

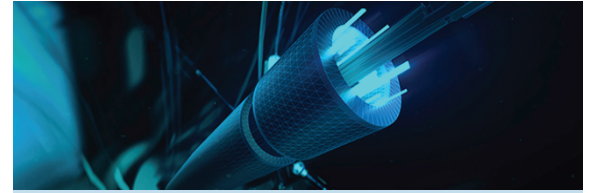
VARIATIONS IN INTERNET ACCESS ACROSS KANSAS

With social distancing, reduced health care services and school building closings during the COVID-19 pandemic, there has been an increasing need for adequate internet access, which is required for [telehealth](#), education, business and social activities. While information is available on areas with [broadband coverage](#), households still might not have adequate internet access due to technical and infrastructure issues, or prohibitive costs.

This brief examines variations in adequate internet access by geography, population characteristics, insurance coverage and other factors to better understand how each one impacts Kansans. It uses data from the U.S. Census Bureau 2019 American Community Survey (ACS) Public Use Microdata Sample (PUMS) to better understand barriers to adequate internet access prior to the COVID-19 pandemic, which can help policymakers identify geographic areas and vulnerable populations that might require additional assistance during and after the pandemic.

Variation by Geographic Area

Overall, three in 10 (29.8 percent) Kansans lacked adequate internet access (*Figure 1*, page 2). Breaking down those lacking adequate internet access, 10.2 percent lacked



What is Adequate Internet Access?

Adequate internet access requires both device availability and a high-speed internet connection.

- **Device availability:** A desktop, laptop or tablet that provides appropriate screen size and allows full features of applications for telehealth and online learning.

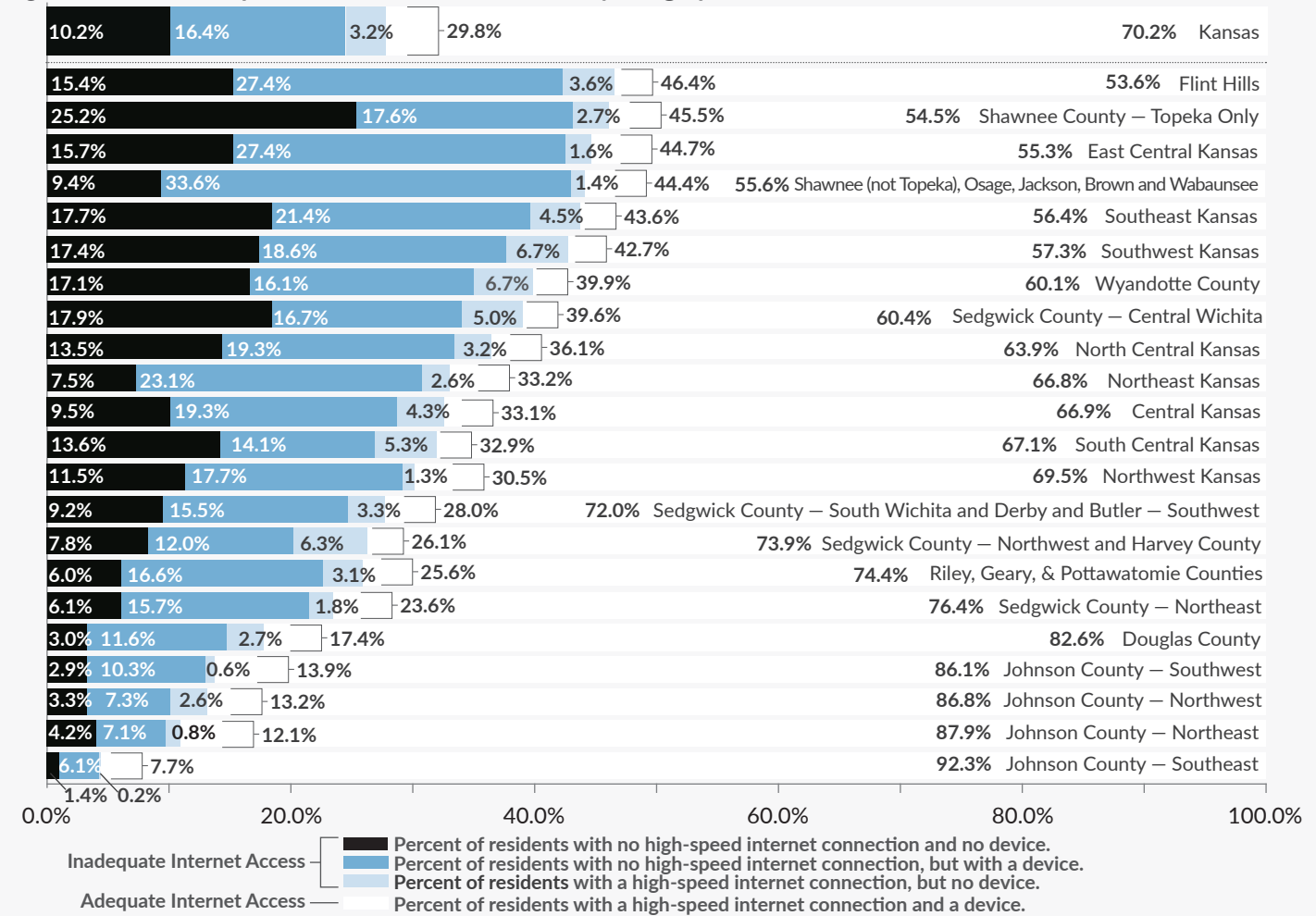
- **High-speed internet connection:** The FCC currently defines a high-speed internet connection as 25 megabits per second (Mbps) download speeds and 3 Mbps upload speeds. This includes cable, fiber-optic and digital subscriber line (DSL).

Note: For the ACS, the type of internet is only asked of people who pay for internet. Some Kansans might receive free or subsidized coverage. Smartphones and cellular data alone are not considered as adequate internet access due to variations in functions, speed and data plans, as well as requirements for people with disabilities.

KEY POINTS

- ✓ Adequate internet access – which is dependent on both device availability and a high-speed internet connection – is critical for telehealth, virtual learning and staying connected in a socially-distanced manner.
- ✓ Three in 10 (29.8 percent or 884,700) Kansans did not have adequate internet access. There was a six-fold difference between the regions with the highest (46.4 percent) and lowest (7.7 percent) inadequate internet access rates.
- ✓ Kansans who are Non-Hispanic Black or Hispanic, Any Race, were more likely to lack adequate internet access than were non-Hispanic White Kansans (45.6 percent, 39.8 percent and 28.5 percent, respectively).
- ✓ Nearly half (48.6 percent) of Kansans with household income less than 100 percent of the federal poverty level (FPL) lacked adequate internet access.
- ✓ Even among those with household income greater than 400 percent of FPL, one in five (19.5 percent) lacked adequate internet access, suggesting that the barriers are more than just financial.

Figure 1. Lack of Adequate Internet Access in Kansas by Geographic Area, 2019



Note: All Kansans (civilian noninstitutionalized population) = 2,872,404. Percentages may not sum to 100 percent due to rounding.
 Source: KHI analysis of data from the U.S. Census Bureau 2019 American Community Survey Public Use Microdata Sample files.

both high-speed internet and a device. Another 19.6 percent lacked either high-speed internet access (16.4 percent) or a device (3.2 percent).

There was a six-fold difference in the rate of inadequate internet access across regions of the state. The area with the highest rate of inadequate internet access was the Flint Hills region, encompassing 11 counties extending from Emporia to the Oklahoma state line, where nearly half (46.4 percent) of residents lacked adequate internet access (See Insert Map). Six out of the 22 regions in Kansas had an inadequate internet access rate of 40 percent or greater. The region with the lowest inadequate internet access rate was Southeast Johnson County (7.7 percent). The five regions where fewer than one in five residents lacked adequate internet access all fell within Johnson and Douglas Counties.

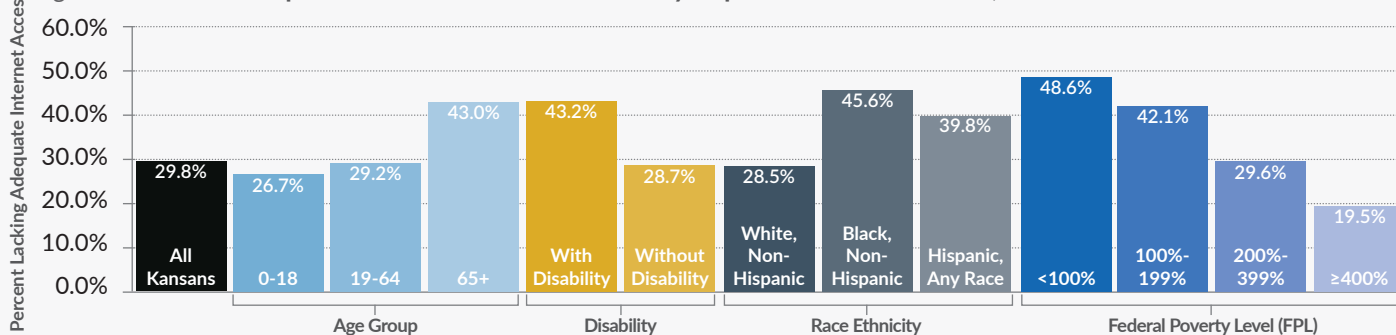
Different strategies are needed to address the lack of adequate internet access across regions. One in four (25.2 percent) Topeka residents lacked both a device and a high-speed internet connection, a rate

18 times greater than that in Southeast Johnson County (1.4 percent). A high-speed internet connection does not guarantee adequate internet access, because a device also is required to get online. High-speed internet without device availability was highest in Wyandotte County and Southwest Kansas, impacting 6.7 percent of residents in both areas, more than 30 times greater than the rate of inadequate access in Southeast Johnson County (0.2 percent). Conversely, Kansans that had a device but not a high-speed internet connection peaked at one in three (33.6 percent) residents in the area encompassing Brown, Jackson, Osage, Shawnee (not Topeka) and Wabaunsee counties, more than five times the rate in Southeast Johnson County (6.1 percent).

Variation by Population Characteristics

The availability of a device and a high-speed internet connection that provide adequate internet access can be influenced by many characteristics, such as age, race/ethnicity and income (Figure 2, page 3).

Figure 2. Lack of Adequate Internet Access in Kansas by Population Characteristic, 2019



Note: All Kansans (civilian noninstitutionalized population) = 2,872,404. People who did not report household income were not included in the analysis by federal poverty level (FPL). Percentages may not sum to 100 percent due to rounding.

Source: KHI analysis of data from the U.S. Census Bureau 2019 American Community Survey Public Use Microdata Sample files.

Age

One in four (26.7 percent, or 198,648) Kansas children age 0-18 lived in households that lacked adequate internet access, potentially making remote learning difficult for school-aged children. Over one-quarter (29.2 percent) of non-elderly adults also lacked adequate internet access, potentially impacting their ability to work remotely. Older adults were the most likely to lack adequate internet access (43.0 percent lacked it) which could affect their ability to use telehealth services and stay connected with family and friends.

Disability

Kansans with a functional disability were 1.5 times more likely to lack adequate internet access than those without a functional disability (43.2 percent compared to 28.7 percent). The ACS defines a functional disability as having difficulties in one or more of the following areas: hearing, vision, cognitive, ambulatory, self-care and independent living.

Race/Ethnicity

Kansans who are Non-Hispanic Black were 1.6 times, and those who are Hispanic, Any Race, were 1.4 times more likely, than non-Hispanic White Kansans to lack adequate internet access (45.6 percent, 39.8 percent and 28.5 percent, respectively).

Household Income

Lack of adequate internet access increased as household income decreased. Nearly half (48.6 percent) of Kansans in households earning less than 100 percent of the federal poverty level (FPL) (\$25,750 for a family of four in 2019) lacked adequate internet access. This rate is 2.5 times the rate of inadequate internet access among those in

households at or above 400 percent FPL (19.5 percent, among those with income more than \$103,000 for a family of four in 2019). Still, the finding that nearly one in five people in households with income above 400 percent FPL lacked adequate internet access suggests that the barriers are more than just financial.

Insurance Coverage

As seen in Figure 3 (page 4), uninsured Kansans and those with public health insurance (including Medicare, Medicaid or Children's Health Insurance Program (CHIP)) were more likely to lack adequate internet access than those with private insurance (including employment-based or direct-purchase coverage) (46.2 percent, 42.0 percent and 23.1 percent, respectively). Individuals with public insurance and those that are uninsured generally have limited income, making it harder for them to afford devices and a high-speed internet connection. Among Kansans with public insurance, those who were dually eligible for both Medicare and Medicaid were the most likely to lack adequate internet access (55.3 percent). Dual-eligible Kansans are either nonelderly adults with disabilities or seniors with low income who could potentially benefit from internet enabled telehealth services.

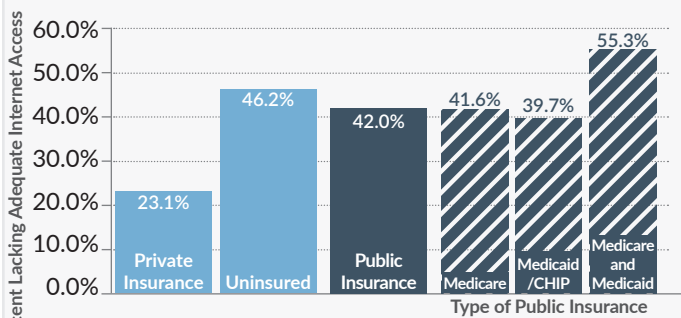
Policy Implications

The COVID-19 pandemic highlighted the detrimental effects of inadequate internet access and the large variations present across regions of the state and various demographic groups of Kansans.

Health

In responding to the COVID-19 pandemic, insurance plans made changes to telehealth policies and the federal and state governments made changes to

Figure 3. Lack of Adequate Internet Access by Source of Insurance Coverage in Kansas, 2019



Note: All Kansans (civilian noninstitutionalized population) =2,872,404. Percentages may not sum to 100 percent due to rounding.

Source: KHI analysis of data from the U.S. Census Bureau 2019 American Community Survey Public Use Microdata Sample files.

telehealth laws. These changes allowed payment parity, expanded services, telephone delivery (instead of only video), and new originating sites. While many of these changes were enacted to expand care during the COVID-19 pandemic, many could be continued after the pandemic ends. Adequate internet access is essential to allow people to obtain telehealth services in a timely manner and to improve their care.

Specifically, for older adults and people with disabilities, the COVID-19 pandemic may have disrupted social services and long-term services and supports, due to challenges in converting in-person or in-home services to telehealth services. It is important to note that older adults and people with disabilities also may need appropriate and adapted devices — such as those with large font sizes and voice activated features — to be able to appropriately access the internet. Many of them live alone or have limited mobility, and adequate internet access could be an option to help them have more frequent interactions with family and friends in order to avoid social isolation during the pandemic.

Education

To slow the spread of the virus, Gov. Kelly closed school buildings early last spring. School districts across the state switched to a virtual platform to educate children

and to coordinate delivery of important health and social services, such as annual vision and hearing screenings and subsidized meals. To receive education and services in a virtual format and keep connections with peers and teachers, which is important for maintaining good emotional health, students need adequate internet access, including an appropriate device and a high-speed internet connection.

However, one in four (26.7 percent) Kansas children lacked adequate internet access in 2019. Many live in areas without a high-speed internet connection and not all schools across the state are able to provide students with the devices needed for virtual learning. Policymakers should consider improvements that would allow all children to have adequate internet access, regardless of geographic location, family income, or other factors.

Looking Ahead

During 2020, several initiatives were put in place to improve and expand broadband access in Kansas. The Office of Broadband Development was established within the Department of Commerce to provide support for broadband expansion. The new Eisenhower Legacy Transportation Program authorized grants of up to \$5 million a year for the first three years, then up to \$10 million a year through 2030, for construction projects that expand and improve broadband service in Kansas. The federal Coronavirus Aid, Relief and Economic Security (CARES) Act provided \$60 million in federal funding to support connectivity initiatives.

Improving health outcomes and educational opportunities are key priorities for the state. Adequate internet access could help achieve these goals. Nevertheless, disparities exist across Kansas based on age, race/ethnicity, income, insurance coverage and geographic area. As Kansas invests in long-term solutions to improve internet access, it is important for policymakers to consider how to reduce disparities that currently exist.

ABOUT THE ISSUE BRIEF

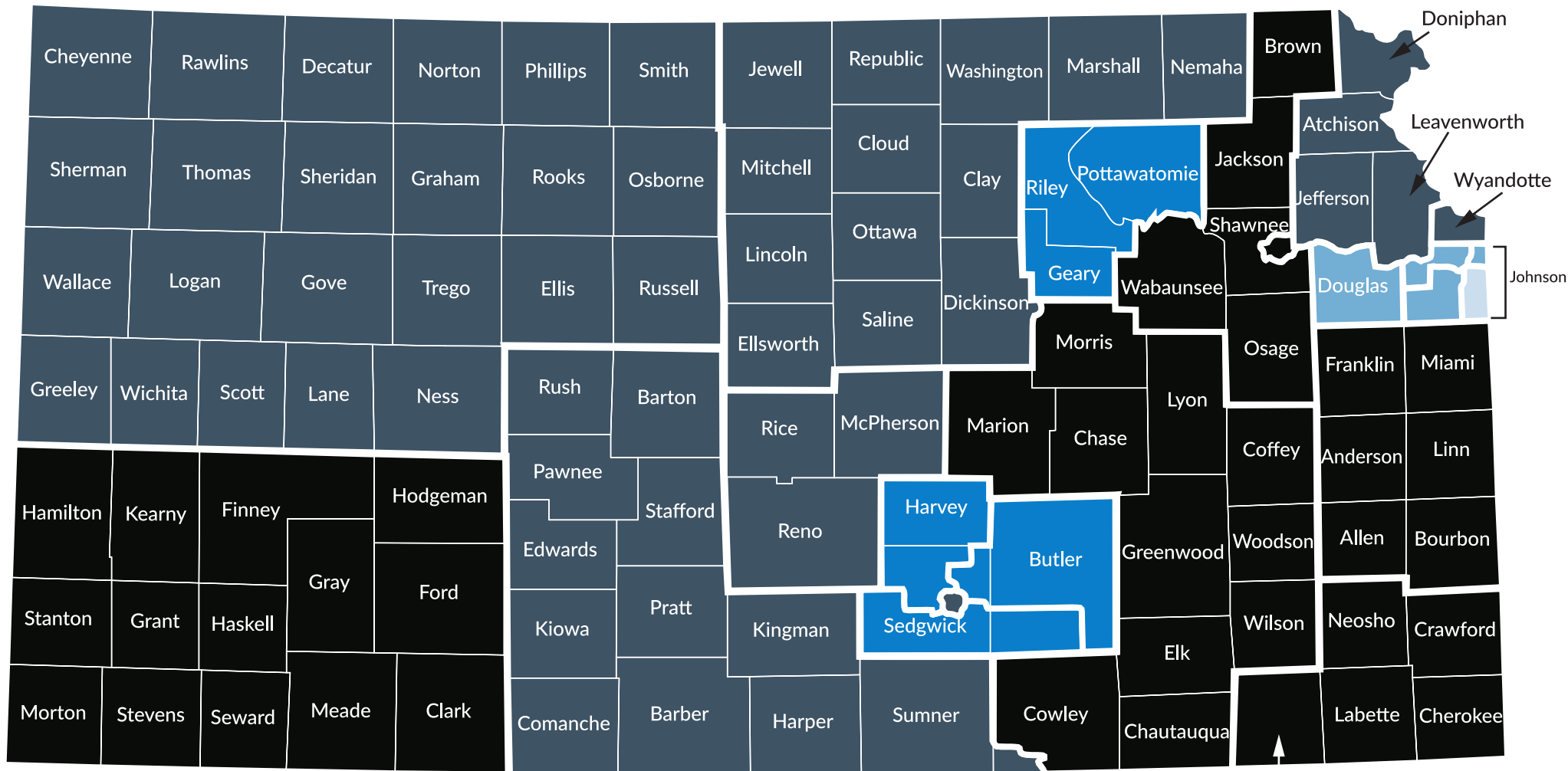
This brief is based on work done by Emily Burgen, M.P.H. and Wen-Chieh Lin, Ph.D. It is available online at khi.org/policy/article/21-09.

KANSAS HEALTH INSTITUTE

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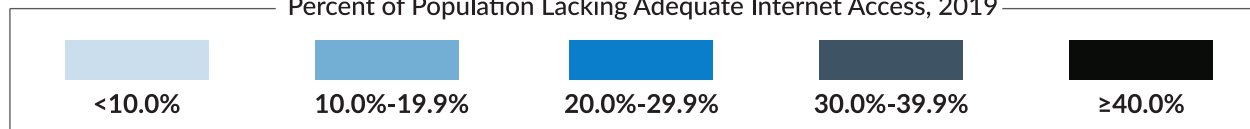
Lack of Adequate Internet Access in Kansas, 2019



Kansans Lacking Adequate Internet Access = 29.8 percent

Montgomery

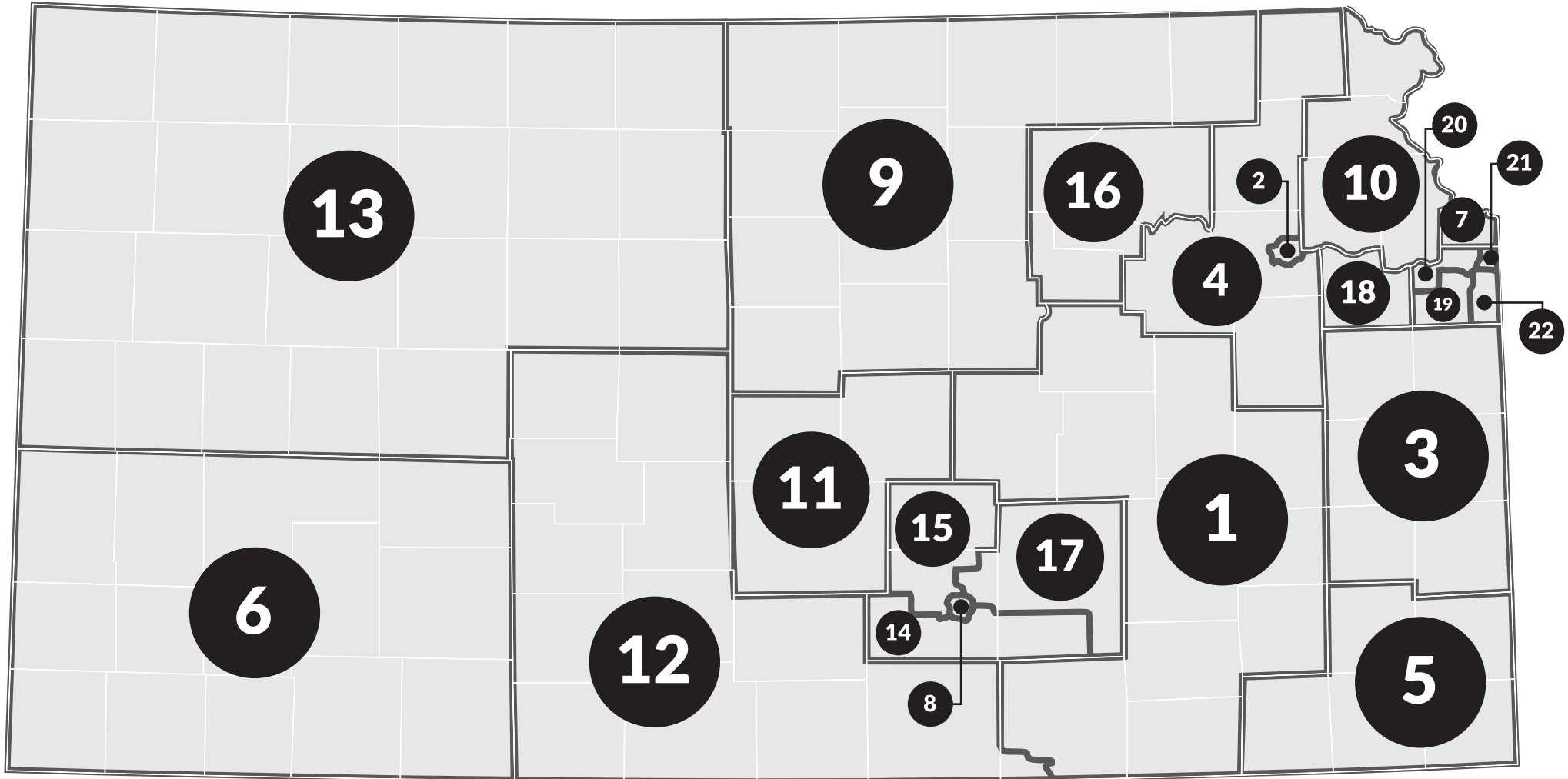
Percent of Population Lacking Adequate Internet Access, 2019



Note: All Kansans (civilian noninstitutionalized population) = 2,872,404.

Source: KHI analysis of data from the U.S. Census Bureau 2019 American Community Survey Public Use Microdata Sample files.

Kansas Public Use Microdata (PUMS) Areas



Regions, in Order of Percent Lacking Adequate Internet Access:

- | | |
|--|--|
| 1. Flint Hills (46.4%) | 12. South Central Kansas (32.9%) |
| 2. Shawnee County – Topeka Only (45.5%) | 13. Northwest Kansas (30.5%) |
| 3. East Central Kansas (44.7%) | 14. Sedgwick County – South Wichita and Derby and Butler – Southwest (28.0%) |
| 4. Shawnee (not Topeka), Osage, Jackson, Brown and Wabaunsee (44.4%) | 15. Sedgwick County – Northwest and Harvey County (26.1%) |
| 5. Southeast Kansas (43.6%) | 16. Riley, Geary and Pottawatomie Counties (25.6%) |
| 6. Southwest Kansas (42.7%) | 17. Sedgwick County – Northeast (23.6%) |
| 7. Wyandotte County (39.9%) | 18. Douglas County (17.4%) |
| 8. Sedgwick County – Central Wichita (39.6%) | 19. Johnson County – Southwest (13.9%) |
| 9. North Central Kansas (36.1%) | 20. Johnson County – Northwest (13.2%) |
| 10. Northeast Kansas (33.2%) | 21. Johnson County – Northeast (12.1%) |
| 11. Central Kansas (33.1%) | 22. Johnson County – Southeast (7.7%) |

