Sheridan County Montana

Community Health Needs Assessment Report

Assessment conducted by
Sheridan Memorial Hospital
Plentywood, Montana

June 2016

Sheridan Memorial Hospital
Community Health Needs Assessment

Table of Contents

I. Introduction 2

II. Health Assessment Process & Methodology 2

III. Focus Group and Key Informant Interview Methodology 3

IV.Key Findings (Secondary Data, Focus Groups and Key Informant Interviews) 4

V. Prioritization of Health Needs, Available Resources, and Implementation Planning Process 7

VI. Evaluation of Activity Impacts from Previous CHNA 8

Appendix A – Public Health and Populations Consultation 10

Appendix B – Community Health Profile 2015 10

Appendix C – Secondary Data Scan 11

Appendix D – Focus Group and Key Informant Interview Questions 28

Appendix E –Focus Group and Key Informant Interview Notes 35

Sheridan Memorial Hospital
Community Health Assessment Report
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I. Introduction

Sheridan Memorial Hospital is a private, not-for-profit 19-bed Critical Access Hospital, long-term care facility and rural health clinic located in Plentywood, Montana. The facility's medical staff is comprised of one family practitioner, two family nurse practitioners, and two physician assistants who offer health care services to the residents and visitors of Sheridan County and surrounding areas which include Daniels and Roosevelt County as well as areas in Canada and North Dakota. Sheridan County is located in the northeastern corner of Montana and covers the geographic area of 1,706 square miles. Sheridan Memorial Hospital provides medical services to Sheridan County which has a population of 3,668 (2013 US Census). In addition to a secondary data review, focus groups were conducted to enhance the community's engagement in the assessment process.

II. Health Assessment Process & Methodology

Sheridan Memorial Hospital conducted a thorough secondary data analysis to identify health concerns in Plentywood and Sheridan County. Additionally, a diverse group of community members representing various organizations and populations within the community (ex. public health, elderly, uninsured) came together for key informant interviews and focus groups to better understand the community's perception of health and health concerns in the area. The interviews and focus groups were conducted in May 2016.

Community Health Data

The Montana Department of Health and Human Services (MT DPHHS) published "Community Health Profile 2015- Sheridan County" in 2015. The report utilized data from the Montana Hospital Discharge Data System (MHDDS), the Office of Vital Statistics (OVS), the Montana Central Tumor Registry (MCTR), and the Montana WIC Management System (MIS) at the Montana Department of Health and Human Services for the chronic disease indicators. This report can be found in Appendix C.

Data Limitations

It is a difficult task to define the health of rural and frontier communities in Montana due to the large geographic size, economic and environmental diversity, and low population density. Obtaining reliable, localized health status indicators for rural communities continues to be a challenge in Montana.

There are many standard health indices used to rank and monitor health in an urban setting that do not translate as accurately in rural and frontier areas. In the absence of sufficient health indices for rural and frontier communities in Montana, utilizing what is available is done with an understanding of access to care in rural and frontier Montana communities and barriers of disease surveillance in this setting.

The low population density of rural and frontier communities require regional reporting of many major health indices including chronic disease burden and behavior health indices. The Montana BRFSS [Behavioral Risk Factor Surveillance System], through a cooperative agreement with the Center for Disease Control (CDC), is used to identify regional trends in health-related behaviors. The fact that many health indices for rural and frontier counties are reported regionally makes it impossible to set the target population aside from the five more-developed Montana counties.

III. Focus Group and Key Informant Interview Methodology

Three focus groups were held in May of 2016. The meetings were held in Plentywood, Westby and Medicine Lake, Montana. Focus group participants were identified as people living in Sheridan Memorial Hospital's service area. Additionally, four key informant interviews were conducted with the assistance from the Montana Office of Rural Health.

Thirteen people participated in the three focus group interviews. The focus groups were designed to represent various consumer groups of healthcare including senior citizens and local community members. Focus groups were held at in Westby, Medicine Lake, and Plentywood- all communities within Sheridan Memorials service area. Each group meeting lasted up to 90 minutes in length and followed the same line of questioning in each session. The questions and discussions at the focus groups were led by Greg Maurer, Executive CEO, Sheridan Memorial Hospital Association.

Four key informant interviews were conducted by the Montana Office of Rural Health on behalf of Sheridan Memorial Hospital. The interviews were up to 30 minutes in length and each followed the same line in questioning. The interviews were conducted by Amy Royer, CHSD Project Assistant.

Focus group and key informant interview questions can be found in Appendix D. Focus group and key informant interview notes can be found in Appendix E of this report. A summary of key findings is discussed in the following section.

IV. Key Findings (Secondary data, Focus Groups and Key Informant Interviews)

Geography	Population Estimates (as of July 1)			
	Census 2010	2013	2014	2015
Montana	989,415	1,014,402	1,023,252	1,032,949
Sheridan County, Montana	3,384	3,652	3,679	3,687
Source: US Census Bureau, PEPANNRES: Annual Estimates of the Resident Population: April 1, 2010-July 1, 2014.				

Economic Characteristics		
EMPLOYMENT STATUS	**Estimate**	**Percent**
Population 16 years and over	2,849	2,849
In labor force	1,876	65.8%
Civilian labor force	1,876	65.8%
Employed	1,820	63.9%
Unemployed	56	2.0%
Armed Forces	0	0.0%
Not in labor force	973	34.2%
HEALTH INSURANCE COVERAGE		
Civilian noninstitutionalized population	3,452	3,452
With health insurance coverage	3,147	91.2%
With private health insurance	2,635	76.3%
With public coverage	1,070	31.0%
No health insurance coverage	305	8.8%
Source: US Census Bureau, 2010-2015 American Community Survey 5-Year Estimates; DP03		

Social Characteristics		
EDUCATIONAL ATTAINMENT	**Estimate**	**Percent**
Population 25 years and over	2,571	2,571
Less than 9th grade	99	3.9%
9th to 12th grade, no diploma	139	5.4%
High school graduate (includes equivalency)	766	29.8%
Some college, no degree	800	31.1%
Associate's degree	219	8.5%
Bachelor's degree	454	17.7%
Graduate or professional degree	94	3.7%
Percent high school graduate or higher		90.7%
Percent bachelor's degree or higher		21.3%
VETERAN STATUS		
Civilian population 18 years and over	2,761	2,761
Civilian veterans	293	10.6%
Source: US Census Bureau, 2010-2015 American Community Survey 5-Year Estimates; DP02		

DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION	Estimate	Percent
Total Civilian Noninstitutionalized Population	3,452	3,452
With a disability	516	14.9%
Under 18 years	749	749
With a disability	25	3.3%
18 to 64 years	1,975	1,975
With a disability	202	10.2%
65 years and over	728	728
With a disability	289	39.7%
Source: US Census Bureau, 2010-2015 American Community Survey 5-Year Estimates; DP02		

Leading Causes of Death	County[1]	Montana[1,2]	Nation[2]
	1. Heart Disease 2. Cancer 3. Pneumonia/Influenza	1. Cancer 2. Heart Disease 3.CLRD*	1. Heart Disease 2. Cancer 3. CLRD*

[1]Community Health Data, MT Dept of Health and Human Services (2010)

[2]Center for Disease Control and Prevention (CDC), National Vital Statistics (2012)
**Chronic Lower Respiratory Disease*

Chronic Disease Burden[1]	Region 1	Montana	Nation[3,4]
Stroke prevalence	2.9%	2.5%	2.6%
Diabetes prevalence	7.7%	6.2%	8.3%
Acute Myocardial Infarction prevalence (Heart Attack)	5.5%	4.1%	6.0%
All Sites Cancer	472.3	455.5	543.2

[1]Community Health Data, MT Dept of Health and Human Services (2010)
[3]Center for Disease Control and Prevention (CDC) (2012)
[4]American Diabetes Association (2012)

Region 1 (Eastern) – Phillips, Valley, Daniels, Sheridan, Roosevelt, Richland, McCone, Garfield, Prairie, Dawson, Wibaux, Rosebud, Custer, Fallon, Powder River, Carter, and Treasure

Behavioral Health[1,2]	Region 1	Montana
Childhood Immunization Up-To-Date (UTD) % Coverage[11,††] Age 24-35 months, population size: 12,075 (% sampled: 35.9%)	26.3% (County)	64.3%
Tobacco Use[1]	20.5%	19.3%
Alcohol Use (binge + heavy drinking)[1]	24.8%	22.8%
Obesity[1]	26.8%	21.6%
Overweight[1]	37.8%	37.8%
No Leisure time for physical activity[1]	27.9%	20.7%

[1]Community Health Data, MT Dept of Health and Human Services (2010)
[2]Center for Disease Control and Prevention (CDC), National Vital Statistics (2012)
[11]County Childhood Immunization Coverage, MT Dept of Health and Human Services (2010-2011).

††Childhood immunization percent coverage was determined following the CDC developed and validated AFIX [Assessment, Feedback, Incentives, & eXchange] strategy designed to raise immunization levels. The Montana Immunization Program is required to participate in this process. Fifty percent of immunization providers are assessed each year. All children's records per provider assessed are reviewed to determine if the child is up-to-date with recommendations of the Advisory Council on Immunization Practices (ACIP).

Sheridan Memorial Hospital did a thorough secondary data scan to assist in identifying health needs in Sheridan County. In addtion to the secondary data scan, focus groups and key informant interviews were conducted.

The following key themes emerged from those meetings:

- Senior services
    - Access to services and development of programs allowing seniors in the community to age in place
- Mental health
    - Access to services throughout the age spectrum (youth-seniors)
    - Crisis services
    - Suicide prevention
    - Behavioral health
- EMS
- Community Health Fair
- Specialty services
- Alcohol and substance abuse
- Physical activity
    - Opportunties for adults and seniors to exercise

All key informant interview and focus group notes can be found in Appendix E.

V. Prioritization of Health Needs, Available Resources, and Implementation Planning Process

A CHNA taskforce comprised of staff leaders and community leaders from Sheridan Memorial Hospital convened to begin an implementation planning process to systematically and thoughtfully respond to all issues and opportunities identified through the Community Health Needs Assessment.

The taskforce determined the most important health needs to be addressed by reviewing the CHNA, secondary data, community demographics, and input from representatives representing the broad interest of the community, including those with public health expertise (see Appendix A for additional information regarding input received from community representatives). With collaboration of community leaders and Sheridan Memorial, prioritized health needs as determined through the assessment process will be addressed over the next three years:

- Mental Health and Suicide Prevention
- Substance Abuse Outreach and Education
- Improvement of Population Health

Sheridan Memorial Hospital will determine which needs or opportunities could be addressed considering their parameters of resources and limitations. The taskforce will prioritize the needs/opportunities using the additional parameters of the organizational vision, mission, and/or values, as well as existing and potential community partners.

The participants will create goals to achieve through strategies and activities, as well as the general approach to meeting the stated goal (i.e. staff member responsibilities, timeline, potential community partners, anticipated impact(s), and performance/evaluation measures). This plan will be documented and posted along with the CHNA report.

Resources

In prioritizing the health needs of the community, the following list of potential community partners and resources in which to assist in addressing the needs identified in this report was identified. As the steering committee continues to meet, more resources will continue to be identified; therefore, this list is not exhaustive.

- Montana Capital Assistance Program (MCAP)
- Montana Area Health Education Center (AHEC)
- Plentywood Public Schools
- Montana Sate University (MSU)
- MSU Extension
- The Montana Job Service
- Eastern Montana Telemedicine Network (EMTN)
- Montana Department of Public Health & Human Services (MDPHHS)
- Alcoholics Anonymous (AA)
- Relapse Prevention and Recovery Program
- Billings Clinic
- Eastern Montana Communiyt Mental Health Service
- Sheridan County Public Health Department

VI. Evaluation of Activity Impacts from Previous CHNA

Sheridan Memorial Hospital approved its previous implementation plan July 22, 2013. The plan prioritized the following health issues:

- Health and Wellness

  Improve local access to wellness and health care services by optimizing facility space and recruiting/retaining staff to support community health needs.

- Health Education and Outreach

  Improve local access to wellness opportunities by providing health education and community outreach activities.

Health and Wellness

This was addressed through several strategies as addressed below:

- **Evaluate need for updated/new space** - Sheridan Memorial Board of directors evaluated the expense of remodeling, rebuilding, or restructuring the current health care facility. The board had decided that the best plan would be to rebuild. Land plots were being looked at however a change in CEO put the building plan on hold as the new CEO's focus was on getting the facility financially stable prior to making any large decisions.
- **Recruit and retain staff to maintain access** – Since the 2013 assessment a primary family practice physician, Dr. Carlos Trevino, has been recruited to our facility. Through the past three years Sheridan Memorial has continued to recruit for ancillary staff as needed; although still not fully staffed, the front-line services such as housekeeping and dietary, which were always short-staffed have finally become fully staffed. To continue with recruitment and staff retention Sheridan Memorial has begun market research to ensure that the wages paid are competitive with what is out in the market.

  In addition, Sheridan Memorial has started to offer staff more options for health benefits, implementing a Health Savings Plan for those who may not utilize their health insurance as much as others.

  All staff meetings are held on a quarterly basis which keeps staff up-to-date on the goings on at Sheridan Memorial. This is also an opportunity for question and answer between staff and CEO. This has proven to be a good tool of communication and helped with staff retention as we are keeping staff informed on important issues.
- **Strategize to improve the community's access to health care** – Sheridan Memorial is continually recruiting for providers that may have additional services that may be added to the repertoire. Sheridan Memorial is currently in the process of interviewing nurse practitioners. In addition our current providers have had medical students shadow them in clinical, acute and emergent care situations. Sheridan Memorial also promotes and offers free telemed usage and proctoring for current employees who take distant learning classes to become nurses. Since 2013, Sheridan Memorial has had 4 certified nurse aids utilize the free services, with 3 returning to work at Sheridan Memorial as an RN.

Health Education and Outreach

Sheridan Memorial has addressed the need for local access for health education and community outreach through:

- Educational programs focused on diabetes and heart disease – Sheridan Memorial contracts with a dietician who visits Sheridan Memorial twice a month and with a providers order works with those with diabetes and heart disease on nutrition and meal plans. In addition Sheridan Memorial providers refer to specialists visits via the telemed. Both Cardiologists and Dieticians are available by appointment over Sheridan Memorial's telemed services.
- Increase awareness of local health issues and services available – Sheridan Memorial has a constant presence throughout the community with advertising with print media and social networks. Through these resources our marketing team promotes services offered to include all ancillary services, reminds community members of support groups and meetings, and announces special events such as health care enrollment assistance, CNA classes, open houses etc.

  In addition Sheridan Memorial has provided material to the providers on services available over telemed. Many times the provider is the educator of services; thus we find it important that all our staff and providers are advocates for the services Sheridan Memorial provide in house and via telemed.

  Sheridan Memorial participated in the Community Health Worker grant which allowed funding for 1 staff member to go out in the community and educate residents of services offered, assist those in need to schedule appointments, run errands, and even helped some stick to an exercise routine. With the end of the funding period Sheridan Memorial was unable to sustain this free service due to lack of funding and staffing; however the program was well received by the community and has not been forgotten.
- Pending expansion of space and availability of staff, potential specialty service expansion – all facility expansion plans have been put on hold due to change in CEOs. Since 2013 Sheridan Memorial has had 3 CEOs, all with different priorities; thus the expansion is at a halt. However, this has not deterred Sheridan Memorial from making changes within the facility to free up additional space thus allowing the potential for expanded services and possibly visiting specialists to come to our Rural Health Clinic.

Appendix A – Public Health and Populations Consultation

1. Public Health

a. Name/Organization
Heidi Williamson– Sheridan County Sheriff
Gina Aasheim, LCPC- Eastern Montana Community Mental Health Center

b. Date of Consultation
Key Informant Interview: May 5, 2016
May 23, 2016

c. Type of Consultation (Interview, Focus Group, etc.)
Interview

d. Input and Recommendations from Consultation
- Mental health is a big issue in our community.
- We really need to break down the stigma around mental health and increase education.
- Alcohol and substance abuse is huge.
- We need better access to health and wellness opportunities- throughout the lifespan.
- Suicide rates.

2. Populations Consultation (a leader or representative of populations such as medically underserved, low-income, minority and/or populations with chronic disease)

Population: Youth

a. Name/Organization
Gina Aasheim, LCPC- Eastern Montana Community Mental Health Center

b. Date of Consultation
Key Informant Interview: May 23, 2016
May 27, 2016

c. Type of Consultation (Interview, Focus Group, etc.)
Interview

d. Input and Recommendations from Consultation
- Mental health is a big issue in our community.
- We really need to break down the stigma around mental health and increase education.
- Alcohol and substance abuse is a problem- young and old.
- We need better access to health and wellness opportunities- throughout the lifespan.
- There is a need for better communication and education on what services are available so we don't refer families out of town when things are available locally.
- Transportation- kids receive referrals to services out of town and have no way to get there.
- Parenting classes- family education

Population: Seniors

a. Name/Organization

Gina Aasheim, LCPC- Eastern Montana Community Mental Health Center

Joni Brensdal, Administrator- Pioneer Manor Retirement Home

b. Date of Consultation

Key Informant Interview: May 23, 2016
May 25, 2016

c. Type of Consultation (Interview, Focus Group, etc.)

Interview

d. Input and Recommendations from Consultation

- We really need to break down the stigma around mental health and increase education.
- There is a large senior population in our community. Access to senior services is important.
- Access to physical fitness. An indoor pool.

Appendix B – Community Health Profile 2015

Community Health Profile 2015

Sheridan County

Public Health and Safety Division

MONTANA DPHHS

Healthy People. Healthy Communities.

Department of Public Health & Human Services

Table of Contents

Demographic Information 1

Communicable Disease 3

Chronic Disease 4

Maternal and Child Health 10

Mortality 12

Behavioral Risk Factors 14

Methods

Methods for all data analyses are in a separate document, "Health Profile Methodology."

Demographic Information[a]

	Sheridan County	Montana
Population, Census, April 1, 2010	3,384	989,415
Population estimates, July 1, 2014	3,696	1,023,579
Population, percent change April 1, 2010–July 1, 2014	9.2%	3.5%
Persons under 5 years, July 1, 2013	5.1%	6.0%
Persons under 18 years, July 1, 2013	20.1%	22.1%
Persons 65 years and over, July 1, 2013	21.2%	16.2%
Female persons, July 1, 2013	48.8%	49.8%
White alone, July 1, 2013	95.1%	89.5%
Black or African American alone, July 1, 2013	0.4%	0.6%
American Indian and Alaska Native alone, July 1, 2013	1.7%	6.5%
Asian alone, July 1, 2013	0.5%	0.8%
Native Hawaiian and Other Pacific Islander alone, July 1, 2013	0.0%	0.1%
Two or more races, July 1, 2013	2.2%	2.5%
Hispanic or Latino, July 1, 2013	1.9%	3.3%
White alone, not Hispanic or Latino, July 1, 2013	93.6%	87.0%
Foreign born persons, 2009–2013	1.3%	2.0%
Language other than English spoken at home, percent of persons age 5 years+, 2009–2013	2.0%	4.4%

[a]Z Value greater than zero but less than half unit of measure shown.
Data from http://quickfacts.census.gov/

1

Demographic Information[a]

	Sheridan County	Montana
High school graduate or higher, percent of persons age 25 years+, 2009–2013	90.7%	92.1%
Bachelor's degree or higher, percent of persons age 25 years+, 2009–2013	23.4%	28.7%
Veterans, 2009–2013	299	94,404
With a disability, under age 65 years, 2009–2013	8.8%	9.0%
Mean travel time to work (minutes), workers age 16 years+, 2009–2013	12.2 minutes	18 minutes
Median gross rent, 2009–2013	$545	$682
Owner-occupied housing units, 2009–2013	74.4%	68.3%
Persons per household, 2009–2013	2.09	2.39
Median household income, 2009–2013	$48,667	$46,230
Persons without health insurance, under age 65 years	18.3%	19.5%
Persons in poverty	10.4%	16.5%
Population per square mile, 2010	2	6.8

*Z Value greater than zero but less than half unit of measure shown.
Data from http://quickfacts.census.gov/

2

Communicable Disease

Table 1. Number and rate of selected communicable diseases — Montana, 2011–2013.

	Sheridan County		Frontier County Data		Montana
Health Indicator	Number	Rate per 100,000[a] (95% CI)	Number per County	Rate per 100,000[a] (95% CI)	Rate per 100,000[a] (95% CI)
Chlamydia	15	140.4 (78.7, 231.5)	154	140.1 (119.7, 164.0)	366.2 (359.5, 373.1)
Hepatitis C	8	74.9 (32.5, 147.7)	50	45.5 (34.4, 60.1)	123.0 (119.1, 127.0)
Pertussis	2	18.7 (2.0, 67.9)	19	17.3 (10.9, 27.2)	44.6 (42.3, 47.0)
Campylobacteriosis	3	28.1 (5.7, 81.9)	50	45.5 (34.4, 60.1)	22.2 (20.6, 24.0)

[a]Department of Corrections population included in county rate where applicable.
Data provided by the Communicable Disease Epidemiology Section.

Table 2. Up-to-date (UTD) on childhood vaccinations for 24–35 month old children as of March 1st of the year of assessment based on imMTrax data reviewed during Vaccines for Children Program Clinic Reviews conducted every other year — Montana, 2011 and 2014.[a]

Health Indicator	Sheridan County	Frontier County Data	Montana
Number assessed 2011[b]	-	-	2,249
Number UTD 2011	-	-	1,305
Percent UTD 2011[c]	-	-	58.7
Number assessed 2014[d]	41	206	4,042
Number UTD 2014	37	162	2,651
Percent UTD 2014 (95% CI)	90.2 (76.9, 97.3)	78.6 (72.4, 84.0)	65.6 (64.1, 67.1)

[a]UTD = 4 DTaP, 3 Polio, 1 MMR, 3/4 HIB, 3 Hep B, 1 Var, 4 PCV by 24 months.
[b]In 2011, chart reviews occurred. Clinics with fewer 50 chart, the review included all available charts. Clinics with more than 50 charts, a sample of charts were reviewed and validated.
[c]Confidence interval cannot be calculated because the total number of records reviewed is unknown.
[d]In 2014, all immunization records were reviewed electronically in the Montana Immunization Information System (imMTrax). The precision of each estimate was quantified using 95% confidence intervals.
Data provided by the Immunization Section of the Communicable Disease Bureau.

3

Chronic Disease

Table 3. Inpatient admissions for selected chronic conditions — Montana, 2011–2013.

	Sheridan County		Frontier County Data		Montana
Health Indicator	Number	Rate per 100,000[a] (95% CI)	Average Number per County	Rate per 100,000[a] (95% CI)	Rate per 100,000[a] (95% CI)
Asthma	<5	‡ ‡	2.2	26.9 (18.1, 39.5)	47.7 (45.2, 50.3)
Chronic Obstructive Pulmonary Disease (COPD)[b]	127	671.8 (557.6, 818.3)	55.8	470.2 (438.6, 504.6)	716.8 (708.1, 725.6)
Cardiovascular Disease	144	733.7 (612.7, 887.2)	67.4	577.9 (541.9, 616.9)	746.7 (737.7, 755.8)
Diabetes (types 1 and 2)	87	556.8 (433.5, 716.8)	57.9	545.3 (507.7, 586.0)	822.5 (812.8, 832.3)

[a]Rates are age standardized to the 2000 Projected US Population using Distribution #1 as described in Klein and Schoenborn 2001 and given per 100,000 person years.
[b]Chronic obstructive pulmonary disease (COPD), includes chronic bronchitis, emphysema, bronchiectasis, and chronic airway obstruction.
‡Does not meet standards of reliability or precision.
Inpatient admission and ED visit data provided courtesy of participating MHA members, collected through the Montana Hospital Discharge Data System (MHDDS).

4

Table 4. Inpatient admissions for injury by type and mechanism of injury — Montana, 2011–2013.

	Sheridan County		Frontier County Data		Montana
Health Indicator	Number	Rate per 100,000* (95% CI)	Average Number per County	Rate per 100,000* (95% CI)	Rate per 100,000* (95% CI)
All Unintentional Injury	68	440.7 (332.3, 586.1)	36.8	416.5 (379.1, 457.4)	538.6 (530.6, 546.8)
Falls	40	213.2 (146.4, 317.3)	18.6	162.6 (143.0, 185.3)	268.7 (263.2, 274.3)
Struck by/against	<5	‡ ‡	1.3	21.1 (12.5, 34.1)	18.0 (16.5, 19.6)
Motor Vehicle	7	‡ ‡	4.1	62.6 (47.0, 82.5)	60.6 (57.8, 63.6)
Poisoning	6	‡ ‡	1.1	‡ ‡	36.3 (34.2, 38.5)
Intentional Self-Harm	5	‡ ‡	2.3	42.9 (29.8, 60.3)	106.5 (102.6, 110.5)
Traumatic Brain Injury	10	‡ ‡	6.3	81.8 (64.8, 102.5)	91.3 (87.9, 94.8)

*Rates are age standardized to the 2000 Projected US Population using Distribution #1 as described in Klein and Schoenborn 2001 and given per 100,000 person years.
‡Does not meet standards of reliability or precision.
Inpatient admission and ED visit data provided courtesy of participating MHA members, collected through the Montana Hospital Discharge Data System (MHDDS).

5

Table 5. Emergency Department visits for selected chronic conditions — Montana, 2011–2013.

	Sheridan County		Frontier County Data		Montana
Health Indicator	Number	Rate per 100,000[a] (95% CI)	Average Number per County	Rate per 100,000[a] (95% CI)	Rate per 100,000[a] (95% CI)
Asthma	15	‡ ‡	9.3	156.6 (131.3, 186.0)	260.0 (254.0, 266.2)
Chronic Obstructive Pulmonary Disease (COPD)[b]	80	500.7 (386.6, 651.2)	43.2	407.0 (374.3, 442.9)	804.9 (795.2, 814.8)
Cardiovascular Disease	78	405.0 (316.2, 527.8)	37.8	333.0 (305.0, 364.0)	372.7 (366.2, 379.3)
Diabetes (types 1 and 2)	96	707.9 (557.9, 896.0)	57.9	585.4 (544.1, 630.1)	1,235.6 (1223.3, 1248.0)

[a]Rates are age standardized to the 2000 Projected US Population using Distribution #1 as described in Klein and Schoenborn 2001 and given per 100,000 person years.
[b]Chronic obstructive pulmonary disease (COPD), includes chronic bronchitis, emphysema, bronchiectasis, and chronic airway obstruction.
‡Does not meet standards of reliability or precision.
Inpatient admission and ED visit data provided courtesy of participating MHA members, collected through the Montana Hospital Discharge Data System (MHDDS).

6

Table 6. Emergency department visits for injury by type and mechanism of injury — Montana, 2011–2013.

	Sheridan County		Frontier County Data		Montana
Health Indicator	Number	Rate per 100,000[a] (95% CI)	Average Number per County	Rate per 100,000[a] (95% CI)	Rate per 100,000[a] (95% CI)
All Unintentional Injury	404	3,762.0 (3372.7, 4190.7)	257.9	4,046.6 (3914.1, 4182.9)	5,901.8 (5873.1, 5930.4)
Falls	179	1,346.9 (1134.0, 1597.5)	96.4	1,290.7 (1220.2, 1364.9)	2,020.0 (2003.7, 2036.5)
Struck by/against	66	721.6 (551.0, 935.0)	34.6	606.0 (554.4, 661.6)	820.2 (809.4, 831.1)
Motor Vehicle	24	295.5 (187.0, 450.3)	18.3	321.3 (283.3, 363.4)	520.0 (511.5, 528.6)
Poisoning	6	‡ ‡	2.5	38.8 (27.0, 54.8)	95.4 (91.8, 99.1)
Intentional Self-Harm	<5	‡ ‡	2.5	50.3 (35.5, 69.6)	104.5 (100.6, 108.4)
Traumatic Brain Injury	34	314.1 (210.6, 459.9)	22.6	359.8 (321.0, 402.6)	649.9 (640.5, 659.5)

[a]Rates are age standardized to the 2000 Projected US Population using Distribution #1 as described in Klein and Schoenborn 2001 and given per 100,000 person years.
‡Does not meet standards of reliability or precision.
Inpatient admission and ED visit data provided courtesy of participating MHA members, collected through the Montana Hospital Discharge Data System (MHDDS).

Table 7. Cancer incidence — Montana, 2011–2013.

	Sheridan County		Frontier County Data		Montana
Health Indicator	Number	Rate per 100,000 (95% CI)	Average Number per County	Rate per 100,000 (95% CI)	Rate per 100,000 (95% CI)
All Cancer	76	413.8 (319.7, 542.7)	45.2	409.9 (378.0, 444.8)	439.8 (432.9, 446.8)
Prostate (males)	9	‡ ‡	6.3	101.2 (82.1, 126.5)	112.8 (108.1, 117.8)
Breast (female)	6	‡ ‡	5.1	95.7 (74.0, 124.6)	115.7 (110.8, 120.9)
Lung and Bronchus	17	‡ ‡	7.1	59.6 (48.7, 73.7)	56.4 (54.0, 58.9)
Colon and Rectum	9	‡ ‡	4.4	37.3 (28.7, 49.4)	36.9 (35.0, 39.0)
Corpus Uteri (female)	<5	‡ ‡	1.4	24.2 (15.1, 41.0)	25.4 (23.2, 27.9)
Melanoma	<5	‡ ‡	1.8	19.7 (12.3, 31.1)	24.9 (23.2, 26.7)

‡Does not meet standards of reliability or precision.
Cancer incidence data are from the Montana Central Tumor Registry.

8

Figure 1: Age-adjusted cancer incidence rates by cancer site — Montana, 2011–2013.

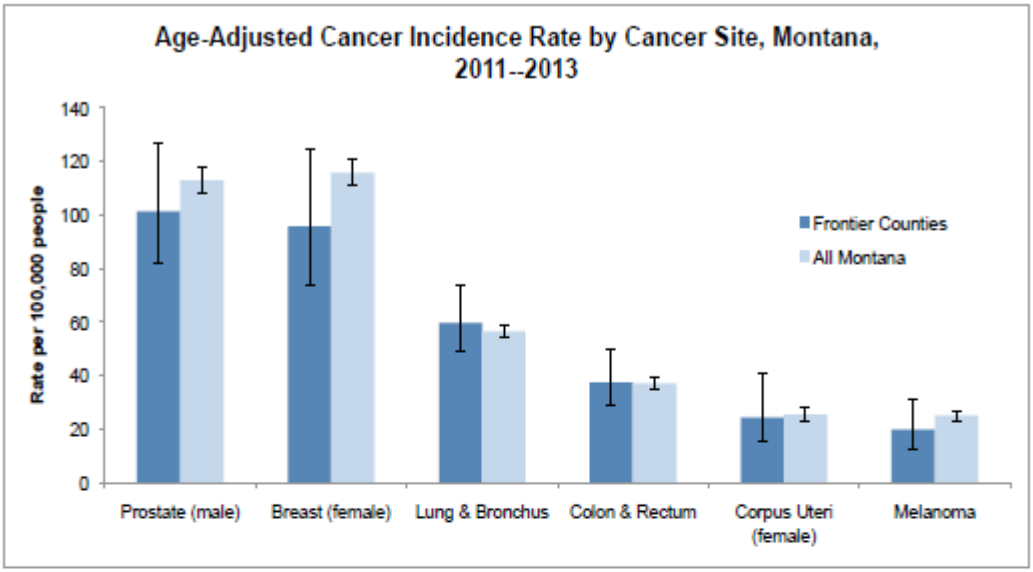


Table 8. Tobacco retailers by county, Montana 2013.

Health Indicator	Sheridan County
Retailer Number	9
Retailers per 1,000 population	2.52

Data from: http://dphhs.mt.gov/Portals/85/Documents/MTUPPapp/index.html

9

Maternal and Child Health

Table 9. Total births occurring in Sheridan County, 2011–2013.

Health Indicator	Sheridan County	Montana
Number of births	38	35,881

Data about births were tabulated from birth certificates of infants to Montana-resident mothers who delivered in Montana, 2011–2013, covering more than 95% of all births.

Table 10. Teen birth rate per 1,000 females age 15–19 years, 2009–2013.[a,b]

Health Indicator	Sheridan County	Montana
Teen birth rate per 1,000	†	32.0

[a]Due to the small number of events in some counties, five year rates have been used to include more counties with at least 20 events over the five years. Not all counties had enough events to be included.
[b]Full report can be found at:
http://dphhs.mt.gov/Portals/85/publichealth/documents/WMH/2014%20Teen%20Birth%20and%20Pregnancy%20Report%20Final.pdf
†Denominator less than 20; rates based on fewer than 20 events are not statistically reliable.

Table 11. WIC data by county — Montana, 2011–2013.

	Sheridan County	Frontier County Data	Montana
Health Indicator	Percent	Percent	Percent
Children (2–5 years of age) overweight or obese	†	30.4	27.9
Initiate breastfeeding	†	78.7	84.7

†Denominator less than 20; rates based on fewer than 20 events are not statistically reliable.
Data provided by the WIC Program in the Family and Community Health Bureau.

10

Table 12. Births to Montana resident mothers occurring in Sheridan County, 2011–2013.[a]

	Sheridan County		Frontier County Data		Montana	
Health Indicator	Number	Percent (95% CI)	Number	Percent (95% CI)	Number	Percent (95% CI)
Born less than 37 weeks	†	‡ ‡	91	9.6 (7.8, 11.7)	3,265	9.1 (8.8, 9.4)
Born weighing less than 2,500 grams	†	‡ ‡	77	8.2 (6.5, 10.1)	2,619	7.3 (7.0, 7.6)
Women entering prenatal care after first trimester	†	‡ ‡	249	26.4 (23.6, 29.3)	9,580	26.7 (26.2, 27.2)
Women whose Kotelchuk Index is ≥ 80%[b]	†	‡ ‡	673	71.2 (68.2, 74.1)	26,911	75.0 (74.6, 75.5)
Smoking during pregnancy	†	‡ ‡	139	14.7 (12.5, 17.1)	5,849	16.3 (15.9, 16.7)
Education less than high school graduate	†	‡ ‡	114	12.1 (10.1, 14.3)	4,281	12.0 (11.6, 12.3)
Any insurance	†	‡ ‡	843	89.2 (87.1, 91.1)	33,118	92.3 (92.0, 92.6)
Receiving WIC	†	‡ ‡	247	26.1 (23.4, 29.1)	12,415	34.6 (34.1, 35.1)
Breastfeeding at discharge	†	‡ ‡	836	88.5 (86.3, 90.4)	31,898	88.9 (88.6, 89.2)

[a]Data about births were tabulated from birth certificates of infants to Montana-resident mothers who delivered in Montana, 2011–2013, covering more than 95% of all births. Demographic information on the birth certificates is self-reported by parents; medical information is abstracted from medical records.

[b]Kotelchuk Index: computed index of adequacy of prenatal care, function of early initiation and enough visits, 80% or greater is defined as adequate.

†Too few events to report or complimentary suppression of corresponding cell.

‡Does not meet standards of reliability or precision.

11

Mortality

Table 13. Median age at death in years by race and sex — Montana, 2011–2013.

	Sheridan County		Frontier County Data		Montana	
Health Indicator	Male	Female	Male	Female	Male	Female
White	81.0	87.0	78.0	85.0	76.0	83.0
American Indian	†	†	†	†	62.5	63.5

†Too few events to report or complimentary suppression of corresponding cell.

Table 14. Frequency and age-adjusted rates of selected causes of death by county all cause Montana residents, 2011–2013.

	Sheridan County		Frontier County Data		Montana	
Health Indicator	Number	Age-adjusted Rate per 100,000 (95% CI)*	Number	Age-adjusted Rate per 100,000 (95% CI)*	Number	Age-adjusted Rate per 100,000 (95% CI)*
All Causes	165	‡ ‡	1,336	710.9 (670.2, 754.6)	27,334	744.8 (735.8, 753.9)
Homicide	†	‡ ‡	†	‡ ‡	80	‡ ‡
Suicide	†	‡ ‡	21	‡ ‡	688	22.3 (20.6, 24.1)
All injuries	†	‡ ‡	86	‡ ‡	1,726	53.3 (50.7, 56.0)
Motor vehicle Accidents	†	‡ ‡	31	‡ ‡	603	19.8 (18.2, 21.5)

*Confidence Intervals (95%) For The Age Adjusted Rate Are Computed Using the Fay-Feuer (1997) Method
National Center for Health Statistics. Vintage 2013 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010–July 1, 2013), by year, County, single-year of age (0, 1, 2, .., 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: http://www.cdc.gov/nchs/nvss/bridged_race.htm as of June 26, 2014, following release by the U.S. Census Bureau of the unbridged Vintage 2013 postcensal estimates by 5-year age group on June 26, 2014.
†Too few events to report or complimentary suppression of corresponding cell.
‡Does not meet standards of reliability or precision.
Data provided by the Office of Epidemiology and Scientific Support.

Table 15. Frequency and age-adjusted rates of selected causes of death by county all cause Montana residents, 2011–2013.

	Sheridan County		Frontier County Data		Montana	
Health Indicator	Number	Age-adjusted Rate per 100,000 (95% CI)[a]	Number	Age-adjusted Rate per 100,000 (95% CI)[a]	Number	Age-adjusted Rate per 100,000 (95% CI)[a]
Deaths Attributed to Drugs	0	- -	†	‡ ‡	87	2.7 (2.2, 3.4)
All Cancer	36	‡ ‡	303	159.2 (140.9, 180.4)	5,902	156.2 (152.1, 160.3)
Cerebrovascular	†	‡ ‡	63	‡ ‡	1,339	35.8 (33.9, 37.9)
Heart Disease	33	‡ ‡	316	151.9 (135.1, 171.7)	5,757	152.4 (148.5, 156.5)
All Liver	†	‡ ‡	21	‡ ‡	566	16.3 (14.9, 17.8)
Alcohol-Related Liver Disease	†	‡ ‡	†	‡ ‡	292	8.6 (7.6, 9.7)
Diabetes	†	‡ ‡	63	‡ ‡	729	19.8 (18.4, 21.4)
Pneumonia and Influenza	†	‡ ‡	23	‡ ‡	517	13.8 (12.6, 15.1)
Chronic Lower Respiratory Disease and Asthma	†	‡ ‡	94	‡ ‡	1,881	50.6 (48.3, 53.0)

[a]Confidence Intervals (95%) For The Age Adjusted Rate Are Computed Using the Fay-Feuer (1997) Method
National Center for Health Statistics. Vintage 2013 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010–July 1, 2013), by year, County, single-year of age (0, 1, 2, .., 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: http://www.cdc.gov/nchs/nvss/bridged_race.htm as of June 26, 2014, following release by the U.S. Census Bureau of the unbridged Vintage 2013 postcensal estimates by 5-year age group on June 26, 2014.
†Too few events to report or complimentary suppression of corresponding cell.
‡Does not meet standards of reliability or precision.
Data provided by the Office of Epidemiology and Scientific Support.

13

Behavioral Risk Factors

Because of the small numbers in Montana, behavioral risk factor health indicators are reported by Montana's Health Planning Regions as demonstrated below. Here is the link to the 2013 annual report, regional comparisons of 2013 health indicators start on page 32:
http://dphhs.mt.gov/Portals/85/publichealth/documents/BRFSS/Annual%20Reports/2013%20Annual/2013MTBRFSSAnnualReport.pdf

Map of Montana's Health Planning Regions

Appendix C – Secondary Data Scan

Sheridan County
Secondary Data Analysis
July 23, 2012

MONTANA STATE UNIVERSITY | Office of Rural Health, Area Health Education Center

	County[1]	Montana[1,2]	Nation[2]
Leading Causes of Death	1. Heart Disease 2. Cancer 3. Pneumonia/Influenza	1. Cancer 2. Heart Disease 3.CLRD*	1. Heart Disease 2. Cancer 3. CLRD*

[1]Community Health Data, MT Dept of Health and Human Services (2010)

[2]Center for Disease Control and Prevention (CDC), National Vital Statistics (2012)

Chronic Lower Respiratory Disease

Chronic Disease Burden[1]	Region 1	Montana	Nation[3,4]
Stroke prevalence	2.9%	2.5%	2.6%
Diabetes prevalence	7.7%	6.2%	8.3%
Acute Myocardial Infarction prevalence (Heart Attack)	5.5%	4.1%	6.0%
All Sites Cancer	472.3	455.5	543.2

[1]Community Health Data, MT Dept of Health and Human Services (2010)

[3]Center for Disease Control and Prevention (CDC) (2012)

[4]American Diabetes Association (2012)

Region 1 (Eastern) – Phillips, Valley, Daniels, Sheridan, Roosevelt, Richland, McCone, Garfield, Prairie, Dawson, Wibaux, Rosebud, Custer, Fallon, Powder River, Carter, and Treasure

Chronic Disease Hospitalization Rates	County	Montana
Stroke[1] *Per 100,000 population*	182.7	182.2
Diabetes[1] *Per 100,000 population*	66.7	115.4
Myocardial Infarction[1] *Per 100,000 population*	187.6	147.3

[1]Community Health Data, MT Dept of Health and Human Services (2010)

Demographic Measure (%)		County			Montana			Nation[5,6]		
Population[1]		3,283			989,415			308,745,538		
Population Density[1]		2.0			6.7			*Not relevant*		
Age[1]		<5	18-64	65+	<5	18-64	65+	<5	15-64	65+
		3%	59%	26%	6%	63%	14%	7%	62%	13%
Gender[1]		Male	Female		Male	Female		Male	Female	
		49.4%	50.6%		50.1%	49.9%		49.2%	50.8%	
Race/Ethnic Distribution	White[1]	97.5%			91.5%			72.4%		
	American Indian or Alaska Native[1]	2.0%			6.8%			0.9%		
	Other †[1]	0.5%			1.7%			26.7%		

[1]Community Health Data, MT Dept of Health and Human Services (2010)

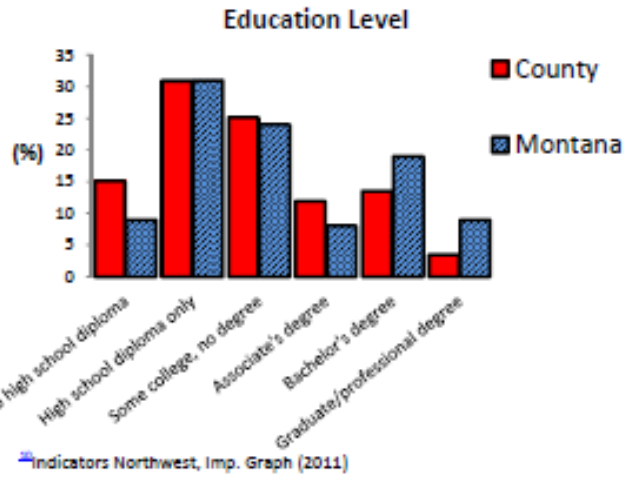
[5]County Health Ranking, Robert Wood Johnson Foundation (2012)

†Black, Asian/Pacific Islanders, Hispanic & Non-Hispanic Ancestry

[5]US Census Bureau (2010)

Socioeconomic Measures[1] (%)	County	Montana	Nation[7,8]
Median Income[1]	$35,395	$43,000	$51,914
Unemployment Rate[7]	2.9%	6.3%	7.7%
Persons Below Poverty Level[1]	15.0%	14.0%	13.8%
Uninsured Adults (Age <65)[1]	26.5%	19.0%	18.2%
Uninsured Children (Age <18)[9]	N/A	11.0%	10.0%

[1]Community Health Data, MT Dept of Health and Human Services (2010)
[7]Montana Dept of Labor and Industry, Research & Analysis Bureau. Local Area Unemployment Statistics (LAUS). Non-Seasonally Adjusted Unemployment Rate. (Retrieved April 2012)
[8]Center for Disease Control and Prevention (CDC), Health Insurance Coverage (2011)
[9]Montana KIDS COUNT (2009)



[10]Indicators Northwest, Imp. Graph (2011)

MONTANA STATE UNIVERSITY
Office of Rural Health
Area Health Education Center

Behavioral Health[1,2]	Region 1	Montana
Childhood Immunization Up-To-Date (UTD) % Coverage[11,††] *Age 24-35 months, population size: 12,075 (% sampled: 35.9%)*	26.3% (County)	64.3%
Tobacco Use[1]	20.5%	19.3%
Alcohol Use (binge + heavy drinking)[1]	24.8%	22.8%
Obesity[1]	26.8%	21.6%
Overweight[1]	37.8%	37.8%
No Leisure time for physical activity[1]	27.9%	20.7%

[1]Community Health Data, MT Dept of Health and Human Services (2010)
[2]Center for Disease Control and Prevention (CDC), National Vital Statistics (2012)
[11]County Childhood Immunization Coverage, MT Dept of Health and Human Services (2010-2011).

††Childhood immunization percent coverage was determined following the CDC developed and validated AFIX [Assessment, Feedback, Incentives, & eXchange] strategy designed to raise immunization levels. The Montana Immunization Program is required to participate in this process. Fifty percent of immunization providers are assessed each year. All children's records per provider assessed are reviewed to determine if the child is up-to-date with recommendations of the Advisory Council on Immunization Practices (ACIP).

2

Screening[1]	Region 1	Montana
Cervical Cancer (Pap Test in past 3 yrs)[1]	79.5%	83.0%
Breast Cancer (Mammogram in past 2 yrs)[1]	69.2%	71.9%
Blood Stool[1]	21.8%	25.3%
Sigmoidoscopy or Colonoscopy[1]	44.8%	54.3%
Diabetic Screening[3] *Percent of Medicare enrollees who received HbA1c screening*	90.0% (County)	79.0%

[1]Community Health Data, MT Dept of Health and Human Services (2010)

[3]County Health Ranking, Robert Wood Johnson Foundation (2012)

Mortality[1,2,12]	County	Montana	Nation[2,13]
Suicide Rate per 100,000 population[1]	11.7	20.3	12.0
Unintentional Injury Death Rate per 100,000 population[1]	81.7	58.8	38.4
Percent Motor Vehicle Crashes Involving Alcohol[1]	14.7%	10.0%	32.0%
Pneumonia/Influenza Mortality per 100,000 population[1]	151.7	19.0	17.5
Diabetes Mellitus[2]	40.9	27.1	21.8

[1]Community Health Data, MT Dept of Health and Human Services (2010)

[2]Center for Disease Control and Prevention (CDC), National Vital Statistics (2012)

[12]Center for Disease Control and Prevention (CDC), Web-based Injury Statistics Query and Reporting System (WISQARS) (2011)

[13]Kaiser State Health Facts, National Diabetes Death Rate (2008)

Maternal Child Health[1]	County	Montana	Nation[14,15]
Infant Mortality (death within 1st year) Rate per 1,000 live births[1]	6.9 (Region 1)	6.1	6.7
Entrance into Prenatal care in 1st Trimester Percent of Live Births[1]	94.0%	83.9%	69.0%
Birth Rate[9] *Babies born per 1,000 people*	7.1	12.8	13.5
Low Birth Weight (<2500 grams) Percent of live births[1]	12.6%	7.3%	8.3%
Neonatal Mortality (under 28 days of age) Rate per 1,000 live births[1]	4.1 (Region 1)	3.3	4.5
Post Neonatal Mortality (28 through 364 days of age) Rate per 1,000 live births[1]	2.8 (Region 1)	2.7	2.2
Pre-Term Birth (<37 completed weeks gestation) Percent of Live Births[1]	10.9%	10.1%	12.5%

[1]Community Health Data, MT Dept of Health and Human Services (2010)

[9]Montana KIDS COUNT (2009)

[14]Child Health USA, U.S. Dept of Health and Human Services – Human Resources & Services Administration (HRSA) (2008-2009)

[15]Center for Disease Control and Prevention (CDC), Preterm Birth (2012)

3

Economic Impact Assessment

Demographic Trends and Economic Impacts: A Report for Sheridan Memorial Hospital

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Introduction

This report responds to requests by MHA for the location quotient of the hospital sector in Sheridan County and for information on the county's demographics. In addition, the report includes analysis of the economic impact of the hospital sector on Sheridan County's economy. Section I gives location quotients for the hospital sector in Sheridan County using both state and national employment as the basis of comparison. Section II looks at the demographic profile of Sheridan County. Section III presents the results of an input-output analysis of the impact of Sheridan Memorial Hospital on the county's economy.

Section I Location Quotients

A location quotient measures how the level of employment concentration in a geographic area compares with that of another geographic area. For example, if 20 percent of workers in county A worked in manufacturing and 10 percent of the workers in that county's state worked in manufacturing, then the location quotient for county A would be:

$$\frac{\text{County A Percent employed in manufacturing} = 20\%}{\text{State Percent employed in manufacturing} \quad 10\%} = 2.$$

Intuitively, county A's location quotient of 2 indicates that its employment in manufacturing is about double what one would expect given the size of manufacturing employment in the state.

Two location quotients for hospital employment in Sheridan County were calculated. The first compares Sheridan County's hospital employment concentration to that of the State of Montana, and the second compares it to hospital employment in the United States. The calculations use 2010 annual averages.

Hospitals Location Quotient (compared to State of MT) = 1.04
Hospitals Location Quotient (compared to U.S.) = 1.20

A location quotient near 1 indicates that the employment concentration in the county mirrors that of the larger geographic region. In the case of Sheridan County, the location quotient of 1.04 indicates that hospital employment in the county is what one would expect given statewide employment patterns. When compared to the nation, the location quotient is 1.20, indicating that the hospital sector's share of county employment is about 20 percent higher than the hospital industry's share of national employment.

Another way to look at the location quotient is to ask how many employees would be employed in the hospital sector if Sheridan County's employment patterns mirrored the state or the nation. Sheridan Memorial Hospital averaged 69 employees in 2010. This is 3 more than expected given the state's employment pattern and 14 more than expected given the national employment pattern. Sheridan Memorial Hospital may employ more people than expected given the size of its employment base because the small population in the county does not allow it to take advantage of economies of scale. In 2010, Sheridan Memorial Hospital accounted for 5.6% of county nonfarm employment and 7.8% of the county's total wages.

(Source of Employment Data: Quarterly Census of Employment and Wages, Research and Analysis Bureau, Montana Department of Labor and Industry)

Section II Age Demographics

The 2010 Census reported that there were 3,384 residents of Sheridan County. The breakdown of these residents by age is presented in Figure 1. Sheridan County's age profile is similar to that of many rural Montana counties. In 2010, baby boomers were between the ages of 45 and 60 and their presence is evident in the graph. Following the baby boom came the "baby bust," which is evidenced by the lack of 25 to 44 year olds in the county. In many rural Montana counties, the baby bust is exacerbated by out-migration of young adults

Figure 1: Age Distribution of Sheridan County Residents

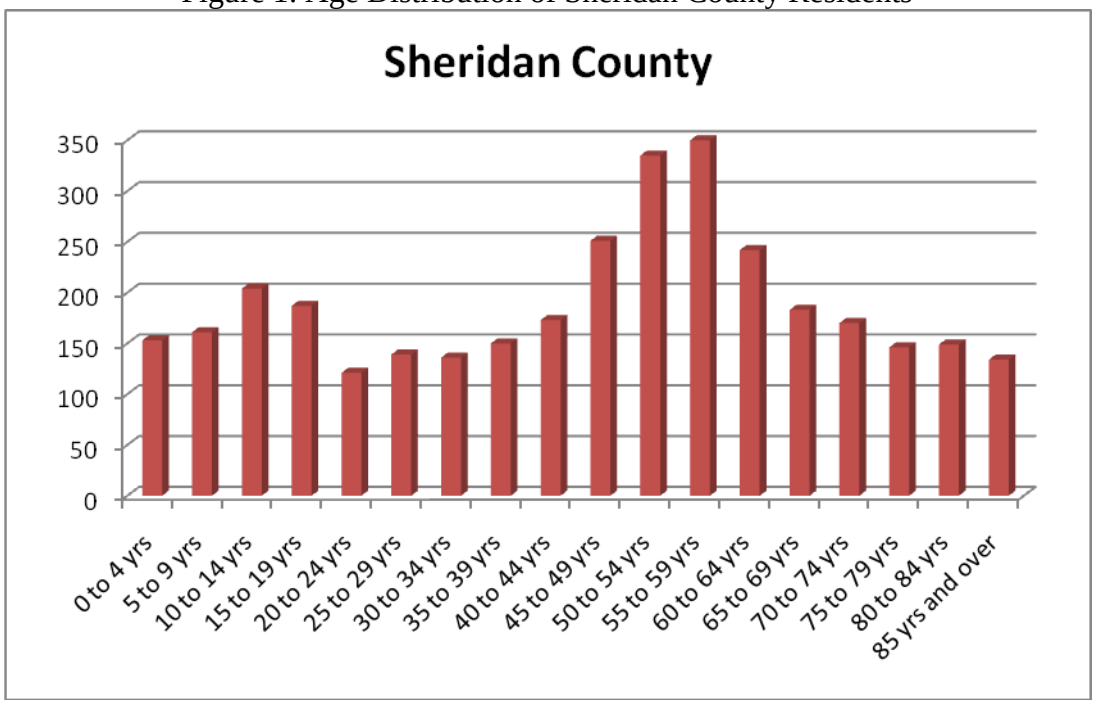

Figure 2: Percent of the population by age groups, Sheridan County vs. Montana

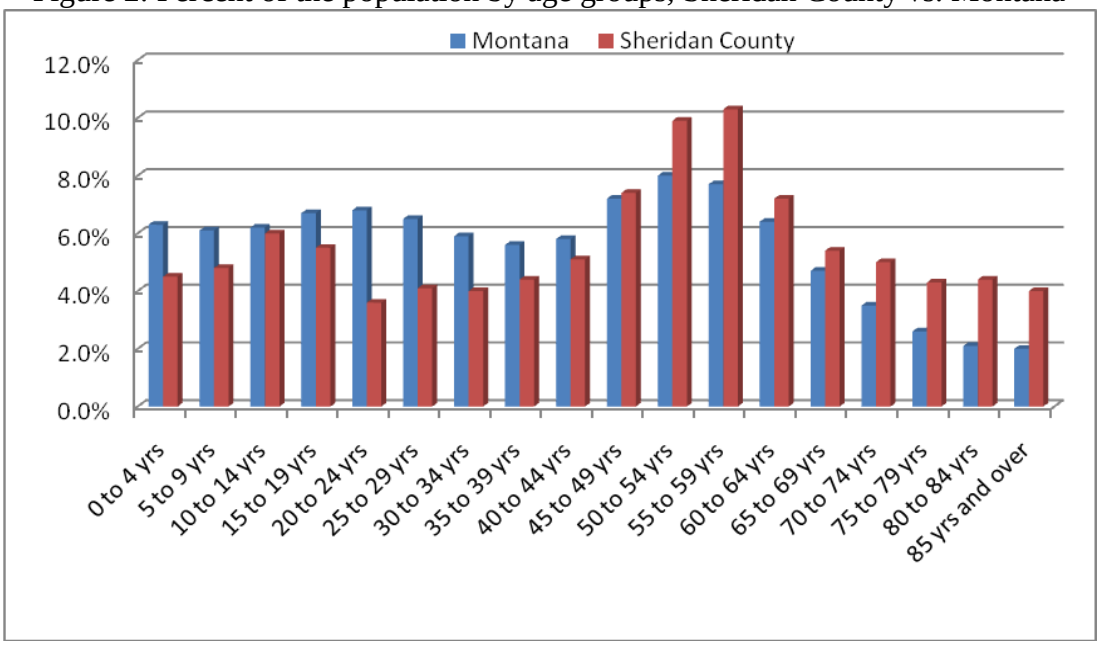

Figure 2 shows how Sheridan County's population distribution compares to Montana's. A careful examination of Figure 2 and the underlying data reveals that, compared with the State as a whole, Sheridan County has a lower percentage of people under 45 (42.0 percent vs. 55.9 percent) and a higher percentage of people aged 45 and up (58.0 percent vs. 44.1 percent). According to the 2010 Census, Sheridan County had a median age of 50.3, which ranked it the fifth oldest among Montana counties. Since older populations have higher rates of healthcare utilization, these demographics are important when planning for healthcare delivery now, and in the future.

Section III Economic Impacts

Businesses have an economic impact on their local communities that exceeds the direct amount of people they employ or wages they pay. For example, individuals employed at Sheridan Memorial Hospital spend a portion of their salary on goods and services produced in Sheridan County, thus supporting jobs and income in those local businesses. Likewise, the hospital itself may purchase goods and services from local suppliers. These businesses and employees then spend a portion of their income on local goods and services which, in turn, supports other local jobs and companies. Thus, the effect of one dollar of wages is multiplied as it circulates through the community.

The amount of jobs and income in a local community attributable to a particular industry sector can be determined by calculating its employment and income multipliers. Industries with the highest multipliers generally are those who buy supplies, services, and labor from the local community, sell products and services outside the local community, and pay a high income to their employees. Although hospitals in rural areas do not usually sell their services to non-residents, they can still generate significant multiplier effects for their communities given that much of their funding comes from outside the region in the form of public and private insurance reimbursements. The relatively high wages earned by hospital employees also tend to boost hospitals' multipliers.

Multipliers are calculated using a methodology called input-output modeling. The Research and Analysis Bureau (R&A) uses IMPLAN software to do regional input-output modeling. The R&A staff is able to correct the underlying IMPLAN data with confidential employment and earnings data from the unemployment insurance system, which allows us to produce more accurate multipliers than would otherwise be possible.

According to the input-output analysis, the hospital industry sector in Sheridan County has the following multipliers:

Hospital Employment Multiplier = 1.29
Hospital Employee Compensation Multiplier = 1.17
Hospital Output Multiplier = 1.27

What do these numbers mean? The employment multiplier of 1.29 can be interpreted to mean that for every job at Sheridan Memorial Hospital, another .29 jobs are supported in Sheridan County. Another way to look at this is that if Sheridan Memorial Hospital suddenly went away, about 20 additional non-hospital jobs would also be lost in the county (based on 2010 hospital employment of 69). The employee compensation multiplier of 1.17simply states that for every dollar in wages and benefits paid to the hospital's employees, another 17 cents of wages and benefits are created in other local jobs in Sheridan County. Put another way, if Sheridan Memorial Hospital suddenly went away, about $476,875 in additional annual wages would be lost from other jobs in the county. Finally, the output multiplier indicates that for every dollar of goods and services produced by Sheridan Memorial Hospital, output in the county increases by another 27 cents.

There are other potential economic impacts of hospitals beyond those identified by the input-output analysis. Novak (2003)[1] observes that "…a good healthcare system is an important indication of an area's quality of life. Healthcare, like education, is important to people and businesses when deciding where to locate" (pg. 1). Thus, all other things being equal, the presence of a quality healthcare system gives communities an advantage when competing for new businesses. An effective healthcare system can also attract retirees to the community. Finally, healthcare may provide an opportunity for young people to stay in the communities where they were raised and still earn a high wage. In areas of the state where economic opportunities are scarce, many hospitals are experiencing shortages of qualified workers. In this situation, "growing your own" workforce may be a viable option.

[1] Novak, Nancy L. (2003) "Bridging the Gap in Rural Healthcare" *The Main Street Economist: Commentary on the Rural Economy,* Center for the Study of Rural America: Federal Reserve Bank of Kansas City. September 2003

Appendix D –Focus Group and Key Informant Interview Questions

Focus Groups

Focus group participants were informed on why Sheridan Memorial Hospital was conducting a community health assessment and requesting community feedback. The community health assessment from 2013 was reviewed during the interviews/focus groups to health drive discussion.

Purpose: The purpose of the focus groups was to identify awareness of county programs and services, as well as services, providers, and facilities needed and utilized in the area. Additionally, feedback was requested on how to better promote and educate the community on currently available services.

1. What do you think are the important local healthcare issues?

Key Informant Interviews

Key Informant Interviews were conducted by the Montana Office of Rural Health on behalf of Sheridan Memorial Hospital. Each interviewee provided informed consent to participate. The interviews were conducted by Amy Royer and each interview lasted up to 30 minutes in length.

Purpose: The purpose of the key informant interviews was to determine the community's perception of local healthcare services and identify important issues.

1. What would make your community a healthier place to live?

2. What do you think are the most important local healthcare issues?

3. What other healthcare services are needed in the community?

Appendix E –Focus Group and Key Informant Interview Notes

Focus Group #1
Monday, May 2, 2016; 6:30pm-8:15pm – Westby VFW/Community Center, Westby
5 Attendees (3 male, 2 females)

1. What do you think are the most important local healthcare issues?
- Teenage suicides seem to be on the rise for Sheridan County
- Access and convenience of care for the elderly who are unable to travel; in particular the travel during the winter months – would it be an option for house calls or mobile clinic?
- Lack of EMT/QRU [Emergency Medical Technicians/Quick Response Unit] within the Westby community. It is unnerving that there are no QRU's in Westby to respond to an emergency, when QRU were in the community it put the Westby locals' minds at ease knowing that someone was close by.
- Quality Transit is utilized for those residents in Westby needing rides to places. They come on Wednesdays.
- Substance abuse with drugs and alcohol are not seen so much in youth but more in the adults.
- Mental health in school is a major concern – the school cannot afford their own counselor. Options could be to share a counselor amongst schools that visits 1 time a week. When there was the suicide of a student last year, the school brought in clergy to help counsel the students; however clergy and school counselors have limited capabilities and there are some students that need help beyond what they can provide.
- Free/discounted school meals for those who cannot afford. Finding that the portion control leaves student left hungry and they are going "downtown" to purchase junk food.
- School accommodates/encourages children to be active in school activities – no worries about childhood obesity.
- New-comers to Westby do not know of the health services offered in the area. Many of them go to the school or Lyndon Lagerquist for information and references.
- Students thrive in Westby with the smaller class sizes. The school has enlisted the help of TAs [Teachers Aids] to get some students the extra help they need.
- Home Care services are huge. We need an aide to come in for a couple hours a day for dressing assistance, household assistance. There is a visiting nurse service available through Sheridan Memorial.
- VA services – in Billings they offer home care services that has an aide come in for 2 hours in the morning and 2 hours at night to care for Vets. Wonder if this is a service that Sheridan Memorial could provide through the VA Outreach Clinic?
- Mental health care – there is a "bad" stigma about asking for help. It would be important to work something out with kids in school so that there would be privacy. Or education with students that asking for help isn't a bad thing.
- Students may be afraid to ask for mental health help due to peers/teasing/bullying. Try to find some way to have ALL students required to meet with a student counselor so there is no one student getting targeted.
- We need to learn how to approach mental health assistance in a positive way.
- Kids need to learn how to deal with the pressure of school, home life and peers.

- Even adults need mental health assistance – however, catch them young and they may grow to be healthy adults.

Focus Group #2

Wednesday, May 4, 2016; 6:30pm-8:15pm – Medicine Lake Fire Hall, Medicine Lake
4 Attendees (1 male, 3 females)

1. What do you think are the most important local healthcare issues?
   - Mental health is a huge need in Sheridan County. We no longer have Elizabeth Drydal coming for weekly visits. Mental Health only has Gina Aasheim and another gentleman that travels weekly for chemical dependency classes.
   - Seeing more and more of a need for mental health care in the school.
   - Healthcare insurance is so expensive and not really providing primary care/preventative care as the deductibles are so high.
   - Sheridan County has a drug issue. There is no place local to go for help or rehab services.
   - In the 90s Sheridan County had the DARE program in the schools; unsure of what type of program is in the schools now.
   - Medicine Lake School had an assembly on "Vaping." This was provided from the Office of Public Instruction and spoke to students of the health issues with vaping/e-cigarettes.
   - Prevalent drugs in the area are meth and prescription drugs. Might be beneficial to look into a prescription drug drop box to dispose of un-needed prescriptions.
   - Community health fair- when done, was well received. With the aging community there are several health issues that could be addressed.
   - Interested in seeing a presentation of Sheridan Memorial's LUCUS [CPR administering machine] during the Community Health Fair.
   - Need CPR training offered locally – very few Medicine Lake firemen are certified.
   - Discussion of QRU [Quick Response Unit] members not in Medicine Lake. Obvious concern that there is not that local help that may arrive earlier than the ambulance. Community members take comfort in knowing that the QRU could arrive sooner than the Ambulance crew from Plentywood.
   - Response time of the Ambulance – there was recently an accident west of Medicine Lake when the Plentywood fire chief was at the scene prior to the Ambulance. This has brought issues of timeliness of the ambulance. Sheridan Memorial is documenting response time to calls to assist in finding a problem/solution.
   - Sheridan County commissioners approached the senior center members in Medicine Lake to shut down their senior center. Sheridan County pays for the senior centers utilities and other expenses thus the commissioners thought it would be a savings to close the senior center and have the seniors set up at the Medicine Lake Fire hall Community Room. This was vetoed by those involved in the Medicine Lake senior center.

Focus Group #3
Wednesday, May 11, 2016; 6:30pm-8:15pm – Sheridan Memorial Hospital Board Room, Plentywood
4 Attendees (2 male, 2 females)

1. What do you think are the most important local healthcare issues?
- Need for dialysis services locally
- Alzheimer's education/care
- Behavioral health in long-term care
- Behavioral health – need for crisis care
- Mental health in general, for all ages
- Birthing Center – unfortunate that Sheridan Memorial no longer delivers babies. It would be nice if there could be at lease pre-and post-birth visits available at Sheridan Memorial through visiting specialist.
- Need for chemotherapy offered locally rather than having to travel over an hour. Patients do not feel well after chemo and the last thing they want to do is jump in a care and have to travel over an hour back home.
- Pediatric diabetes are prevalent in the Plentywood School. Possible need for adolescent and adult education. Although Type 1 cannot be prevented, nutritional and care education can be provided. Type 2 diabetes can be prevented, thus education needs to be provided for all ages.
- Plentywood School will possibly enlist a drug testing policy of students. Need more drug/alcohol awareness in the school.
- It is good to educate students about drug and alcohol abuse, but more importantly the parents.
- Adult use of recreational drugs is extremely high.
- A need for a walking path or indoor walking track would be nice due to the inclement and unpredictable weather we have.
- Community Health Fair –ideas were shared on what to provide during the health fair: EMS, blood pressure, county health, health education. Suggested to do it on Election Day as many are already out and about.

Key Informant Interview #1
Sheriff Heidi Williamson, May 5, 2016; Sheridan County Sheriff's Office
Responses provided via email

1. What would make your community a healthier place to live?
    - I really like the Cardiac Ready Community work Lisa Fawcett [Sheridan Memorial Trauma Care Coordinator] is doing. It will be very beneficial to the community.

2. What do you think are the most important local healthcare issues?
    - I would like to see more mental health in the area. I feel it is a big issue in our community and people with mental health problems often aren't dealt with until it is time for a committal or law enforcement action.

Key Informant Interview #2

Gina Aasheim, Monday, May 23, 2016; Licensed Clinical Professional Counselor
Responses provided via phone interview

1. What would make your community a healthier place to live?
    - I think that this community could really use some mental health and mental health treatment education. It can feel very uneasy and uncomfortable when dealing with someone in a mental health crisis
    - When someone is high on meth, they look like there are having a psychotic episode but they are really just on drugs. I think our community could really use more mental health training. I think we would greatly benefit from having a safe room available. Billings is the closest one. Every person who needs to be committed ends up in Warm Springs, but they usually have to go get them after the judge rules that they don't need to be in the hospital for acute care. It's challenging to transfer someone who is having a psychotic episode. Often it has to happen by ambulance.
    - Where we live, there is such stigma when it comes to mental illness.

2. What do you think are the most important local healthcare issues?
    - If I step out of my specialty, we are a very geriatric community. Mental health issues are not the most prominent issues in our community, but they are the most uncomfortable. Alcohol and substance abuse is a huge issue as well.

3. What other healthcare services are needed in the community?
    - There is a big push in the community for wellness and fitness throughout all developmental stages. People are trying to figure out how to keep their kids active in the winter. Health recreation is very limited here. High school sports are really the only venue for this. We just got a work out facility this year
    - We don't have an Al-Anon group, but we do have an AA group. A lot of that has to do with sponsors and volunteers. The need is there but the services aren't always available.
    - Our suicide rates are pretty high. There are a lot of factors that go into it especially stigma, high access to fire arms, and lack of access to health care. We had 3 women in Daniels County commit suicide with fire arms. That kind of thing just doesn't happen. Gun access is part of the lifestyle here and it is a way of life.
    - I guess my take home message regarding mental health would be breaking down the stigma and increasing the education.

Key Informant Interview #3

Joni Brensdal, Wednesday, May 25, 2016; Administrator at Pioneer Manor Retirement Home
Responses provided via phone interview

1. What would make your community a healthier place to live?
    - Our environment, weather wise, leaves us indoors for six months out of the year. We don't have a facility for middle age or older aged for people to go. We need a place for people to go and learn and to educate the people of what exercises to do. We need someone to help people learn how to have a healthier body. How do you get around the barrier of people, when they get older, they think why does this matter? We want people to feel better. Some place with a small therapy pool where they can get in water.
    - I wish families would take more interest in their elderly family members. Some do but the majority of them don't. Everyone is busy.

2. What do you think are the most important local healthcare issues?
    - We have a lot going for us because we have an active Council on Aging and we have a Courthouse who makes sure we have funding to help people age in their homes for longer. We need to maintain the funding to keep some of those programs going. And making sure that those who are home bound, either because they are stubborn or because they can't afford it, are cared for at home especially with home health and transportation. We need to keep the funding for this going.

3. What other healthcare services are needed in the community?
    - Currently we have our local doctor in Plentywood, but he is in his 60's, and people are really used to seeing him. The transition of people seeing a new doctor will be difficult. We have turnover of doctors [at Sheridan Memorial] and we need people to stay. We only have one doctor at the hospital and the rest are PAs. A lot of people get flown to billings when they need care.
    - Education on deficiencies; vitamin and mineral deficiencies. People need to learn about what vitamins and minerals their body needs so that they can treat those instead of just taking a pill for the pain.
    - I used to work at the bank and we used to have training on staying healthy so we could keep going to work. People need to be educated on how to stay healthy, even in the workplace.
    - It would be nice to have an indoor swimming pool for the kids.

Key Informant Interview #4

Debbie Johnson, Friday, May 27, 2016; Child and Family services, School psychologist, LCSW. Reponses provided via phone interview

1. What would make your community a healthier place to live?
    - There is a real gap in that our medical people in the community don't know who can provide mental health services. So I might be seeing someone in the school and refer them to go see a doctor and then the doctor will refer them to someone else for counseling services when I already do this for free at the school. It would be nice if there was a resource list with everyone in the community (who provides mental health services), so we aren't sending people out of the community if it's not necessary.

2. What do you think are the most important local healthcare issues?
    - I think the lack of specialists. Or maybe just the lack of people in the community knowing what they have to offer. Whether it's them not knowing about tele-medicine, or not knowing about the traveling specialists, or even just the services that are already offered. But if you need to send someone for a foot problem or a breathing problem it would be nice to be able to do more over tele-medicine. I know of two people who got flown to Billings for around $50,000 each, which is just crazy. The people who receive these services aren't aware about how much this costs. We need to do something about this.
    - We also have a big drug issue. Kids are using drugs, parents are using drugs. When you are a small community and even just a handful of people are doing drugs it causes a big impact because we are such a small area.

3. What other healthcare services are needed in the community?
    - Definitely more mental health professionals and chemical dependency counselors. There are only three that I know of in the area who provide mental health services. I know that this is a problem in Montana, but especially in eastern Montana. The availability of clinical psychologists is definitely an issue.
    - We need some sort of ongoing parenting class, a lot of times parents think their kids are having depression and put them on medication, when really it is anxiety caused by traumatic experiences. With enough training and education, parents can handle this better.
    - Also transportation, when kids get referred out but they don't have transportation; their parent won't take them and they won't get the care they need.
    - I wish there was a way that we could reach the educational professionals (teachers, principals etc.) because the last thing they (children having a mental health episode) should be doing is going to class. They're in class but they aren't learning because they are thinking about other things. We need to put mental health first but I find that usually it is the other way around.