Northern Region Vulnerability Profile
2022-2023 Update

Jurisdictions

The Northern Region includes 6 Tribal nations and four Arizona counties.[1] There are 8 rural and 4 frontier census-recognized primary care areas (PCAs).[1] These PCAs include multiple medically underserved areas and are geographically isolated from healthcare services. Frontier designations represent the most isolated rural areas.

Tribal Nations:[1] Hopi Tribe, Kaibab-Paiute, Navajo Nation, White Mountain Apache Tribe, Yavapai Prescott Tribe, and Yavapai Apache Nation

Counties:[1] Apache, Coconino, Navajo, Yavapai

Indian PCAs:[1]
Apache County – Navajo Nation
Coconino County – Navajo Nation, Hopi Tribe
Navajo County – Navajo Nation, Hopi Tribe, White Mountain Apache Tribe

Rural PCAs:[1]
Coconino County – Flagstaff
Navajo County – Snowflake/Heber, Show Low, Winslow,
Yavapai County – Black Canyon City, Cottonwood\Sedona, Chino Valley, Prescott, Prescott Valley

Frontier PCAs:[1]
Apache County – Springerville/Eagar
Coconino County – Grand Canyon Village, Page
Yavapai County - Williamson

Population and Vulnerable Demographics

About 562,766 people live in the Northern Region.[1] The Northern Region is geographically the largest region in Arizona and has a wide range of climate zones which makes it possible to have heat and cold related illnesses on the same day.

During a disaster, individuals with disabilities and others with access and functional needs may require special assistance from the emergency management system. In the Northern Region, there are higher proportions of persons living with disabilities (16.6%) and who are Medicare beneficiaries (10.6%) than the state average.[1]

Considerations for those who are very old or very young, live in rural settings, have transportation challenges, have limited English proficiency, have low-socioeconomic status, or face challenges accessing health services should be included as well. 43% of the population in the Northern Region lives below 200% of the federal poverty level; about one in three children under age 12 also live in poverty.[1] The inmate population is vulnerable due to access to care and congregate living conditions. The Northern Region houses 2.5% of the total prison inmate population of Arizona.[5]

Risk Factors	Northern Region	Arizona
Persons with Disabilities (%)[1]	16.6%	13.2%
AHCCCS (Medicaid) Population[3]	219,620 (8.7%)	2,515,522
Medicare Beneficiaries (%)[4]	150,599 (10.6%)	1,413,896
Electricity-Dependent Medicare Beneficiaries (%)[4]	12,833 (19%)	67,417
Medically Uninsured (%)[1]	12.9%	10.6%
Population below 200% FPL (%)[1]	43%	33%
Children < age 12 in Poverty (%)[1]	26.8%	20.7%
Correctional Facilities[5]	1	16
Correctional Facility Inmate Capacity-prisons only (%)[5]	853 (2.5%)	33,810

Healthcare Utilization

The Northern region has one provider for every 751 residents.[2] Ambulatory care sensitive conditions - care that if delivered properly would not result in hospitalization – relieves the burden on the hospital system. Our communities have lower proportions of ambulatory care sites per resident over 65 years and lower hospital inpatient days per resident than the rest of the state.[2]

Utilization	Northern Region	Arizona
Total Primary Care Providers (%)[1]	610 (6.2%)	9,751
ACSs/1000 Residents Age <65[1]	33.3	34.5
Total Emergency Room Visits (%)[6]	183,327 (7.7%)	2,380,581
Hospital Inpatient Days/1000 Residents Age <65[1]	1.4	1.9
Hospital Beds/1000 Residents[1]	1,079	1,122

Regional Healthcare Infrastructure

All the general hospitals in the Northern Region are sole providers of short-stay, acute care, inpatient services within their PCA.

Diverse regional facilities and resources that serve specific populations, including pediatrics, are critical to the whole community response. The Northern Region has 156 specialty beds, 15 skilled nursing facilities, 1,154 nursing beds, 13 licensed home health agencies, 89 licensed pharmacies, and 24 certified ambulance services.[2]

Healthcare Infrastructure	Northern Region	Arizona
General Hospitals[1]	6 (8.4%)	71
Critical Access Hospitals[7]	5 (29.4%)	17
Behavioral Health Hospitals[9]	4 (16%)	25
Long-term Care Hospitals[9]	0	6
Specialty beds[1]	156 (4.2%)	3,645
Adult ICU bed capacity[8]	123 (5.1%)	2,371
Pediatric ICU bed capacity[8]	0	165
ED bed capacity[8]	281 (8.2%)	3,392
Skilled Nursing Facilities[1]	6 (5.8%)	102
Nursing Beds[1]	451 (3.8%)	11,632
Licensed Home Health Agencies[1]	14 (7.8%)	179
Licensed Pharmacies[1]	89 (6.6%)	1,332
Certified Ambulance Services[1]	24 (22.6%)	106
Air Transport Services[10]	Varies*	70

*There are seventy air ambulances registered to provide care and transport within Arizona, the majority of them helicopters. Air ambulance coverage areas often span large, multi-regional areas, and therefore cannot be broken down by region.

County Hazard Identification Summary

County Multi-Jurisdictional Hazard Mitigation Plans are administered once every five years to identify the greatest risk of loss to people and critical facilities. Hazards were identified through a Threats and Hazard Identification Risk Assessment (THIRA). Experiential knowledge of the planning team, considerations of relative risk, historic context, potential for mitigation, alignment with state plans, and duplication of effects for each hazard influenced each County's process.

Northern Region Hazard Lists (Referenced from County Multi-Jurisdictional Hazard Mitigation Plans and 2019 AzCHER CHVA):

Apache (2017)[11]	Coconino (2021)[12]	Navajo (2017)[13]	Yavapai (2018)[15]
• Flood/Flash Flood • Severe Wind • Wildfire • Winter Storm	• Wildland Fire • Flood/Flash Flood and Post Wildfire Flood/ Debris Flows • Drought • Public Health Outbreak/ Pandemic • Excessive Heat • Hazardous Materials/ Pipeline Failure/ Transport Accident • Dam Failure • Earthquake and Seismic Hazards • High Winds/ Tornado	• Dam Failure • Drought • Flood/Flash Flood • Hazardous Materials Incidents • Levee Failure • Severe Wind • Wildfire • Winter Storm	• Earthquake • Flood • Landslide/ Mudslide • Severe Wind • Wildfires • Winter Storm

Resources

1. Arizona Department of Health Services Data, Reports & Maps, Statistical Provides-Primary Care Area Statistical Profiles. https://www.azdhs.gov/documents/prevention/health-systems-development/data-reports-maps/primary-care/mohave/1.pdf?v=20221003. Published 2022. Accessed February 21, 2023.

2. Arizona Department of Health Services, Population Health and Vital Statistics, Population Denominators, Table 10A-1 Population by Gender and County of Residence, Arizona. https://pub.azdhs.gov/health-stats/report/ahs/ahs2019/index.php?pg=local. Published 2021. Accessed February 23, 2023.

3. Arizona Health Care Cost Containment System (AHCCCS) Population Highlights. https://www.azahcccs.gov/Resources/Downloads/PopulationStatistics/2023/Highlights_02012023.pdf Published February 1, 2023. Accessed February 21, 2023.

4. US Department of Health and Human Services, HHS empower Map, Medicare Data Totals by Selected Geographics. https://empowerprogram.hhs.gov/empowermap. Published November 21, 2022. Accessed February 21, 2023.

5. Arizona Department of Corrections, Rehabilitation & Reentry. Corrections at a Glance. https://corrections.az.gov/sites/default/files/documents/reports/Daily%20Count/2022/12312022%20daily%20count.pdf. Published January 2023. Accessed February 21, 2023.

6. Arizona Department of Health Services, Population Health and Vital Statistics, Hospital Inpatient Discharges & Emergency Room Visits Statistics. https://pub.azdhs.gov/health-stats/hip/index.php?pg=diagnosis. Published 2019. Accessed February 21, 2023.

7. The University of Arizona, Center for Rural Health, Arizona Critical Access Hospitals. https://crh.arizona.edu/sites/default/files/2022-11/20221109_FlexFastFacts.pdf. Published January 2022. Accessed February 21, 2023.

8. Arizona EMResource. Updated February 23, 2023. Accessed February 23, 2023.

9. Arizona Department of Health Services, Public Health Licensing, Provider & Facility Databases, All Licensed Providers, https://www.azdhs.gov/licensing/#databases. Published November 1, 2022, Accessed February 28, 2023.

10. Arizona Department of Health Services, Emergency Medical Services & Trauma System, Bureau Graph Gallery, Regional EMS and Statewide EMS, https://www.azdhs.gov/preparedness/emergency-medical-services-trauma-system/index.php#graph-gallery-regional and https://www.azdhs.gov/preparedness/emergency-medical-services-trauma-system/index.php#graph-gallery-statewide. Published 2022. Accessed February 28, 2023.

11. Apache County Multi-Jurisdictional Local Hazard Mitigation Plan. https://www.apachecountyaz.gov/accnt_591117/site_591118/Documents/Hazard-Mitigation-Plan.pdf. Published 2017. Accessed January 21, 2023.

12. Coconino County Multi-Jurisdictional Local Hazard Mitigation Plan. https://www.coconino.az.gov/DocumentCenter/View/49402/2021-Coconino-MJHMP-FINAL-152022. Published 2021. Accessed January 23, 2023.

13. Navajo County Multi-Jurisdictional Local Hazard Mitigation Plan. https://navajocountyaz.gov/Portals/0/Departments/Emergency%20Management/Documents/2017%20Final%20HMP.pdf. Published 2017. Accessed January 23, 2023.

14. Yavapai County Multi-Jurisdictional Local Hazard Mitigation Plan. https://yavapaiaz.gov/Portals/30/HazardMitigationPlan.pdf. Published 2018. Accessed January 23, 2023.
15. AzCHER Northern Region Community Hazard Vulnerability Assessment. Updated January 2022.
16. US Census Bureau QuickFacts Population Estimates, July 1, 2022, https://www.census.gov/quickfacts/fact/table/US/PST045222. Accessed January 23, 2023.

17. Glossary

ACS	Ambulatory Care Site
AHCCCS	Arizona Health Care Cost Containment System
CDC	Centers for Disease Control and Prevention
HHS emPOWER map	Over 2.5 million Medicare beneficiaries rely on electricity-dependent medical equipment, such as ventilators, to live independently in their homes. Severe weather and other emergencies, especially those with long power outages, can be life-threatening for these individuals. The HHS emPOWER Map is updated monthly and displays the total number of at-risk electricity-dependent Medicare beneficiaries in a geographic area, down to the ZIP Code. The HHS emPOWER Map gives every public health official, emergency manager, hospital, first responder, electric company, and community member the power to discover the electricity-dependent Medicare population in their state, territory, county, and ZIP Code. When combined with real-time severe weather and hazard maps, communities can easily anticipate and plan for the needs of this population during an emergency.
FPL	Federal Poverty Level
PCA	Primary Care Area: A Primary Care Area is a geographic area in which most residents seek primary health services from the same place(s). The PCA is meant to depict the "primary care service seeking patterns" of the residents.
Specialty Beds	The number of hospital beds located at "Specialty" hospitals, such as emergency or surgical hospitals