National Study of Treatment and Addiction Recovery Residences Report
ARIZONA

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 185 recovery residences (2.62 houses per 100,000 population) in Arizona (see Table 1). Compared to other states (which include DC), Arizona ranked 27 in terms of recovery housing availability per capita. Forty-one percent of residences in Arizona could be geocoded for these analyses. Yavapi County, an urban county, had the most recovery residences per 100,000 population, and seven counties had no identified recovery residences, representing a mix of adjacent and non-adjacent rural counties; 12 had fewer than 5 recovery residences (see Figure 1).

We used geographic information systems to identify hot and cold spots in Arizona. 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). However, we were unable to identify hot and cold spots in Arizona because the Getis-Ord Gi* Hot Spot Analysis tool requires a minimum of 30 input features (counties) for it to work best.

The age-adjusted alcohol- and drug-involved mortality rate (per 100,000 population) was 25.90 in Arizona for the years 2009-2019. Arizona ranked 9 on alcohol- and drug-involved mortality out of the 50 states and DC. Apache County had the highest alcohol- and drug-involved mortality rate and Santa Cruz County had the lowest alcohol- and drug-involved mortality rate. Of the three counties that had the highest mortality rates in Arizona (i.e., Apache, Navajo, and La Paz), all 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 2).

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. Four counties were classified as having very high vulnerability, and two counties were located in areas ranked in the bottom half of recovery housing availability per capita, suggesting more recovery resources may be needed (see Table 1 and Figure 3).

185
RESIDENCES TOTAL

27
NATIONAL AVAILABILITY RANKING

7
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]
ARIZONA	7,050,299		185	2.62	27	25.90	9	
Apache	71,511	Adjacent rural	0	0.00	15	136.50	1	Very high vulnerability
Cochise	125,867	Urban	1	0.79	5	40.50	12	High
Coconino	141,274	Urban	1	0.71	6	75.20	5	Moderate
Gila	53,546	Adjacent rural	0	0.00	15	90.90	4	High
Graham	37,996	Non-adjacent rural	0	0.00	15	54.00	8	High
Greenlee	9,522	Non-adjacent rural	0	0.00	15	28.70	14	Low
La Paz	20,793	Adjacent rural	0	0.00	15	112.50	3	High
Maricopa	4,328,810	Urban	44	1.02	2	42.10	11	Very high vulnerability
Mohave	207,695	Urban	2	0.96	4	67.80	6	High
Navajo	109,270	Adjacent rural	0	0.00	15	115.80	2	Very high vulnerability
Pima	1,027,207	Urban	10	0.97	3	48.50	9	Very high vulnerability
Pinal	432,793	Urban	3	0.69	7	35.50	13	High
Santa Cruz	46,480	Adjacent rural	0	0.00	15	22.20	15	High
Yavapai	228,067	Urban	14	6.14	1	58.10	7	Moderate
Yuma	209,468	Urban	1	0.48	8	42.40	10	High

[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 hundred and nine (109) recovery residences in the state were 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 15 (lowest number of residences per 100,000 population). Counties without recovery residences were all assigned a tied rank of 15.

[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 15 (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
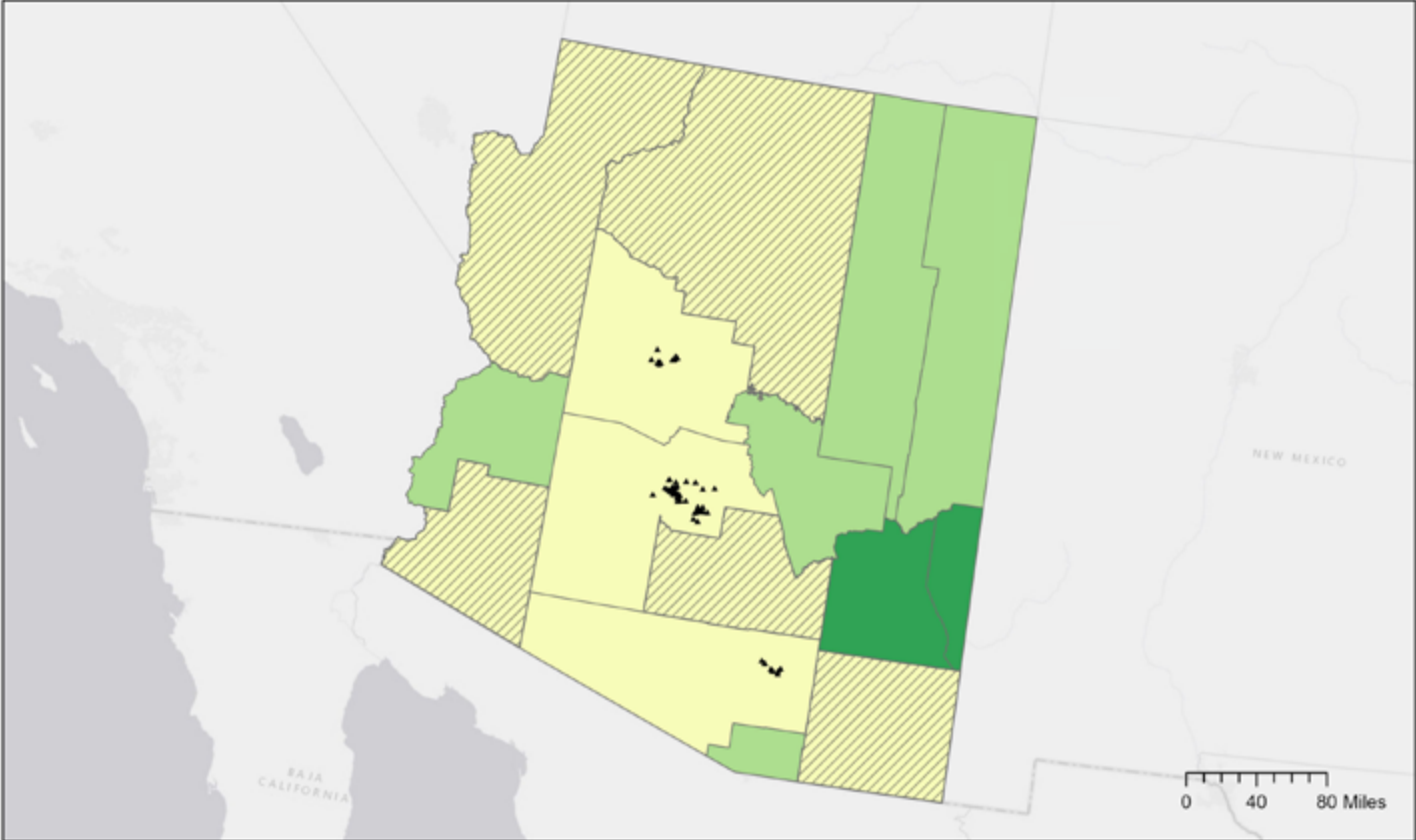
▲ Recovery residences

Rural-Urban Classification Code (RUCC)

◻ Urban
◻ Adjacent rural
◼ Non-adjacent rural
▨ Counties with residence locations suppressed (1-4 residences) to protect privacy

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

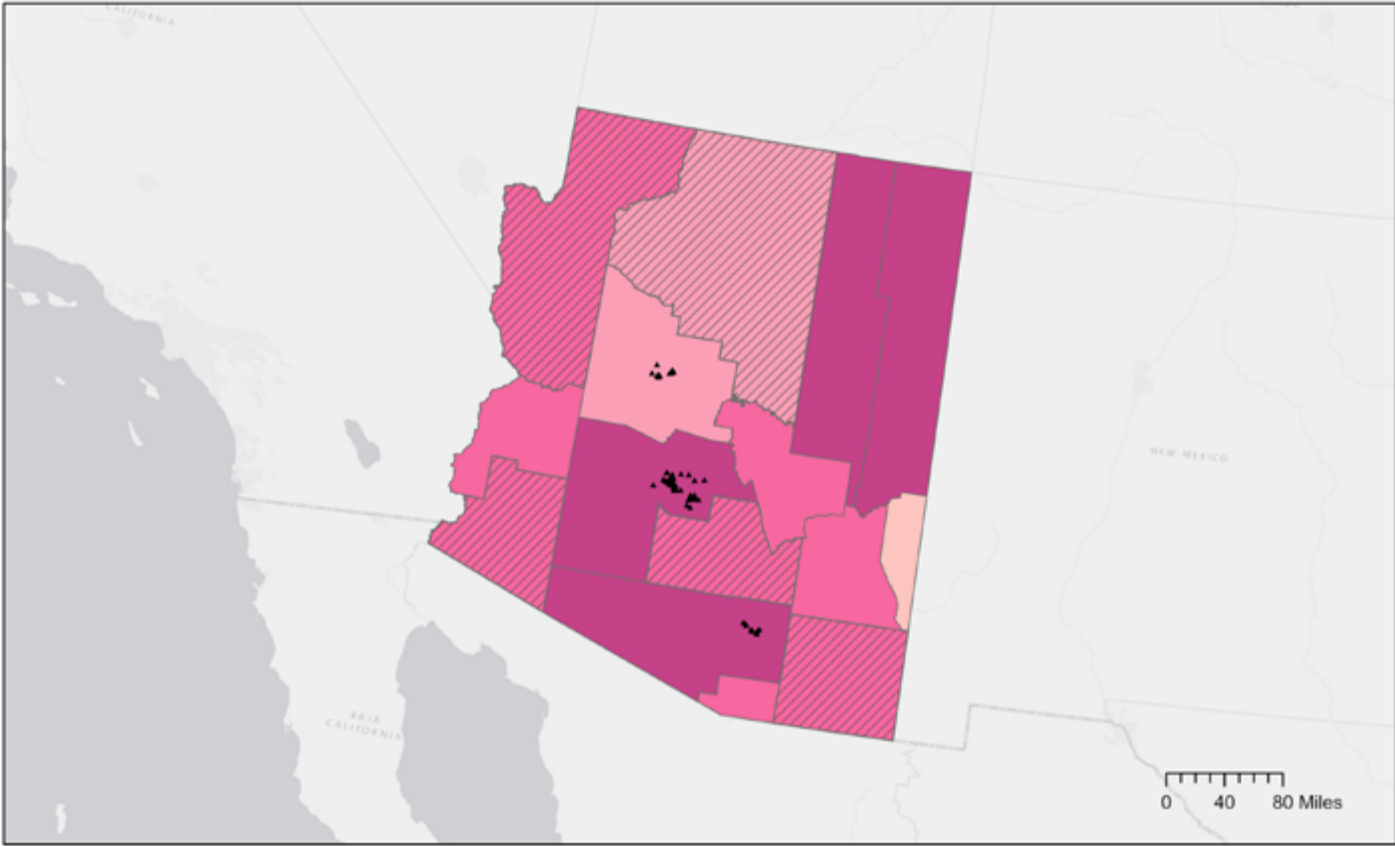Figure 2. Distribution of Residences by Age-adjusted Alcohol- and/or Drug-involved Mortality
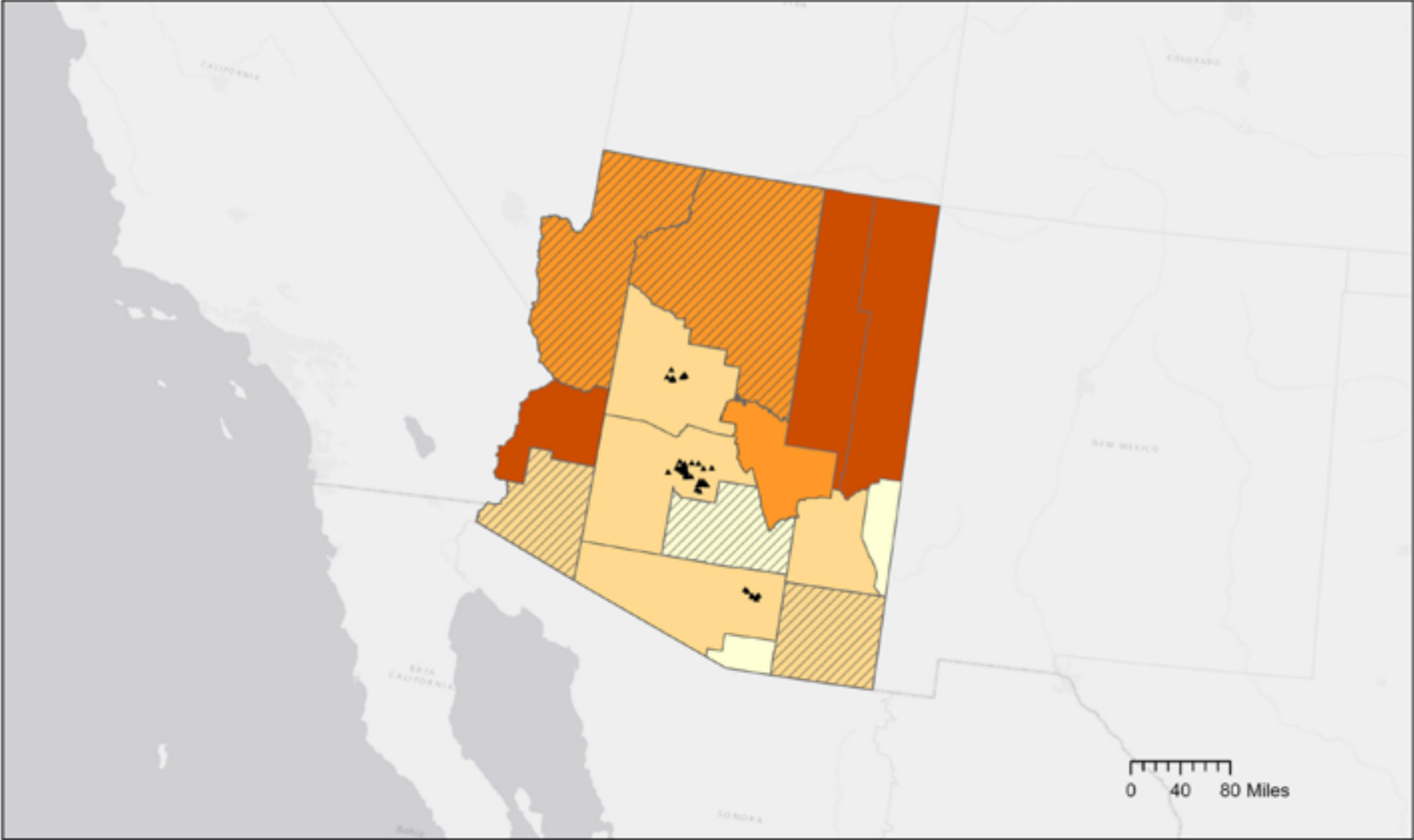
▲ Recovery residences

Age-adusted alcohol and drug
mortality rate per 100,000 population

- 9 - 18
- 19 - 28
- 29 - 52
- 53 - 79
- Suppressed/Unreliable
- Counties with residence locations suppressed
  (1–4 residences) to protect privacy

Figure 3. Distribution of Residences by COVID-19 Community Vulnerability Index

NSTARR

National Study of Treatment and Addiction

RECOVERY RESIDENCES

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