



## GEOGRAPHY MATTERS:

The Impact of Regionality on Safety  
Net Access Trends in St. Louis

June 2018

### SPECIAL THANKS TO

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## Table of Contents

Executive Summary .....	1
Introduction .....	2
The Uninsured .....	3-4
Primary Care Access .....	5-6
Emergency Care Access .....	6-8
Regional Health Outcomes .....	8-9
Barriers to Care .....	10-11
Transportation as a Barrier .....	10-11
Key Findings .....	12-14
Methods .....	15
Limitations .....	15
References .....	16

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## Executive Summary

Below are some important themes related to safety net healthcare access in the St. Louis region:

- 1. North St. Louis County** has large numbers of uninsured users of safety net primary care, but the area still has significant gaps in safety net primary care service in multiple zip codes. The largest gaps exist in the zip codes 63031 (Florissant), 63114 (Overland) and 63136 (Jennings). Additionally, North County has the largest numbers and highest rates of emergency care utilization by uninsured individuals in the region. The highest emergency care utilization rates are in the zip codes 63133 (Pagedale), 63134 (Berkeley), 63135 (Ferguson), 63136, 63138 (Spanish Lake), and 63145 (Berkeley).
- 2. South St. Louis City** has large numbers of uninsured users of safety net primary care, but the area still has significant gaps in safety net primary care service in multiple zip codes. The largest gaps exist in the zip codes 63116 (Bevo Mill) and 63118 (Gravois Park). South City has above average rates of uninsured individuals using emergency care, but the rates are lower than those found in North City and County.
- 3. South St. Louis County** has low rates of safety net primary care utilization by uninsured individuals, which leads to sizeable gaps in safety net primary care service in the zip codes 63123 (Affton), 63125 (Lemay), and 63129 (Oakville). However, South County has the lowest rates of emergency care utilization by uninsured individuals in the St. Louis region. These low rates suggest that uninsured individuals in South County may be accessing care outside of the safety net.
- 4. North St. Louis City** has relatively small gaps in safety net primary care services for uninsured individuals, but the area has high rates of emergency care utilization by the uninsured. The highest emergency care utilization rates by uninsured individuals, in zip codes with at least 1,000 uninsured users, are found in 63106, 63107, and 63115.
- 5. Central and West St. Louis County** have relatively low rates of uninsured and relatively low unmet medical need, as compared to the rest of the region. In Ballwin (63021 and 63011), there are noticeable gaps in primary care; however, both of Ballwin's zip codes have health rankings in the top 20 for the state of Missouri.
- 6. Transportation** is likely a significant barrier to accessing safety net primary care services for uninsured individuals in the St. Louis region. North St. Louis County, South St. Louis County, and South St. Louis City have less community health center locations and access to timely public transportation. These areas also have the largest gaps in safety net primary care utilization by uninsured individuals.

# GEOGRAPHY MATTERS:

## The Impact of Regionality on Safety Net Access Trends in St. Louis

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### Introduction

Every year the St. Louis Regional Health Commission takes a snapshot of the region’s safety net system<sup>a</sup> to monitor progress and trends in providing access to patients. Trends in primary care, specialty care, emergency care, and behavioral health are compiled in the full Access to Care Report, which is available in print by request and electronically on the RHC’s webpage.

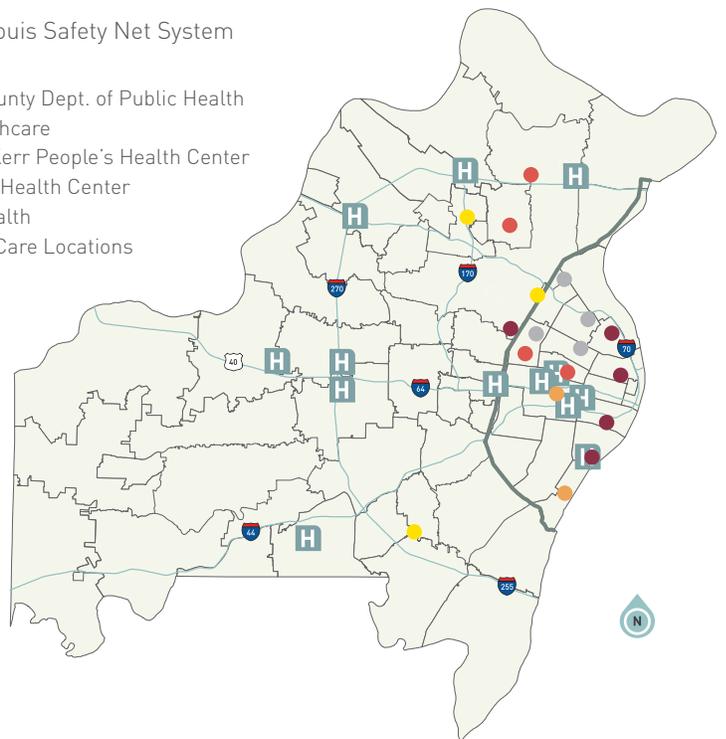
This issue brief acts as a supplement to data provided in the 2017 Access to Care report and will focus on geographic access trends among uninsured patients. Utilizing patients’ zip code of residence, this issue brief will track the number of uninsured patients living in St. Louis City and County who were served by local safety net providers. Additionally,

this analysis will identify the locations of safety net organizations and discuss how location may impact access patterns among patients. By comparing access trends to expected need, this analysis will begin to highlight areas where safety net providers seem to be geographically accessible to the uninsured in our region. Conversely, this analysis will also highlight geographic gaps and potential targets for future safety

net expansion. The data in this issue brief includes that of safety net health care organizations providing primary care and emergency care within the St. Louis region. These organizations include community health centers, hospitals, and other community based clinics. All emergency care locations and the five area community health centers are displayed below and in the maps throughout this report.

**Figure 1: St. Louis Safety Net System**

- St. Louis County Dept. of Public Health
- Affinia Healthcare
- Betty Jean Kerr People’s Health Center
- Family Care Health Center
- CareSTL Health
- H Emergency Care Locations



<sup>a</sup>Safety net organizations are defined as those organizations whose mission is to service all patients regardless of ability to pay. Those organizations include, but are not limited to: public hospitals, federally funded community health centers, and local health departments. Safety net patients are those patients with limited access because of their inability to pay for health care or because of health coverage restrictions. Safety net patients include individuals who do not have health insurance coverage, those covered by Medicaid, and in many cases, those covered by high deductible commercial insurance plans.

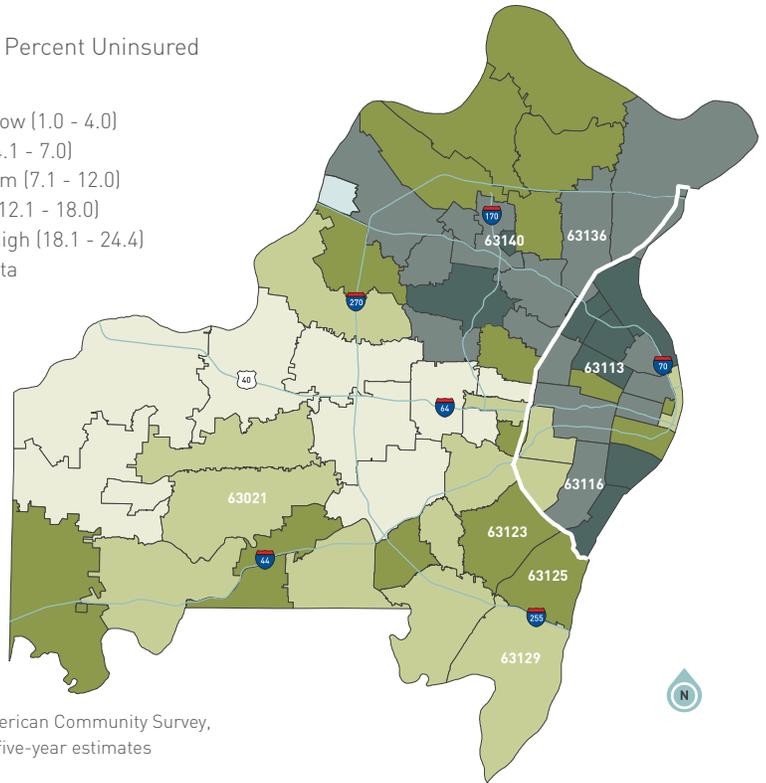
## The Uninsured

To better understand the areas of highest need in our region, it is important to know where individuals who are uninsured reside. Typically, those without health insurance coverage are the most disadvantaged in terms of access to health care, and they are more likely to rely on safety net organizations, whose mission is to serve them, as their main source of care<sup>1</sup>. Therefore, areas with a high proportion of uninsured individuals represent areas of high need for safety net services. Understanding what areas in the region have large uninsured populations will enable us to target our work and maximize health care access in the highest need areas.

Using census data for the St. Louis region, we can see that the highest rates of uninsured individuals are primarily concentrated in North and South St. Louis City and North St. Louis County. In **Figure 2**, the zip codes<sup>b</sup> with the highest percentages of uninsured residents are 63140 (Kinloch) and 63113 (The Ville) with 24.4% and 22.9%, respectively. When looking at the number of uninsured individuals in **Figure 3**, we find that the zip codes 63136 (Jennings) and 63116 (Bevo Mill) have the largest numbers of uninsured individuals with 7,430 and 7,006 uninsured residents, respectively. Additionally, the South County zip codes 63123 (Affton), 63125 (Lemay), and 63129 (Oakville) and the West County zip code 63021 (Ballwin) have notable numbers of uninsured residents.

**Figure 2: Percent Uninsured**

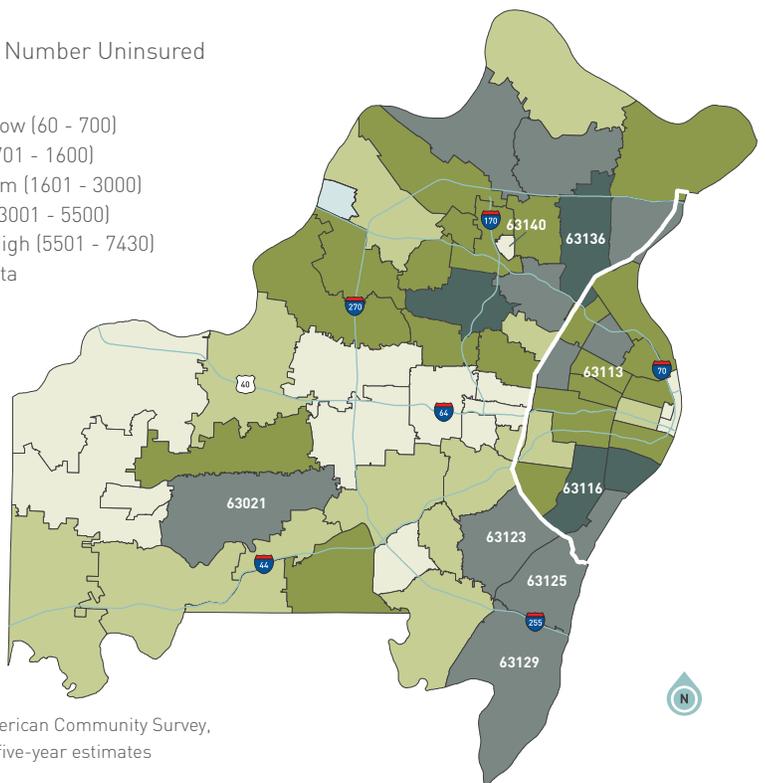
- Very Low (1.0 - 4.0)
- Low (4.1 - 7.0)
- Medium (7.1 - 12.0)
- High (12.1 - 18.0)
- Very High (18.1 - 24.4)
- No Data



Source: American Community Survey, 2012-2016, five-year estimates

**Figure 3: Number Uninsured**

- Very Low (60 - 700)
- Low (701 - 1600)
- Medium (1601 - 3000)
- High (3001 - 5500)
- Very High (5501 - 7430)
- No Data

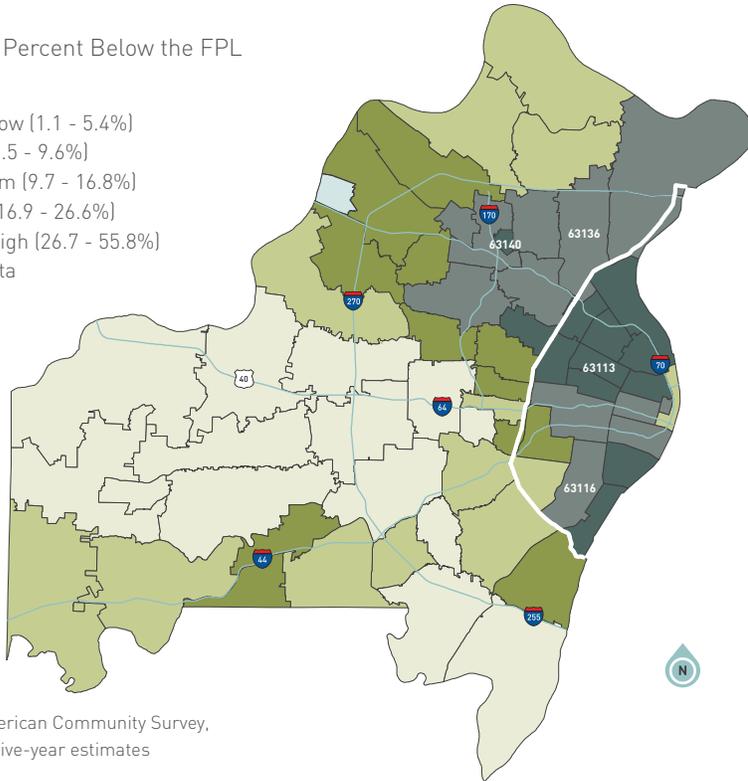


Source: American Community Survey, 2012-2016, five-year estimates

<sup>b</sup>Zip code data was estimated from ZCTA level Census data.

**Figure 4:** Percent Below the FPL

- Very Low (1.1 - 5.4%)
- Low (5.5 - 9.6%)
- Medium (9.7 - 16.8%)
- High (16.9 - 26.6%)
- Very High (26.7 - 55.8%)
- No Data



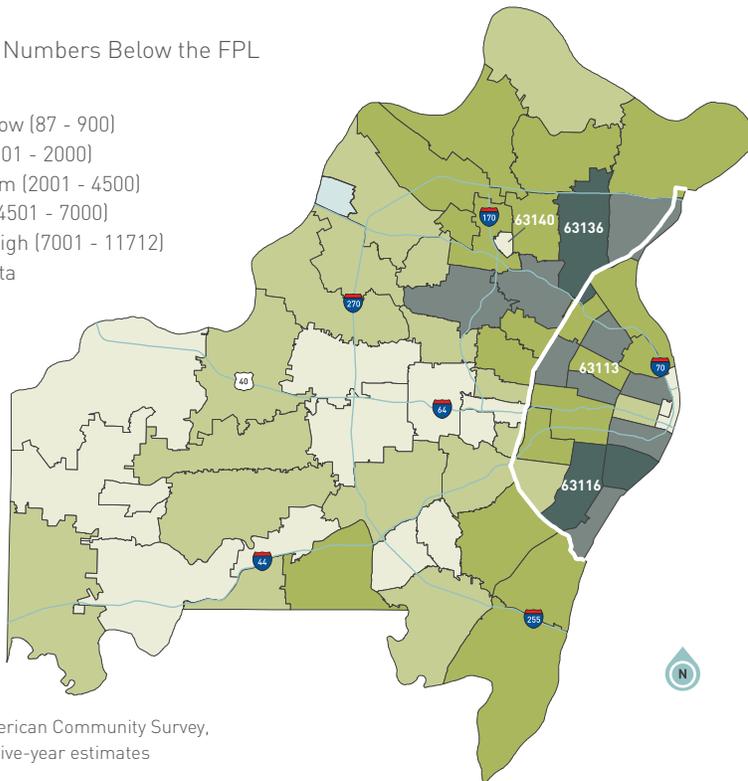
Source: American Community Survey, 2012-2016, five-year estimates

In addition to having high rates and numbers of uninsured individuals, these areas also have high levels of poverty. In **Figure 4**, the zip codes 63140 (Kinloch) and 63113 (The Ville) have 54.6% and 39.0% of their populations living below the Federal Poverty Level (FPL) respectively, while **Figure 5** shows that the zip codes 63136 (Jennings) and 63116 (Bevo Mill) have the region's largest populations living below the FPL with 11,712 and 9,996 individuals, respectively.

The communities in North and South St. Louis City and North St. Louis County, especially the zip codes mentioned, are among those most vulnerable to low health care access. Not only do many individuals in these communities lack health insurance coverage, but they also have less expendable financial resources to pay for their medical care out of pocket.

**Figure 5:** Numbers Below the FPL

- Very Low (87 - 900)
- Low (901 - 2000)
- Medium (2001 - 4500)
- High (4501 - 7000)
- Very High (7001 - 11712)
- No Data



Source: American Community Survey, 2012-2016, five-year estimates



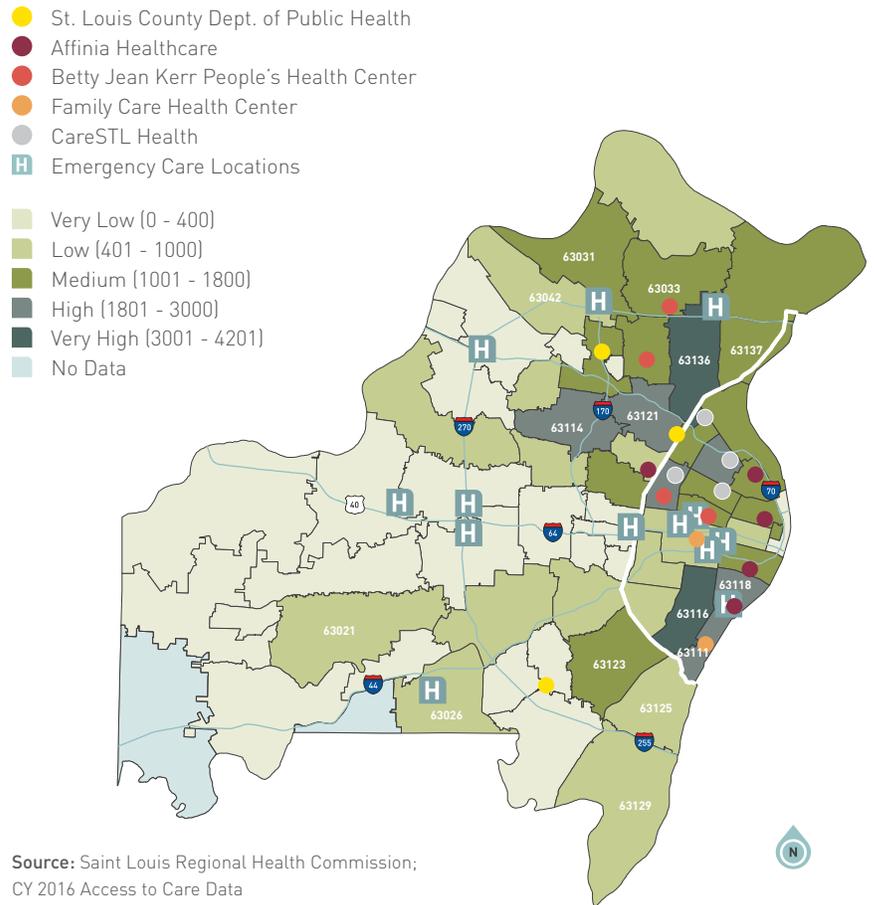
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## Primary Care Access

There are 17 comprehensive community health center sites in the St. Louis region that act as primary care access points for low-income and uninsured individuals. These health centers are operated by five different providers: the St. Louis County Department of Public Health, Affinia Healthcare, Betty Jean Kerr Peoples' Health Centers, Family Care Health Centers, and CareSTL Health, (formerly known as Myrtle Hilliard Davis Comprehensive Community Health Centers). Other key primary care access points in the safety net include Barnes Jewish Hospital's Center for Outpatient Health, Mercy Hospital JFK Clinic, SLUCare, SSM Health St. Mary's Clinic, St. Luke's Pediatric Care Center, The SPOT, and SSM Health Cardinal Glennon Pediatrics<sup>c</sup>. **Figure 6** displays data for all of the safety net primary care providers, but it only displays location markers for the 17 comprehensive community health centers.

Research has shown that uninsured individuals are less likely to access primary care services compared to the general population<sup>1,2</sup>. When compared to individuals who are privately insured, those without health insurance coverage are 30% less likely to have at least one physician office visit in a year<sup>2</sup>. Because of the barriers limiting access to primary care for the uninsured, community health centers and other safety net organizations are vital in ensuring health care

**Figure 6:** Number of Uninsured Primary Care Users



access for this population. Data from safety net organizations in the St. Louis region show that many of the uninsured patients accessing primary care services reside in North and South St. Louis City and North St. Louis County. The highest numbers of uninsured primary care users reside in the zip codes 63136 (Jennings) and 63116 (Bevo Mill) with 4,201 and 3,454 users, respectively. In general, zip codes with high numbers of uninsured primary care users also have high numbers of uninsured residents.

Looking at **Figure 7** there are, however, certain zip codes where sizeable gaps exist between the number of uninsured residents and the number of uninsured patients being served by primary care safety net providers. These areas are primarily concentrated in North and South St. Louis County and South St. Louis City. In the North County zip codes of 63114 (Overland) and 63136 (Jennings), 67% (4,519 individuals) and 43% (3,229 individuals) of uninsured residents were not primary care users in 2016.

<sup>c</sup>Casa de Salud is also considered one of the region's primary care safety net sites. However, data for Casa de Salud was not reported to the RHC in 2016 and is not included in this analysis.

In the South County zip code 63123 (Affton), 76% (3,748 individuals) of uninsured residents were not primary care users, while in the South City zip code 63116 (Bevo Mill), 51% (3,552 individuals) were not users. In addition to these four zip codes, there are multiple zip codes with a gap greater than 1,600 individuals between uninsured residents and users in North County (63031, 63033, 63137, 63121, 63042), South County (63129, 63125, 63026), West County (63021) and South City (63118, 63111).

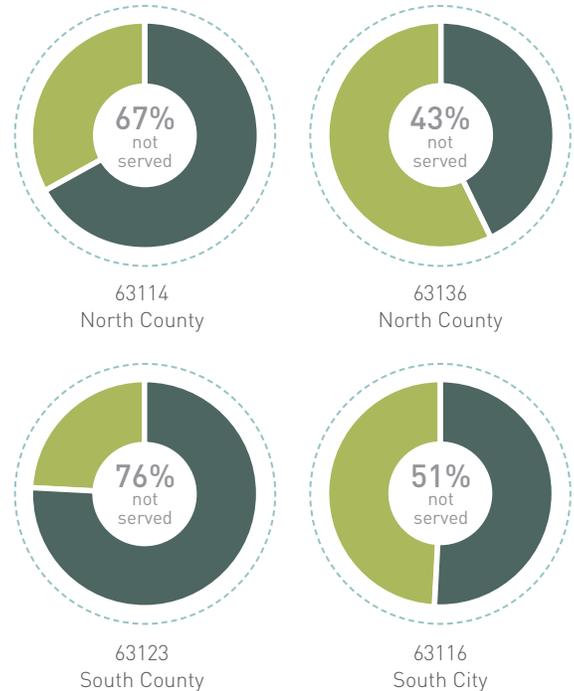
### Emergency Care Access

The 12 emergency departments in the St. Louis region that reported data to the RHC include Barnes- Jewish Hospital, Christian Hospital, Mercy Hospital St. Louis, Missouri Baptist Medical Center, SSM Health Cardinal Glennon Children’s Medical Center, SSM Health DePaul Health Center, SSM Health St. Clare Health Center, SSM Health St. Louis University Hospital, SSM Health St. Mary’s Health Center, St. Louis Children’s Hospital and St. Luke’s Hospital<sup>d</sup>. Data from each of these emergency departments is included in this report.

Emergency departments act as a vital access point for all patients, especially those that are uninsured.

**Figure 7:**  
Primary Care Access

- Number of Uninsured Served
- Service Gap
- Total Number of Uninsured



For those with limited access to or no regular source of care, emergency departments sometimes serve as their primary source of health care and often their initial entry into the safety net system<sup>1</sup>. However, emergency departments are not clinically designed to manage the non-urgent<sup>e</sup>, often chronic, health needs of a community’s population<sup>3</sup>. Emergency rooms are being utilized at increasing rates both nationally and locally. In 2013, there were 130.4 million emergency department visits across the nation, a 15% increase from 2003<sup>4</sup>. In 2016, there were more than 690,000 emergency department visits in the St. Louis region alone. Since 2012, emergency department visits in the St. Louis region have increased by more than 22,000 visits, a 3% increase<sup>5</sup>.

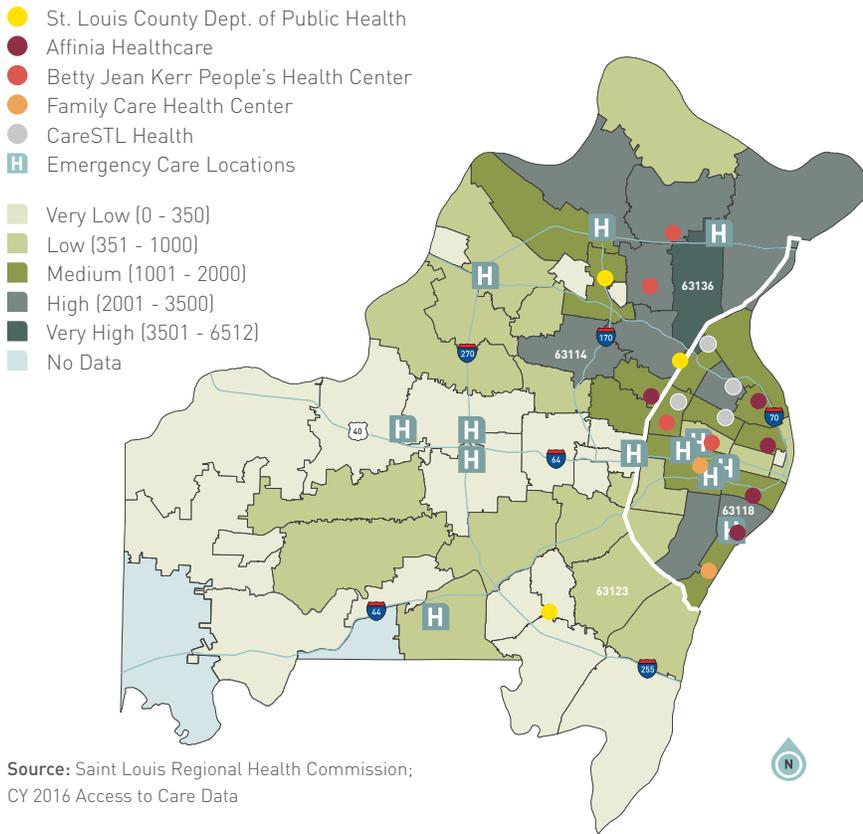
In 2016, non-urgent encounters made up nearly 20% of all emergency department visits in the St. Louis region. Based on the most commonly used definition of a non-urgent visit, roughly 32% of all emergency department visits in the U.S. are preventable or could be delayed<sup>6</sup>. Non-urgent use of emergency departments is not solely a consequence of insurance status. In the St. Louis region, commercially and publicly insured patients have non-urgent emergency department visits at rates comparable to the uninsured, while Medicaid patients have the highest number of non-urgent encounters<sup>5</sup>.

Throughout the St. Louis region as **Figure 8** shows, the relationship between the number of uninsured

<sup>d</sup>Data was not collected for St. Alexius or St. Anthony’s emergency care. This missing data could potentially impact the emergency care findings for South City and South County.

<sup>e</sup>Non-urgent care encounter: low-acuity, non-emergency visits that occur at hospital emergency departments that could have been treated in another provider setting, such as a primary care office, urgent care center, or other non-emergency department setting.

**Figure 8:** Number of Uninsured Emergency Care Users

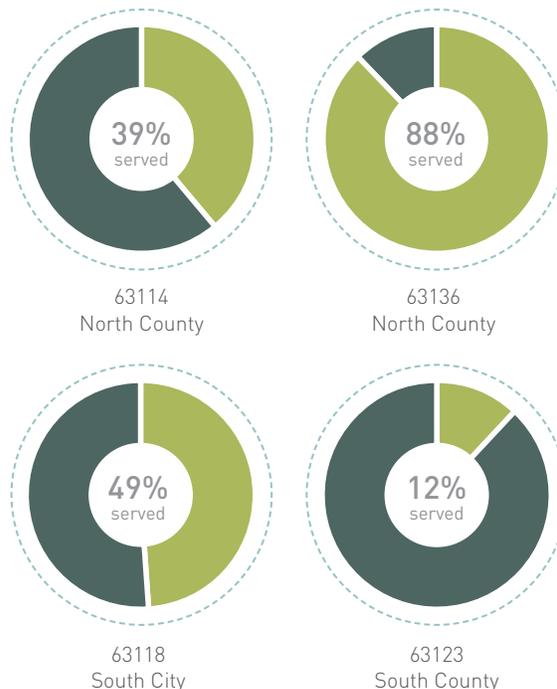


Source: Saint Louis Regional Health Commission;  
CY 2016 Access to Care Data

residents and uninsured emergency department users varies greatly. In North St. Louis County and South St. Louis City, the number of uninsured emergency care users is very high, which correlates with their large uninsured populations. **Figure 9** shows that zip code 63136 (Jennings), located in North County, has 7,430 uninsured residents and 6,512 uninsured emergency care users. According to these estimates, 88% of uninsured individuals in the zip code 63136 received care at an emergency department in 2016. The zip code 63118 (Gravois Park), located in South City, has 5,958 uninsured residents and 2,923 uninsured users, which means 49% of that zip code's uninsured residents used an emergency room in 2016. In contrast to North County and South City, South St. Louis County has relatively few uninsured emergency care users, despite having large uninsured populations. For example, the zip code 63123 (Affton) has 4,964 uninsured residents and only 585 uninsured emergency care users. This means only 12% of the zip code's uninsured residents visited an emergency department in 2016.

**Figure 9:**  
Emergency Care Access

■ Number of Uninsured Served  
■ Service Gap  
○ Total Number of Uninsured



Further analysis and discussion must be completed to better understand the causes and implications of these varying emergency care trends.



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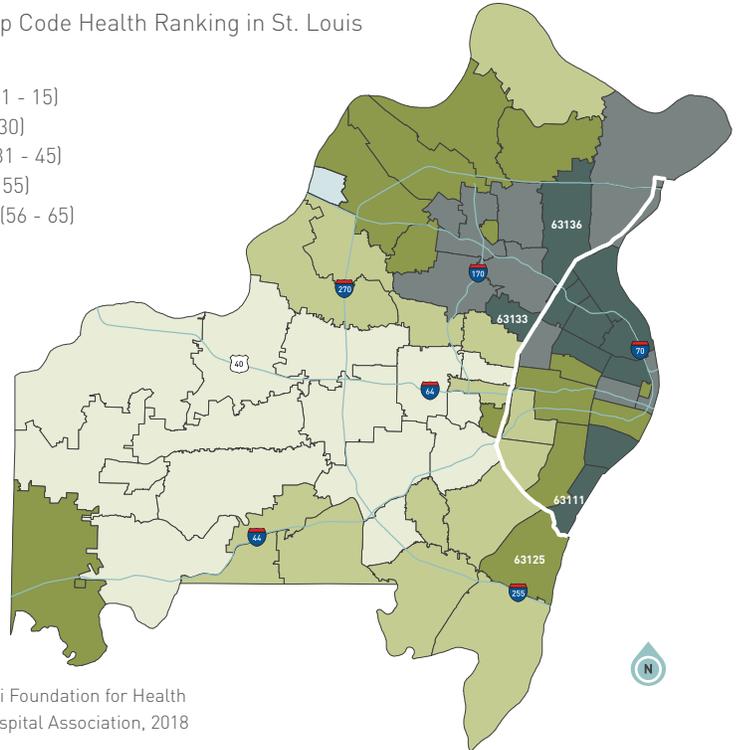
## Regional Health Outcomes

In 2018, the Missouri Hospital Association, in partnership with the Missouri Foundation for Health and the Washington University School of Medicine, published overall health rankings for every zip code in the state of Missouri<sup>f</sup>. Using their data, we have displayed both regional (Figure 10) and state-wide (Figure 11) health rankings for each St. Louis City and County zip code. The regional health rankings range from 1 to 65, with 1 representing the best overall health ranking and 65 the worst. The state-wide health rankings range from 1 to 958, with 1 representing the best overall health ranking and 958 the worst.

Regionally, the zip codes with the worst health outcomes are primarily located in North St. Louis City, North St. Louis County, and South St. Louis City. The state-wide rankings reveal that the zip codes with the worst regional health outcomes also have some of the worst health outcomes in the state. Most of North St. Louis City and several zip codes in both South City and North County have overall health rankings in the bottom 50 for the entire state of Missouri. By showing that large portions of our region have health rankings in the top 100 and the bottom 50, the state-wide health rankings demonstrate the dramatic disparities in health outcomes that are experienced in the St. Louis region.

**Figure 10:** Zip Code Health Ranking in St. Louis

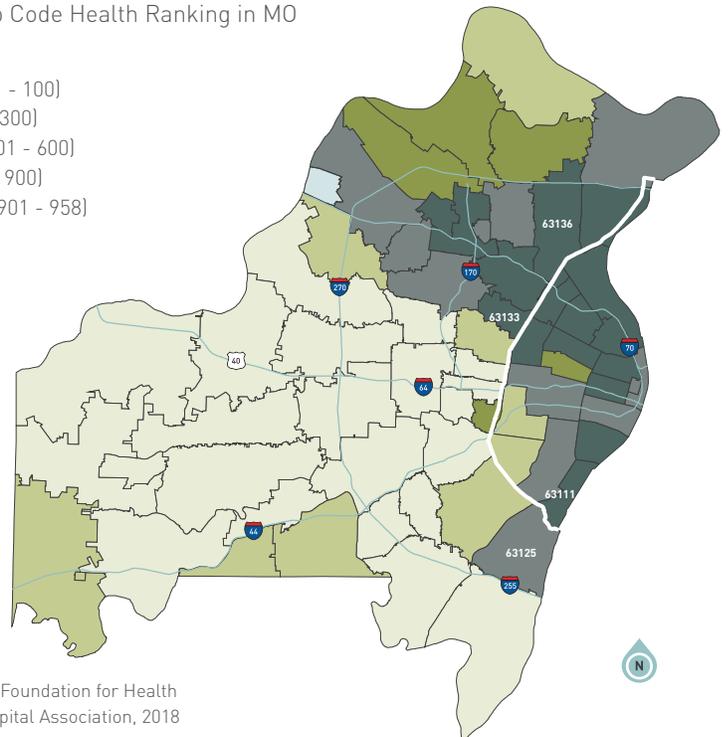
- Very Low (1 - 15)
- Low (16 - 30)
- Medium (31 - 45)
- High (45 - 55)
- Very High (56 - 65)
- No Data



Source: Missouri Foundation for Health and Missouri Hospital Association, 2018

**Figure 11:** Zip Code Health Ranking in MO

- Very Low (1 - 100)
- Low (101 - 300)
- Medium (301 - 600)
- High (601 - 900)
- Very High (901 - 958)
- No Data



Source: Missouri Foundation for Health and Missouri Hospital Association, 2018

<sup>f</sup>The ZIP Health Ranking is based on the average index scores for Combined Health Outcomes (Mortality and Quality of Life) and Combined Health Factors (Behaviors, Clinical Care/Access, Environment, and Socioeconomic Status). For more information visit [exploreMOhealth.org](http://exploreMOhealth.org)

In North St. Louis County, the zip codes with the worst health rankings also have extremely high emergency care utilization rates, which can be seen in zip codes 63133 (Pagedale) and 63136 (Jennings) in **Figure 12**. In South St. Louis City, the zip codes with the poorest health rankings have large gaps in primary care utilization for their uninsured populations. These zip codes also have relatively high emergency care utilization rates, which can be seen in the data displayed for zip code 63111 (Carondelet).

In general, the zip codes with the lowest regional health outcomes are also those with large uninsured populations. This trend demonstrates the importance of health insurance to accessing health care and achieving strong health outcomes; it does not, however, explain all of the differences in health outcomes across the region.

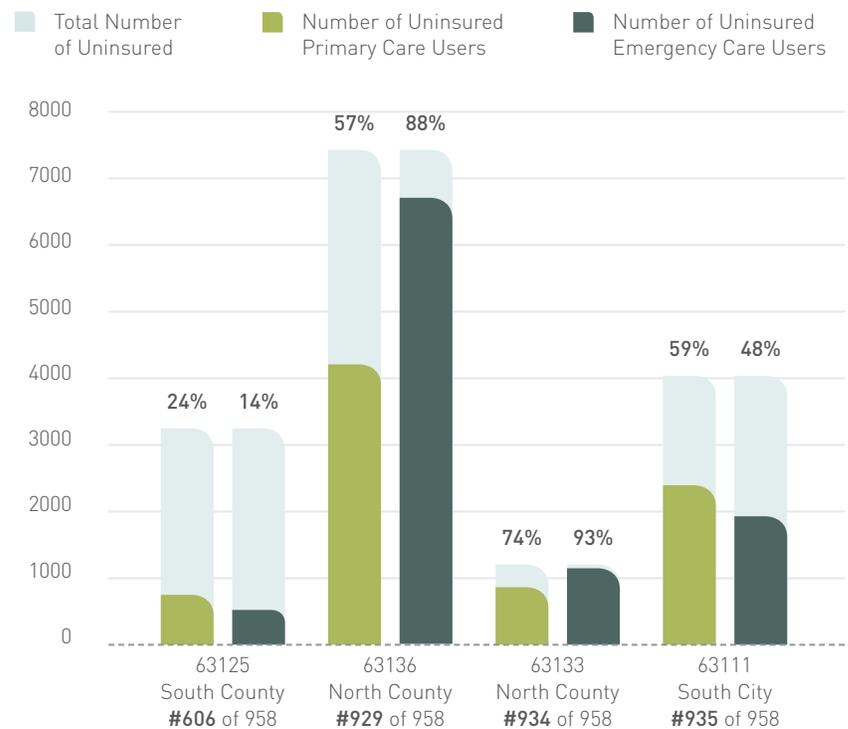
Zip codes in South St. Louis County have some of the largest populations of uninsured individuals in the region. They also have relatively low numbers of uninsured individuals using primary and emergency care, which can be seen in the data displayed for zip code 63125 (Lemay). Despite these facts, the health rankings for South County zip codes are significantly better than those of North City, South City, and North County.

## DRASTIC DISPARITIES IN HEALTH OUTCOMES

Out of **958** Missouri zip codes



**Figure 12:** Health Rankings and Uninsured PC and ED Usage



## Barriers to Care

Individuals who are uninsured face a multitude of barriers to care that limit their access to timely medical care<sup>1</sup>. For the purposes of this report, access is defined as a patient’s ability to get health care when and where they need it and at a price they can afford. Although affordability is a significant barrier for the uninsured, it is not the only barrier they face. Transportation is one of many factors that can serve as a barrier to access, and it has been reported as a significant barrier by local safety net stakeholders<sup>1</sup>.

### Transportation as a Barrier

Research has consistently shown that transportation becomes a larger barrier to accessing health care the farther a patient has to travel<sup>2</sup>. For individuals without a regular source of transportation or those that rely on public transit and social networks for transportation, this barrier is magnified<sup>2</sup>. In St. Louis, public transportation access is limited, especially in St. Louis County. For individuals traveling from St. Louis County and many parts of North St. Louis City, there is often a wait of 20 or more minutes to board a Metro bus during peak hours, as is seen in **Figure 13**. Wait times are even longer during off peak hours, as is seen in **Figure 14**. If someone is taking a trip across multiple bus lines, travel times can quickly become relatively long for the distance being traveled.

**Figure 13:**  
Average Wait Time  
During Peak Route Hours

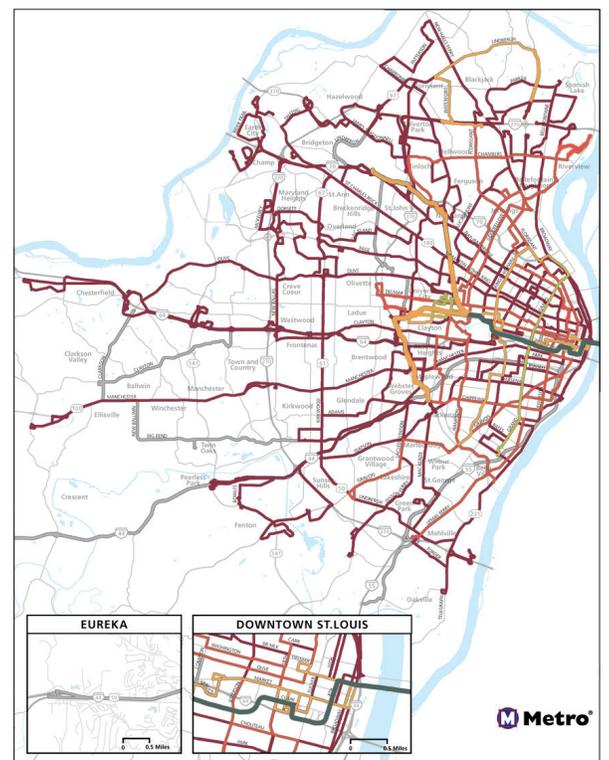
- 10 min or Less
- 11 - 15
- 16 - 20
- 21 - 30
- 30 min or More
- Trip Only



Source: Metro Transit

**Figure 14:**  
Average Wait Time  
During Off Peak  
Route Hours

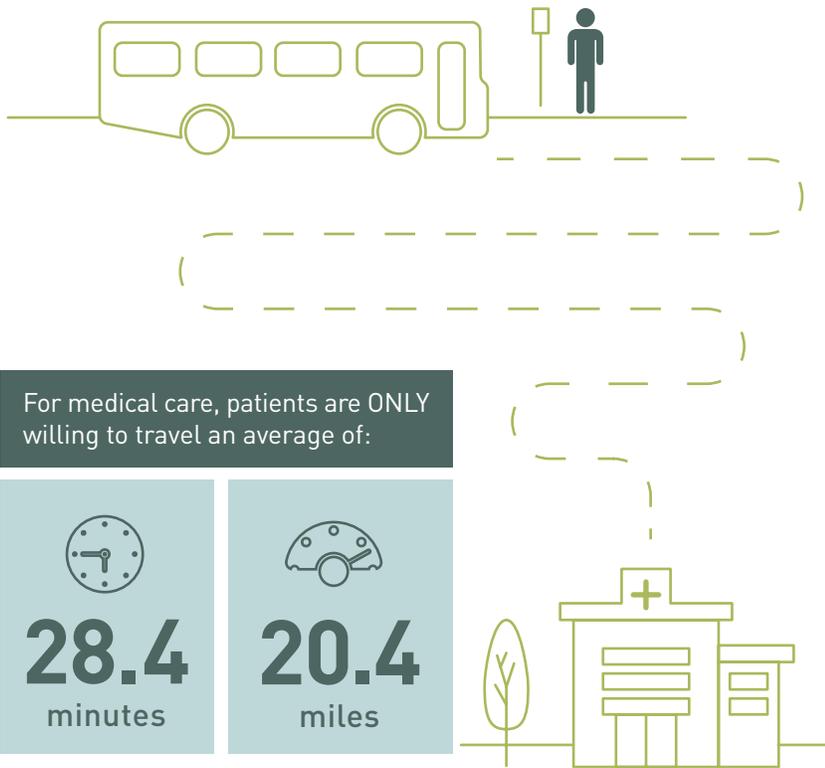
- 10 min or Less
- 11 - 15
- 16 - 20
- 21 - 30
- 30 min or More
- Trip Only



Source: Metro Transit

## TRANSPORTATION

is vital to strong Healthcare Access.



There is strong evidence linking health center location and patient access patterns<sup>2,3</sup>. Proximity is a major determining factor in whether a patient will access a specific health care location or not. This evidence has been supported by local findings as well. In the RHC's 2017 Coro Fellows Report, data showed that the majority of safety net health center patients lived in the zip codes immediately surrounding the health centers<sup>9</sup>. It also showed that North County residents often travel long distances to access safety net primary care services<sup>1</sup>. Studies have also shown that patients are only willing to travel an average of 28.4 minutes and a distance of 20.4 miles to access routine medical services<sup>4</sup>. Given these findings, it is important that the region maximizes existing transportation options for accessing care at safety net sites, and examines expanding safety net locations in areas of high unmet needs.

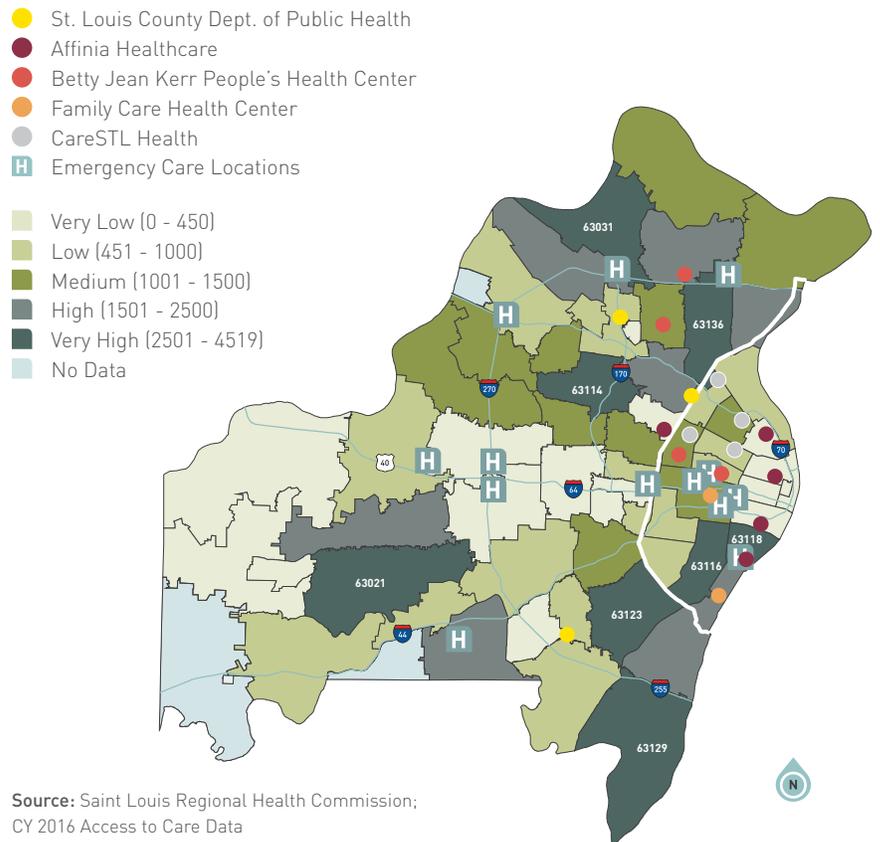


## Key Findings

Our analysis identified North St. Louis County, South St. Louis County, North St. Louis City, and South St. Louis City as the areas with the most zip codes vulnerable to low health care access. We identified these areas as vulnerable because of their high numbers of uninsured residents, high levels of poverty, and relatively low access to public transportation. Below we highlight the key findings for each of the identified areas, as well as findings for the region as a whole.

**1 North St. Louis County has large numbers of uninsured users of safety net primary care, but the area still has significant gaps in safety net primary care service in multiple zip codes. Additionally, North County has the largest numbers and highest rates of emergency care utilization by uninsured individuals in the region.** North St. Louis County has some of the largest populations of individuals living without insurance and under the FPL in the region. High rates of poverty and large uninsured populations make North County particularly vulnerable to low health care access. While many uninsured individuals from North County do access safety net primary care services, the gap between the number of uninsured individuals served and the total number of uninsured living in North County is quite large. The zip codes 63031 (Florissant), 63114 (Overland), and 63136 (Jennings) each have gaps larger than 2,500 people, and the

**Figure 15:** Primary Care Gap:  
Number of Uninsured Residents



zip code 63114 has the largest gap in the St. Louis region at 4,519 (Figure 15). In addition to large gaps in primary care service for uninsured individuals, North St. Louis County has very high utilization rates of emergency care by uninsured individuals. In the zip codes 63133 (Pagedale), 63135 (Ferguson), 63136, 63138 (Spanish Lake), and 63145 (Berkeley), over 80% of uninsured individuals used emergency care in 2016 (Figure 16). In addition to having large primary care gaps and high rates of emergency care utilization,

zip codes in North St. Louis County have some of the worst overall health rankings for the region and state; the zip codes 63121 (Normandy), 63133, 63134 (Berkeley), 63136, 63137 (Bellefontaine), 63138, and 63145, all rank in the bottom 60 (out of 958) for the state of Missouri (Figure 11).

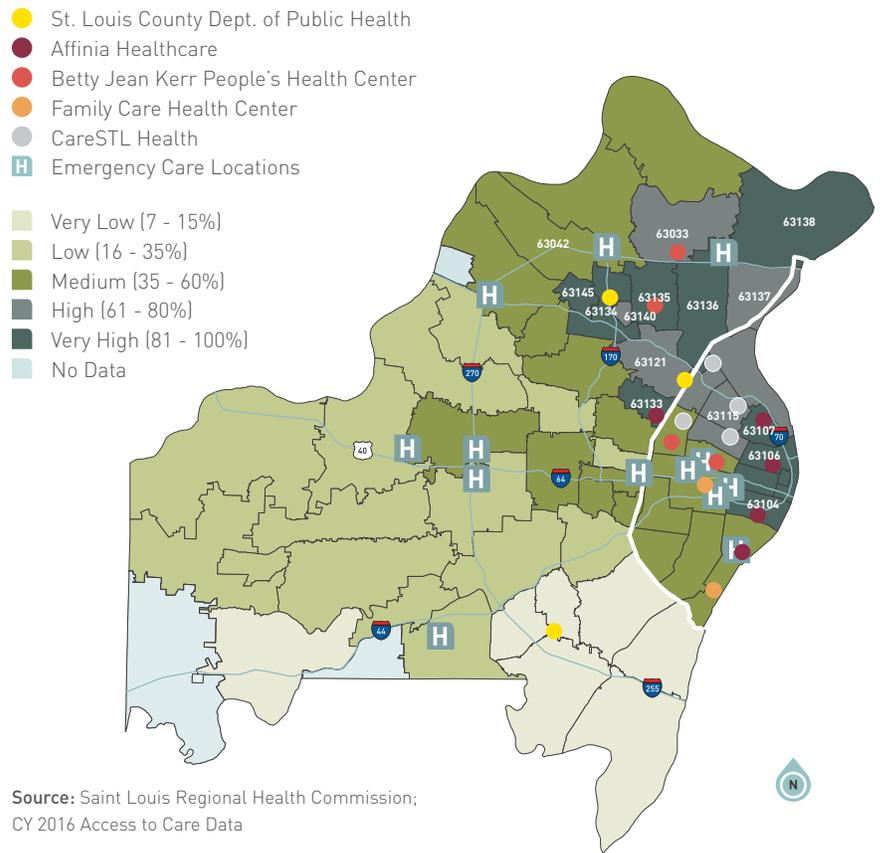
**2 South St. Louis City has large numbers of uninsured users of safety net primary care, but the area still has significant gaps in safety net primary care service in multiple zip codes. Additionally, South City has**

**above average rates of uninsured individuals using emergency care, but the rates are lower than those found in North City and County.**

South St. Louis City has some of the largest uninsured populations and highest rates of poverty in the region. Correspondingly, the area has large numbers of uninsured residents utilizing safety net primary care services; however, there are still gaps in service in some zip codes. The largest gaps between the number of uninsured primary care users and the total number of uninsured individuals are found in the zip codes 63116 (Bevo Mill) and 63118 (Gravois Park), which have gaps of 3,552 and 3,137 individuals, respectively (Figure 15). In South City, the rate of uninsured individuals using emergency care is relatively high for the region but significantly lower than the rates in North City and County. Additionally, the South City zip codes 63111 (Carondelet), 63116, and 63118 each have poor overall health rankings at the regional and state levels. Both 63111 and 63118 have health rankings in the bottom 50 (out of 958) for the state of Missouri (Figure 11).

**3 South St. Louis County has low rates of safety net primary care utilization by uninsured individuals, which leads to sizeable gaps in safety net primary care service in several zip codes. Additionally, South County has the lowest rates of emergency care utilization by uninsured individuals in the St. Louis region.** These low rates suggest that uninsured individuals in South County may be accessing care outside of the

**Figure 16:** Percent of Uninsured Using Emergency Care



safety net. South St. Louis County has low rates of people who are uninsured and living in poverty; However since South County is populous, the overall numbers of individuals without health insurance and below the FPL are quite large. The area also has low numbers of uninsured residents utilizing safety net primary care and emergency care services. Because of this, South County has several areas with gaps in safety net primary care service. The largest gaps are in the zip codes 63123 (Affton), 63125 (Lemay) and 63129 (Oakville) (Figure 15). Despite these gaps, South County has lower

emergency care utilization rates and better health outcomes than North County, North City, and South City.

**4 North St. Louis City has relatively small gaps in safety net primary care services for uninsured individuals. Despite this trend in primary care access, the area has high rates of emergency care utilization by the uninsured.** North St. Louis City has the region's highest percentages of residents who are uninsured and living below the FPL. However, North City has relatively small gaps in primary care services for uninsured

individuals. Despite this, the area continues to have high rates of emergency care utilization by uninsured individuals. Looking at **Figure 16** the zip codes 63106 (St. Louis Place), and 63107 (Fairgrounds) all have rates above 80%, while the zip code 63115 (Penrose) has the highest number of uninsured emergency care users at 2,725. Additionally, North St. Louis City has the worst overall health rankings in the region and some of the worst for the state. Almost all the zip codes making up North St. Louis City have health rankings in the bottom 50 (out of 958) for the state of Missouri (**Figure 11**).

**5 Central and West St. Louis County have relatively low rates of uninsured and relatively low unmet medical need, as compared to the rest of the region.** Central and West St. Louis County have the lowest rates of uninsurance and poverty in the St. Louis region. Because of this, these areas have low numbers of uninsured users of safety net primary and emergency care relative to the region. Additionally, Central and West St. Louis County have the best health outcomes in the St. Louis region and some of the best in the state. Each zip code in these areas has a health ranking in the top 100 for Missouri (out of 958), as well as 7 of the state's top 10 zip codes (**Figure 11**). The zip codes 63011 and 63021, which make up Ballwin, have significant numbers of uninsured residents and noticeable gaps in safety net primary care service. Despite this fact, these zip codes have health rankings in the top 20 for the state of Missouri, which

suggests uninsured residents in these zip codes may be accessing care outside of the safety net.

**6 Transportation is likely a significant barrier to accessing safety net primary care services for uninsured individuals in the St. Louis region. North St. Louis County, South St. Louis County, and South St. Louis City have less community health center locations and access to timely public transportation. These areas also have the largest gaps in safety net primary care utilization by uninsured individuals.** A previous study on health care access in St. Louis found that most individuals utilizing safety net primary care lived in the zip codes immediately surrounding the accessed health center<sup>9</sup>. It also found that some patients from North St. Louis County were traveling more than 20 miles to access safety net primary care<sup>9</sup>. Additionally, local stakeholders in health care have cited transportation as a major barrier to care in the region<sup>9</sup>. The fact that the areas in the St. Louis region with the lowest access to transportation also have the lowest rates of primary care utilization demonstrates a regional need to address transportation as a barrier to health care.

### Conclusion

The data presented in this report highlights several areas in the region in need of increased access to safety net health care services for the uninsured. In general, these areas have gaps in primary care services, high emergency department usage, and very poor health outcomes.

The exception to this trend is seen in South St. Louis County. This area has large gaps in safety net primary care service and extremely low emergency department usage. Despite these facts, the area has significantly better health outcomes than the other areas identified as vulnerable in this report. This trend may be attributable to uninsured residents of South County accessing primary care services outside of the safety net, or utilizing urgent care; however, further investigation is required to fully understand this trend.

In addition to highlighting areas of high need, this report demonstrates the importance of transportation to health care access. The areas of the St. Louis region that are most vulnerable to low health care access and have the worst health outcomes are also the areas with low access to public transportation. In order to increase access in these areas, the barrier of transportation will have to be addressed. This work is already being started through Metro Reimagined project.

Metro Reimagined has already set goals to decrease wait times to 15 minutes or less for the most used public transit routes and to upgrade every other route to a maximum wait time of 30 minutes. This project has also done work to evaluate what they can do more effectively transport patients to healthcare facilities.





## Methods

This issue brief used data from the 2016 American Community Survey, the St. Louis Regional Health Commission's CY 2016 Access to Care Data, and the Missouri Hospital Association's exploreMOhealth initiative. Data from the American Community Survey was used to create the maps displaying numbers and percentages of both uninsured and below FPL populations in the region. The American Community Survey reports its geographic data by Zip Code Tabulation Area (ZCTA), which was used to estimate data at the

Zip Code level. Data from the St. Louis Regional Health Commission's 2017 Access to Care Report was used to generate maps and charts displaying trends in primary care and emergency care utilization. For more information on the data collection methods used in the Access to Care Report, please reference the full 2017 Access to Care Report online. Data from the Missouri Hospital Association was used to create maps displaying the overall health rankings of zip codes throughout the St. Louis region. For more information on the methods

used to develop these rankings, please visit the exploreMOhealth website. Each map was created using ArcGIS software and data from the previously mentioned sources. Zip codes were classified into categories (very low, low, medium, high, very high) using the Jenk's natural breaks statistical method. This method creates meaningful groupings of data by maximizing differences between groups and minimizing them within the group.

## Limitations

The data presented on primary care and emergency care utilization in this brief is self-reported data from participating organizations. Great care has been taken to ensure the accuracy of the data in this report. All institutions were given the opportunity to verify their data for accuracy. In addition, the Regional Health Commission has taken steps to independently validate all data elements to the fullest extent possible. While the Regional Health Commission cannot attest to the complete accuracy of all presented data, these efforts significantly reduced the potential errors in the reported data.

The most likely error to have occurred while collecting the geographic data on care utilization is double-counting of single users. If an individual visited two different primary care or emergency care locations in 2016, then they may have been counted as two separate users for their zip code. Additionally, some primary care providers were not able to report geographic information for all of their patients. Finally, the data is not age-adjusted, so differences in medical service utilization across age groups are not accounted for in the presented data.

This report does not present any data on urgent or specialty care utilization or from any private providers outside of the primary care safety net system. Further analysis will need to be performed to better understand gaps in access for this type of care and how its utilization impacts primary and emergency care.



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