
UNR Med Health Policy Report

Northern Nevada Obstetrics and Gynecology Needs Assessment

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Northern Nevada Obstetrics and Gynecology Needs Assessment

Introduction

The purpose of this assessment is to identify the current and projected need for obstetrics and gynecology care in northern Nevada. This information is supplemented with additional data on other women's health service needs in northern Nevada.

The study focuses on females residing in Carson City, Churchill County, Douglas County, Elko County, Eureka County, Humboldt County, Lander County, Lyon County, Mineral County, Pershing County, Storey County, Washoe County, and White Pine County.

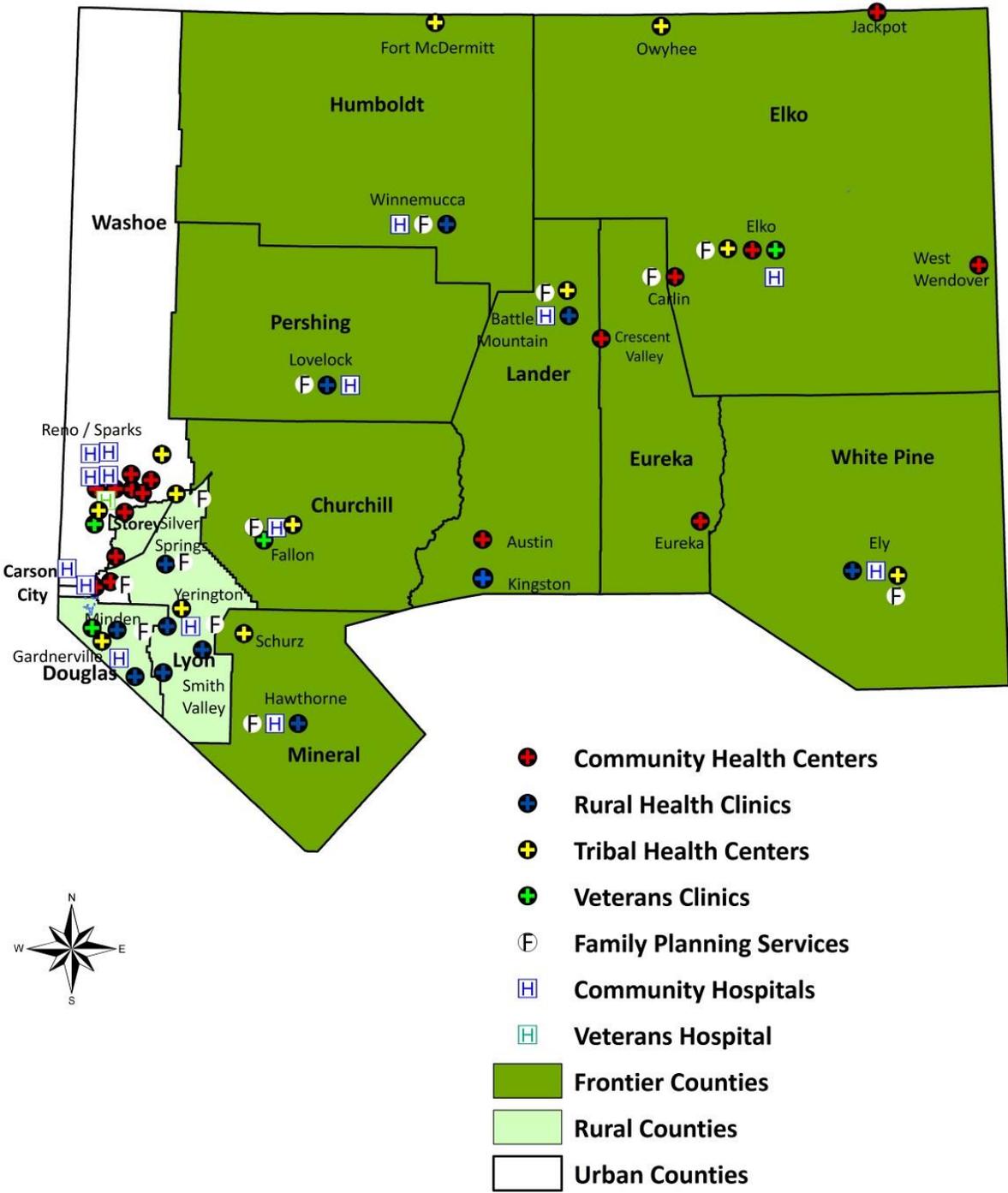
The assessment utilizes existing sources of data on: (a) obstetrics/gynecology physician workforce; (b) current and projected demand for obstetric and gynecologic services provided in a hospital and outpatient settings; (c) health services access and utilization; (d) health insurance coverage; and (e) cancer incidence and mortality in northern Nevada.

This report is divided into two major sections containing information on:

- Obstetrics/gynecology workforce and demand for OB/GYN services in northern Nevada, including number of licensed obstetrics/gynecology physician (MDs) and advanced practice registered nurse (APRNs) per 100,000 female population; projected demand for outpatient visits in obstetrics/gynecology care; and trend data on obstetric-related hospital procedures in northern Nevada.
- Factors driving demand for obstetrics/gynecology services in northern Nevada, including demographic data by region, age and race/ethnicity; insurance coverage; poverty level and educational attainment for female population residing in northern Nevada; and cancer incidence and mortality related to women's health.

Map 1 "Health Care Services in Northern Nevada" illustrates the northern Nevada service area consists of 2 urban, 3 rural and 8 frontier counties. Current population of this service area is 724,640 residents – 495,111 residents in urban counties, 123,057 in rural counties and 106,472 residents in frontier counties. Most rural and frontier communities are located in sparsely populated counties that are considerable distance from the state's urban and tertiary health care centers. The population density in northern Nevada varies from 76.4 residents per square mile in urban areas, 41.5 residents per square mile in rural areas to 1.2 residents per square miles in frontier areas. Spatial isolation and enormous geographic distances that characterize most rural and frontier communities plays a big role in health care access and delivery system for residents in Northern Nevada.

Map 1: Health Care Services in Northern Nevada



Source: Office of Statewide Initiatives (2017).

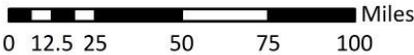


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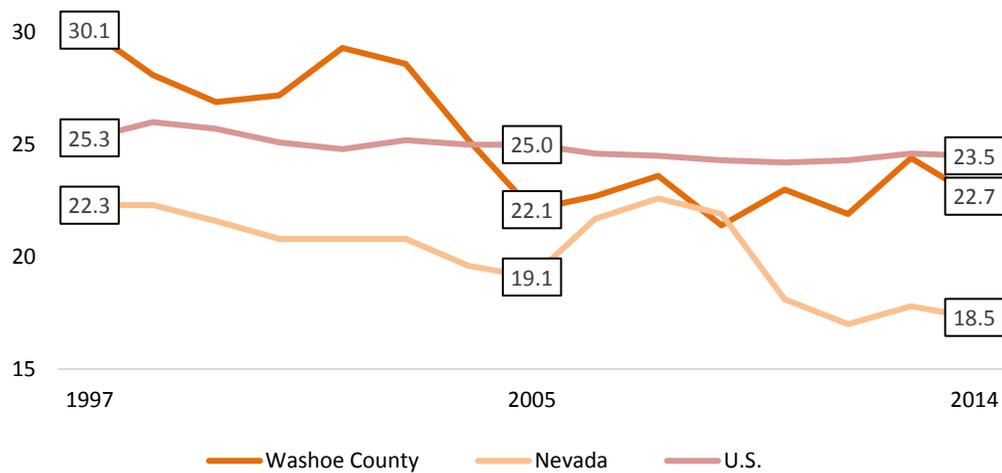
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**SECTION I: Obstetrics/Gynecology Workforce and Demand for OB/GYN Services
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Obstetrics/Gynecology Workforce in Northern Nevada

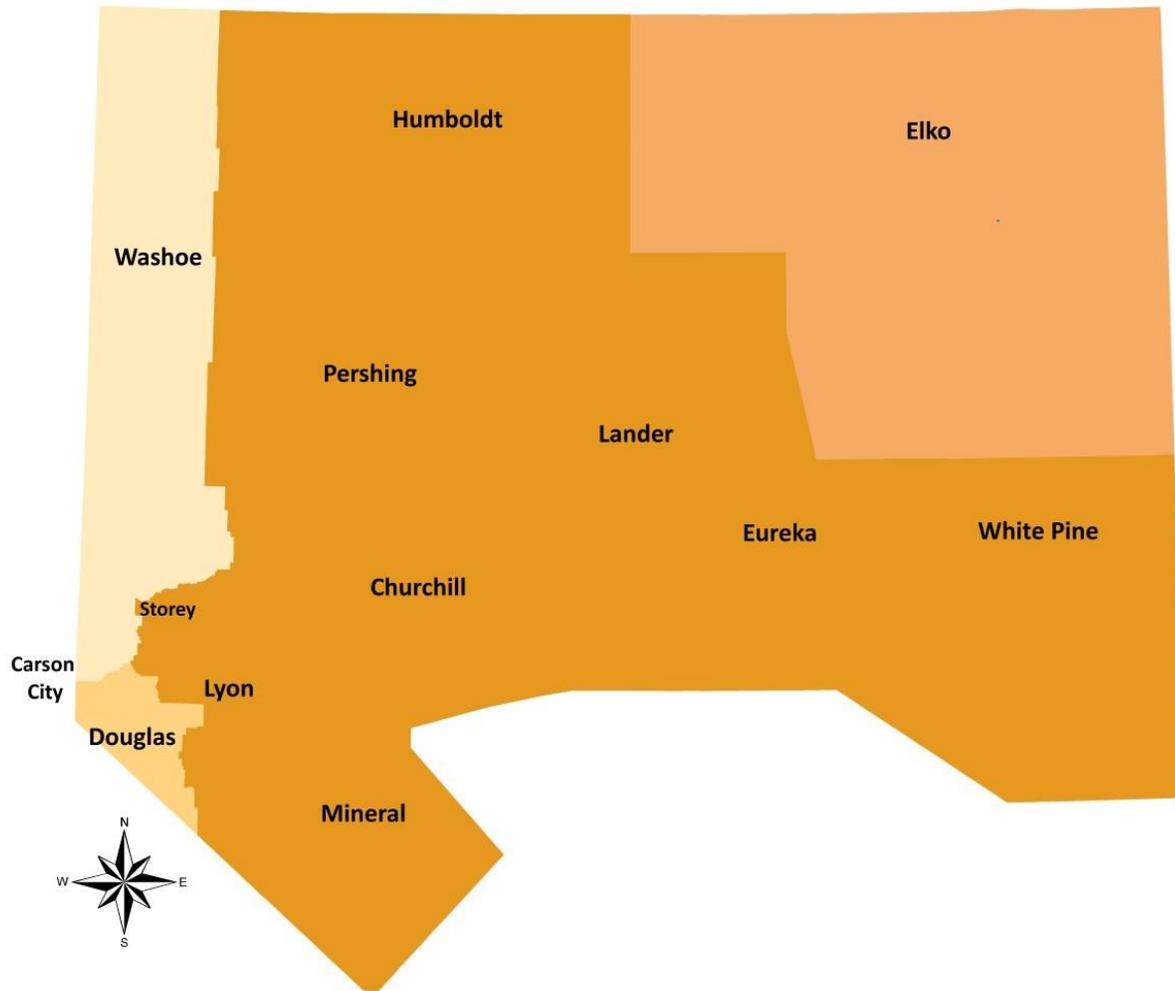
Over the past two decades, the number of obstetrics/gynecology (OB/GYN) physicians per 100,000 female population in Nevada has been lower than the U.S. average. Figure 1 highlights OB/GYN physician workforce trends across Nevada, the U.S. and Washoe County. From 1997 to 2014, the number of OB/GYN physicians in Nevada decreased from 22.3 to 18.5 per 100,000 female population. Nevada’s OB/GYN (MDs and DOs) physician workforce currently ranks 47th in the nation. Map 2 illustrates the current supply of OB/GYN physicians in northern Nevada. Washoe County, Carson City, and Douglas County have a higher supply of OB/GYN physicians compared to Elko County and the Balance of the Service Area.

Figure 1. Obstetrics/Gynecology Physician (MDs & DOs) Workforce per 100,000 Female Population – 1997 to 2014

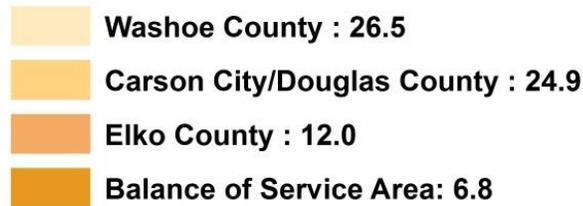


Source: Area Health Resource File (2017). Office of Statewide Initiatives (2017).

Map 2: Obstetrics/Gynecology Physician Workforce (MDs) per 100,000 Female Population in Northern Nevada



Ob/Gyn MDs per 100,000 Female Population



Note: The rate for Nevada is 20.9 per 100,000 female population

Table 1. Obstetrics/Gynecology Physician Workforce (MDs) in Northern Nevada – 2017

County/Region	Obstetrics/Gynecology Physicians (MDs)	
	Number Licensed MDs	Number per 100,000 Female Population
Washoe County	58	26.5
Elko County	3	12.0
Carson City/Douglas County	13	24.9
Balance of Service Area	6	6.8
Northern Nevada – Total	80	20.9
Nevada – Total	303	20.9

Source: Nevada State Board of Medical Examiners (2017). Office of Statewide Initiatives (2017).

Table 2. Obstetrics/Gynecology Physician Workforce (MDs) in Northern Nevada – 2017

County/Region	Obstetrics/Gynecology Physicians (MDs)		
	Number Full Time Equivalent (FTE*)	Number Licensed MDs**	Ratio (FTE/Licensed)
Washoe County	37.1	58	0.6
Elko County	3.0	3	1.0
Carson City/Douglas County	8.4	13	0.6
Balance of Service Area	3.0	6	0.5
Northern Nevada – Total	51.5	80	0.6
Nevada – Total	168.0	303	0.5

Source: *Primary Care Office Provider Data (2016). **Nevada State Board of Medical Examiners.
 Note: Full Time Equivalency (1 FTE= 40 hour workweek of direct outpatient care).

Table 1 shows the number of OB/GYN physician in northern Nevada is 20.9 per 100,000 female population. The OB/GYN workforce in northern Nevada is equal to the number of physicians per 100,000 female population in Nevada. Table 2 shows that approximately 60% of licensed OB/GYN physicians in northern Nevada are actively practicing in an outpatient setting, as defined by the State of Nevada Primary Care Office, in their respective regions. The remaining OB/GYN physicians are not working in outpatient setting.

Aging OB/GYN Physician Workforce in Northern Nevada

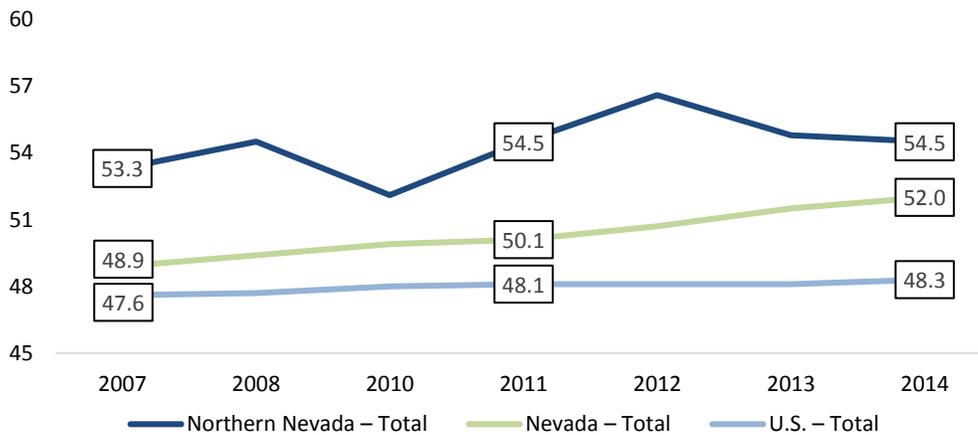
Table 3 provides information on average age of OB/GYN physician over time. From 2007 to 2014, the average age of the OB/GYN physician workforce in northern Nevada increased by 1.2 years or 2.3%. Elko County has the oldest OB/GYN physician workforce in Nevada. Figure 2 shows the OB/GYN physician workforce in Northern Nevada is older than the U.S. OB/GYN physician workforce.

Table 3. Average Age of Obstetrics/Gynecology Physician Workforce (MDs) in Northern Nevada – 2007 to 2014

County/Region	Average Age of Obstetrics/Gynecology Physicians (Years)			
	2007	2014	Change – 2007 to 2014	
			Number	Percent
Washoe County	49.5	52.0	2.5	5.1
Elko County	56.7	62.5	5.8	10.2
Carson City/Douglas County	47.5	50.0	2.5	5.3
Balance of Service Area	59.4	53.3	-6.1	-10.3
Northern Nevada – Total	53.3	54.5	1.2	2.3
Nevada – Total	48.9	52.0	3.1	6.3
U.S. – Total	47.6	48.3	0.7	1.5

Source: Area Health Resource File (2017). Office of Statewide Initiatives (2017).

Figure 2. Average Age of Obstetrics/Gynecology Physician Workforce (MDs) in Northern Nevada – 2007 to 2014



Source: Area Health Resource File (2017). Office of Statewide Initiatives (2017).

Table 4. Advanced Practice Registered Nurses (APRNs) by Specialty in Northern Nevada – 2017

County/Region	Advanced Practice Registered Nurses (APRNs)						Total
	Midwives		Women’s Health		Obstetrics/Gynecology		
	Number	Number per 100,000 Female Population	Number	Number per 100,000 Female Population	Number	Number per 100,000 Female Population	
Washoe County	11	5.0	6	2.7	3	1.3	20
Elko County	1	3.9	1	3.9	2	7.9	4
Carson City/Douglas County	2	3.8	4	7.6	–	–	6
Balance of Service Area	–	–	1	1.1	–	–	1
Northern Nevada – Total	14	3.6	12	3.1	5	1.3	31
Nevada – Total	32	2.2	52	3.5	22	1.5	106

Source: Nevada State Board of Nursing (2017). Area Health Resource File (2017).
 Note: Number of APRN Midwives in the U.S. obtained from year 2015.

Advanced Practice Registered Nurses (APRNs) in Northern Nevada

There are several categories of APRNs specialty related to OB/GYN workforce; 1) midwives; 2) women’s health; and 3) obstetrics/gynecology (OB/GYN). Table 4 summarizes the number of APRNs per 100,000 female population by region and specialty. In northern Nevada, there are more APRN midwives (3.6 per 100,000 female population) than APRNs with women’s health or OB/GYN specialty (3.1 and 1.3 per 100,000 female population, respectively). Washoe County has the highest number of midwives compared to other counties in northern Nevada. There are more APRNs specializing in women’s health in Carson City/Douglas (7.6 per 100,000 female population) compared to other northern Nevada counties. Meanwhile, there are no midwives or OB/GYN APRNs in the Balance of Service Area with the exception of one APRN specializing in women’s health in the Balance of Service Area.

Current and Projected Visits to Office-based Obstetrics/Gynecologic Physicians (MDs)

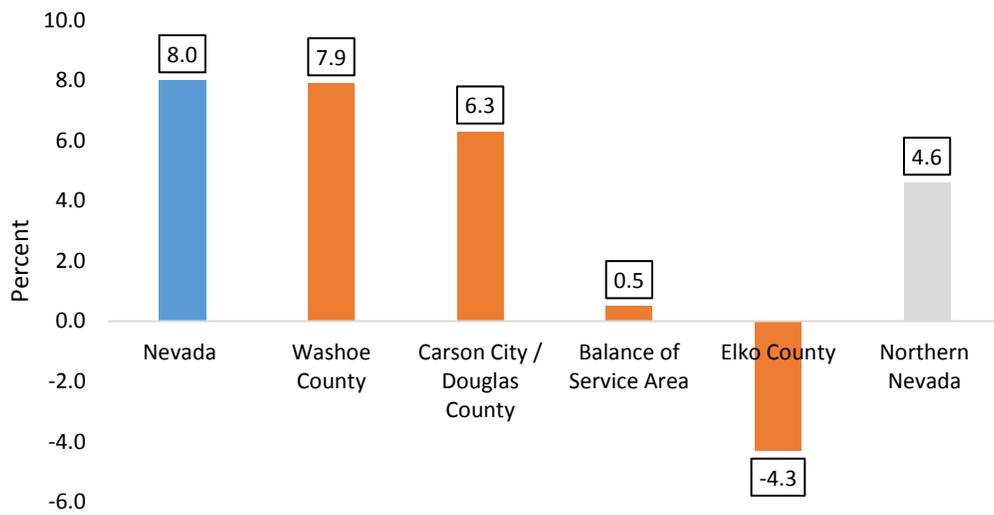
Table 5 summarizes current and projected visits to office-based OB/GYN physicians in northern Nevada. Over the next five years, projected demand for visits to office-based OB/GYN physicians in Nevada (8.0%) is almost three times that of the U.S. (2.7%). Projected growth in the female population aged 15 and over in northern Nevada is expected to drive demand in the number of visits to office-based OB/GYN physicians. Figure 3 illustrates projected demand for outpatient OB/GYN services. Our model projects an increase in demand across all northern Nevada counties, with the exception of Elko County (-4.3%).

Table 5. Current and Projected Visits to Office-based Obstetrics/Gynecologic Physicians (MDs) – 2017 to 2022

County/Region	Current – 2017		Projected – 2022		Change – 2017 to 2022	
	Population Female 15+	Estimated Ob/Gyn Visits	Population Female 15+	Estimated Ob/Gyn Visits	Number	Change
Washoe County	177,167	81,142	191,074	87,512	6,370	7.9
Elko County	20,093	9,203	19,236	8,810	-393	-4.3
Carson City/Douglas County	44,315	20,296	47,097	21,570	1,274	6.3
Balance of Service Area	114,707	52,536	115,304	52,809	273	0.5
Northern Nevada – Total	356,282	163,177	372,711	170,702	7,525	4.6
Nevada – Total	1,164,356	533,275	1,257,713	576,033	42,758	8.0
U.S. – Total	135,671,118	62,137,372	139,355,286	63,824,721	1,687,348	2.7

Sources: Nevada State Demographer’s Office (2017). National Center for Health Statistics, National Ambulatory Medical Care Survey (2013). Office of Statewide Initiatives (2017).
 Note: Estimated visits to obstetrical/gynecological physicians utilize population estimates from the Nevada Department of Taxation (2016) and the U.S. average rate of 45.8 visits to obstetrical/gynecological physicians per 1000 females age 15 and over (National Center for Health Statistics 2013).

Figure 3. Projected Visits to Office-based Obstetrics/Gynecology Physicians (MDs) – 2017 to 2022



Sources: Nevada State Demographer's Office (2017). National Center for Health Statistics, National Ambulatory Medical Care Survey (2013). Office of Statewide Initiatives (2017).

Table 6. Inpatient Obstetric Procedures in Northern Nevada by Hospital – 2011 to 2015
Vaginal Deliveries without Complicating Diagnoses (MS-DRG 775)

Service Region	Number of Cases					Change – 2011 to 2015	
	2011	2012	2013	2014	2015	Number	Percent
Washoe County	3,483	3,485	3,461	3,431	3,685	202	5.8
Renown Regional Medical Center	2,191	2,291	2,394	2,316	2,374	183	8.4
Saint Mary's Regional Medical Center	1,292	1,194	1,067	1,115	1,311	19	1.5
Carson City/Douglas County							
Carson Tahoe Regional Medical Center	511	532	560	515	602	91	17.8
Elko							
Northeastern Nevada Regional Hospital	358	364	395	415	305	-53	-14.8
Balance of Service Area	464	475	428	456	413	-51	-11.0
Banner Churchill Community Hospital	211	233	193	236	205	-6	-2.8
Humboldt General Hospital	201	193	190	171	177	-24	-11.9
William Bee Ririe Hospital	52	49	45	49	31	-21	-40.4
Northern Nevada – Total	4,816	4,856	4,844	4,817	5,005	189	3.9

Source: Center for Health Information and Analysis (2017). Office of Statewide Initiatives (2017).

Definitions: Vaginal delivery: The birth of a fetus through a vagina.

Procedures: Common procedures that frequently accompanied Vaginal Delivery with Complicating Diagnoses (MS-DRG 775): 1) Other manually assisted delivery (7359), 2) Repair of other current obstetric laceration (7569), 3) Other artificial rupture of membranes (7309), 4) Medical induction of labor (734), 5) Administration of diphtheria-tetanus-pertussis (9939).

Diagnoses: Common diagnoses that frequently accompanied Vaginal Delivery with Complicating Diagnoses (MS-DRG 775): 1) Perineal laceration, rupture or tear involving: fourchette, hymen, labia, skin, vagina, vulva, pelvic floor, perineal muscles, vaginal muscles (66401, 66411), 2) cord entanglement (66331), 3) abnormality in fetal heart rate or rhythm (65971), 4) Other viral diseases in the mother (64761), 5) Carrier or Suspected Carrier of Group B Streptococcus (V0251).

Vaginal Deliveries without Complicating Diagnoses by Hospital in Northern Nevada

Table 6 details recent trends for vaginal deliveries without complicating diagnoses in northern Nevada hospitals from 2011 to 2015. There were approximately 4,800 vaginal deliveries without complicating diagnoses in northern Nevada each year. From 2011 to 2015, there was a slight increase in the number of vaginal deliveries without complicating diagnosis by 3.9% or 189 deliveries across northern Nevada. Meanwhile, every rural hospital in northern Nevada experienced a decrease in the rate for this procedure. Figure 4 shows the rate of vaginal deliveries without complicating diagnoses has been consistently higher in Washoe County compared to the statewide rate for the female population aged 15-44 years old.

Vaginal Deliveries with Complicating Diagnoses by Hospital in Northern Nevada

Table 7 documents recent trends for vaginal deliveries with complicating diagnoses in northern Nevada hospitals from 2011 to 2015. There were approximately 700 vaginal deliveries with complicating diagnoses in northern Nevada each year. From 2011 to 2015, there was an increase in the number of vaginal deliveries with complicating diagnoses across urban hospitals in Washoe County and Carson City/Douglas County. Figure 5 shows the rate of this procedure was higher in Washoe County compared to the statewide rate for the female population aged 15-44 years old.

Table 7. Inpatient Obstetric Procedures in Northern Nevada by Hospital – 2011 to 2015
Vaginal Deliveries with Complicating Diagnoses (MS-DRG 774)

Service Region	Number of Cases					Change – 2011 to 2015	
	2011	2012	2013	2014	2015	Number	Percent
Washoe County	519	551	483	590	554	35	6.7
Renown Regional Medical Center	328	372	369	478	414	86	26.2
Saint Mary's Regional Medical Center	191	179	114	112	140	-51	-26.7
Carson City/Douglas County							
Carson Tahoe Regional Medical Center	64	94	93	125	91	27	42.2
Elko							
Northeastern Nevada Regional Hospital	35	32	38	39	44	9	25.7
Balance of Service Area	41	46	44	53	33	-8	-19.5
Banner Churchill Community Hospital	18	22	28	36	17	-1	-5.6
Humboldt General Hospital	12	11	—	—	10	-2	-16.7
William Bee Ririe Hospital	11	13	—	—	—	—	—
Northern Nevada – Total	659	723	658	807	722	63	9.6

Source: Center for Health Information and Analysis (2017). Office of Statewide Initiatives (2017).

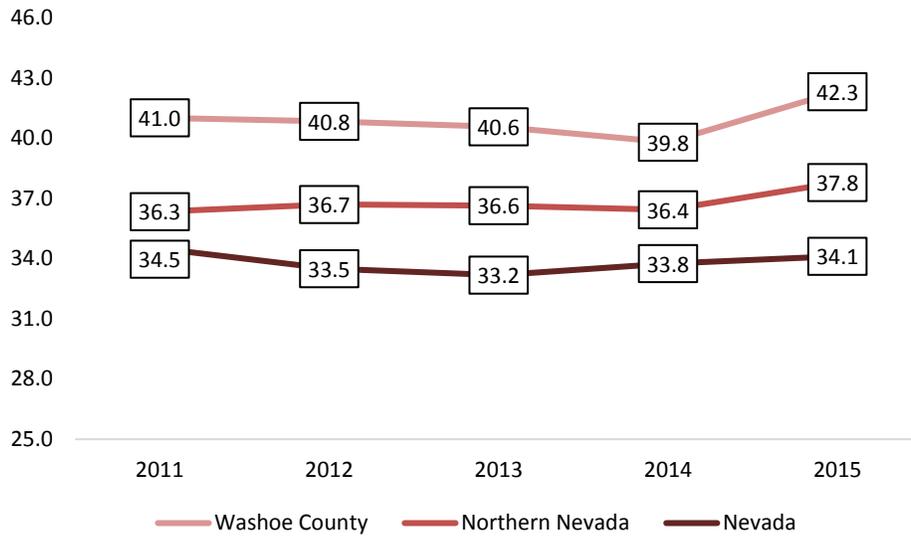
Definitions: Vaginal delivery: The birth of a fetus through a vagina.

Procedures: Common procedures that frequently accompanied Vaginal Delivery with Complicating Diagnoses (MS-DRG 774): 1) Other manually assisted delivery (7359), 2) Repair of other current obstetric laceration (7569), 3) Other artificial rupture of membranes (7309), 4) Medical induction of labor (734), 5) Administration of diphtheria-tetanus-pertussis (9939).

Diagnoses: Common diagnoses that frequently accompanied Vaginal Delivery with Complicating Diagnoses (MS-DRG 774): 1) Perineal laceration, rupture or tear involving: fourchette, hymen, labia, skin, vagina, vulva, pelvic floor, perineal muscles, vaginal muscles (66401, 66411), 2) cord entanglement (66331), 3) abnormality in fetal heart rate or rhythm (65971), 4) Other viral diseases in the mother (64761), 5) Carrier or Suspected Carrier of Group B Streptococcus (V0251), 6) Anemia antepartum (64823), 7) Anemia, unspecified (2859), 8) Mild or unspecified pre-eclampsia (64241).

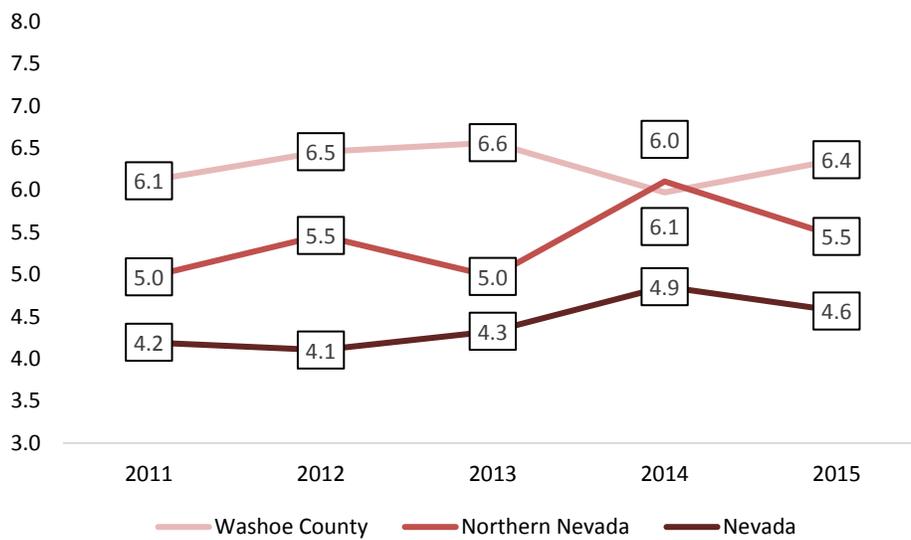
Note: “—” means data suppressed due to count less than 10.

Figure 4. Vaginal Deliveries without Complicating Diagnoses (MS-DRG 775) per 1,000 Female Population Aged 15-44 in Northern Nevada – 2011 to 2015



Source: Center for Health Information and Analysis (2017). Office of Statewide Initiatives (2017). Note: Population estimates for Washoe County and Nevada retrieved from the Health Resources & Services Administration (HRSA) Area Health Resources Files.

Figure 5. Vaginal Deliveries with Complicating Diagnoses (MS-DRG 774) per 1,000 Female Population Aged 15-44 in Northern Nevada – 2011 to 2015



Source: Center for Health Information and Analysis (2017). Office of Statewide Initiatives (2017). Note: Population estimates for Washoe County and Nevada retrieved from the Health Resources & Services Administration (HRSA) Area Health Resources Files.

Table 8. Inpatient Obstetric Procedures in Northern Nevada by Hospital – 2011 to 2015
Cesarean Section without Complicating Diagnoses (MS-DRG 766)

Service Region	Number of Cases					Change – 2011 to 2015	
	2011	2012	2013	2014	2015	Number	Percent
Washoe County	1,157	1,121	1,154	1,081	1,067	-90	-7.8
Renown Regional Medical Center	760	705	789	693	675	-85	-11.2
Saint Mary's Regional Medical Center	397	416	365	388	392	-5	-1.3
Carson City/Douglas County							
Carson Tahoe Regional Medical Center	165	149	163	157	184	19	11.5
Elko							
Northeastern Nevada Regional Hospital	121	142	155	152	103	-18	-14.9
Balance of Service Area	140	149	140	135	156	16	11.4
Banner Churchill Community Hospital	93	87	78	72	83	-10	-10.8
Humboldt General Hospital	34	44	49	48	62	28	82.4
William Bee Ririe Hospital	13	18	13	15	11	-2	-15.4
Northern Nevada – Total	1,583	1,561	1,612	1,525	1,510	-73	-4.6

Source: Center for Health Information and Analysis (2017). Office of Statewide Initiatives (2017).

Definitions: Cesarean Section: A surgical procedure in which incisions are made through a woman's abdomen and uterus to deliver her baby.

Procedures: Common procedures that frequently accompanied Cesarean Section without Complicating Diagnoses (MS-DRG 766): 1) Low cervical cesarean section (741), 2) Medical induction of labor (734), 3) Other bilateral ligation and division of fallopian tubes (6632), 5) Other bilateral destruction or occlusion of fallopian tubes (6639), 6) Other vacuum extraction (7279).

Diagnoses: Common diagnoses that frequently accompanied Cesarean Section without Complicating Diagnoses (MS-DRG 766): 1) Mother had a previous cesarean delivery (65421), 2) Sterilization (V252), 3) Cord entanglement (66331), 4) Abnormality in fetal heart rate or rhythm (65971), 5) Carrier or Suspected Carrier of Group B Streptococcus (V0251)

Cesarean Section without Complicating Diagnoses by Hospital in Northern Nevada

Table 8 shows recent trends for cesarean section without complicating diagnoses in northern Nevada hospitals from 2011 to 2015. There were approximately 1,500 cesarean section without complicating diagnoses in northern Nevada each year. The rate for this procedure declined over time in both urban and rural hospitals with the notable exceptions of Carson Tahoe Regional Medical Center (11.5%) and Humboldt General hospital in Winnemucca. Figure 6 shows the rate of this procedure was lower in Washoe County compared to the statewide rate for the female population aged 15-44 years old.

Cesarean Section with Complicating Diagnoses by Hospital in Northern Nevada

Table 9 shows recent trends for cesarean section with complicating diagnoses in northern Nevada hospitals from 2011 to 2015. There were approximately 800 cesarean section with complicating diagnoses in northern Nevada each year. Figure 8 shows the rate for this procedure is highest in Washoe County compared to the statewide rate for the female population aged 15-44 years old.

Table 9. Inpatient Obstetric Procedures in Northern Nevada by Hospital – 2011 to 2015
Cesarean Section with Complicating Diagnoses (MS-DRG 765)

Service Region	Number of Cases					Change – 2011 to 2015	
	2011	2012	2013	2014	2015	Number	Percent
Washoe County	657	647	657	747	675	18	2.7
Renown Regional Medical Center	418	461	470	518	413	-5	-1.2
Saint Mary's Regional Medical Center	239	186	187	229	262	23	9.6
Carson City/Douglas County							
Carson Tahoe Regional Medical Center	62	66	80	67	84	22	35.5
Elko							
Northeastern Nevada Regional Hospital	50	40	47	46	41	-9	-18.0
Balance of Service Area	39	63	56	57	46	7	17.9
Banner Churchill Community Hospital	28	52	40	47	29	1	3.6
Humboldt General Hospital	—	—	—	—	14	—	—
William Bee Ririe Hospital	—	—	—	—	—	—	—
Northern Nevada – Total	808	816	840	917	846	38	4.7

Source: Center for Health Information and Analysis (2017). Office of Statewide Initiatives (2017).

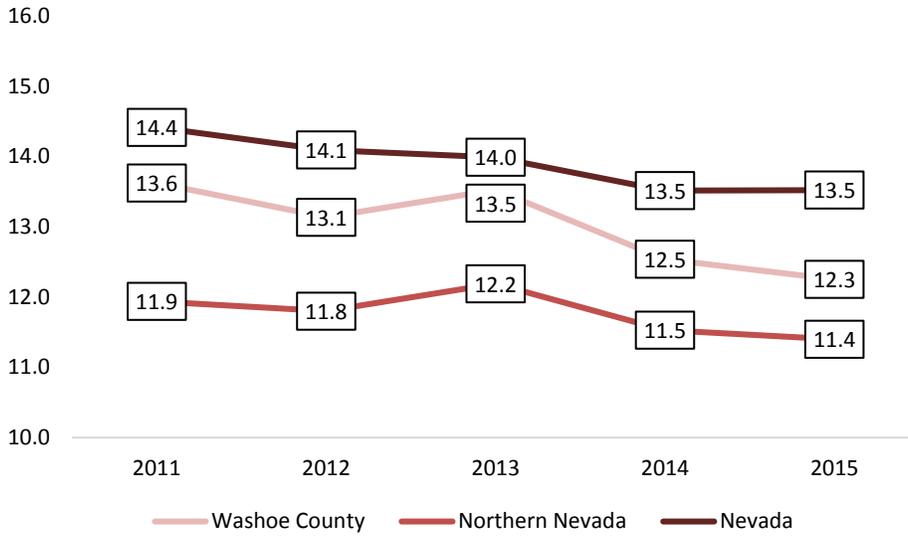
Definitions: Cesarean section: A surgical procedure in which incisions are made through a woman's abdomen and uterus to deliver her baby.

Procedures: Common procedures that frequently accompanied Vaginal Delivery with Complicating Diagnoses (MS-DRG 765): 1) Low cervical cesarean section (741), 2) Bilateral ligation/division of fallopian tubes (6632), 3) Bilateral destruction or occlusion of fallopian tubes (6639), 4) Other artificial rupture of membranes (7309), 5) Other fetal monitoring (7534), 6) Medical induction of labor (734).

Diagnoses: Common diagnoses that frequently accompanied Vaginal Delivery with Complicating Diagnoses (MS-DRG 765): 1) Mother who had previous cesarean delivery (65421), 2) Abnormality in fetal heart rate or rhythm (65971), 3) Early onset of delivery (64421), 4) Sterilization (V252), 5) Obesity complicating pregnancy, childbirth, or puerperium (64911).

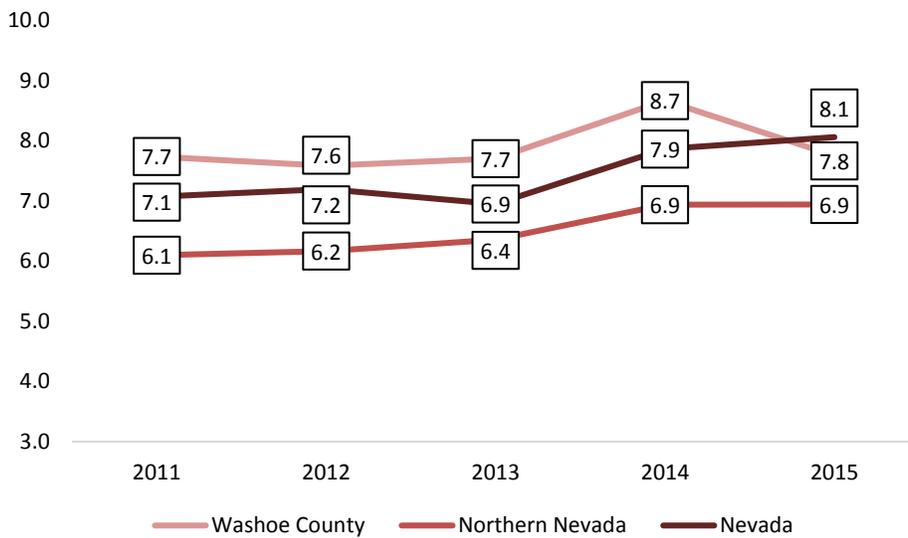
Note: "—" means data suppressed due to count less than 10.

Figure 6. Cesarean Section without Complicating Diagnoses (MS-DRG 766) per 1,000 Female Population Aged 15-44 in Northern Nevada – 2011 to 2015



Source: Center for Health Information and Analysis (2017). Office of Statewide Initiatives (2017). Note: Population estimates for Washoe County and Nevada retrieved from the Health Resources & Services Administration (HRSA) Area Health Resources Files.

Figure 7. Cesarean Section with Complicating Diagnoses (MS-DRG 765) per 1,000 Female Population Aged 15-44 in Northern Nevada – 2011 to 2015



Source: Center for Health Information and Analysis (2017). Office of Statewide Initiatives (2017). Note: Population estimates for Washoe County and Nevada retrieved from the Health Resources & Services Administration (HRSA) Area Health Resources Files.

**SECTION II: Profile of the Northern Nevada Service Area and Factors
Driving Demand for Obstetrics/Gynecology Services**

Profile of the Northern Nevada Service Area and Factors Driving Demand for OB/GYN Services

Utilizing various sources of public and private data, the information contained in this section provides a profile of the northern Nevada service area and key factors driving demand for women's health services.

Primary Care Health Professional Shortage Areas

An estimated 318,250 residents in the northern Nevada (43.9% of the population) reside in a federally designated primary medical care Health Professional Shortage Areas (HPSAs). Map 3 illustrates northern Nevada counties that are designated primary medical care HPSAs, with 8 out of the 13 counties as single-county primary medical care HPSAs. The remaining counties are partial or non-shortage areas.

Map 4 provides additional detail on primary medical care HPSAs in metropolitan northern Nevada. The map highlights predominance of primary medical care HPSAs in rural areas, as well as the concentration of primary medical care HPSAs in downtown Reno/Sparks.

Demographics

Tables 10 through 13 and figures 8 through 10 provide data on the current and projected female population in northern Nevada. These data highlight projected decline in the following age groups: females aged 10-14 and women aged 45-64; and projected growth in the following age groups: females aged 15-19, women aged 64-84, and 85+.

Tables 14 through 16 provide current and projected distribution of female population by race/ethnicity in northern Nevada. In general, these data indicate little projected change for female population in the White, Black, American Indian, and Asian/Pacific Islander race category with the exception of the female Hispanic population which is projected to increase in all northern Nevada region.

Socioeconomic status

Tables 17 and 18 summarize the distribution of female population in northern Nevada by federal poverty level (100% FPL). Approximately 15.8% of the female population aged 18-64 were living below federal poverty level in northern Nevada. Tables 19 and 20 highlight the distribution of the female population living below federal poverty level in northern Nevada with less than high school degree, high school or GED, some college or associate's degree, and bachelor's degree or higher.

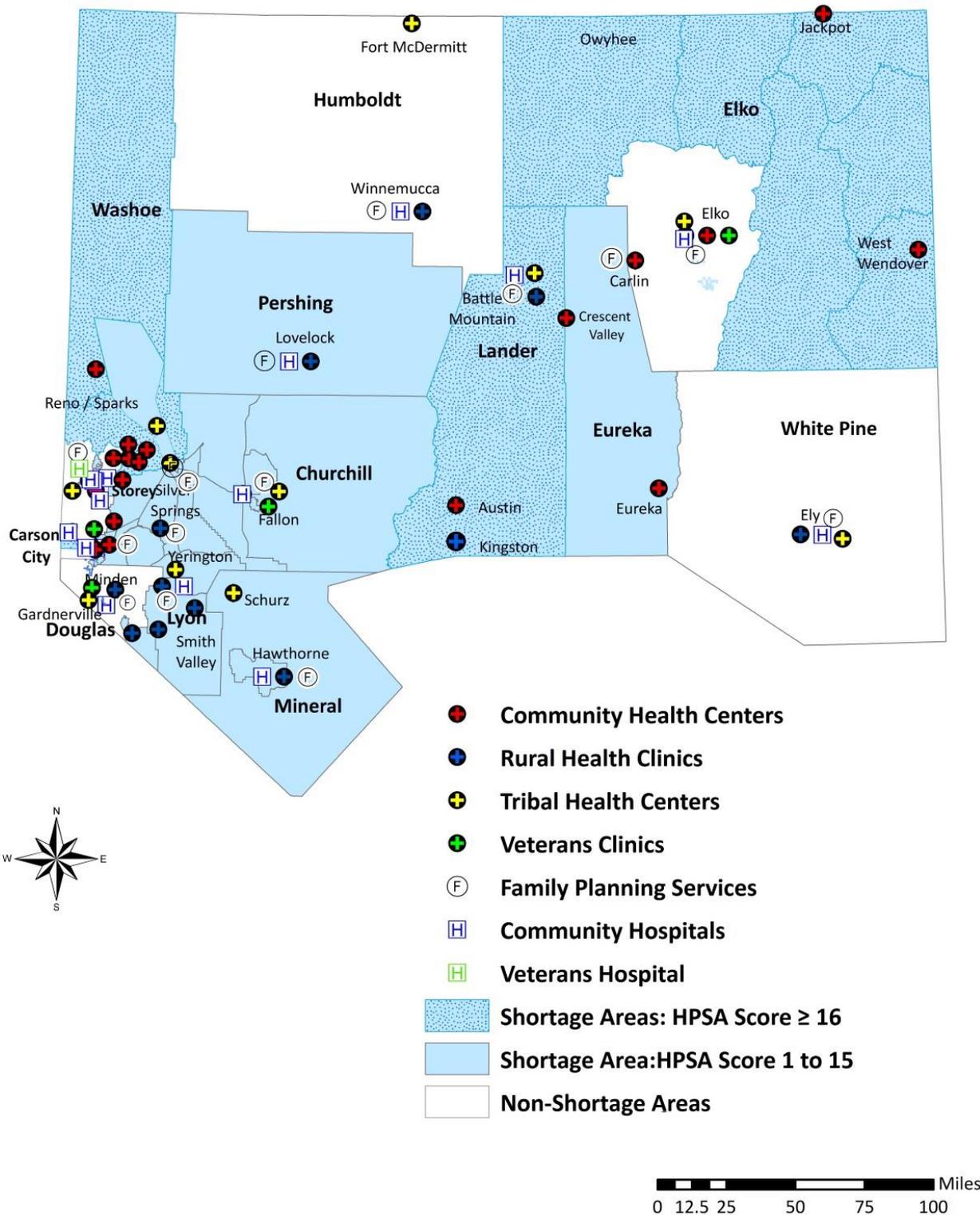
Insurance coverage

Table 21 profiles distribution of public vs. private insurance coverage for women residing in northern Nevada. Tables 22 and 23 shows a decline in uninsured rate over time. From 2013 to 2015, the highest decline in uninsured rate was among women living in rural Nevada.

Cancer incidence and mortality

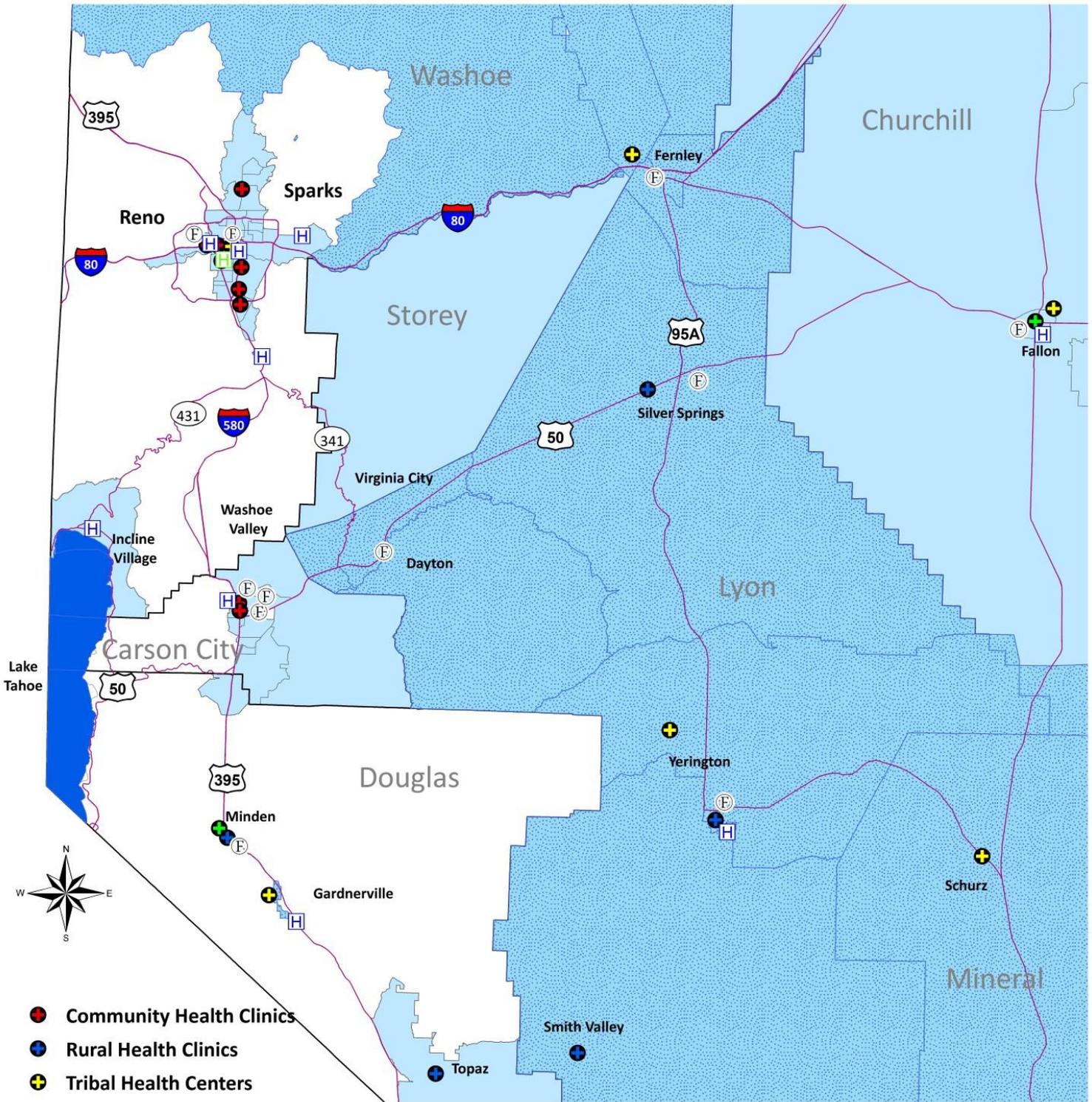
Table 24 summarizes the top five leading cause of cancer deaths among female population northern Nevada counties and they are the following: lung and bronchus; breast cancer; colorectal cancer; pancreatic cancer; and ovarian cancer. Tables 25 and 26 provide incidence and mortality rate for seven different types of cancer that are affecting women in northern Nevada.

Map 3: Primary Medical Care Health Professional Shortage Areas (HPSAs) in Northern Nevada



Source: Office of Statewide Initiatives analysis of data retrieved from Health Resources and Services Administration August 1, 2017 (<https://hpsafind.hrsa.gov>).

Map 4: Primary Medical Care Health Professional Shortage Areas (HPSAs) in Metropolitan Northern Nevada



- Community Health Clinics
- Rural Health Clinics
- + Tribal Health Centers
- + Veterans Clinics
- F Family Planning Centers
- H Community Hospitals
- H Veterans Hospital
- Shortage Areas: HPSA Score \geq 16
- Shortage Areas
- Non-Shortage Areas



Source: Office of Statewide Initiatives analysis of data retrieved from Health Resources and Services Administration August 1, 2017 (<https://hpsafind.hrsa.gov>).

Table 10. Female Population by Age in the Service Area and Nevada – 2017

County/Region	Female Population by Age Group						
	Total – All Ages	10-14	15-44		45-64	65-84	85+
			15-19	20-44			
Washoe County	218,752	14,926	12,951	72,925	55,491	31,827	3,971
Elko County	25,072	1,546	1,213	9,340	6,182	3,106	252
Carson City/Douglas County	52,162	2,845	2,528	13,915	14,708	11,090	2,074
Balance of Service Area	87,705	5,373	5,558	25,456	23,633	17,228	1,951
Northern Nevada – Total	383,691	24,690	22,250	120,726	100,015	63,251	8,249
Nevada – Total	1,447,425	101,964	91,833	480,950	364,794	202,551	24,229

Source: Nevada State Demographer's Office (2017).

Table 11. Female Population by Age in the Service Area and Nevada – 2022

County/Region	Female Population by Age Group						
	Total – All Ages	10-14	15-44		45-64	65-84	85+
			15-19	20-44			
Washoe County	232,527	14,193	16,079	76,677	56,026	38,130	4,162
Elko County	24,173	1,995	1,308	8,320	6,010	3,291	308
Carson City/Douglas County	54,414	2,718	2,695	13,671	14,390	14,170	2,171
Balance of Service Area	87,963	5,094	5,385	25,770	21,469	18,562	2,490
Northern Nevada – Total	399,077	24,000	25,467	124,438	97,896	74,153	9,131
Nevada – Total	1,538,987	96,848	106,212	504,401	381,548	237,692	27,859

Source: Nevada State Demographer's Office (2017).

Table 12. Female Population by Age in Northern Nevada – 2017 to 2022

County/Region	Female Population – Number Change						
	Total – All Ages	10-14	15-44		45-64	65-84	85+
			15-19	20-44			
Washoe County	13,775	-733	3,128	3,752	535	6,303	191
Elko County	-899	449	95	-1,020	-172	185	56
Carson City/Douglas County	2,252	-127	167	-244	-318	3,080	97
Balance of Service Area	258	-279	-173	314	-2,164	1,334	539
Northern Nevada – Total	15,386	-690	3,217	3,712	-2,119	10,902	882
Nevada – Total	91,562	-5,116	14,379	23,451	16,754	35,141	3,630

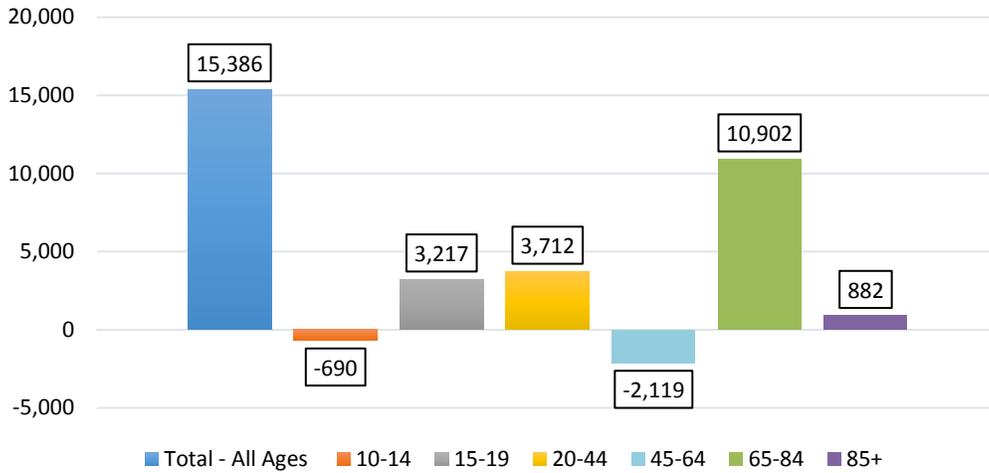
Source: Nevada State Demographer's Office (2017).

Table 13. Female Population by Age in Northern Nevada – 2017 to 2022

County/Region	Female Population – Percent Change						
	Total – All Ages	10-14	15-44		45-64	65-84	85+
			15-19	20-44			
Washoe County	5.9	-5.2	19.5	4.9	1.0	16.5	4.6
Elko County	-3.7	22.5	7.3	-12.3	-2.9	5.6	18.2
Carson City/Douglas County	4.1	-4.7	6.2	-1.8	-2.2	21.7	4.5
Balance of Service Area	0.3	-5.5	-3.2	1.2	-10.1	7.2	21.6
Northern Nevada – Total	3.9	-2.9	12.6	3.0	-2.2	14.7	9.7
Nevada – Total	5.9	-5.3	13.5	4.6	4.4	14.8	13.0

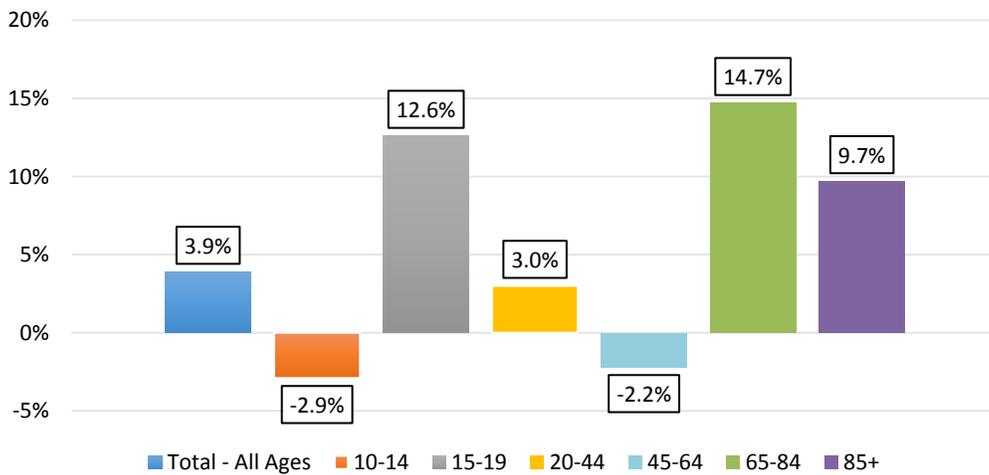
Source: Nevada State Demographer's Office (2017).

Figure 8. Projected Female Population Change by Age in Northern Nevada – 2017 to 2022



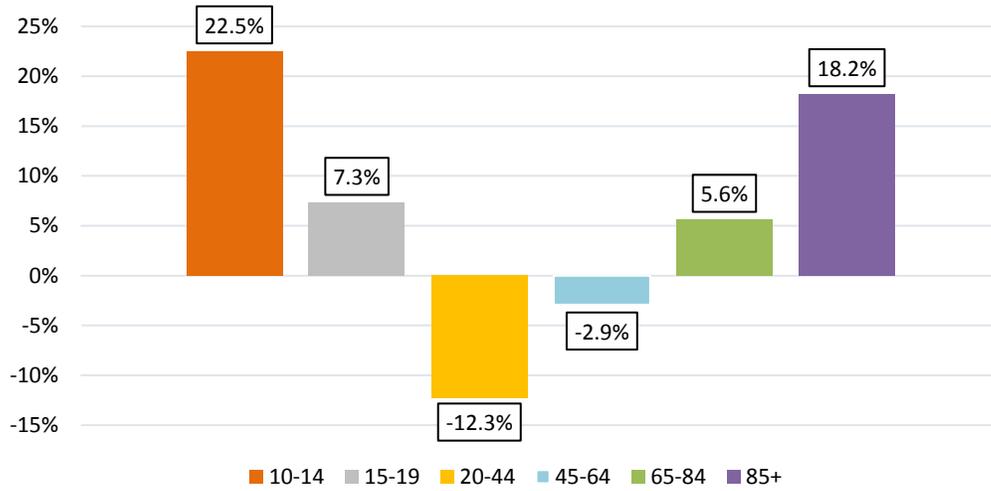
Source: Nevada State Demographer's Office (2017). Office of Statewide Initiatives (2017).

Figure 9. Projected Female Population Change by Age in Northern Nevada – 2017 to 2022



Source: Nevada State Demographer's Office (2017). Office of Statewide Initiatives (2017).

Figure 10. Projected Female Population Percent Change by Age in Elko – 2017 to 2022



Source: Nevada State Demographer's Office (2017). Office of Statewide Initiatives (2017).

Table 14. Distribution of Female Population by Race and Ethnicity in Northern Nevada – 2017

County/Region	Race and Ethnicity – Percent				
	White	Black	American Indian	Asian/Pacific Islander	Hispanic
Washoe County	64.6	2.3	1.7	7.3	24.1
Elko County	71.1	0.6	5.8	1.6	20.9
Carson City/Douglas County	78.2	0.5	2.6	2.6	16.2
Balance of Service Area	77.7	1.2	3.9	2.3	14.9
Northern Nevada – Total	69.9	1.7	2.6	5.1	20.7
Nevada – Total	51.8	8.6	1.2	10.0	28.4

Source: Nevada State Demographer’s Office (2017).

Table 15. Distribution of Female Population by Race and Ethnicity in Northern Nevada – 2022

County/Region	Race and Ethnicity – Percent				
	White	Black	American Indian	Asian/Pacific Islander	Hispanic
Washoe County	62.2	2.4	1.7	7.6	26.1
Elko County	69.4	0.7	5.9	1.8	22.2
Carson City/Douglas County	75.2	0.5	2.6	2.6	19.1
Balance of Service Area	78.4	1.2	5.7	3.4	11.2
Northern Nevada – Total	67.9	1.8	2.9	5.7	21.7
Nevada – Total	49.2	8.9	1.2	10.5	30.3

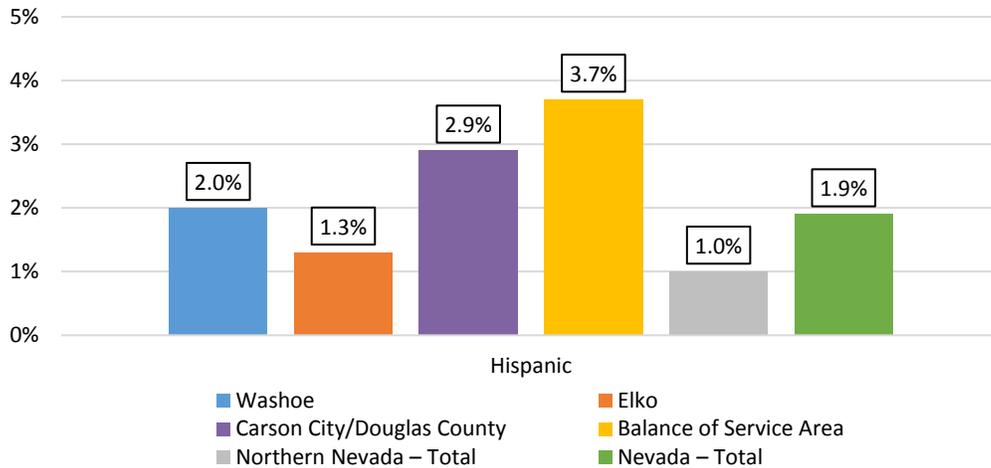
Source: Nevada State Demographer’s Office (2017).

Table 16. Distribution of Female Population by Race and Ethnicity in Northern Nevada – 2017 to 2022

County/Region	Race and Ethnicity – Percent Change				
	White	Black	American Indian	Asian/Pacific Islander	Hispanic
Washoe County	-2.4	0.1	0.0	0.3	2.0
Elko County	-1.7	0.1	0.1	0.2	1.3
Carson City/Douglas County	-3.0	0.0	0.0	0.0	2.9
Balance of Service Area	0.7	0.0	1.8	1.1	3.7
Northern Nevada – Total	-2.0	0.1	0.3	0.6	1.0
Nevada – Total	-2.6	0.3	0.0	0.5	1.9

Source: Nevada State Demographer's Office (2017).

Figure 11. Projected Change in Hispanic Female Population in Northern Nevada – 2017 to 2022



Source: Nevada State Demographer’s Office (2017). Office of Statewide Initiatives (2017).

Table 17. Female Population Below the Federal Poverty Level (100% FPL) by Age in Northern Nevada – 2015

County/Region	Female Population Below 100% FPL – All Ages					
	Under 15	15-44	45-64	65+	Number	Percent
Washoe County	7,991	17,607	6,469	2,727	34,794	16.5
Elko County	700	1,408	652	139	2,899	12.1
Carson City/Douglas County	1,875	3,081	1,620	573	7,149	14.3
Balance of Service Area	2,481	4,359	2,223	916	9,979	16.3
Northern Nevada – Total	13,047	26,455	10,964	4,355	54,821	15.8
Nevada – Total	60,311	105,487	42,619	18,929	227,346	16.8

Source: Population below poverty level estimated from the American Community Survey (2015 5-year estimate). Office of Statewide Initiative (2017). Note: Poverty is measured based on income thresholds that vary by family size and composition; poverty statistics adhere to the standards specified by the Office of Management and Budget in Statistical Policy Directive 14. Poverty is determined for individuals in housing units and non-institutional group quarters, excluding children under age 15 who are not related to the householder, people living in institutional group quarters, and people living in college dormitories or military barracks. In 2015, poverty threshold for one unrelated individual is \$12,082, two people in the household is \$15,391, and four people in the household is \$24,257.

Table 18. Distribution of Female Population Below the Federal Poverty Level (100% FPL) by Age in Northern Nevada – 2015

County/Region	Female Population Below 100% FPL – Percent of All Ages				
	Under 15	15-44	45-64	65+	Total – All Ages
Washoe County	3.8	8.3	3.1	1.3	16.5
Elko County	2.9	5.9	2.7	0.6	12.1
Carson City/Douglas County	3.7	6.2	3.2	1.1	14.3
Balance of Service Area	4.1	7.1	3.6	1.5	16.3
Northern Nevada – Total	3.8	7.6	3.2	1.3	15.8
Nevada – Total	4.5	7.8	3.2	1.4	16.8

Source: Population below poverty level estimated from the American Community Survey (2015 5-year estimate). Office of Statewide Initiative (2017). Note: Poverty is measured based on income thresholds that vary by family size and composition; poverty statistics adhere to the standards specified by the Office of Management and Budget in Statistical Policy Directive 14. Poverty is determined for individuals in housing units and non-institutional group quarters, excluding children under age 15 who are not related to the householder, people living in institutional group quarters, and people living in college dormitories or military barracks. In 2015, poverty threshold for one unrelated individual is \$12,082, two people in the household is \$15,391, and four people in the household is \$24,257.

Table 19. Female Population Age 18 and older Below the Federal Poverty Level (100% FPL) by Educational Attainment in Northern Nevada – 2015

County/Region	Educational Level – Number				Total
	Less than High School	High School or GED	Some College Associate’s Degree	Bachelor’s Degree or Higher	
Washoe County	5,493	5,215	5,697	2,641	19,046
Elko County	501	539	576	107	1,723
Carson City/Douglas County	956	1,139	1,784	399	4,278
Balance of Service Area	2,037	3,104	2,609	539	8,289
Northern Nevada – Total	8,987	9,997	10,666	3,686	33,336
Nevada – Total	36,308	39,672	39,057	13,562	128,599

Source: Population below poverty level estimated from the American Community Survey (2015 5-year estimate). Office of Statewide Initiative (2017). Poverty is measured based on income thresholds that vary by family size and composition; poverty statistics adhere to the standards specified by the Office of Management and Budget in Statistical Policy Directive 14. Poverty is determined for individuals in housing units and non-institutional group quarters, excluding children under age 15 who are not related to the householder, people living in institutional group quarters, and people living in college dormitories or military barracks. In 2015, poverty threshold for one unrelated individual is \$12,082, two people in the household is \$15,391, and four people in the household is \$24,257.

Table 20. Distribution of Female Age 18 and older Below the Federal Poverty Level (100% FPL) by Educational Attainment in Northern Nevada – 2015

County/Region	Educational Level – Percent				Total
	Less than High School	High School or GED	Some College Associate’s Degree	Bachelor’s Degree or Higher	
Washoe County	28.8	27.4	29.9	13.9	100.0
Elko County	29.1	31.3	33.4	6.2	100.0
Carson City/Douglas County	22.3	26.6	41.7	9.3	100.0
Balance of Service Area	24.6	37.4	31.5	6.5	100.0
Northern Nevada – Total	27.0	30.0	32.0	11.1	100.0
Nevada – Total	28.2	30.8	30.4	10.5	100.0

Source: Population below poverty level estimated from the American Community Survey (2015 5-year estimate). Office of Statewide Initiative (2017). Note: Poverty is measured based on income thresholds that vary by family size and composition; poverty statistics adhere to the standards specified by the Office of Management and Budget in Statistical Policy Directive 14. Poverty is determined for individuals in housing units and non-institutional group quarters, excluding children under age 15 who are not related to the householder, people living in institutional group quarters, and people living in college dormitories or military barracks. In 2015, poverty threshold for one unrelated individual is \$12,082, two people in the household is \$15,391, and four people in the household is \$24,257.

Table 21. Insured Female Population Aged 18-64 in Northern Nevada – 2015

County/Region	Type of Coverage – Female Aged 18-64				Total
	Private Insurance		Public Insurance		
	Number	Percent	Number	Percent	
Washoe County	95,555	84.5	17,477	15.5	113,032
Elko County	7,667	86.7	1,180	13.3	8,847
Carson City/Douglas County	20,099	81.1	4,695	18.9	24,794
Balance of Service Area	27,457	79.4	7,133	20.6	34,590
Northern Nevada – Total	150,778	83.2	30,485	16.8	181,263
Nevada – Total	574,732	83.7	111,623	16.3	686,355

Source: U.S. Census Bureau 2015 1- Year American Community Surveys (2017). Office of Statewide Initiative (2017).

Table 22. Uninsured Female Population Aged 18 to 64 in Northern Nevada – 2013 to 2015

County/Region	Uninsured Female Population Aged 18 to 64			
	2013	2015	Change – 2013 to 2015	
			Number	Percent
Washoe County	30,588	17,571	-13,017	-42.6
Elko County	3,278	1,959	-1,319	-40.2
Carson City/Douglas County	6,188	3,428	-2,760	-44.6
Balance of Service Area	11,529	6,485	-5,044	-43.8
Northern Nevada – Total	51,583	29,443	-22,140	-42.9
Nevada – Total	214,846	131,072	-83,774	-39.0

Source: Small Area Health Insurance Estimates (2017). U.S. Census Bureau, 2013, 2015 1-Year American Community Surveys (2017). Office of Statewide Initiative (2017).

Table 23. Uninsured Rate Female Population Aged 18 to 64 in Northern Nevada – 2013 to 2015

County/Region	Uninsured Rate Female Population Aged 18 to 64		
	2013	2015	Change – 2013 to 2015
Washoe County	14.1	8.3	-5.8
Elko County	13.3	8.2	-5.1
Carson City/Douglas County	12.4	6.8	-5.6
Balance of Service Area	19.0	10.6	-8.4
Northern Nevada – Total	14.7	8.5	-6.2
Nevada – Total	15.4	9.7	-5.7

Source: Small Area Health Insurance Estimates (2017). U.S. Census Bureau, 2013, 2015 1-Year American Community Surveys (2017). Office of Statewide Initiative (2017).

Table 24. Twenty Five Leading Cancer Mortality by Type for Female Population All Ages in Nevada by Region – 2015

Type of Cancer	Mortality by Types of Cancer Rank by Region			
	Washoe	Rural	Nevada	U.S.
Lung and Bronchus	1	1	1	1
Breast	2	2	2	2
Colorectal	3	3	3	3
Pancreas	4	4	4	4
Ovary	5	5	5	5
Leukemias	7	7	7	6
Non-Hodgkin Lymphomas	8	8	8	7
Corpus and Uterus, NOS	9	13	9	8
Liver and Intrahepatic Bile Ducts	6	6	6	9
Brain and Other Nervous Sys. Neoplasms	10	10	10	10
Myeloma	12	14	15	11
Kidney and Renal Pelvis	15	11	12	12
Stomach	17	–	13	13
Urinary Bladder	14	9	11	14
Cervix Uteri	11	12	14	15
Melanoma of the Skin	13	17	16	16
Esophagus	16	16	17	17
Lip, Oral Cavity and Pharynx	18	15	18	18
Soft Tissue including Heart	–	–	20	19
Endocrine System	–	–	19	20
Non Epithelial Skin	–	–	22	21
Larynx	–	–	21	22
Bones and Joints	–	–	23	23
Mesothelioma	–	–	24	24
Hodgkin Lymphoma	–	–	25	25

Source: Nevada Central Cancer Registry (2017). Office of Statewide Initiatives (2017).

Note: Cancer Mortality Rankings for Carson City, Douglas County, and Elko County are 1) Lung and Bronchus, 2) Breast, 3) Colorectal, 4) Ovary, 5) Pancreas. Not shown due to small counts and suppressed rates. Rankings are obtained from rolling average cancer deaths year 2010-2014.

Table 25. Incidence by Type of Cancer for Female Population in Nevada – 2015

Types of Cancer	Cancer Incidence by Region						
	Washoe County	Carson	Douglas	Elko	Balance Service Area	Nevada	United States
Breast Cancer	129.3	136.0	114.6	94.9	105.2	111.6	123.4
Lung and Bronchus	54.2	72.4	46.7	46.7	57.8	55.8	53.3
Colon and Rectum Cancer	34.1	33.8	31.2	35.9	34.1	34.7	35.5
Corpus and Uterus, NOS	20.2	24.0	22.8	15.9	17.9	19.4	25.6
Pancreatic Cancer	11.6	11.5	10.8	12.4	9.9	10.1	10.9
Ovary Cancer	11.1	9.5	10.7	8.4	10.8	10.8	11.6
Cervical Cancer	7.5	9.4	–	–	8.0	7.7	7.6

Source: Nevada Central Cancer Registry (2017).

Note: Rates are age-adjusted per 100,000 population. Nevada and U.S cancer rate are age-adjusted to the 2000 U.S. standard population. Incidence rate was calculated based on rolling average data from 2010 – 2014.

Table 26. Mortality by Type of Cancer for Female Population in Nevada – 2015

Types of Cancer	Cancer Mortality by Region						
	Washoe County	Carson	Douglas	Elko	Balance Service Area	Nevada	United States
Breast Cancer	22.4	23.3	22.2	13.1	19.1	21.7	21.5
Lung and Bronchus	38.2	46.8	32.0	22.8	39.1	38.7	37.0
Colon and Rectum Cancer	12.2	11.4	7.9	–	11.9	12.9	12.7
Corpus and Uterus, NOS	3.7	–	–	–	2.5	3.1	4.5
Pancreatic Cancer	10.1	9.0	7.0	–	7.3	8.5	9.5
Ovary Cancer	6.3	8.6	7.6	9.3	6.4	6.9	7.5
Cervical Cancer	2.7	–	–	–	1.9	2.1	2.3

Source: Nevada Central Cancer Registry (2017).

Note: Rates are age-adjusted per 100,000 population. Nevada and U.S cancer rate are age-adjusted to the 2000 U.S. standard population. Mortality rate was calculated based on rolling average data from 2010 – 2014.

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