NSTARR
National Study of Treatment and Addiction
RECOVERY RESIDENCES

National Study of Treatment and Addiction Recovery Residences Report

KANSAS

The National Study of Treatment and Addiction Recovery Residences (NSTARR) constitutes the largest and most diverse study of recovery housing in the U.S. 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 131 recovery residences (4.50 houses per 100,000 population) in Kansas (see Table 1). Compared to other states (which include DC), Kansas ranked 13 in terms of recovery housing availability per capita. All but one of the residences in Kansas could be geocoded for these analyses. Decatur County, an adjacent rural county, had the most recovery residences per 100,000 population, and 91 counties had no identified recovery residences, representing a mix of rural-urban classifications; 98 had fewer than 5 recovery residences (see Figure 1).

131
RESIDENCES TOTAL

We used geographic information systems to identify hot and cold spots in Kansas. 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 17.40 in Kansas for the years 2009-2019. Kansas ranked 28 on alcohol- and drug-involved mortality out of the 50 states and DC. Among the counties ranked, Reno County had the highest alcohol- and drug-involved mortality rate and Lyon County had the lowest alcohol- and drug-involved mortality rate. Of the three counties that had the highest mortality rates in Kansas (i.e., Woodson, Geary, and Wilson), all three 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).

13
NATIONAL AVAILABILITY RANKING

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. Only one county was classified as having very high vulnerability, and this county was located in an area ranked in the top half of recovery housing availability per capita, suggesting recovery housing is located in communities with greater need (see Table 1 and Figure 4).

91
COUNTIES WITHOUT RESIDENCES

Literature Cited: Mericle, A. A., Patterson, D., Howell, J., Subbaraman, M. S., Faxio, A., & Karriker-Jaffe, K. J. (2022). Identifying the availability of recovery housing in the U.S.: The NSTARR project. *Drug and Alcohol Dependence*, 230, 109188.

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]
KANSAS	2,910,652		131	4.50	13	17.40	28	
Allen	12,556	Non-adjacent rural	0	0.00	105	36.90	23	Low
Anderson	7,835	Adjacent rural	0	0.00	105	29.80	43	Very low vulnerability
Atchison	16,268	Adjacent rural	0	0.00	105	32.20	34	Low
Barber	4,624	Non-adjacent rural	0	0.00	105	42.60	9	Very low vulnerability
Barton	26,453	Non-adjacent rural	3	11.34	4	23.20	59	Moderate
Bourbon	14,608	Adjacent rural	0	0.00	105	28.10	50	Low
Brown	9,626	Adjacent rural	0	0.00	105	33.70	31	Low
Butler	66,698	Urban	0	0.00	105	28.60	49	Very low vulnerability
Chase	2,637	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Chautauqua	3,323	Adjacent rural	0	0.00	105	52.30	4	Low
Cherokee	20,179	Adjacent rural	0	0.00	105	38.40	19	Low
Cheyenne	2,665	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Clark	2,026	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Clay	8,082	Adjacent rural	0	0.00	105	40.10	14	Very low vulnerability
Cloud	8,938	Non-adjacent rural	0	0.00	105	20.30	62	Low
Coffey	8,254	Adjacent rural	0	0.00	105	29.70	44	Very low vulnerability
Comanche	1,740	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Cowley	35,351	Adjacent rural	0	0.00	105	37.70	20	Moderate
Crawford	38,968	Adjacent rural	1	2.57	12	34.80	27	Moderate
Decatur	2,860	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Dickinson	18,828	Non-adjacent rural	0	0.00	105	34.40	29	Low
Doniphan	7,684	Urban	0	0.00	105	Suppressed	-	Very low vulnerability
Douglas	120,290	Urban	5	4.16	11	30.60	40	Low
Edwards	2,869	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Elk	2,523	Adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Ellis	28,775	Non-adjacent rural	3	10.43	5	28.70	47	Very low vulnerability
Ellsworth	6,231	Non-adjacent rural	0	0.00	105	28.70	47	Low
Finney	36,750	Non-adjacent rural	0	0.00	105	36.90	23	Moderate
Ford	34,179	Non-adjacent rural	3	8.78	6	25.60	55	Moderate
Franklin	25,558	Adjacent rural	0	0.00	105	32.40	33	Very low vulnerability
Geary	34,025	Adjacent rural	0	0.00	105	56.40	2	Low
Gove	2,644	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability

Graham	2,519	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Grant	7,467	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Gray	6,039	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Greeley	1,185	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Greenwood	6,081	Adjacent rural	0	0.00	105	40.40	12	Very low vulnerability
Hamilton	2,591	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Harper	5,594	Adjacent rural	0	0.00	105	40.10	14	Low
Harvey	34,503	Urban	5	14.49	3	29.60	46	Low
Haskell	4,018	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Hodgeman	1,876	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Jackson	13,266	Urban	0	0.00	105	24.70	56	Very low vulnerability
Jefferson	18,890	Urban	0	0.00	105	34.00	30	Very low vulnerability
Jewell	2,885	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Johnson	591,506	Urban	40	6.76	7	19.40	63	Very low vulnerability
Kearny	3,907	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Kingman	7,340	Urban	0	0.00	105	48.30	5	Very low vulnerability
Kiowa	2,505	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Labette	20,119	Non-adjacent rural	0	0.00	105	40.20	13	Low
Lane	1,564	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Leavenworth	80,745	Urban	0	0.00	105	31.40	38	Low
Lincoln	3,044	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Linn	9,671	Urban	0	0.00	105	41.10	10	Low
Logan	2,805	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Lyon	33,251	Adjacent rural	0	0.00	105	30.00	42	High
Marion	11,964	Adjacent rural	0	0.00	105	32.10	35	Very low vulnerability
Marshall	9,749	Adjacent rural	0	0.00	105	23.50	57	Very low vulnerability
McPherson	28,567	Non-adjacent rural	0	0.00	105	22.30	61	Very low vulnerability
Meade	4,180	Non-adjacent rural	0	0.00	105	44.40	8	Low
Miami	33,417	Urban	0	0.00	105	26.30	52	Very low vulnerability
Mitchell	6,145	Non-adjacent rural	0	0.00	105	34.80	27	Low
Montgomery	32,521	Non-adjacent rural	0	0.00	105	45.20	7	High
Morris	5,566	Adjacent rural	0	0.00	105	30.60	40	Very low vulnerability
Morton	2,754	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Nemaha	10,121	Adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Neosho	16,108	Non-adjacent rural	0	0.00	105	37.20	22	Moderate
Ness	2,876	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability

Norton	5,446	Non-adjacent rural	0	0.00	105	29.70	44	Very low vulnerability
Osage	15,881	Urban	0	0.00	105	37.70	20	Very low vulnerability
Osborne	3,530	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Ottawa	5,822	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Pawnee	6,629	Non-adjacent rural	0	0.00	105	27.20	51	Very low vulnerability
Phillips	5,340	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Pottawatomie	23,847	Urban	0	0.00	105	25.70	54	Very low vulnerability
Pratt	9,452	Non-adjacent rural	0	0.00	105	39.80	16	Low
Rawlins	2,502	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Reno	62,765	Adjacent rural	10	15.93	1	33.00	32	Low
Republic	4,658	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Rice	9,658	Non-adjacent rural	0	0.00	105	36.50	25	Low
Riley	75,056	Urban	1	1.33	14	23.50	57	Low
Rooks	5,053	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Rush	3,022	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Russell	6,948	Non-adjacent rural	0	0.00	105	34.90	26	Very low vulnerability
Saline	54,701	Non-adjacent rural	8	14.62	2	45.30	6	Moderate
Scott	4,917	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Sedgwick	513,375	Urban	34	6.62	9	38.80	18	Moderate
Seward	22,349	Non-adjacent rural	1	4.47	10	26.00	53	High
Shawnee	177,852	Urban	12	6.75	8	40.50	11	Moderate
Sheridan	2,506	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Sherman	5,938	Non-adjacent rural	0	0.00	105	32.00	36	Low
Smith	3,627	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Stafford	4,181	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Stanton	2,052	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Stevens	5,603	Non-adjacent rural	0	0.00	105	Suppressed	-	Moderate
Sumner	23,114	Urban	0	0.00	105	31.00	39	Low
Thomas	7,810	Non-adjacent rural	0	0.00	105	39.20	17	Very low vulnerability
Trego	2,840	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Wabaunsee	6,889	Urban	0	0.00	105	22.90	60	Very low vulnerability
Wallace	1,574	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Washington	5,493	Non-adjacent rural	0	0.00	105	Suppressed	-	Very low vulnerability
Wichita	2,130	Non-adjacent rural	0	0.00	105	Suppressed	-	Low
Wilson	8,688	Non-adjacent rural	0	0.00	105	54.50	3	Moderate
Woodson	3,157	Non-adjacent rural	0	0.00	105	67.20	1	Low

Wyandotte	164,861	Urban	4	2.43	13	31.70	37	Very high vulnerability

[1]Population 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.

[2]The 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

[3]Recovery 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.

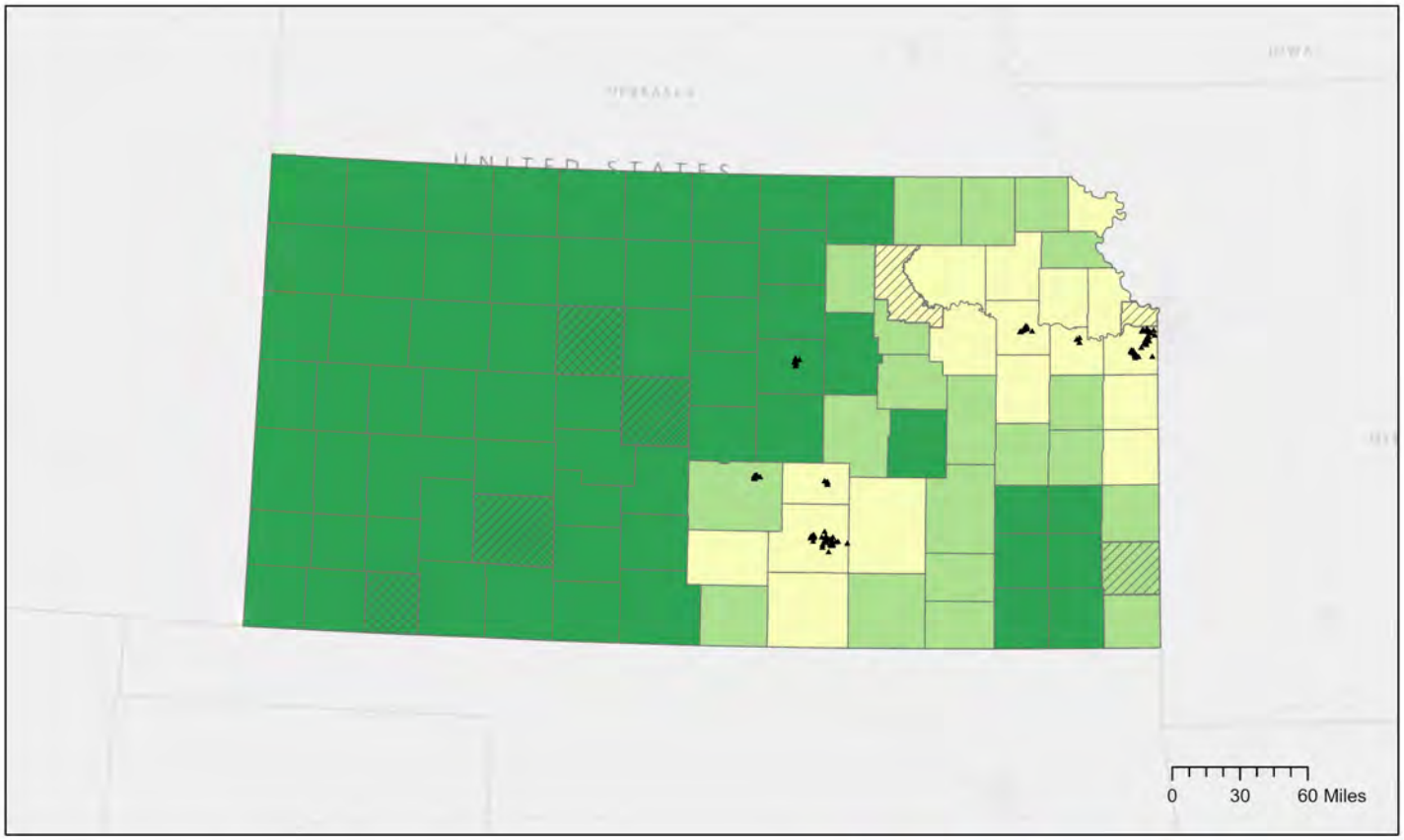
[4]Recovery residences availability per capita is ranked in order of decreasing recovery residence density per 100,000 population per county, with 1 (highest number of residences per 100,000) to 105 (lowest number of residences per 100,000 population). Counties without recovery residences were all assigned a tied rank of 105.

[5]Alcohol- 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.

[6]Mortality rate is ranked in order of decreasing alcohol- and drug-involved mortality from 1 (highest mortality per 100,000 population) to 63 (lowest mortality per 100,000 population).

[7]COVID-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

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

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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

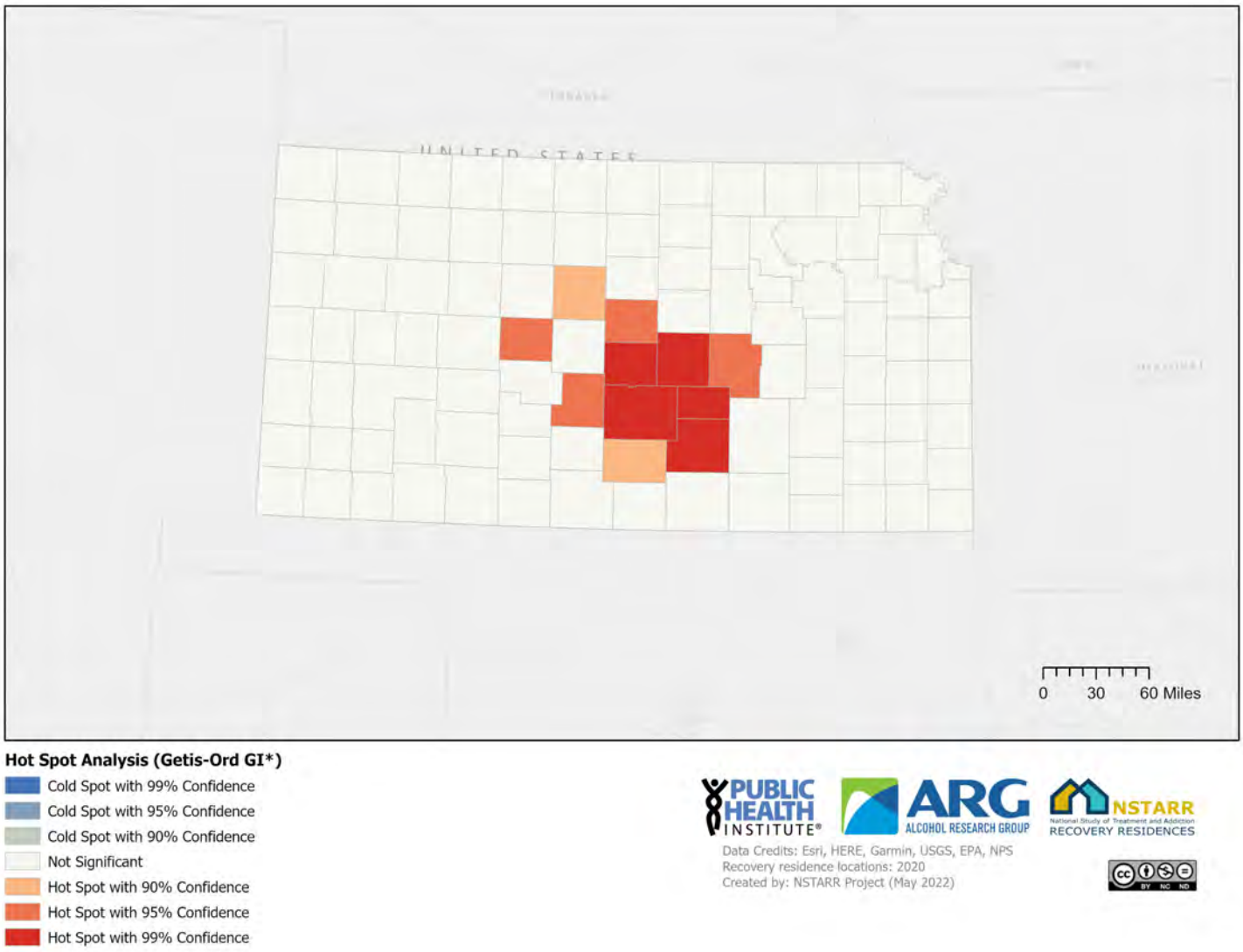


Figure 3. Distribution of Residences by Age-adjusted Alcohol- and/or Drug-involved Mortality

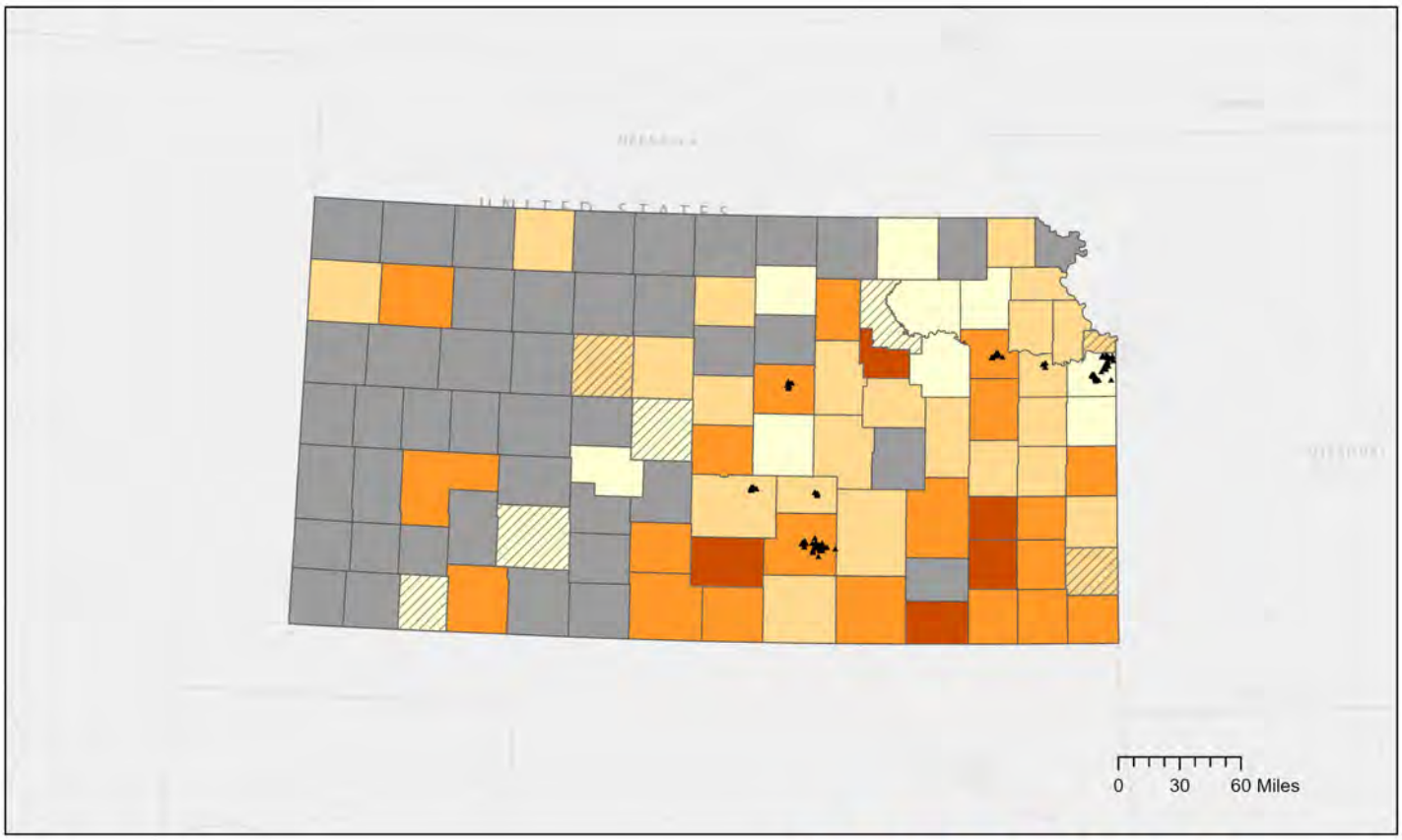
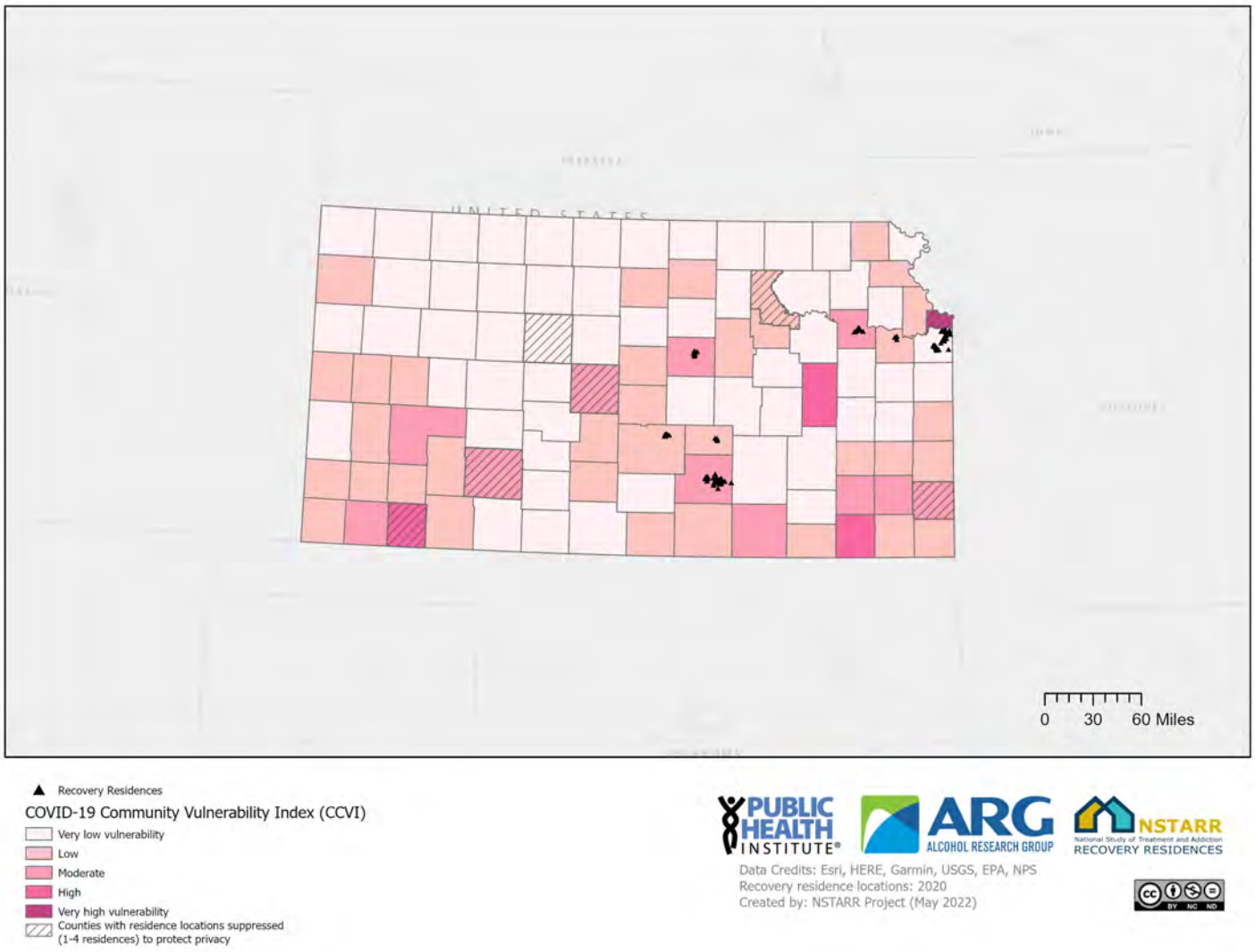


Figure 4. Distribution of Residences by COVID-19 Community Vulnerability Index



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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).

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