

## 2022 BIENNIAL REPORT

### 2021 RN and 2021 LPN Renewal Survey Data

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#### The Nebraska Center for Nursing

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January 2022 – Lincoln, Nebraska Report based on 2021 RN renewal data and 2021 LPN renewal data.<sup>1</sup>

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<sup>&</sup>lt;sup>1</sup> The data collection process for both, the 2021 RN and 2021 LPN renewal surveys, ended on October 31<sup>st</sup>, 2021. Data provided by DHHS, System Automation (December, 2021).

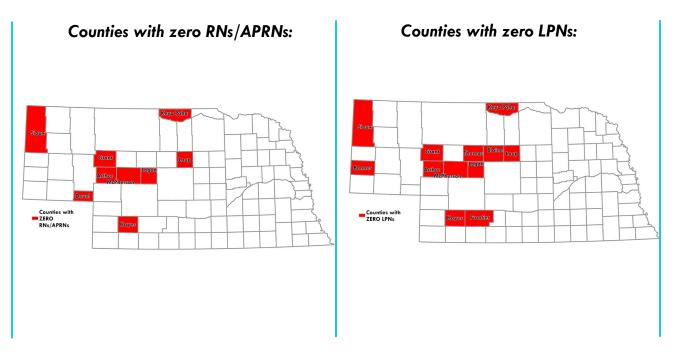
### **Table of Contents**

EXECUTIVE SUMMARY	4
THE NEBRASKA NURSING WORKFORCE	4
METHODOLOGY	6
THE NEBRASKA REGISTERED NURSE & LICENSED PRACTICAL NURSE WORK	(FORCE8
Nebraska Workforce Distribution across Rural and Urban Counties	13
Nebraska Nursing Workforce by Demographic Cohort	19
Satisfaction Levels with the Nursing Profession	22
NURSING WORKFORCE PROJECTIONS	23
Nursing Workforce Model	23
Nursing Workforce Gap by Economic Region	27
ACKNOWLEDGMENTS	29
APPENDIX	30
NEBRASKA CENTER FOR NURSING - LIST OF BOARD MEMBERS	32
THE NEBRASKA CENTER OF NURSING: WHO WE ARE	34
STRATEGIC PLAN	35
Vision	35
Mission	35
Strategic Focus #1: Data	35
Strategic Focus #2: Collaboration	35
Strategic Focus #3: Promotion	35

### EXECUTIVE SUMMARY THE NEBRASKA NURSING WORKFORCE

- As of January 2022, the number of individuals who hold Nebraska nursing licenses is 31,425 RNs; 3,951 APRNs; and 5,296 LPNs (DHHS).
- The 2022 biennial report illustrates nearly 2,600 fewer nurses (RNs, APRNs, and LPNs) working in Nebraska when compared to 2018/19 (24,531 vs. 27,106, respectively), which represents a decrease of 9.5% in the nursing workforce.
- Between 2018/19 and 2021, Nebraska lost on average 1.5 nurses per 1,000 people (14 nurses per 1,000 people in 2018/19 vs. 12.5 nurses per 1,000 people in 2021).
- The number of nurses included in the data analysis and report that follows represent the sample of nurses based on surveys returned a renewal. The sample size consisted of 20,526 RNs (1,921 are APRNs), and 4,018 LPNs, whose principal employment is in Nebraska.
- Based on the Center for Nursing Supply and Demand model data in 2020, there was an existing shortage of 4,191 nurses (RNs, APRNs, and LPNs).
- 6.9% of nurses (RNs and APRNs) are very likely to leave their primary employment over the next 12 months compared to 5.9% in 2018. The largest generation group of nurses who are planning to leave their employment are Generation Y/Millennials (43%), followed by Baby Boomers (25%), and then by Generation X (24%).
- Nearly 1,000 nurses between the ages of 24 and 55 are "very likely" to leave their employment over the next 12 months. They represent two-thirds of all nurses who are planning to leave their employment over the next 12 months.
- Travel nurses (RNs and APRNs) increased 34% between 2018 and 2021, showing the additional workforce needed to meet demand. Traveling nurses earn an average of \$18,000 annually more compared to 'staff nurses' in Nebraska (\$76,486 vs. \$58,435 respectively).
- According to the 2021 RN/APRN Renewal Survey, nine counties reported zero RNs or APRNs working in them: Arthur, Deuel, Grant, Hayes, Keya Paha, Logan, Loup, McPherson, and Sioux. The 2021 LPN Renewal Survey reported zero

LPNs working in twelve counties: Arthur, Banner, Blaine, Frontier, Grant, Hayes, Keya Paha, Logan, Loup, McPherson, Sioux, and Thomas. There are eight counties with zero RNs/APRNs or LPNs working in them: Arthur, Grant, Hayes, Keya Paha, Logan, Loup, McPherson, and Sioux.



- The median age of RNs has remained stable over the years. The current (2020) median age is 43.0, and nationwide the median age is 52 years. The median age for LPNs is 47. 5, and nationwide the median age for LPNs is 53 years. (NCSBN, 2020)<sup>2</sup>.
- The percentage of males that are Registered Nurses has steadily increased over the years, reaching a high of 6.5% in the year 2020. Male participation within the LPN workforce has historically been lower than the RN workforce, although male participation has grown in previous years, reaching 3.2% in 2019. The male participation among LPNs slightly decreased in 2021(3.1%). The percentage of males within Nebraska RNs and LPNs is still lower than the national average (9.4% and 8.1% respectively). (NCSBN, 2020).
- RNs who are considered ethnic minorities have also increased over the years, from 3.1% in the year 2000 to 8% in the year 2020. Among LPNs, minority representation has also increased over time, from 4.6% in 2003 to 13.1% in

<sup>&</sup>lt;sup>2</sup> The 2020 National Nursing Workforce Survey. National Council of State Boards of Nursing (NCSBN). https://www.journalofnursingregulation.com/action/showPdf?pii=S2155-8256%2821%2900027-2

2021. At the state level, 21.6% of the population is considered a minority<sup>3</sup>. Nationwide, 19.4% of RNs and 30.5% of LPNs are considered minorities (NCSBN, 2020).

- In terms of education attainment, RNs with bachelor's degrees and higher have increased 22.1% from the year 2008 to the year 2021 (51.3% vs. 73.4%, respectively<sup>4</sup>). At the national level, 65.2% of RNs hold bachelor's degrees or higher (NCSBN, 2020). Also, RNs with doctoral degrees have substantially increased, from 74 RNs with doctoral degrees (DNP, EdD, and PhD.) in 2003 to a total of **569** RNs in 2021 (669% growth).
- Forty seven percent of RNs work in Nebraska hospitals which is lower than the national data (54.8%; NCSBN, 2020<sup>5</sup>). Only 8.7% of Nebraska LPNs work in hospitals. In comparison, at the national level, 29.3% of LPNs work in hospitals. About four out of ten LPNs work in Nursing Homes/Extended Care/ Assisted Living Facility (41%).

### **METHODOLOGY**

The 2022 Center for Nursing Biennial Report contains nursing workforce data analysis for RNs<sup>6</sup> and LPNs collected through the renewal surveys from 2020/21 and 2021, respectively. The biennial report contains information about nursing workforce projections from the year 2020 through the year 2025 for RNs, APRNs, and LPNs based on a multiregional nursing supply and demand model for each of the nine Nebraska economic regions. This model is one of a few multiregional nursing workforce models available in the United States that projects the nursing workforce at the regional level by considering degrees of urbanization (i.e., urban vs. rural/frontier) and nursing intensity factors by setting (i.e., hospital, long-term care, education).

The Nebraska Center for Nursing has been analyzing nursing workforce data since the year 2000, collected from surveys completed by Registered Nurses (RNs), Advanced Practice Registered Nurses (APRNs), and Licensed Practical Nurses (LPNs) upon renewing their respective nursing licenses. These surveys are analyzed to identify nurses who only work in the State of Nebraska to provide clear demographic estimates of the nursing workforce providing

<sup>&</sup>lt;sup>3</sup> U.S. Census Bureau (ACS 1- year 2020 Estimate).

<sup>&</sup>lt;sup>4</sup> Includes bachelor and higher degrees in nursing and non-nursing fields.

<sup>&</sup>lt;sup>5</sup> The 2020 National Nursing Workforce Survey. National Council of State Boards of Nursing (NCSBN). https://www.journalofnursingregulation.com/action/showPdf?pii=S2155-8256%2821%2900027-2

<sup>&</sup>lt;sup>6</sup> The RN Renewal Survey also includes APRN data.

health care to the citizens of the State. Nursing workforce is provided by urban and rural counties based on the DHHS Office of Rural Health classification (see map in Appendix, page 32). Nursing projections, including demand and supply of nurses, are calculated using the full-time equivalent (FTE).

The renewal surveys are collected by the Nebraska DHHS Licensure Unit in both digital and paper formats, to gather information that includes demographic data, job location, work settings, incivility/bullying, and satisfaction levels of the nursing profession and workplaces. The renewal surveys comply with the minimum dataset developed by the National Forum of State Nursing Workforce Centers. The RN renewal survey contains 35 questions, and the LPN renewal survey contains 28 questions, which can be cross-tabulated, to enrich the statistical analysis of the workforce data. The Nebraska Center for Nursing invites nurses and the general public interested in these databases to request additional information by directly contacting the Executive Director of the Center, Ann Oertwich, at ann.oertwich@nebraska.gov.

# THE NEBRASKA REGISTERED NURSE & LICENSED PRACTICAL NURSE WORKFORCE

#### Workforce Size and Distribution

January 2022 DHHS Licensure Unit data revealed the number of nurses who hold a Nebraska license to include 31,425 RNs; 3,951 APRNs; and 5,296 LPNs. Workforce data is collected from licensees during biennial license renewal cycles.

A total of 20,526 surveys were received from RNs (2020/21) and 4,018 surveys from LPNs (2021) and analyzed representing the sample nurses who indicated work in the State of Nebraska. Nine counties reported zero RNs working in them: Arthur, Deuel, Grant, Hayes, Keya Paha, Logan, Loup, McPherson, and Sioux. The highest number of RNs was reported in Douglas County (n = 9,132), followed by Lancaster County (n = 3,758). Three counties reported having just one RN working in them: Banner, Blaine, and Wheeler.

Twelve counties reported zero LPNs working in them: Arthur, Banner, Blaine, Frontier, Grant, Hayes, Keya Paha, Logan, Loup, McPherson, Sioux, and Thomas. The highest number of LPNs was reported in Douglas County (n = 871), followed by Lancaster County (n = 655). One county reported having just one LPN working: Wheeler.

The total per capita number of RNs (2020/21) and LPNs (2021) is **10.5** and **2.0** per 1,000 people, respectively. (See Appendix for details, pages 30-31). The table below shows the RN and LPN workforce and the total number of inhabitants by county in 2020 (U.S. Census Bureau population estimates). Counties highlighted in **red** show a lower number of RNs per capita compared to the state average. These counties total 75 out of the 93 counties in the State of Nebraska. See **Table 1** and **Figure 1** below.

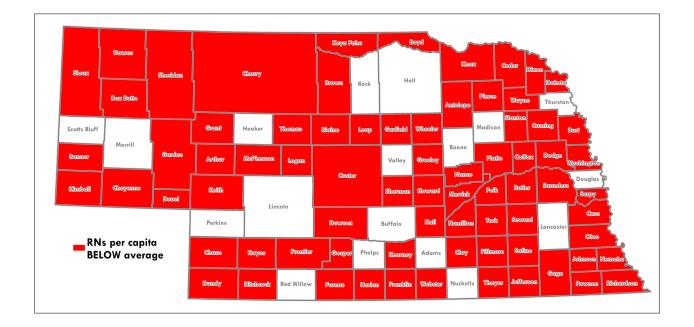
County:	2020 Total Population	RNs 2021	LPNs 2021	RNs per 1,000	LPNs per 1,000
Adams	31,205	397	61	12.7	2.0
Antelope	6,295	51	15	8.1	2.4
Arthur	434	0	0	0.0	0.0
Banner	674	1	0	1.5	0.0
Blaine	431	1	0	2.3	0.0
Boone	5,379	71	33	13.2	6.1
Box Butte	10,842	86	49	7.9	4.5
Boyd	1,810	13	7	7.2	3.9

Table 1: Nebraska Nursing Workforce

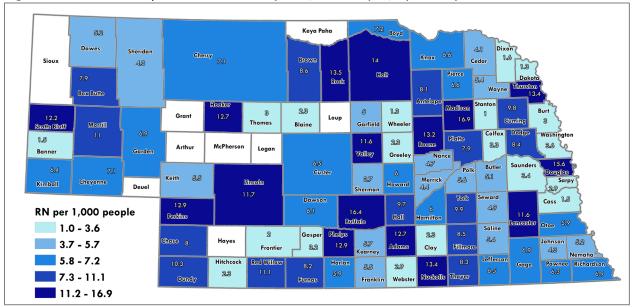
County:	2020 Total Population	RNs 2021	LPNs 2021	RNs per 1,000	LPNs per 1,000
Brown	2,903	25	6	8.6	2.1
Buffalo	50,084	819	175	16.4	3.5
Burt	6,722	20	11	3.0	1.6
Butler	8,369	43	22	5.1	2.6
Cass	26,598	41	18	1.5	0.7
Cedar	8,380	34	19	4.1	2.3
Chase	3,893	31	13	8.0	3.3
Cherry	5,455	39	13	7.1	2.4
Cheyenne	9,468	67	35	7.1	3.7
Clay	6,104	14	12	2.3	2.0
Colfax	10,582	35	18	3.3	1.7
Cuming	9,013	88	20	9.8	2.2
Custer	10,545	69	32	6.5	3.0
Dakota	21,582	27	9	1.3	0.4
Dawes	8,199	43	13	5.2	1.6
Dawson	24,111	146	62	6.1	2.6
Deuel	1,838	0	3	0.0	1.6
Dixon	5,606	9	6	1.6	1.1
Dodge	37,167	314	70	8.4	1.9
Douglas	584,526	9,132	871	15.6	1.5
Dundy	1,654	17	14	10.3	8.5
Fillmore	5,551	47	30	8.5	5.4
Franklin	2,889	16	8	5.5	2.8
Frontier	2,519	5	0	2.0	0.0
Furnas	4,636	38	19	8.2	4.1
Gage	21,704	149	123	6.9	5.7
Garden	1,874	13	11	6.9	5.9
Garfield	1,813	9	7	5.0	3.9
Gosper	1,893	6	2	3.2	1.1
Grant	611	0	0	0.0	0.0
Greeley	2,188	5	7	2.3	3.2
Hall	62,895	610	188	9.7	3.0
Hamilton	9,429	57	21	6.0	2.2
Harlan	3,073	18	4	5.9	1.3
Hayes	856	0	0	0.0	0.0
Hitchcock	2,616	6	5	2.3	1.9
Holt	10,127	142	32	14.0	3.2
Hooker	711	9	3	12.7	4.2
Howard	6,475	39	11	6.0	1.7
Jefferson	7,240	47	42	6.5	5.8
Johnson	5,290	23	13	4.3	2.5
Kearney	6,688	38	15	5.7	2.2
Keith	8,335	46	8	5.5	1.0
Keya Paha	769	0	0	0.0	0.0

County:	2020 Total Population	RNs 2021	LPNs 2021	RNs per 1,000	LPNs per 1,000
Kimball	3,434	22	5	6.4	1.5
Knox	8,391	55	16	6.6	1.9
Lancaster	322,608	3758	655	11.6	2.0
Lincoln	34,676	405	102	11.7	2.9
Logan	716	0	0	0.0	0.0
Loup	607	0	0	0.0	0.0
McPherson	399	0	0	0.0	0.0
Madison	35,585	600	151	16.9	4.2
Merrick	7,668	34	15	4.4	2.0
Morrill	4,555	50	14	11.0	3.1
Nance	3,380	16	16	4.7	4.7
Nemaha	7,074	37	19	5.2	2.7
Nuckolls	4,095	55	10	13.4	2.4
Otoe	15,912	94	34	5.9	2.1
Pawnee	2,544	16	9	6.3	3.5
Perkins	2,858	37	6	12.9	2.1
Phelps	8,968	116	44	12.9	4.9
Pierce	7,317	48	29	6.6	4.0
Platte	34,296	271	100	7.9	2.9
Polk	5,214	29	16	5.6	3.1
Red Willow	10,702	119	44	11.1	4.1
Richardson	7,871	54	37	6.9	4.7
Rock	1,262	17	11	13.5	8.7
Saline	14,292	77	37	5.4	2.6
Sarpy	190,604	554	124	2.9	0.7
Saunders	22,278	75	28	3.4	1.3
Scotts Bluff	36,084	439	130	12.2	3.6
Seward	17,609	87	31	4.9	1.8
Sheridan	5,127	22	13	4.3	2.5
Sherman	2,959	11	5	3.7	1.7
Sioux	1,135	0	0	0.0	0.0
Stanton	5,842	6	9	1.0	1.5
Thayer	5,034	42	28	8.3	5.6
Thomas	669	2	0	3.0	0.0
Thurston	6,773	91	9	13.4	1.3
Valley	4,059	47	15	11.6	3.7
Washington	20,865	75	22	3.6	1.1
Wayne	9,697	52	15	5.4	1.5
Webster	3,395	10	10	2.9	2.9
Wheeler	774	1	1	1.3	1.3
York	14,125	140	45	9.9	3.2
Total population	1,961,504	20,520	4,011	10.5	2.0

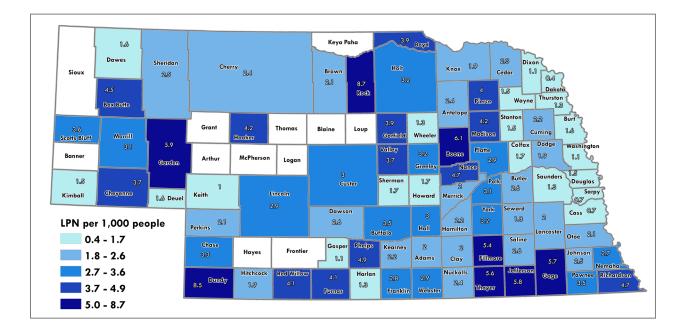
"Per capita [nursing] supply does not take into account differences in population age, disease prevalence, [intensity factors] or the number of hospital beds that must be staffed. Still, it is informative because it illustrates that [state]-level information masks substantial local-level differences." Adapted from HRSA report (2013).



**Figures 2 and 3** show Nebraska per capita RN/APRN and LPN per 1,000 people by county. These graphic representations help to identify the diversity of the nursing workforce needed at the county and regional levels.



#### Figure 2: Nebraska RN/APRN Workforce per 1,000 People, by County



#### Nebraska Workforce Distribution across Rural and Urban Counties

A total of 18,038 RNs/APRNs and 2,973 LPNs work in urban counties. And a total of 2,482 RNs and 1,038 LPNs work in rural counties. One-fourth (25.9%) of LPNs work in rural counties, while only 12.1% of RNs/APRNs work in those areas. As the state nursing workforce data is reported where nurses work and the national data is reported where nurses live, it's not possible to compare both geographies. As a proxy, 24% of LPNs nationwide live in rural areas, which is lower than the percentage of LPNs who work in rural areas in Nebraska. However, nationwide data of RNs living in rural areas is 16%, which is higher than the percentage of reported of RNs working in rural areas of Nebraska (12.1%). As a reference, 18% of the total population in Nebraska live in rural and urban areas of Nebraska.

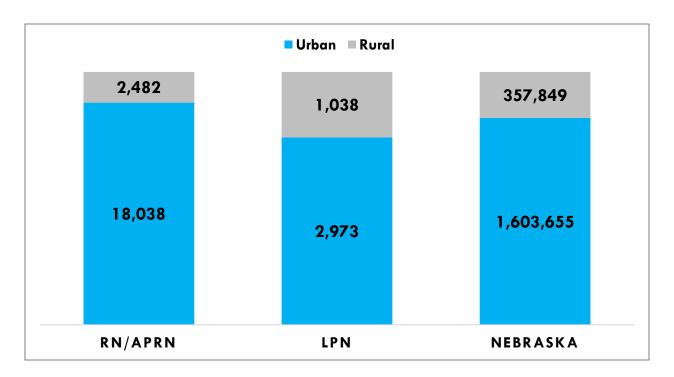


Figure 4: Nebraska Nursing Workforce Distribution in Rural and Urban Areas

<sup>&</sup>lt;sup>7</sup> Nebraska DHHS (2016). Disparities Demographic Data Recommendations. Division of Public Health. Department of Health & Human Services. November 2016. Available at:

https://dhhs.ne.gov/Reports/Disparities%20Demographic%20Data%20Recommendations%20-%202016.pdf (see page 32 in the Appendix for more details).

Counties classified as urban by Nebraska DHHS present the highest number of RNs per capita in Nebraska. On average, there are 11.2 RNs per 1,000 people in urban counties compared to 6.9 RNs in rural counties.

Counties classified as rural by Nebraska DHHS present the highest number of LPNs per capita in Nebraska. On average, there are 2.9 LPNs per capita in urban counties compared to 1.9 LPNs in urban counties. **Table 2** compares the per capita number of RNs and LPNs that work in urban vs. rural counties in Nebraska.

Nurse Type:	<b>Urban</b> County per capita	<b>Rural</b> County per capita
RNs	11.2	6.9
LPNs	1.9	2.9

Table 2: RN and LPN per capita by Urban and Rural Counties in Nebraska

RNs in urban areas are more likely to hold a bachelor's degree or higher than RNs working in rural areas (75.6% vs. 53.9%, respectively). RNs working in rural counties are more likely to be 50 years of age and older in comparison to RNs working in urban counties (36.0% vs. 29.4%, respectively). On average, RNs working in rural counties are 2.6 years older than RNs working in urban counties. RNs in rural counties are less likely to work in hospitals and more likely to work in Nursing Homes/Extended Care Facilities when compared to RNs working in urban counties.

LPNs working in rural areas are more likely to be white non-Hispanic when compared to LPNs working in urban counties (94.9% vs. 84.1%, respectively). LPNs in rural counties are more likely to work in Nursing Homes than LPNs working in urban counties (40.0% vs. 30.1%, respectively). The following **Tables 3 and 4** show demographics and employment characteristics for RNs and LPNs by urban and rural areas in Nebraska.

Age (RN/APRN)	Urban Areas		
25 or younger	(%) 7.2%	<b>(%)</b> 4.8%	<b>(%)</b> 6.8%
26-30	14.1%	11.4%	13.8%
31-35	15.4%	13.6%	15.3%
36-40	15.4%	14.2%	15.3%
41-45	11.2%	11.5%	11.4%
46-50	9.2%	10.3%	9.4%
51-55	7.3%	7.6%	7.3%
56-60	9.1%	11.0%	9.3%
	7.4%	9.4%	7.5%
61-65			
66-70 71 or older	2.8%	4.6%	3.0%
71 or older	0.9%	1.7%	1.0%
Total	100.0%	100.0%	100.0%
Average age	42.7	45.2	43.0
Race/Ethnicity		/	
White	91.5%	95.7%	92.0%
Black/African American	2.3%	0.5%	2.1%
Hispanic/Latino	3.3%	2.0%	3.2%
Asian	1.6%	0.7%	1.5%
American Indian/Alaska Native	0.2%	0.5%	0.2%
Native Hawaiian or Other Pacific Islander	0.2%	0.0%	0.2%
Other	0.9%	0.7%	0.9%
Total	100%	100%	100%
Gender			
Female	93.2%	95.9%	93.5%
Male	6.8%	4.1%	6.5%
Total	100%	100%	100%
Education (highest degree attained) – Inclu	des nursing and non	-nursing degrees	
RN Diploma	6.2%	11.3%	6.9%
Associate's	17.8%	34.4%	19.8%
Bachelor's	57.1%	42.7%	55.4%
Master's	14.5%	9.4%	13.9%
Post Graduate Certificate	1.3%	1.2%	1.3%
Doctoral	3.0%	0.9%	2.8%
Total	100.0%	100.0%	100.0%

Table 3: Residential Distribution of the RN/APRN Workforce - Urban and Rural Areas in Nebraska

Setting (RN/APRN)	Urban Areas (%)	Rural Areas (%)	All Areas (%)
Ambulatory Surgical	4.9%	1.8%	4.5%
Assisted Living	0.6%	1.0%	0.6%
Birthing Center	0.4%	0.0%	0.3%
Clinic	15.9%	14.5%	15.8%
College Health	0.4%	0.1%	0.4%
Correctional/Prison	0.3%	0.7%	0.3%
Developmental Disability	0.3%	0.5%	0.3%
Dialysis Center	0.7%	0.7%	0.7%
Emergency Department	2.7%	2.6%	2.7%
Federally Qualified Health Center (FQHC)	0.4%	0.0%	0.4%
Health Department	0.3%	0.9%	0.4%
Home Health	3.1%	3.8%	3.2%
Hospice/Palliative Care	1.3%	1.2%	1.3%
Hospital	48.1%	45.3%	47.7%
Industry/Sales/IT	0.4%	0.1%	0.3%
Insurance	1.5%	0.2%	1.3%
Military /DoD	0.1%	0.0%	0.1%
Nursing Home (SNF/NF)	5.2%	14.7%	6.3%
Occupational/Employee/Workplace Health	0.7%	0.7%	0.7%
Other	3.7%	1.8%	3.4%
Policy/Planning/Regulatory/ Licensing	0.1%	0.0%	0.1%
Psych-Mental Health	1.7%	0.3%	1.6%
Public Health	0.7%	1.4%	0.8%
Research	0.5%	0.0%	0.5%
Retail Clinic	0.2%	0.0%	0.2%
Rural Health Clinic	0.2%	3.3%	0.5%
School Health Service	1.7%	3.5%	1.9%
Substance Use/Addiction	0.1%	0.3%	0.1%
University/Academic	2.2%	0.4%	2.0%
Urgent Care	0.4%	0.1%	0.4%
VA Facility	1.0%	0.0%	0.9%
Volunteer Clinic	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%

able 4: Residential Distribution of the LPN	Urban Areas	Rural Areas	All Areas
Age (LPN)	(%)	(%)	(%)
25 or younger	3.8%	4.0%	3.8%
26-30	7.2%	5.8%	6.9%
31-35	9.5%	7.6%	9.0%
36-40	14.2%	11.4%	13.5%
41-45	13.5%	11.9%	13.1%
46-50	11.6%	12.6%	11.8%
51-55	10.3%	12.8%	11.0%
56-60	12.9%	15.4%	13.6%
61-65	11.2%	12.6%	11.6%
66-70	4.6%	4.7%	4.6%
71 or older	1.1%	1.2%	1.1%
Total	100.0%	100.0%	100.0%
Average age	47.3	48.8	47.7
Race/Ethnicity			
White	84.1%	94.9%	86.9%
Black/African American	7.0%	0.5%	5.3%
Hispanic/Latino	6.2%	2.9%	5.4%
Asian	1.0%	0.4%	0.9%
American Indian/Alaska Native	0.2%	0.9%	0.4%
Native Hawaiian or Other Pacific Islander	0.3%	0.1%	0.3%
Other	1.1%	0.3%	0.9%
Total	100%	100%	100%
Gender			
Female	96.5%	97.8%	96.9%
Male	3.5%	2.2%	3.1%
Total	100%	100%	100%

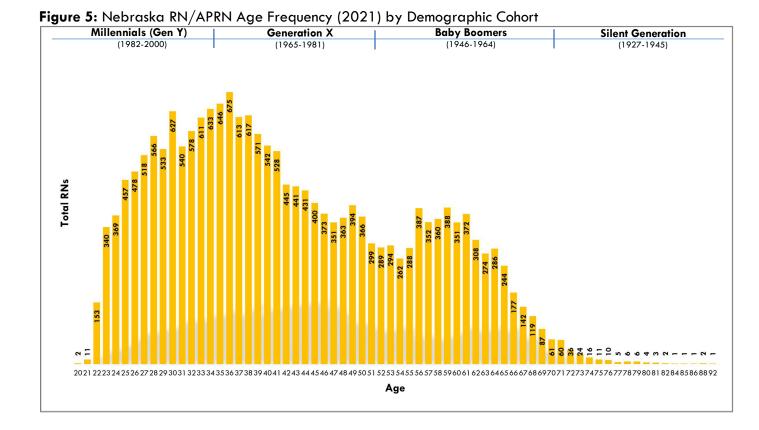
Table 4: Residential Distribution of the LPN Workforce across Urban and Rural Areas in Nebraska

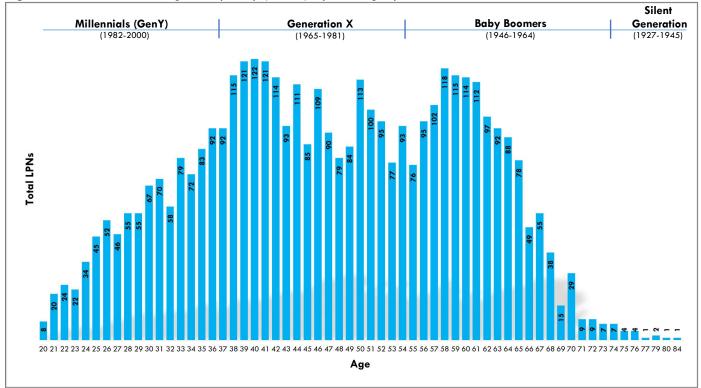
Setting (LPN)	Urban Areas (%)	Rural Areas (%)	All Areas (%)
Ambulatory Care Setting (Clinic)	7.0%	3.3%	6.1%
Ambulatory Surgical Center	0.0%	0.1%	0.1%
Assisted Living	0.2%	0.2%	0.2%
Birthing Center	0.0%	0.0%	0.0%
Clinic	29.9%	22.5%	28.0%
College Health	0.3%	0.0%	0.2%
Correctional/Prison	1.3%	0.7%	1.1%
Developmental Disability	1.3%	1.1%	1.2%
Dialysis Center	0.3%	0.2%	0.3%
Emergency Department	0.2%	0.3%	0.2%
Federally Qualified Health Center (FQHC)	0.3%	0.1%	0.3%
Health Department	0.2%	0.5%	0.3%
Home Health	6.7%	3.1%	5.8%
Hospice/Palliative Care	1.4%	0.2%	1.1%
Hospital	6.5%	19.0%	9.7%
Industry/Sales/IT	0.2%	0.0%	0.2%
Insurance	0.5%	0.2%	0.4%
Military /DoD	0.1%	0.0%	0.1%
Nursing Home (SNF/NF)	30.1%	40.0%	32.6%
Occupational/Employee/Workplace Health	1.1%	0.6%	1.0%
Other	4.9%	3.1%	4.4%
Policy/Planning/Regulatory/Licensing	0.0%	0.0%	0.0%
Psych-Mental Health	1.5%	0.1%	1.2%
Public Health	0.6%	0.5%	0.6%
Research	0.2%	0.0%	0.1%
Retail Clinic	0.1%	0.1%	0.1%
Rural Health Clinic	0.3%	1.8%	0.7%
School Health Service	2.5%	1.5%	2.2%
Substance Use/Addiction	0.3%	0.5%	0.3%
University/Academic	0.2%	0.0%	0.2%
Urgent Care	0.6%	0.4%	0.6%
VA Facility	1.1%	0.1%	0.8%
Total	100%	100%	100%

#### Nebraska Nursing Workforce by Demographic Cohort

**Figures 5 and 6** show the age frequency of RNs/APRNs and LPNs by demographic cohort. **Table 5** shows the percentage of RNs/APRNs and LPNs that belong to each generation. As a whole, "Millennials" (GenY) (born 1982- 2000) represents the highest concentration of nurses in the State of Nebraska (43%), followed by 30% "Generation X" (born 1965-1981). "Baby Boomers" represent 22% of the total nursing workforce. **Figure 7** shows the change in percentage from 2018 to either 2020 or 2021; the Silent Generation was not included in **figure 7** because it represents less than 1.0% of the total nursing workforce.

19





#### Figure 6: Nebraska LPN Age Frequency (2021) by Demographic Cohort

Generation:	RN - 2018	RN - 2021	LPN - 2019	LPN - 2021	All Nebraska Nurses – 2018/19	All Nebraska Nurses – 2021
Generation Z	-	4%	-	4%	-	4%
Millennials (GenY)	38%	44%	27%	40%	36%	43%
Generation X	34%	31%	41%	27%	35%	30%
<b>Baby Boomers</b>	27%	21%	32%	29%	28%	22%
<b>Silent Generation</b>	1%	0.3%	1%	0.2%	1%	0.3%
Total	100%	100%	100%	100%	100%	100%

 Table 5: Nebraska Representation of the Nursing Workforce in Percentage by Generation

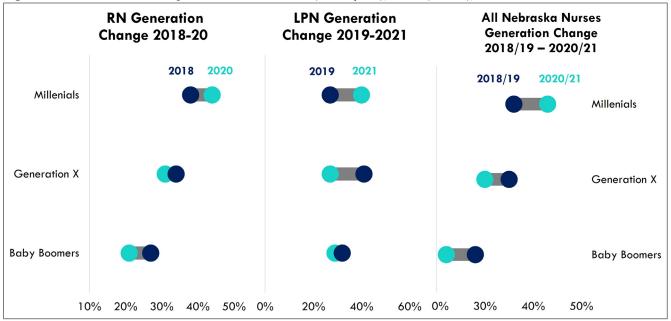


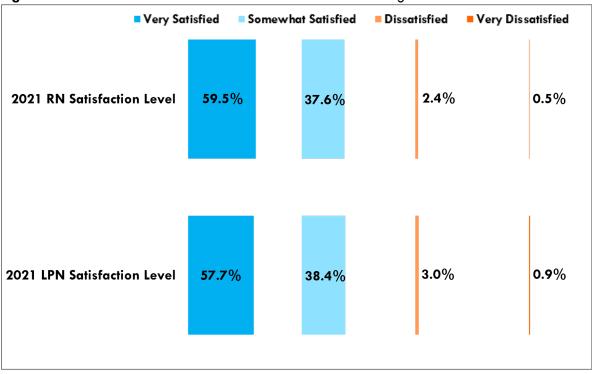
Figure 7: Generation Change for Nebraska RNs (2020/21), LPNs (2021), and All Nebraska Nurses\*

\*The Silent Generation and Generation Y were not included in the chart because of their low representation.

**Figure 7** (above) shows the percentage of generation change for Nebraska RNs and LPNs and all Nebraska Nurses between the past renewal cycle (2018 RN/2019 LPN) and the current renewal cycle (2020/21 RN and LPN). The percentage of nurses represented by each generation is depicted by color coded bullet points in blue for the past renewal survey (2018/19) and cyan for the current renewal survey (2020/21). Figure 7 portrays that Millennials (GenY) nurses substantially increased their representation during the last renewal cycle (cyan circle representing the current nursing workforce moved to the right of the blue bullet point), whereas nurses from Generation X and Baby Boomers substantially decreased their representation (cyan circle moved to the left of the blue circle that represents the past renewal cycle).

#### Satisfaction Levels with the Nursing Profession

Historically nurses in Nebraska have shown high levels of satisfaction with their nursing profession. **Figure 8** illustrates satisfaction levels with "nursing as a career" for RNs in 2021 and for LPNs in 2021. **Table 6** compares satisfaction levels for RNs and LPNs between 2018/19 and 2021.



#### Figure 8: 2021 RN and LPN satisfaction levels with their nursing career

 Table 6: RN and LPN satisfaction and dissatisfaction levels with their nursing career (2018/19 compared to 2021)

	2018/19 Total Satisfied	2021 Total Satisfied	2018/19 Total Dissatisfied	2021 Total Dissatisfied
RN	97.4%	97.1%	2.6%	2.9%
LPN	97.7%	96.1%	2.3%	3.9% (*)

(\*) The percentage increase of total dissatisfaction with their nursing career among LPNs is statistically significant (p < .0001).

### NURSING WORKFORCE PROJECTIONS

#### **Nursing Workforce Model**

**Purpose:** The Nursing Workforce Model is used to predict nursing workforce supply and demand for Registered Nurses (RNs), Advanced Practice Registered Nurses (APRNs), and Licensed Practical Nurses (LPNs) until the year 2025. The nursing workforce projections remain unchanged since 2018 when these projections were made. The nursing projections will be adjusted once the U.S. Census Bureau releases the 2020 Decennial data.

What it is: The Nursing Workforce Model is a forecasting **policy tool** that provides a picture of the alternative future supply and demand under different scenarios and simulations for the nine economic regions defined by the Nebraska Department of Labor (DOL). The forecasting models use these regions as geographic areas to identify nursing workforce needs over time.

**Economic Regions:** The Nebraska nursing workforce model uses the nine economic regions as geographic units to project the supply and demand of nurses (RNs, APRNs, and LPNs).

The Nebraska DOL uses employer and employee information to create job flows known as "Local Employment Dynamics (LED)." The Economic Development Regions defined by DOL are based on work commuting patterns (LED) across cities and counties, along with demographics and employment data. See **Figure 9**.

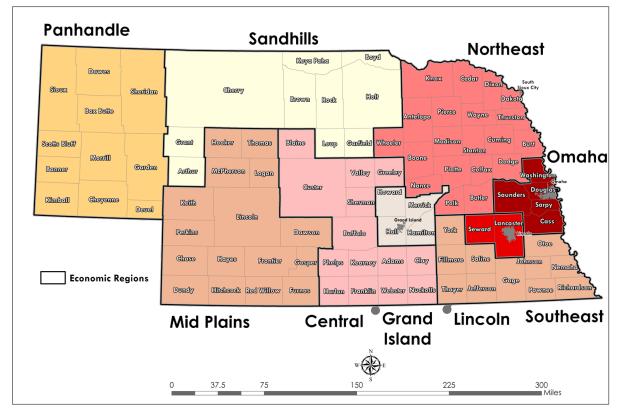


Figure 9: The "9 Economic Regions"

Table 7 shows counties that belong to each of the nine economic regions:

Table 7: Nebraska Economic Regions and Respective Counties

Economic Region	Counties
1. Panhandle	Banner, Box Butte, Cheyenne, Dawes, Deuel, Garden, Kimball, Morrill, Scotts Bluff, Sheridan, Sioux
2. Sandhills	Arthur, Boyd, Brown, Cherry, Garfield, Grant, Holt, Keya Paha, Loup, Rock
3. Mid Plains	Chase, Dawson, Dundy, Frontier, Furnas, Gosper, Hayes, Hitchcock, Hooker, Keith, Lincoln, Logan, McPherson, Perkins, Red Willow, Thomas
4. Central	Adams, Blaine, Buffalo, Clay, Custer, Franklin, Greeley, Harlan, Kearney, Nuckolls, Phelps, Sherman, Valley, Webster
5. Grand Island	Hall, Hamilton, Howard, Merrick

6. Northeast	Antelope, Boone, Burt, Butler, Cedar, Colfax, Cuming, Dakota, Dixon, Dodge, Knox, Madison, Nance, Pierce, Platte, Polk, Stanton, Thurston, Wayne, Wheeler						
7. Omaha Consortium	Cass, Douglas, Sarpy, Saunders, Washington						
8. Lincoln MSA	Lancaster, Seward						
9. Southeast	Fillmore, Gage, Jefferson, Johnson, Nemaha, Otoe, Pawnee, Richardson, Saline, Thayer, York						

#### **Major Findings**

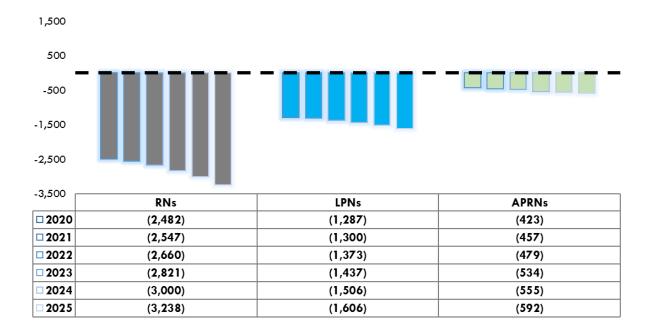
Overall, the nursing supply and demand model projects a nursing shortage of **5,436 nurses** through the year 2025. It is expected that the nursing workforce in the State of Nebraska will grow by 3.8% between 2020 and 2025. The highest growth will be experienced by RNs (4.7%), followed by LPNs (1.8%). APRNs will experience a negative growth between 2020 and 2025 (-1.1%). **Table 8** illustrates the expected growth and nursing workforce gap for each type of nurse in the State of Nebraska through the year 2025.<sup>8</sup>

 Table 8: Nursing Workforce Projections and supply gaps (unfilled FTE positions) for RNs, APRNs, and LPNs

Nurse Type:	Growth, 2020-2025	2025 Expected Nursing Workforce Gap			
RN	4.7%	-3,238			
APRN	-1.1%	-592			
LPN	1.8%	-1,606			
Total Nursing Workforce Expected Growth	3.8%	-5,436			

**Figure 10** shows that all nurse types will experience a workforce shortage that will increase each year from 2020 through 2025.

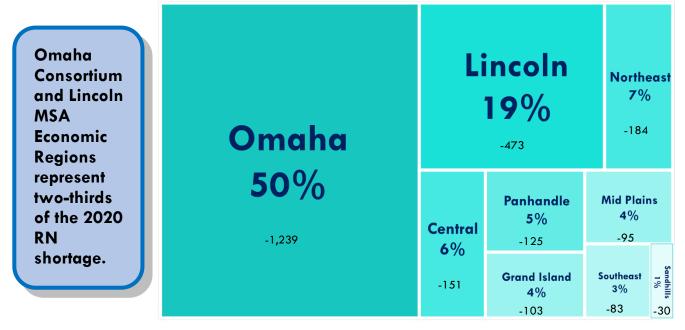
<sup>&</sup>lt;sup>8</sup> Projection estimates from the 2016 RN Renewal Survey and 2017 LPN Renewal Survey. Estimates will be updated using the most recent nursing workforce data (2020 RN Renewal Survey and 2021 LPN Renewal Survey) in 2022. Population demographics (age, gender, and urban vs. rural population) will also be updated using the 2020 Population Census data when available at the county level.



#### Nursing Workforce Gap by Economic Region

As expected, economic regions that contain the highest number of nurses will experience the highest demand for additional nurses to meet the nursing workforce needs from the population. The Omaha Consortium (Douglas, Sarpy, Washington, and Cass counties) and Lincoln Metropolitan Statistical Area - MSA (Seward and Lancaster counties) Economic Regions encompass two-thirds of the total RN shortage in the year 2020. **Figure 11** shows the gap proportion for unfilled RN positions in each economic region.





The following tables show the total number of unfilled FTE nursing positions (RNs, APRNs, and LPNs) in the years 2020 and 2025 (**Tables 9 and 10**).

Panhandle	Sandhills	Mid Plains	Central	Grand Island	Northeast	Omaha	Lincoln	Southeast	State Total
-125	-30	-95	-151	-103	-184	-1,239	-473	-83	-2,482
3	-1	1	-79	0	2	-246	-104	-1	-423
-61	-19	-75	-110	-54	-123	-593	-168	-84	-1287
-182	-50	-168	-339	-157	-305	-2,077	-745	-167	-4,191
	-125 3 -61	-125 -30 3 -1 -61 -19	-125         -30         -95           3         -1         1           -61         -19         -75	-125         -30         -95         -151           3         -1         1         -79           -61         -19         -75         -110	Panhandle         Sandhills         Mid Plains         Central         Island           -125         -30         -95         -151         -103           3         -1         1         -79         0           -61         -19         -75         -110         -54	Panhandle         Sandhills         Mid Plains         Central         Island         Northeast           -125         -30         -95         -151         -103         -184           3         -1         1         -79         0         2           -61         -19         -75         -110         -54         -123	Panhandle         Sandhills         Mid Plains         Central         Island         Northeast         Omaha           -125         -30         -95         -151         -103         -184         -1,239           3         -1         1         -79         0         2         -246           -61         -19         -75         -110         -54         -123         -593	Panhandle         Sandhills         Mid Plains         Central         Island         Northeast         Omaha         Lincoln           -125         -30         -95         -151         -103         -184         -1,239         -473           3         -1         1         -79         0         2         -246         -104           -61         -19         -75         -110         -54         -123         -593         -168	Panhandle         Sandhills         Mid Plains         Central         Northeast         Omaha         Lincoln         Southeast           -125         -30         -95         -151         -103         -184         -1,239         -473         -83           3         -1         1         -79         0         2         -246         -104         -1           -61         -19         -75         -110         -54         -123         -593         -168         -84

Note: positive numbers show a surplus and negative numbers a shortage of nurses

	<u> </u>						'			<u> </u>	
	Panhandle	Sandhills	Mid Plains	Central	Grand Island	Northeast	Omaha	Lincoln	Southeast	State Total	
RNs	-146	-23	-115	-185	-127	-191	-1,572	-745	-132	-3,238	
APRNs	-4	-1	-4	-93	-3	-16	-316	-150	-5	-592	
LPNs	-64	-18	-86	-127	-76	-133	-783	-244	-74	-1,606	
Total Unfilled Positions	-215	-42	-205	-406	-206	-340	-2,671	-1,139	-211	-5,436	
Note: negative numbers show a shortage of nurses											

Table 10: 2025 projected unfilled FTEs positions for RNs, APRNs, and LPNs by economic region

As expected, the Omaha Consortium and Lincoln MSA economic regions will encompass 70% of the total nursing shortage in Nebraska by the year 2025.

- RN workforce shortage will increase by 30% between 2020 and 2025
- APRN workforce shortage will increase by 40% between 2020 and 2025
- LPN workforce shortage will increase by 25% between 2020 and 2025

Overall, total FTE nursing shortage will increase by

30% between 2020 and 2025

### ACKNOWLEDGMENTS

#### **Organizations:**

- Nebraska Center for Nursing and its Board of Directors
- Nebraska Board of Nursing
- Nebraska Hospital Association
- Nebraska Organization of Nurse Leaders
- Nebraska Assembly of Nursing Deans and Directors

#### Individuals:

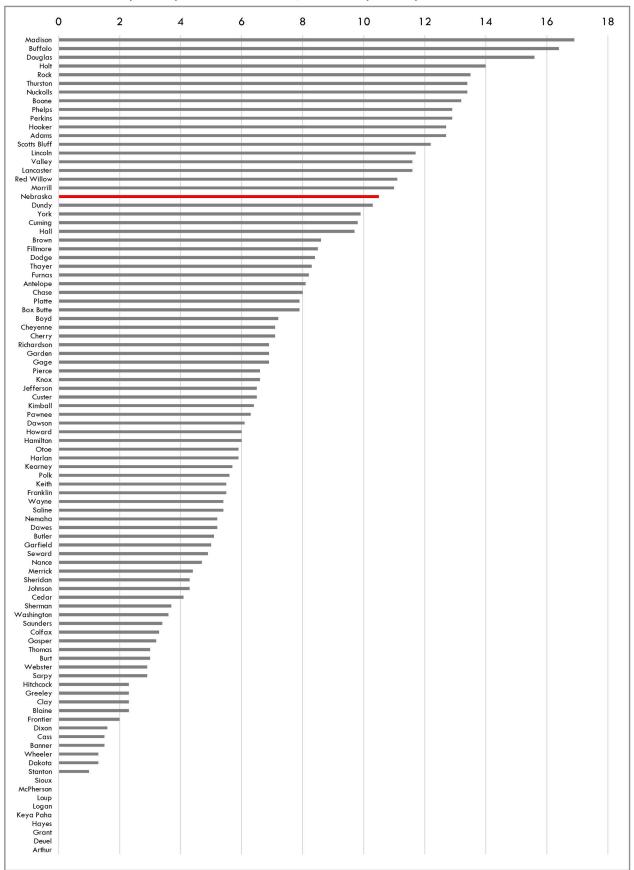
- Ann Oertwich, PhD, Executive Director, Nebraska Board of Nursing and Nebraska Center for Nursing.
- Lisa Walters, Chair of the Nebraska Center for Nursing
- Lina Bostwick, Chair of the Nebraska Center for Nursing Foundation
- Theresa Delahoyde, Chair of the Nebraska Assembly of Nursing Deans and Directors
- Becky Wisell, Nebraska DHHS Licensure Unit
- Jacci Reznicek, EdD, RN, ANP-BC, DHHS Nurse Consultant
- Kathy Hoebelheinrich MSN, APRN-NP, ANP-BC, DHHS Nurse Consultant
- The staff of the Nebraska Center for Nursing for their support

#### 30

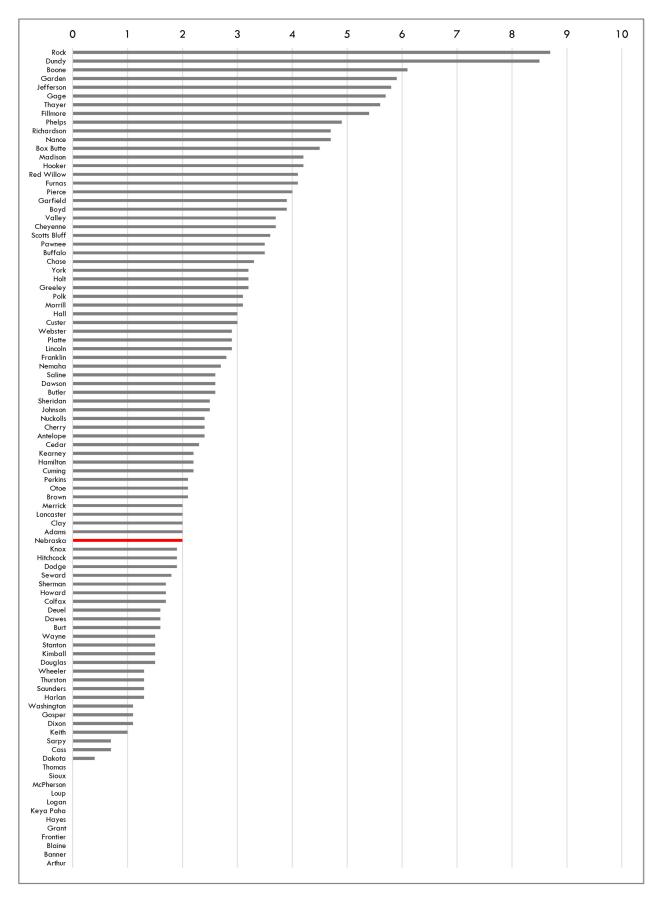
### **APPENDIX**

**Chart 1** shows Nebraska per capita supply of RNs/APRNs which varies from a high of 16.9 per 1,000 people in Madison County, to a low of 1.0 nurse per 1,000 people in Stanton County.

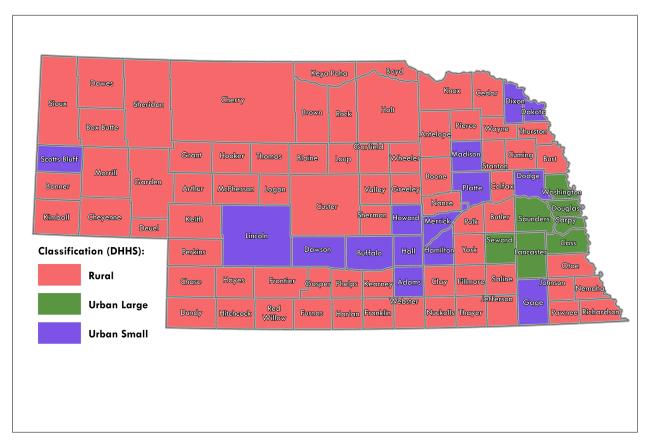
**Chart 2** shows Nebraska per capita supply of LPNs which varies from a high of 8.7 per 1,000 people in Rock County, to a low of 0.4 per 1,000 people in Dakota County.



#### Chart 1: Nebraska per Capita RN Workforce, Ranked by County



#### Chart 2: Nebraska per Capita LPN Workforce, Ranked by County



#### Figure 12: Urban and Rural Counties in Nebraska (DHHS, Office of Rural Health)

Source: Nebraska DHHS (2016). Disparities Demographic Data Recommendations. Division of Public Health. Department of Health & Human Services. November 2016.

The counties included within each category consist of:

- Urban-Large (7 counties): Cass, Douglas, Lancaster, Sarpy, Saunders, Seward, Washington
- Urban-Small (15 counties): Adams, Buffalo, Dakota, Dawson, Dixon, Dodge, Gage, Hall, Hamilton, Howard, Lincoln, Madison, Merrick, Platte, Scotts Bluff
- Rural (71 counties): Antelope, Arthur, Banner, Blaine, Boone, Box Butte, Boyd, Brown, Burt, Butler, Cedar, Chase, Cheyenne, Cherry, Clay, Colfax, Cuming, Custer, Dawes, Deuel, Dundy, Fillmore, Franklin, Frontier, Furnas, Garden, Garfield, Gosper, Grant, Greeley, Harlan, Hayes, Hitchcock, Holt, Hooker, Jefferson, Johnson, Kearney, Keith, Keya Paha, Kimball, Knox, Logan, Loup, McPherson, Morrill, Nance, Nemaha, Nuckolls, Otoe, Pawnee, Perkins, Phelps, Pierce, Polk, Red Willow, Richardson, Rock, Saline, Sheridan, Sherman, Sioux, Stanton, Thayer, Thomas, Thurston, Valley, Wayne, Webster, Wheeler, York

### THE NEBRASKA CENTER OF NURSING: WHO WE ARE

The Nebraska Center for Nursing (CFN) was created via LB 1025 by the Nebraska Legislature on July 13, 2000, to monitor the nursing workforce in Nebraska including supply and demand, recruitment, retention, and utilization of nurses. The Center consists of a 16-member board, composed primarily of nurses from across Nebraska appointed by the Governor (see list of board members in the Appendix). The Center is funded through nursing licensure fees and meets approximately six times a year.

The primary goals for the center are:

### (1) To develop a strategic statewide plan to alleviate the nursing shortage in Nebraska by:

- (a) Establishing and maintaining a database on nursing supply and demand in Nebraska, including current supply and demand and future projections; and
- (b) Selecting priorities from the plan to be addressed.

### (2) To convene various groups representative of nurses, other health care providers, business and industry, consumers, legislators, and educators to:

- (a) Review and comment on data analysis prepared for the center.
- (b) Recommend systemic changes, including strategies for implementation of recommended changes; and
- (c) Evaluate and report the results of these efforts to the Legislature and the public.

#### (3) To enhance and promote recognition, reward, and renewal activities for nurses by:

- (a) Proposing and creating recognition, reward, and renewal activities; and
- (b) Promoting media and positive image-building efforts for nursing. Source: Laws 2000, LB 1025, § 3. Effective date July 13, 2000.

The Center produces biennial and annual reports on Nursing Workforce Data. The Center has recently purchased and implemented a state-of-the-art workforce supply and demand model. This one-of-a-kind model utilizes Nebraska nursing supply data and projects demand for nurses based on information from the nine economic regions of the state. This biennial report highlights the work of this dynamic group.

### THE NEBRASKA CENTER OF NURSING: STRATEGIC PLAN

#### Vision

Nebraska Nurses: when and where we need them

#### Mission

The Nebraska Center for Nursing drives change in the nursing workforce through data, education, and policy development

#### Strategic Focus #1: Data

Provide essential, reliable forecasting and workforce information resulting in equitable access and distribution of nurses.

#### Strategic Focus #2: Collaboration

Collaborate with key stakeholders to address the nursing shortage in Nebraska

- Collaborate to build and maintain the current workforce
- Maintain competency/skill level of the current workforce

#### Strategic Focus #3: Promotion

- Promote the value of the nursing profession
- Develop the image and the voice of the CFN

#### We are Building Healthier Communities through Nursing:

Nebraska nurses are key to promoting health and creating communities in which everyone has access to high-quality care