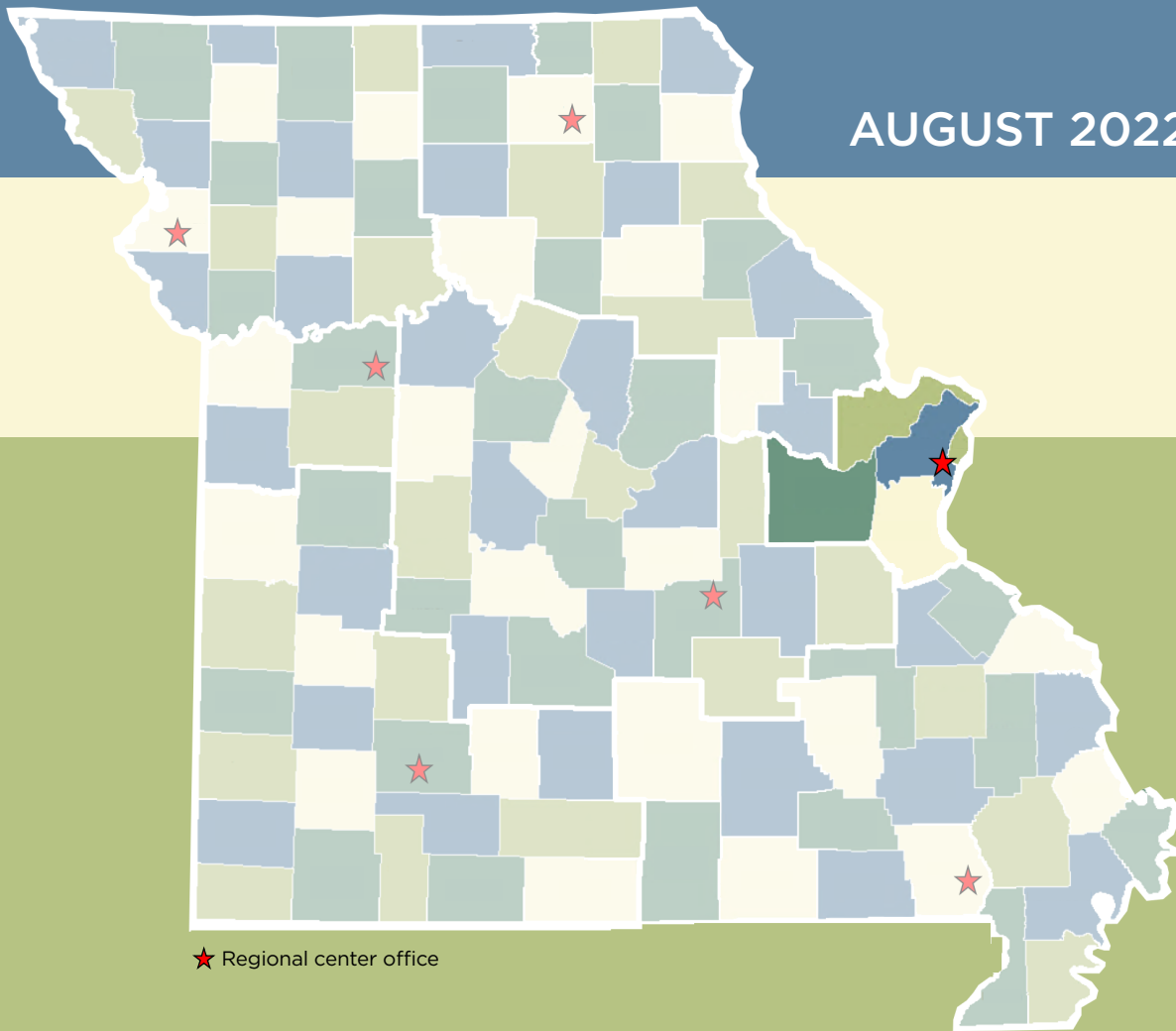


# *East Central Missouri Area Health Education Center Needs Assessment & Gap Analysis*

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  
Missouri AHEC Program Office at A.T. Still University Kirksville College of Osteopathic Medicine<sup>b</sup>

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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 East Central Missouri AHEC (ECMO AHEC) region. The analysis of population health in the region focuses on the social determinants of health. Demographic factors play an important role in the ECMO AHEC region, where the population is more diverse than Missouri's population. Demand for health care may increase with expanded coverage from Missouri's recent Medicaid expansion.<sup>2</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 ECMO 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, and community health workers. Generally, the ECMO AHEC region has a distribution of health care workers that is similar to 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.

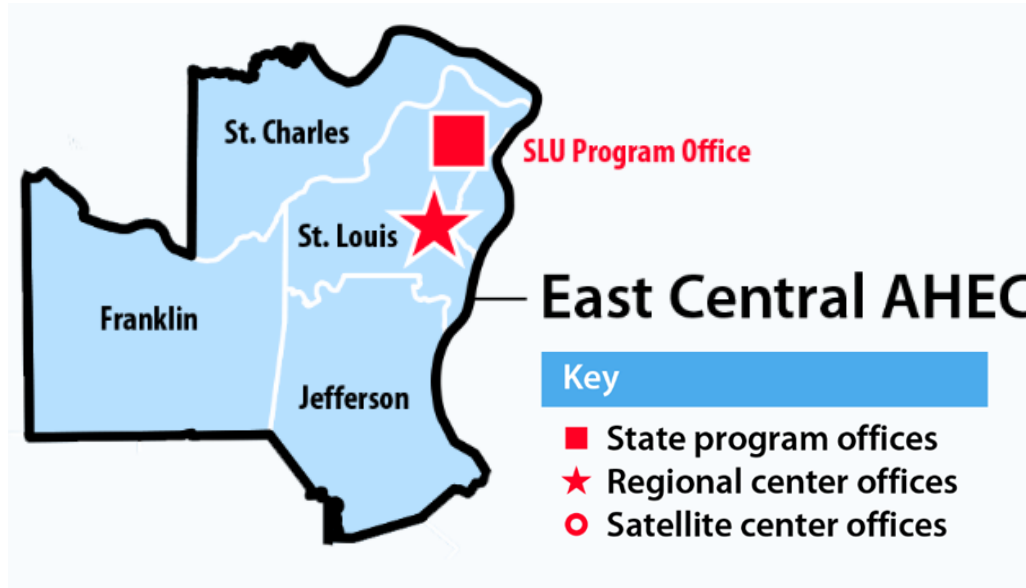
Any analysis of health care needs and workforce in 2022 would be remiss to ignore the impact of the ongoing COVID-19 pandemic. While data sources always lag real-time conditions in health care, the impacts of the lag are more apparent during a pandemic. Health care needs and workforce are changing quickly 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 are data from MHCWP, which utilize Missouri Division of Professional Registration 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. <https://mohealthcareworkforce.org/publication/missouri-area-health-education-centers-needs-assessment-and-gap-analysis/>.

<sup>2</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. East Central Missouri Area Health Education Center (ECMO AHEC) Region**



## Population Health in the Region

The East Central Missouri AHEC region covers the independent City of St. Louis plus four of the counties in its metropolitan region (Figure 1). For the purposes of this report, the City of St. Louis is treated as a county. The region has a population of 2,026,525 and covers a land area of 2,709 square miles. Most of the region's population (94.9%) live in urban areas, while 5.1% live in rural areas by HRSA definition<sup>3</sup> (Table 1). The ECMO AHEC region's population is aging in a pattern similar to other parts of Missouri. The residents of the region face socioeconomic and cultural obstacles that result in health disparities. The ECMO AHEC region's shortages and maldistributions of physicians and other health care providers are similar to other areas in Missouri. 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

Tables 1 (ECMO AHEC Region) and 2 (State of Missouri) show demographics and social determinants of health, utilizing 2015-2019 American Community Survey population estimates to account for small populations within some categories. Data are from the American Community Survey, 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 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>4</sup> Margins of

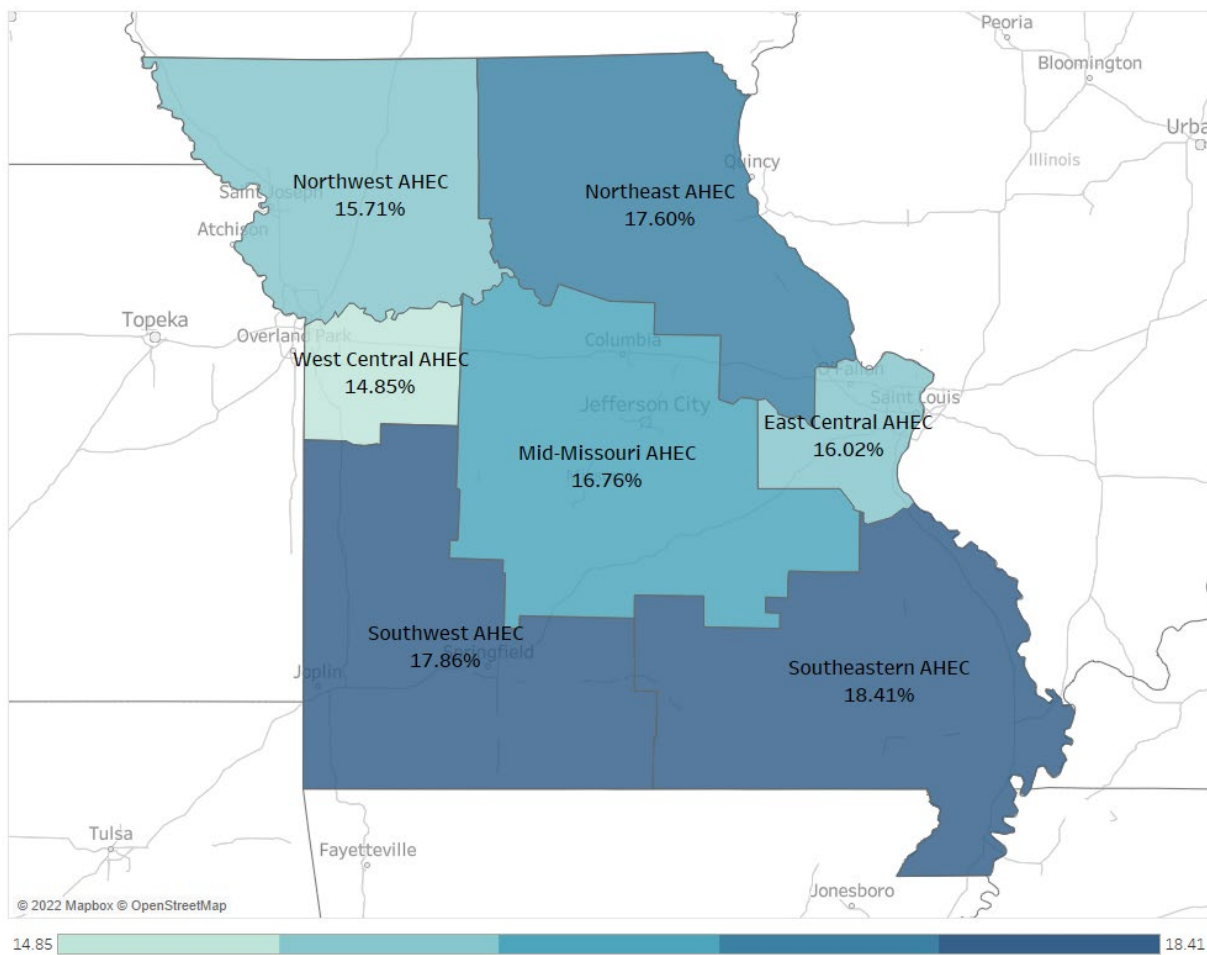
<sup>3</sup> Health Resources and Services Administration. (n.d.) *Defining Rural Population*. Retrieved from <https://www.hrsa.gov/rural-health/about-us/definition/index.html>.

<sup>4</sup> Qualtrics. (2022). Your guide to margin of error. Retrieved from <https://www.qualtrics.com/experience-management/research/margin-of-error/>.

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 ECMO AHEC region is 760, with a margin of error of 157.2%. Based on the margin of error calculation, the population of Pacific Islanders in the ECMO AHEC region is likely between zero and 1,955.

The ECMO AHEC region is more diverse than other parts of Missouri: 73.4% of residents are white compared to 82.2% of the state's population. Almost one in five residents (19.9%) are Black/African American, higher than the state rate of 11.5%. The region has small populations of other racial groups: Multi-racial (2.4%) and Asian (3.2%), compared to the state rates of 2.6%, and 2.0%, respectively. The ECMO AHEC region has fewer residents identifying as Hispanic or Latino (3.0%) than the state as a whole (4.2%). Most residents of the region have earned at least a high school diploma or its equivalent (92.1%), higher than the state rate of 89.9%. Further, 37.9% of residents in the region have earned a least a bachelor's degree, compared to the state rate of 29.2%. The age structure in the region is similar to the State of Missouri, with 22.5% under age 18 and 16.0% age 65 and older compared to Missouri's 22.6% and 16.5%, respectively. See Figure 2 for a map of the population age 65 and older.

**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/>.

Social determinants of health (SDOH-conditions in which people are born, live, learn, work, play, worship, and age, that affect a wide range of health, functioning, and quality-of-life outcomes and risks<sup>5</sup>) play a fundamental role in population health. 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. While the poverty rate in the region is less than the state rate of 13.7%, more than 200,000 regional residents (10.7%) live in poverty. Fifteen percent of those under the age of 18 in the region live in poverty, compared to the state rate of 18.7%. In the ECMO AHEC region, more than one in four households (27.2%) are housing cost burdened, with rent or mortgage and utilities accounting for more than 30% of the household income, slightly more than the state rate of 26.4%. Eight percent of residents in the region lack health insurance, which impedes the ability of low-income individuals to access primary and preventive care. In comparison, Table 2 reports that 10.9% of Missourians lack health insurance. Further, 8.6% of residents in the ECMO AHEC region live with a disability, lower than the state rate of 10.2%.

While margins of error are too large to reliably report on food insecurity at the regional level, the estimates for Missouri offer a useful comparison. Missouri has the 17<sup>th</sup> highest food insecurity rate in the nation,<sup>6</sup> and rates are higher among Missouri's residents of color.<sup>7</sup> Food insecure families are at a higher risk for weight gain and chronic disease, e.g., diabetes, hypertension.<sup>8</sup> Food insecurity is also associated with psychological distress, anxiety, and depression among low-income women and children, and these physical and mental health effects are especially detrimental when there is the lack of access to proper medical care.<sup>9</sup> Transportation is key to health care access, and more than six percent of Missouri households and more than seven percent of households in the region lack a vehicle.

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<sup>5</sup> Social Determinants of Health. (n.d.) *Healthy People 2020*. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>.

<sup>6</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>7</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>8</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>9</sup>Ibid 7.



**Table 1. Summary of Demographics by East Central AHEC (ECMO AHEC) Region<sup>10</sup>**

Criterion	East Central Region		MOE <sup>11</sup>	Rural	% of Region	MOE	Urban	% of Region	MOE
<b>Estimated 2015-2019 Population</b>	<b>2,026,525</b>		<b>0.7%</b>	<b>103,191</b>	<b>5.1%</b>	<b>14.3%</b>	<b>1,923,334</b>	<b>94.9%</b>	<b>0.8%</b>
Land Area (mi <sup>2</sup> )	2,709			923	34.1%		1,787	65.9%	
Population Density/mi <sup>2</sup>	748			112			1,076		
Counties and St. Louis City <sup>12</sup>	5			1			4		
<b>Racial/Ethnic</b>	<b>East Central 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	1,488,196	73.4%	0.9%	99,053	96.0%	13.9%	1,389,143	72.2%	1.0%
Black/Afr. American	404,234	19.9%	2.0%	745	0.7%	1098.8%	403,489	21.0%	2.0%
Native American	3,837	0.2%	39.5%	202	0.2%	749.9%	3,635	0.2%	41.7%
Asian	65,787	3.2%	5.5%	511	0.5%	706.0%	65,276	3.4%	5.5%
Pacific Islander	760	0.0%	157.2%	13	0.0%	9190.7%	747	0.0%	159.9%
Other	15,600	0.8%	23.7%	606	0.6%	609.1%	14,994	0.8%	24.6%
Multi-Racial	48,111	2.4%	8.7%	2,061	2.0%	202.1%	46,050	2.4%	9.0%
Hispanic/Latino <sup>13</sup>	60,411	3.0%	9.3%	1,799	1.7%	314.0%	58,612	3.0%	9.6%
<b>Age Cohorts</b>	<b>East Central 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	449,337	22.2%	1.8%	23,791	23.1%	34.9%	425,546	22.1%	2.0%
65+	324,565	16.0%	1.5%	17,415	16.9%	27.2%	307,150	16.0%	1.5%
<b>Social Determinants of Health</b>	<b>East Central 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>14</sup>	212,352	10.7%	4.9%	10,638	10.5%	98.1%	201,714	10.7%	5.2%
<18 in poverty	66,390	15.0%	6.5%	3,922	17.0%	110.6%	62,468	14.9%	6.9%
HS Graduate +	1,292,611	92.1%	1.0%	63,177	88.4%	20.7%	1,229,434	92.3%	1.1%
Bachelor's Degree +	531,533	37.9%	1.4%	14,943	20.9%	48.8%	516,590	38.8%	1.4%
No Health Insurance (<65)	135,383	8.0%	4.9%	8,157	9.5%	81.3%	127,226	7.9%	5.2%
Disability (<65)	145,586	8.6%	3.5%	8,552	10.0%	64.2%	137,034	8.5%	3.7%
Housing Cost Burdened	218,249	27.2%	2.6%	9,034	22.5%	62.0%	209,215	27.5%	2.7%
Households without a vehicle	63,620	7.8%	4.4%	1,820	4.4%	152.9%	61,800	7.9%	4.5%

<sup>10</sup> Missouri Census Data Center. (2021). ACS Profiles [dataset application]. Retrieved from <https://mcdc.missouri.edu/applications/acs/profiles/>.

<sup>11</sup> MOE: Relative margin of error.

<sup>12</sup> St. Louis City is an independent city and is treated as a county in this report.

<sup>13</sup> Includes Hispanic or Latinx of any race.

<sup>14</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>15</sup>**

Criterion	Missouri		MOE <sup>16</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>17</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/Afr. 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>18</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>19</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 without a vehicle	165,906	6.9%	1.7%	47,735	6.1%	5.8%	118,171	7.3%	2.4%

<sup>15</sup> Missouri Census Data Center. (2021). ACS Profiles [dataset application]. Retrieved from <https://mcdc.missouri.edu/applications/acs/profiles/>.

<sup>16</sup> MOE: Relative margin of error.

<sup>17</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>18</sup> Includes Hispanic or Latinx of any race.

<sup>19</sup> Denominator includes persons for whom poverty status is determined, which is lower than total population.

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

Fewer than three in four residents in the region identify as white non-Hispanic or Latinx, making the region more diverse in race and ethnicity than national and state averages.<sup>20</sup>

Culturally competent and trauma informed health care professionals are needed to meet the needs of the underrepresented among the ECMO 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>21</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>22</sup>

The region's vulnerable 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**

On July 1, 2021, all Missourians aged 19 to 64 earning up to 138% of the federal poverty level became eligible for Medicaid.<sup>23</sup> Missouri began processing applications on October 1, 2021.<sup>24</sup> Prior to expansion, just over one million Missourians (n=1,029,000) were enrolled in the MO HealthNet program; new Medicaid expansion enrollees in the region will likely

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<sup>20</sup> Missouri Census Data Center. (2021). ACS Profiles [dataset application]. Retrieved from <https://mcdc.missouri.edu/applications/acs/profiles/>.

<sup>21</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>22</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>23</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>24</sup> Norris, L. (2021). *Missouri and the ACA's Medicaid Expansion*. Retrieved from <https://www.healthinsurance.org/medicaid/missouri/>.

be disproportionately non-Hispanic/Latinx white and rural.<sup>25</sup> Washington University Center for Health Economics and Policy (CHEP) estimates 275,000 Missourians are eligible to enroll through Medicaid expansion, including 58,829 in the ECMO AHEC region, which is 2.9% of the area’s population. 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 ECMO 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>26</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.

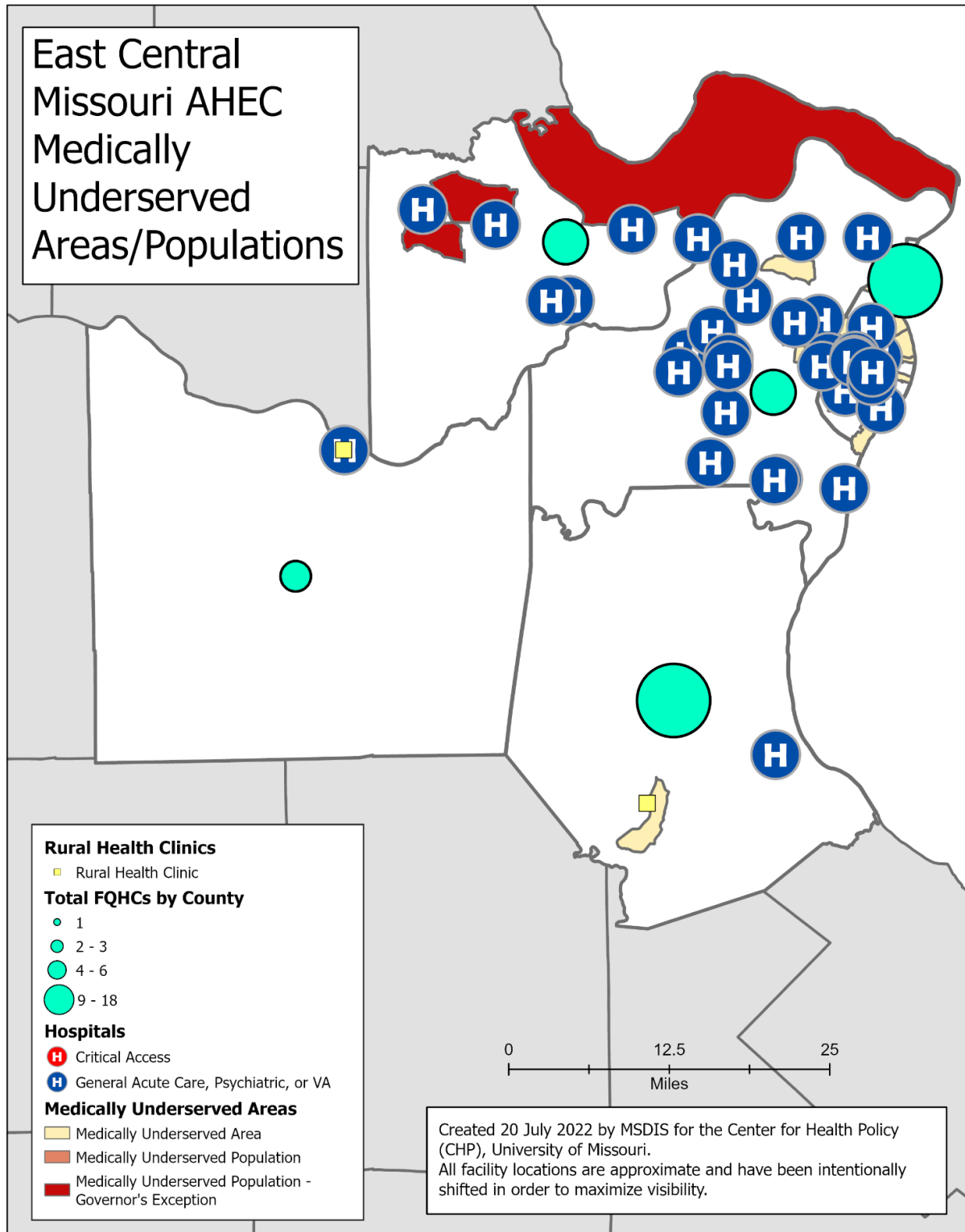
Portions of St. Louis City, St. Louis County and Jefferson County are Medically Underserved Areas. Part of St. Charles County is designated as a Medically Underserved Population-Governor’s Exception. See Figure 3 for more information on MUA/Ps in the

<sup>25</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>26</sup> Health Resources and Services Administration. (2021). *What is a shortage designation?* Retrieved from <https://bhwh.hrsa.gov/workforce-shortage-areas/shortage-designation>.

ECMO AHEC region.

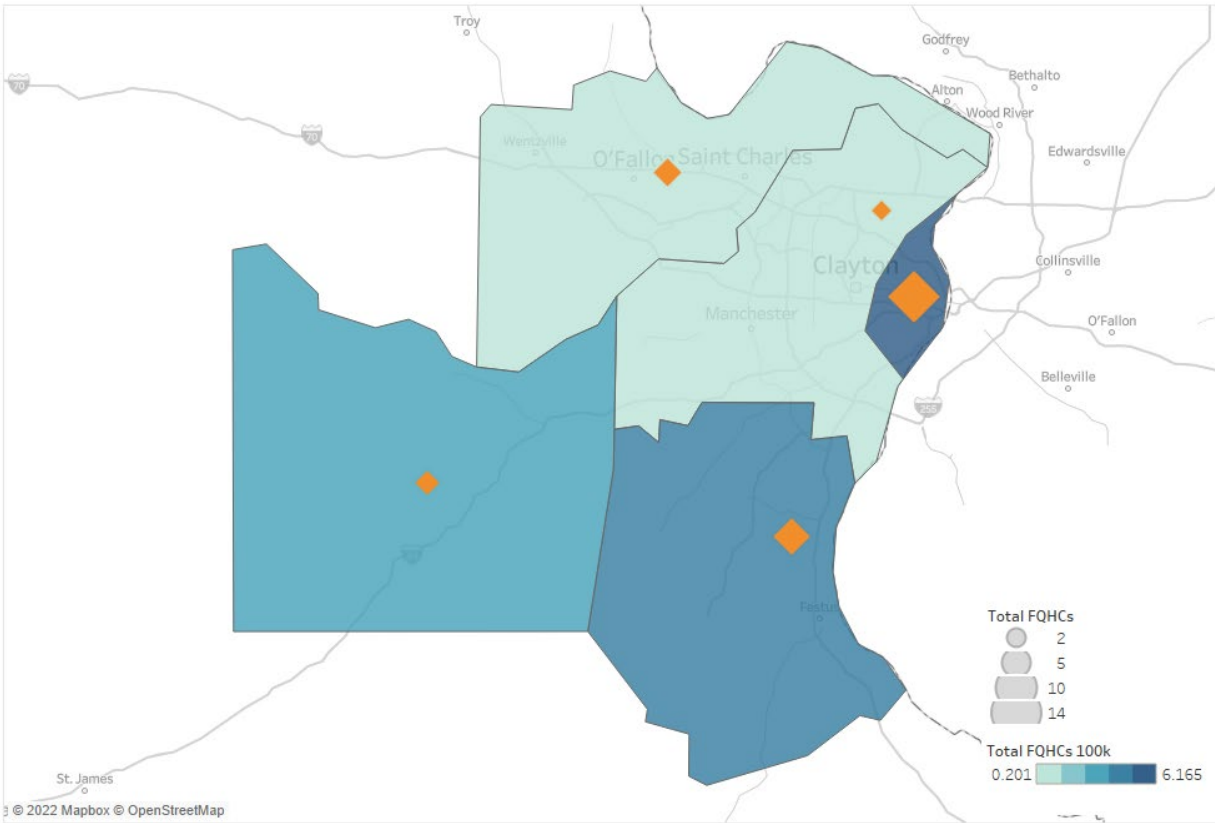
**Figure 3. Medically Underserved Areas/Populations (MUA/Ps)**



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

Federally Qualified Health Centers (FQHCs) are important safety net providers for primary care, dental, and mental and behavioral health. See Figure 4 for more information on FQHCs in the region.

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

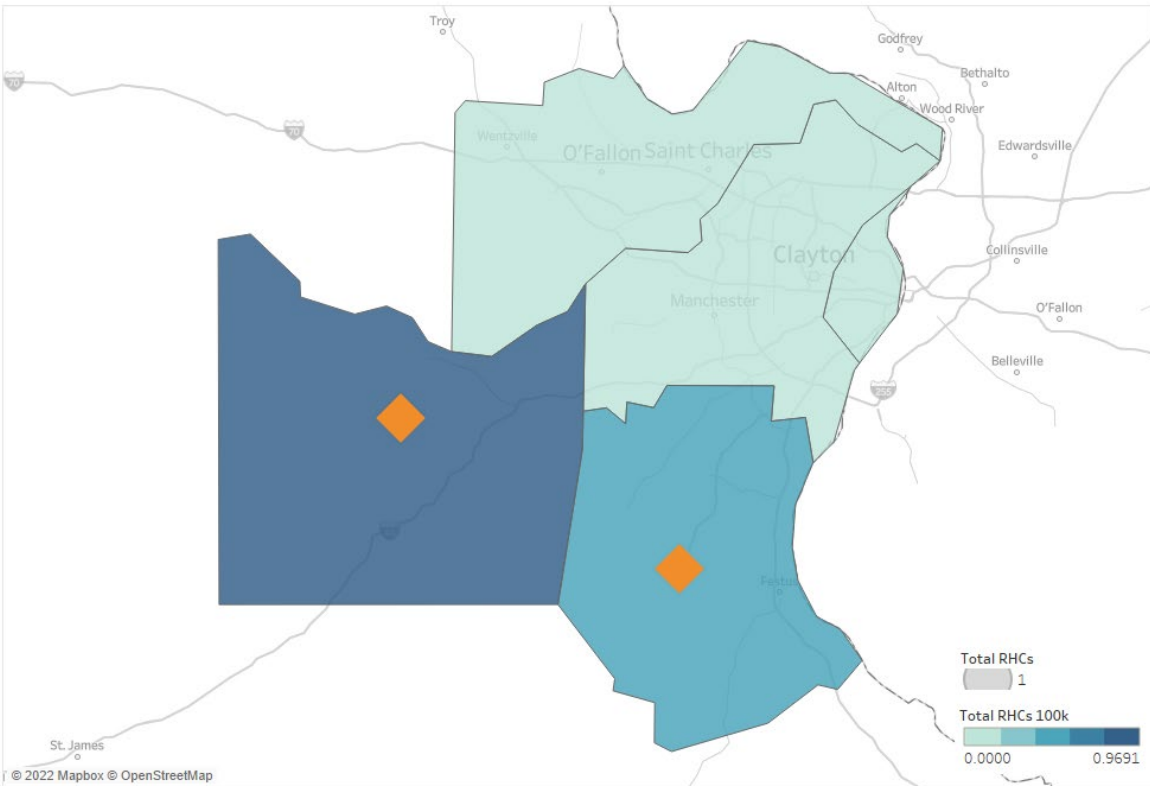


Source: American Community Survey (2015-2019 5 year estimates), MO Department of Health and Senior Services via Missouri Spatial Data Information Service (2022)

Note: 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. St. Louis City and the urban counties of St. Louis and St. Charles do not have RHCs within their boundaries, while both Franklin and Jefferson counties do.

**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 includes an additional RHC (<https://www.marhc.org/rhcfinder>) not shown in Figure 5.

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

The analysis of the ECMO 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 few shortages of health care providers throughout the ECMO AHEC region relative to the rest of the state, except for a few professions (e.g., dental assistants, licensed practical nurses). Throughout Missouri, shortages are more acute in rural areas, so it is not surprising that there are fewer shortages of health care providers in this more urban area.

### 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>27</sup>

### Primary Care Physicians

The ratio of primary care physicians (PCP) to the region’s population is one PCP for every 448 persons (Table 4). This ratio is more favorable than the state’s ratio of one PCP per 621 residents.

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

Region Provider Type	Region State	Rural # (%)	Partially Rural # (%)	Urban # (%)	Total Provider Type	Total Population of AHEC Region	Ratio Provider Type to AHEC Region Population
Primary Care Physicians	Region	97 (2%)	0 (0%)	4,428 (98%)	4,525	2,026,525	1 to 448
	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.

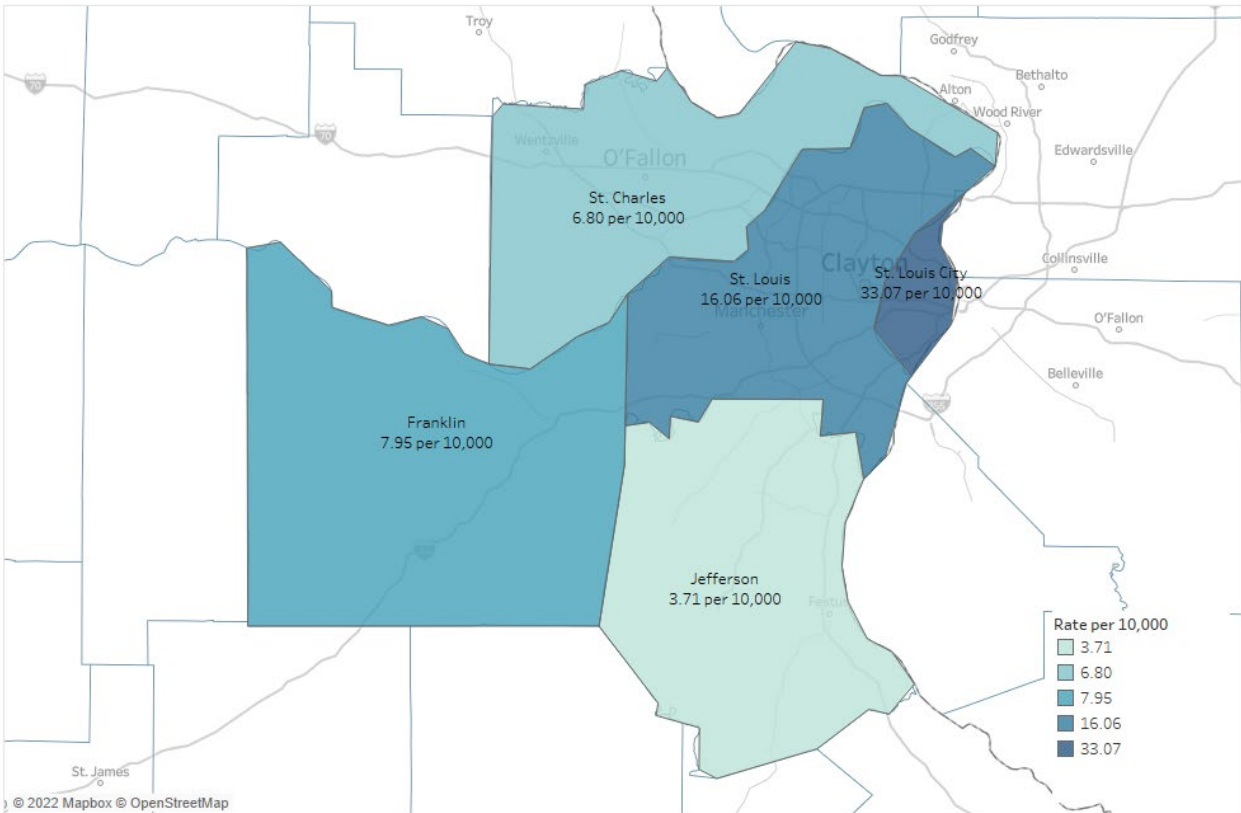
Data on primary care physicians in the region are from the Missouri Division of Professional Registration public release file.<sup>28</sup> According to these data, all counties in the ECMO AHEC region have at least three PCPs per 10,000 residents, with a maximum of 33 PCPs per 10,000 residents (St. Louis City; Figure 6).

<sup>27</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>28</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)**

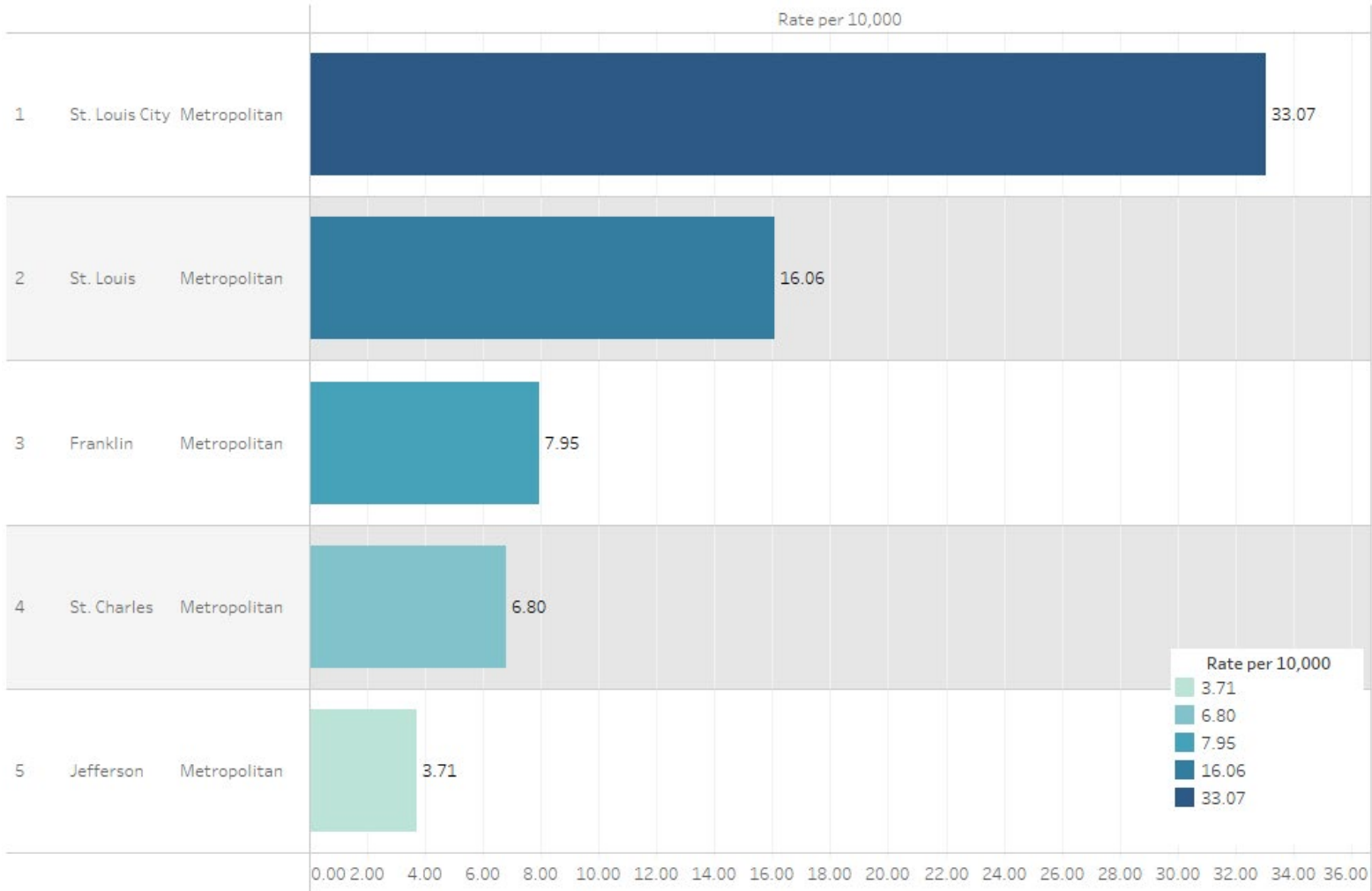


Source: Missouri Division of Professional Registration (2022)  
Primary Care includes Family Medicine/General Practice, Internal Medicine, Obstetrics and Gynecology and Pediatrics.

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

The most densely populated areas in the region, St. Louis City and St. Louis County, have the highest rates of primary care physicians per 10,000 residents (Figure 7). Also, due to their proximity to the St. Louis metropolitan area, the counties adjacent to these more densely populated areas (Franklin, Jefferson, St. Charles) have higher rates of PCPs per 10,000 residents relative to many other counties in the state, though Jefferson has the lowest rate in the region at 3.71 PCPs per 10,000 residents. All counties in the ECMO AHEC region are designated as metropolitan counties, so it is not surprising that this region has high relative rates of PCPs.

**Figure 7. 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.

### **Primary Care Health Professional Shortage Areas (HPSAs)**

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>29</sup> There are Primary Care HPSAs located throughout the ECMO AHEC region (Figure 8).

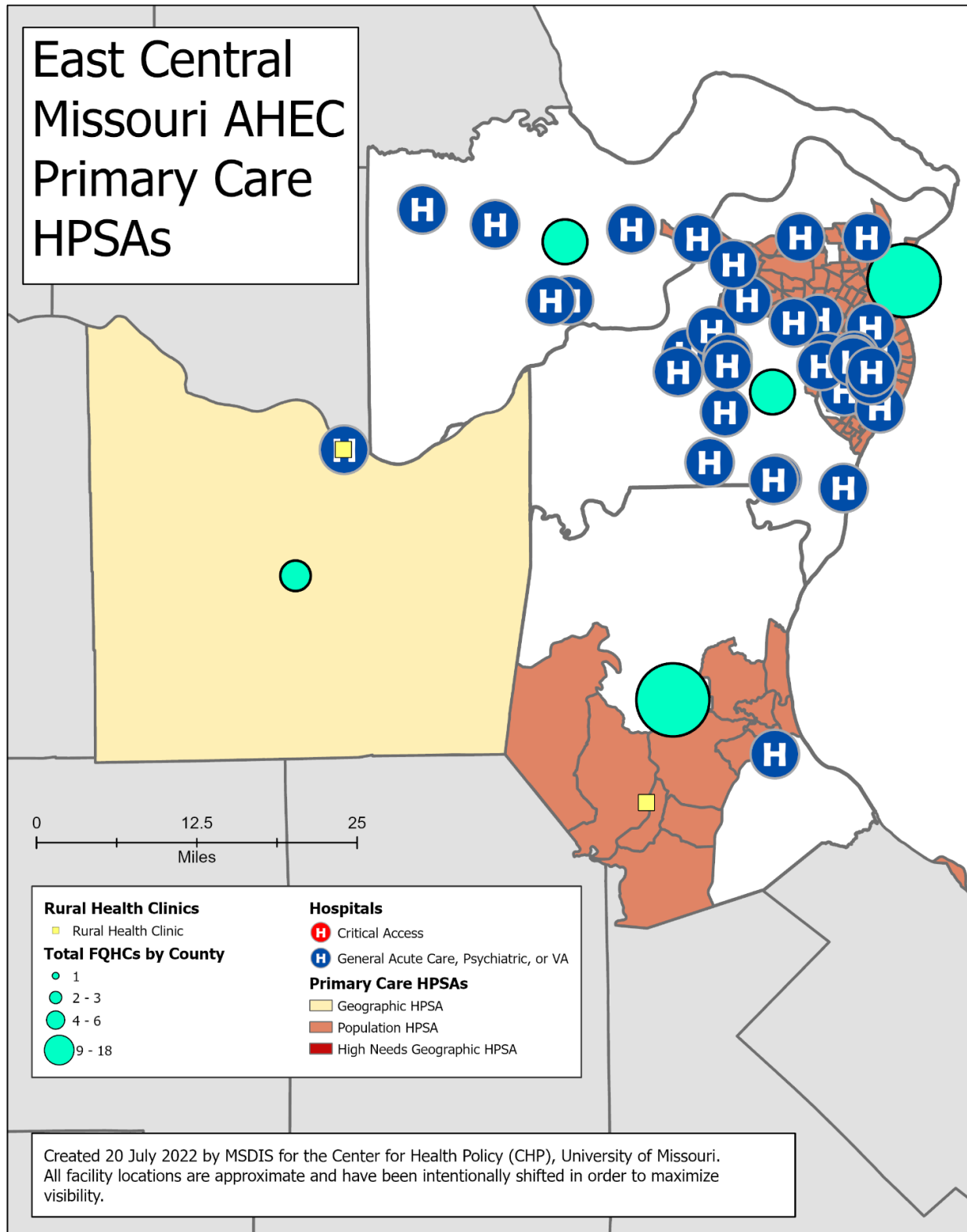
A **Geographic HPSA** represents an entire population of people from a specific geography such as a county or a state who are experiencing a shortage of health care providers. A geographic HPSA can be marked as a **High Needs Geographic HPSA** if more than 20% of the population is at or below 100% federal 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. In the ECMO AHEC region, only one county is designated as a Geographic HPSA (Franklin), but it is not labeled as a High-Needs Geographic HPSA.

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. All of St. Louis City, as well as clusters located in north St. Louis County, central St. Charles County, and southwestern and central Jefferson County are designated as a Population HPSA.

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<sup>29</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>30</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 ECMO AHEC region. With the exception of dental assistants (1:1,535 for the region versus 1:981 for the state), the region has more favorable ratios of dental health providers than the state, including dentists (1:1,490 versus 1:1,902) and dental hygienists (1:1,556 vs. 1:1,683).

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

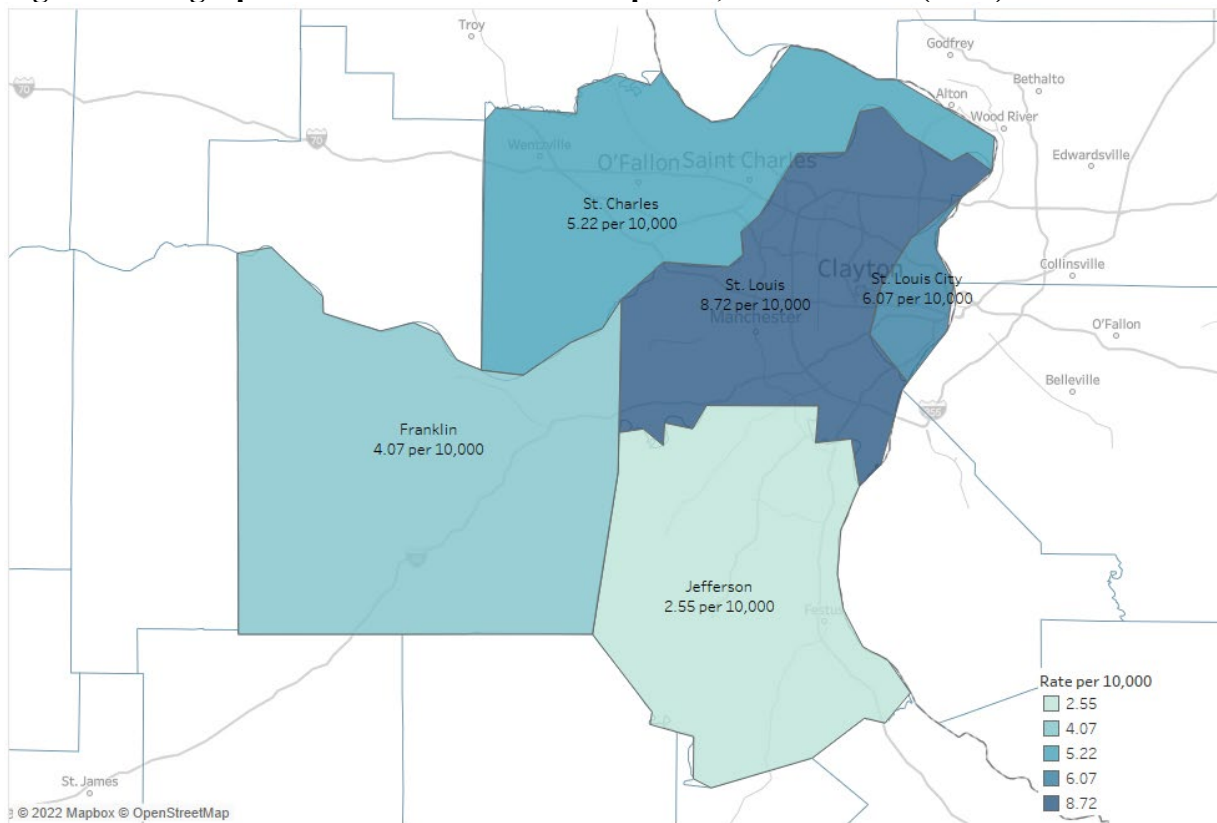
Region Provider Type	Region State	Rural # (%)	Partially Rural # (%)	Urban # (%)	Total Provider Type	Total Population of AHEC Region	Ratio Provider Type to AHEC Region Population
Dentists	Region	42 (3%)	0 (0%)	1,318 (97%)	1,360	2,026,525	1 to 1,490
	State	537 (17%)	222 (7%)	2,452 (76%)	3,211	6,104,910	1 to 1,902
Dental Hygienists	Region	73 (6%)	0 (0%)	1,229 (94%)	1,302	2,026,525	1 to 1,556
	State	893 (25%)	311 (9%)	2,424 (67%)	3,628	6,104,910	1 to 1,683
Dental Assistants	Region	145 (11%)	0 (0%)	1,175 (89%)	1,320	2,026,525	1 to 1,535
	State	2,198 (35%)	507 (8%)	3,512 (56%)	6,217	6,104,910	1 to 981

As was the case with the region's Primary Care Providers, the geographic distribution of dentists is clustered in the St. Louis metropolitan area (St. Louis City and St. Louis County; Figure 9). While the ECMO AHEC region is not experiencing a shortage of dentists relative to other regions of the state, this clustering of dentists toward the biggest city in the region has left

<sup>30</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>.

Jefferson County with the lowest rate of dentists per 10,000 residents (2.55) in the region. This scarcity of providers not only causes issues for patient access to dental care, but also may lead to overburdened providers. The dental hygienist and dental assistant workforce may lessen the impact of the geographic maldistribution of dentists in the region since a single dentist working with a team of hygienists and assistants could serve more patients than a single dentist working alone.<sup>31</sup>

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



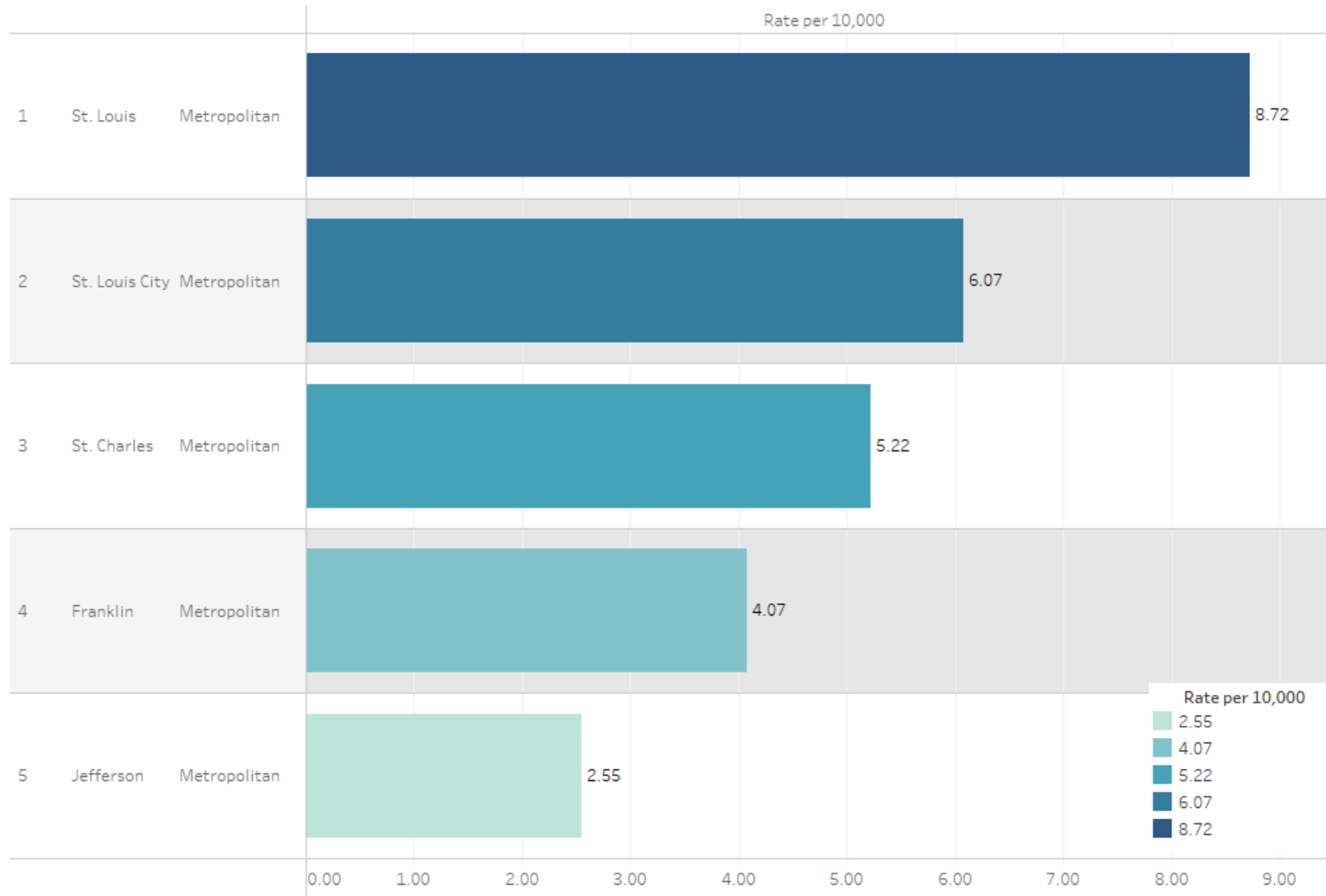
Source: Missouri Division of Professional Registration (2022)

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

Figure 10 shows the same distribution of dentists concentrated in the St. Louis area as appears in Figure 9, but in a chart format. While each county in the ECMO AHEC region is designated as a metropolitan county, the most densely populated areas of St. Louis County (6.07) and St. Louis City (8.72) continue to have higher rates of dentists per 10,000 residents than the rest of this region.

<sup>31</sup> Bersell, C.H. (2017). Access to Oral Health Care: A National Crisis and Call for Reform. *Journal of Dental Hygiene*, 91(1), 6-14.

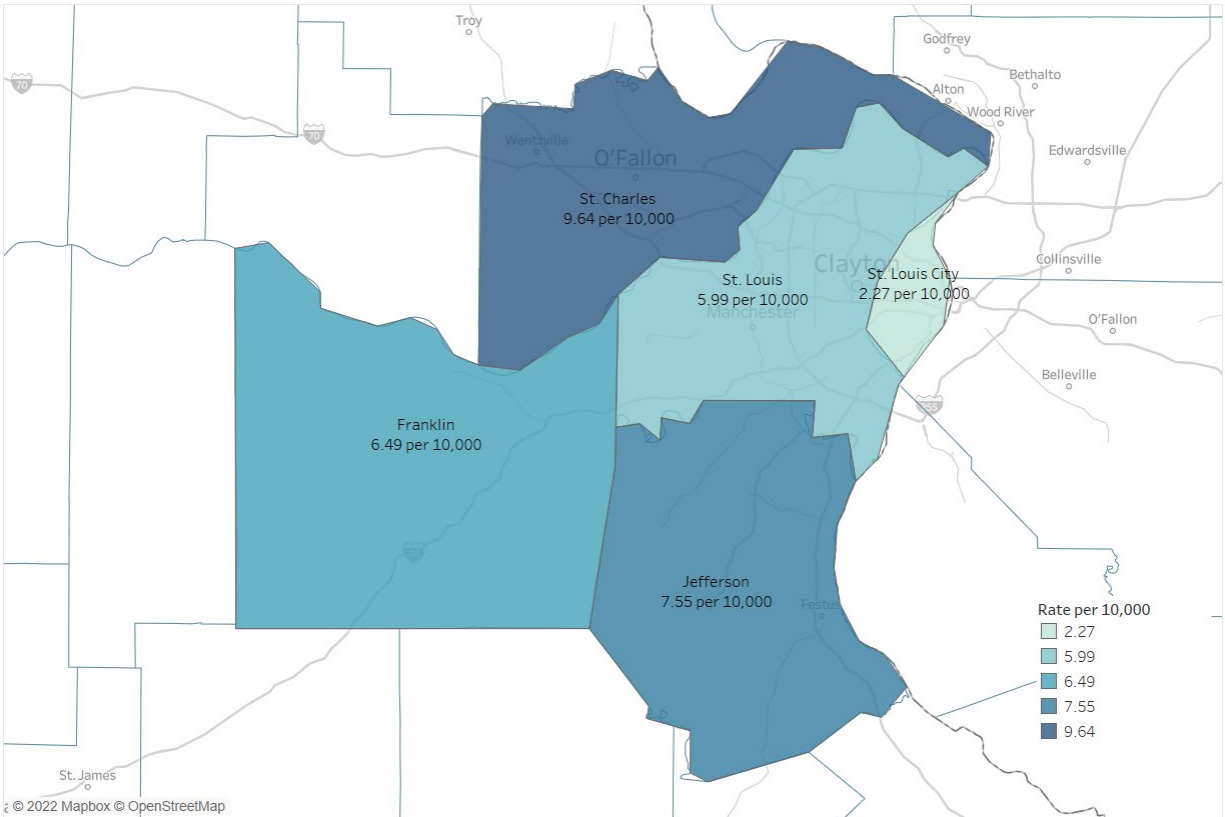
**Figure 10. Dentists per 10,000 Residents (2022)**



Source: Missouri Division of Professional Registration (2022)

Unlike the distribution of dentists in the ECMO AHEC region, the distribution of dental hygienists tends to fall outside of the St. Louis area (Figures 11 and 12). St. Charles County has the highest rate of dental hygienists per 10,000 residents (9.64) in the region, followed by Jefferson County (7.55) and Franklin County (6.49); St. Louis City has the lowest rate of dental hygienists per 10,000 residents (2.27).

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

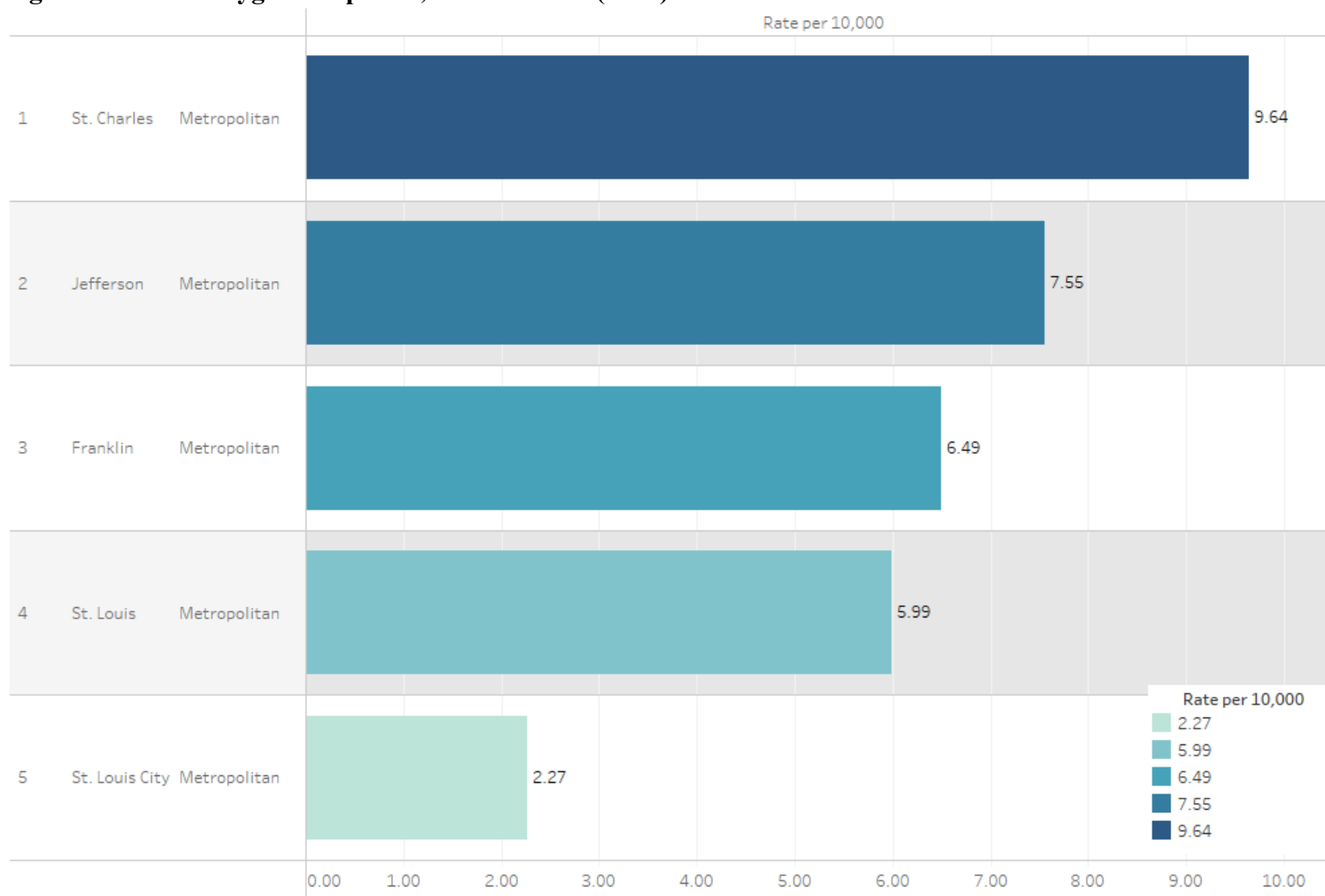


Source: Missouri Division of Professional Registration (2022)

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)**

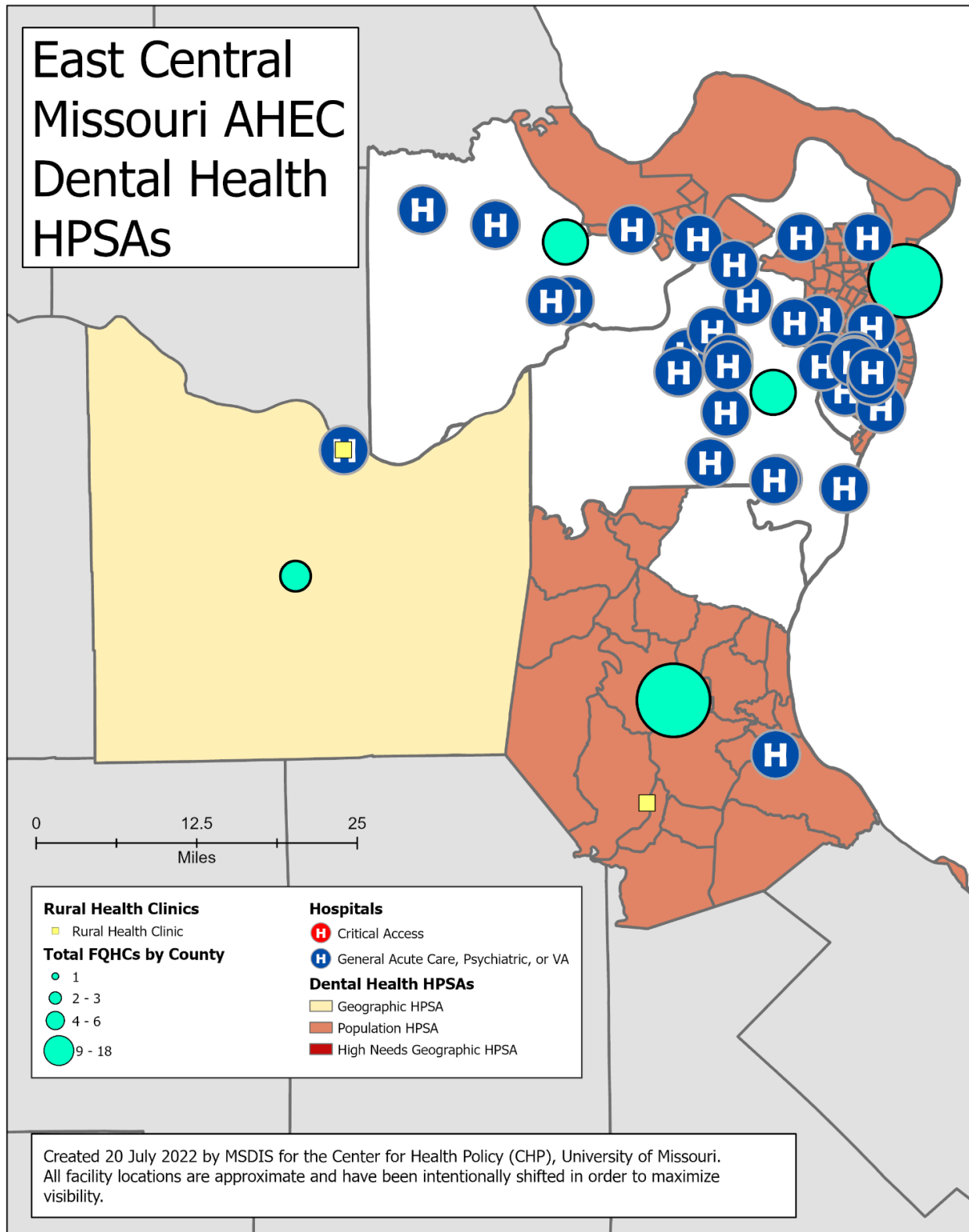


Source: Missouri Division of Professional Registration (2022)

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

Large portions of the ECMO AHEC region are designated as a Population HPSA (Figure 13), including most of Jefferson County, the eastern half of St. Charles County, northern St. Louis County, and the majority of St. Louis City. This means that special populations in the region lack access to dental health care. Franklin County is designated as a Geographic HPSA, which means the entire population in the county is experiencing a shortage of dental health providers.

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>32</sup>

### Mental and Behavioral Health Workforce

This section includes a summary of counts of the ECMO 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 ECMO AHEC region has more mental and behavioral health professionals (1 for every 283 residents) than the state average (1 for every 394 residents). 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 for services in the region. Additionally, telehealth services, which are popular sources of mental and behavioral health care, may provide an additional avenue for residents with adequate broadband service to receive this care.

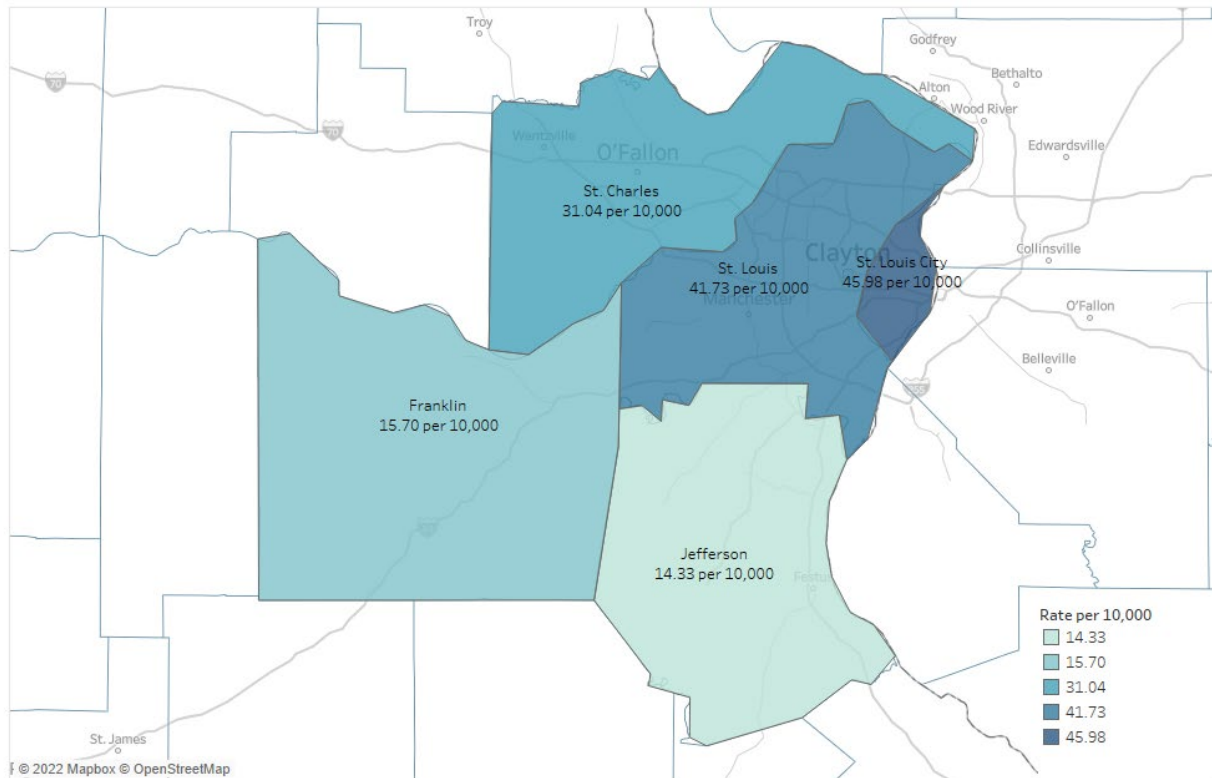
**Table 6. Mental and Behavioral Health Providers by ECMO AHEC Region and State**

Region Provider Type	Region State	Rural # (%)	Partially Rural # (%)	Urban # (%)	Total Provider Type	Total Population of AHEC Region	Ratio Provider Type to AHEC Region Population
Mental and Behavioral Health	Region	149 (2%)	0 (0%)	6,380 (98%)	7,157	2,026,525	1 to 283
	State	2,283 (16%)	1,184 (8%)	10,709 (76%)	15,478	6,104,910	1 to 394

<sup>32</sup> Medline Plus. (2015). *Mental Health*. Retrieved from <https://medlineplus.gov/mentalhealth.html>.  
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The geographic maldistributions of mental and behavioral health providers can be seen in Figure 14. Figure 15 shows this variation in mental and behavioral health providers in chart format. Rates of mental and behavioral health providers are again skewed toward the most densely populated areas of the region (i.e., St. Louis County and St. Louis City), which both have over 40 providers per 10,000 residents. This is in sharp contrast to lower rates of providers in Franklin (15.70) and Jefferson (14.33) counties.

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

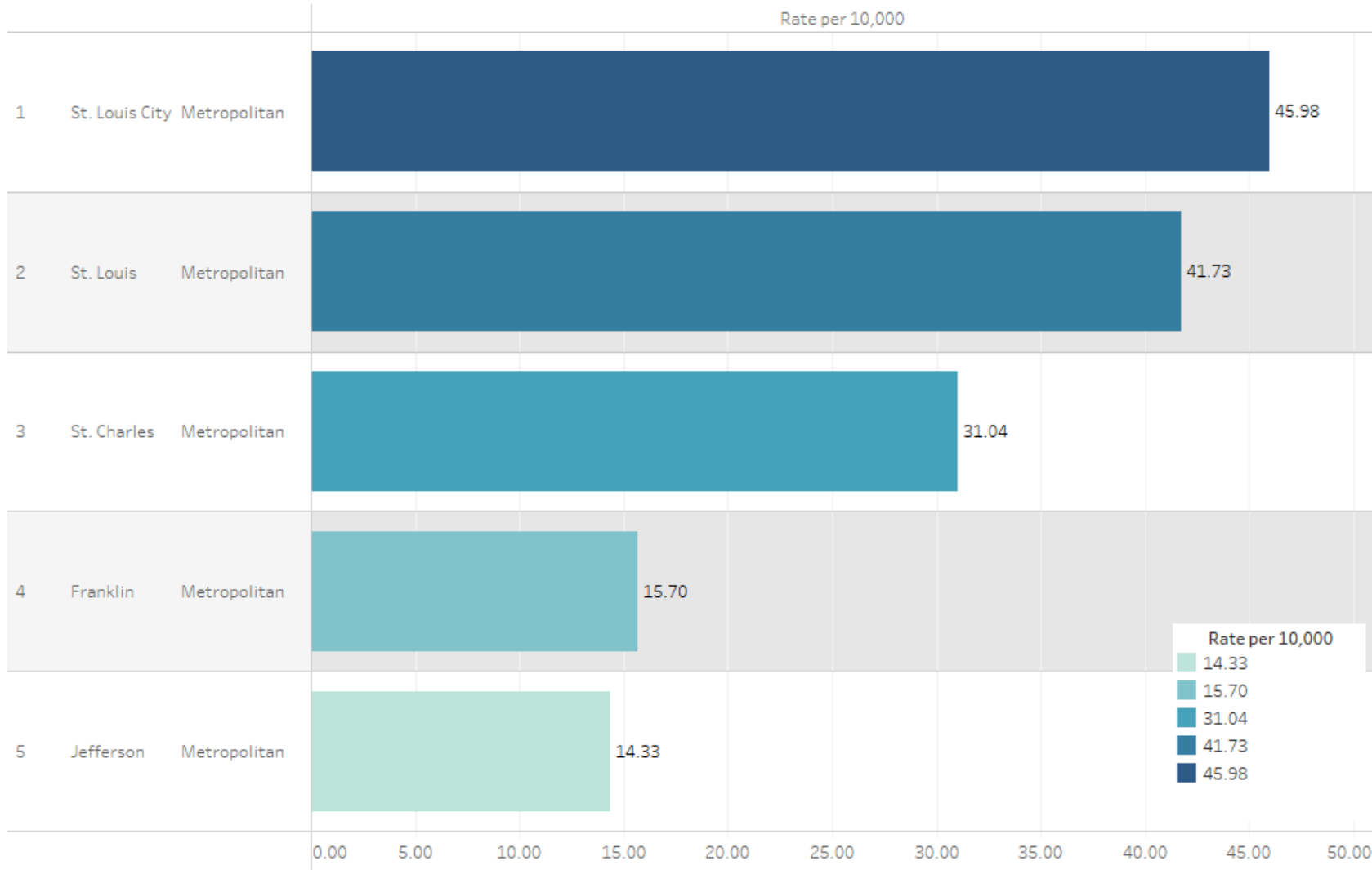


Source: Missouri Division of Professional Registration (2022)  
Mental & Behavioral Health includes Assistant Behavior Analyst, Behavior Analyst, Child Psychiatry, Licensed Professional Counselor, Licensed Social Worker, Marriage & Family Therapist, Psychiatry and Psychologist.

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/>.

Although all counties in the ECMO AHEC region are designated as metropolitan (Figure 15), Franklin and Jefferson Counties have more rural geography than St. Charles County, St. Louis County, and St. Louis City. These two counties also have the lowest rates of mental and behavioral health providers in the region, which follows the trend in the rest of the state in that more rural areas have fewer mental and behavioral health care providers and thus, less access to this type of care.

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



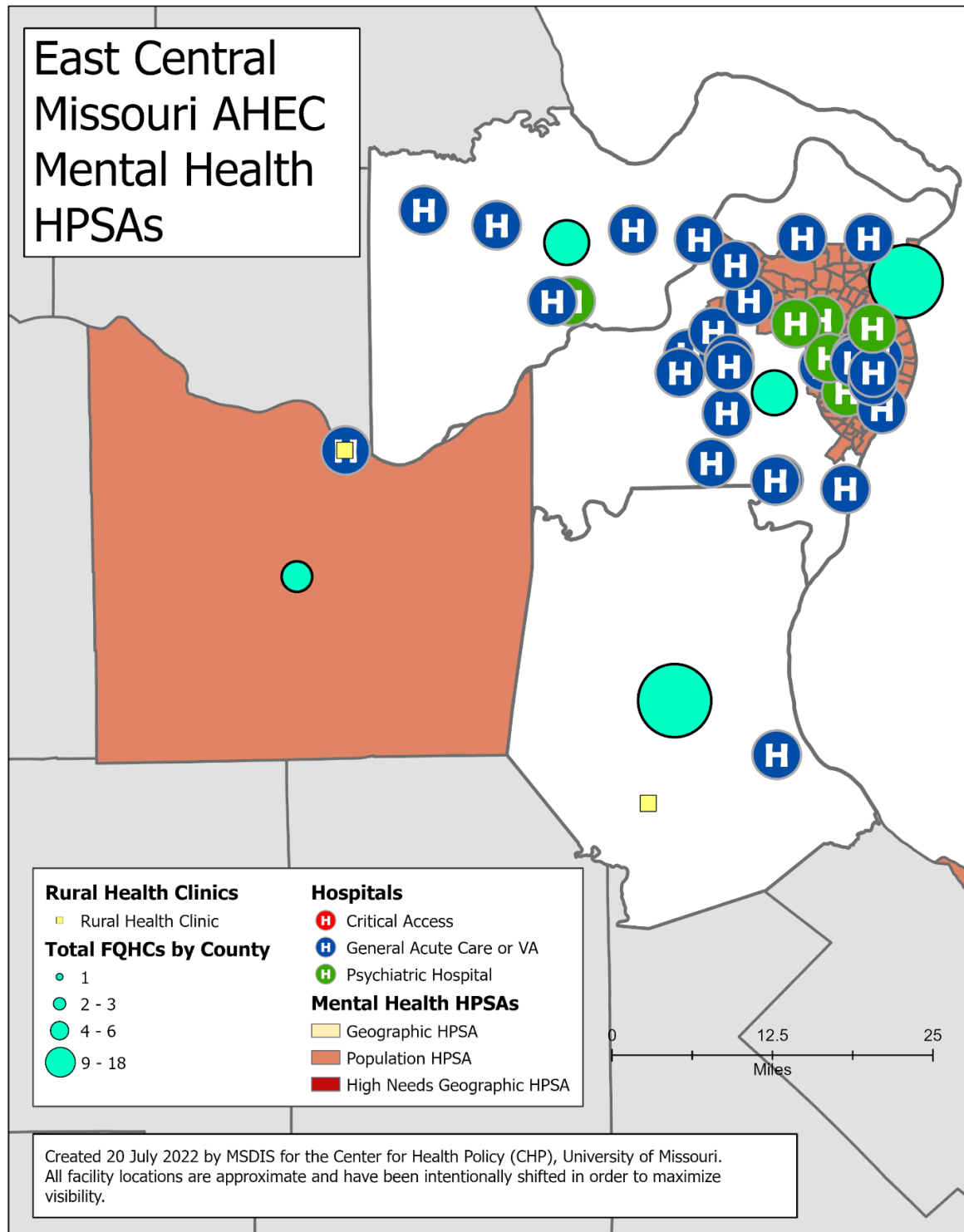
Source: Missouri Division of Professional Registration (2022)

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 Franklin County and St. Louis City, along with northern portions of St. Louis County are designated as Mental Health Population HPSAs (Figure 16).

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/>.

## 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 ECMO AHEC region is opposite the pattern seen in many other Missouri AHEC regions in that the ratios of RNs (1:68) and APRNs (1:542) are better than the state ratios (1 RN:88 residents, 1 APRN:672 residents), but the regional ratio for LPNs (1:537) is worse than the state ratio (1:401).

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

Region Provider Type	Region State	Rural # (%)	Partially Rural # (%)	Urban # (%)	Total Provider Type	Total Population of AHEC Region	Ratio Provider Type to AHEC Region Population
Advanced Practice Registered Nurses (APRNs)	Region	107 (3%)	0 (0%)	3,631 (97%)	3,738	2,026,525	1 to 542
	State	1,506 (17%)	697 (8%)	6,881 (76%)	9,084	6,104,910	1 to 672
Registered Nurses (RNs)	Region	843 (3%)	0 (0%)	29,044 (97%)	29,887	2,026,525	1 to 68
	State	11,594 (17%)	5,693 (8%)	52,325 (75%)	69,612	6,104,910	1 to 88
Licensed Practical Nurses (LPNs)	Region	260 (7%)	0 (0%)	3,517 (93%)	3,777	2,026,525	1 to 537
	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 the Missouri Division of Professional Registration and population numbers from the 2015-2019 ACS 5-year estimates. Ratios of allied health providers in the ECMO AHEC region are like those of other health care professions. The region generally has better rates of providers than the state average, though the ratios for physical therapy assistants and community health workers are worse than the state.

### **Pharmacy Workforce**

Pharmacist and pharmacy technician counts and ratios indicate that the ECMO AHEC region is not currently experiencing a shortage of pharmacy services relative to the rest of the state. In fact, 43.6% (3,099 out of 7,108 Missouri pharmacists) and 40.1% of pharmacy technicians are located within this region.

### **Physical Therapy Workforce**

Compared to Missourians overall, residents of the ECMO AHEC region have more access to physical therapists (PTs; 1:1,274 ECMO AHEC residents versus 1:1,707 Missourians) but less access to physical therapy assistants (PTAs; 1:6,558 ECMO AHEC residents versus 1:5,071 Missourians).

### **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>33</sup> Table 8 presents the most current counts of credentialed CHWs in Missouri. The ECMO AHEC region is experiencing a shortage of CHWs (1:30,247) relative to the state average (1:29,351). Demand for CHWs is anticipated to grow due to expanding health care coverage through Medicaid expansion as well as growing demand for preventive health services.

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<sup>33</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 ECMO AHEC Region and State**

<b>Region Provider Type</b>	<b>Region State</b>	<b>Rural # (%)</b>	<b>Partially Rural # (%)</b>	<b>Urban # (%)</b>	<b>Total Provider Type</b>	<b>Total Population of AHEC Region</b>	<b>Ratio Provider Type to AHEC Region Population</b>
Pharmacists	Region	90 (3%)	0 (0%)	3,009 (97%)	3,099	2,026,525	1 to 654
	State	1,350 (19%)	520 (7%)	5,238 (74%)	7,108	6,104,910	1 to 859
Pharmacy Technicians	Region	362 (4%)	0 (0%)	8,184 (96%)	8,546	2,026,525	1 to 237
	State	6,204 (29%)	1,317 (6%)	13,539 (64%)	21,060	6,104,910	1 to 290
Physical Therapists	Region	56 (4%)	0 (0%)	1,535 (96%)	1,591	2,026,525	1 to 1,274
	State	579 (16%)	296 (8%)	2,701 (76%)	3,576	6,104,910	1 to 1,707
Physical Therapy Assistants	Region	14 (5%)	0 (0%)	295 (95%)	309	2,026,525	1 to 6,558
	State	395 (33%)	105 (9%)	704 (58%)	1,204	6,104,910	1 to 5,071
Community Health Workers	Region	2 (3%)	0 (0%)	65 (97%)	67	2,026,525	1 to 30,247
	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>34</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.

## **MHA Regional Workforce Report Summary**

The Missouri Hospital Association (MHA) produces an annual workforce report (<https://web.mhanet.com/media-library/2022-workforce-report/>), as well as regional profiles. MHA's St. Louis Region Profile includes counties in both Missouri and Illinois. All of the counties in the ECMO AHEC region are in MHA's St. Louis Profile ([https://www.mhanet.com/mhaimages/workforce/2022/STL\\_Region\\_2022\\_WF.pdf](https://www.mhanet.com/mhaimages/workforce/2022/STL_Region_2022_WF.pdf)), along with five counties in Illinois (Clinton, Madison, Monroe, Randolph and St. Clair).

MHA's report on the St. Louis region focuses on the vacancy and turnover rates in health care professionals working in hospitals. In the St. Louis MHA region, the highest vacancy rates in hospitals are respiratory therapists, medical laboratory technicians, and license practical nurses. The region's RN vacancy rate of 20.3% is higher than the state rate of 19.8%. The hospital professions with the highest turnover rates are nurse assistants, food service workers/dietary aids, and housekeepers. Unlike the RN vacancy rates, the RN turnover rate is equal to the state's rate of 22.1%. 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).

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<sup>34</sup> American Public Health Association. (2022, February 17). *What Is Public Health*. Retrieved from APHA.org: <https://www.apha.org/What-is-Public-Health>.

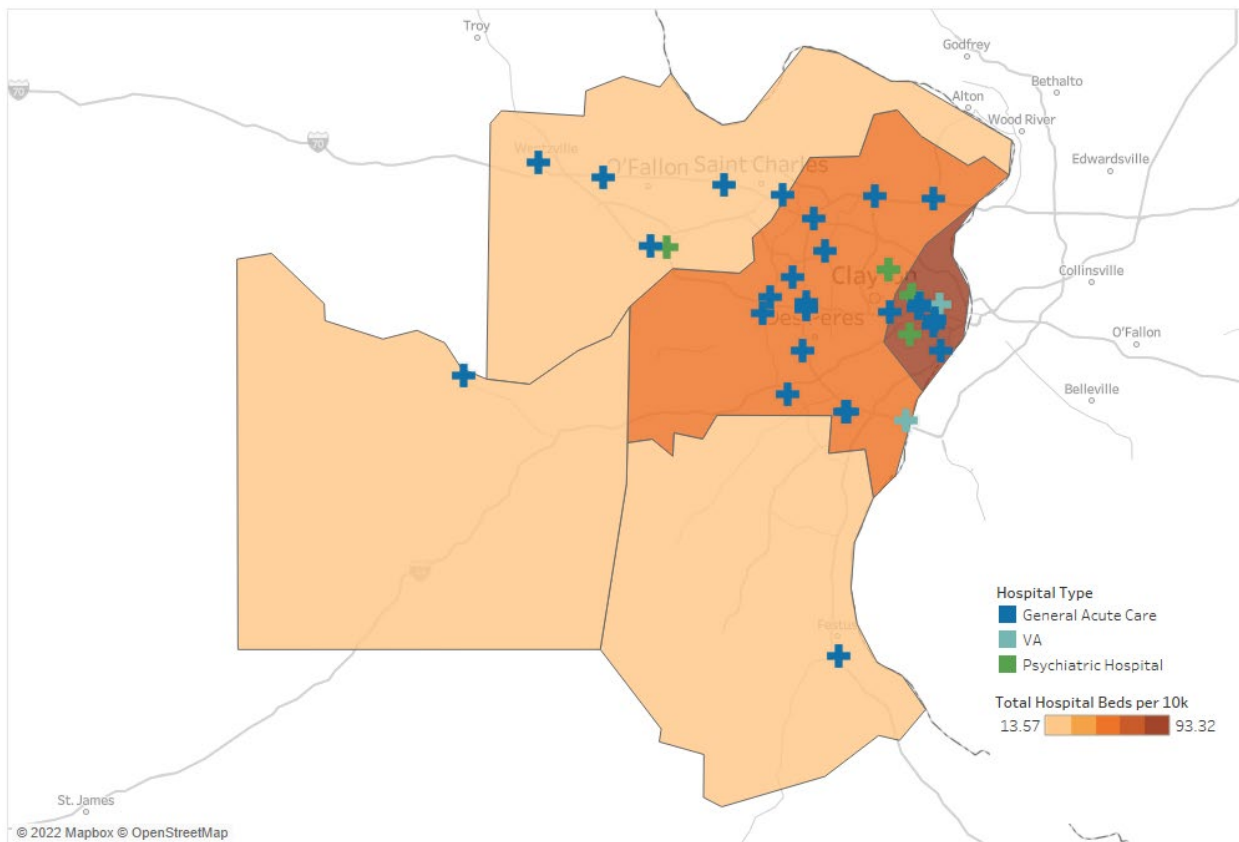
# Health Care Infrastructure

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 ECMO AHEC region, along with rates of total beds per 10,000 residents. Trauma Level I hospitals serve as comprehensive tertiary care facilities offering the most specialized services for every aspect of injury care. St. Louis City and St. Louis County have hospitals providing Level I care in the 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 County. Level III Trauma Centers can assess, resuscitate, and stabilize patients before transfer to Level I and II hospitals, and are available in Franklin and St. Charles counties. Jefferson County has a general acute care hospital.

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



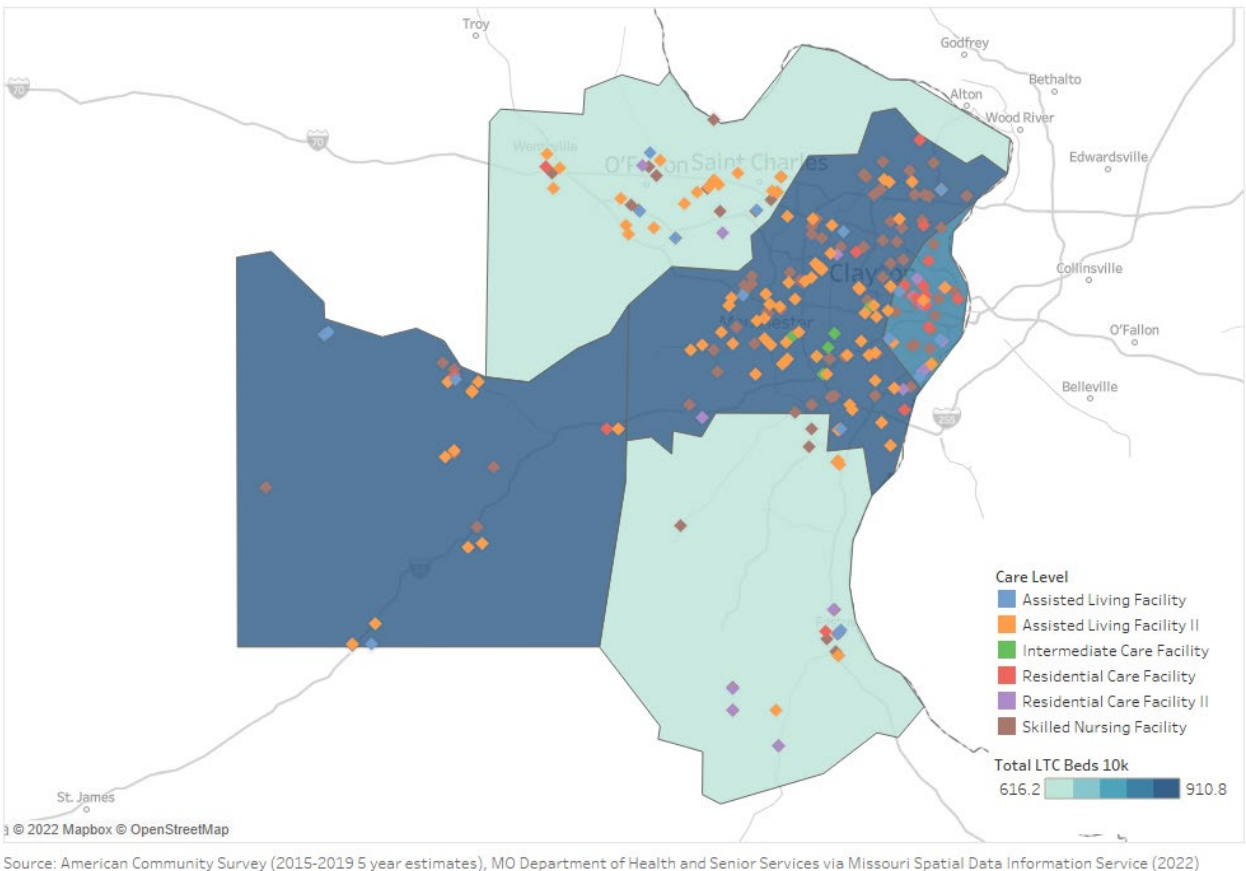
Source: American Community Survey (2015-2019 5 year estimates), MO Department of Health and Senior Services via Missouri Spatial Data Information Service (2022)

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 ECMO AHEC region has 797.3 beds per 10,000 population age 65 or older.

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



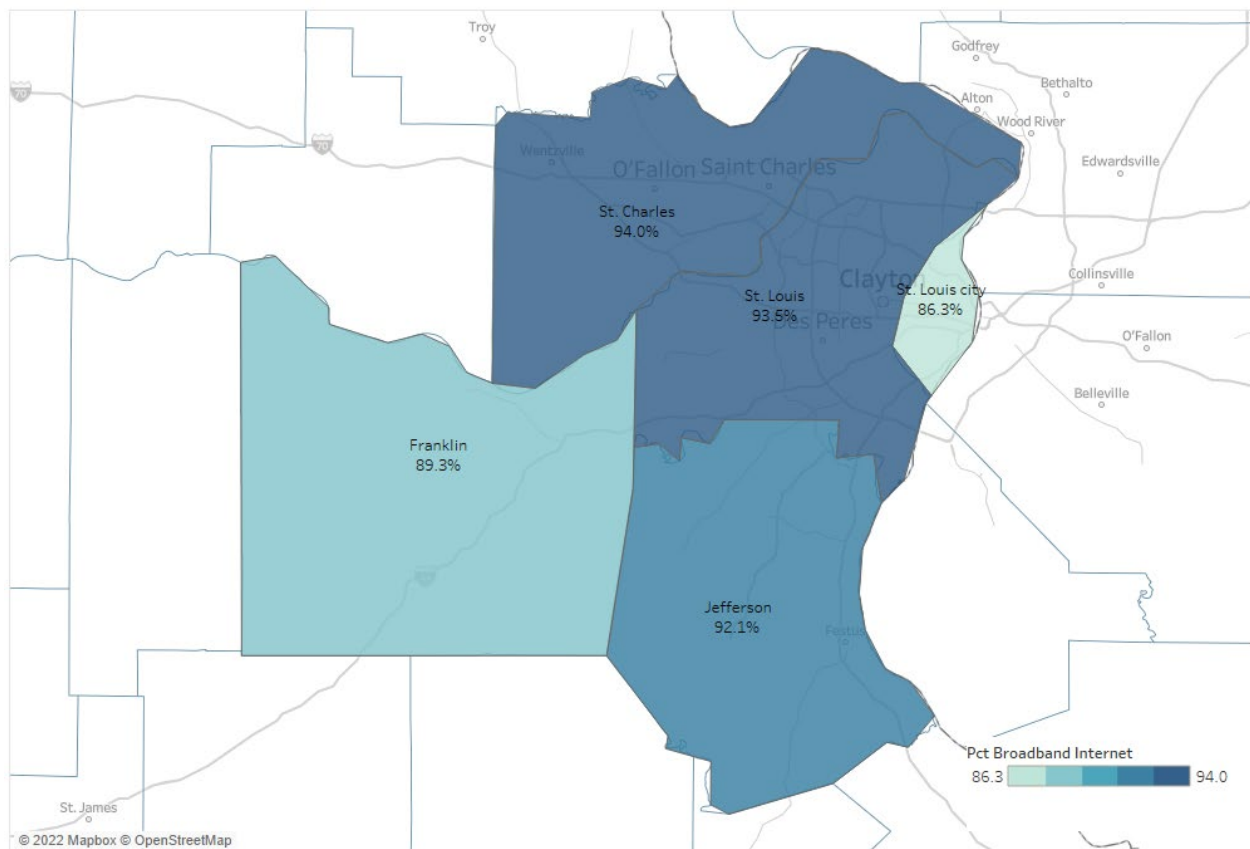
Note: Dynamic, interactive maps of medical facilities in all AHEC regions are available at <https://mohealthcareworkforce.org/indicator-dashboards/medical-facilities/>. Age 65 and older was used as the age category of interest due to Medicare eligibility. Care levels include:

- 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>35</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 ECMO AHEC region. St. Louis City and Franklin County have the lowest rates of broadband access. One potential solution for those without transportation or broadband access 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>36</sup>

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



Source: American Community Survey (2015-2019 5-year estimates)

<sup>35</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>36</sup> Ibid 35.

*East Central 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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