



*Your life is our life's work.*

# Community Health Needs Assessment

Mercy Hospital Berryville  
Fiscal Year 2019



## Our Mission:

As the Sisters of Mercy before us, we bring to life the healing ministry of Jesus through our compassionate care and exceptional service.

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# I. Executive Summary

Mercy Hospital Berryville (Mercy Berryville) is affiliated with Mercy, one of the largest Catholic health systems in the United States. Located in Carroll County, Arkansas, the critical-access hospital has 25 licensed beds, and includes a variety of specialty clinics, an outpatient surgery center, sleep center, physical therapy services, and emergency department. Mercy Berryville is a large employer in the area with over 220 co-workers. Carroll County is considered to be part of the larger Northwest Arkansas metropolitan area, which includes Benton, Carroll, Madison, and Washington Counties in Arkansas, as well as, Barry and McDonald Counties in Missouri.

On January 1, 2018, Mercy Berryville changed its affiliation from Mercy Hospital Springfield to Mercy Hospital Northwest Arkansas. Mercy Northwest Arkansas is currently in the process of a large expansion which will improve access to excellence in health care, increase economic development, and enhance quality of life throughout Northwest Arkansas. In January of 2018, Mercy Berryville opened a convenient care clinic in Berryville, increasing access to care for local communities. In October of that year, a primary care clinic in Green Forest, Arkansas was also reopened, improving access for residents of a rural and underserved area.

Mercy Berryville is committed to carrying out its mission to deliver compassionate care and exceptional service for all members of the communities it serves, with special attention to those who are marginalized, underserved and most vulnerable. As part of this community health needs assessment (CHNA), Mercy Berryville participated in a collaboration of area health care providers to conduct a comprehensive community health survey. Available health indicators within the hospital's primary service area were also obtained and compared to those of Arkansas and the United States. The findings from the CHNA informed prioritization of community health needs for Mercy Berryville:

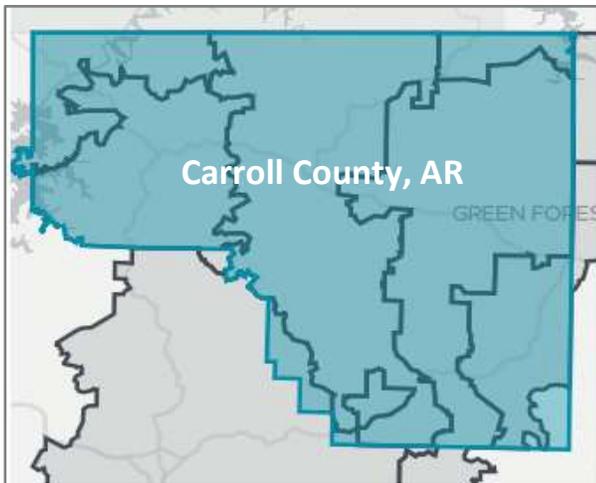
- Access to Care
- Obesity & Overweight

These prioritized needs will be the basis of Mercy Berryville's three-year community health improvement plan (CHIP), which will guide the coordination and targeting of resources, and the planning, implementation and evaluation of both new and existing programs and interventions. This community health needs assessment, along with the resulting community health improvement plan, will provide the framework for Mercy Berryville as it works in collaboration with community partners to advance the health and quality of life for the residents it serves.

To learn more about Mercy Hospital Berryville and to access a copy of this report online, visit [www.mercy.net](http://www.mercy.net).

## II. Community Served by the Hospital

The primary service area (PSA) of Mercy Berryville is Carroll County, Arkansas, which has a population of approximately 28,000. Mercy Berryville is located within the town of Berryville nestled in the Ozark Mountains of Northwest Arkansas. Founded in 1850, much of Berryville was destroyed in a Civil War battle in 1965. Settlers arriving shortly thereafter started to rebuild the town. Since that time, Berryville has continued to grow due in large part to a thriving agricultural industry. Tyson Foods, Inc. maintains a strong presence in the community, offering opportunities for area growers and hatcheries, support businesses, and those seeking employment. Other large corporations, including Walmart, Carroll Electric Cooperative, and Kērussō, Inc. have also contributed to the area’s economic growth and development. Berryville’s historic public square offers several dining and retail options and serves as the site of the Carroll County Heritage Center Museum where visitors learn about Carroll County’s past. Just one block off the square sits the Saunders Museum, which houses one of the largest collections of rare guns in America.<sup>1</sup> Less than 15 miles to the west of Berryville is the popular tourist and vacation destination, Eureka Springs. Named one of its “Dozen Distinctive Destinations,” by the National Trust for Historic Preservation, Eureka Springs is known for its Victorian architecture, unique shopping and dining experiences, fine arts galleries and museums, live music, and festivals. Carroll County provides many options for outdoor activities ranging from fishing, canoeing and watersports on the White River, Kings River and Beaver Lake, to hiking and mountain biking on the Oz Trails System of Northwest Arkansas.<sup>2</sup> The Northwest Arkansas area was recently named in the top 5 best places to live in the United States for the third year in a row and was named eighth overall as most affordable by U.S. News and World Report.<sup>3</sup>



Source: U.S. Census Bureau, QuickFacts, 2017; Map, Community Commons

Mercy Berryville’s primary service area spans 8 zip codes across Northwest Arkansas

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**Carroll County, AR**  
Population: 27,944  
Total Areas: 630.09 sq mi

## Demographics

	Primary Service Area 2017		AR 2017	US 2017
<b>Total Population</b>	27,944		2,994,501	325,139,271
<b>Age Groups</b>	<i>Number</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
0-17	6,148	22%	23%	23%
18-64	15,369	55%	60%	62%
65+	6,427	23%	17%	15%
<b>Race &amp; Ethnicity</b>				
Asian & Pacific Is.	559	2%	2%	6%
Black	280	1%	15%	12%
Hispanic	4,192	15%	8%	18%
White	22,355	80%	73%	61%
All Others	558	2%	3%	3%
	Primary Service Area 2017		AR 2017	US 2017
<b>Language*</b>	<i>Percent</i>		<i>Percent</i>	<i>Percent</i>
English Only at Home	87%		93%	79%
All Others	13%		7%	21%
<b>Workforce**</b>				
Armed Forces	<1%		<1%	<1%
Civilian, Employed	54%		54%	58%
Civilian, Unemployed	3%		4%	5%
Not in Labor Force	43%		42%	36%
<b>Household Income</b>				
<\$15K	15%		15%	12%
\$15-25K	14%		13%	10%
\$25-50K	32%		27%	23%
\$50-75K	18%		17%	17%
\$75-100K	10%		10%	12%
\$100K-\$200K	10%		13%	19%
>\$200K	1%		3%	6%
Families Below Poverty Level	16%		14%	12%
<b>Education Level***</b>				
Less than High School Degree	14%		16%	14%
High School Degree	40%		35%	28%
Some College/Assoc. Degree	27%		30%	31%
Bachelor's Degree or Greater	19%		20%	28%

 = largest cohort in demographic category

\*Excludes population age <5

\*\*Excludes population age <16

\*\*\*Excludes population age <25 and based on highest level achieved

Source: Sg2 Market Demographics; Nielsen zip code data, 2017; US Census Bureau, QuickFacts, Carroll County, AR, 2017 data; Community Commons, Carroll County, AR, 2018 data;

## Poverty and Insurance Status

Lack of income and health insurance are significant factors impacting health status, and create barriers to health care access, including primary care, specialty care, and other health services. Such factors disproportionately impact racially and ethnically diverse populations, which are more likely to struggle with poverty, lack of access to health care, and low socioeconomic status.<sup>4</sup> Residents with low income often forego preventive services and delay seeking medical attention until health problems become more severe. This situation produces a greater demand on a community’s medical resources and may lead to overutilization of emergency department services for what would otherwise be routine primary care. Community residents of lower socioeconomic status are often uninsured or underinsured, which can lead to barriers accessing health care services. Lack of employment and/or underemployment contributes to the issue, as the inability to earn a livable wage or acquire employer-offered health coverage further restricts health care access.

The following table shows the percentage of the population under age 18, as well as, the percentage of the total population living in poverty within the PSA. While the percentages of children under 18 years of age, as well as, the percentage of the overall population, living in poverty within the PSA are lower than state rates, they are higher than national rates.

Report Area	Population Under Age 18 in Poverty	Percent Population in Poverty
Carroll County, AR	23.55%	15.75%
Arkansas	25.68%	18.14%
United States	20.31%	14.58%

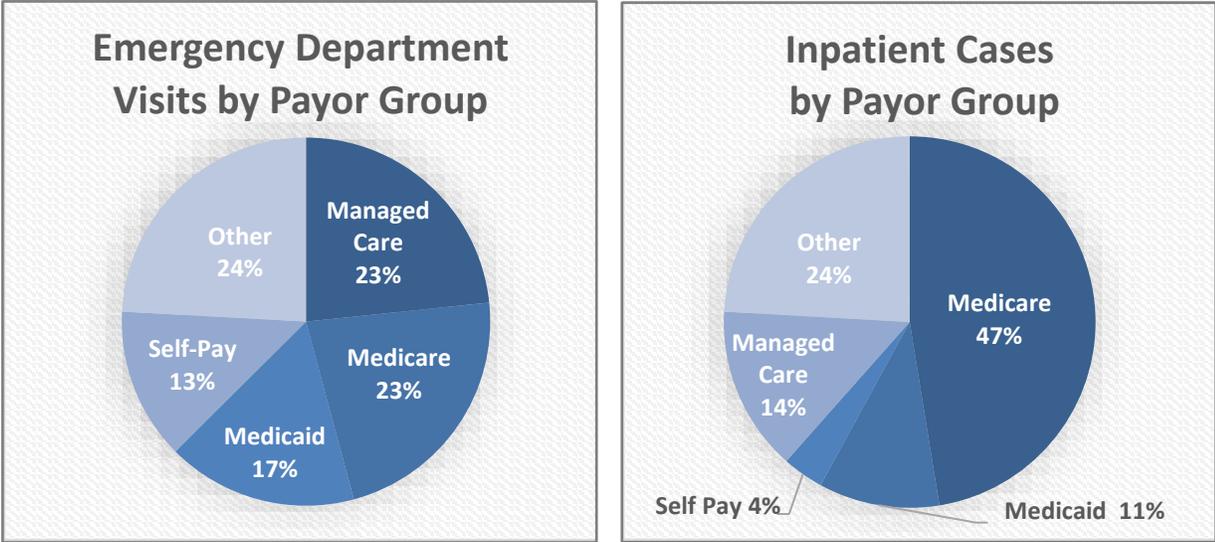
*Note: Poverty based on population below 100% of FPL  
Source: U.S. Census Bureau, American Community Survey, 2013-17.*

The incidences of uninsured persons in the PSA are shown in the table below. The percentage of the total uninsured population within the PSA is higher than both state and national rates, as is the percentage of the designated age group 18-24 living in Carroll County.

Report Area	Under Age 18	Age 18-24	Age 65+	Percent Uninsured Population
Carroll County, AR	5.02%	21.75%	0.36%	13.21%
Arkansas	4.93%	15.85%	0.41%	10.64%
United States	5.69%	14.78%	0.87%	10.50%

*Note: Poverty based on population below 100% of FPL  
Source: U.S. Census Bureau, American Community Survey, 2013-17.*

The following charts shows a comparable payer mix for Mercy Berryville emergency department visits and inpatient cases. The payer mix estimates the percentage of health care payments originating from commercial, government, self-payment, or other sources.



*\*Other includes Commercial, Direct Contract, Exchange, Managed Medicare/Medicaid, and Other  
Source: Epic Hospital Billing Report, 2018.*

**Available Health Services**

Access to appropriate health care, treatment and services is critical to improve and maintain quality of life while reducing the burden of disease. Those without care face obvious health challenges because they are not as able to acquire adequate treatment for acute issues or chronic diseases, resulting in further exacerbation of the condition and reducing quality and years of life.<sup>5</sup>

**Mercy Berryville Locations**

Mercy Berryville’s main campus, located in Berryville, Arkansas, offers the highest standards of care through all stages of life. Mercy Berryville, its urgent care/convenient care centers and other clinic facilities are shown on the map below. Through its partnership with Mercy NWA, which is currently undergoing significant expansion of its facilities and services throughout Northwest Arkansas, Mercy Berryville will continue to improve access to care and enhance quality of life for the residents it serves.



### Mercy Berryville

**PSA Locations**  
*As of January 2018:*  
 1 critical care hospital  
 2 urgent care and/or convenient care centers  
 3 clinic locations

Mercy  
Hospital

cc/uc

Clinic

Source: Map, Mercy Annual Community Update 2018, Mercy Locations Directory, January 2018.

### Community Health Care Providers

The primary service area of Mercy Berryville overlaps with that of its partner facility, Mercy NWA, which covers Benton, Carroll, Madison, and Washington Counties in Arkansas, and Barry and McDonald Counties in Missouri. There are three hospital systems within the Mercy NWA PSA that provide a wide range of services to meet the health-related needs of area residents. Each facility provides inpatient, outpatient and emergency care services. A map of the health care organizations within Northwest Arkansas is provided below. The hospitals located within Northwest Arkansas are represented with a small numbered dot. Corresponding operational statistics for the providers are outlined in the table. The list is not all-inclusive. In addition to the listed providers, there are a variety of primary care physician offices, specialty care physician offices, urgent care and convenient care centers, dentists' offices, behavioral health facilities, and a federally qualified health center distributed throughout Northwest Arkansas.



Note: Primary Care includes FM, IM, and Pediatrics; Specialists includes all other physicians; AP includes all other providers including NPs, PAs, Audiologists, Optometrists, Podiatrists, and Psychologists.  
 Source: Map, Mercy Annual Community Update, 2018;

System Affiliation	ID	Hospital	Type	Total Staffed Beds	Total Inpatient Discharges	Total Births
Mercy	1	Mercy Hospital Northwest Arkansas	Acute	208	11,235	1,635
	2	Mercy Hospital Berryville	Critical Access	25	417	0
	3	Mercy Hospital Cassville	Critical Access	8	292	0
Cox Health	4	Cox Monett Hospital	Critical Access	18	1,042	269
Community Health Systems/ Northwest Health	5	Northwest Medical Center—Bentonville	Acute	121	r	r
	6	Northwest Medical Center—Springdale	Acute	298	16,341	3,669
	7	Willow Creek Women's Hospital	Acute	30	r	r
	8	Siloam Springs Memorial Hospital	Acute	44	1,799	582
	9	Northwest Health Physician's Specialty Hospital	Acute	20	1,134	0
Other System or Independent	10	Eureka Springs Hospital	Critical Access	15	313	0
	11	HealthSouth Rehabilitation Hospital of Fayetteville	Rehabilitation	80	1,457	0
	12	Ozarks Community Hospital of Gravette	Critical Access	25	662	0
	13	Washington Regional Medical Center	Acute	321	14,179	1,240

\*Included with Northwest Medical Center—Springdale Note: #11 partnership with Washington Regional Medical Center  
Source: Mercy data-Mercy Finance, FY2017; Cox Monett inpatient discharges and births-HIDI Analytics, FY2017; all other inpatient discharges and births-AHA Guide, 2017 (2015 data); beds (all bed types/total complex)-AHD (reporting year may vary by provider)

### Health Professional Shortage Areas

The U.S. Health Resources and Services Administration (HRSA) designate particular geographic areas (a county or service area), demographic populations (low income or Medicaid-eligible), or institutions (federally qualified health centers or state/federal prisons) as health professional shortage areas (HPSAs). HPSAs identify areas as having shortages of primary care, mental health, and dental providers; designations may be made based on overutilized, inaccessible medical providers or population-to-clinician ratios.<sup>6</sup> Provider rates per 100,000 population within the PSA are shown in the following table. Primary care, mental health, and dental health provider rates in Carroll County are less than state and national rates.

Report Area	Primary Care Provider Rate	Mental Health Provider Rate	Dental Health Provider Rate
Carroll County, AR	57.67	79.6	28.88
Arkansas	75.1	209.1	44.3
United States	87.8	202.8	65.6

Note: Rates per 100,000 population. Primary care providers include FM, IM, General Practice and General Pediatrics. Mental health providers include psychiatrists, psychologists, clinical social workers, and counsellors specializing in mental health care. Dental care providers include all dentists qualified as D.D.S. or D.M.D.  
Source: Community Commons—data from U.S. Dept. of HHS, HRSA, 2014-15; Univ. of Wisconsin Population Health Institute, County Health Rankings, 2018.

The table below shows that no designated HPSA facilities exist within Mercy Berryville's PSA.

Report Area	Primary Care Facilities	Mental Health Care Facilities	Dental Health Care Facilities	Total HPSA Facility Designations
Carroll County, AR	0	0	0	0
Arkansas	35	32	26	93
United States	3,599	3,171	3,071	9,836

Source: Community Commons—data from US Department of Health & Human Services, HRSA, February 2019.

### III. Community Health Needs Assessment Process

Mercy understands the importance of fostering and working in collaboration with strong partners to positively impact the health and quality of life for all populations within the community served. Therefore, Mercy Berryville, in partnership with Mercy NWA, convened a committee of partners to assist in the Community Health Needs Assessment (CHNA) process. The committee was comprised of representatives from various health and social service agencies and organizations that are located in and/or provide services in the Mercy Berryville community.

The committee assisted Mercy in the development and distribution of a community health survey. The purpose of the survey was to glean perceived health-related needs from those within the PSA. Special efforts were made to reach those individuals in minority and marginalized populations.



A list of community partners involved in the CHNA process is provided below:

Arkansas Coalition of Marshallese, Arkansas Department of Health, Benton County Health Unit, Carroll County Health Unit, Community Clinic Northwest Arkansas, Hark at the Center for Collaborative Care, Madison County Health Coalition, Madison County Health Unit, Mercy Berryville, Mercy Northwest Arkansas, Ozark Guidance Center, Washington County Health Unit, Washington Regional Medical Center, and University of Arkansas for Medical Sciences Northwest

Mercy Community Health co-workers were primary leads for the 2019 CHNA. Supported by a University of Arkansas Community Health PhD student and Public Health interns, these co-workers collected and reviewed data from a variety of sources, including the community health survey, published data, and hospital-specific data.

The survey committee and community health subcommittee evaluated the data, which in addition to input gathered from community members, advisory panels, coalitions, and stakeholder meetings, was utilized to:

- Prioritize the community's identified health-related needs
- Assess the community resources available to address those needs and identify existing gaps
- Create a collaborative health improvement plan with community partners and other resources possessing the potential to alleviate the prioritized needs

The following external sources of published data are examples of those utilized in the data collection process.

- Centers for Disease Control and Prevention, National Center for Health Statistics  
U.S. Department of Health and Human Services  
<https://www.cdc.gov/nchs/>
- Community Commons  
Institute for People, Place and Possibility; The Center for Applied Research and Environmental Systems; and Community Initiatives  
<https://www.communitycommons.org/>
- County Health Rankings and Roadmaps—2019  
The Robert Wood Johnson Foundation and The University of Wisconsin-Public Health Institute  
<http://www.countyhealthrankings.org/>
- HealthyPeople 2020, Leading Health Indicators  
U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion  
[www.healthypeople.gov/2020/](http://www.healthypeople.gov/2020/)
- Northwest Arkansas Community Update—2018  
Annual Community Update Mercy  
<https://baggotstreet.mercy.net/sites/default/files/hubs/Central%20Region%20-%20Northwest%20Arkansas.pdf>
- Carroll County, Arkansas Data  
United States Census Bureau  
<https://www.census.gov/>

## IV. Community Input

The voices of the people within Mercy Berryville’s primary service area were central to the health needs assessment process. Community input was obtained through a comprehensive community health survey.

### Survey

The NWA Community Health Survey was developed and distributed by the aforementioned committee of 14 community partners established for that purpose. From January to April 2018, the committee worked together to create the survey, which focused on community members’ perceptions regarding the greatest community and personal health needs, risky behaviors and health risk factors, and social determinants of health. The survey, which was revised multiple times and pilot tested, was translated into three languages—English, Spanish, and Marshallese—and made available online and in printed versions. The online version was hosted by Hark at the Center for Collaborative Care, a non-profit organization working to coordinate human and social services within Northwest Arkansas. Printed versions were made available to gather feedback from those without computer access. These paper copies were distributed in strategically selected locations, including summer nutrition programs, food pantries, influenza vaccination clinics, free community clinics, health departments, hospital waiting rooms and universities, to increase opportunities for input from low-income, marginalized and medically-underserved members of the community. Over a 4 ½ month time frame (June 1 through October 15, 2018), the committee received 1,108 completed surveys and 122 of those were from Carroll County residents. Twelve percent of respondents identified as a race/ethnicity other than White (3% indicated two or more races/ethnicities), 30% reported an educational level of high school diploma/GED or less, and 10% were uninsured. A full report of the NWA Community Health Survey results is included in Appendix B.

## V. Conducting the Needs Assessment

Mercy collected both primary and secondary data during its CHNA process. Primary data was collected through the community health survey and by obtaining internal Mercy data. Secondary data was obtained from publicly available data sources; some examples of these sources are listed in Section III.

### Primary Data

#### *Survey*

A summary of Carroll County results from the NWA Community Health Survey is as follows:

*The top five most important health-related needs within the NWA community:*

- Diabetes
- Overweight & Obesity
- Mental Health Problems
- Drug Use--Illegal
- Drug Use--Prescription

*The top five most important personal health-related needs:*

- Obesity and Overweight
- Lack of Physical Activity
- Mental Health Problems
- Sleep Difficulties
- Diabetes

*The top five most important risky behaviors within the NWA community:*

- Alcohol Abuse
- Being Overweight
- Drug Use--Illegal
- Unsafe Driving/Texting
- Drug Use--Prescription

*The top five most important health-related needs, that if met, would most improve personal health:*

- Better Sleep
- Exercise/Recreation Opportunities
- Reduced Stress/Stress Management
- Affordable Prescriptions/Medications
- Affordable Housing

**Internal Mercy Berryville Data**

To determine the degree to which Mercy Berryville’s internal measures and data align with the community’s health needs, data specific to Mercy Berryville was considered in the CHNA process. The following tables show 2017 hospital data for which diabetes, behavioral health, cardiovascular disease, and lung disease were principal or secondary diagnoses. Primary reasons for the 7,799 emergency department (ED) visits made in 2017 are summarized first.

MERCY Berryville		Emergency Department Visits by Principal or Secondary Diagnosis	
Emergency Department Visits with Diabetes, Behavioral Health, Cardiovascular Disease, and Lung Disease Principal or Secondary Diagnoses Calendar Year 2017			
Principal or Secondary Diagnoses	Emergency Department Visits		
DIABETES	5.5%	432	
BEHAVIORAL HEALTH	8.5%	669	
CARDIOVASCULAR DISEASE	6.2%	481	
LUNG DISEASE	7.0%	543	

Source: EPIC Hospital Billing Report, FY18

Primary reasons for the 390 inpatient admissions occurring in 2017 are summarized in the table below.

MERCY Berryville		Inpatient Admits by Principal or Secondary Diagnosis	
Inpatient Admits with Diabetes, Behavioral Health, Cardiovascular Disease, and Lung Disease Principal or Secondary Diagnoses Calendar Year 2017			
Principal or Secondary Diagnoses	Inpatient Admits		
DIABETES	38.2%	149	
BEHAVIORAL HEALTH	39.2%	153	
CARDIOVASCULAR DISEASE	39.7%	155	
LUNG DISEASE	66.3%	205	

Source: EPIC Hospital Billing Report, FY18

## Secondary Data

### Leading Causes of Death

The tables below show the ten leading causes of death for residents of Arkansas. Arkansas ranks in the top five states for deaths due to heart disease, cancer, chronic lower respiratory disease, stroke and kidney disease.

AR Leading Causes of Death, 2016	Deaths	Death Rate*	State Rank**	U.S. Rate***
1. Heart Disease	6,612	223.7	3 <sup>rd</sup>	165.5
2. Cancer	6,727	178.8	5 <sup>th</sup>	155.8
3. Chronic Lower Respiratory Diseases	2,169	59.1	5 <sup>th</sup>	40.6
4. Stroke	1,643	45.6	4 <sup>th</sup>	37.3
5. Accidents	1,604	51.4	27 <sup>th</sup>	47.4
6. Alzheimer's Disease	1,475	41.3	7 <sup>th</sup>	30.3
7. Diabetes	920	25.4	8 <sup>th</sup>	21.0
8. Kidney Disease	722	20.0	4 <sup>th</sup>	13.1
9. Influenza/Pneumonia	623	17.1	8 <sup>th</sup> (tie)	15.2
10. Suicide	555	18.2	14 <sup>th</sup>	13.5

\* Age-adjusted, per 100,000 population      \*\*Rankings from highest to lowest      \*\*\*Includes District of Columbia and U.S. territories  
Source: Centers for Disease Control and Prevention—National Center for Health Statistics, Stats of the State of Arkansas, 2016.

### Health Factors and Behaviors Impacting Health Outcomes

Out of 75 counties in Arkansas, Carroll County ranks 23<sup>rd</sup> in overall health outcomes and 16<sup>th</sup> in health factors. These numbers are an increase from 2018, when Carroll County ranked 13<sup>th</sup> and 12<sup>th</sup>, respectively.

The table below shows the measures and current associated data used to rank each county by the 2019 County Health Rankings & Roadmaps:

	Carroll County	Trend	Error Margin	Top U.S. Performers	Arkansas	Rank (of 75)
<b>Health Outcomes</b>						<b>23</b>
<b>Length of Life</b>						<b>28</b>
Premature death	<b>i</b> 10,100		8,600-11,600	5,400	9,500	
<b>Quality of Life</b>						<b>11</b>
Poor or fair health	<b>i</b> 22%		21-23%	12%	24%	
Poor physical health days	<b>i</b> 4.8		4.6-5.0	3.0	5.0	
Poor mental health days	<b>i</b> 4.8		4.6-5.0	3.1	5.2	
Low birthweight	<b>7%</b>		6-8%	6%	9%	
<b>Health Factors</b>						<b>16</b>
<b>Health Behaviors</b>						<b>5</b>
Adult smoking	<b>i</b> 19%		18-19%	14%	24%	
Adult obesity	32%		26-39%	26%	35%	
Food environment index	8.1			8.7	5.4	
Physical inactivity	32%		26-38%	19%	31%	
Access to exercise opportunities	52%			91%	65%	
Excessive drinking	<b>i</b> 13%		13-14%	13%	16%	
Alcohol-impaired driving deaths	27%		19-34%	13%	26%	
Sexually transmitted infections	213.0			152.8	562.0	
Teen births	<b>50</b>		44-56	14	41	

	Carroll County	Trend 	Error Margin	Top U.S. Performers	Arkansas	Rank (of 75) 
<b>Clinical Care</b>						<b>40</b>
Uninsured	14%		12-16%	6%	9%	
Primary care physicians	1,730:1			1,050:1	1,500:1	
Dentists	3,490:1			1,260:1	2,180:1	
Mental health providers	1,160:1			310:1	460:1	
Preventable hospital stays	3,579			2,765	5,075	
Mammography screening	<b>37%</b>			49%	35%	
Flu vaccinations	<b>43%</b>			52%	44%	
<b>Social &amp; Economic Factors</b>						<b>30</b>
High school graduation	82%			96%	88%	
Some college	44%		37-52%	73%	57%	
Unemployment	3.3%			2.9%	3.7%	
Children in poverty	<b>26%</b>		18-33%	11%	23%	
Income inequality	3.9		3.4-4.5	3.7	4.8	
Children in single-parent households	27%		19-35%	20%	36%	
Social associations	14.1			21.9	12.1	
Violent crime	337			63	516	
Injury deaths	97		80-113	57	81	
<b>Physical Environment</b>						<b>29</b>
Air pollution - particulate matter 	9.4			6.1	10.0	
Drinking water violations	Yes					
Severe housing problems	17%		13-20%	9%	15%	
Driving alone to work	<b>80%</b>		77-84%	72%	83%	
Long commute - driving alone	23%		19-28%	15%	26%	

Source: County Health Rankings & Roadmaps—The Robert Wood Johnson Foundation and The University of Wisconsin-Public Health Institute; Carroll County, Arkansas, 2019 data.

The following table shows Preventable Hospital Events as indicated by the discharge rate (per 1,000 Medicare enrollees) for conditions, such as asthma, diabetes, pneumonia, or other conditions which could have been prevented if patients accessed primary care resources. Such conditions are referred to as being ambulatory care sensitive.

Report Area	Total Medicare Part A Enrollees	Ambulatory Care Sensitive Condition Hospital Discharges	Ambulatory Care Sensitive Condition Discharge Rate
Carroll County, AR	2,992	132	44.1
Arkansas	271,555	16,793	61.8
United States	22,488,201	1,112,019	49.4

Note: This indicator is compared to the lowest state average.

Source: Dartmouth College Institute for Health Policy & Clinical Practice, Dartmouth Atlas of Health Care, 2015

### Social Determinants of Health

Healthy People 2020 (HP 2020) highlights the importance of addressing Social Determinants of Health (SDOH) by including an overarching goal to create social and physical environments that promote good health for all. HP 2020 uses a place-based organizing framework to identify five key areas of SDOH: economic stability, education, social and community context, health and health care, and neighborhood and built environment. Many indicators from these areas are included elsewhere in this CHNA. The table below summarizes additional SDOH indicators available for our geographic area.<sup>7</sup>

Key Area/ Issue (HP 2020)	Indicator	Measure	Data Source
<b>Economic Stability</b>			
Food Insecurity	Population receiving SNAP benefits	12%	US Census Bureau, SAIPE, 2015
Housing Instability	Renter-occupied housing units	22.5%	US Census Bureau, American Community Survey, 2013-17
	Housing cost burden (30)% - percentage of households where housing costs exceed 30% of total household income	24%	US Census Bureau, ACS, 2013-17
Poverty	Children eligible for free/reduced price lunch	71%	National Center for Education Statistics, 2015-16
<b>Education</b>			
Early Childhood	Total Head Start programs per 10,000 children under age 5	6.23	US Dept of Health & Human Services, 2018
	Student reading proficiency – percentage of 4 <sup>th</sup> grade students scoring Not Proficient or worse	72%	US Dept of Education, EDFacts, 2014-15
Language & Literacy	Population in limited English households	3.5%	US Census Bureau, ACS, 2013-17
<b>Neighborhood &amp; Built Environment</b>			
Access to Foods that Support Healthy Eating	Percent of population living in food desert census tracts	52%	USDA, Food Research Atlas, 2015
Environmental	High heat index days	9.9%	NOAA, North American Land Assimilation System, 2014
Quality of Housing	Substandard housing – occupied housing with one or more conditions	27%	US Census Bureau, ACS, 2013-17

Source: Community Commons—data for Carroll County, AR, retrieved 2018.

## VI. Prioritized Significant Community Health Needs

### Identifying Assessed Health Issues

As primary and secondary data was analyzed for the CHNA, ten assessed health issues (AHI) emerged from the process. The AHI are broadly defined and relevant indicators are presented in this section. Indicators presented do not represent all indicators available for a particular AHI, but instead were selected based on being deemed germane to the prioritization process. A synopsis report of primary and secondary data utilized in the prioritization process is provided in Appendix D.

#### *Access to Care*

A lack of access to care results in barriers to positive health behaviors and outcomes. These barriers disproportionately impact those who are low-income, racial or ethnic minorities, or immigrants. Access to care is determined by availability and accessibility of resources and services and includes such factors as lack of access to preventive care, limited health knowledge, insufficient provider outreach, and social health determinants interfering with utilization of services.<sup>5</sup>

#### Access to Care Indicators

- Of the PSA population, 16.58% is uninsured, which is higher than the state (12.3%) and U.S. (11.7%) rates<sup>8</sup>
- There are 57.67 primary care physicians per 100,000 population within the PSA, a rate lower than the state (75.1) and U.S. (87.8) rates. The rate of dentists (28.9) and mental health providers (54.0) within Carroll County are also lower those of AR (4.3; 194.0) and the U.S. (65.6; 202.0) for each indicator, respectively.<sup>8</sup>
- The entire population of Carroll County (100%) is considered to be living within a geographic area designated as a “Health Professional Shortage Area,” compared to 45.5% of AR and 33.1% of U.S. residents.<sup>8</sup>

### Behavioral Health

Mental or behavioral health (for the purpose of this report, the terms will be used interchangeably) can be defined as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community.<sup>9</sup>

#### Behavioral Health Indicators

- Of the Medicare population within the PSA, 14.0% has depression, which is less than both AR (16.3%) and the U.S. (16.7%)<sup>8</sup>
- Adults age 18 and older living within Carroll County reported fewer poor mental health days on average (4.8 days) in the last 30 days than did the Arkansas population as a whole (5.2 days)<sup>10</sup>
- Responses to the NWA Community Health survey revealed<sup>11</sup>:
  - 24.4% of Carroll County residents indicated mental health problems were one of the three biggest health problems within the community, and 31.2%, one of the three most important health problems for them, personally
  - Reduced stress/stress management was indicated by 26.5% of PSA respondents as being the health need that, if met, would have the most positive impact on their own personal health

### Cancer

Cancer is a disease in which individuals suffer from an uncontrolled growth of cells derived from normal tissues. Cancer risk is increased by certain genetic, environmental and behavioral factors.<sup>12</sup>

#### Cancer Indicators

- Cancers are listed as the 2<sup>nd</sup> leading cause of death (2016) in the state; Arkansas is 5<sup>th</sup> in the nation in cancer mortality<sup>13</sup>
- The breast cancer incidence rate for the PSA is 116.6/100,000, which is higher than the state (114.7), but lower than U.S. (124.7) rates<sup>8</sup>
- The lung cancer incidence rate in Carroll County, 70.1/100,000, is lower than the state rate (78.0), but higher than the U.S. (60.2)<sup>8</sup>
- Responses to the NWA Community Health survey revealed 20.3% of Carroll County residents indicated cancers were one of the three biggest health problems within the community<sup>11</sup>

### *Chronic Lower Respiratory Disease/COPD*

Chronic Lower Respiratory Disease, mainly COPD (Chronic Obstructive Pulmonary Disorder), refers to a group of diseases that cause airflow blockage and breathing-related problems. COPD may be caused by tobacco smoke, air pollutants, and/or genetics.<sup>14</sup>

#### Chronic Lower Respiratory Disease/COPD Indicators

- Chronic Lower Respiratory Disease is the 3<sup>rd</sup> leading cause of death in the state; Arkansas is 5<sup>th</sup> in the nation in lung disease mortality<sup>13</sup>
- The age-adjusted death rate for Lung Disease within the PSA is 51.4/100,000, lower than AR (59.29), but higher than the U.S. (41.3)<sup>8</sup>
- In 2017, Mercy Berryville had 503 emergency department visits with lung disease being a principal or secondary diagnosis and 205 of those were admitted as inpatients<sup>15</sup>

### *Diabetes*

Diabetes is a common chronic illness in which the body is unable to adequately process blood glucose, resulting in blood sugar levels being too high. Addressing diabetes and its causes is important in improving the overall health of the community.<sup>16</sup>

#### Diabetes Indicators

- Diabetes is the 7<sup>th</sup> leading cause of death (2016) in the state; Arkansas ranks 8<sup>th</sup> in the nation in deaths associated with diabetes<sup>13</sup>
- Of adults aged 20 and older within the PSA, 10.5% have ever been told by a doctor that they have diabetes (age-adjusted), which is lower than state rate (11.28%), but higher than the U.S. (9.19%) rate<sup>8</sup>
- Of the Medicare population within the PSA, 20.44% has diabetes, which is lower than the state (24.4%) and U.S. (26.55%) rates<sup>8</sup>
- In 2017, Mercy Berryville had 432 emergency department visits with diabetes being a principal or secondary diagnosis and 149 of those were admitted as inpatients<sup>15</sup>
- Of Carroll County respondents to the NWA Community Health survey, 30.9% indicated diabetes was one of the three biggest health problems within the community, and 26.2%, for them, personally<sup>11</sup>

### Heart Disease

The term “heart disease” refers to several types of heart conditions. In the U.S., the most common such condition is coronary artery disease, which affects the blood flow to the heart and can lead to a heart attack.<sup>17</sup>

#### Heart Disease Indicators

- Heart disease is the leading cause of death (2016) in the states; Arkansas is 3rd in the nation in deaths due to heart disease<sup>13</sup>
- The age-adjusted death rate for Coronary Heart Disease within the PSA is 110.8/100,000. This is lower than the state rate (132.41), but higher than that of the U.S. (99.6)<sup>8</sup>
- Of adults aged 18 and older within the PSA, 6.2% have ever been told by a doctor that they have heart disease or angina. This is lower than AR (5.8%), but higher than the U.S.(4.4%)<sup>8</sup>
- Of the Medicare population within the PSA, 22.4% has heart disease, which is lower than Arkansas (29.17%) and the U.S. (26.46%)<sup>8</sup>
- In 2017, Mercy Berryville had 481 emergency department visits with cardiovascular disease being a principal or secondary diagnosis and 155 of those were admitted as inpatients<sup>15</sup>

### Homelessness

An individual who is homeless is one without a stable living situation, which may include living in a temporary shelter, transitional housing with extended family or friends, or on the street or in a car. Homelessness is often caused by income disparities, poverty and high housing costs.<sup>18</sup>

#### Homelessness Indicators

- The homeless population within NWA has grown by 152% in the last decade, compared to a 12% growth in the general population<sup>19</sup>
- There are currently an estimated 2,951 homeless persons in Northwest Arkansas, of which 49% report a mental health condition and 40% report substance abuse<sup>19</sup>
- Of the total homeless population, 1,547 are under the age of 18, an increase of 216% in the last decade<sup>19</sup>
- While 15% of the total NWA homeless population is unsheltered, that number rises to 20% among homeless veterans<sup>19</sup>

## Obesity and Overweight

A weight that is higher than what is considered as a healthy weight for a given height is described as overweight or obese. Overweight and obesity contribute to several issues that negatively impact health and contribute to chronic diseases.<sup>20</sup>

### Obesity/ Overweight Indicators

- AR ranks 7th in the nation in adult obesity rates<sup>13</sup>
- Of adults aged 20 and older living in the PSA, 32.8% self-reported a BMI > 30.0 (obese), which is lower than AR (35.4%), but higher than the U.S. (28.3%)<sup>8</sup>
- Of adults aged 18 and older living in the PSA, 30.8% self-reported a BMI between 25.0 to 30.0 (overweight), which is higher than both state (AR 34.0%; MO 35.3%) and U.S. (35.8%) rates<sup>8</sup>
- Responses to the NWA Community Health survey revealed<sup>11</sup>:
  - 26.8% of Carroll County residents indicated obesity and overweight were one of the three biggest health problems within the community, and 41.8%, one of the three most important health problems for them personally
  - 31.1% reported being overweight and 17.7% lack of physical activity as being within the top three most risky behaviors impacting the community's health

## Stroke

A stroke occurs when blood flow to part of the brain become blocked or when a blood vessel in the brain bursts. Because parts of the brain become damaged or die, a stroke can cause lasting brain damage, long-term disability, or even death.<sup>21</sup>

### Stroke Indicators

- Stroke is the 4th leading cause of death (2016) in the state; Arkansas is 5th in the nation in deaths due to stroke<sup>13</sup>
- The age-adjusted death rate for stroke within the PSA is 47.2/100,000. This is higher than the state (46.9) and U.S. (36.9) rates<sup>8</sup>

## Substance Abuse

Substance abuse refers to the harmful or dangerous use of psychoactive substances, which can include alcohol and illicit drugs. Psychoactive substance use can lead to dependence and addiction, so that there are difficulties in controlling the substance use, even despite harmful consequences.<sup>22</sup>

### Substance Abuse Indicators

- There were 87 total arrests for selling, manufacturing, and/or possession of drugs/narcotics within Carroll County in 2017, an increase from 69 arrests in 2016<sup>23</sup>
- According to 2017 Arkansas Prevention Needs Assessment data, NWA (Region 1) youth in 6<sup>th</sup>-12<sup>th</sup> grades report similar rates of prescription drug use (2.8%), over-the-counter drug use (1.3%) and any drug use (10.2%) within 30 days of survey as compared to state rates (3.0%, 1.2%, 10.1%, respectively)<sup>24</sup>
- Responses to the NWA Community Health survey revealed<sup>11</sup>:
  - 22.0% of Carroll County residents indicated illegal drug use was one of the three biggest health problems within the community, and 20.3% included prescription drug use within their top three concerns
  - 29.4% of respondents said that illegal drug use is one of the most important risky behaviors in Carroll County, while 24.4% included prescription drug use within their top three

## Prioritizing Assessed Health Issues

A meeting comprised of Mercy Berryville representatives and community stakeholders was convened in January 2019 in order to prioritize the ten assessed health issues (AHI). The purpose of the meeting was to evaluate any quantitative and/or qualitative findings from the CHNA process, the strengths and resources of the community and the hospital's strategic plan. A Nominal Group Technique was employed to assist in identifying and prioritizing the top three-five assessed health issues. The prioritization committee first agreed to the location of each AHI on a strategy grid based on the degree of need (low or high) and the Mercy NWA resources available to address the need (low, medium, or high). Those AHI that were categorized as "high need" were then ranked by the committee members using five criteria: 1) Magnitude of Need, 2) Feasibility to Change, 3) Alignment with Mission/Strategic Goals, 4) Resources Available, and 5) Importance to Community. Scores were totaled for all participants. Tables showing the resulting strategy grid and AHI rankings are below.

### Strategy Grid Results

	Magnitude of Need		
		High	Low
Resources Available	High	Access to Care Obesity & Overweight	
	Medium	Mental/Behavioral Health Stroke	
	Low		

### Assessed Health Issues Ranking Results

Identified Health Need	Total Score	Chosen as CHNA Priority Need (yes/no)
Access to Care	16	Yes
Obesity & Overweight	15	Yes
Mental/Behavioral Health	12	No
Stroke	8	No

Based on results of the 2019 CHNA, Mercy Berryville has prioritized the following health-related needs:



Access to care was selected as a prioritized health need because the committee believed addressing this issue would be the most efficient and effective way to improve the overall health of Carroll County residents. In response to the community input received through the CHNA, obesity and overweight was also chosen to be a joint focus area. Community survey responses indicated that obesity is perceived to be one of the most important issues impacting both personal and community health. For the next 3-year CHIP cycle beginning in 2019, Mercy Berryville will continue to secure resources, establish partnerships, and implement promising practices and evidence-based programs/interventions associated with these priority areas, creating positive health-related impacts within Carroll County communities.

## VI. Significant Community Health Needs Not Being Addressed and Why

Two assessed health issues identified in the 2019 CHNA process—mental/behavioral health and stroke--will not be addressed within the Mercy Berryville strategic plan for community health improvement. Due to Mercy Berryville's current lack of resources required to directly address these issues, they were not chosen as priority focus areas for the 2019 CHNA. However, related community partnerships, evidence-based programming, and sources of financial and other resources will be explored during the next three-year CHIP cycle. Mercy Berryville will consider focusing on these issues should resources and implementation strategies become available. Until then, Mercy Berryville will support, as able, the efforts of partner agencies and organizations currently working to address these needs within the community.

## VIII. Potentially Available Resources

Mercy Berryville collaborates with local community agencies and organizations that have similar missions and personnel dedicated to improving the health and quality of life for individuals within the Mercy Berryville region. Some of these partners include:

- Arkansas Chronic Disease Coordinating Council
- Arkansas Department of Health
- Arkansas Diabetes Advisory Council
- Carroll County Health Unit
- Hark at the Center for Collaborative Care
- Loaves & Fishes Food Bank of the Ozarks
- Ozark Guidance Center
- University of Arkansas
- University of Arkansas for Medical Sciences Northwest

## IX. Evaluation of Impact

The 2016 Community Health Needs Assessment identified three priority health areas. A community health improvement plan was developed and implemented to address these significant needs. Mercy Berryville developed and implemented a variety of programs and initiatives to address the needs identified in the 2016 CHNA.

### *Cardiovascular Disease*

Mercy Berryville collaborated with the local senior citizen centers in an effort to focus on obesity/overweight and heart health. In May of 2017 and 2018 Mercy Berryville participated in the Carroll County Senior Health Fairs. Screenings, such as weight, blood pressure and heart rate, were offered to senior community members, as well as health education regarding prevention and/or management of related chronic disease risk factors. Information was also provided about the Mercy Cardiac support groups and services available through the Mercy Cardiac Rehabilitation Department.

### *Mental Health*

In 2017, Mercy Berryville added a new program to target mental and behavioral health issues within the senior population. Senior Life Solutions, an outpatient geriatric behavioral health program, focuses on screening, education and referrals. As part of the ongoing partnership with the Carroll County Senior Citizens Center, the Senior Life Solutions program director provided mental and behavior health education, with special emphasis on aging-related factors contributing to depression and anxiety and ways to address these issues to improve overall health and quality of life.

### *Lung Disease*

Mercy Berryville developed plans to address lung disease within Carroll County, including providing education to elementary and middle school students about tobacco use and prevention, as well as, asthma self-management strategies. When leaders responsible for conducting these initiatives left positions with Mercy Berryville, resources necessary for program implementation were no longer available. However, Mercy Berryville maintains positive relationships with Carroll County school districts and may revisit the plan should such resources become available again.

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## **Appendix A**

### **NWA Community Health Survey Questions**

1). What **three** health problems are currently most important in our NWA COMMUNITY? (Those problems which have the greatest impact on overall community health)

- |  |  |   |
|--|--|---|
| <input type="radio"/> Aging problems                     | <input type="radio"/> Gun related injuries                     | <input type="radio"/> Rape/sexual assault                   |
| <input type="radio"/> Alcohol abuse                      | <input type="radio"/> Heart disease and stroke                 | <input type="radio"/> School violence                       |
| <input type="radio"/> Asthma/lung or breathing issues    | <input type="radio"/> High blood pressure                      | <input type="radio"/> Secondhand smoke exposure             |
| <input type="radio"/> Cancers                            | <input type="radio"/> Infant death                             | <input type="radio"/> Sex/human trafficking                 |
| <input type="radio"/> Child abuse/neglect                | <input type="radio"/> Infectious disease (TB, hepatitis, etc.) | <input type="radio"/> Sexually transmitted disease/HIV/AIDS |
| <input type="radio"/> Chronic pain                       | <input type="radio"/> Injuries due to crime                    | <input type="radio"/> Sleep difficulties                    |
| <input type="radio"/> Dental problems                    | <input type="radio"/> Lack of physical activity                | <input type="radio"/> Suicide                               |
| <input type="radio"/> Diabetes                           | <input type="radio"/> Mental health problems                   | <input type="radio"/> Teen pregnancy                        |
| <input type="radio"/> Domestic violence                  | <input type="radio"/> Motor vehicle crash injuries             | <input type="radio"/> Tobacco use/e-cigarette use/vaping    |
| <input type="radio"/> Drug use – illegal drugs           | <input type="radio"/> Obesity and overweight                   | <input type="radio"/> Other _____                           |
| <input type="radio"/> Drug use – prescription drug abuse | <input type="radio"/> Poor nutrition                           |   |

2). What health problems are currently most important to YOU? **Choose all that apply.** (Those problems which have the greatest impact on your personal health)

- |  |  |   |
|--|--|---|
| <input type="radio"/> Aging problems                     | <input type="radio"/> Gun related injuries                     | <input type="radio"/> Rape/sexual assault                   |
| <input type="radio"/> Alcohol abuse                      | <input type="radio"/> Heart disease and stroke                 | <input type="radio"/> School violence                       |
| <input type="radio"/> Asthma/lung or breathing issues    | <input type="radio"/> High blood pressure                      | <input type="radio"/> Secondhand smoke exposure             |
| <input type="radio"/> Cancers                            | <input type="radio"/> Infant death                             | <input type="radio"/> Sex/human trafficking                 |
| <input type="radio"/> Child abuse/neglect                | <input type="radio"/> Infectious disease (TB, hepatitis, etc.) | <input type="radio"/> Sexually transmitted disease/HIV/AIDS |
| <input type="radio"/> Chronic pain                       | <input type="radio"/> Injuries due to crime                    | <input type="radio"/> Sleep difficulties                    |
| <input type="radio"/> Dental problems                    | <input type="radio"/> Lack of physical activity                | <input type="radio"/> Suicide                               |
| <input type="radio"/> Diabetes                           | <input type="radio"/> Mental health problems                   | <input type="radio"/> Teen pregnancy                        |
| <input type="radio"/> Domestic violence                  | <input type="radio"/> Motor vehicle crash injuries             | <input type="radio"/> Tobacco use/e-cigarette use/vaping    |
| <input type="radio"/> Drug use – illegal drugs           | <input type="radio"/> Obesity and overweight                   | <input type="radio"/> Other _____                           |
| <input type="radio"/> Drug use – prescription drug abuse | <input type="radio"/> Poor nutrition                           |   |

3). What **three** risky behaviors are currently most important in our NWA COMMUNITY? (Those behaviors that most contribute to poor individual and/or community health)

- Alcohol abuse
- Being overweight
- Bullying
- Child abuse/neglect
- Domestic violence
- Dropping out of school
- Drug use—illegal drugs
- Drug use—prescription drugs
- Lack of physical activity
- Lack of maternity care
- Not getting shots/vaccines to prevent disease
- Not using birth control or having unprotected sex
- Not using seat belts or child safety seats
- Poor nutrition
- Social media/internet use
- Tobacco use/e-cigarette use/vaping
- Unsafe driving/texting and driving
- Unsecured guns and ammunition
- Other \_\_\_\_\_

4). What **three** health-related needs, if met, would have the most positive impact on your personal health?

- Access to adequate food
- Affordable housing
- Affordable child care
- Affordable prescriptions/medications
- Alcohol, tobacco, or drug use treatment and prevention
- Better sleep
- Dental care
- Disability services
- Exercise and recreation opportunities
- Health education and information
- Job opportunities/training
- Language barriers/interpretation
- Medical care
- Mental health care
- Nutrition and meal planning education
- Older adult/senior care
- Reduced crime and violence, including domestic violence
- Reduced social isolation/loneliness
- Reduced stress/stress management
- Transportation
- Weight management programs
- Other \_\_\_\_\_

5). Within the past 12 months, how difficult has it been for you to get the following if/when needed:

	Very Difficult	Difficult	Somewhat Difficult	Not Difficult	N/A
Medical care (for any reason)	<input type="radio"/>				
After hours medical services (not through the emergency room)	<input type="radio"/>				
Health-related services due to cost or lack of health insurance	<input type="radio"/>				
Prescriptions/medications due to cost or lack of health insurance	<input type="radio"/>				
Mental or behavioral health services	<input type="radio"/>				
Developmental disability services	<input type="radio"/>				
Substance abuse services (alcohol, tobacco, drugs, etc.)	<input type="radio"/>				
Dental care	<input type="radio"/>				
Chronic pain management services	<input type="radio"/>				
Nutrition/weight loss management programs	<input type="radio"/>				
Long term care (nursing home, assisted living, rehabilitation, home health, etc.) services	<input type="radio"/>				

6). Within the past 12 months, if you missed an appointment for health services, it was because: (Select all that apply)

- Forgot
- Didn't have transportation
- Weather
- Child care
- Felt better/no longer required services
- Work
- Cost
- Didn't want to go/changed mind
- Not applicable – I did not miss an appointment for health services

7). Do you AND/OR members of your household currently have any of the following forms of health care coverage? (Select all that apply)

- Health insurance from your job
- Affordable Care Act/Marketplace Plan
- Medicare
- Medicaid
- ARKids First
- Veteran's (VA) Benefits
- Indian Health Services
- Uninsured/no coverage
- Don't know

8). Where do you AND/OR members of your family typically go to receive health care? (Select all that apply)

- Community Clinic Northwest Arkansas (St. Francis House)
- Boston Mountain Rural Health Center
- Free clinic
- Primary care doctor's office (family doctor, internal medicine doctor, or pediatrician)
- Urgent care/Convenient care/Walk-in clinic
- Hospital emergency room
- Health Department
- Veteran's Clinic (VA)
- Indian Health Clinic
- Healer/Alternative Medicine
- Do not seek healthcare services

- 9). Have you EVER been told by a health care provider that you have or have you EVER been treated for:
- |  | Yes                   | No                    | Do Not Know           |
|--|-----------------------|-----------------------|-----------------------|
| Prediabetes, "borderline" diabetes, or diabetes while pregnant                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Diabetes   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| High blood pressure  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Heart disease  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cancer (not including skin cancer)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Overweight or Obesity  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Asthma or other lung problems  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Dental emergency, such as a broken tooth/pain, that required immediate attention | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Dental infection/abscess that required treatment or pulling a tooth              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Depression or anxiety  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Another serious mental illness, such as bipolar, schizophrenia, or psychosis     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A substance abuse disorder   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
- 10). Within the past 12 months, have you:
- |  | Yes                   | No                    | Do Not Know           |
|--|-----------------------|-----------------------|-----------------------|
| Had episodes of sadness, depression, or hopelessness lasting two weeks or longer that interfered with your ability to do daily tasks | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Seriously considered attempting suicide or taking your own life  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Actually attempted suicide or to take your own life  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

11). Within the past 12 months, how many times have you:

	0	1-2	3-5	6+	Do Not Know
Had your utilities shut off	<input type="radio"/>				
Moved	<input type="radio"/>				
Been unable to get childcare when needed	<input type="radio"/>				
Been unable to get reliable transportation when needed	<input type="radio"/>				
Run out of food and did not have money to get more	<input type="radio"/>				
Used WIC or SNAP benefits to purchase food for myself or my family	<input type="radio"/>				
Gotten emergency food from a food bank, pantry or church	<input type="radio"/>				
Experienced homelessness by having to sleep outside, in a tent, shelter, car, or motel	<input type="radio"/>				
Stayed/lived with a family or friend because of lack of own housing	<input type="radio"/>				
Been in danger of losing your own housing	<input type="radio"/>				
Been unable to get needed vocational training or education resources	<input type="radio"/>				

12). In what zip code do you live? \_\_\_\_\_

13). In what town do you live? \_\_\_\_\_

14). What is your age? \_\_\_\_\_

15). What is your gender?

- Male
- Female
- Transgender
- Intersex

16). Do you think of yourself as:

- Heterosexual or straight
- Homosexual, gay, or lesbian
- Bisexual
- Something else; if you think of yourself as something else, what do you mean? \_\_\_\_\_

17). What is your race/ethnicity (select all that apply)?

- American Indian or Alaskan Native
- Asian
- Black or African-American
- Hispanic or Latino
- Native Hawaiian, Marshallese, or Other Pacific Islander
- White
- Other (Please specify) \_\_\_\_\_

18). What is the primary language you use in most daily situations:

- English
- Spanish
- Marshallese
- Other \_\_\_\_\_

19). What is the highest level of school you have completed or the highest degree you have received?

- Less than high school diploma
- High school diploma or GED
- Vocational/technical training
- Some college but no degree
- Associate's degree
- Bachelor's degree
- Graduate or Professional degree

20). How many adults live in your household? \_\_\_\_\_

21). How many children live in your household? \_\_\_\_\_

22). What was the total combined income of all members of your household last year?

- \$0 to \$9,999
- \$10,000 to \$24,999
- \$25,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 and up

23). Which of the following categories best describes your employment status?

- Work full-time
- Work part-time
- Self-employed
- Work more than one job
- Homemaker
- Student
- Retired
- Disabled and unable to work
- Out of work for less than one year
- Out of work for more than one year

24). What else would you like us to know about health in Northwest Arkansas?

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**Appendix B**  
**NWA Community Health Survey Report—Carroll County**

# Northwest Arkansas Community Health Survey 2018

## Carroll County

### Summary Report



## Introduction

Mercy Hospital Northwest Arkansas and Mercy Hospital Berryville convened a group of health care and public health agencies from across the four-county Northwest Arkansas (NWA) region to conduct a comprehensive community health survey as part of their 2019 Community Health Needs Assessment process. The Northwest Arkansas region is made up of Benton, Washington, Carroll, and Madison County. The collaboration was made up of thirteen organizations representing two hospitals, a federally qualified health center, a mental health service provider, a university, four county health departments, and several other nonprofit organizations. The survey was hosted online by Hark at the Center for Collaborative Care, a nonprofit organization working to coordinate human services and provide a backbone organization for social services in Northwest Arkansas. Representatives from the partner organizations worked together to create the 25-question anonymous survey, which was available in English, Spanish, and Marshallese.

The last NWA community-wide health assessment was conducted in 2004. The 2004 assessment concluded that the top issues affecting the community were cost and availability of health care insurance, medical care costs, and money for prescriptions.

## Methodology

In January 2018, the survey coalition began meeting to discuss writing the health survey. This coalition consisted of the Arkansas Coalition of Marshallese; Arkansas Department of Health; the Benton, Washington, Carroll, and Madison County Health Units; Community Clinic Northwest Arkansas, Hark at the Center for Collaborative Care, Madison County Health Coalition, Mercy Hospital Berryville and Mercy Hospital Northwest Arkansas, Ozark Guidance Center, Washington Regional Medical Center, and University of Arkansas for Medical Sciences.

From January to April 2018, the coalition developed the survey which would focus on community members' perception of the greatest community health needs, their personal health needs, their perceptions of risky behavior and health risk factors, and social determinants of health. Community health survey projects from other cities and counties across the United States were studied to identify commonly asked questions. These questions were tailored to the NWA region, and further questions were developed by members of the collaborative, working together in committees. The larger group discussed and evaluated each committee's contributions and drafted an initial survey which went through a total of ten revisions before being pilot tested.

The survey was translated into Spanish by two certified medical interpreters. Pilots were distributed to 25 English-speaking individuals and 15 Spanish-speaking individuals who completed the survey and returned feedback, which was then used to further revise and refine the survey.

Hark at the Center for Collaborative Care hosted the survey online in English, Spanish, and Marshallese. The survey went live online June 1, 2018 and remained open until October 15, 2018. The English and Spanish versions of the survey were available for the entire span of 4 ½ months. The Marshallese version was translated by a certified Marshallese interpreter but was completed later than the other two and was not pilot tested. The Marshallese version of the survey was available for the last four weeks of the survey period.

Distribution involved both online and in-person components. Each partner organization distributed the survey electronically to their co-workers, patients, clients, and other community members through mass email. A survey-specific Facebook page was also created, and the survey was publicized in local newspapers. In-person distribution occurred in Berryville through the Carroll County parole offices. The survey was also distributed in multiple forms at a number of community events. These events included flu clinics, back-to-school immunizations, and county fairs. Results of each paper survey completed were entered into the online survey database by Mercy employees and volunteers.

## Results

### *Descriptive Statistics/Demographics*

The NWA Community Health Survey received a total of 1192 survey responses from the entire four-county region and 122 responses from Carroll County. The majority of those responding in Carroll County were from Berryville (63%) followed by Green Forest and Eureka Springs, at about 12% and 10%, respectively.

<b>Table 1</b>				
<i>Total survey respondents by county</i>				
<u>County</u>	<u>n of participants</u>	<u>% of participants</u>	<u>2010 Census County Total</u>	<u>County Population % of Total NWA Survey Area</u>
Benton	494	44%	221,339	47%
Washington	471	42%	203,065	43%
Carroll	122	11%	27,446	6%
Madison	30	3%	15,717	3%
Did not list address	75			
<b>Total</b>	<b>1,192</b>		<b>467,567</b>	

The majority of Carroll County respondents were White (91%), with about 8% of those surveyed reporting Hispanic/Latino ethnicities. Most participants were female (73%). About 65% of respondents were under 50 years of age, with the highest percentage of respondents in the 30-39 range. About 95% of participants identified as heterosexual or straight. The majority (97%) of respondents reported speaking English in most daily situations. Three percent chose Spanish as their primary language.

**Table 2**

*Carroll County survey respondents by race/ethnicity*

<u>Race/ethnicity</u>	<u>n of respondents</u>	<u>% of respondents</u>	<u>% of Carroll County population by race/ethnicity</u>
White	115	91%	79%
Hispanic/Latino	10	8%	15%
American Indian or Alaska Native	3	2%	1%
Black or African-American	2	2%	1%
Asian	0	0%	1%
Native Hawaiian, Marshallese, or Other Pacific Islander	0	0%	1%
More than one race/ethnicity	4	3%	2%

With regard to education, about 30% of individuals had a high school diploma/GED or less, and 53% had obtained an associate degree or higher. Sixty-five percent of participants work full-time.

The majority of those surveyed obtain insurance through their employer (68%), and 30% of respondents indicated that they and/or members of their household have more than one form of insurance. Ten percent of respondents reported being uninsured.

**Table 3**

*Health insurance coverage of Carroll County respondents*

<u>Type of health insurance</u>	<u>n of responses</u>	<u>% of responses</u>
Health insurance from your job	86	68%
Medicare	27	21%
ARKids First	21	17%
Affordable Care Act/Marketplace Plan	19	15%
Medicaid	9	7%
Veteran (VA) benefits	4	3%
Indian Health Services	1	1%
Uninsured/no coverage	0	0%
Don't know	5	4%
No response	2	2
Chose more than one type of insurance	40	32%

Thirty-six percent of survey respondents reported seeking medical care at multiple locations. Eighty-nine percent reported that they or a member of their family typically went to a primary care doctor or office to receive care.

**Table 4**  
*Locations where Carroll County respondents receive healthcare*

<u>Location</u>	<u>n of responses</u>	<u>% of responses</u>
Primary care doctor or office (family doctor, internal medicine doctor, or pediatrician)	113	89%
Urgent care/convenient care/walk-in clinic	25	20%
Hospital emergency room	20	16%
Boston Mountain Rural Health Center	10	8%
Health Department	10	8%
Free clinic	3	2%
Community Clinic Northwest Arkansas (St. Francis House)	1	1%
Veterans Clinic (VA)	1	1%
Healer/alternative medicine	1	1%
Indian Health Clinic	0	0%
Do not seek healthcare services	1	1%
Chose more than one site of care	46	36%
No response	1	1%

***Health Needs/Health Problems/Risky Behaviors***

In order to determine community members’ overall perceptions of health needs in Northwest Arkansas, the following four questions were developed and asked of survey respondents. The top eight responses to each question are reported in descending order.

- 1.) What three health problems are currently most important in NWA?
- 2.) What health problems are currently most important to YOU?
- 3.) What three risky behaviors are currently most important in NWA?
- 4.) What three health related needs, if met, would have the most positive impact on your personal health?

**Table 5***Health problems most important in NWA – Carroll County Respondents*

<u>Priority Rank</u>	<u>Health Problem</u>	<u>n of responses</u>	<u>% of responses</u>
1	Diabetes	38	31%
2	Obesity and overweight	33	27%
3	Mental health problems	29	24%
4	Drug use—illegal drugs	27	22%
5	Drug use—prescription drug abuse	25	20%
6	Cancers	24	20%
7	Child abuse/neglect	22	18%
8	Alcohol abuse	18	15%

**Table 6***Personal health problems most important to respondents – Carroll County Respondents*

<u>Priority Rank</u>	<u>Health Problem</u>	<u>n of responses</u>	<u>% of responses</u>
1	Obesity and overweight	51	42%
2	Lack of physical activity	44	36%
3	Mental health problems	38	31%
4	Sleep difficulties	33	27%
5	Diabetes	32	26%
6	High blood pressure	31	25%
7	Poor nutrition	28	23%
8	Child abuse/neglect	23	19%

**Table 7***Risky behaviors most important in NWA – Carroll County Respondents*

<u>Priority Rank</u>	<u>Risky Behavior</u>	<u>n of responses</u>	<u>% of responses</u>
1	Alcohol abuse	39	32%
2	Being overweight	38	31%
3	Drug use—illegal	35	29%
4	Unsafe driving/texting and driving	35	29%
5	Drug use—prescription drugs	29	24%
6	Not using birth control or having unprotected sex	25	21%
7	Child abuse/neglect	23	19%
8	Lack of physical activity	22	18%

**Table 8**

*Health needs (if met) that would have most positive impact on respondents' personal health – Carroll County Respondents*

<u>Priority Rank</u>	<u>Health Problem</u>	<u>n of responses</u>	<u>% of responses</u>
1	Better sleep	34	28%
2	Exercise and recreation opportunities	33	27%
3	Reduced stress/stress management	32	27%
4	Affordable prescriptions/medications	28	23%
5	Affordable housing	25	21%
6	Weight management programs	21	17%
7	Mental health care	18	15%
8	Access to adequate food	18	15%

## Discussion

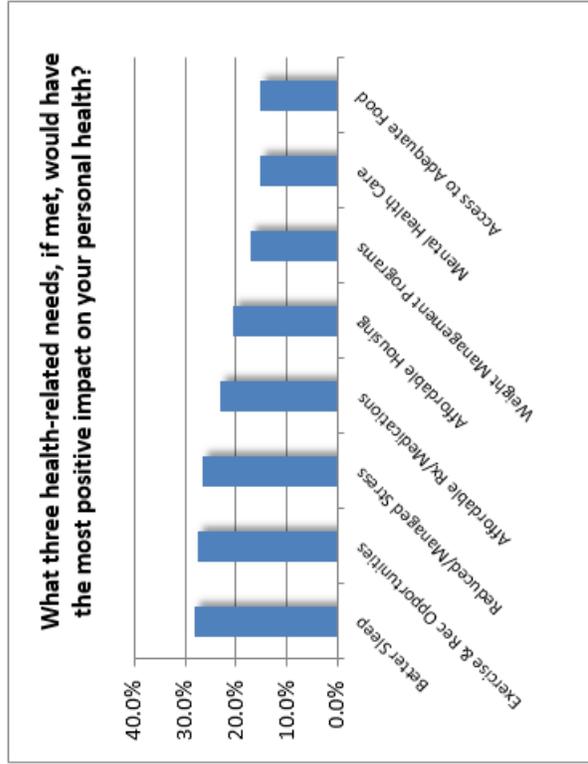
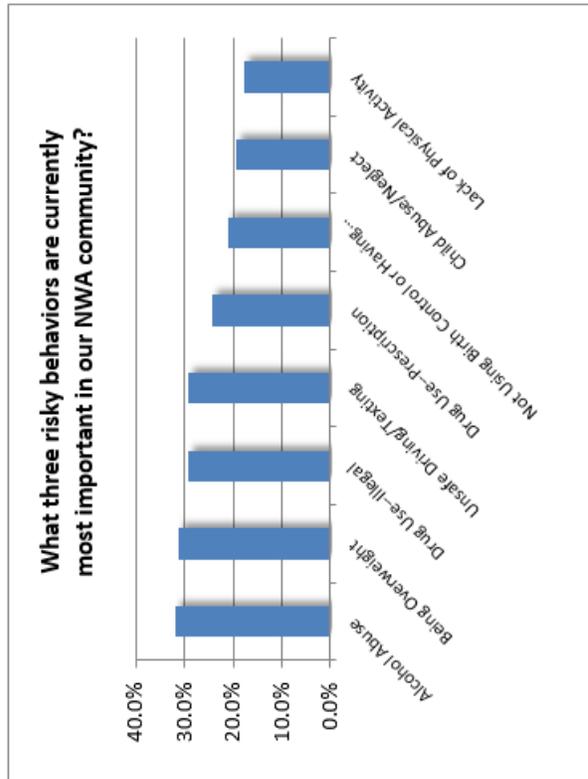
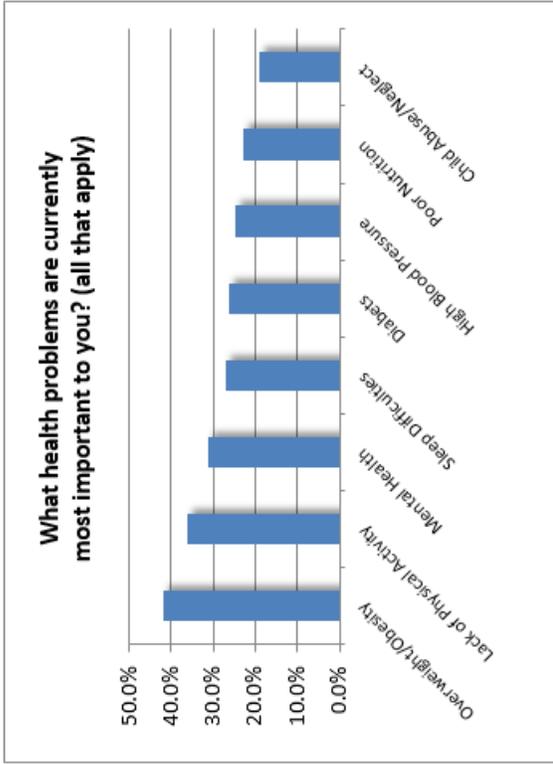
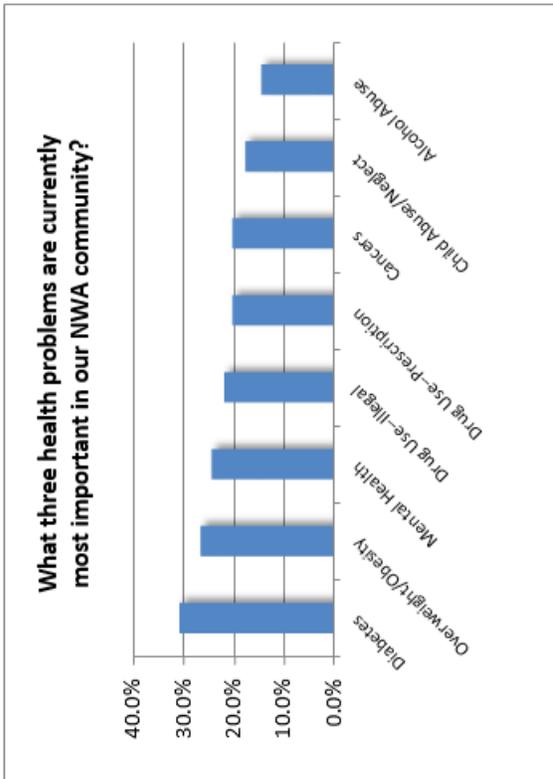
Residents of Carroll County are concerned with a wide range of health-related needs and topics. Results were similar to the overall Northwest Arkansas population. Survey participants selected topics related to obesity, diabetes, mental health problems, and illegal and prescription drug abuse as the most important health problems in their community. Many of the other responses from participants included factors that are strongly associated with the issue of obesity and overweight, including high blood pressure, lack of physical activity, and poor nutrition. Respondents indicated that better sleep, increased exercise and recreation opportunities and reduced stress and stress management would have the most positive impact on their health.

## Conclusion

The Northwest Arkansas Community Health Survey obtained 122 responses from community members in Carroll County. Similar to the results for the four-county area, participants indicated that they were concerned with issues related to obesity, diabetes, mental health, and illegal and prescription drug abuse. These issues are potential areas for interventions to improve health of the Northwest Arkansas community.

## Appendix C

### NWA Community Health Survey Response Charts—Carroll County



## Appendix D

### Mercy Berryville CHNA Primary and Secondary Data Synopsis

## **Mercy Berryville 2018 Identified Health Needs Synopsis of Supporting Data**

### **Access to Care**

- 16.58% of the Carroll County population is uninsured, which is higher than the state (12.33%) and national rate (11.7%)<sup>5</sup>
- 17.16% of adults and 5.98% of children within Carroll County are uninsured, which is higher than state and national rates (AR, 11.62% and 4.03%; US 12.08% and 4.67%)<sup>5</sup>
- The access rates within Carroll County (per 100,000 population) are 57.67 primary care physicians, 28.88 dentists, and 54.00 mental health providers, which is lower than the state and national rates (AR, 75.1, US 87.8; AR 44.3, US 65.6; AR 194, US 202.8) for each indicator, respectively<sup>5</sup>
- 100% of Carroll County's population is considered to be living in a geographic area designated as a "Health Professional Shortage Area," which is greater than AR (45.47%) and the US (33.13%)<sup>5</sup>

### **Cancer**

- Cancers are listed as the 2<sup>nd</sup> leading cause of death (2016) in Arkansas; the state is 5<sup>th</sup> in the nation in cancer mortality<sup>4</sup>
- 18.0% of Carroll County respondents of the NWA Community Health survey indicated cancers were one of the three biggest health problems within the community<sup>6</sup>

### **Chronic Lower Respiratory Disease/COPD**

- The age-adjusted death rate for Lung Disease within Carroll County is 51.4 per 100,000 population; this is less than the AR rate (59.29), but greater than the US (41.3)<sup>5</sup>
- Chronic Lower Respiratory Disease is the third leading cause of death (2016) in Arkansas, which is 5<sup>th</sup> in the nation in lung disease mortality<sup>4</sup>

### **Diabetes**

- 10.5% of Carroll County adults aged 20 and older have ever been told by a doctor that they have diabetes (age-adjusted). This is below the AR rate (11.28%), but above the US (9.19%)<sup>5</sup>
- 20.44% of the Medicare population within Carroll County has diabetes, which is lower than AR (24.4%) and the US (26.55%)<sup>5</sup>
- Diabetes is the 7<sup>th</sup> leading cause of death (2016) in Arkansas, which ranks the state as 8<sup>th</sup> in the nation<sup>4</sup>
- Results of the NWA Community Health survey revealed 25.0% of Carroll County respondents believe diabetes is one of the three biggest health problems within the community, and 20.9% indicated diabetes is one of the three biggest personal health problems<sup>6</sup>

### **Heart Disease**

- The age-adjusted death rate for Heart Disease within Carroll County is 194.7 per 100,000 population; this is less than the state rate of AR (219.48), but greater than that of the US rate (168.2)<sup>5</sup>

- 6.2% of Carroll County adults aged 18 and older have ever been told by a doctor that they have heart disease or angina, greater than both AR (5.8%) and the US (4.4%)<sup>3</sup>
- 22.4% of the Medicare population within Carroll County has heart disease, which is less than both AR (29.17%) and the US (26.46%)<sup>5</sup>
- Heart disease is the leading cause of death (2016) in Arkansas; the state is 3rd in the nation in heart disease mortality<sup>4</sup>

### **Mental/Behavioral Health**

- 14.0% of the Medicare population within Carroll County has depression, which is less than both AR (16.3%) and the US (16.7%)<sup>4</sup>
- The age-adjusted suicide death rate within Carroll County is 21.0, which is above both the AR (17.67) and US (13.0) rates<sup>4</sup>
- Adults age 18 and older living within Carroll County reported fewer poor mental health days on average (4.8 days) in the last 30 days than did the Arkansas population as a whole (5.2 days)<sup>3</sup>
- Results of the NWA Community Health survey revealed<sup>6</sup>:
  - 24.4% of Carroll County respondents indicated mental health problems are one of the three biggest health problems within the NWA community, and 31.2%, as one of the three most important health problems for them, personally
  - When asked what about what health needs, if met, would have the most positive impact on personal health, 26.5% of Carroll County respondents indicated reduced stress/stress management and 15.4% said mental health care

### **Obesity and Overweight**

- 36.8% of Carroll County adults aged 20 and older self-report a BMI > 30.0 (obese), which is greater than the AR state rate (34.7%) and the US rate (27.5%)<sup>5</sup>
- The obesity trend within Carroll County has continued to rise, from 26.6% in 2009, 29.3% in 2010, 34.3% in 2011 and 37.3% in 2012, while the state and national rates have remained relatively stable<sup>5</sup>
- Arkansas ranks 7<sup>th</sup> in the nation in adult obesity rates<sup>4</sup>
- 30.8% of Carroll County adults aged 18 and older self-report a BMI between 25.0 to 30.0 (overweight), which is less than both the state (34%) and US (35.8%) rates<sup>5</sup>
- Responses by Carroll County NWA Community Health survey participants revealed<sup>6</sup>:
  - 26.8% indicated obesity and overweight were one of the three biggest health problems within the community, and 41.8%, one of the three most important health problems for them, personally
  - 36.1% reported lack of physical activity and 23.0% poor nutrition as being within the top three most important personal health problems<sup>4</sup>
  - Being overweight was indicated by 31.1% as being one of the three most important risky behaviors within NWA

## Stroke

- Stroke is the fourth leading cause of death (2016) in Arkansas, which ranks the state 5th in the nation<sup>4</sup>
- The age-adjusted death rate for stroke within Carroll County is 47.2 per 100,000 population; this is higher than the state rate (46.9) and the US (36.9) rates<sup>5</sup>

## Substance Abuse

- There were 87 arrests in Carroll County for selling, manufacturing, and/or possession of drugs/narcotics in 2017, an increase from 69 arrests in 2016<sup>1</sup>
- According to 2017 Arkansas Prevention Needs Assessment data, NWA (Region 1) youth in 6th-12th grades report similar rates of prescription drug use (2.8%), over-the-counter drug use (1.3%) and any drug use (10.2%) within 30 days of survey as compared to state rates (3.0%, 1.2%, 10.1%, respectively)<sup>2</sup>
- Results of the NWA Community Health survey revealed<sup>6</sup>:
  - 22.0% indicated illegal drug use was one of the three biggest health problems within the community, and 20.3% included prescription drug use within their top three concerns
  - 29.4% of respondents said that illegal drug use is one of the three most important risky behavior in NWA, while 24.4 % included prescription drug use within their top three

## Appendix D References

<sup>1</sup>Arkansas Crime Information Center, 2016-2017 data. Drugs/Narcotics Assessment by Contributor.

<https://www.acic.org/crime-statistics>

<sup>2</sup>County Health Rankings and Roadmaps, Arkansas Prevention Needs Assessment Survey, 2017 data. Region 1 (Benton, Carroll, Madison, and Washington Counties).

<sup>3</sup>County Health Rankings and Roadmaps, Carroll County, Arkansas, 2018 data.

<http://www.countyhealthrankings.org/app/arkansas/2019/rankings/carroll/county/outcomes/overall/snapshot>

<sup>4</sup>Centers for Disease Control and Prevention, National Center for Health Statistics, 2014 data. Stats of the State of Arkansas.

<https://www.cdc.gov/nchs/pressroom/states/arkansas.htm>

<sup>5</sup>Community Commons. (2018). Carroll County.

<https://assessment.communitycommons.org/CHNA/report?reporttype=libraryCHNA>

<sup>6</sup>NWA Community Health Survey. (2018).





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