

Health Professional Shortage Areas Nebraska - 2003

Roslyn Fraser, BA - University of Nebraska Medical Center
Brian Hesford, BA - University of Nebraska Medical Center
Tom Rauner, M.C.R.P. - Nebraska Health and Human Services System

Purpose

To describe Nebraska's Health Professional Shortage Areas (HPSAs) in 2003 as defined by federal and state criteria.

Introduction

This *Health Data Reporter* presents data about Nebraska's Health Professional Shortage Areas and examines ways in which the Nebraska Health and Human Services System and U.S. Department of Health and Human Services define areas where barriers exist to obtaining adequate health care. Federally designated areas include Health Professional Shortage Areas (HPSAs), Medically Underserved Areas (MUAs), and Medically Underserved Populations (MUPs). In 2003, over one-third (35/93) of Nebraska's counties have been designated, either in full or in part, as primary medical care HPSAs (see page 3). Primary medical care HPSAs potentially affect more than 10 percent of Nebraska's total population (1,711,263). In addition, 67 of Nebraska's 93 counties have been designated, in full or in part, as containing MUAs or MUPs. Over 28 percent of the state's population live within these designated areas and are potentially affected by a shortage of health services.

Within state-designated HPSAs, a high degree of shortage exists in each of the defined health specializations. Three-fourths of Nebraska's counties currently have a shortage of family practice physicians (69/93), 83 percent have a shortage of general surgeons (77/93), 91 percent have a shortage of internal medicine physicians (85/93), 94 percent have a shortage of psychiatrists (87/93), 95 percent have a shortage of pediatricians (88/93), and 92 percent have a shortage of obstetricians/gynecologists (86/93). Additionally, 34 percent of Nebraska's counties have a shortage of dental health professionals (32/93), 43 percent have a shortage of pharmacy professionals (40/93), 63 percent have a shortage of occupational therapists (59/93), and 41 percent have a shortage of physical therapists (38/93).

Federal Health Professional Shortage Area (HPSA) Designation

Federally, HPSAs are designated for three major health professional types:

- \$ Primary Medical Care,
- \$ Mental Health, and
- \$ Dental.

Service programs based on HPSA designation involve these three health areas.

HPSAs may be defined within:

- \$ urban and rural geographic areas,
- \$ population groups, and/or
- \$ facilities recognized as having acute shortages of health professionals.

Geographically, HPSAs can be defined by county, township, town, census tract, minor civil division, or other definable geographic divisions as recognized by the U.S. Census Bureau. Special populations that meet specific criteria are also included. All of these designations are rated according to degree of shortage.

The U.S. Department of Health and Human Services reviews designated HPSAs annually and revises them on an ongoing basis. Specific emphasis is given to updating designations that are over three years old or where significant and relevant changes in the designation criteria have occurred. The Nebraska Health and Human Services System submits changes in HPSA designation in Nebraska to the U.S. Department of Health and Human Services every year. The opinions of the governor, appropriate state medical societies, and other interested organizations or individuals are considered in determining qualifying areas. A more specific description of HPSA determination can be found in the November 17, 1980, *Federal Register*, and a copy of proposed changes can be found at <http://www.bphc.hrsa.dhhs.gov/dsd/methodtxt.htm>.

Once an area is designated as a HPSA, it qualifies for varying degrees of federal assistance. This assistance may include:

- \$ National Health Service Corps personnel to provide primary health services in the HPSA,
- \$ Public Health Service scholarships and training programs,
- \$ eligibility for grant assistance,
- \$ supplemental Medicaid and Medicare cost-based reimbursement for qualifying facilities in HPSAs, and/or
- \$ education loan repayment for qualifying practitioners.

For additional information on primary care HPSA designation, visit the Bureau of Primary Health Care website at: <http://bhpr.hrsa.gov/shortage/hpsacritpcm.htm>



Federally Designated Primary Medical Care Health Professional Shortage Areas

Primary care practitioners are defined as all non-federal doctors of medicine (M.D.) and doctors of osteopathy (D.O.) who provide direct patient care in general or family practice, general internal medicine, pediatrics, or obstetrics and gynecology.

Qualification as a primary care HPSA is based on three criteria:

1. Determination as a rational area for the delivery of primary medical care services, including:
 - \$ a county or group of counties whose population centers are within 30 minutes travel time,
 - \$ a portion of a county whose population has limited access to contiguous area resources, as measured by a travel time of greater than 30 minutes, and/or
 - \$ established neighborhoods or communities within metropolitan areas that display strong homogeneity, have limited interaction with contiguous areas and have a minimum population of 20,000.
2. Has a population to full-time-equivalent (FTE) primary care physician ratio of 3,500:1, or between 3,000:1 and 3,500:1 with an unusually high need for primary care services, or an insufficient capacity of existing primary care providers.

Unusually high need is defined as:

- \$ more than 100 births per year per 1,000 women age 15-44,
- \$ more than 20 infant deaths per 1,000 live births, and/or
- \$ more than 20 percent of the population have incomes below the poverty level.

Insufficient capacity of primary care providers includes:

- \$ more than 8,000 office or outpatient visits per year per FTE primary care physician,
- \$ unusually long waits for appointments for routine services (more than seven days),
- \$ excessive average waiting time at primary care providers (longer than one hour),
- \$ excessive use of emergency room facilities for primary care,
- \$ substantial proportion (2/3 or more) of physicians do not accept new patients, and/or
- \$ abnormally low utilization of health services (average two or less visits per year per person).

3. Primary medical care professionals in contiguous areas are over-utilized, excessively distant, or inaccessible to the population of the area. This status is defined by:
 - \$ more than 30 minutes travel time from population centers;
 - \$ contiguous area physician to population ratio in excess of 2,000:1;
 - \$ significant demographic barriers, like language, exist;
 - \$ more than 20 percent of the population have incomes below poverty level; and/or,
 - \$ where Medicaid-covered or public primary care services are not available.

Table 1 lists Nebraska's primary medical care HPSAs in detail by county and HPSA, and Figure 1 illustrates their location within the state. The data are current as of January 2003.

Table 1 - Federally Designated Primary Medical Care HPSAs, Nebraska 2003

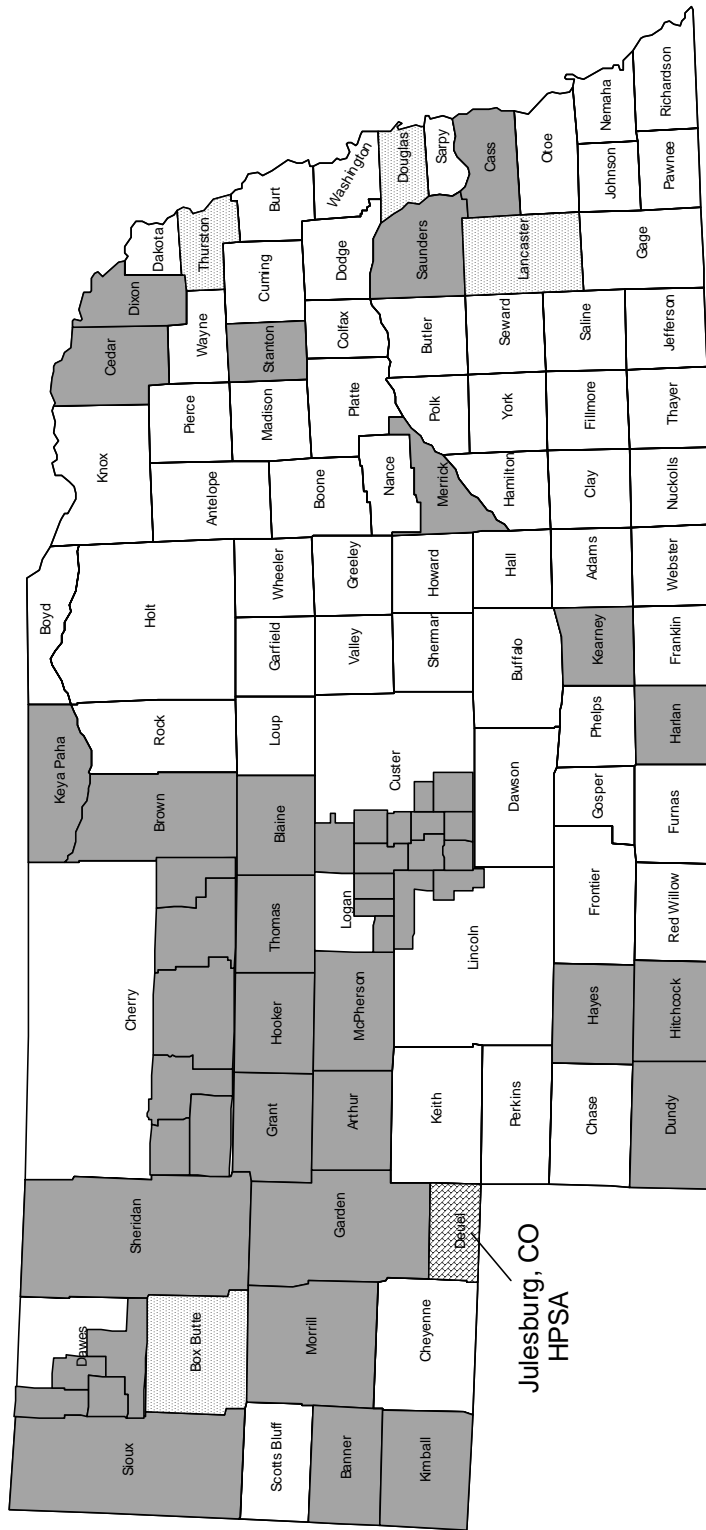
County	Affected Population	HPSA Area	County	Affected Population	HPSA Area
Adams	None		Greeley	None	
Antelope	None		Hall	None	
Arthur	Entire county	Arthur	Hamilton	None	
Banner	Entire county	Banner	Harlan	Entire county	Harlan
Blaine	Entire county	Blaine	Hayes	Entire county	Hayes
Boone	None		Hitchcock	Entire county	Hitchcock
Box Butte	Low Income Pop	Low Inc./Box Butte	Holt	None	
Boyd	None		Hooker	Entire county	Mullen Service Area
Brown	Entire county	Brown	Howard	None	
Buffalo	None		Jefferson	None	
Burt	None		Johnson	None	
Butler	None		Kearney	Entire county	Kearney
Cass*	Entire county	Cass	Keith	None	
Cedar	Entire county	Cedar	Keya Paha	Entire county	Keya Paha
Chase	None		Kimball	Entire county	Kimball
Cherry	Calf Creek Precinct Goose Creek Precinct King Precinct Lackey Precinct Loup Precinct Mother Lake Precinct Wells Precinct	Mullen Service Area Mullen Service Area Mullen Service Area Mullen Service Area Mullen Service Area Mullen Service Area Mullen Service Area	Knox	None	
Cheyenne	None		Lancaster*	Dept. of Corrections	Facility Designation
Clay	None		Lincoln	Antelope Precinct Garfield Precinct	Arnold Service Area Arnold Service Area
Colfax	None		Logan	Grandy Precinct Logan Precinct Stapleton No.2 Prec	Arnold Service Area Arnold Service Area Arnold Service Area
Cuming	None		Loup	None	
Custer	Arnold Twp Cliff Twp Custer Twp Delight Twp Elim Twp Grant Twp Hayes Twp Triumph Twp Wayne Twp Wood River Twp	Arnold Service Area Arnold Service Area Arnold Service Area Arnold Service Area Arnold Service Area Arnold Service Area Arnold Service Area Arnold Service Area Arnold Service Area Arnold Service Area	Madison	None	
Dakota*	None		McPherson	Entire county	McPherson
Dawes	Precinct No. 7 Precinct No. 9 Precinct No. 10 Precinct No. 11	Crawford Service Area Crawford Service Area Crawford Service Area Crawford Service Area	Merrick	Entire county	Merrick
Dawson	None		Morrill	Entire county	Morrill
Deuel	Entire county	Julesburg (CO/NE)	Nance	None	
Dixon	Entire county	Dixon	Nemaha	None	
Dodge	None		Nuckolls	None	
Douglas*	Low Income Pop Census Tracts 18-33, 39-41	South Omaha	Otoe	None	
Dundy	Entire county	Dundy	Pawnee	None	
Fillmore	None		Perkins	None	
Franklin	None		Phelps	None	
Frontier	None		Pierce	None	
Furnas	None		Platte	None	
Gage	None		Polk	None	
Garden	Entire county	Garden	Red Willow	None	
Garfield	None		Richardson	None	
Gosper	None		Rock	None	
Grant	Entire county	Mullen Service Area	Saline	None	
			Sarpy*	None	
			Saunders	Entire county	Saunders
			Scotts Bluff	None	
			Seward	None	
			Sheridan	Entire county	Sheridan
			Sherman	None	
			Sioux	Entire county	Crawford Service Area
			Stanton	Entire county	Stanton
			Thayer	None	
			Thomas	Entire county	Mullen Service Area
			Thurston	Omaha Indian Tribe	Omaha Indian Res.
			Valley	None	
			Washington*	None	
			Wayne	None	
			Webster	None	
			Wheeler	None	
			York	None	

Source: Bureau of Primary Health Care - Division of Shortage Designation
<http://www.bphc.hrsa.dhhs.gov/databases/hpsa/hpsa.cfm> - Data current as of December 2003.
 Nebraska Health and Human Services System, Office of Rural Health & Primary Care, December 2003.

*See metropolitan county definitions p. 23.

Note: "Twp" represents "Township" and "Prec" represents "Precinct."

Figure 1 Federally Designated Primary Medical Care Health Professional Shortage Areas, Nebraska 2003



- Other State's HPSA
- No Shortage
- Shortage Area
- Special Population Shortage Area*

* Special Population Shortage Areas include the Low Income Populations of Box Butte County and Douglas County (South Omaha), the Omaha Indian Population of Thurston County, and the Lincoln Dept. of Corrections in Lancaster County.

Source: Bureau of Primary Health Care - Division of Shortage Designation

<http://belize.hrsa.gov/newhspa/newhpsa.cfm> - Data current as of August 2003. Nebraska Health and Human Services System, Office of Rural and Primary Care. Map by Nebraska Center of Rural Health Research.

Federally Designated Mental Health Professional Shortage Areas

Mental health professionals include licensed psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, and marriage and family therapists.

To qualify as a federally designated mental health HPSA, the area must:

1. Be determined to be a rational area for the delivery of mental health services. This includes:
 - \$ establishment as a mental health catchment area as designated by the *Community Mental Health Centers Act* criteria;
 - \$ a portion of a mental health catchment area whose population has limited access to area resources, as measured by a travel time of greater than 40 minutes; and/or
 - \$ a county or metropolitan area which contains more than one mental health catchment area or where data are unavailable by individual catchment area.
2. Have a specific population to core mental health professional ratio, including:
 - \$ a population to mental health professional ratio greater than or equal to 6,000:1, and a population to psychiatrist ratio greater than or equal to 20,000:1; or
 - \$ a population to core professional ratio greater than or equal to 9,000:1; or
 - \$ a population to psychiatrist ratio greater than or equal to 30,000:1.
3. Have an unusually high need for mental health services and:
 - \$ a population to core mental health professional ratio greater than or equal to 4,500:1, and a population to psychiatrist ratio greater than or equal to 15,000:1; or
 - \$ a population to core professional ratio greater than or equal to 6,000:1; or
 - \$ a population to psychiatrist ratio greater than or equal to 20,000:1.
4. Have mental health professionals in contiguous areas who are over-utilized, excessively distant, or inaccessible to residents of the area.

In 2003, the U.S. Department of Health and Human Services designated a majority of Nebraska's counties (88/93) as mental health HPSAs. One facility, the Hastings Regional Center in Adams County, has also been included. Based on 2000 census estimates, the population represented within these shortage areas (1,045,809) exceeds 61 percent of the state's total population. Table 2 lists the federally designated mental health HPSAs in Nebraska, and Figure 2 illustrates their placement in the state.

Further information on mental health HPSA designation can be found at:
<http://bhpr.hrsa.gov/shortage/hpsacritmental.htm>

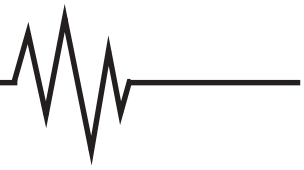


Table 2 - Federally Designated Mental Health Professional Shortage Areas, Nebraska 2003

County	Affected Service Area(s)/Population	County	Affected Service Area(s)/Population
Adams	<i>Hasting Reg. Cnt. Catchment Area 3</i>	Jefferson	<i>Service Area: Catchment Area 5</i>
Antelope	<i>Service Area: Catchment Area 4</i>	Johnson	<i>Service Area: Catchment Area 5</i>
Arthur	<i>Service Area: Catchment Area 2</i>	Kearney	<i>Service Area: Catchment Area 3</i>
Banner	<i>Service Area: Catchment Area 1</i>	Keith	<i>Service Area: Catchment Area 2</i>
Blaine	<i>Service Area: Catchment Area 3</i>	Keya Paha	<i>Service Area: Catchment Area 4</i>
Boone	<i>Service Area: Catchment Area 4</i>	Kimball	<i>Service Area: Catchment Area 1</i>
Box Butte	<i>Service Area: Catchment Area 1</i>	Knox	<i>Service Area: Catchment Area 4</i>
Boyd	<i>Service Area: Catchment Area 4</i>	Lancaster*	<i>Service Area: Catchment Area 5</i>
Brown	<i>Service Area: Catchment Area 4</i>	Lincoln	<i>Service Area: Catchment Area 2</i>
Buffalo	<i>Service Area: Catchment Area 3</i>	Logan	<i>Service Area: Catchment Area 2</i>
Burt	<i>Service Area: Catchment Area 4</i>	Loup	<i>Service Area: Catchment Area 3</i>
Butler	<i>Service Area: Catchment Area 5</i>	Madison	<i>Service Area: Catchment Area 4</i>
Cass*	<i>None Catchment Area 6</i>	McPherson	<i>Service Area: Catchment Area 2</i>
Cedar	<i>Service Area: Catchment Area 4</i>	Merrick	<i>Service Area: Catchment Area 3</i>
Chase	<i>Service Area: Catchment Area 2</i>	Morrill	<i>Service Area: Catchment Area 1</i>
Cherry	<i>Service Area: Catchment Area 4</i>	Nance	<i>Service Area: Catchment Area 4</i>
Cheyenne	<i>Service Area: Catchment Area 1</i>	Nemaha	<i>Service Area: Catchment Area 5</i>
Clay	<i>Service Area: Catchment Area 3</i>	Nuckolls	<i>Service Area: Catchment Area 3</i>
Colfax	<i>Service Area: Catchment Area 4</i>	Otoe	<i>Service Area: Catchment Area 5</i>
Cuming	<i>Service Area: Catchment Area 4</i>	Pawnee	<i>Service Area: Catchment Area 5</i>
Custer	<i>Service Area: Catchment Area 3</i>	Perkins	<i>Service Area: Catchment Area 2</i>
Dakota*	<i>Service Area: Catchment Area 4</i>	Phelps	<i>Service Area: Catchment Area 3</i>
Dawes	<i>Service Area: Catchment Area 1</i>	Pierce	<i>Service Area: Catchment Area 4</i>
Dawson	<i>Service Area: Catchment Area 2</i>	Platte	<i>Service Area: Catchment Area 4</i>
Deuel	<i>Service Area: Catchment Area 1</i>	Polk	<i>Service Area: Catchment Area 5</i>
Dixon	<i>Service Area: Catchment Area 4</i>	Red Willow	<i>Service Area: Catchment Area 2</i>
Dodge	<i>None Catchment Area 6</i>	Richardson	<i>Service Area: Catchment Area 5</i>
Douglas*	<i>None Catchment Area 6</i>	Rock	<i>Service Area: Catchment Area 4</i>
Dundy	<i>Service Area: Catchment Area 2</i>	Saline	<i>Service Area: Catchment Area 5</i>
Fillmore	<i>Service Area: Catchment Area 5</i>	Sarpy*	<i>None Catchment Area 6</i>
Franklin	<i>Service Area: Catchment Area 3</i>	Saunders	<i>Service Area: Catchment Area 5</i>
Frontier	<i>Service Area: Catchment Area 2</i>	Scotts Bluff	<i>Service Area: Catchment Area 1</i>
Furnas	<i>Service Area: Catchment Area 3</i>	Seward	<i>Service Area: Catchment Area 5</i>
Gage	<i>Service Area: Catchment Area 5</i>	Sheridan	<i>Service Area: Catchment Area 1</i>
Garden	<i>Service Area: Catchment Area 1</i>	Sherman	<i>Service Area: Catchment Area 3</i>
Garfield	<i>Service Area: Catchment Area 3</i>	Sioux	<i>Service Area: Catchment Area 1</i>
Gosper	<i>Service Area: Catchment Area 2</i>	Stanton	<i>Service Area: Catchment Area 4</i>
Grant	<i>Service Area: Catchment Area 2</i>	Thayer	<i>Service Area: Catchment Area 5</i>
Greeley	<i>Service Area: Catchment Area 3</i>	Thomas	<i>Service Area: Catchment Area 2</i>
Hall	<i>Service Area: Catchment Area 3</i>	Thurston	<i>Service Area: Catchment Area 4</i>
Hamilton	<i>Service Area: Catchment Area 3</i>	Valley	<i>Service Area: Catchment Area 3</i>
Harlan	<i>Service Area: Catchment Area 3</i>	Washington*	<i>None Catchment Area 6</i>
Hayes	<i>Service Area: Catchment Area 2</i>	Wayne	<i>Service Area: Catchment Area 4</i>
Hitchcock	<i>Service Area: Catchment Area 2</i>	Webster	<i>Service Area: Catchment Area 3</i>
Holt	<i>Service Area: Catchment Area 4</i>	Wheeler	<i>Service Area: Catchment Area 3</i>
Hooker	<i>Service Area: Catchment Area 2</i>	York	<i>Service Area: Catchment Area 5</i>
Howard	<i>Service Area: Catchment Area 3</i>		

Sources: Federal Register, September 15, 2000. Vol. 65, No. 180; Bureau of Primary Health Care - <http://belize.hrsa.gov/newhpsa/newhpsa.cfm> - December, 2003; and Nebraska Health and Human Services System, Office of Rural Health, December 2003.

*See metropolitan county definition p. 23.



Federally Designated Dental Health Professional Shortage Areas

To qualify as a federally designated dental HPSA, the area must:

1. Be determined to be a rational area for the delivery of dental health services, including:
 - \$ establishment as a county, or group of contiguous counties whose population centers are within 40 minutes travel time of each other;
 - \$ a portion of the county's population has limited access to area resources, as measured by a travel time of greater than 40 minutes; and/or
 - \$ establishment as a neighborhood or community within a metropolitan area which displays a strong homogeneity and has a limited interaction with contiguous areas, and which, in general, has a minimum population of 20,000.
2. Have a population to full-time-equivalent (FTE) dentist ratio of at least 5,000:1, or a population to FTE dentist ratio of between 4,000:1 and 5,000:1, but with an unusually high need for dental services or an insufficient capacity of existing dental providers.

Unusually high need is defined as:

- \$ more than 20 percent of the population have incomes below the poverty level, and/or
- \$ the majority of the area's population does not have a fluoridated water supply.

Insufficient capacity of existing dental care providers includes:

- \$ more than 5,000 visits per year per FTE dentist serving the area,
- \$ unusually long waits for appointments for routine services (six weeks or more), and/or
- \$ a substantial proportion (2/3 or more) of the area's dentists do not accept new patients.

3. Have dentists in contiguous areas who are over-utilized, excessively distant, or inaccessible to the population of the area. This is the case if:
 - \$ they are more than 40 minutes travel time from population centers;
 - \$ the contiguous area dentist to population ratio is in excess of 3,000:1;
 - \$ significant demographic barriers, like language, exist;
 - \$ more than 20 percent of the population have incomes below poverty level; and/or
 - \$ Medicaid-covered or public primary care services are not available.

In 2003, populations within two counties in Nebraska were affected by a shortage of dental health care in their areas. According to the 2000 Census, about 17,374 Nebraskans live in counties containing a designated dental HPSA. The majority of the affected population in both counties are members of the Omaha and Winnebago Indian Tribes. Table 3 lists the federally designated dental HPSAs in Nebraska, and Figure 3 illustrates their placement in the state.

The Nebraska Health and Human Services System Office of Rural Health is currently analyzing and updating both geographic and Medicaid population designations. Preliminary analysis indicates that nearly 50 percent of the counties in Nebraska will qualify as federal dental HPSAs and will be approved by the fall of 2004.

Further information on dental HPSA designation can be found at:
<http://bhpr.hrsa.gov/shortage/hpsacritdental.htm>

Table 3 - Federally Designated Dental Health Professional Shortage Areas, Nebraska 2003

County	Affected Service Area(s)/Population	County	Affected Service Area(s)/Population
Adams	None	Jefferson	None
Antelope	None	Johnson	None
Arthur	None	Kearney	None
Banner	None	Keith	None
Blaine	None	Keya Paha	None
Boone	None	Kimball	None
Box Butte	None	Knox	None
Boyd	None	Lancaster*	None
Brown	None	Lincoln	None
Buffalo	None	Logan	None
Burt	None	Loup	None
Butler	None	Madison	None
Cass*	None	McPherson	None
Cedar	None	Merrick	None
Chase	None	Morrill	None
Cherry	None	Nance	None
Cheyenne	None	Nemaha	None
Clay	None	Nuckolls	None
Colfax	None	Otoe	None
	<i>Population - Winnebago/Omaha Indian Tribes (Omaha In - Bancroft Twp, Cleveland Twp)</i>		
Cuming	None	Pawnee	None
Custer	None	Perkins	None
Dakota*	None	Phelps	None
Dawes	None	Pierce	None
Dawson	None	Platte	None
Deuel	None	Polk	None
Dixon	None	Red Willow	None
Dodge	None	Richardson	None
Douglas*	None	Rock	None
Dundy	None	Saline	None
Fillmore	None	Sarpy*	None
Franklin	None	Saunders	None
Frontier	None	Scotts Bluff	None
Furnas	None	Seward	None
Gage	None	Sheridan	None
Garden	None	Sherman	None
Garfield	None	Sioux	None
Gosper	None	Stanton	None
Grant	None	Thayer	None
Greeley	None	Thomas	None
			<i>Population - Winnebago/Omaha Indian Tribes</i>
Hall	None	Thurston	None
Hamilton	None	Valley	None
Harlan	None	Washington*	None
Hayes	None	Wayne	None
Hitchcock	None	Webster	None
Holt	None	Wheeler	None
Hooker	None	York	None
Howard	None		

Sources: Federal Register, September 15, 2000. Volume 65, No. 180; Bureau of Primary Health Care - <http://belize.hrsa.gov/newhpsa/newhpsa.cfm> - July 23, 2003; and Nebraska Health and Human Services System, Office of Rural Health, July 2003.

*See metropolitan county definition p. 23.

Federal Medically Underserved Areas/Populations (MUAs/MUPs) Designation

Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) are also federally designated health professional shortage areas. MUAs represent geographical areas and MUPs define a specific population within defined geographic areas. MUPs include those populations where unusual local conditions may place a barrier to the access or availability of health services. MUP determination can also be applied by the recommendation of the governor and/or other state official. Examples of MUPs in Nebraska include the Medicaid population in Adams County and the Hispanic population in Scotts Bluff County.

Determination of MUAs/MUPs is based on the Index of Medical Underservice (IMU), which assesses an overall score based on several specific data elements. Relevant factors include:

- \$ the percent of population with incomes below the poverty line,
- \$ residents age 65 and older,
- \$ specific infant mortality rates, and/or
- \$ the number of full-time primary care physicians per thousand people serving within the defined area.

The IMU scale ranges from 0 to 100, where 0 represents a completely underserved area and 100 represents a best-served or least underserved area. Under the established criteria, each service area found to have an IMU of 62.0 or less qualifies for designation as an MUA. Detailed information on MUA/MUP designation can be obtained from the Bureau of Primary Health Care online at: <http://www.bphc.hrsa.dhhs.gov/dsd/muaguidelines.html>.

Geographic areas for MUAs/MUPs include whole counties or groups of contiguous counties, minor civil divisions, or census county divisions in non-metropolitan areas with population centers within 30 minutes travel time of each other. Metropolitan areas include groups of census tracts which represent a homogeneous neighborhood based on demographic or socioeconomic characteristics.

MUAs and MUPs also qualify for several federally supported primary health care programs, including special programs for migrant health centers, community health centers, programs for the homeless, health department clinics, and rural health clinics. Detailed determination criteria can be found in the October 15, 1976, *Federal Register*.

In 2003, the Office of Rural Health reported that of Nebraska's 93 counties, 67 either qualify as MUA/MUP shortage areas or contain an MUA/MUP within them. When combined, over 28 percent (480,172) of the state's total population (1,711,263) live within these health shortage areas. Table 4 lists the 2003 federally designated MUAs/MUPs in Nebraska, and Figure 4 illustrates their placement in the state.



Table 4 - Federally Designated MUAs/MUPs, Nebraska 2003

County	Affected Area/Population	County	Affected Area/Population	County	Affected Area/Population
Adams	Medicaid Population	Douglas*	Census Tracts 3-12, 16, 18-33, 39-41, 51-54, 59.01, 59.02, 60, 61.01, 61.02, 62.02, 73.04	McPherson	Entire county
Antelope	Entire county	Dundy	Entire county	Merrick	Clarksville Twp Lone Tree Twp Loup Twp
Arthur	Entire county	Fillmore	Entire county	Morrill	None
Banner	Entire county	Franklin	Franklin City	Nance	Genoa Twp
Blaine	Entire county	Frontier	Entire county	Nemaha	Auburn City Washington Prec
Boone	Entire county	Furnas	Entire county	Nuckolls	Entire county
Box Butte	None	Gage	None	Otoe	None
Boyd	Entire county	Garden	None	Pawnee	Entire county
Brown	Entire county	Garfield	Entire county	Perkins	None
Buffalo	Ravenna City	Gosper	Entire county	Phelps	None
Burt	Decatur Twp Everett Twp Oakland City Tekamah City	Grant	Entire county	Pierce	Pierce City
Butler	David City Twp Oak Creek Twp	Greeley	Entire county	Platte	St. Bernard Twp
Cass*	Avoca Prec Center Prec Elmwood Prec Liberty Prec Mount Pleasant Prec Stove Creek Prec Weeping Water City Weeping Water Prec	Hall	Low Income/MFW Population	Polk	Entire county
Cedar	Entire county	Hamilton	None	Red Willow	None
Chase	Entire county	Harlan	Alma City Orleans Twp	Richardson	Entire county
Cherry	None	Hayes	Entire county	Rock	Entire county
Cheyenne	None	Hitchcock	Entire county	Saline	Entire county
Clay	Entire county	Holt	Entire county	Sarpy*	Census Tracts 103.02, 103.04
Colfax	Adams Prec Lincoln Prec Schuyler City	Hooker	Entire county	Saunders	Chester Twp Oak Creek Twp Wahoo City
Cuming	Wisner City	Howard	St. Libory Prec St. Paul City	Scotts Bluff	Hispanic Population
Custer	Arnold Twp Delight Twp Kilfoil Twp Sargent Twp	Jefferson	Fairbury City Pleasant Prec	Seward	None
Dakota*	Census Tracts 101.00, 104.00	Johnson	Spring Creek Prec Sterling Prec Tecumseh City	Sheridan	Rushville City
Dawes	None	Kearney	None	Sherman	Entire county
Dawson	None	Keith	None	Sioux	Entire county
Deuel	Entire county	Keya Paha	Entire county	Stanton	Entire county
Dixon	Entire county	Kimball	None	Thayer	Bruning Prec Davenport Prec Deshler Prec Highland-Alexandria Prec
Dodge	Hooper Twp Scribner Twp Webster Twp	Knox	Entire county	Thomas	Entire county
		Lancaster*	Census Tracts 3-9, 17-22	Thurston	Entire county
		Lincoln	None	Valley	North Loup Twp
		Logan	Entire county	Washington*	None
		Loup	Entire county	Wayne	Chapin Prec
		Madison	Madison City Newman Grove City(Part) Tilden City(Part)	Webster	Entire county
				Wheeler	Entire county
				York	None

Sources: Bureau of Primary Health Care - <http://belize.hrsa.gov/newhpsa/newhpsa.cfm> - Data current as of January 7, 2003; and Nebraska Health and Human Services System, Office of Rural Health, January 2003.

Note: "Twp" represents "Township" and "Prec" represents "Precinct."

*See metropolitan county definition p. 23.



State Designated Health Professional Shortage Areas (HPSAs)

For state health shortage designation purposes, primary care physicians are broadly defined as medical doctors who specialize in general family practice, general surgery, internal medicine, pediatrics, psychiatry, or obstetrics/gynecology. Service areas for these may include a single county or a group of contiguous counties. Family practice service areas may also include an identified population group within a defined area.

Service areas are designated as shortage areas if there is no physician coverage or if the population-to-physician ratio equals or exceeds the following:

\$ Family Practice	2,000:1
\$ General Surgery	10,000:1
\$ Internal Medicine	3,250:1
\$ Obstetrics/Gynecology	10,000:1
\$ Pediatrics	9,300:1
\$ Psychiatry	10,000:1

Service areas with a population-to-physician ratio at or between 1,500:1 to 1,999:1 are designated as shortage areas if at least one of the following high-need indicators is present:

- \$ the proportion of population above age 65 ranks in the highest quartile of the state,
- \$ the proportion of the population below the poverty threshold ranks in the highest quartile,
- \$ the infant mortality rate ranks in the highest quartile of the state,
- \$ the low birth weight rate ranks in the highest quartile of the state,
- \$ more than half of the area's physicians are over 60 years of age,
- \$ the area is designated as a frontier area (fewer than six persons per square mile).

The population to physician ratio is based on practice on a full-time-equivalent basis. Physicians will not be counted if they are practicing under Medicare, Medicaid, or licensure sanction, or if they have documented plans to discontinue practice within one year. Psychiatrists working exclusively in an inpatient setting are not included.

In all cases, cities larger than 15,000 are not designated as shortage areas. Special populations and/or facilities within these cities may be designated. Rural areas in counties containing these cities may be designated as partial-county service areas. Areas within a 25-mile radius of Lincoln and Omaha are not designated as shortage areas. In addition, the designation of a shortage area will not be withdrawn if the area has been chosen as a future practice site by a scholarship recipient or loan repayment applicant.

In 2003, the Office of Rural Health reported that of Nebraska's 93 counties, 69 experienced a shortage of family practice physicians, 77 a shortage of general surgery specialists, 85 a shortage of internal medicine physicians, 88 a shortage of pediatricians, 86 a shortage of obstetricians/gynecologists, and 87 a shortage of psychiatrists. Additionally, dental health professional shortages existed in 32 of Nebraska's 93 counties, while 40 counties experienced a shortage of pharmacy professionals, 59 experienced a shortage of occupational therapists, and 38 experienced a shortage of physical therapists. Table 5 lists the state designated health professional shortage areas in Nebraska, and Figures 5 through 14 illustrate their placement in the state, by specialty type.

Table 5 - State Designated Health Professional Shortage Areas⁽¹⁾ by County and Type of Shortage, Nebraska 2003

County	Region ⁽²⁾	Family Practice	General Surgery	Internal Medicine	Pediatric	Obstetrics / Gynecology	Psychiatric	Dental	Pharmacy	Occupational Therapy	Physical Therapy
Adams	3		x	x		x	x				
Antelope	4			x	x	x	x			x	
Arthur	2	x	x	x	x	x	x	x	x	x	x
Banner	1	x	x	x	x	x	x	x		x	x
Blaine	3	x	x	x	x	x	x	x	x	x	x
Boone	4		x	x	x	x	x	x	x	x	
Box Butte	1	x	x	x	x	x	x		x	x	
Boyd	4			x	x	x	x	x	x	x	x
Brown	4	x	x		x	x	x	x	x	x	
Buffalo	3		x	x						x	
Burt	4	x	x	x	x	x	x	x	x		x
Butler	5		x	x	x	x	x	x			
Cass*	5	o	o	o	o	o	o	o	o	o	o
Cedar	4	x	x	x	x	x	x	x		x	
Chase	2	x		x	x	x	x	x		x	x
Cherry	4	x		x	x	x	x			x	
Cheyenne	1			x	x	x	x	x			
Clay	3	x	x	x	x	x	x		x	x	x
Colfax	4	x	x	x	x	x	x			x	
Cuming	4	x	x	x	x	x	x			x	
Custer	3	(3)	x	x	x	x	x	x	x	x	x
Dakota*	4										
Dawes	1	x		x	x	x	x	(3)		x	
Dawson	2	x	x	x	x	x	x			x	
Deuel	1	x	x	x	x	x	x		x	x	x
Dixon	4	x	x	x	x	x	x	x		x	x
Dodge	4		x	x		x	x			x	x
Douglas*	6										
Dundy	2	x	x		x	x	x		x	x	x
Fillmore	5	x	x	x	x	x	x		x	x	x
Franklin	3	x	x	x	x	x	x		x	x	x
Frontier	2	x	x	x	x	x	x	x	x	x	x
Furnas	2	x	x	x	x	x	x	x	x	x	
Gage	5		o	o	o	o	o			x	x
Garden	1	x	x		x	x	x		x	x	x
Garfield	3	x	x	x	x	x	x		x	x	
Gosper	2	x	x	x	x	x	x	x	x	x	x
Grant	2	x	x	x	x	x	x	x	x	x	x
Greeley	3	x	x	x	x	x	x	x	x	x	x
Hall	3		x	x	x	x	x			x	
Hamilton	3			x	x	x	x			x	
Harlan	3	x	x	x	x	x	x	x	x	x	x
Hayes	2	x	x	x	x	x	x	x	x	x	x
Hitchcock	2	x	x	x	x	x	x	x	x	x	x
Holt	4			x	x	x	x		x	x	x
Hooker	2		x	x	x	x	x	x	x	x	x
Howard	3	x	x	x	x	x	x	x		x	x
Jefferson	5	x	x	x	x	x	x		x	x	
Johnson	5		x	x	x	x	x		x		
Kearney	3	x	x	x	x	x	x		x	x	x
Keith	2	x	x	x	x	x	x			x	
Keya Paha	4	x	x	x	x	x	x	x	x	x	x
Kimball	1	x	x		x	x	x			x	x
Knox	4	x	x	x	x	x	x		x	x	

Table continues on the following page.



Table 5 (continued) - State Designated Health Professional Shortage Areas⁽¹⁾ by County and Type of Shortage, Nebraska 2003

County	Region ⁽²⁾	Family Practice	General Surgery	Internal Medicine	Pediatric	Obstetrics / Gynecology	Psychiatric	Dental	Pharmacy	Occupational Therapy	Physical Therapy
Lancaster*	5										
Lincoln	2	o	x	x	x		x			x	
Logan	2	x	x	x	x	x	x	x	x		x
Loup	3	x	x	x	x	x	x	x	x		x
Madison	4			x			x				
McPherson	2	x	x	x	x	x	x	x	x	x	x
Merrick	3	x	x	x	x	x	x	x	x	x	x
Morrill	1	x	x	x	x	x	x	x	x	x	x
Nance	4	x	x	x	x	x	x		x	x	x
Nemaha	5	x	x	x	x	x	x			x	
Nuckolls	3	x	x	x	x	x	x		x	x	
Otoe	5	o	o	o	o	o	o			o	o
Pawnee	5	x	x	x	x	x	x		x	x	
Perkins	2		x	x	x	x	x	x		x	
Phelps	3			x	x	x	x			x	x
Pierce	4	x	x	x	x	x	x	x	x	x	x
Platte	4		x	x	x	x	x		x	x	
Polk	5	x	x	x	x	x	x	x	x	x	
Red Willow	2	x	x	x	x	x	x			x	x
Richardson	5	x	x	x	x	x	x		x	x	x
Rock	4	x	x	x	x	x	x		x	x	x
Saline	5	o	o	o	o	o	o		o	o	
Sarpy*	6										
Saunders	5	o	o	o	o	o	o	x	o	o	
Scotts Bluff	1	o		x	x	x					
Seward	5	o	o	o	o	o	o			o	o
Sheridan	1	x		x	x	x	x	x		x	
Sherman	3	x	x	x	x	x	x	x	x		x
Sioux	1	x	x	x	x	x	x	x	x	x	
Stanton	4	x	x	x	x	x	x	x	x	x	x
Thayer	5	x	x	x	x	x	x	x	x	x	x
Thomas	2	x	x	x	x	x	x	x	x	x	x
Thurston	4		x	x	x	x	x	x	x	x	x
Valley	3	x	x	x	x	x	x		x	x	
Washington*	4	o	o	o	o	o	o			o	
Wayne	4	x	x	x	x	x	x	x	x	x	
Webster	3	x	x	x	x	x	x	x	x	x	x
Wheeler	3	x	x	x	x	x	x	x	x	x	x
York	5	x	x	x	x	x	x			x	
Total Nebraska Counties with State Designated Shortage Areas		69	77	85	88	86	87	45	55	78	50

Source: Nebraska Health and Human Services System, Office of Rural Health, August 2003.

(1) State designated shortage area for indicated health professional category.

(2) Nebraska Health Planning Regions defined by the Nebraska Health and Human Services System, 2001.

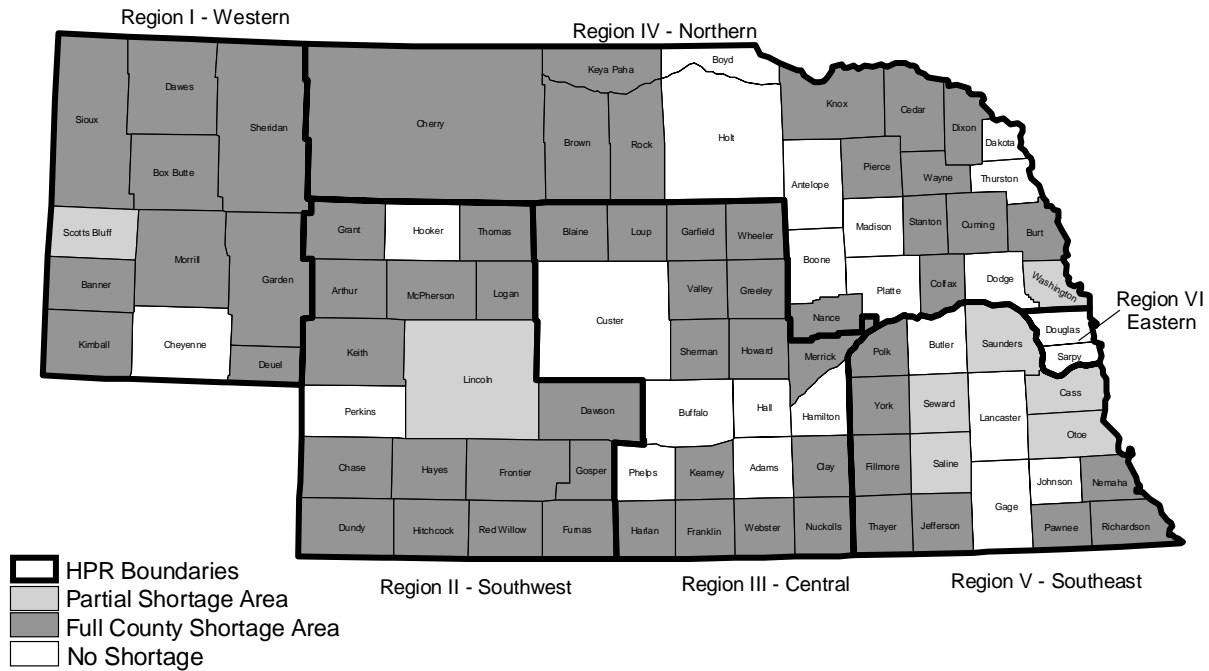
(3) A federal primary care shortage area covering Callaway and Arnold in Custer County, and a federal dental shortage area covering Crawford in Dawes county are also designated as state shortage areas respectively.

(x) Indicates the county is a designated shortage area.

(o) As per guidelines, cities larger than 15,000 and counties within a 25-mile radius of Lincoln and Omaha are not designated. This means that only parts of these counties are designated as shortage areas.

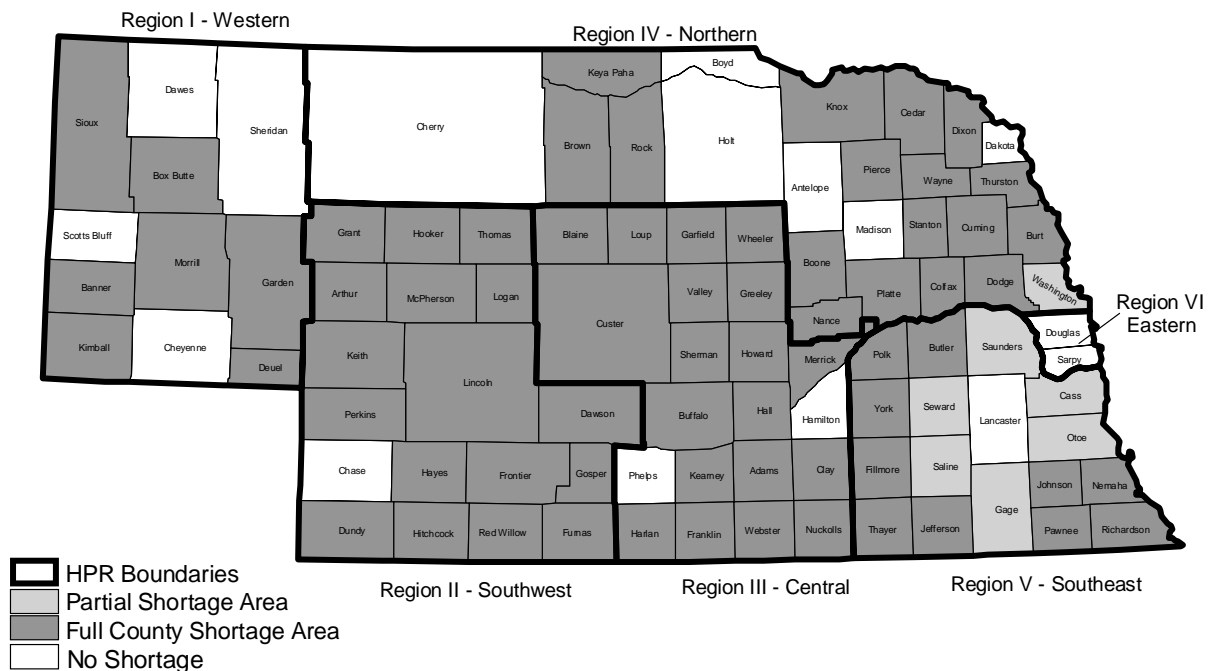
* See metropolitan county definitions p. 23.

Figure 5
Family Practice Shortage Areas



Source: Nebraska Health and Human Services System, Office of Rural Health - 2003.
 Nebraska Health Planning Regions defined by Nebraska Health and Human Services System, 2001.

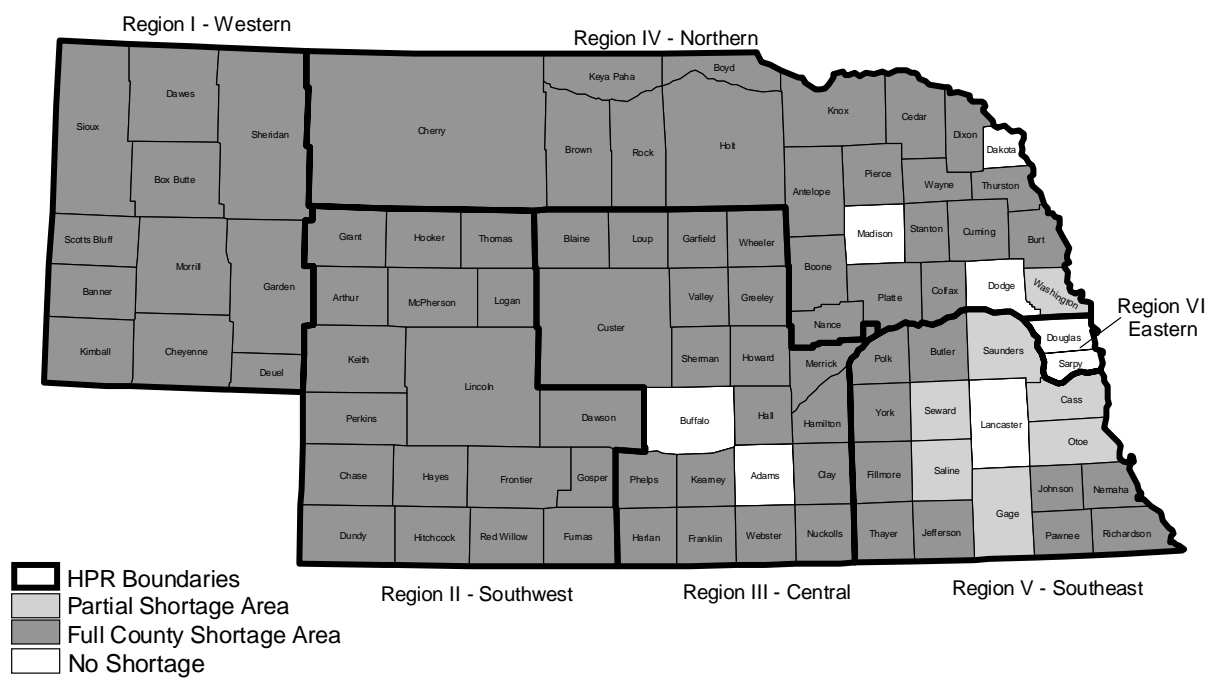
Figure 6
General Surgery Shortage Areas



Source: Nebraska Health and Human Services System, Office of Rural Health - 2003.
 Nebraska Health Planning Regions defined by Nebraska Health and Human Services System, 2001.

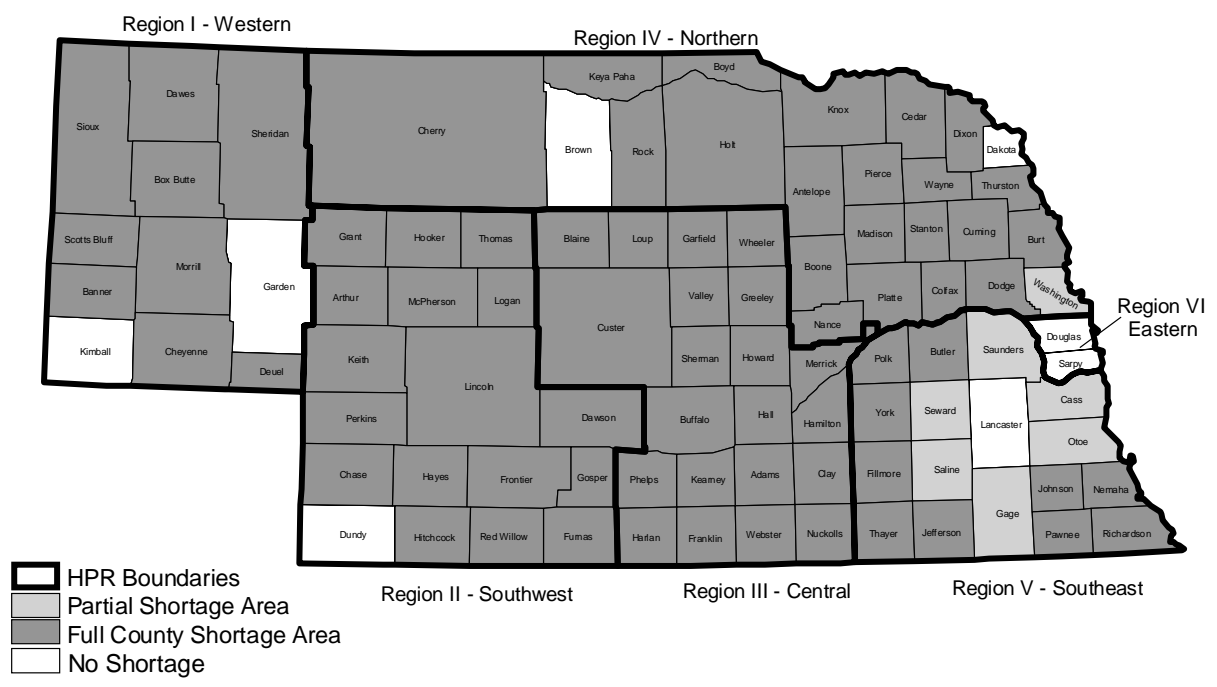


Figure 7
Pediatric Care Shortage Areas



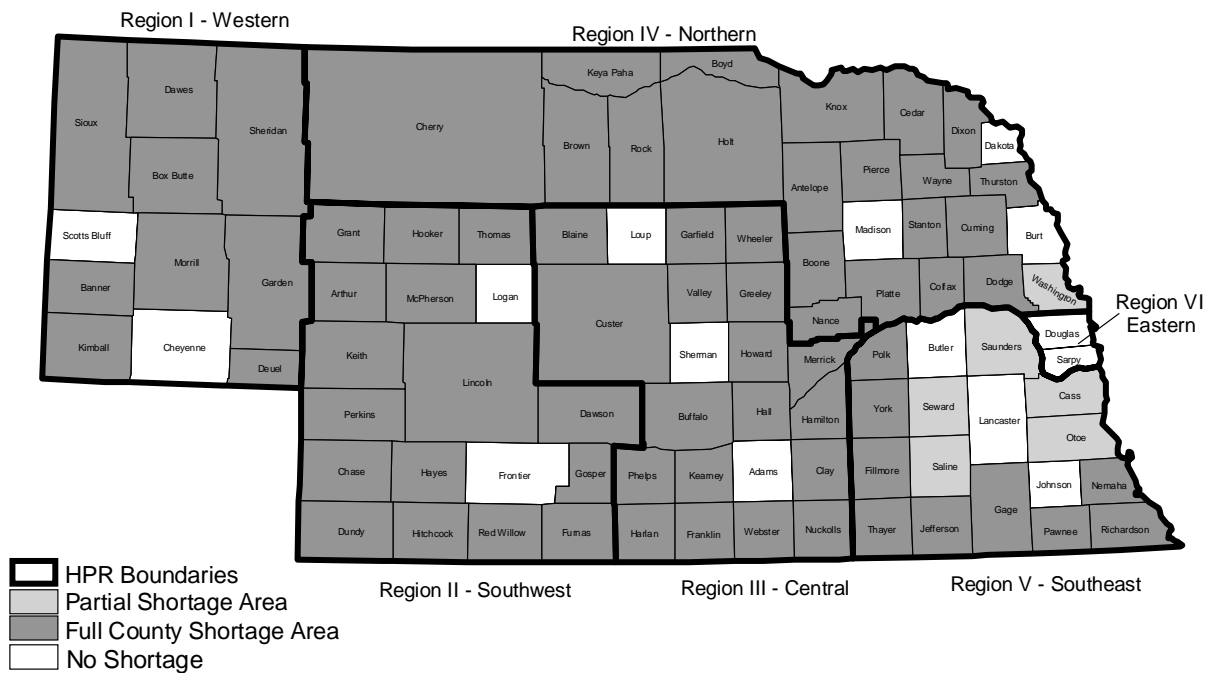
Source: Nebraska Health and Human Services System, Office of Rural Health - 2003.
Nebraska Health Planning Regions defined by Nebraska Health and Human Services System, 2001.

Figure 8
Internal Medicine Shortage Areas



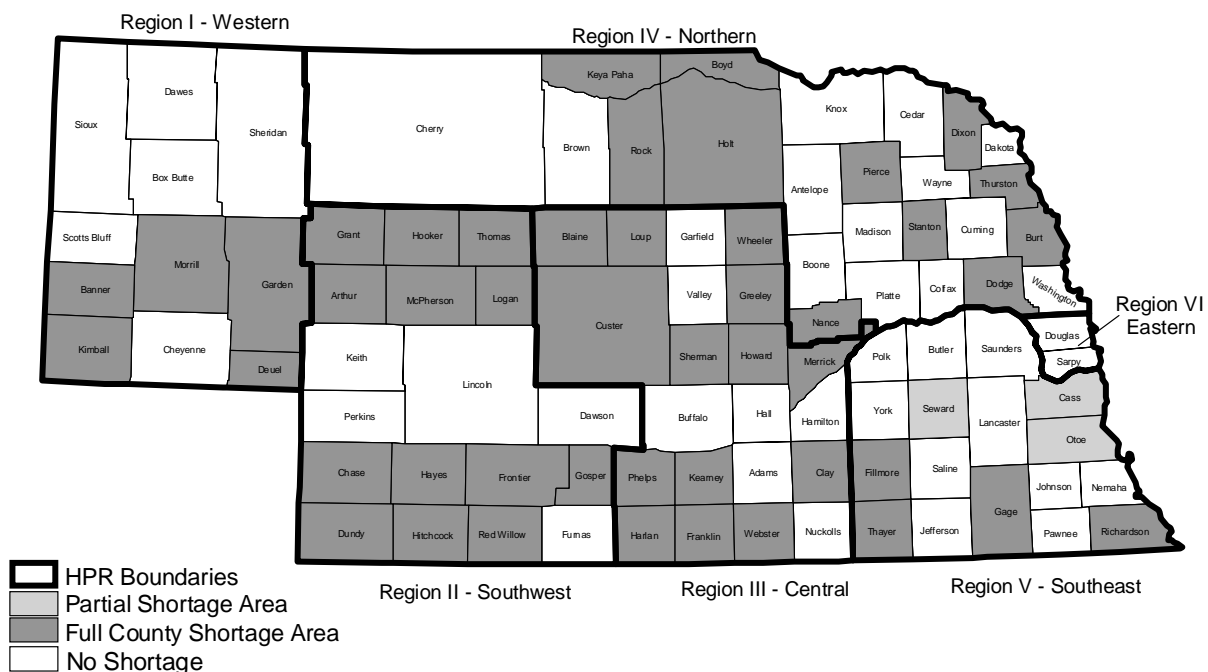
Source: Nebraska Health and Human Services System, Office of Rural Health - 2003.
Nebraska Health Planning Regions defined by Nebraska Health and Human Services System, 2001.

Figure 13
Occupational Therapy Shortage Areas



Source: Nebraska Health and Human Services System, Office of Rural Health - 2003.
 Nebraska Health Planning Regions defined by Nebraska Health and Human Services System, 2001.

Figure 14
Physical Therapy Shortage Areas



Source: Nebraska Health and Human Services System, Office of Rural Health - 2003.
 Nebraska Health Planning Regions defined by Nebraska Health and Human Services System, 2001.



Definitions

CCD (Census County Division) - A subdivision of a county that is a relatively permanent statistical area established cooperatively by the Census Bureau and local government authorities. Used for presenting census statistics in 21 states that do not have well-defined MCDs (Minor Civil Divisions) that serve as local governments. Nebraska has defined MCDs.

CT (Census Tract) - A small, relatively permanent, statistical subdivision of metropolitan areas and selected non-metropolitan counties, delineated for the purpose of presenting census data. CTs usually have between 2,500 and 8,000 persons and, when first delineated, are designed to be homogeneous with respect to population characteristics, economic status, and living conditions. Census tracts do not cross county boundaries.

MCD (Minor Civil Division) - The primary political or administrative divisions of a county. MCDs represent many different kinds of legal entities with a wide variety of governmental and/or administrative functions. MCDs are variously designated as American Indian reservations, assessment districts, boroughs, election districts, gores, grants, magisterial districts, parish governing authority districts, plantations, precincts, purchases, supervisors' districts, towns, and townships.

PRIMARY CARE PHYSICIAN - Primary care physicians are defined as all non-federal doctors of medicine (M.D.) and doctors of osteopathy (D.O.) who provide direct patient care in general or family practice, general internal medicine, pediatrics, or obstetrics and gynecology.

MENTAL HEALTH PROVIDER - Mental health professionals include licensed psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, and marriage and family therapists.

METROPOLITAN AND NON-METROPOLITAN AREAS - Pursuant to U.S. Code and Executive Order, the Federal Office of Management and Budget (1993) defines statistical data collection areas for the United States. This *Health Data Reporter* uses two such definitions, Metropolitan Statistical Areas (MSAs) and Non-Metropolitan Statistical Areas (Non-MSAs). An MSA is defined as a Core Based Statistical Area associated with at least one urbanized area that has a population of at least 50,000. The MSA comprises the central county or counties containing the core, plus adjacent outlying counties having a high degree of social and economic integration with the central county as measured through commuting (Federal Register, 65:249, p. 82238). Non-MSAs are all areas outside of the federally recognized MSAs.

About the Nebraska Health Information Project

The Nebraska Health Information Project is a partnership project made possible with the financial support of the State of Nebraska and through additional personal and other resources provided by the University of Nebraska Medical Center. While initiated by Nebraska Unicameral, the ongoing success of the project results from cooperation and collaboration among a number of organizations and individuals, particularly those involved in delivering health care services, financing health care and analyzing health related data.

Other reports have been published by the Nebraska Health Information Project, including biennial databooks which present Nebraska health and demographic data at the county, area and state levels. To find out more about these reports and future reports visit our homepage at: <http://www.unmc.edu/nebraska>

The Nebraska Center for Rural Health Research

<http://www.unmc.edu/rural>

Director: Keith Mueller

Faculty: Li-Wu Chen, J. Patrick Hart, Michael Shambaugh-Miller

Research Associate: Katherine Jones

Analysts: Roslyn Fraser, Dianne Harrop, Catherine Makhanu, Brandi Shay,
Anne Skinner, Liyan Xu, and Wanqing Zhang

Graduate Assistants: Erin Carlson, Brian Hesford,
and Donadea Rasmussen

Administrative Staff: Laura Bashus, Kathy Minikus, and Celeste Pierce

Editor: Sue Nardie

