and Missouri AHEC Program Office  
at A.T. Still University-Kirksville College of Osteopathic Medicine



University of Missouri



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By the University of Missouri Center for Health Policy<sup>a</sup>, and  
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# Introduction

During Fall 2020, the Missouri Area Health Education Centers (MAHEC) began meeting with the University of Missouri Center for Health Policy (CHP) to develop a statewide needs assessment and gap analysis. The needs assessment scanned Missouri's health care landscape, focusing on population health needs as well as health care workforce and infrastructure. The resulting report provided an analysis of Missouri's health care system, identifying gaps between health needs and health services available in the state, as well as MAHEC's efforts to address these gaps.<sup>1</sup>

Upon completion of the statewide analysis, MAHEC continued working with CHP to produce a needs assessment and gap analysis for each region, including the Southeastern Missouri AHEC region (SEMO AHEC). The analysis of population health focuses on the social determinants of health and indicates that the SEMO AHEC region's health disparities are largely influenced by disparities in income and higher education attainment, as well as lack of health insurance and distance to health care services. Demographic factors play an important role in the SEMO AHEC region, where the population is aging. Demand for health care is likely to increase with the higher concentration of population aged 65 and older<sup>2</sup> and expanded coverage from Missouri's recent Medicaid expansion.<sup>3</sup>

Analysis of the health care workforce is provided by the MU Center for Health Policy's Missouri Health Care Workforce Project (MHCWP). In depth information on the SEMO AHEC region's health care workforce, health facilities, health status and community or social determinants of health are available and continually updated on the MHCWP website and indicator dashboards at <https://mohealthcareworkforce.org/>. This report focuses on primary care, dental health, and mental and behavioral health care availability as well as professions such as nursing, pharmacy, physical therapy, community health workers. Generally, the SEMO AHEC region is experiencing greater shortages of health care workers than Missouri as a whole. The report also provides an overview of health care infrastructure, including Federally Qualified Health Centers (FQHCs), Rural Health Clinics (RHCs), hospitals, and long-term care facilities, as well as telehealth and broadband access in the region.

Any analysis of health care needs and workforce in 2022 would be remiss to ignore the impact of the ongoing COVID-19 pandemic. While data sources always lag real-time conditions in health care, the impacts of the lag are more apparent during a pandemic. Health care needs and workforce are changing quickly in unexpected ways. This report uses the most recent data available, but many sources, including the 2015-2019 ACS 5-year population estimates, predate the start of the pandemic. One exception is Missouri Division of Professional Registration workforce data from December 2021.

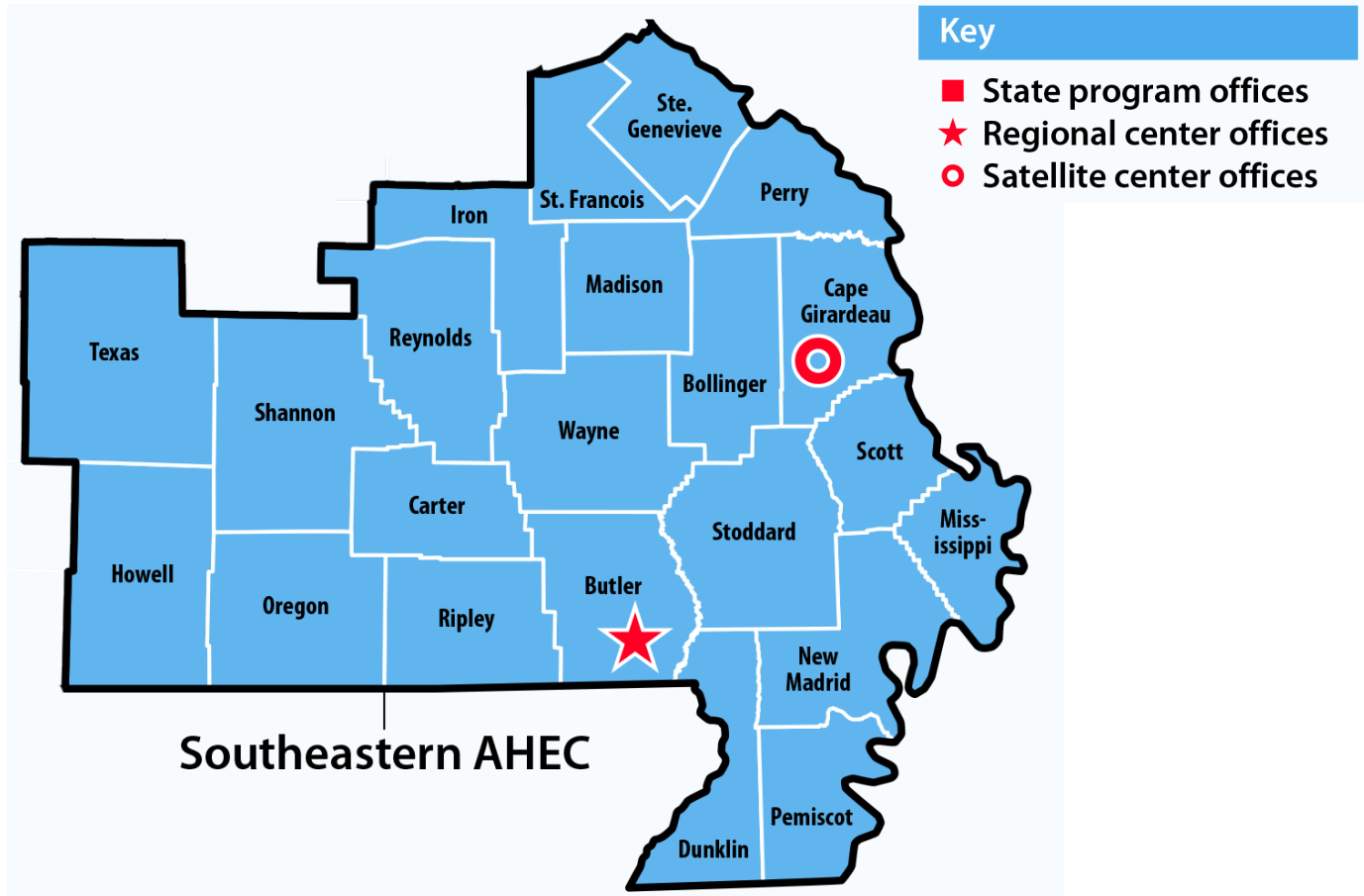
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<sup>1</sup> Center for Health Policy. (2022). Missouri Area Health Education Centers Needs Assessment and Gap Analysis. Columbia, MO: Center for Health Policy. Retrieved from <https://mohealthcareworkforce.org/publication/missouri-area-health-education-centers-needs-assessment-and-gap-analysis/>.

<sup>2</sup> Dall, T. M., Gallo, P. D., Chakrabarti, R., West, T., Semilla, A. P., & Storm, M. V. (2013). An aging population and growing disease burden will require a large and specialized health care workforce by 2025. *Health affairs*, 32(11), 2013-2020. <https://doi.org/10.1377/hlthaff.2013.0714>.

<sup>3</sup> HHS Press Office. (2021). Missouri Medicaid Expansion Brings Quality Essential Health Coverage to More than 275,000 Missourians. Retrieved from <https://www.hhs.gov/about/news/2021/10/04/missouri-medicaid-expansion-brings-quality-essential-health-coverage.html>.

**Figure 1: Southeastern Area Health Education Center (SEMO AHEC) Region**



**Population Health in the Region**

The SEMO AHEC region covers 22 counties in the southeastern corner of the state (Figure 1). The region has a population of 592,002 and covers a land area of 14,327 square miles. Most of the region is considered rural (85.2%) by HRSA definition<sup>4</sup> (Table 1), and its population is aging in a pattern similar to other rural parts of Missouri. The residents of the region face geographic, socioeconomic, and cultural obstacles that result in health disparities, largely related to its rural nature and aging population. The SEMO AHEC region’s shortages and maldistributions of physicians and other healthcare providers are similar to rural areas throughout the state and nation. Mindful of this, the region may need to expand its health care workforce to fit the needs of the population for improved access and comprehensive, coordinated care.

**Population Demographics, Including Regional Challenges/Barriers**

Table 1 shows demographics and social determinants of health for the SEMO AHEC region and Table 2, for comparison, shows the same data for the entire state. Data are from the American Community Survey (ACS), a sample survey conducted by the United States Census Bureau. Note that the font in Tables 1 and 2 reflects relative margins of error through a system developed by

<sup>4</sup> Health Resources and Services Administration. (n.d.) *Defining Rural Population*. Retrieved from <https://www.hrsa.gov/rural-health/about-us/definition/index.html>

the Missouri Census Data Center (<https://mcdc.missouri.edu/>): **bold values** have a margin of error <15%, regular font has a margin of error between 15-35%, and margins of error 35% or greater are shaded light grey. Analysis on this regional report is focused on estimates in bold font; their lower relative margins of error enable a higher degree of confidence in the accuracy of the estimate.<sup>5</sup> Margins of error are calculated based on the size of the sample and the population. They can exceed 100% when sample sizes are small. For example, the ACS estimate for Pacific Islanders in the SEMO AHEC region is 164, with a margin of error of 538.2%. Based on the margin of error calculation, the actual population of Pacific Islanders in the SEMO AHEC region is likely between zero and 1,047.

Most of the SEMO AHEC region is rural according to HRSA's definition, and the region as a whole is less diverse than others: 90.6% of residents are white compared to 82.2% of the state's population. However, there are counties within the region with higher percentages of residents who are Black or African American Alone than the state rate of 11.5%, including Pemiscot County (27.5%) and Mississippi County (24.9%) with one-quarter or more residents in this category.<sup>6</sup>

Most residents of the region have earned at least a high school diploma or its equivalent (83.8%), less than the state rate of 89.9%. Higher education rates are much lower in the region than the state as a whole, with 16.6% of residents in the region having earned at least a bachelor's degree compared to the state rate of 29.2%.

Missouri's population of adults aged 65 and older has grown to more than one million (16.5% of the total population). The percentage of older adults in the region is slightly higher than the state rate with 18.4% aged 65 and older. An aging population may affect the health sector in key ways: 1) retiring health professionals may intensify workforce shortages<sup>7</sup> and 2) aging may increase health care needs.<sup>8</sup> See Figure 2 for a map of the population age 65 and older. The percentage of children under the age of 18 are the same in both the SEMO AHEC region and the state at 22.6%.

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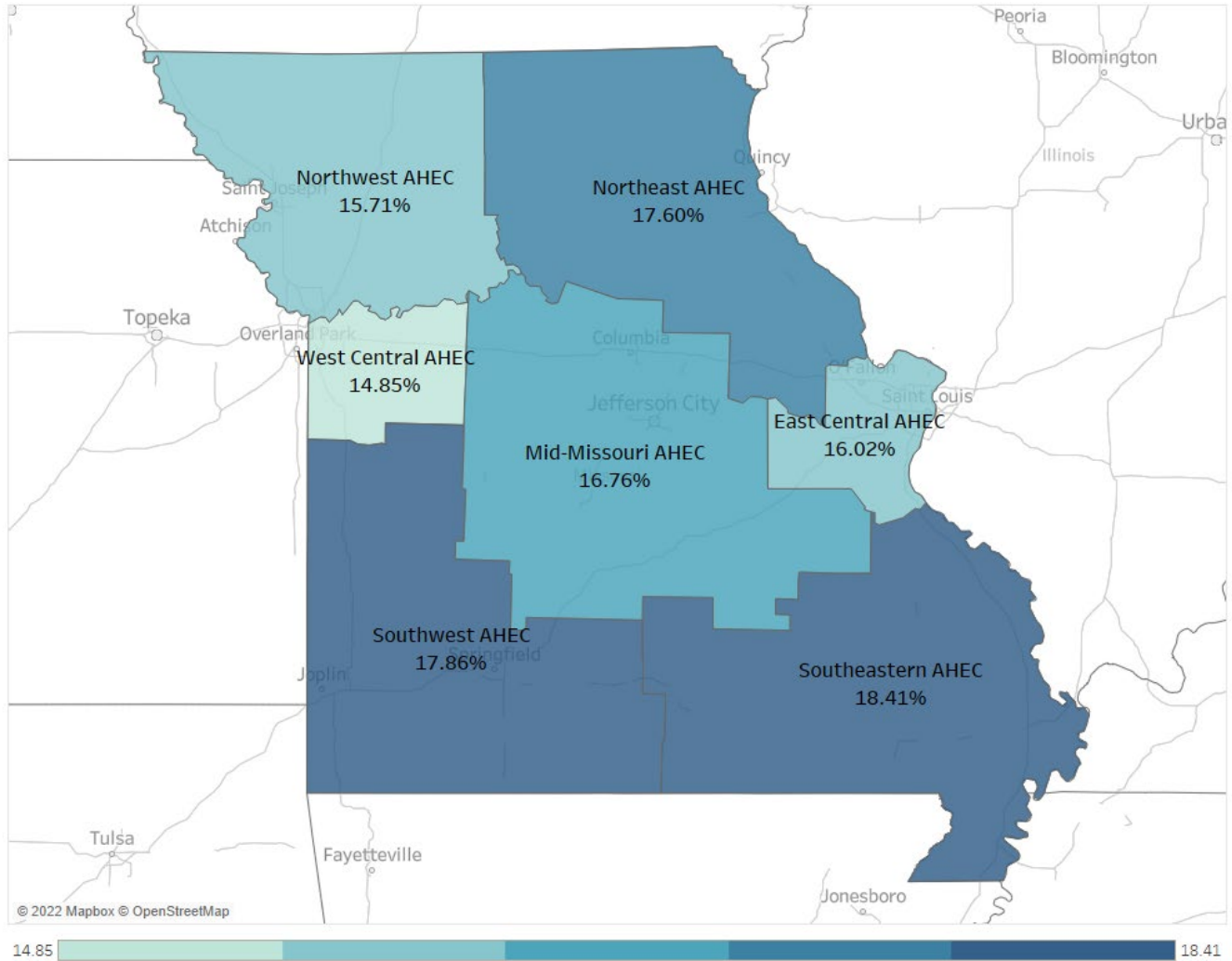
<sup>5</sup> Qualtrics. (2022). Your guide to margin of error. Retrieved from <https://www.qualtrics.com/experience-management/research/margin-of-error/>.

<sup>6</sup> Missouri Census Data Center. (2021). 2015-2019 ACS Profiles [dataset application]. Retrieved from <https://mcdc.missouri.edu/applications/acs/profiles/>.

<sup>7</sup> Bolin J.N., Bellamy G.R., Ferdinand A.O., Vuong A.M., Kash B.A., Schulze A., Helduser J.W. (2015, Summer). *Rural Healthy People 2020*. Retrieved from: New Decade, Same Challenges. *Journal of Rural Health*. 31(3):326-33. doi: 10.1111/jrh.12116.

<sup>8</sup> Dall, T. M., Gallo, P. D., Chakrabarti, R., West, T., Semilla, A. P., & Storm, M. V. (2013). An aging population and growing disease burden will require a large and specialized health care workforce by 2025. *Health affairs*, 32(11), 2013-2020. <https://doi.org/10.1377/hlthaff.2013.0714>.

**Figure 2. Percent Population Age 65 and Older**



Note: Dynamic, interactive maps of community indicators, including population age 65 and older, are available for all AHEC regions at <https://mohealthcareworkforce.org/indicator-dashboards/community/>.

Additional health care access barriers that exist in the region are tied to socioeconomic challenges including poverty, housing and food insecurity, as well as a lack of transportation and health insurance. In the SEMO AHEC region, 19.7% of the population, more than 100,000 persons, live in poverty, higher than the state rate of 13.7%. Additionally, more than one in four (26.8%) children live in poverty in the region, compared to the state rate of 18.7%.

More than one in four (25.9%) of SEMO AHEC region households, similar to the state rate of 26.4%, are housing cost burdened, with rent or mortgage and utilities accounting for more than 30% of household income. While housing costs are often lower in rural areas than urban areas in Missouri, so are incomes, resulting in similar rates of housing cost burden in rural portions of the region (25.6%) as the regional rate overall (25.9%). A higher rate of SEMO AHEC region



residents (13.6%) lacks health insurance than Missourians overall (10.9%), which may impede the ability of low-income individuals to access primary and preventive care. Further, 15.6% of residents in the SEMO AHEC region live with a disability, higher than the state rate of 10.2%.

While margins of error for the SEMO AHEC region are too large to reliably report on food insecurity and transportation at the regional level, the estimates for rural Missouri offer a useful comparison. Missouri has the 17<sup>th</sup> highest food insecurity rate in the nation.<sup>9</sup> Food insecure families are at a higher risk for weight gain and chronic disease, e.g., diabetes, hypertension.<sup>10</sup> Food insecurity is also associated with psychological distress, anxiety, and depression among low-income women and children.<sup>11</sup> These physical and mental health effects are especially detrimental when there is the lack of access to proper medical care.<sup>12</sup> In rural areas, individuals may drive sixty or more miles to reach appropriate care<sup>13</sup> and more than six percent of rural Missouri households lack access to a vehicle according to Table 2 (below).

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<sup>9</sup> US Department of Agriculture Economic Research Service. (n.d.) *Key Statistics and Graphics*. Retrieved from <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx>.

<sup>10</sup> Liu Y., Njai R., Greenlund K., Chapman D., Croft J. Relationships Between Housing and Food Insecurity, Frequent Mental Distress, and Insufficient Sleep Among Adults in 12 US States, 2009. (nd.) *Preventing Chronic Disease*. 2014. Retrieved from <http://doi:10.5888/pcd11.130334>.

<sup>11</sup> Calender, C. Barker, R. (editor). (December 2015). *Health Equity Series: Food Insecurity*. Missouri Foundation for Health. Retrieved from <http://mffh.org/wp-content/uploads/2016/04/Health-Equity-Series-Food-Insecurity.pdf>.

<sup>12</sup> Ibid 11.

<sup>13</sup> Bolin J.N., Bellamy G.R., Ferdinand A.O., Vuong A.M., Kash B.A., Schulze A., Helduser J.W. (2015, Summer). *Rural Healthy People 2020*. Retrieved from: New Decade, Same Challenges. *Journal of Rural Health*. 31(3):326-33. doi: 10.1111/jrh.12116.

**Table 1. Summary of Demographics in the SEMO AHEC Region<sup>14</sup>**

<b>Criterion</b>	<b>Southeastern Region</b>		<b>MOE<sup>15</sup></b>	<b>Rural</b>	<b>% of SEMO</b>	<b>MOE</b>	<b>Urban</b>	<b>% of SEMO</b>	<b>MOE</b>
<b>Estimated 2015-2019 Population</b>	<b>529,002</b>		<b>2.8%</b>	<b>450,511</b>	<b>85.2%</b>	<b>3.3%</b>	<b>78,491</b>	<b>14.8%</b>	<b>18.9%</b>
Land Area (mi <sup>2</sup> )	14,327			13,749	96.0%		579	4.0%	
Population Density/mi <sup>2</sup>	37			33			36		
Counties	22			21			1		
<b>Racial/Ethnic</b>	<b>Southeastern Region</b>	<b>%</b>	<b>MOE</b>	<b>Rural</b>	<b>% of Rural</b>	<b>MOE</b>	<b>Urban</b>	<b>% of Urban</b>	<b>MOE</b>
White	479,326	90.6%	2.9%	410,449	91.1%	3.4%	68,877	87.8%	20.0%
Black or African American	31,472	5.9%	26.0%	25,684	5.7%	31.9%	5,788	7.4%	141.4%
Native American	2,641	0.5%	57.4%	2,537	0.6%	59.7%	104	0.1%	1,456.5%
Asian	3,450	0.7%	104.6%	2,102	0.5%	171.6%	1,348	1.7%	267.6%
Pacific Islander	164	0.0%	728.5%	132	0.0%	905.1%	32	0.0%	3,733.7%
Other	1,905	0.4%	193.8%	1,612	0.4%	229.0%	293	0.4%	1,259.7%
Multi-Racial	10,044	1.9%	41.5%	7,995	1.8%	52.1%	2,049	2.6%	203.3%
Hispanic/Latino <sup>16</sup>	11,896	2.2%	47.5%	10,069	2.2%	56.1%	1,827	2.3%	309.1%
<b>Age Cohorts</b>	<b>Southeastern Region</b>	<b>%</b>	<b>MOE</b>	<b>Rural</b>	<b>% of Rural</b>	<b>MOE</b>	<b>Urban</b>	<b>% of Urban</b>	<b>MOE</b>
<18	119,620	22.6%	6.9%	102,810	22.8%	8.1%	16,810	21.4%	49.4%
65+	97,376	18.4%	4.9%	84,663	18.8%	5.6%	12,713	16.2%	37.2%
<b>Social Determinants of Health</b>	<b>Southeastern Region</b>	<b>%</b>	<b>MOE</b>	<b>Rural</b>	<b>% of Rural</b>	<b>MOE</b>	<b>Urban</b>	<b>% of Urban</b>	<b>MOE</b>
Persons in poverty <sup>17</sup>	100,268	19.7%	10.4%	87,940	20.3%	11.9%	12,328	16.4%	84.7%
<18 in poverty	31,140	26.8%	13.9%	28,027	28.1%	15.5%	3,113	18.9%	139.3%
HS Graduate +	304,995	83.8%	4.3%	259,080	82.7%	5.1%	45,915	91.0%	28.5%
Bachelor's Degree +	60,547	16.6%	12.0%	44,655	14.2%	16.3%	15,892	31.5%	45.9%
No Health Insurance (<65)	58,585	13.6%	11.3%	52,458	14.3%	12.6%	6,127	9.3%	108.2%
Disability (<65)	67,409	15.6%	8.4%	60,901	16.6%	9.4%	6,508	9.9%	80.5%
Housing Cost Burdened	50,433	25.9%	11.1%	42,697	25.6%	13.1%	7,736	27.2%	72.4%
Households without a vehicle	14,908	7.2%	18.7%	13,193	7.5%	21.1%	1,715	5.8%	162.2%

<sup>14</sup> Missouri Census Data Center. (2021). 2015-2019 ACS Profiles [dataset application]. Retrieved from <https://mcdc.missouri.edu/applications/acs/profiles/>.

<sup>15</sup> MOE: Relative margin of error.

<sup>16</sup> Includes Hispanic or Latinx of any race.

<sup>17</sup> Denominator includes persons for whom poverty status is determined, which is lower than total population.

**Table 2: Summary of Demographics by State, Urban, and Rural Counties<sup>18</sup>**

Criterion	Missouri		MOE <sup>19</sup>	Rural	% of MO	MOE	Urban	% of MO	MOE
Estimated 2015-2019 Population	6,104,910		0.2%	2,055,390	33.7%	0.7%	4,049,520	66.3%	0.4%
Land Area (mi <sup>2</sup> )	68,742			59,591	86.7%		9,150	13.3%	
Population Density/mi <sup>2</sup>	89			34			443		
Counties <sup>20</sup>	115			102			19		
Racial/Ethnic	Missouri	%	MOE	Rural	% of Rural	MOE	Urban	% of Urban	MOE
White	5,015,904	82.2%	0.3%	1,906,204	92.7%	0.7%	3,109,700	76.8%	0.4%
Black or African American	701,334	11.5%	1.2%	60,716	3.0%	13.5%	640,618	15.8%	1.3%
Native American	27,084	0.4%	5.6%	13,020	0.6%	11.6%	14,064	0.3%	10.8%
Asian	120,654	2.0%	3.0%	13,664	0.7%	26.4%	106,990	2.6%	3.4%
Pacific Islander	8,231	0.1%	14.5%	2,507	0.1%	47.7%	5,724	0.1%	20.9%
Other	71,335	1.2%	5.2%	14,884	0.7%	24.8%	56,451	1.4%	6.5%
Multi-Racial	160,368	2.6%	2.6%	44,395	2.2%	9.4%	115,973	2.9%	3.6%
Hispanic/Latino <sup>21</sup>	254,791	4.2%	2.2%	71,321	3.5%	7.9%	183,470	4.5%	3.1%
Age Cohorts	Missouri	%	MOE	Rural	% of Rural	MOE	Urban	% of Urban	MOE
<18	1,381,612	22.6%	0.6%	466,198	22.7%	1.8%	915,414	22.6%	0.9%
65+	1,006,725	16.5%	0.5%	382,257	18.6%	1.2%	624,468	15.4%	0.8%
Social Determinants of Health	Missouri	%	MOE	Rural	% of Rural	MOE	Urban	% of Urban	MOE
Persons in poverty <sup>22</sup>	810,045	13.7%	1.3%	330,838	16.8%	3.2%	479,207	12.1%	2.2%
<18 in poverty	252,071	18.7%	1.7%	105,296	23.2%	4.1%	146,775	16.4%	3.0%
HS Graduate +	3,731,783	89.9%	0.4%	1,201,893	85.9%	1.1%	2,529,890	92.0%	0.5%
Bachelor's Degree +	1,212,562	29.2%	0.6%	243,674	17.4%	3.0%	968,888	35.2%	0.8%
No Health Insurance (<65)	555,130	10.9%	1.2%	230,380	13.8%	2.9%	324,750	9.5%	2.0%
Disability (<65)	518,371	10.2%	0.7%	210,870	12.6%	1.8%	307,501	9.0%	1.3%
Housing Cost Burdened	616,342	26.4%	0.9%	181,285	24.1%	3.1%	435,057	27.4%	1.3%
Households w/o a vehicle	165,906	6.9%	1.7%	47,735	6.1%	5.8%	118,171	7.3%	2.4%

<sup>18</sup> Missouri Census Data Center. (2021). 2015-2019 ACS Profiles [dataset application]. Retrieved from <https://mcdc.missouri.edu/applications/acs/profiles/>.

<sup>19</sup> MOE: Relative margin of error.

<sup>20</sup> Six Missouri counties contain both urban and rural census tracts, therefore the number of urban and the number of rural counties in this row total more than 115.

<sup>21</sup> Includes Hispanic or Latinx of any race.

<sup>22</sup> Denominator includes persons for whom poverty status is determined, which is lower than total population.

## **Demand for Culturally Competent and Diverse Workforce**

While more than 90% of residents in the region identify as white non-Hispanic or Latinx, there are some counties within the region with one-quarter or more of their residents identifying as Black or African American Alone.<sup>23</sup> Culturally competent and trauma informed health care professionals are needed to meet the needs of the underrepresented among the SEMO AHEC region's population, and inclusivity, diversity and equity (IDE) training continue to be important for health care providers in the region.

The lesbian, gay, bisexual, transgender, and queer (LGBTQ+) community faces stigma, systematic discrimination, and differential access to health insurance, which combined with a lack of culturally competent care results in poor health outcomes. The physical and mental health of LGBTQ+ individuals is compromised when economic and social influences lead to social isolation, psychological distress, anxiety, depression, low self-esteem, and the ailments tied to poor mental health status.<sup>24</sup> Many LGBTQ+ individuals do not receive the care they require—an issue that is particularly difficult for transgender people, especially given that the majority of health insurers, including Medicaid, Medicare, and Veteran plans do not cover transgender-specific care. Data on the LGBTQ+ community are emerging. The Census Bureau began collecting information on sexual orientation and gender identity through their Household Pulse Survey in July 2021. While regional data are not available, the LGBT population in Missouri is estimated to be 6.9% (+/- 0.9%).<sup>25</sup>

The region's underrepresented racial and ethnic populations and LGBTQ+ health disparities may be addressed by a workforce that reflects the population, a training focus in cultural proficiency for all health care providers, and the addition of minority-specific services as a part of practice transformation.

## **Medicaid Expansion**

Starting July 1, 2021, all Missourians aged 19 to 64 earning up to 138% of the federal poverty level became eligible for Medicaid.<sup>26</sup> Missouri began processing applications on October 1, 2021.<sup>27</sup> Prior to expansion, just over one million Missourians (n=1,029,000)

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<sup>23</sup> Missouri Census Data Center. (2021). 2015-2019 ACS Profiles [dataset application]. Retrieved from <https://mcdc.missouri.edu/applications/acs/profiles/>.

<sup>24</sup> United States Department of Health and Human Services. (n.d.) *Lesbian, Gay, Bisexual, and Transgender Health. Healthy People 2020*. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/lesbian-gay-bisexual-and-transgender-health>.

<sup>25</sup> Anderson, L., File, T., Marshall, J., McElrath, K., Scherer, Z. (2021). New Household Pulse Survey Data Reveals Differences between LGBT and Non-LGBT Respondents During COVID-19 Pandemic. Retrieved from <https://www.census.gov/library/stories/2021/11/census-bureau-survey-explores-sexual-orientation-and-gender-identity.html>.

<sup>26</sup> HHS Press Office. (2021). *Missouri Medicaid Expansion Brings Quality Essential Health Coverage to More than 275,000 Missourians*. Retrieved from <https://www.hhs.gov/about/news/2021/10/04/missouri-medicare-expansion-brings-quality-essential-health-coverage.html>.

<sup>27</sup> Norris, L. (2021). *Missouri and the ACA's Medicaid Expansion*. Retrieved from <https://www.healthinsurance.org/medicaid/missouri/>.

were enrolled in the MO HealthNet program.<sup>28</sup> New Medicaid expansion enrollees will likely be disproportionately non-Hispanic/Latinx white and rural.<sup>29</sup> Washington University Center for Health Economics and Policy (CHEP) estimates 275,000 Missourians are eligible to enroll through Medicaid expansion, including 26,989 in the SEMO AHEC region, which is 5.1% of the area’s population (Table 3). Estimates may shift due to pandemic impacts on employment and income.

**Table 3: Medicaid Expansion Estimates by AHEC Region**

<b>AHEC Region</b>	<b>Percent of Region’s Population to Enroll (%)</b>	<b>Regional Enrollee Estimate (#)</b>	<b>Regional Population Estimate (#)</b>
<b>East Central</b>	2.9%	58,829	2,025,851
<b>Mid-Missouri</b>	4.8%	37,340	783,453
<b>Northeast</b>	4.4%	14,403	328,749
<b>Northwest</b>	3.3%	20,276	618,639
<b>Southeastern</b>	5.1%	26,989	525,060
<b>Southwest</b>	5.3%	51,343	960,115
<b>West Central</b>	4.3%	38,818	895,561
<b>Total</b>	<b>4.0%</b>	<b>247,498</b>	<b>6,137,428</b>

Note: Estimates provided by the Center for Health Economics and Policy at Washington University in St. Louis based on an analysis of the 2019 American Community Survey and 2018 Small Area Health Insurance Estimates files, with slightly different population estimates than the 2015-2019 ACS 5-year estimates used elsewhere in this report. Funding support provided by Missouri Foundation for Health.

### **Medically Underserved Areas/Populations (MUA/Ps)**

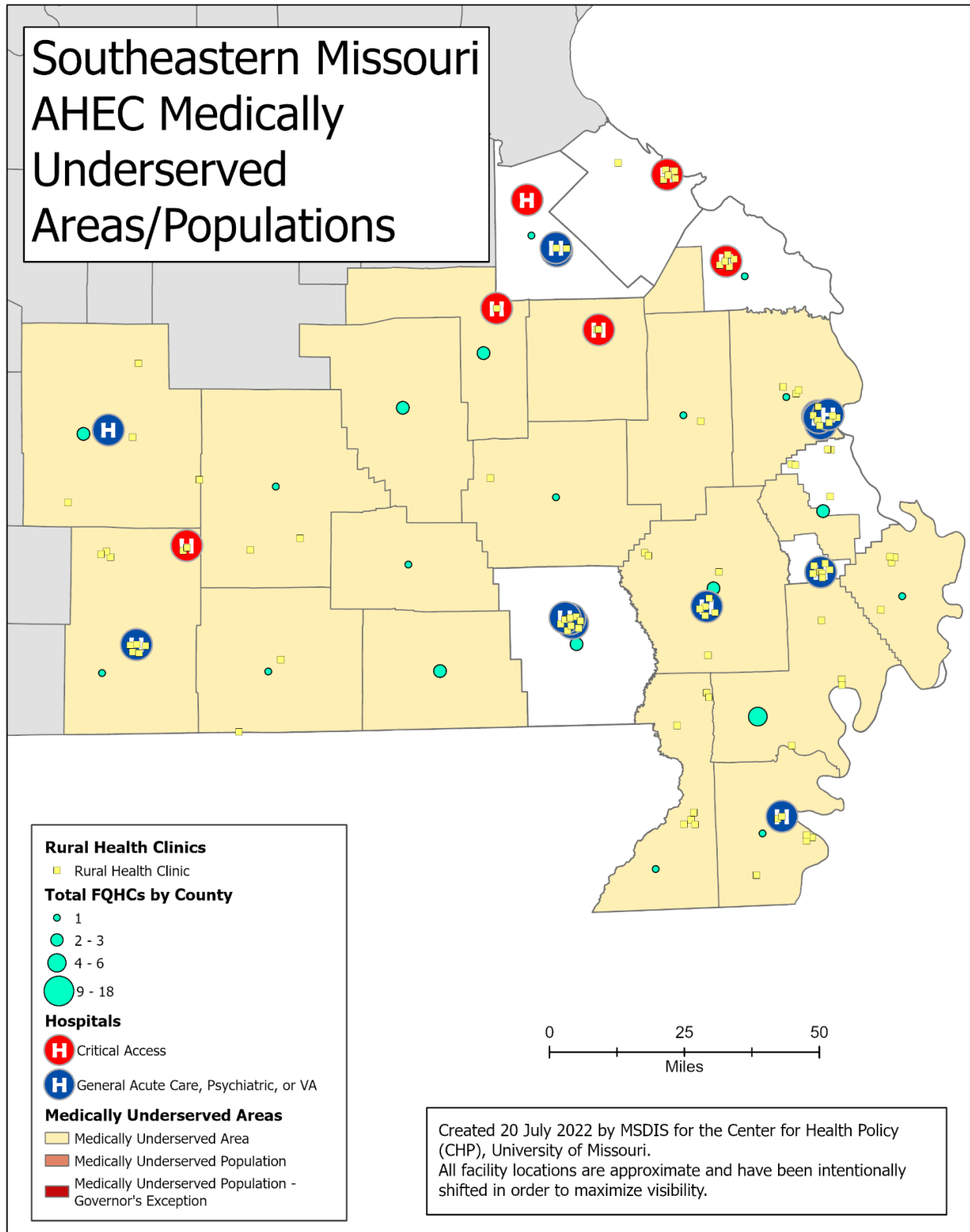
The SEMO AHEC region’s specific population health needs are addressed through a number of federal health care and health care workforce initiatives. Medically Underserved Areas/Populations (MUA/Ps) are areas or populations which HRSA designates as having a shortage of primary care providers, high incidence of infant mortality, high poverty or a concentration of older adult residents.<sup>30</sup> Programs like the Health Center Program and CMS Rural Health Clinic Program utilize MUA/Ps to allocate federal resources to areas of greatest need. Most counties in the region have been designated as medically underserved areas (MUAs). Exceptions are Butler, Perry, St. Francois, Ste. Genevieve counties and portions of Scott County. See Figure 3 for more information on MUA/Ps in the SEMO AHEC region.

<sup>28</sup> Missouri Foundation for Health. (2021). *Medicaid expansion enrollment and eligibility update: Characteristics of expansion enrollees*. Retrieved from [https://cpb-us-w2.wpmucdn.com/sites.wustl.edu/dist/1/2391/files/2020/04/FactSheet\\_NewEnrolleeDemographics\\_final.pdf](https://cpb-us-w2.wpmucdn.com/sites.wustl.edu/dist/1/2391/files/2020/04/FactSheet_NewEnrolleeDemographics_final.pdf).

<sup>29</sup> Ibid 28.

<sup>30</sup> Health Resources and Services Administration. (2021). *What is a shortage designation?* Retrieved from <https://bhwh.hrsa.gov/workforce-shortage-areas/shortage-designation>.

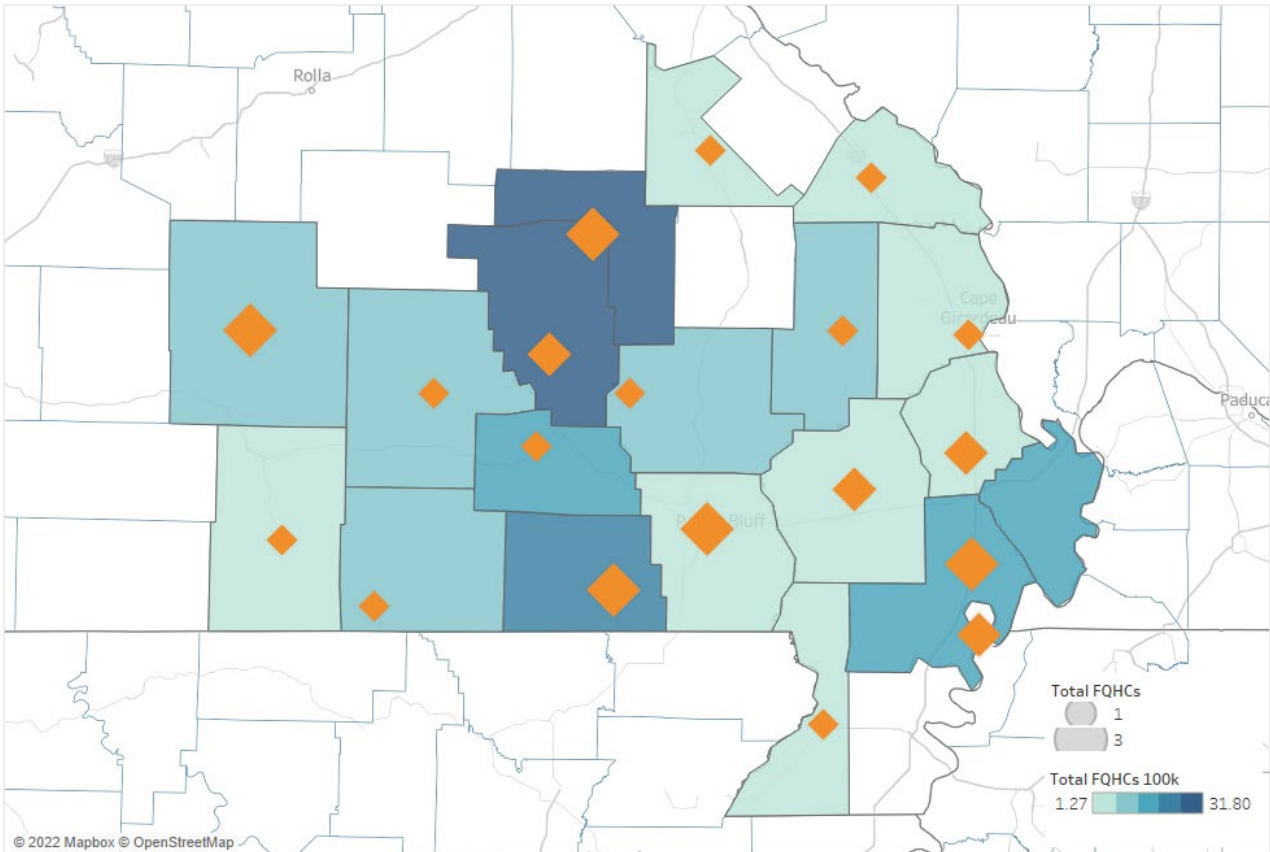
**Figure 3: Medically Underserved Areas/Populations (MUA/Ps)**



Note: Dynamic, interactive maps of MUA/Ps and medical facilities in all AHEC regions are available under Indicator Dashboards at <https://mohealthcareworkforce.org/>.

As seen in Figure 4, Federally Qualified Health Centers (FQHCs) are fairly well distributed throughout the region. However, there are some counties in the SEMO AHEC region without a Federally Qualified Health Center. FQHCs are important safety net providers for primary care, dental, and mental and behavioral health.

**Figure 4: Federally Qualified Health Centers (FQHCs) per 100,000 Residents**



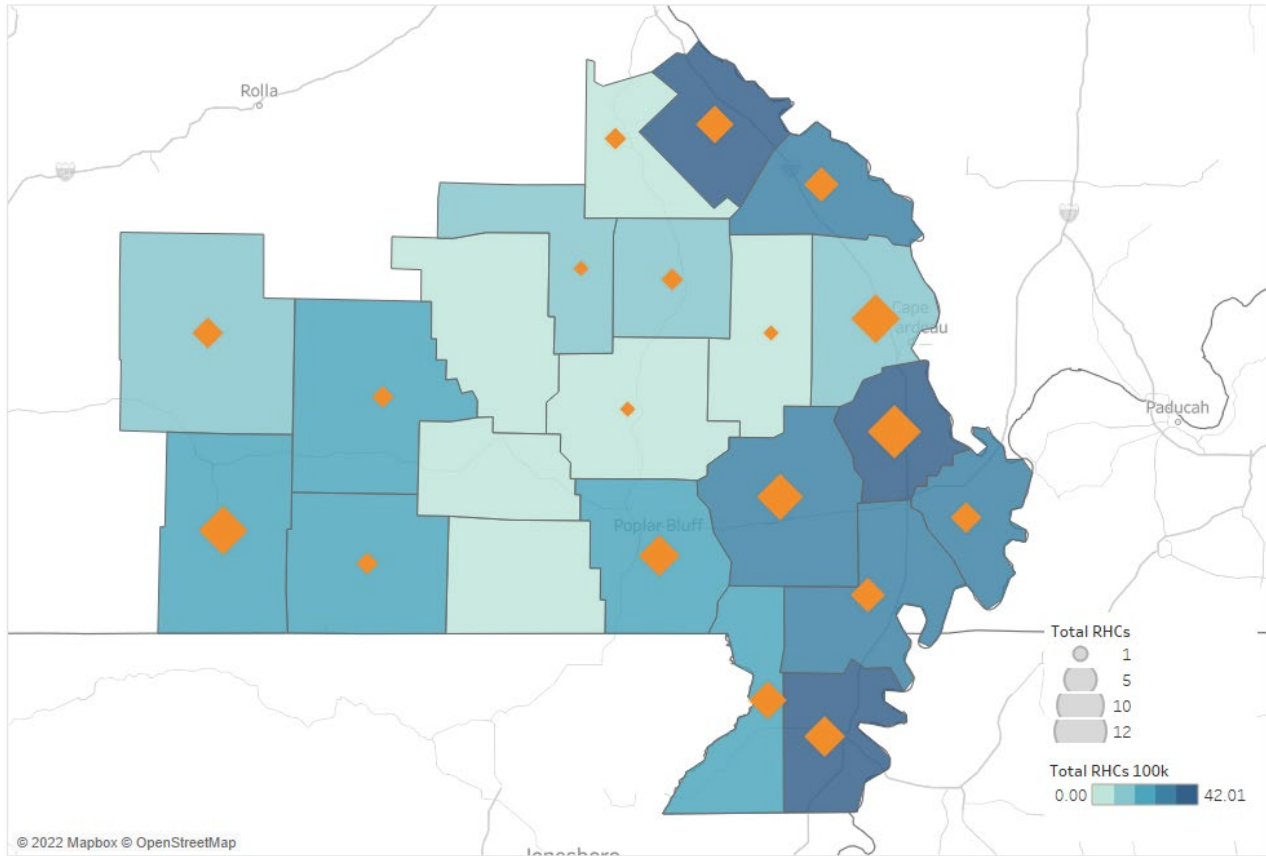
Source: American Community Survey (2015-2019 5 year estimates), MO Department of Health and Senior Services via Missouri Spatial Data Information Service (2022)

Note: Map does not include FQHC administrative offices. Dynamic, interactive maps of medical facilities in all AHEC regions are available at <https://mohealthcareworkforce.org/indicator-dashboards/medical-facilities/>.

Figure 5 displays Rural Health Clinics and rates of clinics per 100,000 residents in the region. Three counties in the region, Carter, Reynolds and Ripley, do not have a Rural Health Clinic. Rural Health Clinics fill important gaps in primary care, dental care, and mental and behavioral health in rural areas.



**Figure 5: Rural Health Clinics (RHCs) per 100,000 Residents**



Source: American Community Survey (2015-2019 5 year estimates), MO Department of Health and Senior Services via Missouri Spatial Data Information Service (2022)

Note: Dynamic, interactive maps of medical facilities in all AHEC regions are available at <https://mohealthcareworkforce.org/indicator-dashboards/medical-facilities/>. Rural Health Clinic locations are reported by the Missouri Department of Health and Senior Services through Missouri Spatial Data Information Service (<https://data-msdis.opendata.arcgis.com/>). The “RHC Finder” on the Missouri Association of Rural Health Clinics website may include additional RHCs (<https://www.marhc.org/rhcfinder>) not shown in Figure 5.

## **Health Care Workforce Landscape in the Region**

Analysis of the health care workforce in the SEMO AHEC region focuses on primary care, dental health, and mental and behavioral health, as well as additional professions such as nursing, pharmacy, physical therapy, community health workers and the public health workforce. For the purposes of this regional analysis, primary care includes these specialties: family medicine, general practice, internal medicine, obstetrics and gynecology (OB/GYN) and pediatrics. Dental health includes dentists, dental hygienists and dental assistants. Mental and behavioral health includes licensed professional counselors, psychologists, licensed social workers, marital and family therapists, psychiatrists, child psychiatrists, behavior analysts and assistant behavior analysts.



In general, the analysis finds shortages of health care providers throughout the SEMO AHEC region for each of the professions reviewed. Throughout Missouri, shortages are more acute in rural areas with few exceptions, such as licensed practical nurses (LPNs). Due to the rurality of the SEMO AHEC region, it is not surprising that shortages exist for most provider types.

### Primary Care

A high-quality primary care workforce providing sufficient regional coverage is key to healthy individuals, families and communities. Primary care providers are on the front lines as the first source of non-emergency care. Through education to manage daily health, treatment for sickness, and linkages to specialized care, primary care providers help people live healthier lives and incur fewer medical costs over time.<sup>31</sup>

### Primary Care Physicians

The ratio of primary care physicians (PCPs) to the region’s population is one PCP for every 1,197 persons (Table 4). This ratio is well below the state’s ratio of one PCP per 621 residents.

**Table 4. Primary Care Physicians by SEMO AHEC Region and State**

Provider Type	Region State	Rural # (%)	Partially Rural # (%)	Urban # (%)	Total Provider Type	Total Population	Ratio Provider Type to Population
Primary Care Physicians	Region	264 (60%)	0 (0%)	178 (40%)	442	529,002	1 to 1,197
	State	1,224 (12%)	847 (9%)	7,753 (79%)	9,824	6,104,910	1 to 621

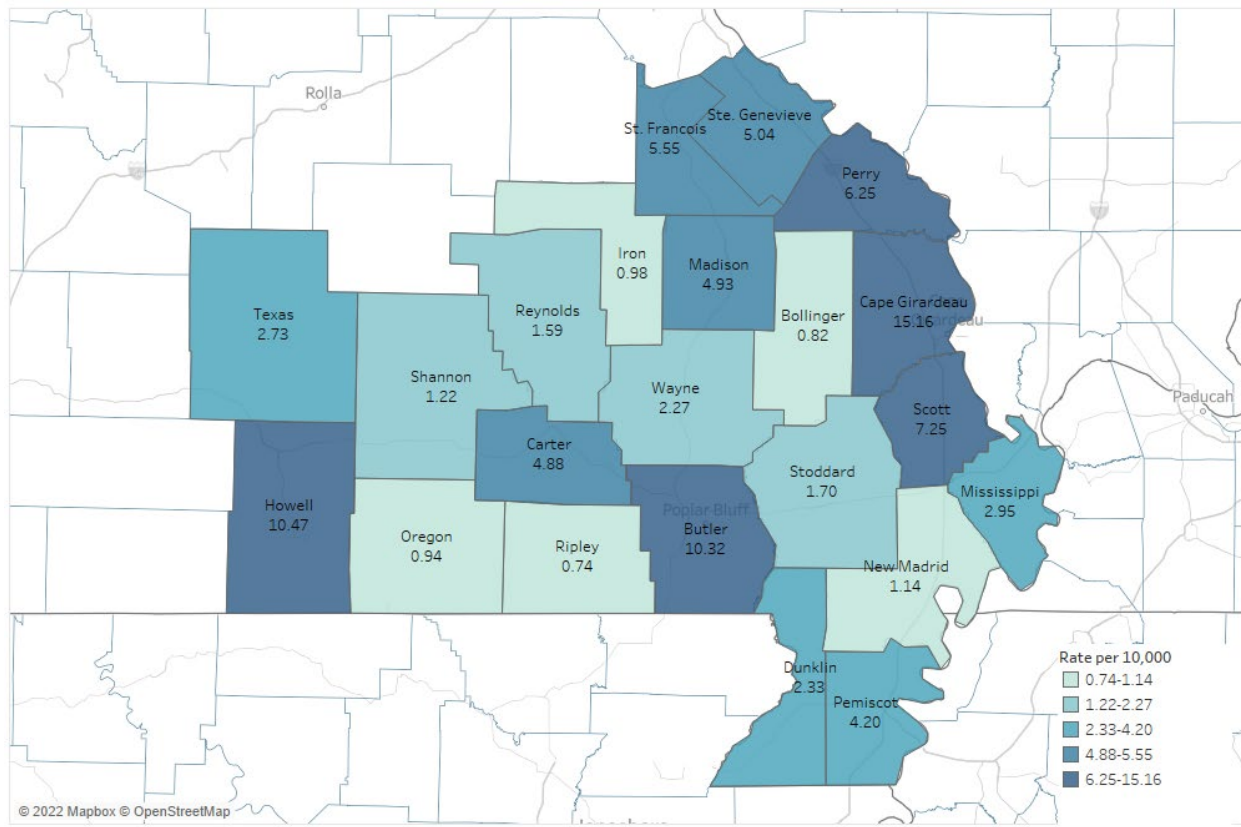
Note: Primary care physicians include the specialties of Family Medicine, General Practice, Internal Medicine, Obstetrics and Gynecology (OB/GYN) and Pediatrics.

Data on primary care physicians in the region are from the Missouri Division of Professional Registration public release file.<sup>32</sup> According to these data, five counties (Bollinger, Iron, New Madrid, Oregon and Ripley) have less than 1.2 PCP per 10,000 residents (Figure 6).

<sup>31</sup> Cleveland Clinic. (2021). *The importance of having a primary care doctor*. Retrieved from <https://my.clevelandclinic.org/health/articles/16507-the-importance-of-having-a-primary-care-doctor>.

<sup>32</sup> The Missouri Division of Professional Registration allows licensees to opt out of inclusion in their public release files. As such, some practicing primary care physicians are not included in this dataset.

**Figure 6. Geographic Distribution of Primary Care Physicians per 10,000 Residents (2022)**



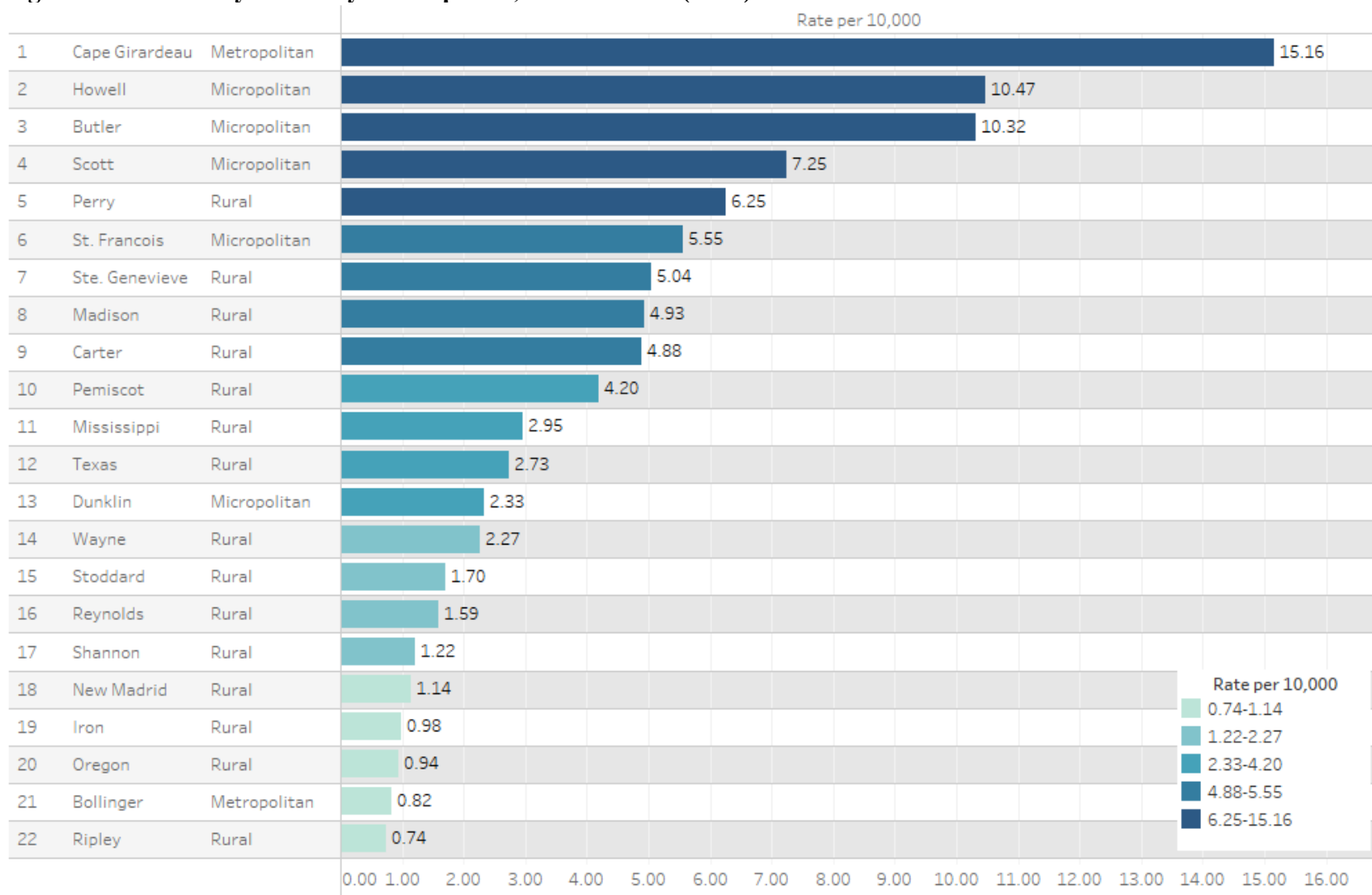
Source: Missouri Division of Professional Registration (2022)

Primary Care includes Family Medicine/General Practice, Internal Medicine, Obstetrics and Gynecology and Pediatrics.

Note: Dynamic, interactive maps of primary care physicians and other providers in all AHEC regions are available at <https://mohealthcareworkforce.org/indicator-dashboards/workforce/>.

Counties with the highest rates of primary care physicians per 10,000 residents (Butler, Cape Girardeau, Howell, Powell and Scott) tend to be the most densely populated counties in the region, with all except Perry County being designated as metropolitan or micropolitan counties (Figure 7). An interesting exception to this trend is Bollinger County, which is in the Cape Girardeau metropolitan area, but has the second lowest rate of primary care physicians in the region at 0.82 PCPs per 10,000 residents.

**Figure 7. All Primary Care Physicians per 10,000 Residents (2022)**



Source: Missouri Division of Professional Registration (2022)

Primary Care includes Family Medicine/General Practice, Internal Medicine, Obstetrics and Gynecology and Pediatrics.

A **Primary Care Health Professional Shortage Area (HPSA)** is an area, population, or facility designated by HRSA as having an insufficient number of primary care providers. HPSAs are utilized by federal programs such as National Health Service Corps, Nurse Corps, Indian Health Service (IHS) Loan Repayment Program, and Rural Health Clinic Program to allocate resources to designated areas of shortage.<sup>33</sup> All of the region is included in a primary care Population HPSA with the exception of Iron County which is a High Needs Geographic HPSA (Figure 8).

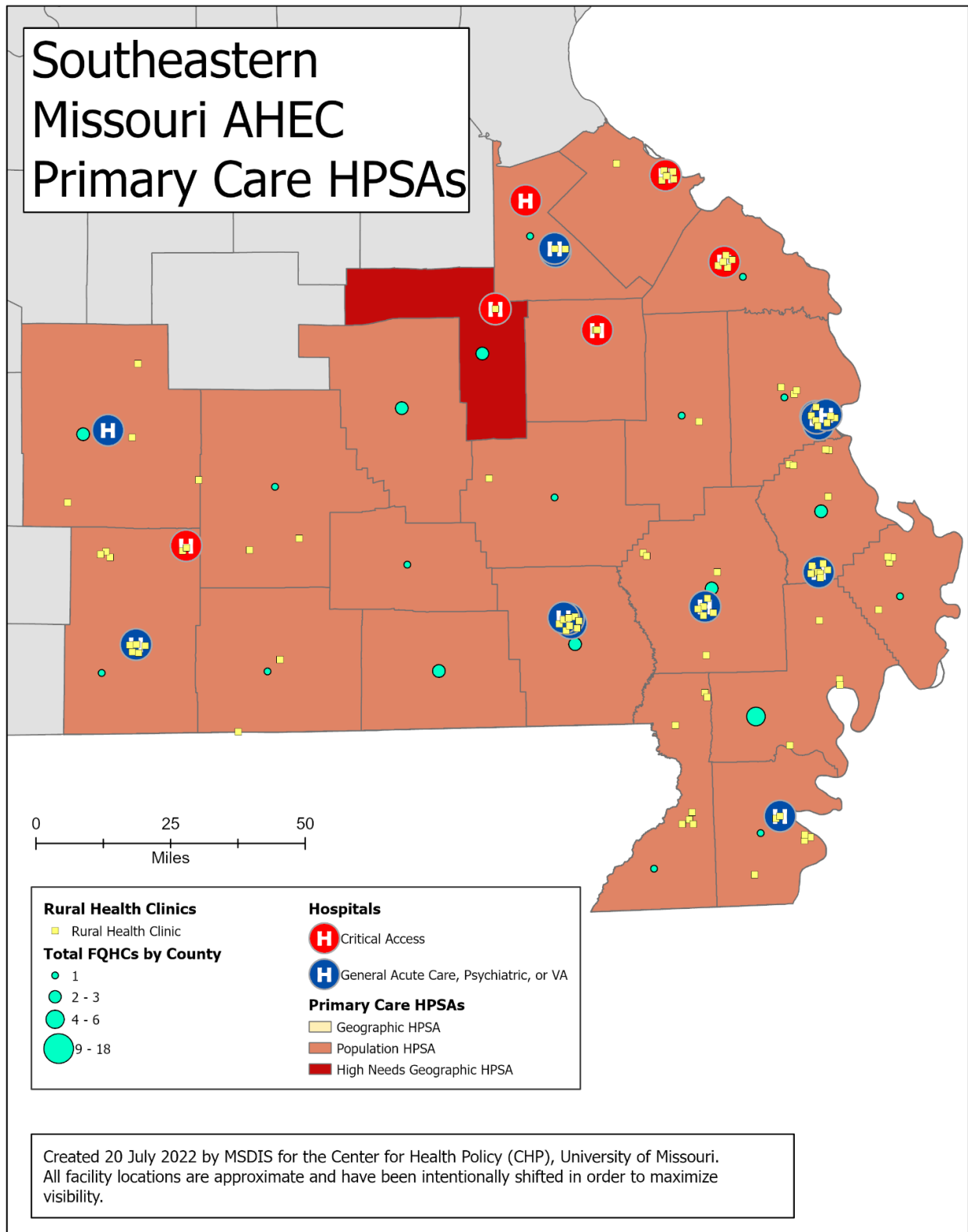
A **Geographic HPSA** represents an entire population of people from a specific geography such as a county or a state who are experiencing a shortage of health care providers. A Geographic HPSA can be marked as a **High Needs Geographic HPSA** if more than 20% of the population is at or below 100% federal poverty level, there are more than 100 births per year per 1,000 women ages 15-44, more than 20 infant deaths per 1,000 live births, or two or more criteria are met for insufficient capacity in the designated area.

A **Population HPSA** represents a specific group of people within a defined geographic area like a county or a state who are experiencing a shortage of health care providers. Specific groups may include low-income persons, migrant workers, Medicaid eligible persons, and others.

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<sup>33</sup> Health Resources and Services Administration. (2021). *What is a shortage designation?* Retrieved from <https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation>.

Figure 8. Primary Care HPSAs



Note: Dynamic, interactive maps of HPSAs and medical facilities in all AHEC regions are available under Indicator Dashboards at <https://mohealthcareworkforce.org/>.

## Dental Health

Dental health is foundational to overall health and well-being. Dental health is linked to the overall health of the body, including susceptibility to oral cancer, lung disease, pregnancy and birth complications, pneumonia, stroke, heart attack and diabetes.<sup>34</sup> Access to quality dental education, prevention, treatment of disease, replacement and repair is crucial for all.

### Dental Health Providers

Dental health providers include dentists, dental hygienists, and dental assistants. The 2021 data on these providers are from Missouri Division of Professional Registration public release licensure data, and do not include providers who opt out of the public release file. Table 5 shows the number and ratios of dental care providers in the SEMO AHEC region. The region is experiencing greater shortages of dentists, dental hygienists, and dental assistants than the state average.

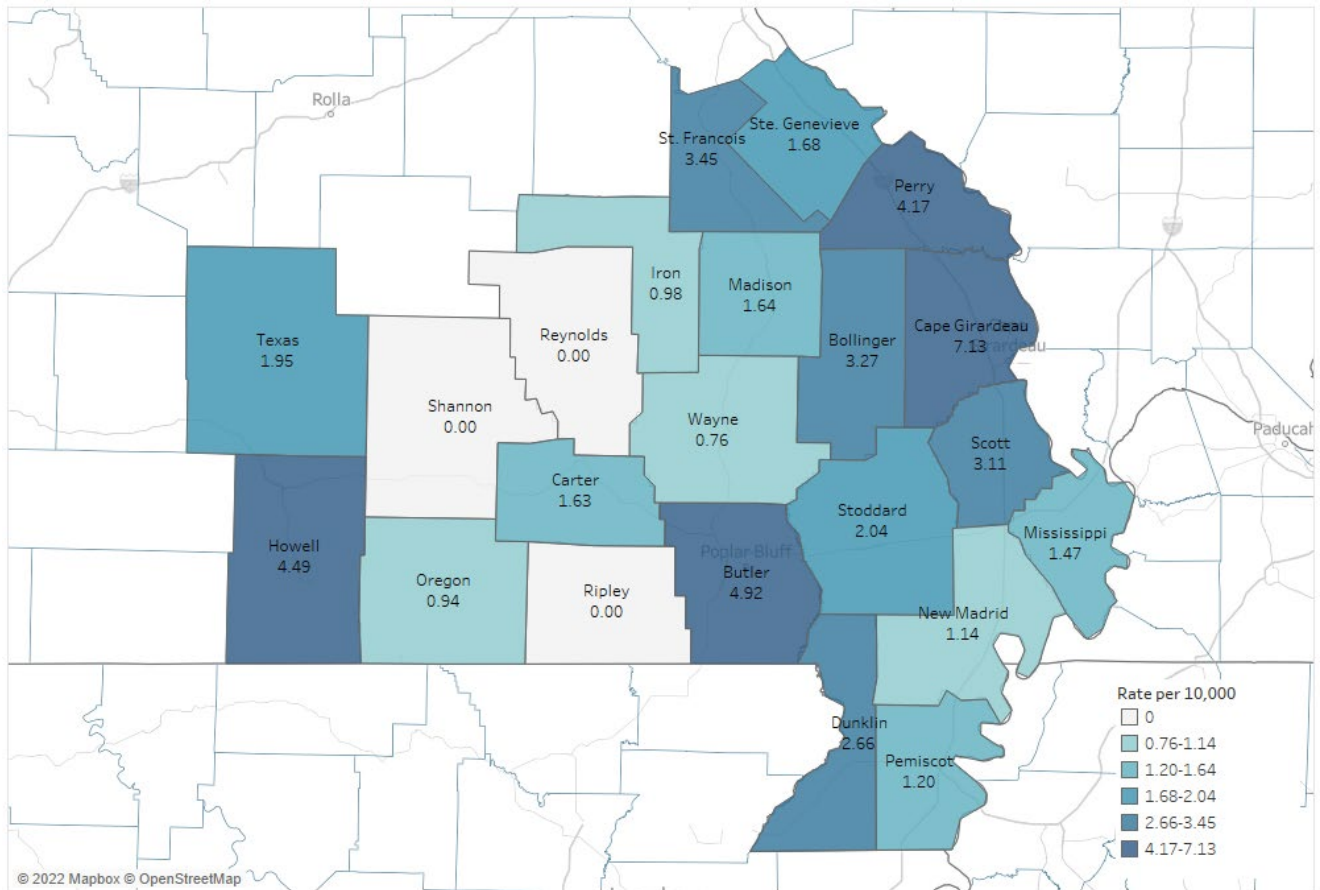
**Table 5. Dental Health Providers by SEMO AHEC Region and State**

Provider Type	Region State	Rural # (%)	Partially Rural # (%)	Urban # (%)	Total Provider Type	Total Population	Ratio Provider Type to Population
Dentists	Region	119 (68%)	0 (0%)	56 (32%)	175	529,002	1 to 3,023
	State	537 (17%)	222 (7%)	2,452 (76%)	3,211	6,104,910	1 to 1,902
Dental Hygienists	Region	165 (80%)	0 (0%)	41 (20%)	206	529,002	1 to 2,568
	State	893 (25%)	311 (9%)	2,424 (67%)	3,628	6,104,910	1 to 1,683
Dental Assistants	Region	325 (84%)	0 (0%)	63 (16%)	388	529,002	1 to 1,363
	State	2,198 (35%)	507 (8%)	3,512 (56%)	6,217	6,104,910	1 to 981

The geographic distribution of dentists (Figure 9) is skewed toward the metropolitan and micropolitan counties (Cape Girardeau, Butler and Howell) with the exception of rural Perry County (Figure 9). There are three counties with no dentists recorded in the public release data file (Reynolds, Ripley and Shannon).

<sup>34</sup> Mayo Clinic. (2021). *Oral health: A window to your overall health*. Retrieved from <https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/dental/art-20047475>.

**Figure 9. Geographic Distribution of Dentists per 10,000 Residents (2022)**

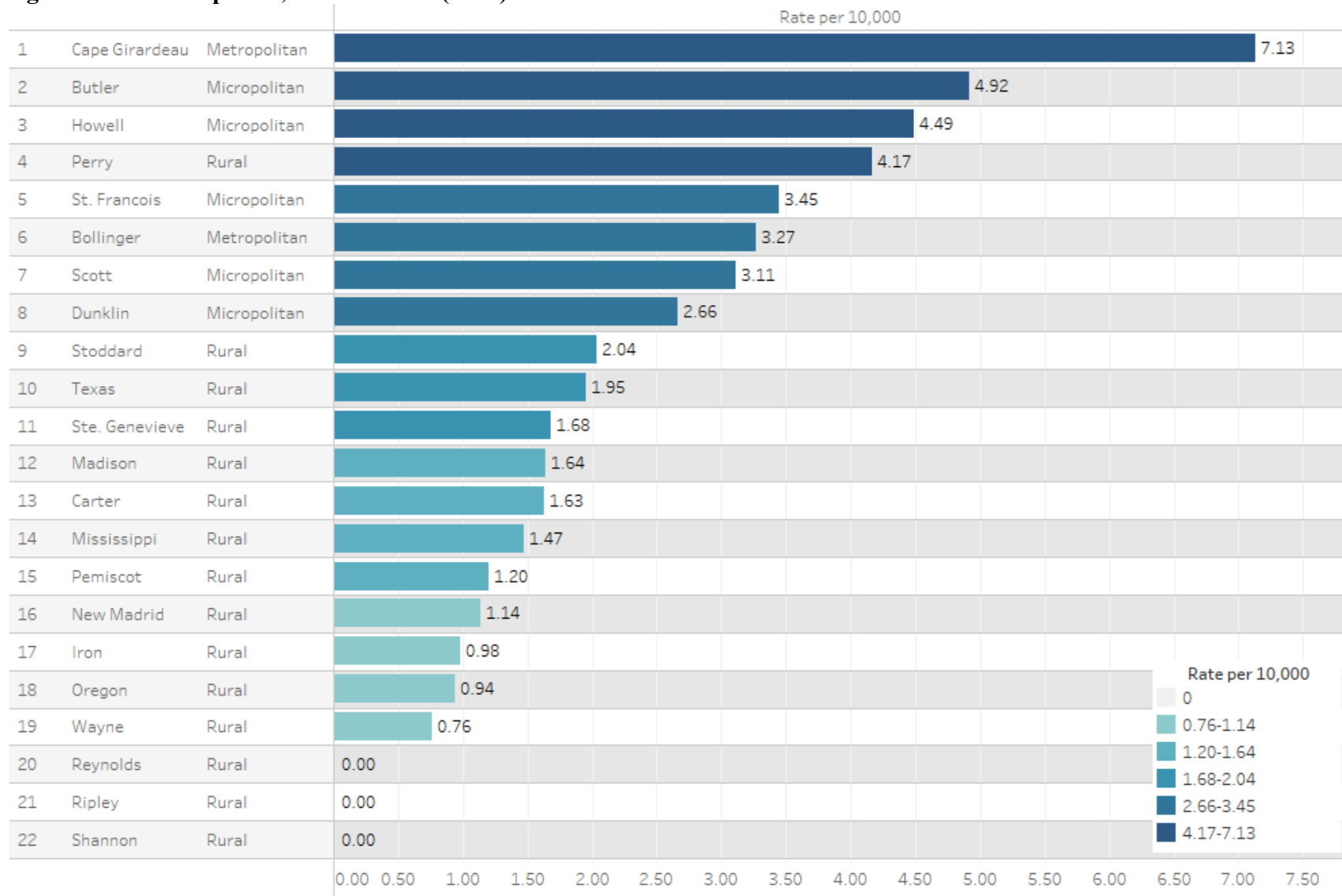


Source: Missouri Division of Professional Registration (2022)

Note: Dynamic, interactive maps of dentists and other providers in all AHEC regions are available at <https://mohealthcareworkforce.org/indicator-dashboards/workforce/>.

Figure 10 provides another view of the distribution of dentists in the region. Cape Girardeau County has the highest rate by far, with 7.13 dentists per 10,000 residents. A second tier includes Butler (4.92), Howell (4.49) and Perry (4.17) counties. There are three counties with less than one dentist per 10,000 residents: Iron (0.98), Oregon (0.94) and Wayne (0.76) and three with no dentists (Reynolds, Ripley and Shannon).

**Figure 10. Dentists per 10,000 Residents (2022)**

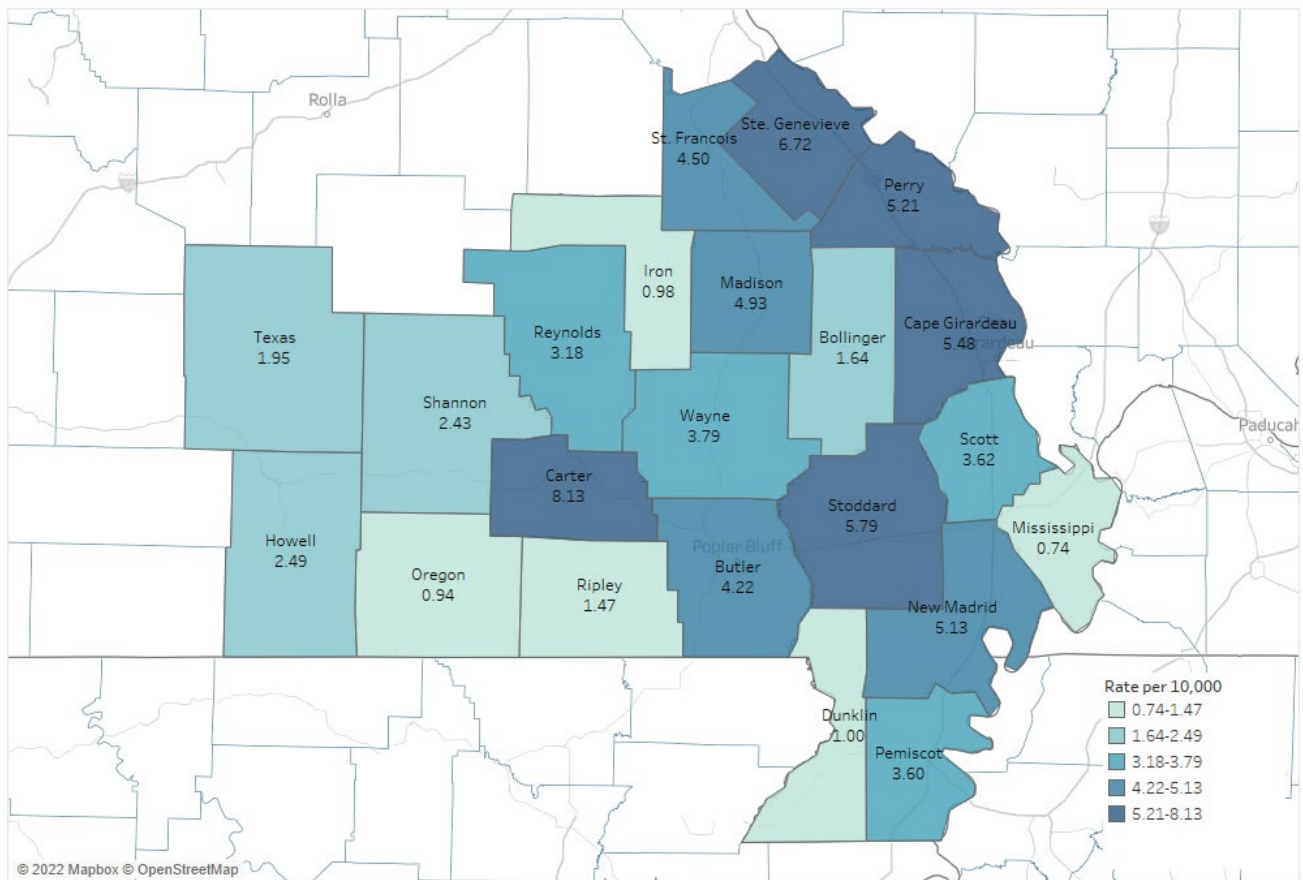


Source: Missouri Division of Professional Registration (2022)



Unlike the distribution of dentists, all counties in this AHEC have dental hygienists (Figure 11). The region’s dental hygienists tend to be concentrated in more rural counties (Carter, Perry, Ste. Genevieve and Stoddard), with the exception of Cape Girardeau County. Carter County has the highest concentration of dental hygienist at 8.13 per 10,000 residents, followed by Ste. Genevieve (6.72), Stoddard (5.79) and Cape Girardeau (5.48). Among all professions listed in this report, dental hygienists are the only profession whose county with the highest density of professionals is a rural county.

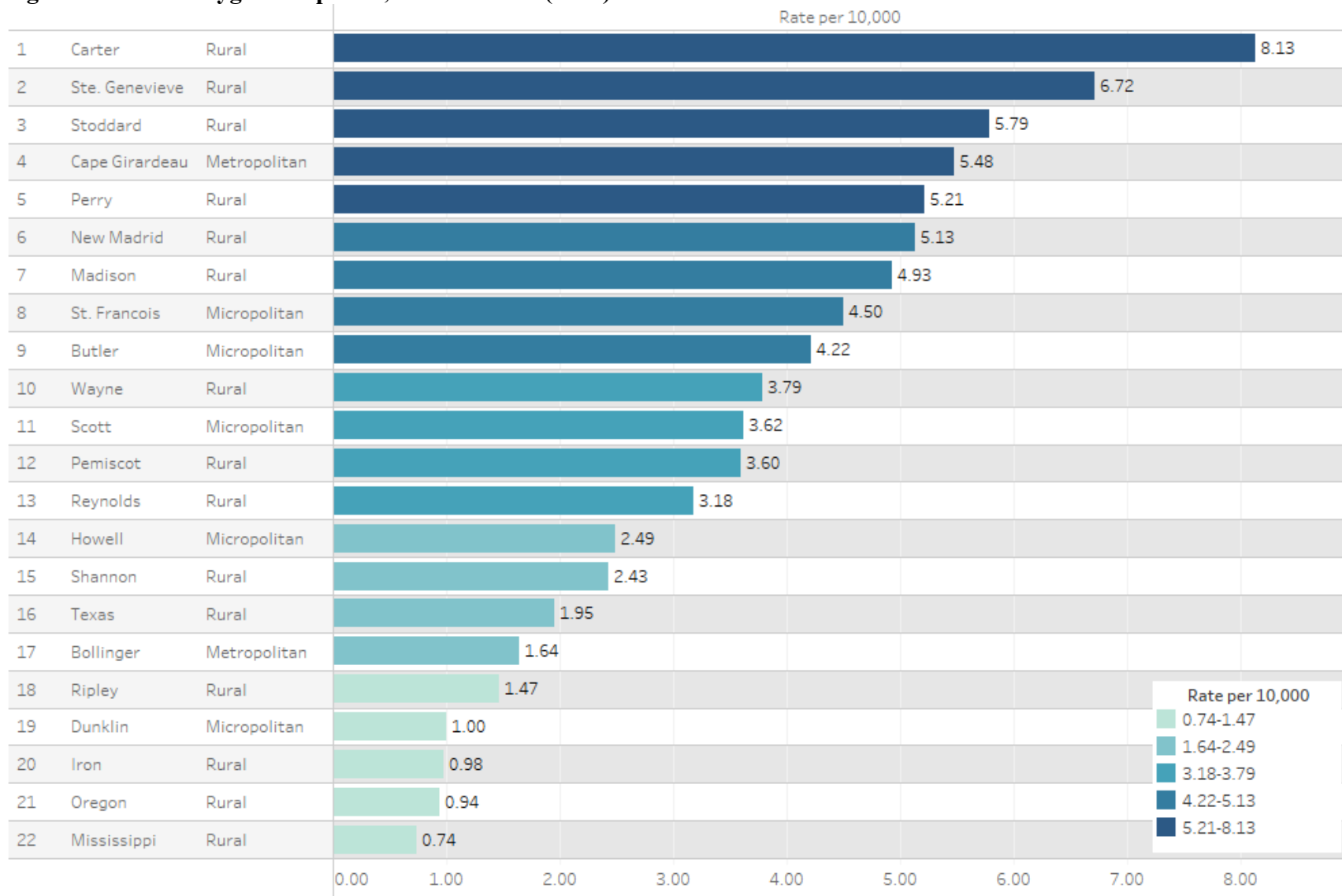
**Figure 11. Geographic Distribution of Dental Hygienists per 10,000 Residents (2022)**



Source: Missouri Division of Professional Registration (2022)

Note: Dynamic, interactive maps of dental hygienists and other providers in all AHEC regions are available at <https://mohealthcareworkforce.org/indicator-dashboards/workforce/>.

**Figure 12. Dental Hygienists per 10,000 Residents (2022)**



Source: Missouri Division of Professional Registration (2022)

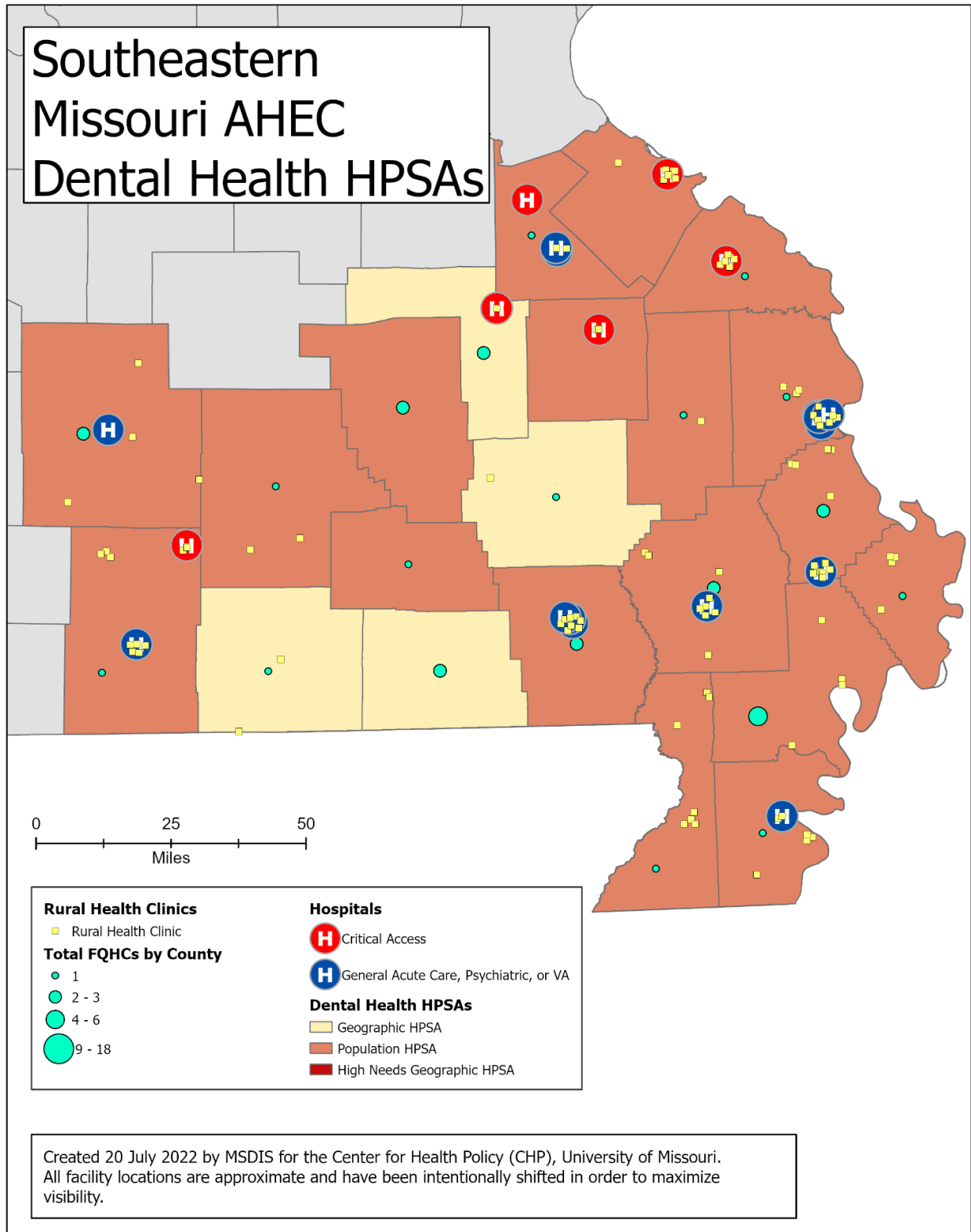
### **Dental Health Professional Shortage Areas (HPSAs)**

Most of the region is designated a Population HPSA (Figure 13) for dental health, which means that special populations in the region lack access to dental health care. All Population HPSAs in the region are designated as low-income populations. Additionally, Iron, Oregon, Ripley, Ste. Genevieve and Wayne are designated as Geographic HPSAs for dental health, which means that all residents of those counties are experiencing a shortage of dental health care.<sup>35</sup>

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<sup>35</sup> Office of Rural Health and Primary Care. (2021). *Health in rural Missouri: Biennial report 2020-2021*. Retrieved from <https://health.mo.gov/living/families/ruralhealth/pdf/biennial2020.pdf>.

Figure 13. Dental Health HPSAs



Note: Dynamic, interactive maps of HPSAs and medical facilities in all AHEC regions are available under Indicator Dashboards at <https://mohealthcareworkforce.org/>.

## Mental and Behavioral Health

Mental and behavioral health care helps people identify how behaviors influence their health including how to adopt positive behaviors to replace unhealthy ones. Mental illness and substance use disorders are key factors in disability, mortality, and health care costs. The prevalence of opioid addiction and related deaths is a crisis that continues. Mental and behavioral health professionals focus on wellness and prevention, helping patients manage mental and behavioral issues that allow them to lead happier, healthier, and more productive lives.<sup>36</sup>

## Mental and Behavioral Health Workforce

This section includes a summary of counts of the SEMO AHEC region's mental and behavioral health providers for 2021 provided by the Missouri Division of Professional Registration. Mental and behavioral health providers include licensed professional counselors, psychologists, licensed social workers, marital and family therapists, psychiatrists, child psychiatrists, behavior analysts and assistant behavior analysts. Table 6 is a summary of the 2021 data and shows both the region and state data for comparison. Population data were retrieved from the 2015-2019 ACS 5-year estimates.

The SEMO AHEC region has very few mental and behavioral health providers (one for every 621 SEMO AHEC region residents) compared to the state ratio (one provider for every 394 Missourians). The ratio of providers to population is noteworthy because of the increased need for mental health services due to trauma and PTSD from pandemic-related issues as well as the ongoing opioid crisis. Increased rates of insurance coverage due to Medicaid expansion and ACA may increase demand at a time of acute shortages in the region.<sup>37</sup> Telehealth services, which are popular sources of mental and behavioral health care, may provide an alternative for residents with adequate broadband service.

**Table 6. Mental and Behavioral Health Providers by SEMO AHEC Region and State**

Region Provider Type	Region State	Rural # (%)	Partially Rural # (%)	Urban # (%)	Total Provider Type	Total Population	Ratio Provider Type to Population
Mental and Behavioral Health	Region	589 (75%)	0 (0%)	193 (25%)	852	529,002	1 to 621
	State	2,283 (16%)	1,184 (8%)	10,709 (76%)	15,478	6,104,910	1 to 394

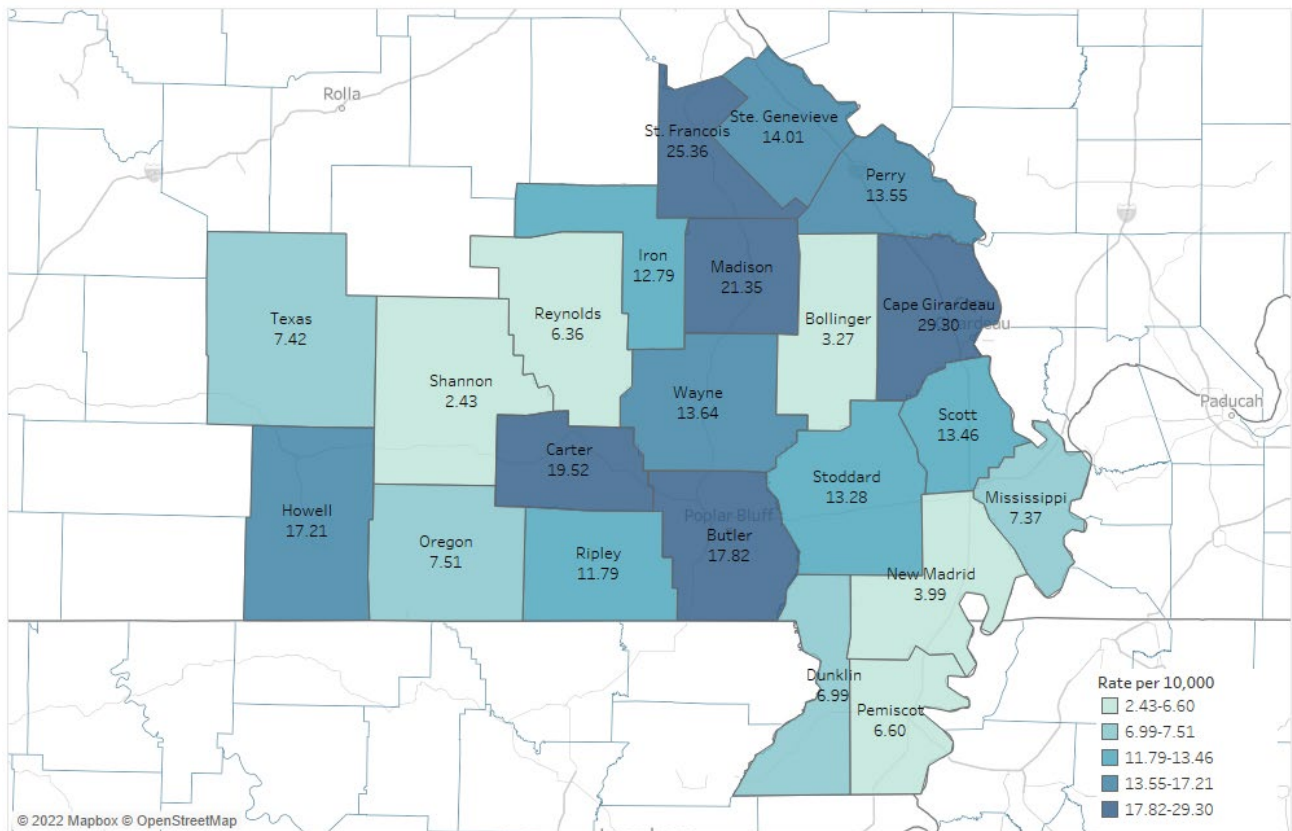
<sup>36</sup> Medline Plus. (2015). *Mental Health*. Retrieved from <https://medlineplus.gov/mentalhealth.html>.

<sup>37</sup> Grimm, C. (2021) "Hospitals Reported That the COVID-19 Pandemic Has Significantly Strained Health Care Delivery." Retrieved from <https://oig.hhs.gov/oei/reports/OEI-09-21-00140.pdf>.

The shortages and maldistributions of mental and behavioral health providers can be seen in Figures 14 and 15. Figure 15 shows that the highest concentration of providers is in Cape Girardeau County with 29.30 per 10,000 residents. St. Francois (25.36) and Madison (21.35) counties also have more than 20 mental and behavioral health providers per 10,000 residents.

The lowest rates of mental and behavioral health providers tend to occur in rural counties such as Shannon County with 2.43 per 10,000 residents. An exception is Bollinger County in the Cape Girardeau metropolitan area and the second lowest rate at 3.27 per 10,000 residents.

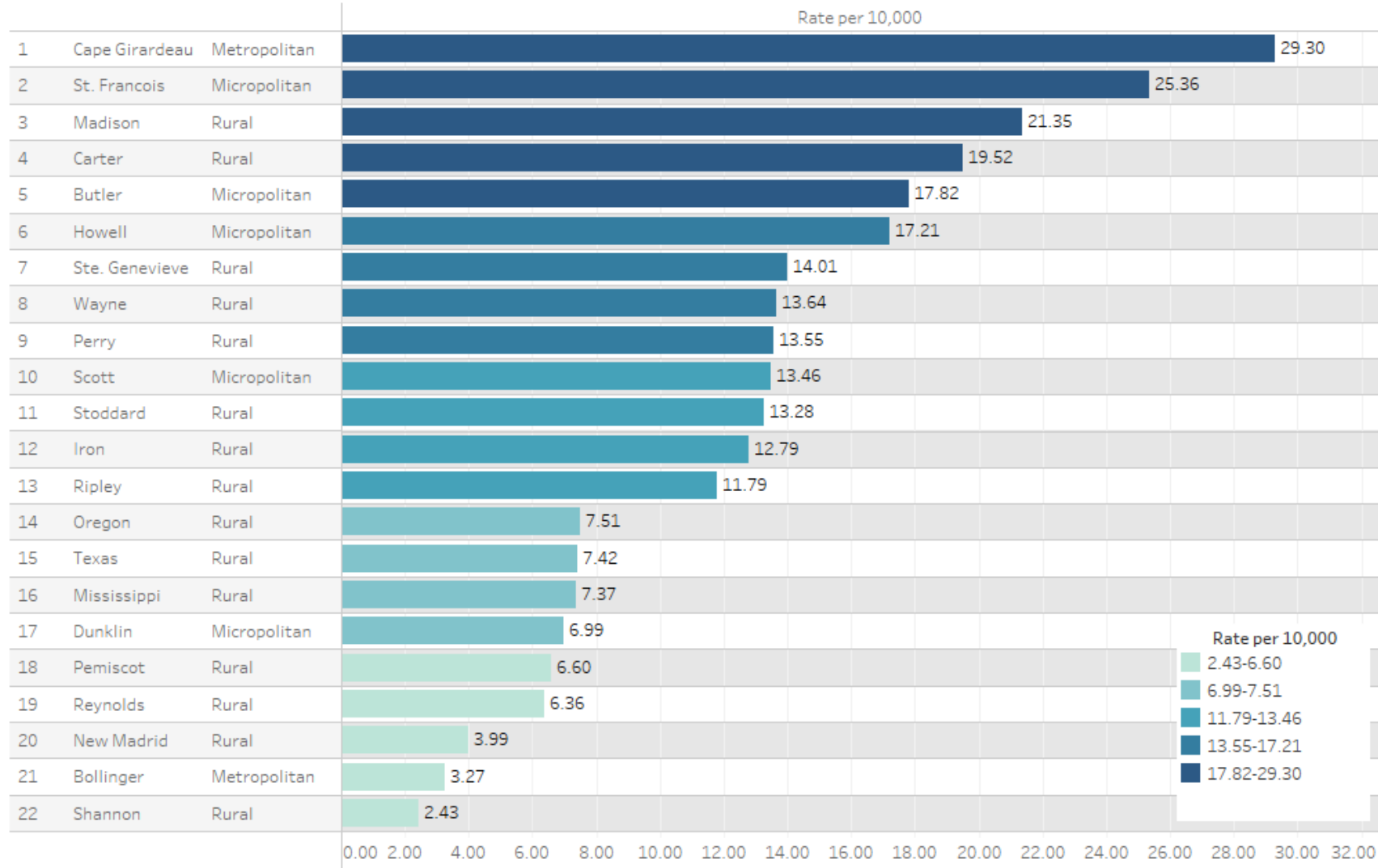
**Figure 14. Geographic Distribution of Mental and Behavioral Health Providers per 10,000 Residents (2022)**



Source: Missouri Division of Professional Registration (2022)  
 Mental & Behavioral Health includes Assistant Behavior Analyst, Behavior Analyst, Child Psychiatry, License Professional Counselor, Licensed Social Worker, Marriage & Family Therapist, Psychiatry and Psychologist.

Note: Dynamic, interactive maps of mental and behavioral health providers and other providers in all AHEC regions are available at <https://mohealthcareworkforce.org/indicator-dashboards/workforce/>.

**Figure 15. Mental and Behavioral Health Providers per 10,000 Residents (2022)**



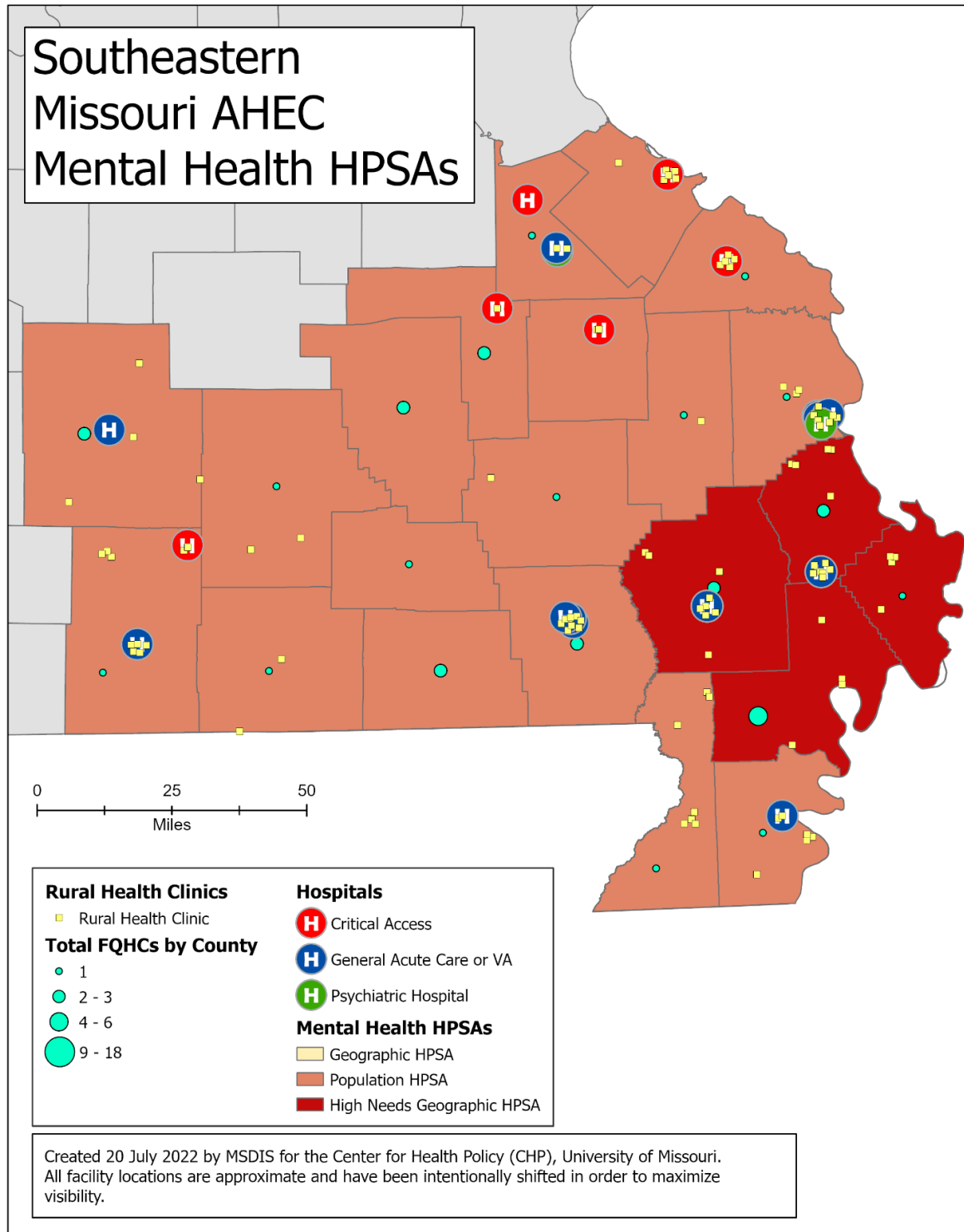
Source: Missouri Division of Professional Registration (2022)

Mental & Behavioral Health includes Assistant Behavior Analyst, Behavior Analyst, Child Psychiatry, Licensed Professional Counselor, Licensed Social Worker, Marriage & Family Therapist, Psychiatry and Psychologist.

## Mental Health Professional Shortage Areas (HPSAs)

All of the SEMO region is covered by a mental health HPSA including a **High Needs Geographic HPSA** that includes Mississippi, New Madrid, Scott and Stoddard counties (Figure 16). The remaining counties are a Population HPSA.

Figure 16. Mental Health HPSAs



Note: Dynamic, interactive maps of HPSAs and medical facilities in all AHEC regions are available under Indicator Dashboards at <https://mohealthcareworkforce.org/>.



## Missouri's Nursing Workforce

The Missouri State Board of Nursing offers two license types: Licensed Practical Nurse (LPN) and Registered Nurse (RN). While Missouri's Advance Practice Nurses (APRNs) are licensed as RNs, their title reflects completion of a terminal degree, national credentialing, and recognition by the Missouri State Board of Nursing of their advanced practice status. When considering Missouri's nursing workforce, it is important to note the differences in the scope of practice among LPNs, RNs and APRNs. With their ability to prescribe and supervise LPNs and RNs, APRNs are more comparable to physicians and physician assistants in the workforce. Table 7 presents 2021 nurse counts from Missouri Division of Professional Registration licensure data, as well as population counts from 2015-2019 ACS 5-year estimates.

The distribution of APRNs and RNs in the SEMO AHEC region follows a similar pattern to other rural regions of the state where, compared to the state ratio, there are fewer RNs (1:113 residents versus 1:88 residents) and APRNs (1:728 residents versus 1:672 residents) for the population. However, like many other rural regions, there are more LPNs for the population compared to the state ratio (1:274 residents versus 1:401 residents).

**Table 7. Nursing Workforce by SEMO AHEC Region and State**

Provider Type	Region State	Rural # (%)	Partially Rural # (%)	Urban # (%)	Total Provider Type	Total Population	Ratio Provider Type to Population
Advanced Practice Registered Nurses (APRNs)	Region	452 (62%)	0 (0%)	275 (38%)	727	529,002	1 to 728
	State	1,506 (17%)	697 (8%)	6,881 (76%)	9,084	6,104,910	1 to 672
Registered Nurses (RNs)	Region	3,158 (67%)	0 (0%)	1,531 (33%)	4,689	529,002	1 to 113
	State	11,594 (17%)	5,693 (8%)	52,325 (75%)	69,612	6,104,910	1 to 88
Licensed Practical Nurses (LPNs)	Region	1,603 (83%)	0 (0%)	330 (17%)	1,933	529,002	1 to 274
	State	5,813 (38%)	1,376 (9%)	8,017 (53%)	15,206	6,104,910	1 to 401

## Selected Allied Health Professions

Table 8 includes 2021 data from Missouri Division of Professional Registration and population numbers from 2015-2019 5-year ACS estimates. Provider shortages in the SEMO AHEC region follow the pattern of other rural regions of the state. Shortages for pharmacists, pharmacy technicians, physical therapists, and physical therapy assistants may be concerning due to an aging population which may increase need for many services.<sup>38</sup>

<sup>38</sup> Dall, T.M., Gallo, P.D., Chakrabarti, R., West, T., Semilla, A.P., & Storm, M.V. (2013). An aging population and growing disease burden will require a large and specialized health care workforce by 2025. *Health affairs*, 32(11), 2013-2020. <https://doi.org/10.1377/hlthaff.2013.0714>.

### **Pharmacy Workforce**

Pharmacist and pharmacy technician counts and ratios indicate a lack of pharmacists in the region (one per 1,082 residents) compared to the state ratio (one per 850 residents), but only a slightly lower number of pharmacy technicians in the region (one per every 258 residents) compared to the state ratio (one per every 290 residents). As residents of the SEMO AHEC region age, they may require more access to pharmacy care while their region has fewer pharmacists than state averages. Services such as Express Scripts may increase access to prescription medications for SEMO AHEC residents, though filling prescriptions is just one of the services provided by pharmacists.

### **Physical Therapy Workforce**

Residents of the SEMO AHEC region have less access to physical therapists (PTs) than Missourians overall with a region ratio of one PT for every 2,519 residents compared to a state ratio of one PT per 1,707 residents. However, there is a higher density of physical therapy assistants (PTAs) in this region compared to the state ratio (one PTA for every 3,458 SEMO AHEC region residents versus one PTA per every 5,071 Missouri residents). Two issues that may impact the need for PTs and PTAs are the opioid epidemic and the aging population. As the Missouri population ages, their need for physical therapy services may increase. Additionally, there is also widespread need for non-addictive alternatives to treat pain, with one study finding 78 percent of Americans surveyed preferred drug-free pain management to opioids.<sup>39</sup> Physical therapy is one such option that can provide education on pain and pain management as well as effective treatment.

### **Community Health Worker Workforce**

Community Health Workers (CHWs) are a relatively new workforce in the US and Missouri. CHWs provide frontline public health services in their own communities and serve as liaisons between health care and social service providers and the communities they serve. CHWs serve in both formal and informal capacities and can be employees or volunteers.<sup>40</sup> Table 8 presents the most current counts of credentialed CHWs in Missouri. Demand for CHWs is anticipated to grow due to expanding healthcare coverage through Medicaid expansion as well as the growth in Missourians over the age of 65.

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<sup>39</sup> Mintken, P.E., Moore, J.R., Flynn, T.W. (April 30, 2018) *Physical Therapists' Role in Solving the Opioid Epidemic*. Retrieved from <https://www.jospt.org/doi/10.2519/jospt.2018.0606>

<sup>40</sup> National Institute for Healthcare Management Foundation. (April 7, 2021) *Community Health Workers: Their Important Role in Public Health*. Retrieved from <https://nihcm.org/publications/community-health-workers-infographic>.

**Table 8. Selected Allied Health Professions by SEMO AHEC Region and State**

Provider Type	Region State	Rural # (%)	Partially Rural # (%)	Urban # (%)	Total Provider Type	Total Population	Ratio Provider Type to Population
Pharmacists	Region	359 (73%)	0 (0%)	130 (27%)	489	529,002	1 to 1,082
	State	1,350 (19%)	520 (7%)	5,238 (74%)	7,108	6,104,910	1 to 859
Pharmacy Technicians	Region	1,740 (85%)	0 (0%)	307 (15%)	2,047	529,002	1 to 258
	State	6,204 (29%)	1,317 (6%)	13,539 (64%)	21,060	6,104,910	1 to 290
Physical Therapists	Region	143 (68%)	0 (0%)	67 (32%)	210	529,002	1 to 2,519
	State	579 (16%)	296 (8%)	2,701 (76%)	3,576	6,104,910	1 to 1,707
Physical Therapy Assistants	Region	122 (80%)	0 (0%)	31 (20%)	153	529,002	1 to 3,458
	State	395 (33%)	105 (9%)	704 (58%)	1,204	6,104,910	1 to 5,071
Community Health Workers	Region	0 (0%)	20 (100%)	0 (0%)	20	529,002	1 to 26,450
	State	20 (10%)	53 (25%)	135 (65%)	208	6,104,910	1 to 29,351

### Public Health Workforce

Based in a variety of organizations that are part of a diverse and complex system, the public health workforce promotes and protects the health of communities.<sup>41</sup> Missouri has a decades-long history of efforts to transform the public health system, including efforts to normalize public health services across the state. For example, grassroots efforts by the #HealthierMO Initiative (HealthierMO, <https://www.healthiermo.org/>), include an analysis of Missouri’s public health system capacity titled *A Summary of Missouri’s Public Health System Capacity to Deliver the Missouri Foundational Public Health Services Model*: [https://www.healthiermo.org/\\_files/ugd/9bd019\\_f678e32c6fa24128958b9280f5f03450.pdf](https://www.healthiermo.org/_files/ugd/9bd019_f678e32c6fa24128958b9280f5f03450.pdf). While the Local Public Health Agency regions analyzed in the report do not fully align with Missouri AHEC regions, the analysis nonetheless provides a useful resource to better understand the region’s public health workforce.

<sup>41</sup> American Public Health Association. (2022, February 17). *What Is Public Health*. Retrieved from APHA.org: <https://www.apha.org/What-is-Public-Health>.

## **MHA Regional Workforce Report Summary<sup>42</sup>**

The Missouri Hospital Association (MHA) produces an annual statewide workforce report (<https://web.mhanet.com/media-library/2022-workforce-report/>) as well as regional profiles ([https://www.mhanet.com/mhaimages/workforce/2022/SE\\_Region\\_2022\\_WF.pdf](https://www.mhanet.com/mhaimages/workforce/2022/SE_Region_2022_WF.pdf) and [https://www.mhanet.com/mhaimages/workforce/2022/SC\\_Region\\_2022\\_WF.pdf](https://www.mhanet.com/mhaimages/workforce/2022/SC_Region_2022_WF.pdf)). MHA's Southeast Region Profile overlaps with about half of the SEMO AHEC region, though the SEMO AHEC region includes an additional nine counties that are in the South Central MHA Region (Butler, Carter, Howell, Oregon, Reynolds, Ripley, Shannon, Texas and Wayne). MHA's regional reports focus on the vacancy and turnover rates of healthcare professionals working in hospitals.

In the Southeast MHA region, the highest vacancy rates in hospitals are licensed practical nurses, nurse assistants, and staff registered nurses. In the South Central MHA region, the highest vacancy rates in hospitals are registered dietitians, physician assistants, and pharmacy technicians. The Southeast MHA region's RN vacancy rate of 21.7% is higher than the state's average (19.8%), while the South Central MHA region's RN vacancy rate is slightly lower than the state average at 18.7%.

The hospital professions with the highest turnover rates are food service worker/dietary aid, nurse assistant, and housekeeper in the Southeast MHA region; and staff registered nurse, registered dietitian, and housekeeper in the South Central MHA region. Like the vacancy rate, the RN turnover rate in the Southeast MHA region (24.7%) is higher than the state average of 22.1%. However, unlike its RN vacancy rate, the South Central region's RN turnover rate is much higher than the state average at 40.9%. This is important regional data because the solutions are different between vacancies (e.g., increase focus on recruiting new entrants to the field) and turnover (e.g., increase focus on retaining existing employees).

A regionalized analysis can help local and state policymakers determine the most productive strategies to stabilizing and growing the health care workforce. For example, if a region faces a high vacancy rate, investing in recruiting new entrants into the field might be a long-term approach whereas employee turnover challenges might be addressed through retention strategies such as increasing salary and/or enhancing benefits.

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<sup>42</sup> Missouri Hospital Association. (2022). *2022 MHA Workforce Report: Southeast Region Profile and South Central Region Profile*. Retrieved from [https://www.mhanet.com/mhaimages/workforce/2022/NE\\_Region\\_2022\\_WF.pdf](https://www.mhanet.com/mhaimages/workforce/2022/NE_Region_2022_WF.pdf) and [https://www.mhanet.com/mhaimages/workforce/2022/SC\\_Region\\_2022\\_WF.pdf](https://www.mhanet.com/mhaimages/workforce/2022/SC_Region_2022_WF.pdf).

**Table 9. SEMO AHEC Region compared to Missouri Hospital Association (MHA) Region**

<b>Southeastern AHEC Region Counties</b>	<b>MHA Region</b>
Bollinger County	Southeast
Butler County	South Central
Cape Girardeau County	Southeast
Carter County	South Central
Dunklin County	Southeast
Howell County	South Central
Iron County	Southeast
Madison County	Southeast
Mississippi County	Southeast
New Madrid County	Southeast
Oregon County	South Central
Pemiscot County	Southeast
Perry County	Southeast
Reynolds County	South Central
Ripley County	South Central
Saint Francois County	Southeast
Sainte Genevieve County	Southeast
Scott County	Southeast
Shannon County	South Central
Stoddard County	Southeast
Texas County	South Central
Wayne County	South Central

## **Health Care Infrastructure in the Region**

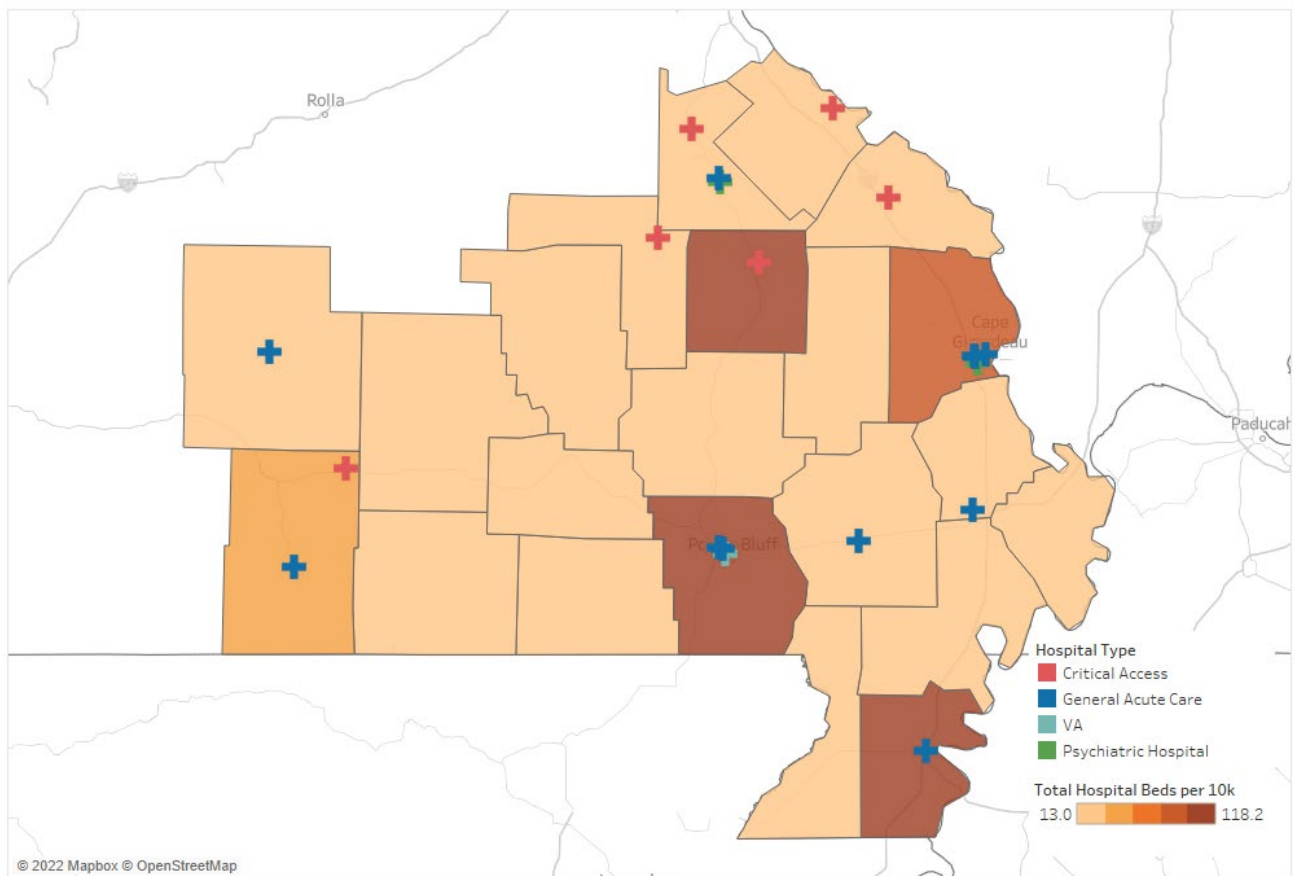
Primary care, dental health care, and mental and behavioral health care, and the workforce needed to deliver services, are all important aspects of Missouri’s health care landscape. Infrastructure is another important piece. FQHCs and Rural Health Clinics were mentioned earlier in this document, but it is also important to consider hospitals, long-term care facilities and even broadband access when examining Missouri’s health care infrastructure.

### **Hospitals**

Figure 17 displays the geographic location and distribution of hospitals across the SEMO region, along with rates of total beds per 10,000 residents. There are no Level I or II hospitals in the region. Trauma Level I hospitals serve as comprehensive tertiary care facilities offering the most specialized services for every aspect of injury care, and St. Louis and Springfield provide the nearest Level I hospitals for the region. Memphis, Tennessee, is another option for Level I care for the far southeastern portions of the SEMO AHEC region. Level II hospitals can provide

initial treatment for all injuries though some patients may need to be transferred to a Level I facility. Level II care is available in St. Louis and Memphis, Tennessee. Level III Trauma Centers can assess, resuscitate, and stabilize patients before transfer to Level I and II hospitals. Cape Girardeau has the only Level III hospital in the region. Gaps in availability of hospital care are visible throughout the SEMO region, and several counties (Bollinger, Carter, Dunklin, Mississippi, New Madrid, Oregon, Reynolds, Ripley, Shannon and Wayne) lack hospital care altogether. Many rural residents face long drive times and increased cost to access care, and emergency responders may need to cross two or more county lines to connect patients with life-saving services.

**Figure 17: Hospitals and Total Beds Per 10,000 Residents**



Source: American Community Survey (2015-2019 5 year estimates), MO Department of Health and Senior Services via Missouri Spatial Data Information Service (2022)

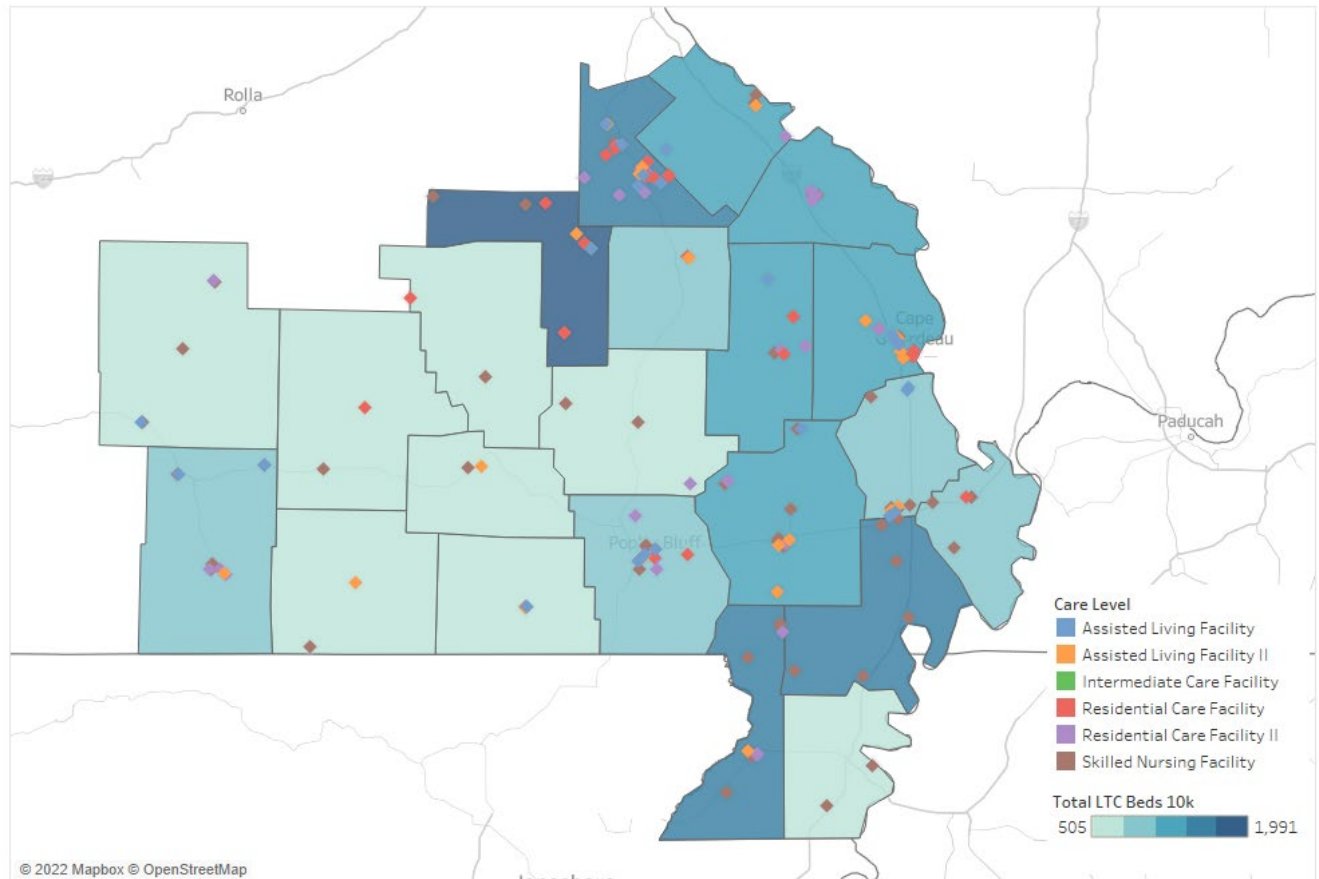
Note: Dynamic, interactive maps of medical facilities in all AHEC regions are available at <https://mohealthcareworkforce.org/indicator-dashboards/medical-facilities/>.



## Long-Term Care Facilities

Figure 18 provides a visualization of long-term care facilities in the region, based on the rate of long-term care beds per 10,000 population age 65 or older in 2022. The SEMO AHEC region has the highest rate among the MAHEC regions with 1,075.7 beds per 10,000 population age 65 or older. There are enough long-term-care facility beds to care for approximately one out of every 10 persons in the region over the age of 65.

**Figure 18: Long-Term Care Facilities and Total Beds Per 10,000 Residents Age 65+**



Source: American Community Survey (2015-2019 5 year estimates), MO Department of Health and Senior Services via Missouri Spatial Data Information Service (2022)

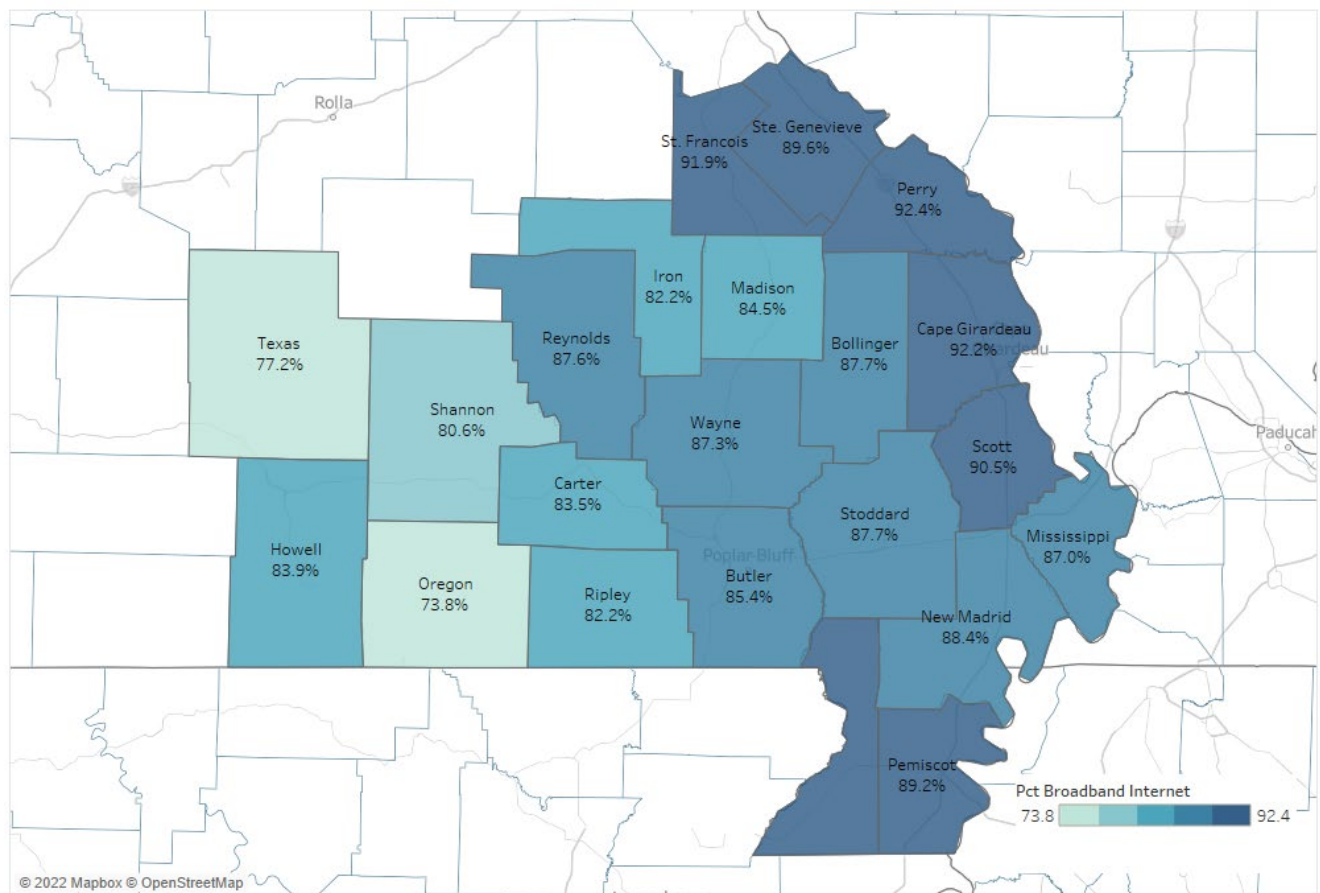
Note: Dynamic, interactive maps of medical facilities in all AHEC regions are available at <https://mohealthcareworkforce.org/indicator-dashboards/medical-facilities/>. “Age 65 and older” was used as the age category of interest due to Medicare eligibility. Care levels include:

- ALF: Assisted Living Facility
- ALF II: Assisted Living Facility with additional requirements for evacuation assistance
- ICF: Intermediate Care Facility
- RCF: Residential Care Facility
- RCF II: Residential Care Facility requiring a licensed Nursing Home Administrator
- SNF: Skilled Nursing Facility

## Broadband Access

Telehealth coverage and utilization was greatly expanded during the COVID-19 pandemic. Many of these policy changes may become permanent to increase health care access.<sup>43</sup> Thus, broadband access is an important piece of health care infrastructure. Figure 19 displays the percentage of households with a broadband internet subscription at the county level within the SEMO AHEC region. Unfortunately, many of the counties with low percentages of broadband at home also have fewer health care providers and facilities. One potential solution is extending the audio-only telehealth options introduced during the pandemic, allowing those without broadband internet to access some care with their phone line.<sup>44</sup>

**Figure 19: Percentage of Households with a Broadband Internet Subscription**



<sup>43</sup> Koma, W., Cubanski, J., and Neuman, T. (n.d.) *Medicare and Telehealth: Coverage and Use During the COVID-19 Pandemic and Options for the Future*. Retrieved from <https://www.kff.org/medicare/issue-brief/medicare-and-telehealth-coverage-and-use-during-the-covid-19-pandemic-and-options-for-the-future>.

<sup>44</sup> Ibid 43.



*Southeastern Missouri Area Health Education Center*  
**Needs Assessment and Gap Analysis**

By the University of Missouri Center for Health Policy and Missouri AHEC Program Office  
at A.T. Still University-Kirksville College of Osteopathic Medicine

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