

National Study of Treatment and Addiction Recovery Residences Report South Carolina

The National Study of Treatment and Addiction Recovery Residences (NSTARR) constitutes the largest and most diverse study of recovery housing in the US to date. NSTARR compiled data from publicly available sources (e.g., Oxford House, National Alliance for Recovery Residences, and Substance Abuse and Mental Health Services Administration websites) and lists maintained by entities tracking recovery housing. Residences for which locating information was available were geocoded and linked with U.S. Census data on urbanicity, alcohol- and drug-involved mortality, and COVID vulnerability. Data collection began in January 2020 and is ongoing until June 2023. The NSTARR database currently contains information on 10,358 residences operated by 3,628 providers in all 50 states. For a detailed description of methods and national findings, please see Mericle et al., 2022.

KEY FINDINGS

The NSTARR team identified 89 recovery residences (1.77 houses per 100,000 population) in South Carolina (see Table 1). Compared to other states (which include DC), South Carolina ranked 37 in terms of recovery housing availability per capita. All but one residence in the state could be geocoded for these analyses. Richland County, an urban county, had the most recovery residences per 100,000 population, and 33 had no identified recovery residences, representing a mix of rural-urban classifications; 39 had fewer than 5 recovery residences (see Figure 1).

We used geographic information systems to identify hot and cold spots in South Carolina. A hot spot is a cluster of high values (county with a high number of residences surrounded by other counties with high numbers of residences) and a cold spot is a cluster of low values (county with low counts surrounded by counties also with low counts). Our analyses found hot spots but no cold spots within the state (see Figure 2).

The age-adjusted alcohol- and drug-involved mortality rate (per 100,000 population) was 16.90 in South Carolina for the years 2009-2019. South Carolina ranked 34 on alcohol- and drug-involved mortality out of the 50 states and DC. Anderson County had the highest alcohol- and drug-involved mortality rate and Edgefield County had the lowest alcohol- and drug-involved mortality rate. Of the three counties that had the highest mortality rates in South Carolina (i.e., Anderson, Pickens, and Laurens), two of them also ranked in the bottom half recovery housing availability per capita, suggesting more recovery resources may be needed (see Table 1 and Figure 3).

COVID vulnerability was summarized using the county-level data from the Centers for Disease Control and Prevention's COVID Vulnerability Index (CCVI). The CCVI is a composite measure of seven social determinants of health, encompassing modified themes from the Centers for Disease Control and Prevention's Social Vulnerability Index in combination with COVID risk factors to identify communities in need of additional support during the COVID pandemic. Nineteen counties were classified as having very high vulnerability, and 16 of these counties were located in areas ranked in the bottom half of recovery housing availability per capita, also suggesting that more recovery resources may be needed (see Table 1 and Figure 4).

89

RESIDENCES
TOTAL

37

NATIONAL
AVAILABILITY
RANKING

33

COUNTIES
WITHOUT
RESIDENCES

Table 1. County-level Descriptive Statistics on Recovery Residences

County Name	Population ¹	RUCC Classification ²	Number of Recovery Residences ³	Recovery Residences Per 100,000 Population	Recovery Residences Availability per Capita (Rank) ⁴	Age-Adjusted Alcohol/Drug Mortality ⁵ Rate per 100,000 Population	Mortality Rate (Rank) ⁶	CCVI Quintile ⁷
SOUTH CAROLINA	5,020,806		89	1.77	37	16.90	34	
Abbeville	24,627	Adjacent rural	0	0.00	46	22.60	43	High
Aiken	168,301	Urban	1	0.59	11	35.80	14	High
Allendale	9,024	Adjacent rural	0	0.00	46	25.10	39	Very high vulnerability
Anderson	198,064	Urban	1	0.50	12	49.10	1	High
Bamberg	14,376	Non-adjacent rural	0	0.00	46	42.30	7	Very high vulnerability
Barnwell	21,346	Adjacent rural	0	0.00	46	31.10	21	Very high vulnerability
Beaufort	186,095	Urban	0	0.00	46	27.10	31	Moderate
Berkeley	215,044	Urban	1	0.47	13	27.70	30	Moderate
Calhoun	14,663	Urban	0	0.00	46	26.30	34	High
Charleston	401,165	Urban	14	3.49	4	38.60	9	Moderate
Cherokee	56,895	Adjacent rural	0	0.00	46	28.00	27	High
Chester	32,311	Urban	0	0.00	46	35.30	16	High
Chesterfield	45,953	Adjacent rural	1	2.18	7	26.20	36	Very high vulnerability
Clarendon	33,957	Adjacent rural	0	0.00	46	26.30	34	Very high vulnerability
Colleton	37,585	Adjacent rural	0	0.00	46	37.50	10	High
Darlington	67,027	Urban	0	0.00	46	26.10	37	Very high vulnerability
Dillon	30,689	Adjacent rural	0	0.00	46	26.90	32	Very high vulnerability
Dorchester	158,299	Urban	0	0.00	46	31.70	20	Moderate
Edgefield	26,927	Urban	0	0.00	46	17.10	46	High
Fairfield	22,565	Urban	0	0.00	46	28.70	26	High
Florence	138,475	Urban	6	4.33	2	30.10	23	Very high vulnerability
Georgetown	61,952	Adjacent rural	0	0.00	46	40.80	8	High
Greenville	507,003	Urban	14	2.76	6	37.50	10	Moderate
Greenwood	70,411	Adjacent rural	0	0.00	46	37.10	13	Very high vulnerability
Hampton	19,564	Adjacent rural	0	0.00	46	28.00	27	High
Horry	332,172	Urban	12	3.61	3	44.00	4	Moderate
Jasper	28,657	Urban	0	0.00	46	26.90	32	Very high vulnerability
Kershaw	65,112	Urban	0	0.00	46	32.00	19	Moderate
Lancaster	92,308	Urban	0	0.00	46	32.20	18	Moderate
Laurens	66,846	Urban	0	0.00	46	45.20	3	Very high vulnerability
Lee	17,365	Adjacent rural	0	0.00	46	19.60	44	Very high vulnerability
Lexington	290,278	Urban	6	2.07	8	29.80	24	Moderate
Marion	31,308	Adjacent rural	0	0.00	46	27.80	29	Very high vulnerability
Marlboro	26,753	Adjacent rural	0	0.00	46	18.20	45	Very high vulnerability

McCormick	9,531	Adjacent rural	0	0.00	46	24.20	40	Moderate
Newberry	38,194	Adjacent rural	0	0.00	46	23.60	42	Very high vulnerability
Oconee	77,528	Adjacent rural	0	0.00	46	43.90	5	High
Orangeburg	87,687	Adjacent rural	0	0.00	46	32.60	17	Very high vulnerability
Pickens	124,029	Urban	0	0.00	46	48.70	2	Moderate
Richland	411,357	Urban	20	4.86	1	31.00	22	Moderate
Saluda	20,303	Urban	0	0.00	46	24.20	40	Very high vulnerability
Spartanburg	307,617	Urban	6	1.95	9	43.60	6	High
Sumter	106,757	Urban	3	2.81	5	25.80	38	Very high vulnerability
Union	27,490	Urban	0	0.00	46	35.50	15	High
Williamsburg	31,324	Adjacent rural	0	0.00	46	29.00	25	Very high vulnerability
York	265,872	Urban	3	1.13	10	37.40	12	Moderate

¹Population data were downloaded from tables in Social Explorer's ACS five-year estimate (2015-2019). American Community Survey 5-year Estimates, 2015-2019. Social Explorer tables, ACS 2015-2019. Social Explorer.

²The Rural-Urban Continuum Code (RUCC) was used to classify each county as urban, adjacent rural, or non-adjacent rural. Urban counties are counties with codes 1 (Counties in metro areas of 1 million population or more), 2 (Counties in metro areas of 250,000 to 1 million population), and 3 (Counties in metro areas of fewer than 250,000 population). Adjacent rural counties are counties with codes 4 (Urban population of 20,000 or more, adjacent to a metro area), 6 (Urban population of 2,500 to 19,999, adjacent to a metro area), and 8 (Completely rural or less than 2,500 urban population, adjacent to a metro area). Non-adjacent rural counties are the remaining three codes - 5 (Urban population of 20,000 or more, not adjacent to a metro area), 7 (Urban population of 2,500 to 19,999, not adjacent to a metro area), and 9 (Completely rural or less than 2,500 urban population, not adjacent to a metro area). Rural-Urban Continuum Code (RUCC). <https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx>

³Recovery residences are from the NSTARR project and are current as of 2020. One (1) recovery residence in the state was not successfully geocoded due to lack of adequate address information, and thus were not assigned to a county.

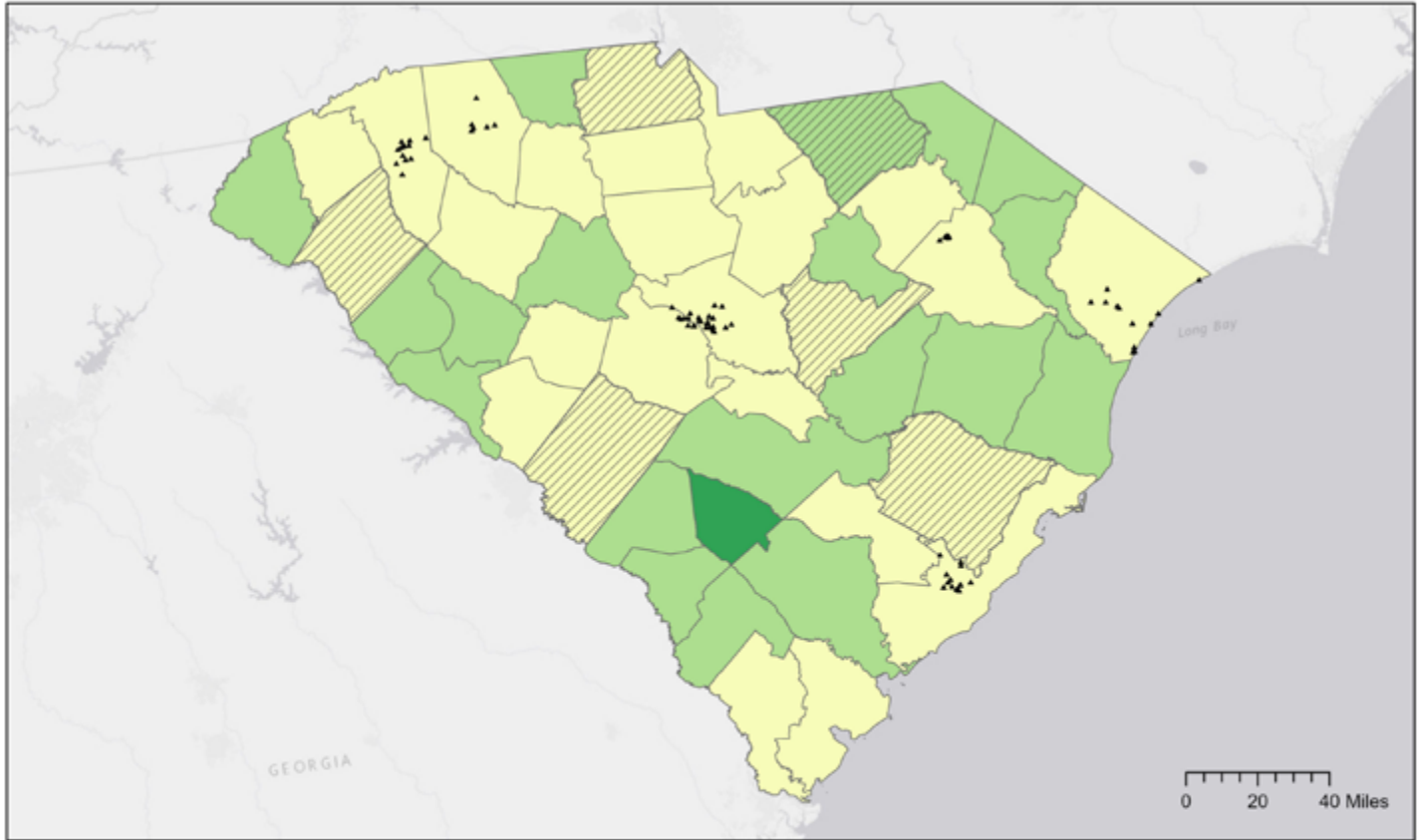
⁴Recovery residences availability per capita is ranked in order of decreasing recovery residence density per 100,000 population per county, with 1 (highest number of residences per 100,000) to 46 (lowest number of residences per 100,000 population). Counties without recovery residences were all assigned a tied rank of 46.

⁵Alcohol- and drug-involved mortality included all deaths as underlying causes of death and selected ICD-10 codes mentioning or attributed to alcohol or drugs as contributing cause of death. Data from the Centers for Disease Control and Prevention, 2020. CDC Wonder (Wide-ranging Online Data for Epidemiologic Research). U.S. Department of Health and Human Services, Atlanta, GA. Available at: <https://wonder.cdc.gov/>. For more information on coding multiple causes of death, see: Centers for Disease Control and Prevention, About Multiple Cause of Death, 1999-2019. <https://wonder.cdc.gov/mcd-icd10.html> accessed on August 9 2021.

⁶Mortality rate is ranked in order of decreasing alcohol- and drug-involved mortality from 1 (highest mortality per 100,000 population) to 46 (lowest mortality per 100,000 population).

⁷COVID-19 Community Vulnerability Index (CCVI) scores range in value from 0 – 1, with 0 being least vulnerable and 1 being the most vulnerable. Each county is ranked relative to all counties across the country, based on seven themes/domains. Each county was grouped into quintiles: very high (score of 0.8-1), high (0.6-0.8), moderate (0.4-0.6), low (0.2-0.4), and very low (0-0.2). For more information on how the CCVI I is calculated, see: COVID-19 Community Vulnerability Index (CCVI) methodology. Retrieved from [https://covid-static-assets.s3.amazonaws.com/US-CCVI/COVID-19+Community+Vulnerability+Index+\(CCVI\)+Methodology.pdf](https://covid-static-assets.s3.amazonaws.com/US-CCVI/COVID-19+Community+Vulnerability+Index+(CCVI)+Methodology.pdf)

Figure 1. Distribution of Residences by Rural-Urban Classification



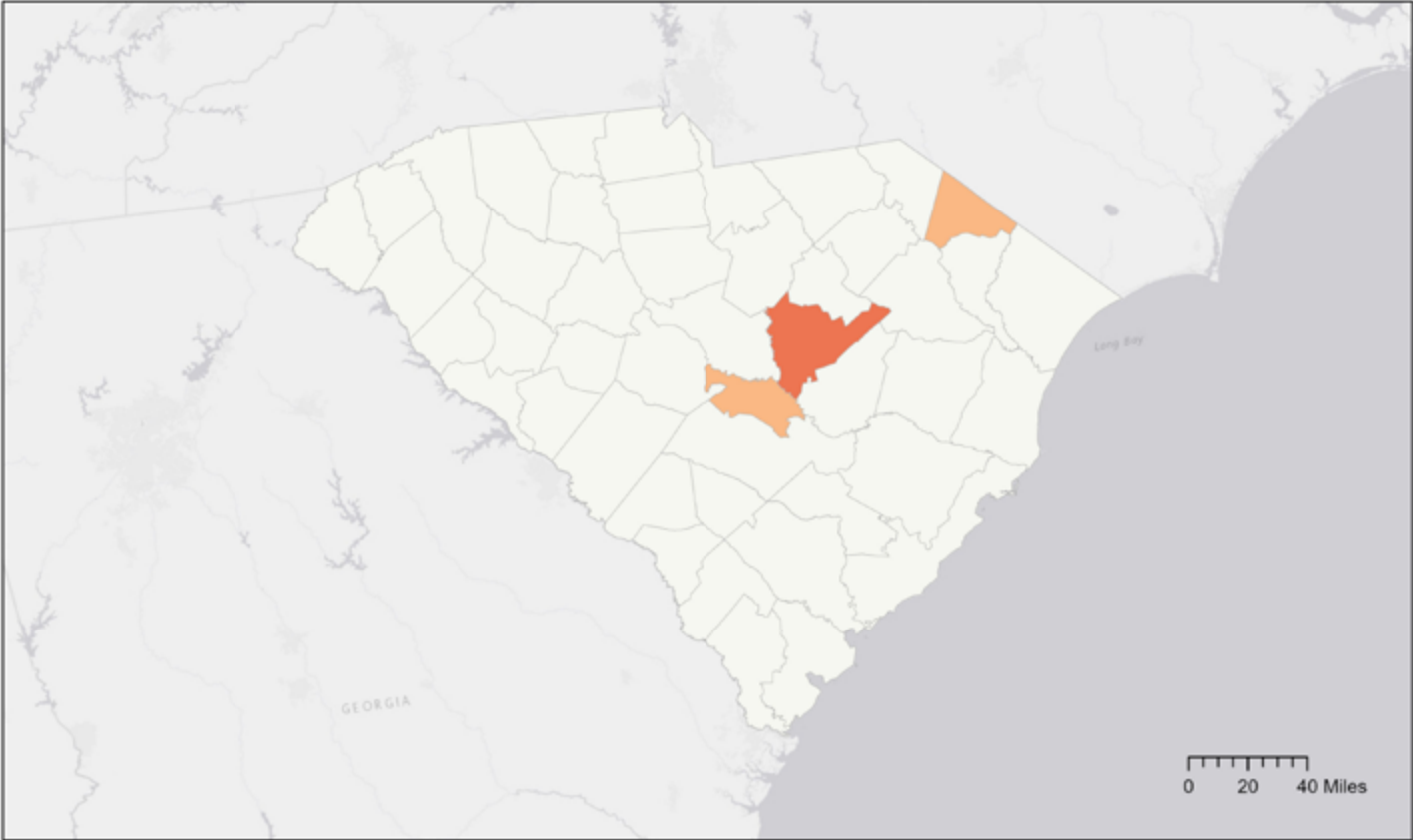
- ▲ Recovery residences
- Rural-Urban Classification Code (RUCC)**
- Urban
- Adjacent rural
- Non-adjacent rural
- Counties with residence locations suppressed (1-4 residences) to protect privacy



Data Credits: Esri, HERE, Garmin, USGS, EPA, NPS
Recovery residence locations: 2020
Created by: NSTARR Project (May 2022)



Figure 2. Hot/Cold Spot Analysis of Recovery Residence Locations



Hot Spot Analysis (Getis-Ord GI*)

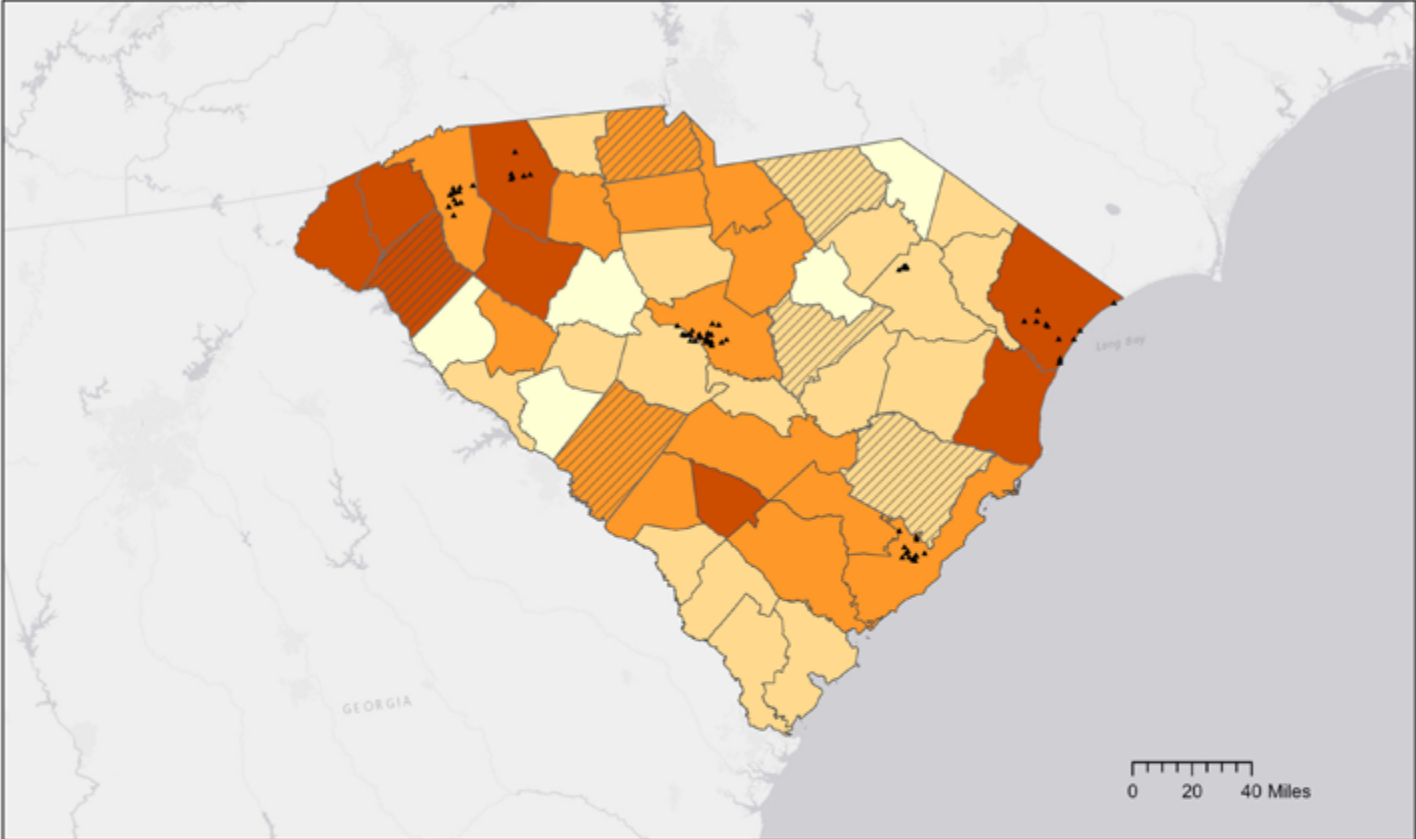
- Cold Spot with 99% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 90% Confidence
- Not Significant
- Hot Spot with 90% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 99% Confidence



Data Credits: Esri, HERE, Garmin, USGS, EPA, NPS
Recovery residence locations: 2020
Created by: NSTARR Project (May 2022)



Figure 3. Distribution of Residences by Age-adjusted Alcohol- and/or Drug-involved Mortality



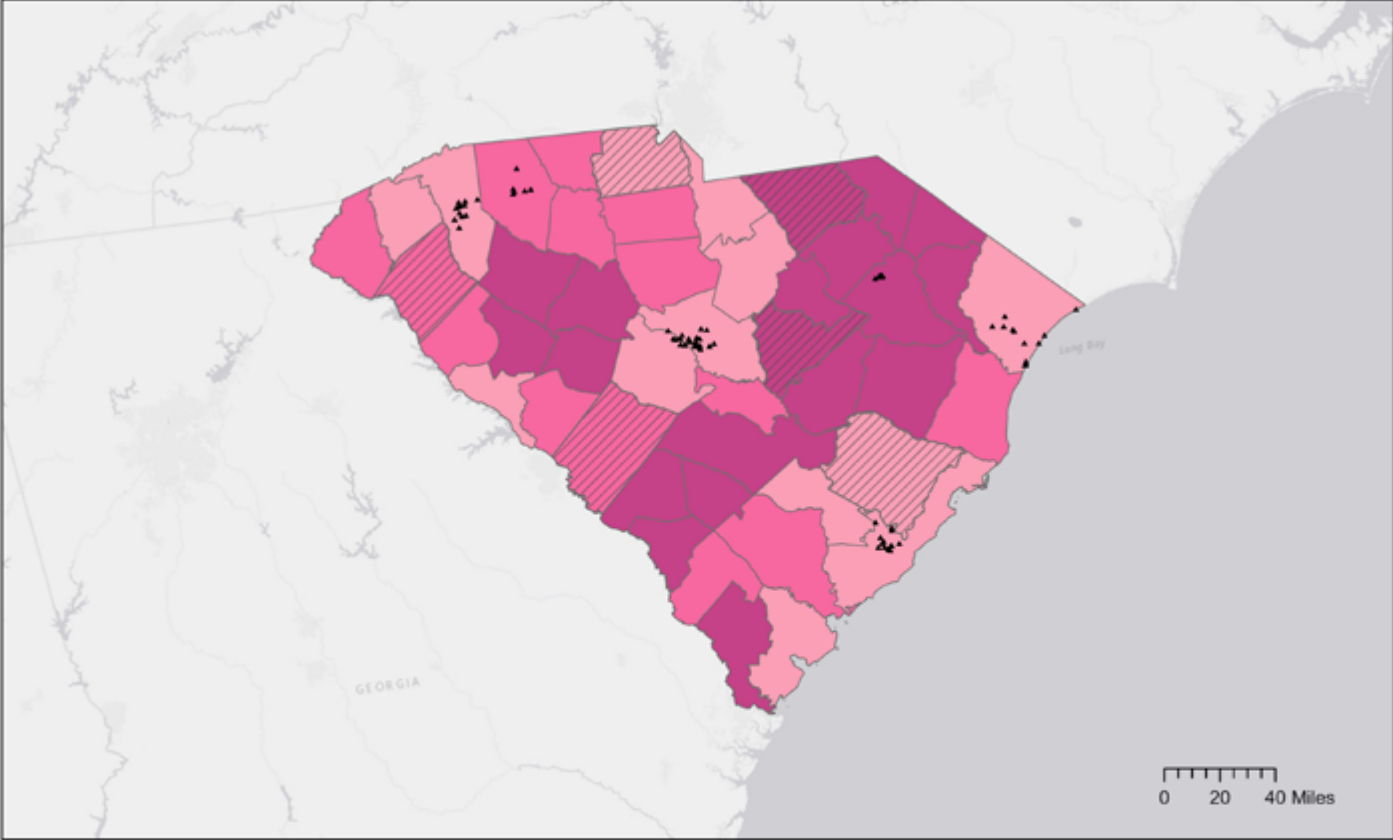
- ▲ Recovery residences
- Age-adjusted alcohol and drug mortality rate per 100,000 population
- 17 - 23
- 24 - 30
- 31 - 38
- 39 - 49
- Suppressed/Unreliable
- Counties with residence locations suppressed (1-4 residences) to protect privacy



Data Credits: Esri, HERE, Garmin, USGS, EPA, NPS
 Recovery residence locations: 2020
 Created by: NSTARR Project (May 2022)



Figure 4. Distribution of Residences by COVID-19 Community Vulnerability Index



- ▲ Recovery Residences
- COVID-19 Community Vulnerability Index (CCVI)
- Very low vulnerability
- Low
- Moderate
- High
- Very high vulnerability
- COUNTIES WITH RESIDENCE LOCATIONS SUPPRESSED
(1-4 RESIDENCES) TO PROTECT PRIVACY



Data Credits: Esri, HERE, Garmin, USGS, EPA, NPS
Recovery residence locations: 2020
Created by: NSTARR Project (May 2022)





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Funding for this project was provided by the National Institute on Alcohol Abuse and Alcoholism at the National Institutes of Health under award R01AA027782 (PI: Mericle).

