Nevada Rural and Frontier Health Data Book

Introduction: Health and Health Care in Rural and Frontier Nevada

The Nevada Rural and Frontier Health Data Book – Seventh Edition contains a wide range of current county-level information on the resident population, economy, social environment, population health, health workforce, and the health care delivery system. It includes important data for public policy makers, health care professionals and administrators, rural health care advocates, and equally important, the residents of rural and frontier Nevada. The primary purpose of this data book is to provide the most current and accurate data for these audiences, as well as for those interested in learning more about health and health care in Nevada.

Utilizing over 50 sources of public and private data, most tables also provide data aggregated at the regional level highlighting important, general distinctions between rural and urban regions of the state. In some cases, the only available data is regional in nature (e.g., HIV/AIDS prevalence rates). In other instances, the data counts for individual rural and frontier counties are suppressed by the data-collating agency for confidentiality or other reasons (e.g., teen pregnancy and birth rates). Regardless, the expressed intent of this publication is to highlight important differences among the urban, rural, and frontier areas of the state.

It should also be noted that, with the state’s ever-changing demography, economy, and health care delivery system, some of the data are in flux and, thus, must be approached with caution. In some cases, the information is not updated on a regular basis. Consequently, the “most current” available data likely understates county and regional trends (e.g., unemployment rates, uninsured estimates). Nonetheless, all of the information presented in this volume is, to our best knowledge, the most currently available.

The Nevada Rural and Frontier Health Data Book – Seventh Edition is divided into five major sections containing the most current data on:

- Demographic characteristics of rural and frontier Nevada, including recent population estimates and projections;
- The social and economic characteristics of rural and frontier Nevada, including data on income, economic indicators, poverty, and educational attainment;
- Health insurance coverage, population health status, and vital statistics in rural and frontier Nevada;
- The health care workforce in rural and frontier Nevada, including estimates and projections for many licensed health care occupations across the major regions of the state; and
- Health care resources and the economics of health care in rural and frontier Nevada.

The majority of tables contained in the data book are organized into two broad categories: (1) rural and frontier counties and (2) urban counties. Rural and frontier counties include Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye, Pershing, Storey, and White Pine Counties. Urban counties include Carson City, and Clark and Washoe Counties.
Provider-to-population ratios, insurance enrollment rates, and other population-based ratios and calculations utilize county- and state-level population estimates certified by the Nevada State Demographer’s Office for any given year. Some of the population estimates presented in this data book and utilized in the aforementioned denominators vary slightly from those published later in the same year. Numbers and percentages presented throughout the data book may not add up due to rounding. All dollar figures and estimates are in current U.S. dollars and have not been adjusted for inflation. A complete list of data sources is contained at the end of this report, as well as endnotes providing additional information on data and data sources.

_Nevada Rural and Frontier Health Data Book – Seventh Edition_ details important differences among rural, frontier, and urban areas of Nevada. These differences impact population health, the availability of hospital and other health care resources, and access to health care services between rural and frontier and urban areas. For example, the age distribution of a county has a significant influence on the health status and health care needs of a population. The population age distribution within a county may affect available resources for local residents (e.g., number and percent of Medicare-eligible residents, proportion of county income from Social Security and other transfer payments).

All things being equal, rural counties tend to have an older population than urban counties. An older population, in turn, is typically at a greater risk of death and disability than a younger population, and uses a disproportionately larger share of health care resources. In general, urban, rural and frontier areas possess important differences in demographics, economics, and social characteristics, which produce differences in health priorities, population health, health-related behaviors, the delivery of health services, and access to health care. For example, research has consistently documented higher levels of obesity and smoking prevalence, lower levels of health insurance coverage, and greater barriers to accessing health care services in non-metropolitan versus metropolitan areas. Thus, it is not surprising that non-metropolitan areas have significantly higher age-adjusted all-cause mortality rates and cause-specific mortality rates than metropolitan areas.

**Defining Rural and Frontier**

The definition of what is and is not a “rural” area is no mere academic matter. Indeed, policy makers utilize different, and in some cases competing, classification schemes to target programs, services, and projects to populations in Nevada and the United States. The classification scheme adopted by the Nevada Office of Rural Health and utilized in this edition of the _Nevada Rural and Frontier Health Data Book_ emphasizes the important distinctions between “rural” and “frontier” regions of the state. This classification scheme was developed by the National Center for Frontier Communities (NCFC) with input from state health planners and rural health professionals throughout the country.
The Center’s classification scheme distinguishes certain areas of the country as being more remote than rural areas. The Center’s classification scheme represents an improvement over previous schemes that defined “frontier” simply in terms of population density, where counties with a population density of six or less persons per square mile were defined as “frontier.” Frontier counties are different from rural counties by being more remote in terms of travel time and distance from the nearest population centers with more specialized medical care and facilities. Additional information on the Center’s classification scheme and methodology can be found at www.frontierus.org.

Map 1 highlights the three urban counties (Carson City, and Clark and Washoe County), three rural counties (Douglas, Lyon, and Storey Counties), and the remaining eleven frontier counties. It also indicates the location of Nevada’s major towns, cities, and county seats. According to 2014 population estimates prepared by the Nevada State Demographer’s Office, 2.5 million Nevadans or 89.9% of the state’s population resides in the state’s three urban counties. Approximately 72.5% of the state’s population resides in Clark County (Las Vegas metropolitan area) alone and 15.5% in Washoe County (Reno-Sparks metropolitan area). In comparison, an estimated 284,496 Nevadans or 10.1% of Nevada’s population resides in the state’s rural and frontier counties. The rural and frontier population spreads over 95,431 square miles or 86.9% of the state’s land mass.

Map 1 also provides a current snapshot of the major health care services available to rural and frontier residents of Nevada. This map excludes the offices of physicians, emergency medical services agencies, or other individual health providers. While most of the state’s tertiary care centers are concentrated in the state’s three urban counties, a diverse range of acute care hospital services, outpatient clinics and medical services are scattered across twelve of the state’s fourteen rural and frontier counties (exceptions are Storey and Esmeralda counties where there are no health care facilities). These facilities and services – highlighted in greater detail throughout this data book – provide most of the basic health care received by our state’s rural and frontier populations.
Maps 2 through 4 illustrate different ways that rural and urban areas are defined by federal agencies and researchers. Map 2 provides a visual depiction of the Census Bureau’s classification of urban and rural counties in Nevada. In general, urban counties possess a population greater than 50,000. In Map 2, the state’s three urban counties are shaded white and the state’s fourteen rural counties are shaded in blue. In these terms, Nevada’s three urban counties currently have a combined population of 2,544,298 (89.1%) and its fourteen rural counties have a combined population of 284,496. Additional information on the Census Bureau’s classification scheme can be found at http://www.census.gov/geo/reference/urban-rural.html.

Map 3 illustrates the distribution of metropolitan, micropolitan, and non-metropolitan counties in Nevada utilizing a classification scheme developed by the White House’s Office of Management and Budget (OMB) and used by the Economic Research Service (ERS) of the U.S. Department of Agriculture. The original OMB system distinguished two broad types of areas: metropolitan (shaded white in Map 3) and non-metropolitan (shaded light and dark blue). Basically, metropolitan areas have at least one city of more than 50,000 residents and non-metropolitan areas typically have less than 50,000 residents.

The OMB classification scheme was recently updated to include “micropolitan” areas (shaded light blue in Map 3) that are distinguished by closer economic ties to metropolitan areas, yet possessing population less than 50,000. Utilizing the current OMB classifications scheme, Nevada possesses four metropolitan counties with a combined population of 2.5 million, seven micropolitan counties with a population of 250,215, and six non-metropolitan counties with a combined population of 34,281. Additional information on the OMB classification scheme can be found at http://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/what-is-rural.aspx.

Map 4 illustrates the considerable heterogeneity of Nevada’s population and geography utilizing “Rural-Urban Commuting Areas” or “RUCA” codes ranging from 1 (the red shaded or core areas of urbanized areas) to 10 (the blue shaded, mostly frontier, isolated areas of the state). The RUCA methodology provides a more fine-grained classification of rural areas applicable at both the county and sub-county units of analysis. Map 4 underscores the concentration of most of the state’s population in zip code areas located in the northwestern and southern counties of the state (RUCAs 1-2), and the dispersion of the remaining 10 percent of the population is scattered across a vast geographic expanse of rural and frontier regions of the state (RUCAs 4-10).

Map 4 also highlights the considerable variation within counties. For example, the urban counties of Washoe County and Clark County contain substantial areas that are rural or frontier in nature; conversely rural and frontier counties such as Lyon and Nye Counties possess comparatively small urban areas or zip codes that are economically integrated with urban centers in the state. Additional information on the RUCA methodology can be found at http://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes.aspx.
Map 3: Office of Management and Budget (OMB) Designation of Metropolitan, Micropolitan, and Non-metropolitan Areas in Nevada – 2015

Source: Office of Statewide Initiatives (2015)
Map 5 highlights the unique topography and vast distances separating the state’s rural communities from the urban centers. Most rural and frontier communities are located in sparsely populated counties that are considerable distances from the state’s urban and tertiary health care centers. The average distance between acute care hospitals in rural Nevada and the next level of care or tertiary care hospital is 114.7 miles and the average distance to the nearest incorporated town is 46.5 miles. Consequently, the primary health care delivery issue for rural and frontier residents and communities in Nevada is how best to overcome the spatial isolation and enormous geographic distances that characterize most of rural and frontier Nevada.

Nevada comprises the western half of our nation’s Great Basin. Ridge after ridge of rugged, brown mountains are broken up with flat sage covered valleys. The Great Basin is a high desert defined by 150 mountain ranges running north to south and earthquake activity second only to Hawai‘i. Most mountain passes are subject to very difficult seasonal weather conditions. Most major roads follow the north to south pattern with two major exceptions. U.S. Highway 50 – “the loneliest highway in America” – across the middle of the state winds through numerous mountain summits. Interstate 80 curves northeastwards across the state largely following the railroad tracks built in the 1870’s. Travel time from most county hospitals to regional medical centers is thus measured in hours not minutes. Driving long distances is a very daunting task to obtain emergency health care in winter conditions. Helicopter pads are located at all rural hospitals for emergency transport to/from either Reno, Las Vegas, or other emergency care centers.

Map 6 details public and private land ownership in Nevada. Approximately 10 percent of land is privately owned (shaded black). The remaining 90 percent is publicly owned and administered by a wide range of federal, state, and tribal entities. The major administrators of public lands in Nevada are the Bureau of Land Management, Departments of Defense and Energy, and the U.S. Forest Service. The checkerboard pattern along Interstate 80 and the Humboldt River in Northern Nevada highlights a large swath of land owned between the Bureau of Land Management and the railroad company’s land grants.

Map 7 highlights the enormous geographic expanse of the state – Nevada is the 7th largest state in the U.S. – by comparing it with selected northeastern states. Nevada’s land mass is approximately 110,000 square miles. By comparison, seven northeastern states with a combined land mass of 47,820 square miles would easily fit within Nevada’s borders.
Map 7: Selected Northeastern States Placed Within the State of Nevada

NEVADA
109,286 square miles
2.8 million population

Massachusetts
10,555 square miles
6.7 million population

New Jersey
8,722 square miles
2.9 million population

Vermont
9,615 square miles
0.6 million population

New Hampshire
9,350 square miles
1.3 million population

Connecticut
5,544 square miles
3.6 million population

Rhode Island
1,545 square mi
1.1 million pop

Delaware
2,489 sq mi
0.9 million pop

Source: Office of Statewide Initiatives (2015)
Data Book Sections and Contents

Section One: Demographic Profile of Rural and Frontier Nevada

The first section of the Nevada Rural and Frontier Health Data Book – Seventh Edition contains the most current data on the social and demographic characteristics of rural and frontier Nevada, including information on:

- Population and population density
- Population change and projections
- Population aging and diversification
- Population by place of birth
- Veterans in Nevada

Section Two: Social and Economic Profile of Rural and Frontier Nevada

The second section contains the most current data from state and federal agencies on the social and economic characteristics of rural and frontier Nevada, including data on:

- Personal and family income
- Poverty rates for children and adults
- Educational enrollment and public school expenditures
- Educational attainment and high school graduation rates
- Voter registration and party affiliation
- Crime statistics

Section Three: Population Health Profile of Rural and Frontier Nevada

The third section contains the most current data on population health and health insurance coverage in rural and frontier Nevada, including information on:

- Health insurance coverage and the uninsured
- Population health status and risk factors to health
- Teen pregnancy and birth rates
- Morbidity and mortality rates
- County health outcomes and health determinants rankings
Section Four: Health Care Workforce in Rural and Frontier Nevada

The fourth section contains the most current data on the health care workforce in rural and frontier Nevada, including data on:

- General labor market trends
- Estimated hospital and health sector employment
- Number and per capita geographic distribution of licensed health professionals
- Health professional shortage areas and medically underserved areas

Section Five: Health Care Resources and Economics in Rural and Frontier Nevada

The fifth section contains the most current data on health care facilities, health care resources, and economic aspects of health care in rural and frontier Nevada, including information on:

- Hospital and other health care resources
- Health care and hospital industry sector employment and payroll
- Economic impact of the health care and hospital industry sector
- Rural and frontier clinics, community health centers, tribal facilities, and Nevada’s telehealth network
- Utilization trends and financial performance among the state’s rural and frontier hospitals and comparisons with urban facilities

The data sources, explanation of data tabulations, and notes on the strengths and weaknesses of the data presented for each table, figure, and map in the data book are contained in the appendices.

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In closing, since health and health care in rural and frontier Nevada are ever changing, our ambition is to continue to update and distribute this volume on a biennial basis. If your organization or agency utilizes the data book, we would appreciate learning more about how you have used it and how the eighth edition of the data book can be improved. As such, please send your comments and suggestions, as well as requests for additional copies to Tabor Griswold at tgriswold@medicine.nevada.edu.

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