

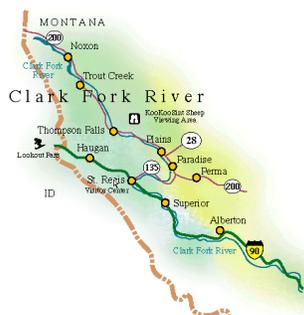


Mineral County Health Department

1208 6th Ave E P.O. Box 488

Superior, MT 59872

Phone: (406) 822-3564 Fax (406) 822-3745



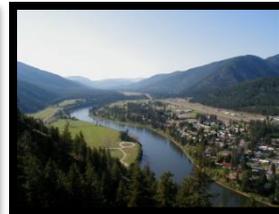
Community Health Assessment (CHA)

Mineral County Health Department (MCHD) - Montana

HB 173 –Version 2.0 – April 27, 2011

Michele Sare, MSN, RN; sare.michele@gmail.com
HB 173: Public Health Coordinator

It is assumed that the goal of any government entity is the responsible allocation of available resources toward the goal of quality of life for all citizens



Contributors:

Peggy Stevens, BSN, RN, Director
Mineral County Health Department
pstevens@co.mineral.mt.us
P.O. Box 488
Superior, MT 59872
406.822.3564

Beth Price, Administrative Assistant
Mineral County Health Department
bprice@co.mineral.mt.us

Barbra Jasper, BSN, RN, PHN & School Nurse
Mineral County Health Department
bjasper@co.mineral.mt.us

Sue Hazlett, RN, PHN & School Nurse
Mineral County Health Department
shazlett@co.mineral.mt.us

Denyse Trader
Mineral County Tobacco Coordinator & Mineral County Healthy Communities Project
Coordinator
P.O. Box 511
Superior, MT 59872
dtrader@gmail.com
406.531.6669

George Bailey, Director of Business Development
Mineral County Community Hospital
P.O. Box 66
Superior, MT 59872
georgebailey@mchospital.net
406.822.4841

Western Montana Mental Health
P.O. Box 745
Superior, MT 59872
www.wmmhc.org/superior
406.532.9150

Superior Schools (CHANGE Tool – Fall 2010)
P.O. Box 400
Superior, MT 59872
406.822.3600

Michele Sare, MSN, RN
Public Health Coordinator – HB 173 MCHD
5392 Hwy 1
Hall, MT 59837
406.288.0022 Or 406.544.7620
406.288.7777 (Fax)
Sare.michele@gmail.com
Michele@nursesfornursesinternational.com

Alex Micklewright, GN
Montana State University - CON
micklewrighta@gmail.com
406.871.6119

Casey Wilcox, GN
Montana State University - CON
406.600.1269
casey.wilcox1@gmail.com

Tim Read - Sanitarian
Mineral County
tread@co.mineral.mt.us
406.822.3526

Acronyms:

APHA: American Public Health Association

ARM: Administrative Rules of Montana

CAP: Community as Partner model

CDC: Centers for Disease Control

CHA: Community Health Assessment

CHIP: Community Health Improvement Plan

DPHHS: Department of Public Health and Human Services

EPHS: Essential Public Health Services

HB 173: House Bill 173

HIA: Health Impact Assessment

HP 2010: Healthy People 2010

HP 2020: Healthy People 2020

IOM: Institute of Medicine

MCA: Montana Code Annotated

MCHD: Mineral County Health Department

MDG: Millennium Development Goals

NACCHO: National Association of City and County Health Officials

PH: Public Health

PHAB: Public Health Accreditation Board

PHN: Public Health Nurse

RHP 2010: Rural Healthy People 2010

RWJF: Robert Wood Johnson Foundation

SEM: Social Ecology Model

SP: Strategic Planning

USHHS: United States Health and Human Services

WHO: World Health organization



Table of Contents:

- I. Abstract.....6
 - a. Purpose, scope and implications
 - b. Definition of Health
 - c. Definition of Need (HP 2010, Rural HP 2010, HP 2020, Millennium Development Goals, WHO Determinants of Health and the Institute of Medicine’s 20 key indicator measures of population health)
- II. Executive Summary.....11
 - a. PH diagnosis for Mineral County
- III. Methodology.....12
 - a. Institute of Medicine’s Social Ecology Model¹
 - b. Community as Partner Model (CAP)
 - c. Primary and Secondary Data
- IV. Community Description and Characteristics using the CAP Subsystems.....15
 - a. Core Population
 - b. Environment
 - c. Recreation
 - d. Economics
 - e. Communication
 - f. Health and Social Services
 - g. Politics and Government
 - h. Safety and Transportation
 - i. Education
- V. Local Views of Health and Health Priorities.....36
 - a. Key Informants – Stakeholders
 - b. Key Informants – Healthcare Workforce
- VI. CHA Findings – Primary Data.....41
 - a. Quality of Life Surveys
 - i. Findings
 - ii. Limitations
 - iii. Comparison to Regional and/or National Data
 - iv. Inference Statement
 - b. Leading Health Indicators Survey – Healthcare Workforce

¹Institute of Medicine. *The Future of the Public’s Health in the 21st Century*. Washington, DC: National Academy Press; 2003. P. 51

	i. Findings	
	ii. Limitations	
	iii. Comparison to Regional and/or National Data	
	iv. Inferences	
VII.	CHA Findings – Secondary Data.....	72
	a. Emergency Department Logs	
	i. Findings	
	ii. Limitations	
	iii. Comparison to Regional and/or National Data	
	iv. Inference Statement	
	b. Maternal Child Health	
	i. Findings	
	ii. Limitations	
	iii. Comparison to Regional and/or National Data	
	iv. Inference Statement	
VIII.	Relationships to Standards – Diagnostic Reasoning Inference Statement.....	84
	a. Assess ‘ <i>Major Prevention Opportunities to Improve Health in Montana</i> ’	
	(2006 DPHHS document) as compared to MCHD CHA findings	
	b. Assess alignment with HP 2010 and RHP 2010	
	c. EPHS	
	d. PHAB Domains	
IX.	Asset Mapping.....	88
X.	CHANGE Tool Evaluation – Clarke, Nelson & Schatte and Sare.....	92
XI.	Summary of Findings.....	92
XII.	Community Diagnosis (Equity, Disparity and Implications – PH Statement).....	93
XIII.	CHA Evaluation – Wilcox and Micklewright.....	94
XIV.	Appendices.....	95
	Appendix A: PHAB Domains.....	99
	Appendix B: Six Areas of Public Health Responsibility.....	100
	Appendix C: 10 Essential Public Health Services (EPHS).....	101
	Appendix D: Montana House Bill 0173.....	102
	Appendix E: <i>Healthcare Workforce Health Risk Appraisal</i> Sample.....	105
	Appendix F: <i>Healthcare Workforce Determinates of Health</i> Survey Sample.....	107
	Appendix G: <i>Mineral County Community Quality of Life</i> Survey Sample.....	109
	Appendix H: Emergency Department Logs Sample.....	113
	Appendix I: US Census Data – County Profile.....	114
	Appendix J: CHANGE Tool – Montana State University - Fall 2010.....	122

Appendix K: Rural Health Priorities – RHP 2010.....125
Appendix L: County Health Rankings – NACCHO.....126

Abstract

Purpose

Mineral County Health Department is one of seven awardees of the House Bill 173 Pilot Project grant funds to assess models of sustainability for local health departments in Montana and an “AN ACT... TO HELP LOCAL PUBLIC HEALTH AGENCIES UNDERTAKE ACTIVITIES RELATED TO MEETING NATIONAL GUIDELINES; PROVIDING FOR AN ALLOCATION OF FUNDS; AND PROVIDING AN EFFECTIVE DATE”

(<http://data.opi.mt.gov/bills/2009/billhtml/HB0173.htm> - Montana Legislative Session 2009).

The grant funding for this pilot project began November 2009 and completes June 30, 2011.

The Community Health Assessment (CHA) is one of four deliverables for this two year project. The CHA is in alignment with the Public Health Accreditation Board’s (PHAB) requirements for applying for local health department accreditation and is a long standing standard of public health practice. The PHAB accreditation process is slated to begin 2011 – 2014.

Scope

The CHA process is based on standards and guidelines established by the US Department of Health and Human Services Healthy People 2010 and now 2020 (released November 2010); by the Public Health Accreditation Board’s 11 Domains²; and by the Centers for Disease Control’s Public Health National Public Health Performance Standards Program (NPHPSP). Examples of evidenced-based standards for a community health assessment are available at the New York State Department of Health³, the New Mexico Department of Health⁴ and the Minnesota Department of Health through their CHAAP⁵ (Community Health Assessment and Action Program).

CHA have been employed since the institution of the Healthy People Reports beginning in 1979; *Healthy People: The Surgeon General’s Report on Health Promotion and Disease Prevention*. Epidemiology, the foundational science of public health, has employed principles of community assessment since John Snow identified the source of a cholera outbreak in London in 1854. Collecting and analyzing indicators or disease, tracking infectious disease and tracking and explaining health indicators form the basis of a CHA.

Many models and tools have been developed since 1854 to assess a population’s health. Two generally accepted assessment models for contemporary public health practice are the Institute of Medicine’s Social Ecology Model (employed to inform the IOM report *The Future of the Public’s Health in the 21st Century*⁶) and Anderson and McFarland’s *Community as Partner Model*: Both ascribe to the necessity to involve key informants and stakeholders in the CHA process.

² Please see the Public Health Accreditation Board’s (PHAB) website at: <http://www.phaboard.org/>

³ <http://www.health.state.ny.us/statistics/chac/>

⁴ http://ibis.health.state.nm.us/resources/CHA_Resources.html

⁵ <http://www.health.state.mn.us/divs/cfh/ophp/system/planning/chaap/docs/handbook-072307.pdf>

⁶ <http://www.nap.edu/openbook.php?isbn=030908704X> (2002)

The process also includes evidenced-based components from public health nursing theory (e.g., Minnesota Interventions and the Community as Partner Model – both highly regarded evidenced-based practice [EBP] standards), and is designed around the six areas of public health responsibility⁷ and the ‘10 Essential Public Health Services’⁸. It is important to note that of the public health (PH) workforce nation-wide, in over 3,000 local health departments, approximately 80% of the entire PH workforce is comprised of nurses; the majority of which are baccalaureate (BSN) prepared RNs (hence, the importance of employing nurse-based PH CHA models). Based on the fact that 67% of the PH workforce in Mineral County is BSN prepared RNs, the approach and methodologies employed in this CHA document for Mineral County, Montana, employ both the science of public health theory (epidemiology and social science) and of public health nursing theory.

Community partners have included the Mineral Community Hospital, the Superior Schools, the Tamarack Clinic, Mineral County, leading employers in Mineral County (United States Forest Service and TriCon Lumber Products), Western Montana Mental Health, Montana State University College of Nursing, MT DPHHS and area agencies [such as Senior Citizens and RSVP volunteers]. Over two thousand five hundred surveys were sent to every postal holder county-wide. One hundred and twenty area healthcare workers were also surveyed. From this primary data and existing secondary data the CHA was written.

As the first comprehensive CHA for Mineral County, this is a dynamic document that the author hopes will serve as a foundation to ask more and better questions to improve the health of all Mineral Co. residents. It is neither exhaustive nor 100% inclusive, but it is a necessary beginning to assessing the systems, processes, health indicators and health determinates that affect the vigor and sustainability of the county – the quality and length of the lives of the people who call Mineral County home.

Implications

The CHA is a process that the local public health department uses to:

- assess and prioritize the health needs of Mineral County;
- align outcomes with Healthy People 2010 and 2020 and the Millennium Development Goals;
- work with community partners to complete the CHA;
- align with Public Health Accreditation Board’s standards;
- prioritize resource allocation;
- meet funding source requirements;
- assess and prioritize Mineral County Health Department’s own internal capacity to meet the community’s health needs;
- help to assess community capacity and capability to meet those health needs; and

⁷ Please see Appendix C: Six Areas of Public Health Responsibility

⁸ Please see Appendix D: EPHS

- develop an action plan (community health improvement plan [CHIP], a capacity improvement plan and a strategic plan) to meet those needs

Definition of Health

The definition of health employed for the CHA comes from the World Health Organization: *“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”*⁹

The definition of public health nursing employed for this CHA comes from the American Public Health Association: *“Public health nursing practice is affected by biological, cultural, environmental, economic, social, and political factors. As part of the health care system public health nursing practice is responsive to these factors through working with the community to promote health and prevent disease, injury and disability...The health needs of people in the U.S. and the role of public health have been addressed in public policy documents including the 1988 Institute of Medicine's The Future of Public Health, the 1990 Department of Health and Human Services' Healthy People 2000[and now 2010]: National Health Promotion and Disease Prevention, the 1993 Public Health Service's The Core Functions Project: Health Care Reform and Public Health and the 1995 Institute of Medicine's Nursing, Health and the Environment: Strengthening the Relationship to Improve the Public's Health ...The efforts to plan an effective health care delivery system in these documents include recognition of the unique contribution public health nurses make to the health care system. This definition of public health nursing is designed to provide an understanding of the practice of public health nursing in the health care system.”*¹⁰

The definition of public health comes from C.E.A. Winslow: *“Public health practice is the science and art of disease prevention, prolonging life, and promoting health and well-being through organized community effort for the sanitation of the environment, the control of communicable infections, the organization of medical and nursing services for the early diagnosis and prevention of disease, the education of the individual in personal health and the development of the social machinery to assure everyone a standard of living adequate for the maintenance or improvement of health”* (1920) (Fig 1).

⁹ Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948

¹⁰ <http://www.apha.org/membersgroups/sections/aphasections/phn/about/defbackground.htm>



Figure 1 April 13, 1955 - Salk vaccine

Definition of Need

The WHO further defines public health through primary health care (PHC) (PHC definition from the World Health Organization [WHO])¹¹ and is based on their organization's initiative from the Alma-Ata Declaration of 2000 aligning primary healthcare – public health - as the most effective tool to carry-out the goal of Health for All: The ultimate goal of primary health care (public health) is better health for all. WHO has identified five key elements to achieving that goal:

- reducing exclusion and social disparities in health (universal coverage reforms);
- organizing health services around people's needs and expectations (service delivery reforms);
- integrating health into all sectors (public policy reforms);
- pursuing collaborative models of policy dialogue (leadership reforms); and
- increasing stakeholder participation.

The opening statement to the Alma-Ata Declaration is:

“The International Conference on Primary Health Care, meeting in Alma-Ata this twelfth day of September in the year Nineteen hundred and seventy-eight, expressing the need for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all people of the world...”¹²

Public health is prioritized at the national level through policy and resource allocation. Several US governmental agencies are dedicated to the public's health: DPHHS, CDC, NIH and our national commitment to the WHO. Non-governmental organizations (NGOs) also direct and advise public health: The RWJF, the IOM and organizations such as the APHA and the NACCHO have identified the need to increase the use of CHA to direct population health initiatives. The State of the USA, an NGO, is working with the IOM to establish a Key National Indicator System (KNIS)¹³ that will continue to inform CHA and improved population health measurement.

¹¹http://www.who.int/topics/primary_health_care/en/

¹²www.who.int/publications/almaata_declaration_en.pdf

¹³<http://www.stateoftheusa.org/content/work-begins-on-first-official-key-national-indicator-system.php>

Under the authority of the USHHS Healthy People 2010 and now HP 2020 sets the future tasks of public health (population based healthcare) through their vision and mission statements and the goals that are established to achieve those goals¹⁴:

The Vision of HP 2020: *A society in which all people live long, healthy lives.*

The Mission; Healthy People 2020 strives to:

- ✓ Identify nationwide health improvement priorities.
- ✓ Increase public awareness and understanding of the determinants of health, disease, and disability and the opportunities for progress.
- ✓ Provide measurable objectives and goals that are applicable at the national, State, and local levels.
- ✓ Engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge.
- ✓ Identify critical research, evaluation, and data collection needs.

The Overarching Goals of HP 2020;

- ✓ Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.
- ✓ Achieve health equity, eliminate disparities, and improve the health of all groups.
- ✓ Create social and physical environments that promote good health for all.
- ✓ Promote quality of life, healthy development, and healthy behaviors across all life stages.

Four foundation *health measures* will serve as an indicator of progress towards achieving these goals:

- ✓ General Health Status
- ✓ Health-Related Quality of Life and Well-Being
- ✓ Determinants of Health
- ✓ Disparities (“Although the term ‘disparities’ often is interpreted to mean racial or ethnic disparities, many dimensions of disparity exist in the United States, particularly in health. If a health outcome is seen in a greater or lesser extent between populations, there is disparity. Race or ethnicity, sex, sexual identity, age, disability, socioeconomic status, and geographic location all contribute to an individual’s ability to achieve good health. It is important to recognize the impact that social determinants have on health outcomes of specific populations. Healthy People 2020 strives to improve the health of all groups”¹⁵)

Population based healthcare – public health being a cardinal partner – is informed and directed by the HP 2010 and now 2020 objectives. This hallmark work represents the body of knowledge that drives the evidence and activities of the profession of public health.

¹⁴<http://www.healthypeople.gov/2020/about/default.aspx>

¹⁵<http://www.healthypeople.gov/2020/about/DisparitiesAbout.aspx>

The lead entity in the US directing the CHA process as a cardinal PH practice is the Public Health Accreditation Board¹⁶(PHAB) (supported by the CDC and the RWJF is a partner model comprised of National Association of County and City Health Officials, the Association of State and Territorial Health Officials, the National Association of Local Boards of Health, the National Indian Health Board and the American Public Health Association). PHAB is currently establishing the standards and guidelines delineating an accredited system of public health. The four preliminary components identified by PHAB for local PH accreditation are: 1]. internal audit/assessment of capability and capacity 2]. CHA 3].Community Health Improvement Plan (CHIP) and 4]. Strategic Plan (SP).

At the Montana State level, public health has been prioritized through the allocation of state resources. The mission of the Public Health and Safety Division of the DPHHS is, “to improve the health of Montanans to the highest possible level”¹⁷. The determination as to how and if this mission is being accomplished can only be accomplished through thorough CHA at the local levels and through a state health assessment – completed at least every five years. This CHA will provide evidence to the purpose of the PHSD of the DPHHS for Montana.

The need for public health care services is based on a cultural norm and a social policy that provides for the aforementioned PH services directed to improving the population’s health. Legal and policy documents that give local public health agencies the authority and responsibility to undertake efforts to protect the public health and educate the public on health-related issues come through Montana Legislation in the form of the MCA Title 50 and the MT AMR 37.

Executive Summary

PH Nursing diagnosis for Mineral County and project summary

Mineral County Montana is at increased risk for premature death, disability, lost productivity, financial burdens of disease and disability and decreased quality of life related to poor economy, high poverty levels, environmental hazards and threats, ineffective coping as evidenced by high rates of obesity and substance abuse and mental health data. The community assets help to offset the consequences of some of the community’s ill health.

‘If you don’t have your health, you don’t have anything’ is a poignant statement for the vitality and sustainability of Mineral County as a thriving community. In its history, the county has waxed and waned. If the County’s stakeholders plan for a vigorous future, then the health of its population must be well considered and continually assessed and improved. Healthy people make for healthy employees and healthy citizens

This CHA process discovered the determinates of health that affect the health and wellbeing of the people of Mineral County. The national guidelines set out by HP 2010 and 2020 as well as the Rural HP 2010 established the health guidelines for which to measure the assessment against (outcome). By employing an evidenced-based CHA model – the Community as Partner Model – the CHA process was given a structure that included the community subsystems and their

¹⁶<http://www.phaboard.org/>

¹⁷<http://www.dphhs.mt.gov/PHSD/StrategicPlanWEB.pdf>

relationship to population health in this frontier community. The CHA process at Mineral County Health Department has *set the ground-work to:*

- assess and prioritize the health needs of Mineral County;
- align PH interventions with outcomes set by Healthy People 2010 and 2020 and the Millennium Development Goals;
- work with community partners to complete a CHIP;
- align PH work with Public Health Accreditation Board’s standards;
- prioritize community resource allocation;
- meet funding source requirements for the pilot project and set the framework to help the MCHD meet the funding challenges of the future;
- assess and prioritize Mineral County Health Department’s own internal capacity to meet the community’s health needs; and
- helped to assess community capacity and capability to meet those health needs

Methodology

Social Ecology Model (SEM)

The methods employed for this CHA employed the framework of the Social Ecology Model (SEM) as described by the IOM in their work on assessing public health in 1988 and again in 2002. The basis of the assessment is the *identified population* (here described as the ‘core population’ and its characteristics such as gender and ethnicity; i.e. – Mineral County’s population). This model (Fig 3) conceptualizes the determinates of an individual’s health *across time*. This concept mapping of these five factors demonstrates the need to assess the *human and social ecology*; where people live and work - from the natural environment to the built environment - and to consider all of the human conditions and relationships affecting a population.

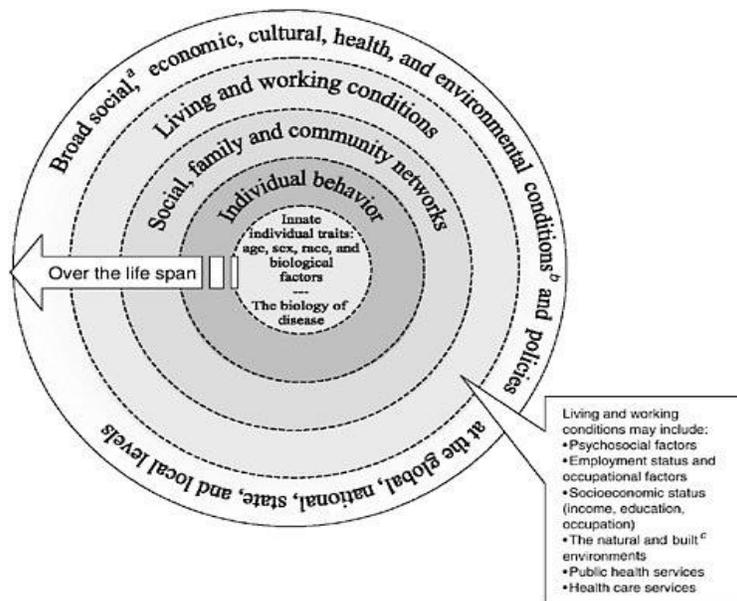


Figure 2 Ecology Model IOM; 2002

The SEM helps to inform this CHA through research and studies that have demonstrated the relationships – across time – of behaviors, environments, gender & genetics, education, social and healthcare, working conditions and income levels as they impact an individual’s health. For example – for this CHA we will not need to conduct novel research to determine if obesity is related to heart disease or diabetes. This research and evidence already exists. Across the life span, we know that exposure to heavy metals, cigarette smoke and high BMIs may determine a person’s likelihood of contracting cancer. Certain personal behaviors are ‘risky’. An example of this increased ‘risk’ might be a teen driving under the influence of alcohol leading to a potential for a disabling or fatal MVA. This SEM has helped to set the HP 2010 and HP 2020 goals and objectives and serves as a basis for the body of knowledge that this CHA has relied on for creating inference statements and evaluating primary and secondary data specific to Mineral County, Montana.

Community as Partner Model (CAP)

The Community as Partner model (CAP) is an innovation of E. Anderson and J. McFarlane (Fig 4). The model, developed in the mid 1990s, is based on Newman’s Systems Model and considers holism much like the Social Ecology Model. The utility of the model for conducting the CHA comes from its clarity in defining eight subsystems that relate to the Social Ecology model. Further, the CAP model describes how to assess each of the five factors identified by the Social Ecology model thereby creating a ‘roadmap’ for the CHA process based on evidence-based theory. A unique attribute of this model is its consideration of lines of defense and stressors affecting a population’s health (signified by the broken lines in the model). The Social-Ecology Model gives the framework for the over-all scope of the CHA and the CAP model gives the specific entities to assess.

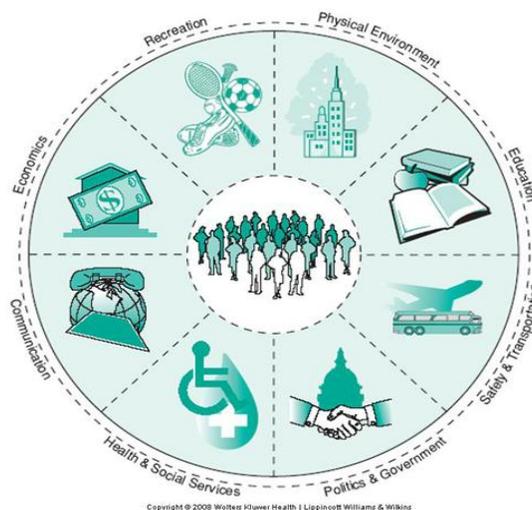


Figure 3 Anderson & McFarlane (2011)

The CHA was a partnership process – working with key informants and stakeholders across six months. Quality of life surveys were mailed to over 2,500 Mineral County residents (all mail subscribers) and over 120 directed health surveys were distributed to Mineral County’s entire healthcare workforce. Focus groups, interviews and discussion groups were employed.

Secondary research informed the CHA. The CDC’s new CHANGE Tool was employed and assessed for ease of use. MSU PHN Students conducted an assessment of the CHA based on best practices and with reference to the HB 173 deliverables.

Community Members/CHA Team

Methods Table1: Describing the Roles and Responsibilities of Community Partners

Participant	CHA Design	Assessment tool development and implementation	Survey rankings	Tallying data	Writing CHA	Evaluating/ vetting	Research
MCHD Staff	✓	✓	✓	✓		✓	✓
M. Sare - Lead	✓	✓	✓	✓	✓		✓
Mineral Community Hospital Admin.		✓	✓			✓	✓
Mineral Community Hospital Staff		✓					
Schools		✓		✓		✓	
Mental health		✓		✓			
DPHHS							✓
Volunteer agencies				✓		✓	
MSU PHN Students	✓		✓	✓	✓	✓	✓

Community Description and Characteristics Using the CAP Subsystems

There are eight identified Subsystems (based on the Community as Partner Model [CAP] from Anderson & McFarlane). In addition to identifying the population to be studied (the Core Population), the eight subsystems that describe the partners and drivers of a population’s health are:

1. Environment
2. Recreation
3. Economics
4. Communication
5. Health & Social Services

- 6. Politics & Government
- 7. Safety & transportation
- 8. Education

Core Population Described – Primary Data

Core Population Table: Ethnicity, Marital Status, Education Level and Employment Status (from Quality of Life Survey – Appendix G)

Gender	Ethnicity	Marital Status	Education Level	Employment Status
Male	93% Caucasian	65% Married	3.5% < High School	27% employed for wages
	0.5% Native American	15% Divorced	24.4% High School	12% self employed
	1.2% Other	8% Widowed	33% Some college	7% out of work
	5.3% Not reported	12% Single	33% College Degree or >	4% unable to work
			6.1% Not Specified	0.5% student 51% retired
Female	92% Caucasian	53% Married	4.8% < High School	43% employed for wages
	1% Hispanic	12% Divorced	30% High School	9% self employed
	2% Native American	10% Widowed	29% Some College	5% out of work
	1% Other	9% Single	34% College Degree or >	5% unable to work
	4% Not reported	16% Not reported	2.2% Not reported	4% homemaker 2% students 39% retired 1% other

Core Population - Secondary Quantitative Data

The 2000 US Census projected that there would be 3,833¹⁸ persons in Mineral County in 2009 which represents a 1.3% population decrease (2010 Census Data is not available as of this writing). According to the 2000 US (as of this writing, the 2010 US Census data is not available) Census the Mineral County Core Population is (*Demographics: 2008 US Census Data*¹⁹):

- a. Gender: 49.1% female; 51.9% male
- b. Age: 6% < 5 years; 19.7% < 18 years; 21% > 65; and 53% between 18 and 65

¹⁸<http://quickfacts.census.gov/qfd/states/30/30061.html>

¹⁹<http://quickfacts.census.gov/qfd/states/30/30061.html>

- c. Ethnicity: 94.2% White; 0.3% Black; 2.2% American Indian or Alaskan Native; 0.5% Asian; 1.9% Hispanic or Latino; and 2.7% reported two or more races: 22.5% of German, 14.6% Irish, 9.9% English, 8.1% American and 8.0% Norwegian ancestry
- d. Language: 92.3% English; 3.7% a language other than English is spoken
- e. Poverty: Median household income = \$34,985 (200% FPL based on 2011 estimates); \$9,000 < Montana average incomes and \$17,000 < national median incomes for 2008; 17.1% of persons in Mineral Co. live in poverty compared to the Montana average of 14.1% and the national average of 13.2% (increased from 15.8% in 2000): Per capita income is \$15,166 compared to the state average of \$17,151 and the national average of \$21,547
- f. 22% of Mineral Co. citizens are on Medicaid (compared to the Montana average of 11% and the national average of 19%); 21% are uninsured
- g. Employment: 9.8% compared to the Montana average of 6.8% (2010)
- h. Family/households: There are 1,584 households in Mineral County with an average family size of 2.41; 27.7% with children < 18; 57.7% are married couples living together, 6% have a female householder with no husband present, and 32.6% are non-families. 26.6% of all households are made up of individuals and 8.2% had someone living alone who was 65 years of age or older; average family size is 2.9
- i. Education: 12.3% hold a bachelors degree or higher compared to the Montana average of 24.4% and the national average of 24.4%; 83.2 have completed high school whereas 87.2% of Montanans complete high school. This is better than the national average of 80.4%
- j. Values and beliefs:
 - a. Politics: With the exception of voting for a Democratic Senator in 2006, Mineral County has voted strongly Republican in local, state and national elections;
 - b. Religion: There are over eleven churches in Mineral County – all of Christian denominations
 - c. Social sub-groups: There are no know cults or social labeled population entities
 - d. Stated beliefs from the 2010 community survey:

Values & Beliefs Table 1: Male respondents – majority believe either a). ‘always’ believe b). ‘sometimes’ believe or c). do *not* believe

Belief	Age 18-24	25-34	35-44	45-54	55-64	65+
Working together = quality of life	a.	a.	a.	a.	a.	a.
Have a sense of community pride	b.	a.	a.	b.	b.	a.
Responsibility to help improve MC health	a.	b.	a.	b.	b.	b.

Values & Beliefs Table 2: Female respondents –majority believe either a). ‘always’ believe b). ‘sometimes’ believe or c). do not believe

Belief	Age 18-24	25-34	35-44	45-54	55-64	65+
Working together = quality of life	a.	a.	a.	a.	a.	a.
Have a sense of community pride	b.	b.	b.	b.	b.	a.
Responsibility to help improve MC health	b.	b.	b.	b.	b.	a.

Values & Beliefs - Security Table 3: **Female** respondents –majority believe either a). ‘always’ believe b). ‘sometimes’ believe or c). do not believe (from questions 8-11 on the Quality Life Survey)

Belief	Age 18-24	25-34	35-44	45-54	55-64	65+
I have enough money to pay my bills	a.	a.	a.	b.	a.	a.
I have someone to share problems with or get help when needed	a.	a.	a.	a.	a.	a.
Always feel there are enough jobs in Mineral Co.	c.	c.	c.	c.	c.	c.
I can get healthcare whenever I need it	b.	b.	b.	a.	a.	a.

Values & Beliefs - Security Table 3: **Male** respondents –majority believe either a). ‘always’ believe b). ‘sometimes’ believe or c). do not believe (from questions 8-11 on the Quality Life Survey)

Belief	Age 18-24	25-34	35-44	45-54	55-64	65+
I have enough money to pay my bills	b.	a.	a.	a.	a.	a.
I have someone to share problems with or get help when needed	b.	b.	a.	a.	a.	a.
Always feel there are enough jobs in Mineral Co.	c.	c.	c.	c.	c.	c.
I can get healthcare whenever I need it	b.	a.	a.	a.	a.	a.

- e. There are nine cemeteries on record with many more small and family cemeteries as yet mapped

For population 25 years and over in Mineral County:

- High school or higher: 83.9%
- Bachelor's degree or higher: 15.3%
- Graduate or professional degree: 4.3%
- Unemployed: 6.1%
- Mean travel time to work (commute): 19.2 minutes

For population 15 years and over in Superior:

- Never married: 22.2%
- Now married: 49.7%
- Separated: 2.8%
- Widowed: 13.4%
- Divorced: 12.0%

In 2010 there were 7 registered sex offenders living in Superior²⁰.

Inference Statement

The *core population* in Mineral County feels pride and responsibility for their communities – across all age levels. Although it was interesting that more males than females felt a pride in their community and more males than females felt a responsibility to improve their community. More women than men felt that they could not access help or healthcare when needed.

One cardinal set of information that the US Census does not reveal is the higher numbers of women who are wage earners, who are at increased poverty levels and who do not feel safe. This demonstrates a vulnerable population that potentially affects the well being of the community. Women in Mineral Co. have less education than their male counterparts according to US Census data, but not according to the Quality of Life Surveys. Fewer women feel that they get the healthcare that they need. Women are the primary child-care providers and their ability and actions to support children and their activities have significant impacts on community members 0-18.

This predominately Republican county with slightly more males than females, high poverty and unemployment rates has a high percentage of persons over 65 compared to the state averages. However, this English speaking, predominately Caucasian population has its greatest percentage of persons between the ages of 18-64 (working and high productivity years). Educational levels are low compared to the state and the most evident religious belief appears to be Christian. Community supports that address the needs of the core population are at the basis of a CHA and the resulting CHIP.

²⁰<http://www.city-data.com/city/Superior-Montana.html>

Natural Environment

Geographic and Topographic Descriptions

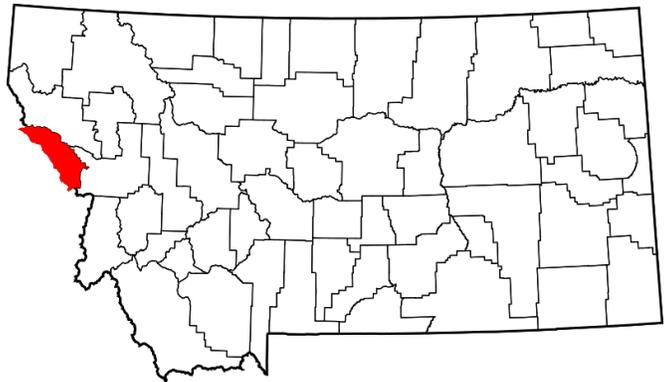


Figure 4 Mineral County, Montana

Mineral County, Montana covers 1,223 square miles; approximately 1,219 of which is land and approximately 4 square miles of water. The county has a land mass slightly larger than Rhode Island. Mineral County is made up of over 80 valleys, 42 lakes and over 200 streams. It is bordered by Sanders County, MT to the north, Missoula County, MT to the east, Clearwater County, Idaho to the south and Shoshone County, Idaho to the west. The Lewis and Clark River bisects the county from the east to west, turning north at St. Regis. Its elevation is 2, 762'. The Bitterroot Mountains rise-up from the valley floors surrounding the Clark Fork River, leaving little open or flat land within the county (Fig 3).

Figure 5 Mineral Co. and neighboring counties



The majority of the county is heavily forested with ponderosa pine, lodge pole pine, fir, larch, white pine and cedar. The area is high in minerals and contains many unpatented mining claims with 124 mines. The Clark Fork flows through downtown, heading north towards St. Regis, Montana and ultimately emptying into Lake Pend Oreille near Cabinet, Idaho.

The mountains to the west of Superior along the Montana/Idaho border receive a large amount of precipitation annually, mostly due to the amount of snow in the winter months. Nearby Lookout Pass Ski and Recreation Area receives 400 inches on average each winter. The snow pack melts throughout the spring and summer months, feeding the many mountain streams and creeks with water. All of the water eventually reaches the Clark Fork in the valley below, where Superior is located²¹. According to the Montana State University Extension Service "...with 8% private land in the valley bottom, there is still adequate land for farming that includes wheat, hay and grazing for cattle and sheep"²².

In 1906 the majority of land in Mineral County was proclaimed National Forest (Lolo National Forest). There are 1,226 sections (a section is 640 acres) in Mineral County. Of this, 83.8% belongs to the Federal Government, 2.8% belongs to the State of Montana Department of Natural Resources, 13.4% is privately owned - leaving about 8% of the land available to the county.

Natural Disasters

Natural disasters that have historically impacted this county are wild fires and floods. The most severe fires were in 1910 and then in 2000. Carrying more water than any other river in Montana, the last severe flooding of the Clark Fork River in St. Regis was in 1997:

Historical Crests for Clark Fork River at St. Regis²³

- (1) 20.27 ft on 05/18/1997
- (2) 19.96 ft on 05/24/1948
- (3) 19.50 ft on 06/03/1972
- (4) 19.39 ft on 06/18/1974
- (5) 19.20 ft on 05/30/1913
- (6) 18.98 ft on 05/24/1956
- (7) 18.54 ft on 06/10/1964
- (8) 18.50 ft on 05/29/1917
- (9) 18.21 ft on 06/21/1975
- (10) 18.07 ft on 05/16/1976
- (11) 17.91 ft on 05/10/1947
- (12) 17.39 ft on 06/19/1950

Most strong earthquakes in Montana have occurred in the western third of the State. Montana is one of the most seismically active states in the Union according to the US Geological Service. Mineral County has not been significantly impacted, in part due to the sparse population, low rise buildings and frame construction.²⁴

²¹http://en.wikipedia.org/wiki/Superior,_Montana

²²<http://www.msuxextension.org/counties/mineral/mineral.htm>

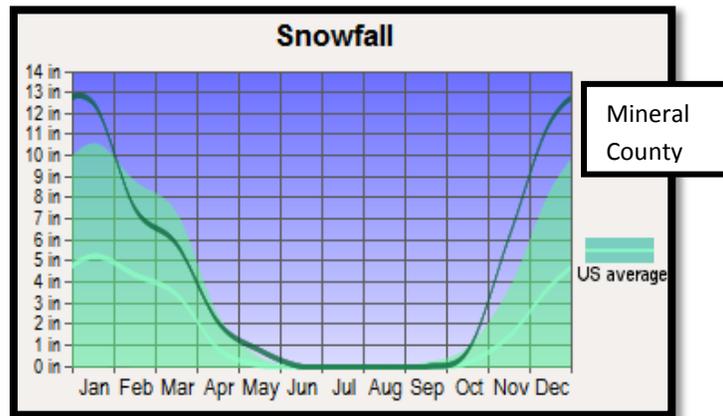
²³<http://water.weather.gov/ahps2/crests.php?wfo=mso&gage=srgm8>

²⁴<http://earthquake.usgs.gov/earthquakes/states/?region=Montana>

Climate

Period of Record Monthly Climate Summary 1/1/1914 – 12/31/2005²⁵

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	33.6	41.2	50.2	60.4	69.5	76.5	86.8	85.8	74.9	60.4	42.9	34.2	59.7
Average Min. Temperature (F)	17.5	21.3	26.1	31.5	38.1	44.5	48.2	46.7	39.8	32.7	26.2	20.4	32.8
Average Total Precipitation (in.)	1.58	1.20	1.29	1.19	1.80	1.93	0.87	1.06	1.17	1.36	1.60	1.67	16.72
Average Total Snow Fall (in.)	11.6	6.6	4.2	0.5	0.1	0.0	0.0	0.0	0.0	0.3	4.4	9.7	37.4
Average Snow Depth (in.)	5	4	1	0	0	0	0	0	0	0	1	2	1
Percent of possible observations for period of record.													
Max. Temp.:	95.5%	Min. Temp.:	95.2%	Precipitation:	95.8%	Snowfall:	90.1%	Snow Depth:	88.5%				



Average Snowfall – Mineral Co., MT

Average daylight hours

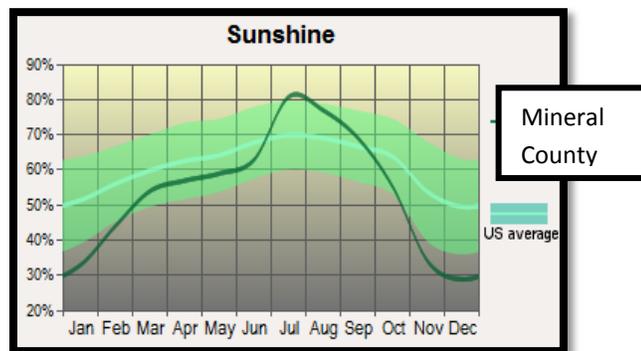
Of Mineral Counties 1,223 square miles, weather patterns and daylight patterns that affect this area have the potential to have a significant impact on health (such as with seasonal affective disorder and light related depressions). Available sunlight is lessened across all seasons by the

²⁵<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?mtsupe>

deep valleys and high surrounding peaks. With an average of six months of snow fall, road conditions, easy access to activities of daily living (such as grocery shopping) and social activities can be curtailed – especially in those populations unable to drive independently or who depend on walking as their primary means to attain services.

Annual chance of sunshine: 55%²⁶

Month	% Sunny Days
January	20.00%
February	27.59%
March	29.03%
April	35.48%
May	45.16%
June	51.72%
July	80.65%
August	75.00%
September	62.07%
October	45.16%
November	23.33%
December	19.35%



Average percent of sunshine – Mineral Co., MT

²⁶<http://www.homefacts.com/weather/Montana/Mineral-County/Superior.html>

Inference Statement

The natural environment that defines Mineral County offers many opportunities for healthful living: Esthetic natural beauty, mountain air, spectacular seasons, and an abundance of water, minerals, timber and enough open space suitable for human habitat. There is a profusion of outdoor activity possibilities and resources that support human needs abound. At the same time, the natural environment presents many challenges to the health and wellbeing of its inhabitants. Threats of wild fires, floods and earthquakes pose a significant hazard to the population, but more mundane aspects to the natural environment also determines population health.

Long distances to service centers, high fuel bills for heating associated with long winters, dangerous driving conditions and the potential for serious threats to health and safety arising from isolation related to phone and other service outages and the capacity and capability of volunteer emergency services to respond with the 'golden hour'. With the vast majority of the county belonging to the Federal and State Governments, tax bases and ability to generate revenue from land based industry are severely impaired. Mineral County must seek to build capacity and capability (infrastructures) to improve the economy in partnership with these government entities that hold the majority of Mineral County lands.

County History

A county's history shapes its demography, commerce and many of its health determinates. Mineral County was long a trade and summer camping area for American Indian populations. Tribes most likely to have lived in Mineral County were Salish Kootenai and Flathead, but there are no reservations in the county and only 2.2% of the population is of American Indian or Alaska native heritage today (or about 44 persons). Lewis and Clark passed through the county in about 1805, but White settlers did not start to come into the area until the late 1800s.

Captain John Mullen and his team were sent to build a wagon road from Walla Walla, Washington to Fort Benton, Montana in 1859. That early road defines the travels of much the same path as the I-90 traversing the county today.

The next wave of settlers came with the discovery of gold in 1869 on Cedar Creek and 'Cedar fever' was on. Within weeks of the first strike in October 1869 there were 1,700-2,000 new claims. The early demographic of Mineral County (the Cedar Creek area) - according to the 1870 census - showed 1,587 white people, 30 Chinese, 20 Indians, and nine Blacks with a total of 50 saloonkeepers and nine bartenders. A early settler named Norman described the early streets of Mineral County in this way; "In every direction windlasses, shaft-houses, piles of mining timbers meet the eye; while walking through the town, one must pursue a serpentine course to avoid the huge piles of headings, or dumps of pay-dirt that obstruct the main, and only, street of the place."

By 1874 the gold was played-out and the population went from 1,700 to 265 persons. In 1910 the population of Mineral County recovered to 2,900, but by 1930 it dropped to 1,626; in 1960 it rose to 3,037 with a robust timber harvest period and to 3,884 with continued timber industry strength in 2000.

In the 1860s the county saw the building of the two transcontinental rail road lines. This helped the fledgling community, but it wasn't until the late 1930s that the county was again invigorated with the Civilian Conservation Corp and the government's response to the Great Depression.

In 1914 Mineral County was created from Missoula County to the east. Superior became the county seat and was named by its founder for his home town of Superior, WI. The town made history in 1908, when the Superior Hotel received the first Bibles to be placed in hotel rooms by The Gideon's. But the gold rush – with the exception of the Bibles and the Great Fires of 1910 – was the areas greatest claim to fame and vigor. The colorful years of the gold rush gave way to today's primary industry – aside from government and healthcare – forest products. The next largest industry for this county is recreation. Mining continues on a small scale.

While there are no longer 50 'saloons', remnants of the county's origins are evident in the county's 14 bars and casinos, a few operating mining claims and slag plies from the years of processing ore. There are no windlasses or shaft houses adorning the main streets, but the tailings carved-out from just five years of the county's history plagues the county's health with the heavy metals and water contamination that resulted from the ore's processing in the 1800s. The piles of tailings of this mine waste were distributed around the towns as a free source for roads, foundations, driveways and other building projects - even school grounds.



Figure 6 yellow areas = Contaminated Mine Tailings in Population Centers, homes & businesses; Superior, MT

Inference Statement

The early miners who came to Montana were predominately of Irish and German decent – a demographic characteristic reflected in the racial background of Mineral County today (37% being of German or Irish decent). Examples of the importance of understanding genetic considerations for persons with Irish heritage might be HFE mutations for hereditary hemochromatosis (also known as the “Celtic curse”) and amyloid polyneuropathy (FAP) - an autosomal dominant inherited disorder that potentially follows through German genetic lines. History potential defines and informs the present and the future conditions and genetics affecting a population's health.

Built Environment

There are 1,993 housing *units* in Mineral County with three persons per sq. mile. While not an exact count, it appears that at least 30% of all housing units are mobile or modular homes with Alberton having approximately 80% mobile or modular homes; 50% of all county homes appear to have been built prior to 1950 and are stick frame construction; less than 4% of housing units are multi-family dwellings. Homes are valued in Mineral County at an average of \$88,300 compared to the state average of \$43,948 and the national average of \$119,000. This is somewhat deceptive for homes within the three populated areas versus the retirement and recreational homes built along-side the Clark Fork River and other prime recreational property within the county. Homes within the populated areas are older, on the way down in terms of value and upkeep, are not prime real estate and many are valued at < \$50,000 according to real estate sales. There are three low income housing units in Superior and a new multi family low income unit is currently under construction along the river in Superior (ARRA monies).

Mineral County is located in the Northwest section of Montana and is bordered on the West by Idaho. There are several separate, but intertwined communities within the county: The West End (Haugan, Saltese, and DeBorgia), St. Regis in the middle and Superior and Alberton on the eastern end of the county. With 3.2 persons per square mile – Mineral County is designated as a frontier county. There are 1,584 households with six main populated areas: Two incorporated communities (Superior and Alberton and four non-incorporated as well as 27 separate ‘neighborhoods’). Superior, the County Seat, has 410 housing units with 1,993 housing units county-wide.

The main business areas are in Superior, St. Regis and Alberton with one main road acting as the business center for each: Superior, 2,123 persons or 55% of the total population of Mineral County; St. Regis, 896 or 23%; Alberton, 418 or 11%; and with 447 living in remote county locations, or 11%.

Business buildings and community centers (such as the library, the courthouse and schools) range in age and construction material. The newest buildings in the county are the schools in Superior and St. Regis (cement and block construction) as well as the mental health offices (stick frame construction) in Superior. Downtown/commerce areas appear to be primarily turn-of-the 20th Century construction interspersed with buildings resembling mid-1900s architectural styles. Both types of paint and insulation materials probably pose lead and/or asbestos threats given the building era. Other considerations are R-values for heat retention and cooling as well as electrical wiring, fire safety related to older non-code wiring and a high radon exposure potential (Mineral County has a predicted average indoor radon screening level > 4 pCi/L (pico curies/liter. This is considered a high level).

Inference Statement

The natural environment defines the built environment. The Clark Fork River bisects the towns of Superior and St. Regis; Alberton sits north of the river. Bridges are therefore crucial to access for emergency services, commerce access and in the event of flooding or other disasters. The remainder of available building sites is on the limited ground between the very high valleys cut by the river and defined by the Bitterroot Mountains that run north-and-south across the western

edge of Montana. The two greatest threats to the built environment remain wild fires and flooding. Because of the age of many structures, it must also be assumed that lead in the paint and asbestos in the insulation and building materials pose a potential threat to the health of inhabitants. Mobile and modular homes have historically had very high levels of formaldehyde. Other issues are the safety of aging wiring, plumbing, water and septic systems.

Developing policies and supports to improve and protect not only the built environment, but the people who use and inhabit that environment, creates healthier environments that promote health and prevent disease. High lead and asbestos levels can be inferred by the age of the built environment. Indoor air quality and concern for water pipe construction and aging electrical systems are significant hazards for the young and those with compromised immune systems.

In the map, *Fig. 4 Contaminated Mine Tailings in Population Centers on pg. 24* (under 'History'), the threat of health consequences related to heavy metals from mine waste is visualized. The waste materials were offered to community members to be used as fill, foundational materials or for driveways and recreation areas (this has been under study by the Agency for Toxic Substances and Disease Registry [ATSDR]²⁷ – the final report was released April 2011). This hazard potentially serves as a significant determinate of health to Mineral County citizens – especially those living in the Flat Creek drainage catchment and those who live in areas that received the mine tailings as 'fill' or other landscape material. One area that has been assessed by ATSDR has been the seepage into water systems as well as some human testing (please see the related footnote to reference this study).

Recreation

Recreational opportunities in Mineral County abound – especially for the outdoor enthusiast: downhill and cross-country skiing, hiking, mountain biking, fishing, boating/kayaking/rafting and rodeo are some of the seasonal outdoor sports available. The county fairgrounds provide meeting facilities and an arena for various animal sports. The three schools provide sports facilities open to the public and outdoor tracks and fields. There are five community parks county-wide with playgrounds for young children. Superior hosts the county's outdoor swimming pool (open in warm months). There are tennis courts and several walking trails along the Clark Fork River open to the public.

Camping sites are available along the Clark Fork and throughout the Lolo National Forest. A host of recreational opportunities exist through access to these public lands.

In town recreation – such as biking and roller-skating/roller balding- are neither practical nor safe due to the poor road conditions, poor visibility, lack of sidewalks and no bike lanes. Persons riding horseback have been seen in town and many trails are available county-wide as well. The Hiawatha Trail is popular as a walking or biking trail. 'Four wheeling' and other motorized sports – such as dirt-biking and snowmobiling - are popular county past-times.

School sporting events, a movie theater in Superior and three community centers provide other forms of recreation. Church 'socials' and life stage events provide other 'recreation' and

²⁷<http://www.atsdr.cdc.gov/hac/pha/FlatCreekIMM2010/FlatCreekIMM1-6-2010.pdf>

socialization. There are sewing and quilting clubs and organizations such as the Rotary Club and the Lions Club that all serve as other forms of recreation and community engagement.

Casinos and bars provide yet another form of recreation. The counties over 14 cafes, restaurants and coffee shops provide a place to gather, enjoy a meal and connect.

Inference Statement

The many and diverse recreational opportunities in Mineral County offer this county strong assets to help improve the health and economy of its citizens. Some ‘recreation’ is not conducive to healthful living – such as bars and casinos – and helping citizens to find alternative past-times may strengthen the population’s health.

Economics

Mineral County has a higher than average rate of unemployment at 9.8% compared to the state average of 6.8%. In 2007 18.8% of the county’s population was over 65 years. It is expected that there will be a 154.5% increase in persons over 65 by 2030 adding to a large unemployed population. This has the potential to both aid and cause detriment to the economic status of Mineral County: Aid – increased number of financially stable retirees moving to the county for its recreational attributes or 2. An aging population already living in or near poverty levels will be aging in-place and add to the existing social burdens.

Eight percent of industry workers are employed by the lumber industry. The largest employer in the county is the county itself. Recreation now plays a significant role in the county’s economic stability.

Economic & Destabilizing Factors

Economic: Employers

Mineral County has the third highest unemployment rate in Montana. Once the county’s largest employer, Crown-Pacific/DAW saw mill closed its doors in 1994. Mineral County depended on Crown-Pacific for its economic stability. The mill closed for several reasons; two most cited were inefficiency and outdated equipment making the mill unable to compete. Economic drivers of the 1980s recession and falling lumber prices were also significant variables. Fuel prices and lumber prices affect the viability of the forest product industry. Forest products had historically come from the Lolo National Forest lands, but that trend shifted in 1988 with new FS management practices and policies.

Jobs and Income

In 1970, there were 1,179 jobs in Mineral County. In 1995, that number had grown to 1,652; and in 2006 there were 2,213 jobs in the county. Over that 36 year period, growth in the number of jobs has occurred in Mineral County, but at a slower pace than in the State of Montana and in the

nation as a whole. The number of jobs in Mineral County grew by 88%, jobs in Montana grew by 112%, and jobs in the U.S. grew by 95%.²⁸

The fastest growing sector in Mineral County’s economy is service industries with 80% of new employment coming from this sector. The majority of business entities are small with 1 – 4 employees and 94% having fewer than 20 employees. Since 1990 Mineral County has become known as a ‘bedroom community’ of Missoula County as many residents travel to Missoula for employment.²⁹ The county’s largest employers are the county itself with hospital, roads, police and school employers.

1995– 2010 Employers³⁰:

COMPANY	Year	# Emp	Union	Products/ Services
Mountain West Bark	1988	25	No	Bark Products
Tricon Timber	1990	40	No	Studs Post/Pole
Mineral Community Hospital and Nursing Home	2011	80	No	Medical Services
Lincoln Development	1972	120	No	Tourist Services
Lincoln Silver \$	1953	80	No	Tourist Services
			No	Tourist Services
Castle Grocery	1940	25	No	Grocers/ Hardware
Independent Loggers		8% of all jobs	No	Timber Harvest
Federal, State, Local Government		80		Various

²⁸ http://www.co.missoula.mt.us/rural/pdfs/BrochureMineralCountyChallengePhase_1.pdf

²⁹ <http://www.bea.gov/>

³⁰ <http://mineralcounty.info/general.htm> (amended 3/2011)

River Guide Services	Seasonal	No Recreation
----------------------	----------	---------------

Unemployment in Dec. 2010: Mineral County, 13.9%; Montana State average, 7.4%

Type of workers³¹:

- Private wage or salary: 66%
- Government: 17%
- Self-employed, not incorporated: 16%
- Unpaid family work: 1%

Inference Statement

Unemployment in Mineral County has steadily risen over the past decades. With an increasingly older population, the provision of quality healthcare and the burden of disease and disability that comes with an aging demographic have the potential to significantly impact the county’s financial security and viability. Income and age are both determinates of health that plays a crucial role in the quality of life, sustainability and vigor of this community. Understanding how these subsystems affect the wellbeing on Mineral County will be crucial for the policy makers of today and the future.

Communication

Communication within Mineral County is provided through phone, internet, cell phone and some satellite coverage. Land line phone service is provided through Blackfoot Telecommunications. The internet lines are broad band (DSL).The Montana Telecommunications Access Program (MTAP) is available in Mineral County. MTAP is an agency of the government of Montana that offers assistive equipment and services to Montanans whose disabilities make it hard for them to use the phone.

Cell phone coverage is provided by several carriers, but with the steep valley walls and limited cell towers, coverage is sporadic throughout the county – being strongest in the broader open valleys.

The county’s residents have access to over 12 AM and 10 FM radio stations. There are two translators providing access to three TV channels. There are several satellite TV companies doing business in Mineral County.

There are several Federal Communication Commission (FCC) registered towers within Mineral Co.; at least five microwave towers (radio and TV); two paging towers; one cell phone tower; 12

³¹ http://www.city-data.com/county/Mineral_County-MT.html#ixzz1J3OJpT00

antenna towers (primarily TV) and; nine private land mobile towers. There are also at least 20 FCC registered amateur radio operators within the county.

Internet broad-band has not yet reached many parts of Mineral Co. – especially areas to the west. It is unclear as to the plan for when the cable will be laid given the sparse population and the high cost of burying cable.

Inference Statement

Communication systems in Mineral County are redundant and widely available. The technology available to Mineral County holds the potential for telehealth, improved access to education and even opportunities for business – and therefore income – development. A weakness is the ‘black-out areas’ where there is no cell coverage and no internet access. Building these capacities and capabilities is essential for access to emergency services, emergency notifications and access to improved educational and professional development options. This is another strong asset for this county and policy makers may wish to further explore these assets and their potential for improving the vigor and wellbeing of Mineral County’s residents.

Health & Social Services

There is one county owned critical access hospital with 25 beds (designated as ‘swing beds’ – seven hospital beds and 18 nursing home beds), a medical clinic and three emergency medical services within Mineral County. There is one long term care facility that is adjoining the hospital. An assisted living facility houses 11 apartments. There is one dentist who does not take Medicaid clients. There are two mental health facilities employing three mental health professionals: Visiting specialists working at the community hospital include cardiology, general surgery, and podiatry.

There is a full time public assistance office located in Superior. There are two mental health providers in the county – one of which provided school based programs and both work with the Sheriff’s Office to counsel DUI offenders.

With one primary care physician, one 0.5 FTE DO and four part time PAs, Mineral County is a designated health professional shortage area by HRSA³². The county is also designated as a health professional shortage area for dental and mental health care and is considered a medically underserved area by HRSA.

All emergency services in Mineral County are volunteer. Both the ambulance and fire services are fully volunteer. There is one of each service in each of the three population centers. Distances that each may travel to respond is 20 miles in either direction on I-90 and for the crews at St. Regis, there is a need to respond to the north towards Sanders County. There is apparently an ambulance service in Haugen, but the author was unable to determine its location or how the service is operated. Life Flight and Care Flight as well as Missoula ALS ground support travels to Mineral County approximately 3 – 4 times each month to transport critical patients in to Missoula.

³²<http://hpsafind.hrsa.gov/>

Mineral County Health Department is a full service health department with four part time and one FT employee offering a WIC Clinic weekly and targeted case management. There is one Environmental Health Director with one administrative staff. Public Health provides service M-F and are on-call on weekends. There is one DES coordinator and there are currently ATSDR and EPA consultants working with and within the county to assess the heavy metal exposures resulting from the county's mining industry.

Partners in Home Care – a Missoula based Home Health Agency – contracts with the MCHD to provide many of the HH services in Mineral County. The other home care agency is through the Agency on Aging that provides some respite care and some home care aids.

There are two physical therapists; one that has a stand-alone business in Mineral County. Other ancillary healthcare entities are two fitness 'gyms' and a food bank in Superior. There are various volunteer agencies that help the population: Senior Citizens serve meals and provide social activities and supports; RSVP (through Area VI Agency on Aging) helps with assisting with public health projects (flu clinics, in-school first aid, etc), distributing safety information, assisting with disaster and emergency preparedness plans, helping local law enforcement make the community safe, changing lives by mentoring and tutoring youth and preparing brochures and/or answering phones³³.

Inference Statement

Mineral County has several healthcare and social assets that strengthen both the access to and the provision of population based care. A chief complaint among respondents of the Quality of Life Survey is that healthcare in Mineral County costs too much when Missoula or Plains are 'close enough' and 'much less expensive'. Looking at price structures – recognizing economy of scale – working on continuous quality improvement and improved collaboration across healthcare and social entities are three ways that may strengthen this economic, health and social asset set for Mineral County.

The findings, while consistent with regional numbers, identify many injuries and some unexpected trends (such as dog bites, migraines and seizures). There is more to learn from the timely and efficient tracking of persons seeking ED services (a common entry into healthcare setting – especially for those without a medical home). Regional data is insufficient to assess this system. In order to better understand alignment of available healthcare services with population need it is crucial that continued assessments of this subsystem be continued and involves more partners.

Politics & Government

Mineral County is in House District 14 and Senate District 7.

There are few county ordinances in Mineral County that affect health. For example, there is no leash law in St. Regis and many dog bites are not reported as there is no county veterinarian and no mandatory rabies vaccination policy county wide (Superior does have a leash and rabies

³³ <http://www.westernmontanaagingservices.org/chd10pg19.asp>

ordinance). The Mineral County Planning Commission does create policy regarding septic, well and other subdivision matters that have the potential to affect population health. State and federal laws and rules serve as the backbone for food security and safety as well as water quality.

Politically, Mineral County has traditionally voted a Republican ticket. This might indicate a conservative preference in matters of government interventions and policy development. This is a sharp contrast to the 22% of the population on Medicaid and recognizing that the largest employer county-wide is the government.

Policies must have the resources to back them up. With high poverty levels and a waning industry and economy, it is likely that local policy makers are constrained in their ability to fund new mandates as well as being able to access expert resources by the lack of those resources (such as the case with a leash law and the potential for a rabies exposure requiring a 10 day observed quarantine). Political will must be matched by constituent will and resources to implement that will.

Inference Statement

Other variables to politics and government are the changing beliefs and preferences of a changing population of elected officials. The need to continuously inform and educate the policy makers is an arduous never-ending process that the healthcare professional workforce must take seriously. Since this governance model is of the Commission serving a dual role as the Board of Health as well – conflicts of the best interest of the population's health and evidenced-based practice can potentially be threatened. Since healthcare entities in Mineral County are predominately county entities, the potential for personal agendas or biases of a small governing body pose a viable threat to the health of Mineral County: A Commission (and therefore BOH) that supports the efforts of healthcare professionals versus a Commission that undermines or negates the efforts of healthcare. Understanding the indicators and determinants of health is a cardinal competency for those governing healthcare. All stakeholders must share in the onus of this responsibility of ongoing learning and quality assurance.

Safety & Transportation

There is one airport east of Superior and one helipad located at the Mineral Community Hospital. The rail line that bisects the county – parallel to I-90 – carries primarily cargo and is not a passenger route. I-90 is a four lane interstate running east and west and provides access county-wide.



Three main highways intersect Mineral County. I-90 bisects the county east to west. US Hwy. 10 serves as the now frontage road for I-90 and Montana State Hwy. 135 is the north-south route connecting Mineral County and her neighbor Sanders County to the north. Roads are paved in the three population centers of Superior, Alberton and St. Regis, but many of the connecting and residential or farm access roads are dirt or gravel. There are three main bridges connecting the southern and northern parts of the county. The highways offer well maintained safe roadways for access and recreation, but also pose a threat from motor vehicle accidents and hazardous winter driving conditions. Driving under the influence of alcohol or other chemical substances is a statewide problem – with Montana leading the nation in alcohol related MVA fatalities.

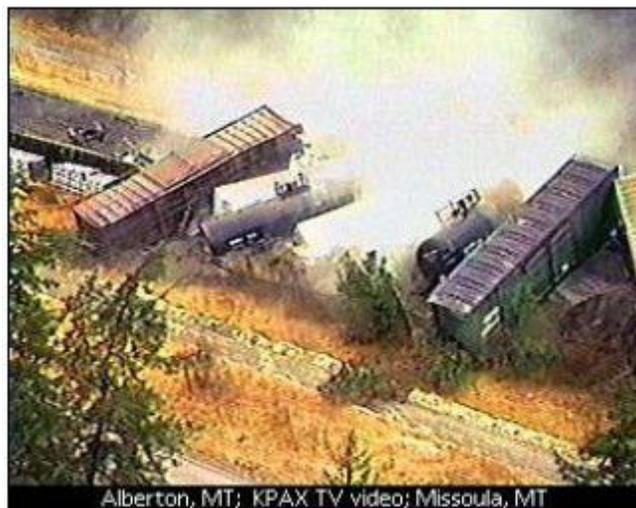
Each of the three population centers house volunteer ambulance and fire services. The Sheriff's Office is located in Superior, Several Montana Highway Patrol serve the county and are based out of their District 1 office in Missoula, MT (60 miles to the east). There is a county road department located in Superior and a state road department located at the base of the Lookout Pass west of Haugen. The hospital has a handicap accessible van that carries persons to out-of-county appointments and events. The local PHN have even 'rented' the school buses to transport children to dentist appointments in Missoula.

Inference Statement

Of greatest challenge to safety and transportation are those presented to pedestrian and bike commuters and recreationalists. Two children were killed walking to school in independent occurrences on MT 135. With no bike lanes, poor visibility and shortened daylight hours with winter and decreased valley light, road hazards to children is especially significant in Mineral County. Walking trails, paths and bike paths and trails are markedly absent throughout Mineral County. Persons with disabilities are especially challenged as mechanical or motorized wheel chairs will have great difficulty traversing the broken or absent sidewalks and the unmarked crossings and blocked vision of many county roadways as well. With the aging population and a disproportionately over-weight population, this transportation and safety variable set is a significant barrier to mobility and health and poses an ongoing threat to the safety of pedestrians of all ages and ability.

Gaining/maintaining the political will to address drinking and driving continues to be a significant threat to safety and transportation – and therefore the health and wellbeing - of persons across Montana. Another related variable to rating the transportation subsystem as an asset or a liability is the surge that burdens the healthcare system in Mineral County with multiple MVA victims.

Added to the long winters, shaded mountain passes and long distances between service centers, road hazards are a tremendous burden and challenge to Mineral County. Another transportation factor that has the potential to impact population health (and has – as evidenced by the chlorine gas spill in April 1996 – Fig 7 below) is the railroad that parallels I-90. Both the highway and the railroad transport a wide array of chemicals and materials with the ongoing threat of hazardous spills.



Alberton, MT; KPAX TV video; Missoula, MT
Figure 7 Alberton Chlorine Gas Spill 1996

An uncommonly known fact is that both I-90 and the railroad system act as the ‘drug gateway to the Midwest’. With two long mountain passes to the west, the first population center entering Montana is St. Regis and the travel center there. The Drug Enforcement Agency (DEA) has an active presence in Mineral County. Simply stated, the transportation routes serve as both assets and liabilities to the health and wellbeing of Mineral County.

Education

Public Schools in Superior:

Superior High School (Students: 124)

Superior Elementary (Students: 169; Prekindergarten - 6th Grade)

Superior 7-8 (Students: 78; 7th Grade - 8th Grade)

Public Schools in Alberton:

Alberton School: K – 12 (149 students)

Public Schools in St. Regis:

St. Regis Elementary, middle school and high school: K – 12 (168 students)

Both the number of high school graduates and college graduates in Mineral County are below the state's average.

Flathead Community College offers some adult education and advanced placement courses in Superior. Online learning options abound through both open courseware (free) and standard online educational modalities. The schools in St. Regis and Alberton have libraries and the public library is available in Superior to provide access to reading materials.

Inference Statement

Education level is a key determinate of a person's health and economic vigor (the less a person's education level or capacity the greater their ill health, disability and/or premature death). Addressing the needs for strengthened education in Mineral County has the potential to improve quality and years of life. Many of the dollars that support the Mineral County schools comes from a Forest Service 'tax'. This legislative year has brought this issue to light and there is a threat that these monies may be terminated. Here again, politics and government play a key role in the health, wellbeing and vigor of this county with the potential to intervene at the policy level to assure for services that strengthen a counties vigor and the wellbeing of its citizens.

Limitations of the subsystem overview

More research may reveal increased depth and understanding of the subsystems as they affect the county's health and wellbeing. Inference statements can be expanded to include stakeholders and serve as key dialogue points for community meetings surrounding health improvement initiatives. This is a beginning assessment of the eight subsystems in Mineral County.

Local Views of Health and Health Priorities

Healthcare workforce perceptions

Healthcare Workforce Perceptions (Primary Qualitative Data) - Stakeholder Survey of Determinants of Health for Mineral County, Montana – **Group I:**

Stakeholders that assessed determinates of health were: One Mental Health professional, one nurse manager, five Public Health personnel, the hospital administrator, the hospital's quality improvement coordinator, five senior PHN students, three Commissioners and two members of the BOH.

Determinants of health as identified by the World Health Organization (2009) are:

1. Policy/politics
2. Behavioral
3. Economic/poverty/social
4. Education
5. Access to quality healthcare
6. Environmental

- 7. Biology/genetics
- 8. The above table intends to show the viewer how many ranked

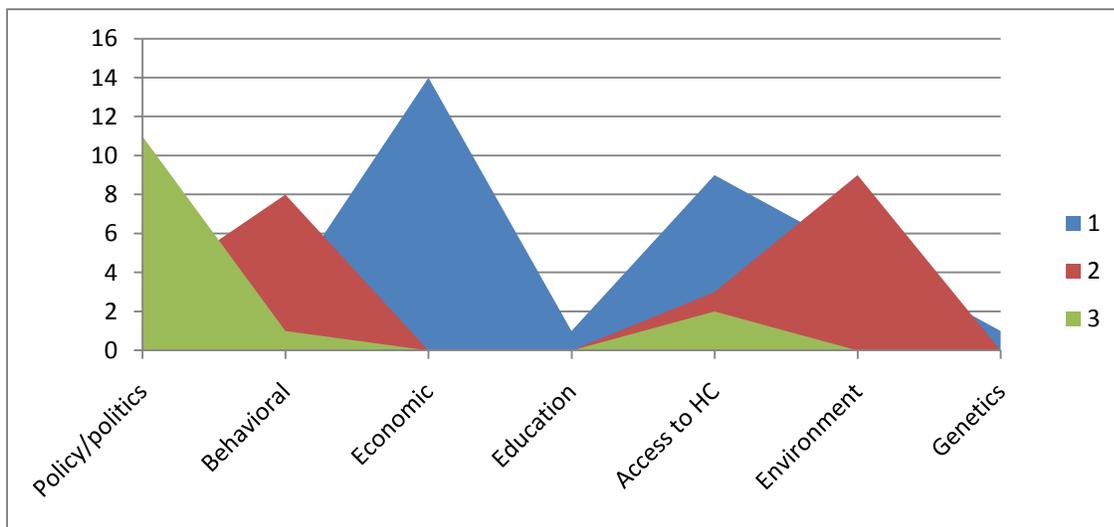
The following table intends to show the viewer how the key informants ranked the *determinates of health* based on order of importance affecting ill health in Mineral County. Key comments are shown for why they chose to rate the item as a 1, 2 or 3.

Stakeholder Table 1: Group I - Ranking of importance of determinate of health (as identified above) with 1 = most important, 2 = very important and 3 = important

Determinate	Ranking	Indicator
1	3	Available resources, transportation, side walks
2	2	Alcohol & drugs, bars, obesity
3	1	Poverty levels, unemployment
4	NR	
5	3	No Medicaid dentist, no family planning
6	2	Lead & arsenic – mining, distances, weather
7	NR	

NR = Not ranked by Stakeholders as significant determinate for Mineral County

Stakeholder Fig. 1: group I - Rankings of Determinates of Health



The top three factors that determine the population’s health in Mineral County according to Group I are: 1). Economic 2). Access to quality HC (Medicaid dental and family planning were identified) and 3). Physical Environment

Rankings – Healthcare Workers (stakeholders) perception of determinants of health as significant for Mineral County, MT **Group II:**

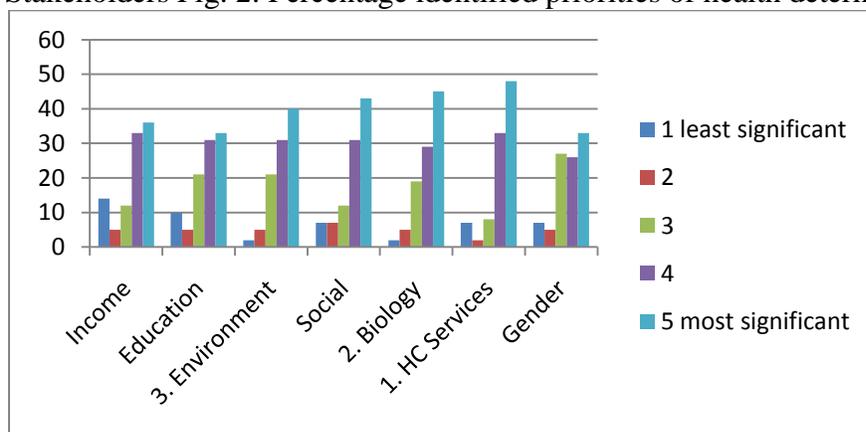
Please see Appendix F for the example of this survey of stakeholders. Of 112 surveys 42 were returned completed (n=42) or 38% return. These were sent to every healthcare worker at Mineral Community Hospital, Tamarac Clinic and the Mineral County Health Department. These included medical records, physical therapy, radiology and the various departments within these organizations.

(The determinates of health are those identified by the WHO as: Income, Education, Physical Environment, Social, Biology, Health Services Behavior – and gender as it determines trends and predisposing factors [the determinates of Behavior and Policy and Politics were not assessed with this survey as it is included in the other tools]).

Stakeholders Table 2: HC Workforce Determinates as priorities for Mineral County

Determinate	1 = not significant	2	3	4	5 = most significant	NR = Not Rated
Income	14%	5%	12%	33%	36%	0
Education	10%	5%	21%	31%	33%	0
Physical Environment	2%	5%	21%	31%	40%	0
Social	7%	7%	12%	31%	43%	0
Biology/genetics	2%	5%	19%	29%	45%	2%
Healthcare services	7%	2%	8%	33%	48%	2%
Gender	7%	5%	27%	26%	33%	2%

Stakeholders Fig. 2: Percentage identified priorities of health determinants



The top three priorities that determine the health of Mineral Co. residents identified by the healthcare stakeholders Group II are: 1). Healthcare Services – 81% 2). Biology/genetics – 74% and 3). Physical Environment – 71%.

Limitations

Understanding the language of ‘determinates’ and having an understanding of the changing evidence of such factors affecting health like ‘genetics’ verses smoking is necessary to attain valid informed opinions. It appears that the healthcare workforce relies on information of past medical models that ascribed to nature as a more powerful determinate of health than behavior. This data demonstrates the need for workforce education. It is especially interesting to note that the public health workforce identified income, behavior and environment as the top three determinants of health – while the hospital and clinic staff identified biology, access to healthcare and environment. This may be suggestive of a prevention paradigm versus a medical model paradigm in approaching health – one being population based, the other, individual based.

Community Perceptions (Primary Qualitative Data)

Qualitative data collected through the Quality of Life Surveys covered topics from perceptions of healthcare to rating the county as a ‘good place to raise children’. Understanding the core population’s perceptions is crucial to knowing how to best work with them to improve health outcomes. The example of the survey can be viewed in Appendix G. Questions 1-7 address a person’s sense of safety and security in their community; 9 & 10 address health security; and question 11 is about perceived access to healthcare. Question 8 is about economic security – a cardinal determinate of a person’s health and wellbeing.

Community Perceptions Table 1: Quality of life perceptions in Mineral County: Questions 1-7 majority of responses: a). excellent b). very good c). good d). fair e). poor

Survey Question	Male	Female
Rate Mineral Co. as a healthy community	c.	c.
Overall health related quality of life in Mineral Co.	c.	d.
Overall quality of the environment in Mineral Co.	b.	c.
Rate the healthcare system in Mineral Co.	c.	c.
How does Mineral Co. rate to raise children?	c.	c.
How does Mineral Co. rate to grow old?	c.	c.
Rate how safe Mineral Co. is	b.	c.

Community Perceptions Table 2: Quality of life perceptions in Mineral County by age groups **male**: Questions 1-7 majority of responses: a). excellent b). very good c). good d). fair e). poor

Survey Question	18-24	25-34	35-44	45-54	55-64	65+
Rate Mineral Co. as a healthy community	c.	d.	d.	d.	c.	c.
Overall health related quality of life in Mineral Co.	d.	d.	c.	c.	c.	c.
Overall quality of the environment in Mineral Co.	a.	b.	c.	b.	b.	c.
Rate the healthcare system in Mineral Co.	d.	c.	c.	c.	c.	c.
How does Mineral Co. rate to raise children?	b.	c.	c.	b.	d.	c.
How does Mineral Co. rate to grow old?	b.	c.	c.	c.	c.	c.
Rate how safe Mineral Co. is	c.	c.	a.	b.	c.	b.

Community Perceptions Table 2: Quality of life perceptions in Mineral County by age groups **female**: Questions 1-7 majority of responses: a). excellent b). very good c). good d). fair e). poor

Survey Question	18-24	25-34	35-44	45-54	55-64	65+
Rate Mineral Co. as a healthy community	d.	c.	d.	d.	c.	c.
Overall health related quality of life in Mineral Co.	d.	c.	d.	d.	c.	c.
Overall quality of the environment in Mineral Co.	c.	c.	c.	c.	c.	c.
Rate the healthcare system in Mineral Co.	c.	c.	d.	c.	c.	c.
How does Mineral Co. rate to raise children?	c.	b.	c.	c.	c.	b.
How does Mineral Co. rate to grow old?	b.	c.	c.	c.	b.	c.
Rate how safe Mineral Co. is	d.	c.	c.	d.	c.	c.

Tables 1 & 2 demonstrate a marked difference between genders and their perception of the overall quality of life in Mineral County. Men are generally more satisfied with the identified indicators, while females feel less safe, do not consider the county as healthy and rate the healthcare system ‘lower’. Other perceptions of these identified indicators are very similar across genders and ages. Generally, the younger respondents were less satisfied with all of the identified indicators. This is important to note in relation to attracting and retaining productive members to the community.

Limitations

A limited number of indicators were used to assess quality of life in Mineral County. Focus groups could be employed to expand this work. This is a beginning assessment of citizen satisfaction of the community as a whole and with the healthcare subsystem. It would be relevant and informative to seek further community participation to more deeply assess each of the subsystems.

CHA Findings - Primary Quantitative Data

Quality of Life Survey

The Quality of Life in Mineral County survey was a three page tool designed to assess many variables identified in the SEM and the CAP models. Mailed to over 2,500 community members, there was a 32% overall return rate. Please Appendix G to view a copy of the survey.

Rankings: Quality of Life Survey Results 2011 – Mineral County, Montana:

Random sampling: Total surveys mailed (to all Mineral County box holders): 2578

‘Snowbirds’ (not in-county during survey period): 263

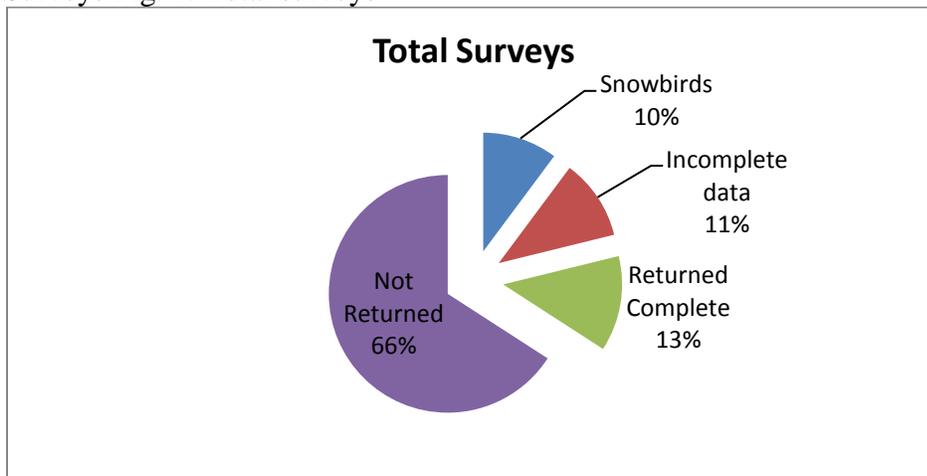
Incomplete, but returned: 282

Total returned complete: 277

Total returned *not including* ‘Snowbirds’ (mail ‘holds’): 559 or 24% return

Total returned of all surveys: 822 or 32%

Surveys Fig. 1: Total surveys

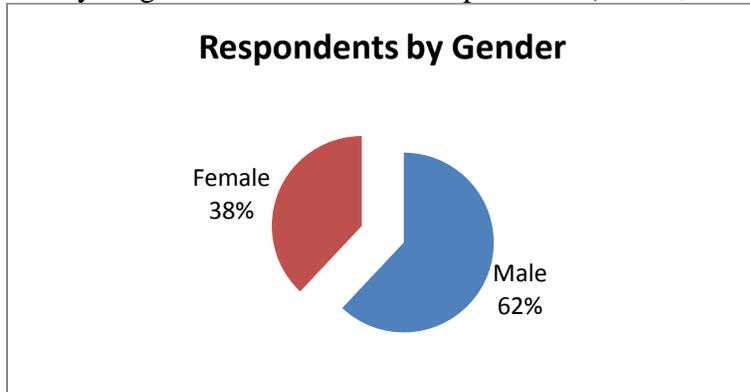


Demographics of respondents:

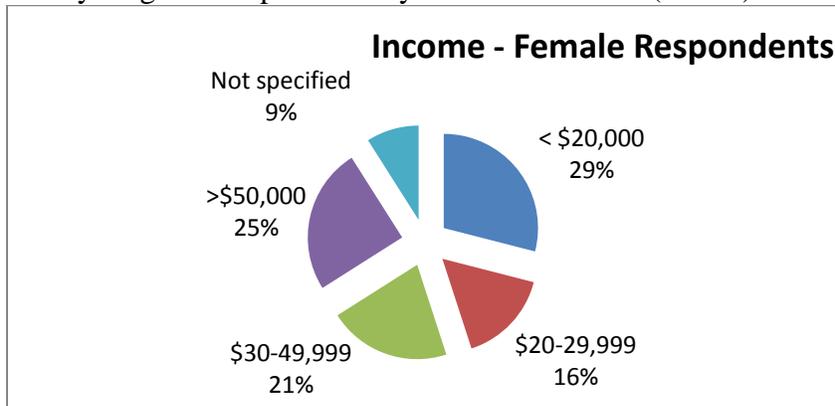
Surveys Table 2: Demographic of completed returned surveys – age of respondents (n= 277; 172 males & 105 females)

Male	Female	18-24	25-34	35-44	45-54	55-64	65+
62%	38%	1.5%	5%	9.8%	17.7%	27%	39%

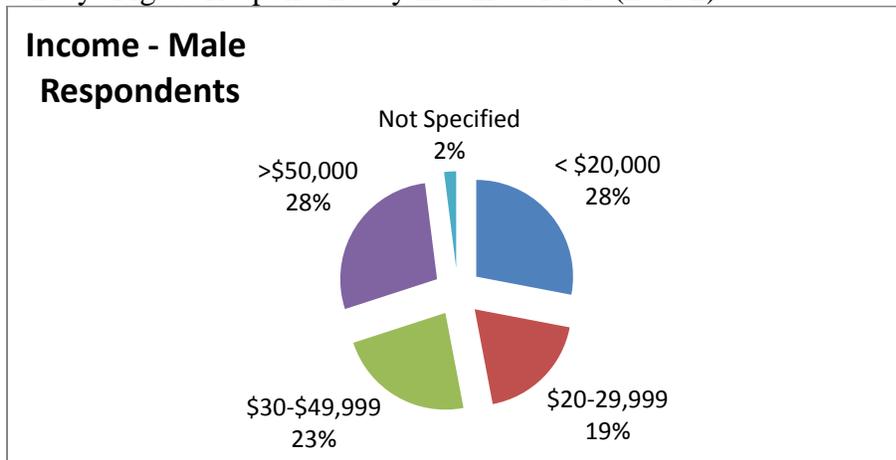
Surveys Fig. 2: Male and female respondents (n=172, male; n=105, female)



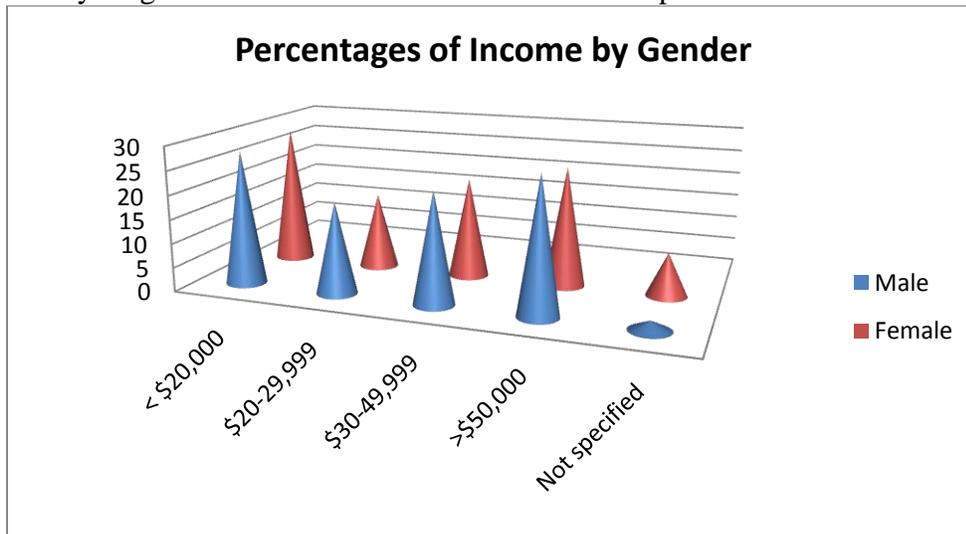
Surveys Fig. 3: Respondents by income – Female (n=105)



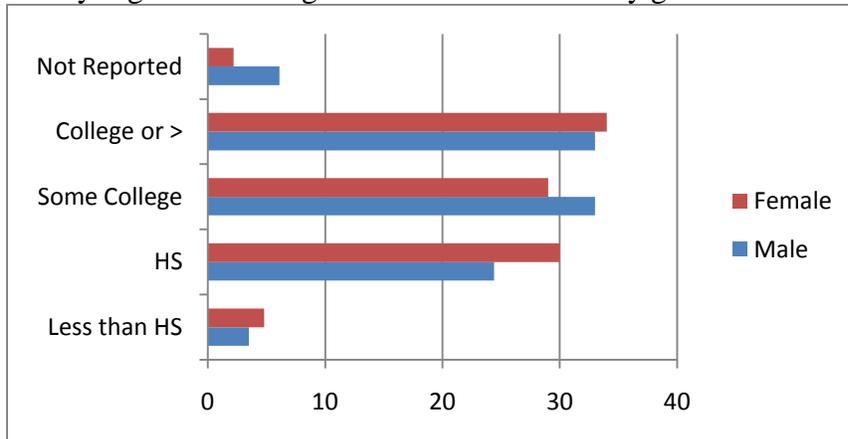
Surveys Fig. 4: Respondents by income – Male (n=172)



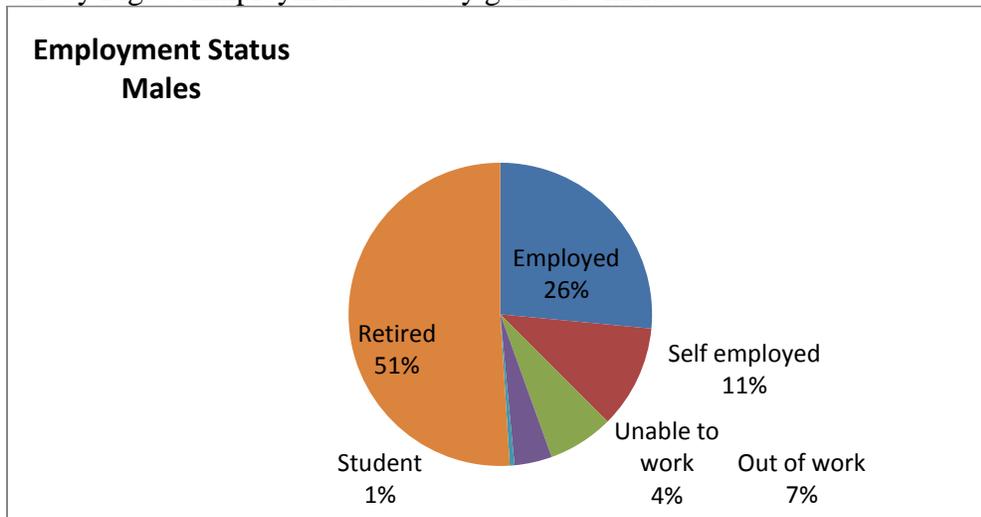
Surveys Fig. 5: Income levels – Male & Female respondents



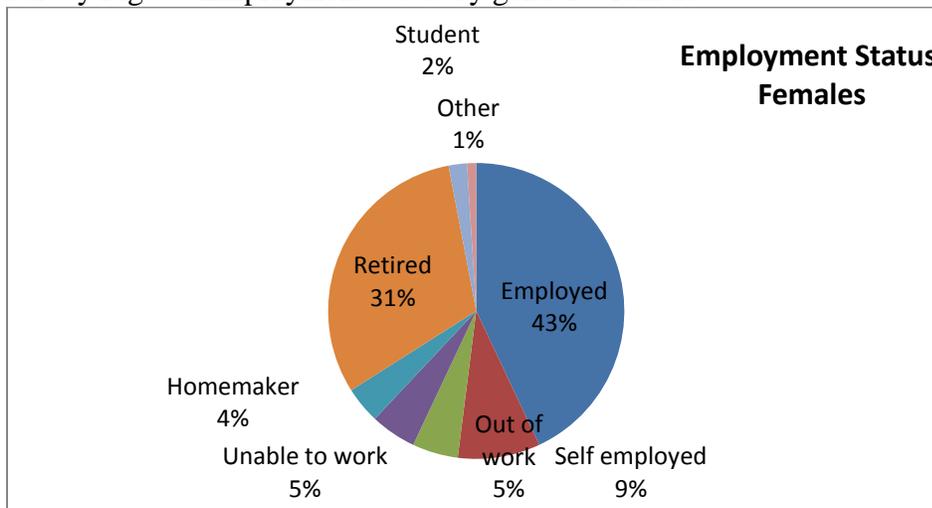
Survey Fig. 6: Percentage of educational levels by gender



Survey Fig. 7: Employment status by gender – males



Survey Fig. 8: Employment status by gender – females



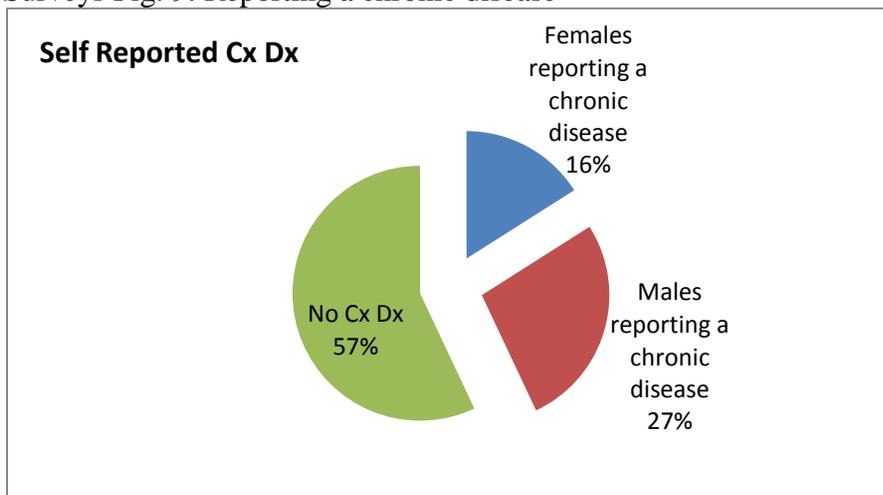
More women are employed, yet there are more men than women in Mineral County. According to this primary data, women tend to be slightly more educated, but receive lower wages. These numbers indicate a disparity that potentially impacts wellbeing.

Health Status of Respondents by Select Indicators:

Surveys Table 3: Self reported select health behaviors/health indicators

Gender	Tobacco use	Exercise	Overweight	Alcoholic Beverages/wk.	Feel Healthy	Illegal Drug Use	Seat Belt Use	Drive After Alcohol
Males	37% yes	53% < 1 x/wk	64% overweight	7% > 10 beverages per week	15% no	1.7% yes	23% no	15% yes
Females	61% yes	87% < 1 x/wk.	53% overweight	30% > 10 beverages per week	25% no	3% yes	38% no	25% yes

Surveys Fig. 9: Reporting a chronic disease



Surveys Table 4: Chronic Disease (Cx Dx) - 43 unique occurrences (16% of total respondents)

Condition (Cx Dx)	Percent Respondents Reporting Condition
Arthritis	5%
Degenerative disk disease	12%
Seizures	9%
Liver disease	2%
Mental health disorder	7%

Heart condition	9%
HTN	5%
ADD (Attention Deficit Disorder)	2%
Diabetes	9%
Cancer	7%
Asthma	7%
Pulmonary HTN	2%
Migraine	5%
Allergies	2%
COPD	5%
Crohns Disease	2%
Lupus	2%
Constipation	2%
Cystitis	2%
Trigeminal neuralgia	2%
Fibromyalgia	2%

Montana: Burden of Chronic Diseases - CDC Data

Chronic diseases – such as heart disease, stroke, cancer, and diabetes – are among the most prevalent, costly, and preventable of all health problems. Leading a healthy lifestyle (avoiding tobacco use, being physically active, and eating well) greatly reduces a person’s risk for developing chronic disease. Access to high-quality and affordable prevention measures (including screening and appropriate follow-up) are essential steps in saving lives, reducing disability and lowering costs for medical care.

5 Most Common Causes of Death in Montana (2005):

1. Diseases of the Heart
2. All cancers
3. Stroke
4. Chronic Lower Respiratory Diseases
5. Unintentional Injuries

Heart Disease and Stroke

Heart disease and stroke, the first and third leading causes of death in the United States, are the most common cardiovascular diseases.

- Heart disease accounted for 22% of deaths in Montana in 2005, while stroke caused 6% of deaths.
- In 2007, 25% of adults in Montana reported having high blood pressure (hypertension) and 35% of those screened reported having high blood cholesterol, which puts them at greater risk for developing heart disease and stroke.

Cancer

Cancer is the second leading cause of death in the United States, accounting for almost one in every four deaths.

- 23% of all deaths in Montana in 2005 were due to cancer.
- The American Cancer Society estimates that 4920 new cases of cancer were diagnosed in Montana in 2007, including 520 new cases of colorectal cancer and 630 new cases of breast cancer in women.

Diabetes

In 2005, diabetes was the sixth leading cause of death in the

U.S. Likely to be underreported as a cause of death, the risk of death among people with diabetes is about twice that of people without diabetes of similar age.

- 285 adults in Montana died from diabetes mellitus in 2005.
- In 2007, 6% of adults in Montana reported being diagnosed with non-pregnancy related diabetes.

Arthritis

Arthritis is the most common cause of disability in the U.S., affecting more than 46 million Americans.

- In 2007, 29% of adults in Montana reported being diagnosed with

The primary findings, while somewhat consistent with regional data, identify many injuries and some unexpected trends (such as dog bites, migraines and seizures). There is more to learn from the timely and efficient tracking of persons seeking ED services (a common entry into healthcare setting – especially for those without a medical home). Regional data is insufficient to assess this system.

Limitations

Many of the self reported ‘illness’ in Table 5 is subjective. More effective reporting between healthcare providers and population based healthcare would help to strengthen the validity of these numbers. The use of electronic medical records and the capturing of codes would greatly strengthen data access and interpretation for all areas of this initial CHA.

Rankings – Health Risk Assessment (HRA) – Healthcare Workforce:

Mineral Counties 120 healthcare employees were surveyed (112 surveys were distributed; eight were on leave of some type) using the Healthy People 2010 (HP 2010) Leading Health Indicators (LHI): The LHI are:

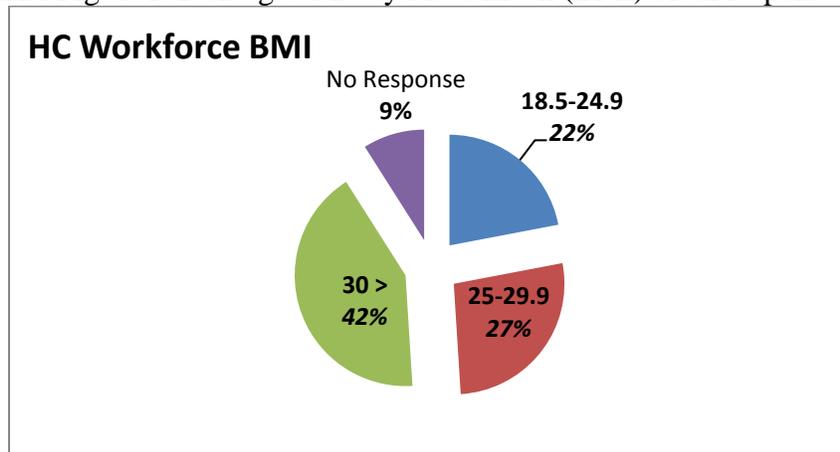
1. Physical activity
2. Overweight & obesity
3. Tobacco use
4. Substance abuse
5. Responsible sexual behavior
6. Mental health
7. Injury and violence
8. Environmental quality
9. Immunization
10. Access to quality healthcare

Of the 112 Health Risk Appraisals sent-out 45 were returned completed – or 40%; 4 were incomplete; n=41. The appraisals were sent to all healthcare workers and ancillary workers at the Mineral Community Hospital, the Tamarack Clinic and the Mineral Co. Health Department. For an example of the appraisal please see Appendix E.

HRA Table 1: Physical Activity

Activity	Yes	No
Exercise 3 x/wk	51%	49%
Exercise 3 x/wk 20' or >	51%	49%

HRA Fig. 1: Percentage of Body Mass Index (BMI) of all respondents

**BMI Categories³⁴:**

- Underweight = <18.5
- Normal weight = 18.5–24.9
- Overweight = 25–29.9
- Obesity = BMI of 30 or greater

Key for the following figures and tables grouped by BMI category as identified above (normal wt., over wt. & obese – no underweight persons were identified):

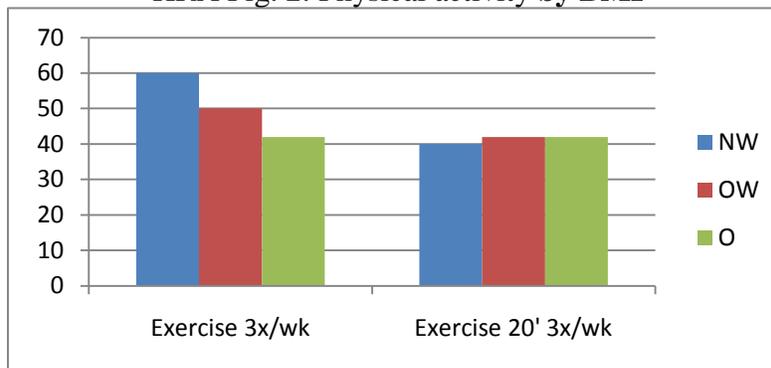
NW = normal weight

OW = overweight

O = obese

³⁴<http://www.nhlbisupport.com/bmi/>

HRA Fig. 2: Physical activity by BMI



Physical Activity

Findings

Even with the vast array of recreational opportunities available in Mineral County, the respondents consistently reported less than 20 minutes of exercise less than three times each week. Those at normal weights report higher levels of exercise that those who have BMIs > 24.9.

Limitations

Only 112 persons were surveyed for this health indicator with 45 respondents. Only adults were assessed. The school BMI data is contained later in this assessment. The childhood rates of obesity mirror those of the adult respondents. It is important to note that Mineral County has a significantly higher rate for obesity than the state. Correlations between exercise, nutrition and weight appear to be the leading health indicator for Mineral County.

Comparison to Local Data

National data is based on those who exercise five days per week. Gallup’s Health-Ways Well-Being Index³⁵ offers a comparative data set for persons in the West:

*Percentage of Americans Who Report Exercising at Least 30 Minutes
Five or More Days per Week, by Demographic Group*

	January-May 2010
West	28.2
Men	28.2
Ages 65+	28.2
Ages 18-29	28.2
Less than \$36,000 per year	26.7
Whites	26.4
Hispanics	26.4
Ages 45-64	26.3
South	26.3
Blacks	26.0
East	25.8
Midwest	25.8
\$90,000+ per year	25.4
Women	25.0
\$36,000-\$89,999 per year	24.8
Ages 30-44	24.1
Asians	21.1

Gallup-Healthways Well-Being Index

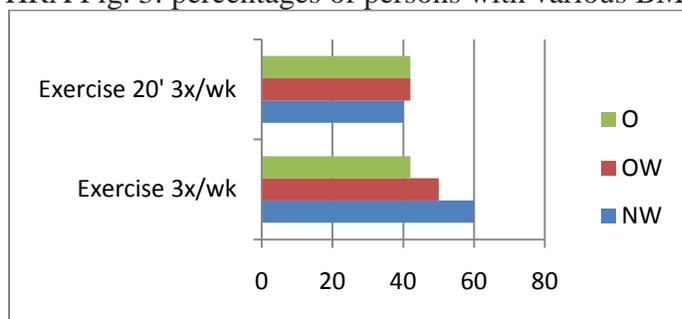
GALLUP®

Inference Statement

According to Gallup, the national average for 2010 – percentage of persons exercising five or more days per week (January through May) - is 26.5%. Compared to the Mineral County data from the respondents, (HRA Fig. 3), it appears that at least 40% of Mineral County citizens might exercise at least three times per week. This data cannot be compared, but it does lead to questions about reliability of respondent’s potential for over-reporting frequency of exercise – especially given the high BMI rates and no persons with BMIs of ‘underweight’ - which was a surprising finding.

³⁵<http://www.gallup.com/poll/139340/exercise-levels-demographic-differences-remain.aspx>

HRA Fig. 3: percentages of persons with various BMI – exercise frequency



Three days of exercise were chosen to be assessed to best determine the minimal level of exercise in Mineral County, but the CDC recommends at least 150 minutes of moderately intense aerobic exercise per week and at least two days per week of muscle strengthening exercise. None of the respondents met these minimal standards based on the answers they provided. Physical fitness opportunities and behavioral programs hold the potential to address Mineral County’s high rate of obesity of 42% compared to the Montana State average of 26.5% in 2009³⁶.

Nutritional Practices

HRA Table 2: Overweight & obesity: Percentage of respondents who demonstrate the identified nutrition practices

Indicator	NW	OW	O
5 servings fruits & vegetables daily	40% yes	33% yes	16% yes
Elevated cholesterol	30% yes	33% yes	50% yes

Overweight and Obesity

Findings

It was important to assess both adults and children. Fourth graders were randomly selected to be evaluated for their BMI. Primary data for 25 fourth graders in Superior of BMI rates demonstrates a significantly high rate of obesity in Mineral County. Of the 25 children, six were at or higher than the 95 percentile (determined by the CDC) for obesity³⁷ – or 24%. Of the 25, five were considered at risk – or 20% (85th percentile or >). Four were at the 75th percentile or higher. The average for BMI rates at or > the 95th percentile in the US is 18%.

³⁶<http://www.cdc.gov/obesity/data/trends.html>
³⁷<http://www.cdc.gov/obesity/childhood/index.html>

The adult findings reveal a high rate of both obesity and overweight: 69% of adults are overweight or obese according to the HRA surveys and according to the Quality of Life Surveys, 64% of males are overweight or obese and 53% of females are overweight or obese. According to the 2009 Behavioral Risk Factor Surveillance System (BRFSS – an annual CDC appraisal administered by state health departments) demonstrates a Montana rate of obesity at 20 – 24%.

Nutrition, Physical Activity, and Overweight/ Obesity

In the past 30 years, the prevalence of overweight and obesity has increased sharply for both adults and children. Physical inactivity and unhealthy eating contribute to overweight and obesity and a number of chronic diseases, including some cancers, cardiovascular disease, and diabetes.

- In 2007, 62% of adults in Montana were overweight or obese and 13% of high schools students were overweight, based on self-reported height and weight.
- 83% of high school students and 75% of adults in Montana consumed fewer than 5 fruits and vegetables per day.
- 46% of Montana high school students did not attend physical education classes.
- 42% of adults in Montana were not engaged in sufficient moderate or vigorous physical activity (please see exercise data and inferences above).

Diabetes

In 2005, diabetes was the sixth leading cause of death in the U.S. Likely to be underreported as a cause of death, the risk of death among people with diabetes is about twice that of people without diabetes of similar age.

- 285 adults in Montana died from diabetes mellitus in 2005.
- In 2007, 6% of adults in Montana reported being diagnosed with non-pregnancy related diabetes.

Limitations

Data collected for this CHA demonstrates a need to assess the health indicators of obesity, exercise and nutrition on an ongoing basis as prevention programs are implemented. The data for Mineral County is alarming and needs to be further validated.

Comparison to Local Data

It is clear that national, regional and state data are not relevant for Mineral County:

Comparison Data Fig. 1: Montana, US & Mineral County

Indicator	Montana	US	Mineral County
Percent <i>obesity</i> - adults (BMI >29.9)	26.5%	10-30+%	42%
Percent who exercise – CDC recommendations	20%	35% ³⁸	<10%
Percent who eat < 5 fruits/veggies/day	75%	73% ³⁹	84%
Children w/ BMI at or > 95 th %	(no MT DPHHS data available – all included ‘overweight’)	13-18%	24%

Respondents to both the Quality of Life Survey and the HRA survey demonstrate a 69% + overweight *and* obesity rate compared to the state overweight *and* obesity rate for adults of 68.9% for males and 51.5% for females⁴⁰. A greater percentage of adults are obese in Mineral Co. than the MT average (42% in Mineral Co. vs.23% obesity in Montana⁴¹). For children these numbers are even more alarming with 24% being obese with BMIs in the 95th percentile or higher. The CDC estimates that only 13% of youth are obese nation-wide. Combining overweight and obesity rates to demonstrate one rate of BMI problems is like combining underweight rates with overweight rates and renders the MT data invalid.

Inferences

Obesity increases risk of illness due to Type II Diabetes, high blood pressure, increased cholesterol, orthopedic stresses and injury and other chronic disease. While Mineral County is in-line with the national epidemic of obesity, it is disproportionately high for rates of obesity in both children and adults. In Montana, the medical costs associated with adult obesity were \$175 million in 2003 dollars⁴². Combined with the limited amounts of exercise and the low rates of consumption of fruits and vegetables, Mineral County residents are at especially high risks for many chronic diseases as well as diminished quality and years of life.

A Montana program – instituted by a town’s mayor, Larry Bonderud – has helped the community of Shelby to commit to healthy behaviors and healthy places. The Mayor conducts surveys of town residents through community newsletters and barbers for publicity from local radio and newspaper. His efforts have resulted in a new fitness center for the Civic Center. He

³⁸ <http://www.cdc.gov/nchs/fastats/exercise.htm>

³⁹ <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5610a2.htm>

⁴⁰ <http://www.statehealthfacts.org/profileind.jsp?rgn=28&ind=90&cat=2>

⁴¹ http://helenair.com/news/article_576432e0-88bd-11df-998b-001cc4c03286.html

⁴² <http://www.cdc.gov/obesity/stateprograms/fundedstates/montana.html>

has also convinced local employers to subsidize memberships for employees. Town residents are able to enjoy a six-mile walking/biking trail that connects schools, businesses, neighborhoods, and parks; eat produce from a wheelchair-accessible community garden, and take obesity-focused Health Risk Assessments free of charge. Plans are in the works to improve access to healthy restaurant menu options, especially for children's menus⁴³. These are examples of how inferences from this data might be addressed to improve the health of the citizens of Mineral County.

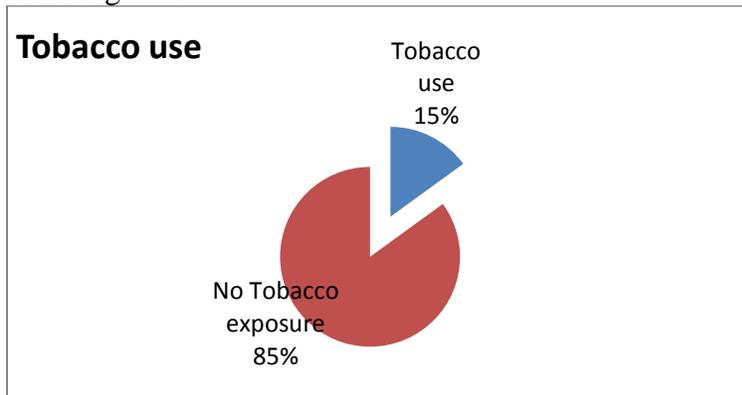
Tobacco Use

HRA Table 3: Tobacco use

Indicator	NW	OW	O
Use tobacco	20% yes	16% yes	11% yes
How often use tobacco**	7-8 x/d or daily	Daily, 3 x/d	'a lot'
Exposure to 2 nd hand smoke	20%	16%	11%

** Summary of comments on frequency of use

HRA Fig. 3: Tobacco use



Tobacco Use

Tobacco use is the single most preventable cause of death and disease in the United States. Each year, an estimated 438,000 people in the U.S. die prematurely from smoking or exposure to second hand smoke, and another 8.6 million have a serious illness caused by smoking. For every person who dies from smoking, 20 more people suffer from at least one serious tobacco-related illness.

- In 2007, 20% of adults and 20% of high school students in Montana reported being current smokers.

⁴³<http://www.cdc.gov/obesity/stateprograms/fundedstates/montana.html>

Limitations

The use of smokeless tobacco was not assessed. Frequency of use of smoked tobacco was not fully assessed with the HRA and was not assessed with the Quality of Life Survey. Data collected from the Prevention Needs Assessment (PNA) has helped to complete the information about tobacco use in Mineral County (please see ‘Substance Abuse - Findings’ following).

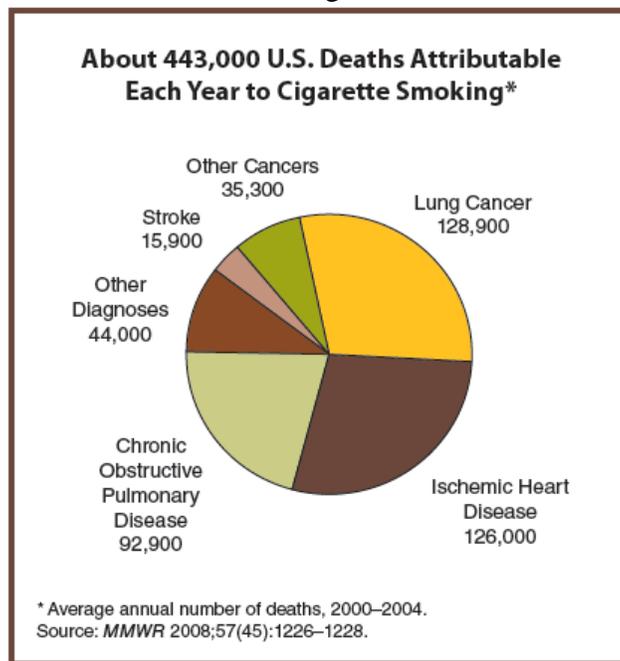
Comparison to Local Data

This data from the BRFSS is in-line with the Mineral County data. Data on the trends of smoking nationwide indicate a consistent rate of 18-23% and shows that smoking among women in on the rise nationally⁴⁴ - especially in low income and minority populations. This appears to be the case in Mineral County as well.

Inference Statement

Tobacco Fig. 1 demonstrates the ongoing need to address the use of tobacco across the life span. The evidence has consistently shown the burden of disease and disability resulting from the use of tobacco products:

Tobacco – Fig. 1: CDC⁴⁵



Work that communities can do to address the use of all forms of tobacco will have a direct benefit for the population. Tobacco rates do not differ across age or gender significantly. Youth rates are at 20% as well. Tobacco prevention programs need to start in childhood and span ages and gender.

⁴⁴<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5802a2.htm>

⁴⁵http://www.cdc.gov/tobacco/data_statistics/tables/health/attrdeaths/index.htm

Substance Abuse

HRA Table 4: Substance abuse

Indicator	NW	OW	O
2 alcoholic drinks/d	5%	0	5%
Use illegal drugs	0	0	0

Substance Abuse

Findings

From July 2008 – June 2009⁴⁶:

37 adults and 7 youths from Mineral County **received state-approved chemical dependency treatment services.**

Of these 44 people, **4 were women with dependents or pregnant women.**

The **main drugs of choice** for Mineral County are:

<i>Drug</i>	<i># Adults</i>	<i># Kids</i>	<i>% of Total</i>
Alcohol	28	2	68.2
Marijuana	7	4	25
Meth	2	1	6.8

From July 2008 – June 2009 State Block Grant funds paid for **3371 hours of prevention services for at least 3204 people** in Mineral County.

The following is the **projected need for treatment** of individuals meeting State Block Grant eligibility requirements (200% of poverty) for Mineral County:

<i>Age: 10-17</i>		<i>18-24</i>		<i>25+</i>	
Population: 433		265		2820	
<i>Alcohol</i>	<i>Drugs</i>	<i>Alcohol</i>	<i>Drugs</i>	<i>Alcohol</i>	<i>Drugs</i>
49	31	67	30	211	49

⁴⁶ This information is data specific to the stated county from different federal and state sources. The treatment data is from the Substance Abuse Management System for SFY 2009. The prevention data is from both the 2008 MT Prevention Needs Assessment and the Minimum Data Set (SFY 2009). The projected need data is based on annual averages based on 2004-2006 National Survey on Drug Use (MT regional responses to “needing but not receiving treatment...in past year”) and the 2009 MT County Health Profiles. The crime data is from the 2008 Board of Crime Control Report.

The **binge drinking rate** (drinking five or more drinks on the same occasion) for Mineral County, according to the 2006 NSDUH, is:

Age: 10-17	18-24	25+
16.28%	54.62%	25.67%

The percent of Mineral County **youth engaged in binge drinking in the last two weeks**, according to the 2008 PNA, are:

8 th Grade	10 th Grade	12 th Grade
11.4%	33.3%	29.6%

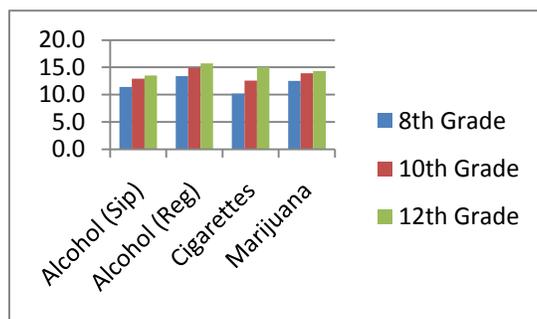
In 2008, Mineral County had:

11 drug/narcotic offenses

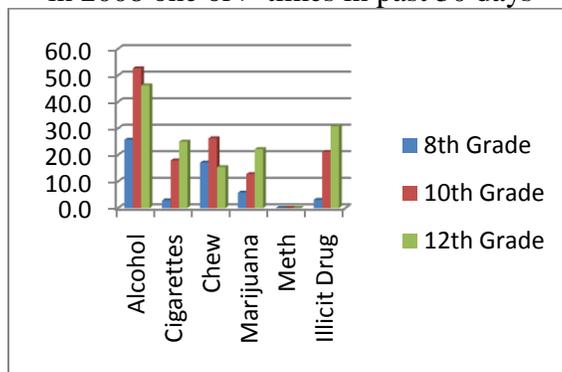
36 DUIs

8 liquor law violations

Substance Abuse Fig. 1: Teen substance abuse average age of rates initiation to substances - Mineral County



Substance Abuse Fig. 2: Percent used the following in 2008 one or > times in past 30 days



Data in the above Fig. 1 & 2 comes from the Addictive and Mental Disorders' Chemical Dependency Bureau.

Substance Abuse - Table 1: Percentage of Students Binge Drinking in Past Two Weeks for All Races (2004* PNA)⁴⁷

Grade	2004* County Data	2004* MT Data	Percentage Comparison
8 th	36.8	16.2	+
10 th	26.7	32.3	-
12 th	34.6	44.4	-
Total	32	30.7	+

*The schools did not participate in the PNA in 2006, PNA data for 2000 and 2004 was substituted to keep all results comparable and statistically sound.

Substance Abuse –Table 2: Percentage of Convictions for Alcohol-Related Crime for 2000

Crime	Number of Filings	Number Dismissed	Number Plead Down to Lesser Charge	Number Found Guilty(including deferred prosecution)	Other (transferred to another Court, No Disposition)	Conviction Percent
Minor in Possession (MIP)	5	0	0	5	0	100%
Multiple MIP	4	0	0	4	0	100%
DUI	14	0	0	14	0	100%
Multiple DUI (misdemeanor)	7	0	0	7	0	100%
4 th or Subsequent DUI (felony)	5	1	0	4	0	80%
Open Container (Vehicle)	0	0	0	0	0	0%
Other	0	0	0	0	0	0%
Total	35	1	0	34	0	97.14%

⁴⁷ Montana Community Change Project Strategic Prevention Framework State Incentive Grant; D. Trader (2010)

Limitations

The data presented in the tables and figures above has been compiled by the Addictive and Mental Disorders' Chemical Dependency Bureau and D. Trader and work with substance abuse and tobacco community grants (Montana Community Change Project) across the past five years. More data is available at: <http://oas.samhsa.gov/nsduhLatest.htm>. Respondents to the Quality of Life Survey as well as the HRA did not report rates of substance use at the expected rates. This is not an unexpected finding as persons often under report on indicators that they perceive to be illegal, detrimental or that they are embarrassed about. The concerns most often expressed for the health and wellbeing of Mineral County residents in the Quality of Life Surveys was pertaining to substance abuse and the community's concern for the safety, wellbeing and exposure of harmful substances of Mineral County's youth.

Comparison to Local Data

According to the CDC alcohol is one of the most widely used drug substances in the world. Alcohol use and binge drinking among our nation's youth is a major public health problem⁴⁸:

- Alcohol is used by more young people in the United States than tobacco or illicit drugs.
- Excessive alcohol consumption is associated with approximately 75,000 deaths per year.
- Alcohol is a factor in approximately 41% of all deaths from motor vehicle crashes.
- Among youth, the use of alcohol and other drugs has been linked to unintentional injuries, physical fights, academic and occupational problems, and illegal behavior.
- Long-term alcohol misuse is associated with liver disease, cancer, cardiovascular disease, and neurological damage as well as psychiatric problems such as depression, anxiety, and antisocial personality disorder.
- Drug use contributes directly and indirectly to the HIV epidemic, and alcohol and drug use contribute markedly to infant morbidity and mortality.

Mineral County data is in alignment with national data. Substance abuse starts as early as 11 years. The MIP and DUI data is similar across counties in Montana and continues to be one of the most unreasonable and shameful factors that kills Montana's youth. The greatest limitation to this data is that it continues to not be resolved.

Inference Statement

With Mineral County acting as the 'gateway to the Midwest' as a drug corridor, added to poverty and unemployment levels, a strong determinate of the health and wellbeing of Mineral County's youth and adults is substance abuse. Montana leads the nation in deaths from MVA related to alcohol. Two methamphetamine labs have been closed in the past two years in the county. The rates of methamphetamine use are low in teens, but the use of illicit drugs is high in minors. Emergency department (ED) logs also revealed ED admissions related to illicit drug and ETOH (ethanol alcohol) use in adults over 50 years old. Substance abuse kills more Montana youth per

⁴⁸ <http://www.cdc.gov/healthyouth/alcoholdrug/index.htm>

capita than in any other state. The will and resolve of policy makers has been very weak in this area in Montana.

Responsible Sexual Behavior

HRA Table 5: Responsible sexual behavior

Indicator	NW	OW	O
Practice safe sex	100% yes	100% yes	100% yes
HIV test in past 5 yrs.	60% yes	25%	21% yes

Responsible Sexual Behavior

Findings

Youth:

The CDC reports that Vaginal, anal and oral intercourse place young people at risk for HIV infection and other sexually transmitted diseases (STDs). Vaginal intercourse carries the additional risk of pregnancy. In the United States

- In 2009, 46% of high school students had ever had sexual intercourse, and 14% of high school students had had four or more sex partners during their life.
- In 2009, 34% of currently sexually active high school students did not use a condom during last sexual intercourse.
- In 2002, 11% of males and females aged 15-19 had engaged in anal sex with someone of the opposite sex; 3% of males aged 15-19 had had anal sex with a male.
- In 2002, 55% of males and 54% of females aged 15-19 had engaged in oral sex with someone of the opposite sex.²
- In 2006, an estimated 5,259 young people aged 13-24 in the 33 states reporting to CDC were diagnosed with HIV/AIDS, representing about 14% of the persons diagnosed that year.
- Each year, there are approximately 19 million new STD infections, and almost half of them are among youth aged 15 to 24.⁴
- In 2002, 12% of all pregnancies, or 757,000, occurred among adolescents aged 15-19.

“In addition, young people in the United States use alcohol and other drugs at high rates. Adolescents are more likely to engage in high-risk behaviors, such as unprotected sex, when they are under the influence of drugs or alcohol. In 2009, 22% of high school students who

had sexual intercourse during the past three months drank alcohol or used drugs before last sexual intercourse.⁴⁹

Adult:

A letter to the Surgeon General in 1999 addressed the burden of disease and other health indicators related to responsible sexual behaviors:

“While it is important to acknowledge the many positive aspects of sexuality, we also need to understand that there are undesirable consequences as well—alarming high levels of sexually transmitted disease (STD) and HIV/AIDS infection, unintended pregnancy, abortion, sexual dysfunction, and sexual violence. In the United States:

- STDs infect approximately 12 million persons each year;
- 774,467 AIDS cases, nearly two-thirds of which were sexually transmitted, have been reported since 1981;
- an estimated 800,000 to 900,000 persons are living with HIV;
- an estimated one-third of those living with HIV are aware of their status and are in treatment, one-third are aware but not in treatment, and one-third have not been tested and are not aware;
- an estimated 40,000 new HIV infections occur each year;
- an estimated 1,366,000 induced abortions occurred in 1996;
- nearly one-half of pregnancies are unintended;
- an estimated 22 percent of women and two percent of men have been victims of a forced sexual act; and
- an estimated 104,000 children are victims of sexual abuse each year.⁵⁰

Limitations

National data is the main source for the assessment of this health indicator. The Quality of Life Survey respondents all reported monogamy and responsible sexual practices. Reporting of STD is assumed to be insufficient for Mineral County.

Comparison to Local Data

A leading indicator of responsible sexual behavior is the rate of sexually transmitted disease (STD). In Mineral County the Chlamydia rate is 207.1 per 100,000 compared to the state rate of 324.1⁵¹. Gonorrhea rates are listed as zero, but with Chlamydia and gonorrhea commonly being co-infections it is likely that the data is insufficient and/or the providers do not test for gonorrhea. National data from Drs. Gale R. Burstein, MD, MPH, et al, in the Journal of American Medical Association found that 29.1% of adolescent females had at least one positive

⁴⁹ <http://www.cdc.gov/HealthyYouth/sexualbehaviors/index.htm>

⁵⁰ <http://www.surgeongeneral.gov/library/sexualhealth/call.htm>

⁵¹ MT DPHHS Data provided for the H 173 project

result for Chlamydia⁵². The rate identified by the MT DPHHS data reveals 2% rates. These findings are most likely the result of provider under-reporting.

Inference Statement

The inference statement is best articulated by the Surgeon General in 2001 as: “Each of these problems (STDs, unwanted pregnancy, sexual violence/abuse, etc.) carries with it the potential for lifelong consequences-for individuals, families, communities, and the nation as a whole. As is the case with so many public health problems, there are serious disparities among the populations affected. The economically disadvantaged, racial and ethnic minorities, persons with different sexual identities, disabled persons, and adolescents often bear the heaviest burden. Yet it is important to recognize that persons of all ages and backgrounds are at risk and should have access to the knowledge and services necessary for optimal sexual health.”

“These challenges can be met but first we must find common ground and reach consensus on some important problems and their possible solutions. It is necessary to appreciate what sexual health is, that it is connected with both physical and mental health, and that it is important throughout the entire lifespan, not just the reproductive years. It is also important to recognize the responsibilities that individuals and communities have in protecting sexual health. The responsibility of well-informed adults as educators and role models for their children cannot be overstated. Issues around sexuality can be difficult to discuss-because they are personal and because there is great diversity in how they are perceived and approached (David Satcher, M.D., Ph.D, Surgeon General, 2001).”⁵³

With just 21-60% receiving HIV tests in Mineral County, the population is at risk for potentially high or undiscovered HIV rates. Nationwide, over 200,000 persons do not know that they have HIV. Taking 5 – 15 years to present signs or symptoms, it is important that HIV testing be a part of every community’s health promotion and prevention efforts. The lack of identified gonorrheal infections may indicate that providers are not testing – as co-morbidity is a nationally expected diagnostic finding with Chlamydia.

⁵² <http://jama.ama-assn.org/content/280/6/521.short>

⁵³ <http://www.surgeongeneral.gov/library/sexualhealth/call.htm>

Mental Health

HRA Table 6: Mental health

Indicator	NW	OW	O
Enjoy my job	80% yes	100% yes	89% yes
Feel stressed-out	20% yes	16%	68% yes

Mental Health

Findings

Forty percent of all respondents of the Quality of Life Survey reported not having someone to share problems with or being able to get help when they needed to do so. This finding sets the stage for all other MH data for Mineral County.

Suicide

- MT’s suicide rate is one of the highest in the nation
- Suicide is 2nd leading cause of death for Montanans 10-34 (after unintentional injuries)
- Firearm-related suicide is the leading cause of suicide in MT⁵⁴

Primary mental health data was not collected due to the issue of access and confidentiality of valid data. Data for assessing this indicator came from the Western Montana Mental Health Center (WMMHC) in Superior⁵⁵. Substance abuse is often related to mental health and has been discussed separately in a previous section. The WMMHC data provided for three randomly selected years (2004, 2007 and 2010) is as follows:

Mental Health -Table1: Number of MH clients seen by WMMHC

Population	2004	2007	2010
Males	85	109	111
Females	100	113	95

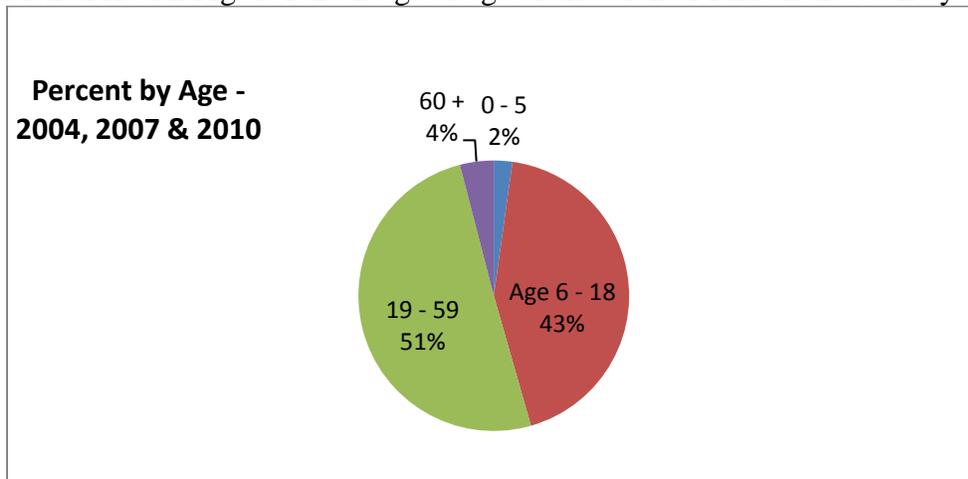
Mental Health Table 2: Age distribution of MH clients seen by WMMHC

Age	2004	2007	2010
0 - 5	4	5	5
6 - 18	72	108	92
19 - 59	105	109	101
60 +	7	6	12

⁵⁴ MT Health Agenda 2001, MT DPHHS
<http://www.dphhs.state.mt.us/hpsd/health-planning/ph-planning-agenda.htm>

⁵⁵ <http://www.wmmhc.org/superior>

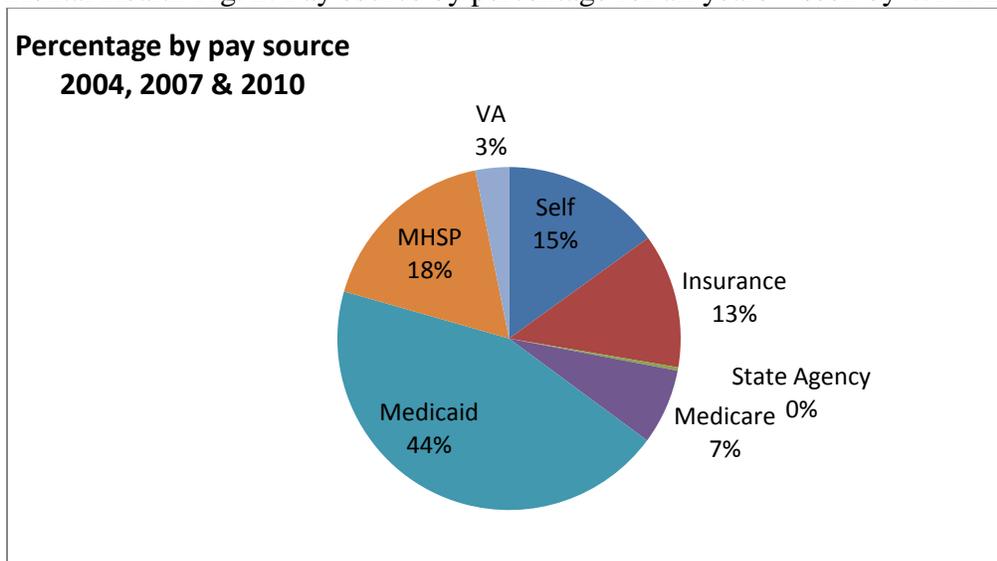
Mental Health Fig. 1: Percentage of age distribution of MH clients seen by the WMMHC



Mental Health – Table 3: Pay source of MH clients seen by WMMHC

Pay Source	2004	2007	2010
Self	33	46	38
Insurance	15	47	39
Other State agency	2	0	1
Medicare	11	24	21
Medicaid	113	125	112
MHSP – Non-Medicaid	53	38	46
VA	1	10	13

Mental Health Fig. 2: Pay source by percentage for all years – seen by WMMHC



Limitations

All data came from one agency. The other mental health provider in Mineral County did not provide data. School data was not available.

Comparison to Regional and National Data⁵⁶

Suicide deaths per 100,000 population (MT): 11.5. The national suicide rate is 14.2 per 100,000. No data specific to Mineral County was available – all was regional.

Percent of non-institutionalized adults with serious psychological distress in the past 30 days (US): 3.2%.

Montana; persons experiencing 14 or more days of mental health distress from 2005 - 2009⁵⁷ is 9.2% of Montanans. Based on the WMMHC numbers, Mineral County has an average across three separate years of 6% who seek mental health services. Of the emergency department data assessed (1103 unique visits) approximately 4% of all ED visits were related to mental health. This does not include substance abuse or violence related admissions. There was no evidence that the ED persons entering for mental health issues were WMMHC clients; no notation of a referral to a MH provider was made in any ED entry.

Inference Statement

Mental health rates in Mineral County appear to be higher than national rates when considering ED admissions and substance abuse and violence. High poverty levels, unemployment and cultural norms of alcohol consumption and 17 bars for 3,888 persons (1 bar for every 289 persons) - added to the drug ‘gateway’ – are all contributing factors to a population’s mental health. Another factor could be the active presence, educational efforts and community acceptance of mental health providers in the county. School officials have also worked with MH providers to create the School Based mental health Program which accounts for the increase in client numbers from ages 6 – 18 who might not otherwise have come into the MH system. Access to MH services appears to be a strong community asset provided by two distinct MH provider entities.

Injury & Violence

HRA Table 7: Injury & violence

Indicator	NW	OW	O
Wears seat belts	100% yes	100% yes	95% yes
So angry want to hit	10%	8%	0
Not safe at home	10% don't feel safe	0	0

Please see the ED Log data – in the CHA Secondary Data Section for a more detailed explanation of this indicator set.

⁵⁶ <http://www.cdc.gov/mentalhealth/data.htm>

⁵⁷ <http://apps.nccd.cdc.gov/HRQOL/TrendV.asp?State=28&Category=1&Measure=7>

Environmental Quality

HRA Table 8: Environmental quality

Indicator	NW	OW	O
Exposed to dust/particles	20% yes	13% yes	50% yes
Home checked for radon	60%	58%	32%
I/family exposed to industrial byproduct	10%	8%	21%

Environmental Quality

Findings

The fourth leading cause of death in Mineral County is related to chronic lower respiratory disease. This table demonstrates a high exposure to poor indoor air quality. Combining this information with the numbers of smokers, older homes (lead and formaldehyde exposures), the exposure to outside environmental factors – such as the exposure to heavy metals from mine tailings and the fire seasons – environmental air quality is a serious population health indicator (please see the subsystem information of the built and natural environments and the ATSDR findings referenced there).

Limitations

No measuring devices for air quality are available in Mineral County. The recent completion of the Flat Creek IMM is available at: <http://www.epa.gov/region8/superfund/mt/flatcreekimm/>. No in-depth studies have been conducted to assess the wood burning, lead levels, formaldehyde exposure or other environmental hazards in Mineral County. The Environmental Engineer for Mineral County has provided excellent services for assuring water and sanitation quality (please see <http://www.co.mineral.mt.us/departments/Enviornmental.aspx>).

Inferences

Exposure to radon gas is the second-leading cause of lung cancer (after smoking) in the United States. About 14,000 people die each year from radon-related lung cancer. The radon level for Mineral County is seven times higher than the national indoor average⁵⁸. Environmental factors continue to be strong determinants of a population’s health. This preliminary data suggests the need for further study of the environmental impacts on population health in Mineral County.

⁵⁸ <http://county-radon.info/MT/Mineral.html>

Immunizations

HRA Table 9: Immunizations

Indicator	NW	OW	O
Children fully immunized	100% yes	100% yes	100% yes
Adults fully immunized	50% no	42% no	5% no

Immunization

Findings

The only primary data assessed for immunizations was from the HRA surveys. The table above shows a reported rate of children being 100% immunized, but 50% or less of adults fully immunized.

Mineral County immunization rates vary depending on the vaccine. There are 16 distinct vaccine agents recommend by the CDC for childhood immunization (birth to 18 years)⁵⁹ and 14 recommended vaccine agents for adults⁶⁰. Vaccine schedules are in a state of continuous improvement as new research and vaccines develop. There are two primary ways that a health department can provide vaccine: VFC or private stock. VFC is a federal vaccine program (Vaccine for Children) that provides free vaccine for those who meet the VFC eligibility requirements (please see <http://www.cdc.gov/vaccines/programs/vfc/providers/elig-scrn-rec-doc-req.htm> to learn about these requirements). No vaccine preventable disease outbreaks have been reported in Mineral County in the past five years.

During the 2010 H1N1 pandemic influenza, the Mineral County Health Department administered 638 doses of H1N1. Of those, 569 were unique patients. Two hundred thirty-eight clients were under the age of 19 and 178 clients were under age 10.

Nation-wide only 20-26% of adults receive pneumococcal vaccine. Increased incidence of pertussis in children and infants is attributed to adults.

The Mineral County Health Department PHN staff work well together, meet regularly and continually assess methods to improve immunization rates county-wide. Both the WIC program and the County’s Health Officer work to refer and capitalize on opportunities to immunize. With the recent addition of a well-child check-up program at the MCHD, long-standing school-based programs, and staff competent in both the administration and documentation of immunizations have all improved and continuously improve Mineral County vaccine preventable disease rates.

Limitations

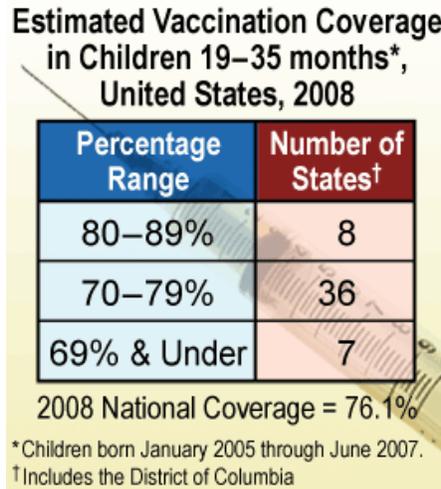
Data available for immunization rates statewide is for children only. The relevance of this data is impacted by several variables: Many Missoula pediatricians do not use the MT DPHHS

⁵⁹ <http://www.immunize.org/catg.d/p2010.pdf>

⁶⁰ <http://www.cdc.gov/vaccines/recs/schedules/downloads/adult/mmwr-adult-schedule.pdf>

immunization registry (WIZRD); shortages of Hib affected availability and rates; history of chicken pox cannot be noted in WIZRD; Recent changes in adult vaccine recommendations – not entered into the registry; parental refusals are not entered into the registry; parents requests for ‘extended’ immunization schedules cannot be entered and several other variables affect apparent immunization rates for both Mineral County and other Montana counties.

Comparison to National Data



<http://www.cdc.gov/Features/dsChildImmunization/>

Vaccines in the recommended series (called the 4:3:1:3:3:1 series) are:

- Four or more doses of diphtheria, tetanus and pertussis vaccine (DtaP)
- Three or more doses of polio vaccine
- One or more doses of measles, mumps and rubella vaccine (MMR)
- Three or more doses of *Haemophilus influenzae* type b vaccine (Hib)
- Three or more doses of hepatitis B vaccine
- One or more doses of varicella (chickenpox) vaccine

"Vaccination is one of the most important things parents can do to protect their children's health," said Dr. Melinda Wharton, deputy director of CDC's National Center for Immunization and Respiratory Diseases. "Thanks to the hard work of doctors and nurses and other immunization providers and the commitment of parents, rates are still high, but we must all continue to work hard to reach those children who are not fully vaccinated."⁶¹

Inference Statement

Trust for America’s Health offers a summary of the significance of under-immunized adults: “Nationally, 33.1 percent of seniors had not been immunized against pneumonia (Montana – 28.8%), and even in the state with the highest immunization rate - Oregon - more than one

⁶¹ <http://www.cdc.gov/Features/dsChildImmunization/>

quarter (26.8 percent) of seniors were not immunized. Washington, D.C. had the lowest number of seniors immunized, with nearly half (45.6 percent) of seniors not immunized.”

“Overall, the *Adult Immunization* report found millions of American adults go without routine and recommended vaccinations each year, which leads to an estimated 40,000 to 50,000 preventable deaths, thousands of preventable illnesses, and \$10 billion in preventable health care costs each year. In addition to low rates of pneumonia immunizations, only 2.1 percent of eligible adults have had the tetanus, diphtheria, and whooping cough vaccine in the previous two years; only 10 percent of eligible adult women have had the human papillomavirus (HPV) vaccine; and only 36.1 percent of all adults were vaccinated against the seasonal flu in 2008.

The report outlines a number of policy recommendations to increase rates of adult vaccinations. Some top recommendations include:

- **Close coverage gaps:** Providers should be required to offer full coverage for all vaccines recommended by the Advisory Committee on Immunization Practices (ACIP); Medicare should fully cover all recommended vaccinations under Part B; and a Vaccines for Uninsured Adults (VFUA) Program should be created to cover all adults who are uninsured.
- **Consider post-health reform scenarios:** As any vaccine-related provisions are being phased in, steps should also be taken to expand support of existing adult vaccine programs during the interim time before these proposals are in full effect, and a Vaccines for Uninsured Adults (VFUA) Program would still need to be created to cover adults who will remain uninsured after reform.
- **Increase public education:** CDC and local and state health departments should receive increased resources to create and manage broad public education campaigns targeted at improving adult immunization rates, including communicating about the effectiveness and safety of vaccines.
- **Increase provider and patient information:** Standard practices should be developed to review patients' immunization histories and vaccinations should be offered at appropriate medical encounters, such as during physicals, cancer screenings, and pre-natal visits. Health providers should also play an increased role in reducing transmission of disease and set an example by complying with the recommended vaccines to protect themselves, their staffs, and their patients.
- **Increase research, development, and production:** The National Institutes of Health (NIH), CDC, and the U.S. Food and Drug Administration (FDA) should receive increased resources for vaccine research and development, including safety surveillance and research, and incentives should be provided for development and research in the United States to assure supplies of vaccines, especially during times of crisis⁶².”

Depending on the client’s entry into the healthcare delivery system, immunizations may or may not be assessed and administered – regardless of age. The immunization program at the MCHD is dynamic and works actively with community partners to improve the immunization rates of its citizens across the life span. Personal choice and the point of entry into the healthcare system continue to be potential barriers to optimal immunization rates statewide.

⁶² <http://healthyamericans.org/report/73/adult-immunization-2010>

Access to Healthcare

HRA Table 10: Access to healthcare

Indicator	NW	OW	O
Go outside county for HC	40% yes	33% yes	50% yes
Health insurance	80% yes	92%	74% yes

Access to Health Care

Findings

Of the respondents assessed in both the HRA and the Quality of Life Survey, 33-50% goes outside of Mineral County for their healthcare needs. Of those, 50% of females and 40% of males did not feel that the available healthcare was at the level of quality that they believe is necessary. Cost for local acute care was a consistent concern of respondents in the Quality of Life Survey.

Twenty two percent of Mineral County residents are covered by Medicaid. With 21% of the population 65 or older, Medicare is a primary provider. With the third highest unemployment rate in Montana, it would be expected that low cost healthcare services would be a community preference. It was significant to note that the primary pay source for mental health came from Medicaid (44%).

Limitations

Many aspects of healthcare access are based on individual perceptions. Data that specifies access related to outcomes and population health is not easily applied and/or transferable to Mineral County.

Comparison to National Standards – Data

Early Detection

Mammography is a screening method that has been shown to reduce mortality due to breast cancer by approximately 20-25% over 10 years among woman aged 40 years and over.

- In 2006, 28% of women in Montana aged 40 years or older, reported not having had a mammogram within the last 2 years. Up to 60 percent of deaths from colorectal cancer could be prevented if persons aged 50 and older were screened regularly. Colorectal cancer can be prevented by removing precancerous polyps or abnormal growths, which can be identified during a fecal occult blood test, sigmoidoscopy or colonoscopy.
- In 2006, among adults in Montana aged 50 years or older, 47% reported never having had a sigmoidoscopy or colonoscopy.
- 72% reported not having had a fecal occult blood test within the past two years.

Mammography is provided by a cooperative project that employs a trailer that is shared with three other counties. Colon screening is available at the Mineral Community Hospital. There was not assessment of fecal occult tests in Mineral County.

No Health Care Coverage

With the U.S. health care system changing rapidly, health care plans (e.g. health insurance, HMOs and Medicaid/Medicare) need to ensure that all Americans have access to affordable, high-quality preventive services.

- In 2007, 20% of adults aged 18-64 in Montana reported having no health care coverage.

Mineral County – with high unemployment rates, an aging population and high levels of poverty also has uninsured rates at or higher than the Montana state rates of 18 – 24.6% uninsured⁶³. Percent of children with health insurance in Mineral County is measured by those with Medicaid or the Montana Healthy Kids (MHK) (previously CHIP) programs: 43% of Mineral County’s children are on Medicaid and 14% are on the MHK insurance⁶⁴. Over half of the county’s children insured are covered by federal health insurance.

Inference Statement

To learn more about the Mineral County Health Department, please see:

<http://www.mineralcountyhealth.com/> and their Facebook page at:

<http://www.facebook.com/pages/Mineral-County-Health-Department/142084009146315>

For more information about the Mineral Community Hospital, please see:

<http://www.mineralcommunityhospital.com/>

Access to healthcare is determined by many subjective and objective variables. The preliminary findings point strongly to the need to more thoroughly assess this fundamental determinant of population health.

CHA Findings – Secondary Data

The top three leading causes of death in Mineral County – as indicated by the death certificates filed for Montanans (with the cause of death being classified according to the tenth revision of the International Statistical Classification of Diseases and Related Health Problems) are⁶⁵:

1. Cancer
2. Heart Disease
3. Unintentional Injury and Chronic Lower Respiratory Disease share the same rate

⁶³ <http://www.dphhs.mt.gov/qad/beyondrural.pdf>

⁶⁴ <http://montanakidscount.jcsecure.com/filelib/67.pdf>

⁶⁵ Data provided by MT DPHHS

Emergency Department Logs

Mineral Community Hospital Emergency Department (ED) rankings of presenting conditions and selected health indicators: Mineral County Health Department Community Health Assessment, 2011 (see Appendix H for ED log example):

Method: Three months for each of three years of ED logs were randomly selected by hospital personnel and were reviewed for gender, admitting diagnosis, treatment, age and disposition. Eight diagnostic groups were identified that are common across the three years assessed. All diagnoses identified in the review fall into one of the eight categories of these presenting conditions. They are:

1. Infections/illness
2. Asthma/allergies
3. Dental
4. Chronic disease
5. Injury
6. Maternal-neonate health
7. Mental health
8. Substance abuse

The years and months that were randomly selected were: 2000 ((January, May and August), 2005 (January, March and July) and 2009 (January, February and March).

Total ED admissions and daily averages (measured per 90 days or three months):

2009 = 382 total visits; 4.2 ED admissions per day

2005 = 335 total visits; 3.7 ED admissions per day

2000 = 386 total visits; 4.3 ED admissions per day

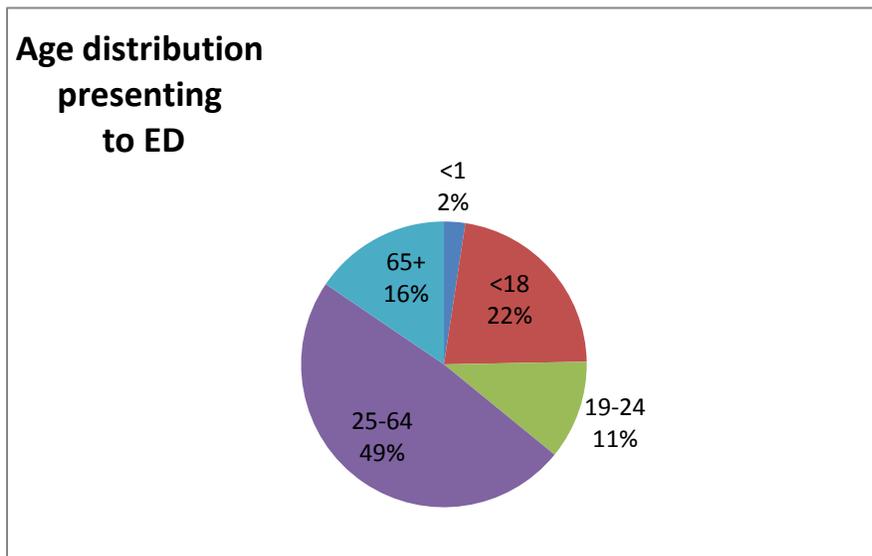
Total ED visits for assessed time period: 1103

Rankings:

ED Table 1: Percentage of ED admissions by age groups for **all** conditions (1 – 8 as above)

Year	% 1 y.o. or <	% 18 y.o. or <	% 19 - 24	% 25 - 64	% > 64
2009	4.2	24.6	13	49.3	8.9
2005	5	21.5	11	38.8	23.7
2000	1.3	21	9.6	52.8	15.3

Fig. 1: Age distribution of ED admissions for **all** three years (2000, 2005 & 2009)



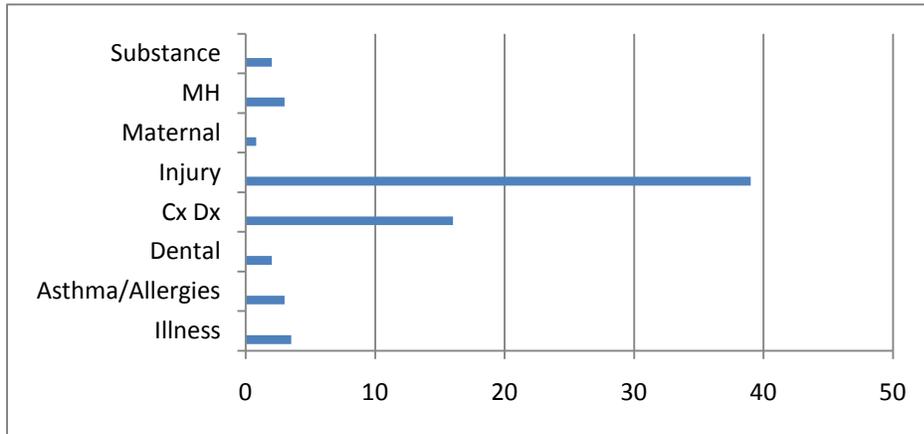
ED Table 2: ED admissions by gender

Year	Male Total #	Male %	Female Total #	Female %
2009	193	50.1%	192	49.9%
2005	204	54.4%	172	45.6%
2000	242	60%	161	40%

ED Table 3: **Percent** of persons with select health conditions presenting to ED

Year	Infection/illness	Asthma/allergies	Dental	Chronic Disease (CxDx)	Injury	Maternal/Neonate	Mental Health	Substance Abuse
2009	31.8	1.8	1.8	17.5	38.5	0.5	5.2	2.9
2005	26.6	3.3	3.6	23.6	37	0.8	3.6	1.5
2000	42.8	3.9	0.8	9	40.4	1	1.3	0.8

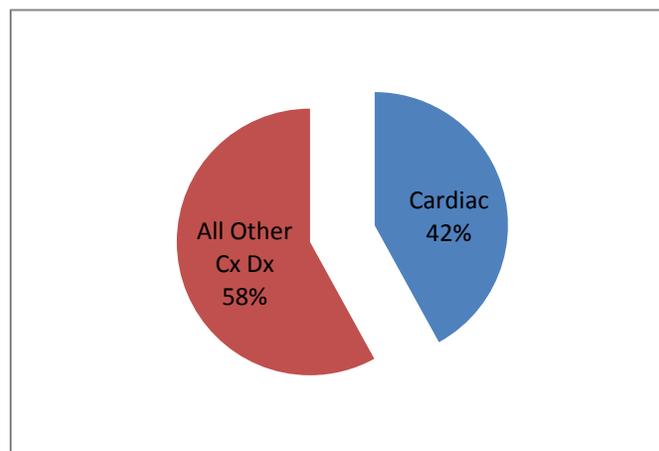
ED Fig. 2: **Percent** of all ED admissions by health conditions for all three years (2000, 2005 & 2009)



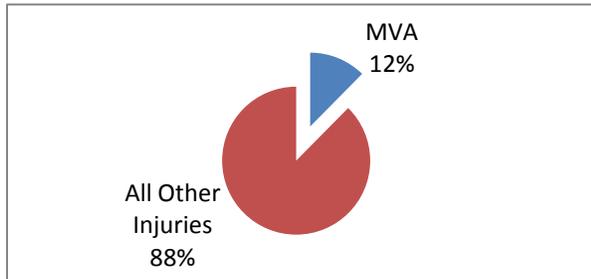
ED Table 4: Sentinel health conditions identified are Mental Health (MH), Cardiac, Dog Bites, Seizures, Motor Vehicle Accidents (MVA), Migraines, Violence and Substance Abuse – number of unique encounters

Year	MH	Cardiac	Dog Bites	Seizures	MVA	Migraines	Violence	Substance Abuse
2009	8	24	3	4	21	9	11	2
2005	7	28	2	4	18	11	6	5
2000	3	24	9	1	14	7	3	4

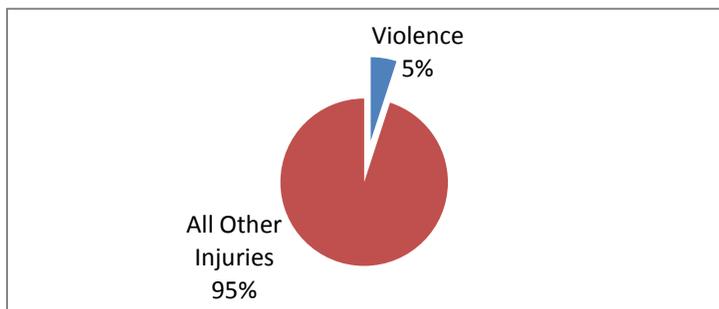
ED Fig. 3: Select sentinel conditions as a percentage of total presenting: Cardiac of all Chronic Disease (from Fig. 2)



ED Fig. 4: Select sentinel conditions as a percentage of total presenting: MVA of all Injury (from Fig. 2)



ED Fig. 5: Select sentinel conditions as a percentage of total presenting: Violence of all Injury (from Fig. 2)



Injury and Violence

Findings

Motor vehicle crashes

- The leading cause of injury and fatality in MT ages 1-44
- 47.9% of fatal crashes in 1999 were alcohol related
- MT has the 2nd highest motor vehicle death rate in U.S.

Limitations

Much of the available data is regional. Given the main and long transportation corridors, high poverty and unemployment rates and the rates of alcohol and other controlled substance abuse, more primary data needs to be designed and evaluated. A data subgroup to this category is domestic abuse. The researchers were unable to locate any local data except for police reports and ED Log entries. No empirical data was available on the age and gender distribution of domestic violence in Mineral County. Physical violence in the community setting appeared to be a co-morbidity of alcohol consumption, but that is not an empirical finding as the data was not specifically tallied at the point of entry into care.

*Comparison to National Data*National Domestic Violence Statistics⁶⁶

- According to the U.S. Surgeon General, domestic violence is the leading cause of injury to women in the United States.
- The American Medical Association estimates that their male partners assault 2 million American women each year.
- The U.S. Department of Justice estimates that 95% of the victims of domestic violence are women.
- A woman is beaten every 15 seconds in the United States. (Bureau of Justice Statistics, Report to the nation on Crime and Justice. The Data. Washington DC Office of Justice Program, US Dept. of Justice. Oct 1983)
- 35% of all emergency room calls are a result of domestic violence.
- Of those who abuse their partner, well over 65% also physically and/or sexually abuse the children.
- Each day4 women die as a result of abuse.
- Each day3 children die as a result of abuse.
- The Federal Bureau of Investigation reports that 32% of female homicide victims are killed by their intimate partners. (Federal Bureau of Investigation, *Crime in the United States 1999.2000*)
- Anywhere from 1-3 million women are battered each year by their intimate partner. (Bureau of Justice Statistics, *Intimate Partner Violence*. Washington DC, 2000.)
- In the United States, a woman is more likely to be assaulted, raped, or killed by an intimate partner than by any other type of assailant. (ibid.)
- Nearly one-third of American women report being physically or sexually abused by a husband or boyfriend at some point in their lives. (Commonwealth Fund Survey, 1998.)
- Approximately 85% of the victims of domestic violence are women. (Bureau of Justice Statistics, *Intimate Partner Violence*. Washington DC, 2000.)
- 37% of all women who sought care in hospital emergency rooms for violence related injuries were injured by a current or former spouse, boyfriend, or girlfriend. (US Department of Justice, *Violence Related injuries Treated in Hospital Emergency Departments*, August 1997.)
- 11% of all murders in 1998 were the result of domestic violence. (Office of Justice Programs, May 17, 2000 press release, www.ojp.usdoj.gov)
- Domestic violence occurs to all types of women regardless of income, age, race, education, or belief system. (Office for Victims of Crime, *Domestic Violence Victimization*, 2002)
- Victimization by domestic violence is usually not a single even. If a woman is abused once, her risk of further abuse is high, and this abuse often becomes not only more frequent over time, but more severe. (ibid.)
- Domestic violence is a major contributing factor to other problems including child abuse, neglect, drug & alcohol abuse, emotional problems, job-loss, homelessness, and attempted suicide. (ibid.)

⁶⁶ http://www.domesticpeace.com/ed_nationalstats.html

- The social and economic costs of domestic violence are enormous and generally uncounted and unrecognized. Public education, awareness, and community support are crucial for effective intervention. (ibid.)
- On average, more than three women are murdered by their husbands or boyfriends in this country every day. (Bureau of Justice Statistics Special Report, *Intimate Partner Violence and Age of Victim 1993-9*, October 2001.)
- A child's exposure to the father abusing the mother is the strongest risk factor for transmitting violent behavior from one generation to the next. (American Psychological Association, Report of the American Psychological Association Presidential Task Force on Violence and the Family, 1996.)
- Slightly more than half of female victims of domestic violence live in households with children under age 12. (US Department of Justice, *Violence by Intimates; Analysis of Data on Crimes by Current or Former Spouses, Boyfriends, and Girlfriends*, U.S. Department of Justice, March 1998)
- Studies show that child abuse occurs in 30-60% of family violence cases that involve families with children. (Edleson, J.L., Violence Against Women, *The Overlap Between Child Maltreatment and Woman Battering*, February, 1999.)
- The National Domestic Violence Hotline has received more than 700,000 calls for assistance since February 1996. -*National Domestic Violence Hotline, December 2001.*
- Nearly one-third of American women (31 percent) report being physically or sexually abused by a husband or boyfriend at some point in their lives - *Commonwealth Fund Survey, 1998.*
- It is estimates that 503,485 women are stalked by an intimate partner each year in the United States - *National Institute of Justice, July 2000.*
- Estimates range from 960,000 incidents of violence against a current or former spouse, boyfriend, or girlfriend each year to 4 million women who are physically abused by their husbands or live-in partners each year. - *Violence by Intimates: Analysis of Data on Crimes by Current or Former Spouses, Boyfriends, and Girlfriends*, U.S. Department of Justice, March, 1998.
- Studies show that child abuse occurs in 30-60% of family violence cases that involve families with children. - "The overlap between child maltreatment and woman battering." *J.L. Edleson, Violence Against Women, February, 1999.*
- While women are less likely than men to be victims of violent crimes overall, women are 5 to 8 times more likely than men to be victimized by an intimate partner - *Violence by Intimates; Analysis of Data on Crimes by Current or Former Spouses, Boyfriends, and Girlfriends*, U.S. Department of Justice, March 1998
- Violence by an intimate partner accounts for about 21% of violent crime experienced by women and about 2% of the violence experienced by men. - *Violence by Intimates; Analysis of Data on Crimes by Current or Former Spouses, Boyfriends, and Girlfriends*, U.S. Department of Justice, March 1998
- In 92% of all domestic violence incidents, crimes are committed by men against women. - *Violence by Intimates; Analysis of Data on Crimes by Current or Former Spouses, Boyfriends, and Girlfriends*, U.S. Department of Justice, March 1994
- Of women who reported being raped and /or physically assaulted since the age of 18, three quarters (76 percent) were victimized by a current or former husband cohabitating partner, date, or boyfriend. - *Prevalence Incidence, and Consequences of Violence*

Against Women: findings from the national Violence Against Women Survey, U.S. Department of Justice, November, 1998

- In 1996, among all female murder victims in the U.S., 30% were slain by their husbands or boyfriends - *Uniform Crime Reports of the U.S. 1996, Federal Bureau of Investigation, 1996*
- 31,260 women were murdered by an intimate form 1976-1996 - *Violence by Intimates; Analysis of Data on Crimes by Current or Former Spouses, Boyfriends, and Girlfriends, U.S. Department of Justice, March 1998*
- Forty percent of teenage girls age 14 to 17 report knowing someone their age who has been hit or beaten by a boyfriend. - *Children Now/Kaiser Pemaente Poll, December, 1995*
- Family violence costs the nation from \$5 to \$10 billion annually in medical expenses, police and court costs, shelters and foster care, sick leave, absenteeism, and non-productivity - *Medical News, American Medical Association, January, 1992*
- One in five female high school student reports being physically or sexually abused by a dating partner. - *Massachusetts Youth Risk Behavior Survey (YRBS), August 2001*

Inference Statement

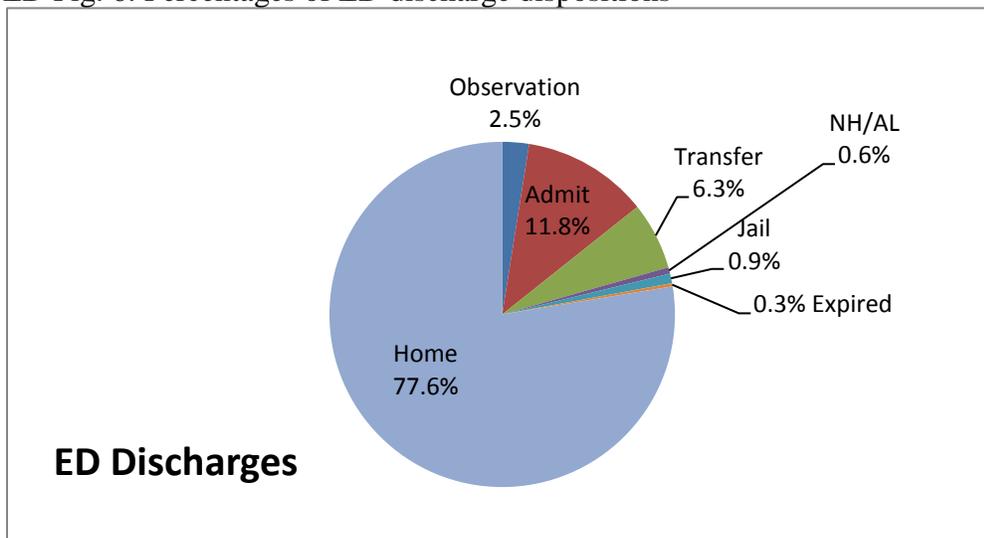
Assessing and understanding the causes, incidents and co-morbidity of violence is a joint effort of many professional disciplines that requires a transparent collaborative process – from health departments, schools, legal systems and mental health workers to business owners and community stakeholders. Nationally there is much work to do and Mineral County – with a history of recent violent murder and domestic violence – is no exception. This is an important population health challenge to address. What ‘goes on behind closed doors’ must be brought into the light of understanding and community action.

Additional ED Data

ED Table 5: Disposition of patients exiting ED

Years	ED Hold/observation	Admit	Critical Transfer	Nursing Home/AL	Jail/Police	Deceased	Home
2000, 2005 & 2009	28	129	70	7	10	3	856

ED Fig. 6: Percentages of ED discharge dispositions



Limitations

Some of the ED data was inconsistent and entries were dependant on the nurse on duty. Some hand writing was difficult to read. Electronic medical records and coding would make the access to this important data more easily and efficiently acquired. While some duplicated entries were evident, but tracking repeat visits/unresolved conditions or assessing the ‘frequent flier’ encounters, there is no system to assess these variables.

Inference Statement

With the largest majority of ED admissions being discharged home, follow-up and appropriate referral services need to be strengthened. Coding and the use of informational technology will greatly improve both the availability and quality of data that is required to effectively assess a population’s health and the many determinants that impact that health – and therefore its viability and economic vigor.

Maternal Child Health

Findings

Data collected by the Montana State Department of Public Health and Human Services is primarily regional data. As previously noted, the regional data is not in alignment with the local data discovered through this CHA process. A second secondary research was conducted accessing local data only.

Rankings – Live Births Mineral County, MT:

Live Births: January 10, 2010 – May 3, 2010: 8
 Live Births: May 4, 2010 – January 26, 2011: 20
 2009: 26 live births
 Total Live Births 2009-10: 54

Over a two year period (2009-2010) one live birth to a 15 year old mother and six live births to six 19 year old mothers.

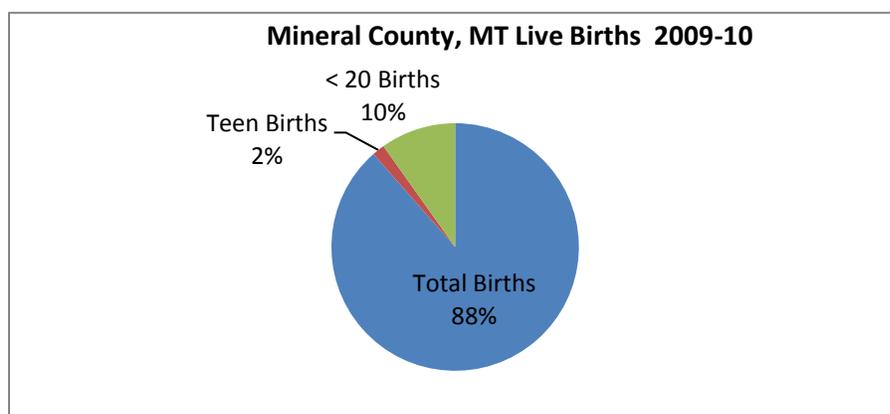
1.85% Teen pregnancy → mother

11.11% < 20 year old → mother

During the school year 2007-08 there were six pregnancies to students 15 – 18 years old in one Mineral County School. STD rates in the same school also increased.

During 1996-2000, one out of four MT teens who had a live birth or an abortion indicated they had a prior pregnancy ⁶⁷

MCH Fig. 1: Young mothers as a percentage in Mineral Co.



MCH Table 1: Leading Health Indicators for mothers and babies⁶⁸

Behavior Health Indicator	Percent in Mineral Co.	Percent in US	Severe Rate as a Percent
Cigarette use during pregnancy	34%	10.7%	14.5%
Late entry into prenatal care	42%	16%	20%
Percent low birth weight	9%	6%	9.8%
Percent of children – no lead blood test	97.4%	<15%	<7%
Percent women with no PAP Smear	19%	7% ⁶⁹	NA – multiple variables

⁶⁷VISTA Volunteer, Aaron Lessen, for MT DPHHS (2007)

⁶⁸ MT Primary Care Association; mlevine@mtpca.org 2010

⁶⁹<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1492158/>

WIC:

For the months of January and February 2011 there were approximately 100 Women Infant and Children (WIC) encounters each of the two months (MTDPHHS, 2011 WIC Newsletter).

Approximately 100 WIC clients are served through the MCHD. The MCHG WIC Clinic requires specialized training (S. Hazlett, RN) and operates as satellite clinic of Sander's County. Given the 77 mile span of Mineral County and the long driving distances coupled with the clientele's low income, MCHD PHNs feel that other satellite clinics may be of benefit to the population in need and at risk (low income mothers and children).

Fetal Alcohol Syndrome / Fetal Alcohol Effect: Recognized as the leading cause of mental retardation and neurological dysfunction in children and is 100% preventable. (Please see the alcohol and substance abuse data for Mineral County).

MCH Table 2: MCH Data from the MT DPHHS

Maternal and Child Health Indicator	County	Montana	Data Source/ Definition
1. Infant mortality (death within 1st year): rate per 1000 live births	<i>FICMR</i>	6.1 (5.5-6.7)	Vital Statistics (OVS) death and live birth data, 2004-2008. The number of infant (birth through 364 days of age) deaths, divided by the total number of live births, multiplied by 1,000.
2. Entrance into prenatal care in 1st trimester: percent of live births	76.9% (71.4-82.4)	83.9 (83.6-84.2)	Vital Statistics (OVS) live birth data, 2003-2007. The number of live births with prenatal care (PNC) reported as starting in the first trimester (first three months) of pregnancy, divided by the total number of live births (records with unknown timing of PNC initiation excluded), times 100.
3. Births to adolescents (15-17 years): rate per 1000 population	12.9 (4.2-30.0)	29.2 (27.9-30.5)	Vital Statistics (OVS) live birth data, 2004-2008. The number of live births to mothers 15-17 years of age, divided by the estimated population of females 15-17 years of age.
4. Low birth weight (< 2500 grams): percent of live births	9.2% (5.8-13.9)	7.3 (7.1-7.5)	Vital Statistics (OVS) live birth data, 2004-2008. The number of live births with a birthweight less than 2500 grams, divided by the total number of live births, unknown BW infants excluded.
5. Child mortality (1 through 14 years): rate per 100,000	<i>No local data</i>	18.4 (15.3-21.9)	Vital Statistics (OVS) death data, 2004-2008, and U.S. Census Population Estimates, May 2009 release. The number of deaths to children 1 through 14 years of age, divided by the estimated population of children 1 through 14 years of age, multiplied by 100,000.
6. Neonatal (under 28 days of age) mortality: rate per 1000 live birth	<i>No local data</i>	3.3 (2.9-3.8)	Vital Statistics (OVS) death and live birth data, 2004-2008. The number of deaths to infants under 28 days of age, divided by the total number of live births, multiplied by 1000.
7. Post neonatal (28 through 364 days of age) mortality: rate per 1000 live births	<i>No local data</i>	2.7 (2.4-3.1)	Vital Statistics (OVS) death and live birth data, 2004-2008. The number of deaths to infants 28 through 364 days of age, divided by the total number of live births, multiplied by 1000. The number of live births with gestational diabetes reported during pregnancy, divided by the total number of live births (records with unknown gestational diabetes excluded), times 100
8. Gestational diabetes: percent of live births	3.8% (1.8-7.1)	2.5 (2.4-2.6)	Vital Statistics (OVS) live birth data, 2004-2008
9. Smoking during pregnancy: percent of live births	32.0% (25.1-40.2)	18.3 (18.1-18.6)	Vital Statistics (OVS) live birth data, 2003-2007. The number of live births with smoking reported during pregnancy, divided by the total number of live births (records with unknown smoking during pregnancy excluded), times 100.
10. Pre-term (<37 completed weeks gestation) birth: percent of live births	7.6% (4.5-11.9)	10.1 (9.8-10.4)	Vital Statistics (OVS) live birth data, 2004-2008. The number of live births at a gestational age of less than 37 completed weeks, divided by the total number of live births (records with unknown gestational age excluded), times 100.

Limitations

The data on Mineral County births is compiled through the ‘Follow Me’ program (a MCH Block Grant program that is no longer funded) at Missoula City County Health Department and initiated at the region’s birthing center – Community Medical Center in Missoula, MT. Other birthing centers and a private practice do not collect ‘follow-me’ data. Not all mothers sign the Follow-Me forms. This data is limited by the participating facilities and the number of births as well as by the fact that there is not a pediatrician in Mineral County. Accurate county information regarding follow-through on such important indicators as low birth weights, high risk mothers or infant exposure to alcohol en utero or second-hand smoke are not available.

Comparison to Regional and/or National Data

As the oldest federal block grant, research associated with MCH programs is extensive. One recent study demonstrates the need and performance measures related to maternal and child health: Please see <http://www.dphhs.mt.gov/PHSD/family-health/mchc/documents/NPMSPMHSI.pdf>.

Assessing this population is an extensive process and was not completed for this CHA. Raw data – primary and secondary – of gross numbers was all that was assessed and therefore it is not relevant to compare to national programs. Women and children receiving WIC is in alignment with state and national averages. It is of importance that – given the high poverty and unemployment rates, that this number (of WIC participants) seems low for Mineral County.

Inference Statement

According to the CDC, teen pregnancy is still a crisis despite rate decreases. Conditions that impair length and quality of life with this population persist in Mineral County: Late entry into prenatal visits; smoking during (and after) pregnancy; alcohol use leading to and during pregnancy; high STD rates with potentially high rates of pelvic inflammatory disease (PID) and resulting infertility; and determinates of population health such as gestational diabetes are higher than state rates in Mineral County. Maternal child health is at the foundation of a community’s health and wellbeing. While the above findings are basic, the data point to a remarkable need to strengthen the understanding of the factors affecting, contributing to and that may improve the health of this important community aggregate.

Relationships to Standards – Diagnostic Reasoning Inference Statement

Assess ‘Major Prevention Opportunities to Improve Health in Montana’ (2006 DPHHS document) as compared to MCHD CHA findings

MAJOR PREVENTION OPPORTUNITIES⁷⁰

Target Population	Public Health Problem	Intervention
Infants < 1	Low birth weight SIDS	Provide adequate prenatal care Promote baby-on-back sleep position Provide smoking cessation counseling and treatment for moms and others in baby's family
Pregnant women	Smoking in pregnancy Drinking in pregnancy	Provide smoking cessation counseling and treatment, especially for American Indian women Provide substance abuse counseling and treatment
Children (1 to 14)	Unintentional injuries Tobacco use Overweight/obesity	Provide programs to decrease drinking/driving by parents and others caring for children Increase seat belt and safety seat use Promote use of helmets for bicycle riders Increase prevention efforts to decrease tobacco use and exposure to tobacco smoke Provide programs to increase physical activity and improve diet choices
Adolescents and young adults (14 to 44)	Unintentional injuries Overweight/obesity Tobacco use	Enforce graduated driver's license law Empower parents to set rules for young drivers Promote primary seat belt law Provide programs to decrease drinking/driving Provide substance abuse counseling Promote use of helmets by riders of cycles and horses Establish and promote efforts to increase physical activity and improve diet choices Increase tobacco use prevention and cessation programs
Adults (45 to 64)	Cancer Heart Disease Overweight Obesity Diabetes	Increase early detection of cancer to decrease morbidity and mortality Establish and promote efforts to increase physical activity and

⁷⁰ http://www.dphhs.mt.gov/PHSD/prevention_opps/pdf/2006-Major-Prevention-Opps-9-25-06.pdf

	Tobacco use	improve diet choices Promote efforts to improve care for cancer and cardiovascular disease Increase tobacco use cessation efforts
Older adults (65+)	Heart Disease Diabetes Stroke Cancer Overweight/Obesity Tobacco Use	Increase early detection of cancer to decrease morbidity and mortality Promote efforts to improve care for cancer and cardiovascular disease Promote efforts to increase early recognition and appropriate treatment of stroke Establish and promote efforts to increase physical activity and improve diet choices Increase tobacco use cessation efforts
All adults	Significant emotional distress	Increase early detection and appropriate treatment of depression

These prevention opportunities set by then Director Joan Miles of the MT DPHHS⁷¹, are relevant for Mineral County, as they are for the state. Poverty, unemployment and violence are other determinates that must be addressed. Ms. Miles, in her opening remarks to this report stated: *“Determinants of health include genetics, social circumstances, environmental conditions and medical care. But, the most important determinants are the behavioral choices that individual Montanans make for themselves and for the children who rely on them.”* In the case of Mineral County, the determinate of economy is as significant if not more so than the behavioral determinants: Are the behaviors a symptom of the economic, social and environmental determinates?

Most of the major causes of premature death, as well as much disease and most injuries in Montana are preventable. In many instances interventions known to be efficacious are available. In this section the major prevention opportunities and related intervention steps have been highlighted by Ms. Miles’s report. Using this work and applying Mineral County data and the appropriate inferences provides a template to make use of this CHA and to work with community partners to develop a Community Health Improvement Plan (CHIP). From the CHA and the resulting CHIP a population health strategic plan can be completed with all Mineral County stakeholders: The over-arching goal of this work is to provide a road map for direction to improve population health for our families, friends and community for today and the future.

Alignment with HP 2010 and RHP 2010

Healthy People 2010 (and the recently released HP 2020) established the leading health indicators (LHI) as:

⁷¹ http://www.dphhs.mt.gov/PHSD/prevention_opps/pdf/2006-Major-Prevention-Opps-9-25-06.pdf

- ✓ Physical Activity
 - ✓ Overweight and Obesity
 - ✓ Tobacco Use
 - ✓ Substance Abuse
 - ✓ Responsible Sexual Behavior
 - ✓ Mental Health
 - ✓ Injury and Violence
 - ✓ Environmental Quality
 - ✓ Immunization
-
- ✓ Access to Health Care

This CHA has reviewed these indicators from the HRA and the Quality of Life Survey tools fairly thoroughly. Of the LHI, Overweight and Obesity, Environmental Quality and Substance Abuse appear to be the most significant indicators of health for Mineral County.

10 Essential Public Health Services and PHAB Domains

The ‘10 EPHS’ (established by the CDC) are:

1. Monitor health status to identify and solve community health problems.
2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships and action to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure competent public and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.

Each of the ‘10 Essential Public Health Services’ is relevant to the LHI in Mineral County. Community partnerships and public health capability and capacity needs to be continually strengthened in-order to employ these essential functions to address the challenges created by the ill health, decreased quality and shortened life of the citizens of Mineral County as a result of the conditions that adversely affect this population’s health.

The goal of the voluntary national accreditation program (through PHAB) is to improve and protect the health of the public by advancing the quality and performance of state and local public health departments. The domains are based on the framework created by the 10 EPHS and further define how to implement these services. As Mineral County partners complete the CHIP and the Strategic Plan for population health, the PHAB domains, standards and measures may be used as the framework for these plans.

Asset Mapping

Communities everywhere have both assets and liabilities. The purpose of the CHA is to help identify areas where a community may have areas needing improvement, but also intends to demonstrate areas where a community can rely on and develop strengths - assets. It is assumed that the goal of any government entity is the responsible allocation of available resource toward the goal of quality of life for all citizens.

Liabilities and assets have been identified throughout this document. Mapping helps to identify untapped assets (such as improved recreational opportunities and therefore potential for improved economy). Mapping of assets helps with planning and to offer a visual representation of sheltering potentials, assets in the event of a flood (such as heavy equipment) and where key emergency services are located. Following are two beginning examples of asset mapping that might be employed in the CHIP and emergency planning processes. More maps could benefit community planning. For example, if the county wants to attract industry, then the esthetics and environmental conditions need to be considered (i.e., a contemporary green building company may not want to be near a salvage yard). With only 8% of the county's land available for county development, asset mapping may prove to be an important tool for improving population health.

Asset Map Fig. 1: Asset Mapping of bridges, road departments and schools (as the logical sheltering facilities in the event of a disaster)



Asset Map Fig. 2: Asset mapping of EMS, Fire and Healthcare services



Assets Fig. 3: Recreation - example



3 school gyms, 3 private fitness gyms, 3 museums, 3 community centers, 1 library & the Co. Fairgrounds offer recreation for a broad audience



Outdoor recreation includes several fishing & boating access, river sports such as kayaking & rafting, Lolo Nat'l Forest camping, Lookout Pass downhill skiing, multiple trails for hiking, cross country skiing and biking, snowmobiling and off-road vehicles and horseback riding. Hiawatha Trail offers mountain biking trails and the county's many lakes offer more recreational opportunities



With over eight casinos and bars in Mineral Co., there are other 'recreational' activities available as well



Superior had a movie theater and all 3 high schools have performance theater areas



School sporting events, 4-H activities and church events add to the recreational offerings

CHA CHANGE Tool – MSU PHN Students

Centers for Disease Control CHANGE Tool Piloted for MCHD

Lisa Clark, RJ Nelsen, & Jill Schatte: NUR 477 – MSU Fall 2010: Summary

The concept of evidence-based practice is extremely relevant to HB 173. In order to maintain relevance and prioritize activities appropriately, it is imperative we use evidence to guide our decisions. Data needed to make decisions does not exist at this point, so the generation of data through a community assessment is necessary and will be most accurate if collected on a community-wide basis using a systematic method to obtain qualitative and quantitative data. The CHANGE tool is based on evidence and provides an opportunity for uniform community assessments that can be compared to one another. (Clark, Nelson and Schatte, December, 2010).⁷²

The CHANGE Tool, from the CDC as a tool for CHA, is labor intensive and requires a designated data entry person – least inconsistent entries are recorded. The tool is effective for specific population groups (such as school aged children) and aligns with the HP 2020 and determinates of health. The tool requires interpretation as its results are not easily understood by a lay audience. The tool requires translation and interpretation to be effective. While it was used to assess school aged nutrition and fitness, the author – in her work with the MSU PUHN Students - found it to be limiting and too time consuming for a broad project – such as has been made possible by HB 173 and ARRA monies for this CHA. The author recommends that the CHANGE Tool – the evidence based best practices tool released by CDC in 2010 – be used for focused community assessments.

Summary of Findings

What has been discovered from the process is that not all activities and interventions at the MCHD are specific to public health (PH), but all do fill an unmet healthcare (HC) need in this frontier county that covers 120 lateral miles 30 miles east of Missoula to the Idaho border. Poverty levels, industry, age distribution, disease distribution and determinants such as healthcare coverage and other available HC, place unique burdens on the provision of PH in Mineral County. These geographic and demographic considerations are important when considering the delivery of PH services and when calculating staff hours needed: These economy

⁷² A copy of their full report is available at bprice@co.mineral.mt.us

issues include travel, time and the added expense incurred with a county vehicle necessary to cover PH services county-wide.

Federal block grants do not cover expenses to implement the programs - added to economy of scale – these are cardinal factors to considering sustainability of population based healthcare. Political understanding and will are essential to the improvement of population health.

Overall Survey Tools and Their Limitations

The data represented here in this CHA has a potential for error – as does any primary and secondary research processes. Respondents may under or over report weight, activity levels and other factors. It was noted in reviewing the Quality of Life Survey's that many participants may have reported earning >\$50,000 per year while also stating that they could not meet their basic needs financially. Levels of knowledge and understanding on behalf of respondents of the items could lead to error in creating inferences from this information. When asked to complete one of the surveys, a key healthcare worker expressed dissatisfaction with 'one more thing we have to do' and this had the potential to create dissatisfied respondents in the pool of employees that she directly supervised.

Another margin for error has been that the work-load and time constraints of community partners has led to this CHA being the primary work of one person: This is not an effective nor a prudent design as there is too much room for subjective interpretation. To off-set this dilemma, throughout the CHA, partners vetted the findings and offered perspectives, corrections and areas needing clarification and missed data. This serves as an initial assessment. It is hoped that partners will build on this document – make corrections – access the most recent US Census Bureau data (2010) when it becomes available and use this first CHA for Mineral County as a framework for future planning – while fully understanding the documents' strengths and limitations.

Community Diagnosis (Equity, Disparity and Implications – PH Statement)

A very important finding of this process has been that regional data is not a valid tool to form and inform a local CHA. If the determinates of health are the national benchmark, then **community demographics** that define those determinates must be **individually considered** to be relevant for assessments and planning at the community and state levels. Please see the following Table: Apples & Oranges:

 <p>Mineral County</p>	 <p>Missoula County</p>
Persons over 65 – 21%	Persons over 65 – 11%
High School Graduates – 83.2%	High School Graduates – 91%
Median income - \$34,985	Median income - \$43,260
Persons per sq. mi. – 3.2	Persons per sq. mi. – 36.9

Public Health Diagnosis from the CHA:

Mineral County Montana is at increased risk for premature death, disability, lost productivity, financial burdens of disease and disability and decreased quality of life related to poor economy, high poverty levels, environmental hazards and threats, ineffective coping as evidenced by high rates of obesity and substance abuse and mental health data. The community assets help to offset the consequences of some of the community’s ill health.

‘If you don’t have your health, you don’t have anything’ is poignant for the vitality and sustainability of Mineral County as a thriving community. In its history, the county has waxed and waned. If the County’s stakeholders plan for a vigorous future, then the health of its population must be well considered and continually assessed and improved. Healthy people make for healthy employees and healthy citizens.

Independent CHA Evaluation – MSU PHN Students Micklewright and Wilcox

Through Montana House Bill 173, funds have been granted for a pilot project to conduct a community health assessment (CHA) for eight counties across Montana. This opportunity has been excellent for the counties, but more importantly will help serve as a guide for the conduction of CHAs for counties across the state in the future. Two Montana State University baccalaureate nursing students have taken this opportunity to apply what they have learned in school to evaluate the CHA conducted in Mineral County, MT as well as 5 others conducted through House Bill 173. To do this they have compared the CHAs (gathered from the Montana Public Health Training & Communication Center website; www.montanapublichealthtcc.org) with national CHA conduction standards set by North Carolina. The purpose of this assessment is to determine the adequacy, reliability and validity of the CHAs and provide recommendations for counties in Montana and the nation for conducting adequate, reliable and valid CHAs.

The first step in the evaluation process was to identify a standard in CHA conduction. The PHN students researched CHAs available online in several states including Minnesota, New York,

North Carolina, and New Mexico. Through scanning the CHAs for completeness and organization, North Carolina was decidedly the leader. The students then discovered that the reason North Carolina consistently led in CHA conduction was due to simple guidelines, broken down into phases, produced by the state. Six phases of these guidelines were then used as evaluation criteria for the CHAs in Montana.

1. The first phase consists of establishing a Community Health Assessment team. The team should consist of members of the community who can provide accurate, pertinent information about the county, acting as advocates for a variety of populations within the community.

Mineral County- Well identified team consisting of members of the community. Areas where each individual contributed to the Community Health Assessment were also identified.

Butte/Silverbow County- Well identified team consisting of members of the community including job titles.

Yellowstone County- Did not identify team members for the CHA.

Cascade County- Did not identify team members for the CHA.

Hill County- Acknowledged members of the CHA team.

Prairie County- Acknowledged members of the CHA team and their titles.

2. The second phase is to collect primary data from community members regarding their values and beliefs about health in the community, concerns of the members, and other issues important to the people.

Mineral County- Collected primary data through surveys of the community, surveys of the health care workforce, interviews of key stakeholders in the community, review of emergency department logs, and observation through a Windshield Survey.

Butte/Silverbow County- Primary data collection was not discussed or identified.

Yellowstone County- Conducted a survey of community members (copies not included in CHA). Key informant focus groups were conducted.

Cascade County- Three community member focus groups were conducted to collect primary data.

Hill County- Dispersed and collected surveys of community members (copies not included in CHA). Interviews with key stakeholders in the community were conducted. Photojournalism was incorporated.

Prairie County- Dispersed and conducted surveys of community members (copies not included in CHA). Interviews with key stakeholders in the community were conducted. Photojournalism was incorporated.

3. The third phase in conducting a community health assessment is the collection of secondary data. North Carolina's guide recommends comparing the county's health statistics to those of the state and trending the data through previous years. This will serve as a guide as to what is happening in the area.

Mineral County- Gathered extensive data from multiple sources and made comparisons to the primary data gathered and the states' statistics utilizing graphs and other visual representations. Mineral County did not have previous primary data to establish trends and did not trend secondary data.

Butte/Silverbow County- Gathered extensive data from multiple sources and made some comparisons to state and national data. Some data was trended and compared to previous secondary data.

Yellowstone County- Gathered extensive data from multiple sources. Compared data to Montana, national, and past county data as well as Healthy People 2010 and 2020 goals.

Cascade County- County-specific as well as regional secondary data was collected and compared to Montana and the US. Some data was trended and compared to previous secondary data.

Hill County- Some county-specific and regional secondary data was collected and compared to the state. Data was minimally trended through previous years.

Prairie County- Some county-specific and regional secondary data was collected and compared to the state. Data was minimally trended through previous years.

4. Phase four of conducting a community health assessment is to analyze and interpret the county data. In this phase, community data is fit together with health statistics.

Mineral County- Analyzed and interpreted primary and secondary data to identify health priorities of the community. Healthy People 2020 was used as the benchmark for county goals.

Butte/Silverbow County- Analyzed and interpreted data to identify trends and root causes of problems.

Yellowstone- Analyzed and interpreted primary and secondary data. Healthy People 2010 and 2020 were used as benchmarks for county goals.

Cascade County- Minimally analyzed and interpreted some secondary data.

Hill County- The assessment mentions analyzing survey data. No analyzation or interpretation was apparent in the CHA. Data was presented in a raw form.

Prairie County- Data was not analyzed or interpreted but presented in a raw form.

5. In the next phase, health priorities are determined. The community health assessment is reported to the community and feedback is elicited from the members. Inferences are made by the community assessment team to determine the health priorities, gathered from phase 4.

Mineral County- Inferences were identified from data. Assets and challenges in the community were addressed to determine how the priorities can be met. Focus groups and informant interviews as well as emergency department logs and surveys were used to help determine priorities which were identified.

Butte/Silverbow County- Inferences were identified from data. Health priorities were identified, and several visual aids identified assets, gaps and needs.

Yellowstone County- Inferences and health priorities were identified from data and discussed. Areas of opportunity were addressed to identify community assets.

Cascade County- Some inferences were identified from data. There were no health priorities set.

Hill County- Very minimal inferences were made from the data, and no health priorities were set.

Prairie County- No inferences were identified from data. There were no health priorities set.

6. The sixth phase consists of creating the Community Health Assessment document. The document will include the process, methods, and findings of the entire community health assessment. The purpose of the document is to present the findings to the community and other interested stakeholders.

Mineral County- Documented extensively the process, methods, and findings of the community health assessment.

Butte/Silverbow County- The document did not include the process and methods of data collection and analysis. It did include findings of the CHA.

Yellowstone County- The process and methods of data collection and analysis were minimally addressed. Extensive findings of the CHA were included.

Cascade County- The document did not include their process and minimally discussed methods of data collection and analysis. It did include findings of the CHA.

Hill County- The document included minimal explanation of the process and methods of data collection and analysis. Limited findings were included.

Prairie County- The document included some explanation of the process and methods of data collection and analysis. It included findings which were limited.

Observations

Instructions for the CHA to be written in Mineral County and across the state included two examples. One published by Lewis & Clark City-County Health Department in Montana, entitled: *2009 Leading Public Health Indicators* which describes in 15 pages a number of health indicators to present an overview of the county's health. The other published by Spokane Regional Health District Community Health Assessment Program, entitled: *Spokane Counts 2009 Update: An Updated Summary of Selected Public Health Indicators*, ranks the county's progress with different health indicators do give an overview of the county's health and highlight areas for improvement. The PHN students felt that these were very poor examples and set the bar for CHA conduction through House Bill 173 below an acceptable level which is why several Montana CHAs fell below this level.

In the future (for statewide CHA direction), it would be prudent to include excellent examples of community health assessments as well as guidelines outlining phases of CHA conduction as North Carolina has done. The Mineral County CHA example met the standards set by North Carolina.

North Carolina Dept. of Health and Human Services. (2011). *Community health assessment; What is a community health assessment?*; Retrieved April 19, 2011 from, <http://www.healthycarolinians.org/assessment/guidebook.aspx>

Appendices

Appendix A: Public Health Accreditation Board Domains

1. Part A: Administrative Capacity and Governance
2. Domain 1: Conduct assessment activities focused on population health status and health issues facing the community
3. Domain 2: Investigate health problems and environmental public health hazards to protect the community
4. Domain 3: Inform and educate about public health issues and functions
5. Domain 4: Engage with the community to identify and solve health problems
6. Domain 5: Develop Public health policies and plans
7. Domain 6: Enforce public health laws and regulations
- Domain 7: Promote strategies to improve access to healthcare services
9. Domain 8: Maintain a competent public health workforce
10. Domain 9: Evaluate and continuously improve processes, programs, and interventions
11. Domain 10: Contribute to and apply the evidence base of public health

Appendix B: Six Areas of Public Health Responsibility from:
<http://www.health.state.mn.us/divs/cfh/ela/ela-short.pdf>

Area 1: Assure an Adequate Local Public Health Infrastructure

Area 2: Promote healthy Communities and healthy Behaviors

Area 3: Prevent the Spread of Infectious Disease

Area 4: Protect Against Environmental Health Hazards

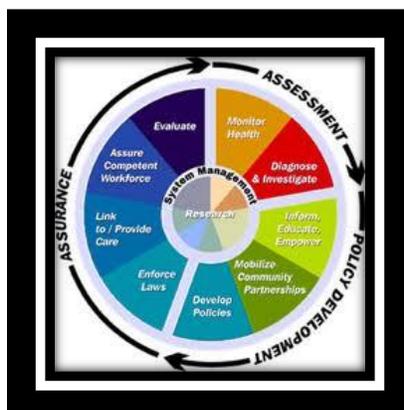
Area 5: Prepare for and Respond to Disasters, and Assist Communities in Recovery

Area 6: Assure the Quality and Accessibility of Health Services

Appendix C: Essential Public Health Services ('10 EPHS')

(<http://www.cdc.gov/od/ocphp/nphpsp/essentialphservices.htm>)

1. Monitor health status to identify and solve community health problems.
2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships and action to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure competent public and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.



Appendix D: HB 0173

2009 Montana Legislature



HOUSE BILL NO. 173

INTRODUCED BY G. HENDRICK

AN ACT CREATING A PILOT PROJECT TO HELP LOCAL PUBLIC HEALTH AGENCIES UNDERTAKE ACTIVITIES RELATED TO MEETING NATIONAL GUIDELINES; PROVIDING FOR AN ALLOCATION OF FUNDS; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Montana law gives local public health agencies the authority and responsibility to undertake efforts to protect the public health and educate the public on health-related issues; and

WHEREAS, funding for local public health agencies varies widely across the state because of variations in local funding resources; and

WHEREAS, the National Association of County and City Health Officials, American Public Health Association, National Association of Local Boards of Health, and Association of State and Territorial Health Officials recognize that local public health agencies across the country are served by a system unique to each agency based on available financial, medical, and other resources; and

WHEREAS, these national public health organizations are developing a national accreditation program to guide the basic activities that local public health agencies should carry out regardless of the makeup of their local health systems.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA

Section 1. Pilot project for implementing national public health standards. (1) Subject to available funding, the department of public health and human services shall administer a pilot project to assist local public health agencies, as defined in 50-1-101, with preparing for national accreditation by using nationally recognized public health standards and guidelines that are based on the 10 essential public health services as outlined by the national association of county and city health officials, the centers for disease control and prevention, the public health accreditation board, and other national public health organizations. The public health standards and guidelines include but are not limited to the operational definition of a functional local health department and the national public health performance standards.

(2) The department shall:

- (a) develop grant application and review criteria in accordance with this section;
- (b) establish protocol, policy, goals, strategies, and timelines for the local public health agencies selected for the pilot project;
- (c) establish evaluation criteria for the pilot project;
- (d) provide materials and training to pilot project counties; and
- (e) complete and submit a final report to the 2011 legislature as provided in 5-11-210.

(3) To the extent that it receives applications that meet grant review criteria established by the department in accordance with this section, the department shall award grants to eight local public health agencies, including a tribal health department. The grant awards must be made, in consultation with the public health system improvement task force established by the department, to:

- (a) two local public health agencies in counties with populations of 40,000 or more residents;

(b) one local public health agency in a county with a population of between 20,000 and 40,000 residents;

(c) two local public health agencies in counties with populations of 5,000 to 20,000 residents; and

(d) three local public health agencies in counties with populations of fewer than 5,000 residents.

(4) A local public health agency selected for a grant shall demonstrate, through the application process, how it will use the funds to:

(a) prepare for national accreditation using the types of nationally recognized public health guidelines and standards described in subsection (1);

(b) effectively participate in a self-assessment of the local public health agency's capacity to deliver the 10 essential public health services as outlined in the nationally recognized public health guidelines and standards described in subsection (1);

(c) work with the department and the public health system improvement task force to ensure proper use of the grant, including participation in a process to evaluate the pilot project efforts; and

(d) complete measurement criteria established by the department and the public health system improvement task force.

(5) The department and the public health system improvement task force shall:

(a) serve as a resource for the local public health agencies selected for the pilot project as they prepare for national accreditation using nationally recognized public health standards and guidelines as described in subsection (1). In this capacity, the task force shall participate in:

(i) regularly scheduled conference calls; and

(ii) at least two meetings a year that are held in one of the counties in which the pilot project agencies are located;

(b) ensure that the technical assistance and training needs of the pilot project agencies are met; and

(c) assess the results of the pilot project.

(6) The public health system improvement task force and the pilot project agencies shall report the following information to the appropriate interim committees of the legislature by September 15, 2010:

(a) the estimated costs of becoming accredited agencies through the national accreditation program, based on their experiences in the pilot project, including information that explains how the costs were determined;

(b) their assessments of the ability of Montana's local public health agencies serving jurisdictions with varying population sizes in becoming accredited agencies through the national accreditation program, including funding and other resource management issues and challenges they encountered;

(c) suggestions for preparing local public health agencies for national accreditation that are relevant to the populations each pilot project agency serves;

(d) the public health benefits created by the pilot project activities for residents within each pilot project agency's jurisdiction;

(e) how their efforts met the nationally recognized public health standards and guidelines described in subsection (1); and

(f) recommendations for improving the local public health system and creating a sustainable model for local public health agencies in Montana.

Section 2. Allocation of available funds. (1) If funds are made available for the program in [section 1], then the funds must be allocated as follows:

(a) grants of \$25,000 a year in each year of the biennium to each of eight local public health agencies selected as provided in [section 1]; and

(b) \$50,000 for the biennium to pay for the department's expenses in administering the grant program, providing technical assistance to the local public health agencies, and reimbursing the costs of travel for members of the public health system improvement task force as provided in 2-18-501 through 2-18-503.

(2) If less than \$450,000 is available for the program provided for in [section 1], then the funding must be prorated on the basis of the allocations in subsection (1).

Section 3. Notification to tribal governments. The secretary of state shall send a copy of [this act] to each tribal government located on the seven Montana reservations and to the Little Shell Chippewa tribe.

Section 4. Effective date. [This act] is effective July 1, 2009.

- END -

Latest Version of HB 173 (HB0173.ENR)

Processed for the Web on April 17, 2009 (11:48am)

Prepared by Montana Legislative Services

(406) 444-3064

Appendix E: Healthcare Workforce health risk Appraisal –*Sample*

Community Health Assessment: Healthcare Workforce – Mineral County MT

11.2010 – Mineral County Health Department: M. Sare, MSN, RN

Health Risk Assessment based on Healthy People 2010: Leading Health Indicators

The HP 2010 Leading Health Indicators are—

1. Physical Activity
 2. Overweight and Obesity
 3. Tobacco Use
 4. Substance Abuse
 5. Responsible Sexual Behavior
 6. Mental Health
 7. Injury and Violence
 8. Environmental Quality
 9. Immunization
 10. Access to Health Care
- 1.a. I exercise at least 3 times a week T F
 - 1.b. I exercise for at least 20 minutes 3 times a week T F
 - 2.a. HT.: _____ Wt.: _____ Age: _____
 - 2.b. I eat at least five servings of fruit and vegetables a day T F
 - 2.c. I have been told by a medical professional that I have elevated cholesterol levels T F
 - 3.a. I use some type of tobacco T F
 - 3.b. How often do you use a tobacco product? T F
 - 3.c. Exposed to tobacco smoke in the home T F
 - 4.a. I drink more than 2 alcoholic drinks or beers a day T F
 - 4.b. I use illegal drugs T F
 - 5.a. I practice safe sex or I am in a long-term monogamous relationship T F
 - 5.b. In the past five years I have had an HIV test T F
 - 6.a. I enjoy my job/responsibilities T F
 - 6.b. I feel stressed out T F
 - 7.a. My family wears seat belts in a car T F
 - 7.b. I sometimes get so angry that I feel as if I may hit or otherwise hurt someone T F
 - 7.c. I sometimes feel unsafe in my home T F
 - 8.a. I am exposed to dust and other inhaled particles in my job T F
 - 8.b. Our house has been checked for radon levels T F
 - 8.c. I have been told that I or someone in my family has been exposed to an industrial byproduct
T F
 - 9.a. Are the children in your home up-to-date on their immunizations (shots)?
 - 9.b. Are the adults in your home up-to-date on their immunizations (shots)?
 10. a. Do you regularly go outside your county for health services?

10. b. Do you have health insurance?

Appendix F: Healthcare Workforce - Determinates of Health Survey – *Sample*

Community Health Assessment Focus Group: HC Providers and personnel

Mineral County, MT

The determinants of health defined by the WHO are: 1. the social and economic environment, 2. the physical environment, and 3. the person’s individual characteristics and behaviors (<http://www.who.int/hia/evidence/doh/en/>)

The context of people’s lives determine their health, and so blaming individuals for having poor health or crediting them for good health is inappropriate. Individuals are unlikely to be able to directly control many of the determinants of health. These determinants—or things that make people healthy or not—include the above factors, and many others:

1. Income and social status - higher income and social status are linked to better health. The greater the gap between the richest and poorest people, the greater the differences in health.
2. Education – low education levels are linked with poor health, more stress and lower self-confidence.
3. Physical environment – safe water and clean air, healthy workplaces, safe houses, communities and roads all contribute to good health. Employment and working conditions – people in employment are healthier, particularly those who have more control over their working conditions
4. Social support networks – greater support from families, friends and communities is linked to better health. Culture - customs and traditions, and the beliefs of the family and community all affect health.
5. Genetics - inheritance plays a part in determining lifespan, healthiness and the likelihood of developing certain illnesses. Personal behavior and coping skills – balanced eating, keeping active, smoking, drinking, and how we deal with life’s stresses and challenges all affect health.
6. Health services - access and use of services that prevent and treat disease influences health
7. Gender - Men and women suffer from different types of diseases at different ages.

Please rate each of the seven determinants of health above by their significance to Mineral County (1 – 5 – with 5 being most significant):

1. 1 2 3 4 5
2. 1 2 3 4 5
3. 1 2 3 4 5
4. 1 2 3 4 5
5. 1 2 3 4 5

6. 1 2 3 4 5

7. 1 2 3 4 5

Appendix G: Quality of Life Survey – *Sample*

Mineral County Health Department: Quality of Life Survey

Please take a minute to complete the survey below. The purpose of the survey is to get your opinions about health status and quality of life in Mineral County. The survey results will contribute to **Healthy Mineral County 2020** health improvement plans. Your responses are very important and are completely voluntary. **All information you provide will be kept confidential – we do not want nor need your name on this survey.** Thank you for sharing your opinions. If you wish to contact **Mineral County Health Department** for any reason, the contact information is at the end of the survey.

Please answer the questions below as they relate to Mineral County. Please return all 3 pages of this survey in the self-addressed stamped envelope by Dec. 17, 2010. *Thank you!*

1. How would you rate Mineral County as a Healthy Community?
 Excellent Very Good Good Fair Poor

2. Would you say the overall health related Quality of Life in Mineral County is: Excellent
 Very Good Good Fair Poor

3. Would you say the overall quality of the Environment in Mineral County is:
 Excellent Very Good Good Fair Poor

4. Would you say the health care system in Mineral County is:
 Excellent Very Good Good Fair Poor

5. Please indicate how Mineral County rates as a place to raise children.
 Excellent Very Good Good Fair Poor

6. Please indicate how Mineral County rates as a place to grow old.
 Excellent Very Good Good Fair Poor

7. Please indicate how Mineral County rates as a safe community.
 Excellent Very Good Good Fair Poor

8. Do you have enough money to pay for essentials such as food, clothing, housing, and medicine?
 Always Sometimes No

9. Do you have persons with whom you can share problems or get help when needed?

Always Sometimes No

10. Do you feel there are enough jobs in Mineral County?

Always Sometimes No

11. Within the past year, were you able to get needed health services?

Always Sometimes No

12. Do you feel that working together can improve the Quality of Life in Mineral County?

Always Sometimes No

13. Do you have a sense of community pride in Mineral County?

Always Sometimes No

14. Do you feel a responsibility to improve the health status of Mineral County as a community?

Always Sometimes No

Comments: _____

15. Age:

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- Over 65

16. Sex: Male Female

17. How would you describe yourself:

- African American / Black
- Asian/Pacific Islander
- Hispanic/Latino
- Native American
- White/Caucasian
- Other _____

18. Marital Status:

- Married or Partner
- Divorced
- Widowed
- Single

19. Education

- Less than high school
- High school diploma or GED
- Some college
- College degree or higher

20. Household income

- Less than \$20,000
- \$20,000 to \$29,999
- \$30,000 to \$49,999
- Over \$50,000

21. Do you use tobacco in any form? Yes No

22. How often do you exercise each week? never 1- 3 times
 4-5 times every day

23. How tall are you _____
How much do you weigh? _____

24. How many alcoholic beverages do you drink each week? _____

25. Do you feel healthy? Yes
 No

26. Do you use illegal drugs?

- Yes
- No

27. Do you wear a seat belt every time you are in a car? Yes

- No

28. Do you drive after drinking alcohol (in any amount)? Yes

- No

29.

What is your employment status?

- Employed for wages
- Self-employed
- Out of work
- Unable to work
- Homemaker
- Student
- Retired
- Other

30. Do you have any chronic illness?

- Yes
- No

31. What illness has a doctor told you that you have: _____

- Pay cash (no insurance)
- Pay cash or uninsured
- Health insurance (e.g., private Insurance, HMO)
- Medicaid
- Medicare
- Veterans' Administration
- Indian Health Services
- Other _____

Appendix H: Emergency Log Review – *Sample*

ED Log Review: Mineral Community Hospital – for the Community Health Assessment of HB 173:
December, 2010: M. Sare

2000, 2005 and 2009

Date	Gender	Age	Diagnosis	Outcome	Treatment	Payment/insurance

Notes for this page:

Appendix I: US Census Data – Mineral County

2010 US Census Bureau

2009 Population Estimate,

3,833	Montana Population:	974,989	
Population, percent change, April 1, 2000 to July 1, 2009		-1.3%	8.1%
Population estimates base (April 1) 2000		3,884	902,190
Persons under 5 years old, percent, 2009		6.0%	6.4%
Persons under 18 years old, percent, 2009		19.7%	22.5%
Persons 65 years old and over, percent, 2009		21.0%	14.6%
Female persons, percent, 2009		49.1%	50.0%

White persons, percent, 2009 (a)		94.2%	90.3%
Black persons, percent, 2009 (a)		0.3%	0.7%
American Indian and Alaska Native persons, percent, 2009 (a)		2.2%	6.4%
Asian persons, percent, 2009 (a)		0.5%	0.7%
Native Hawaiian and Other Pacific Islander, percent, 2009 (a)		Z	0.1%
Persons reporting two or more races, percent, 2009		2.7%	1.8%
Persons of Hispanic or Latino origin, percent, 2009 (b)		1.9%	3.1%
White persons not Hispanic, percent, 2009		92.7%	87.6%

Living in same house in 1995 and 2000, pct 5 yrs old & over		52.3%	53.6%
Foreign born persons, percent, 2000		1.5%	1.8%

Language other than English spoken at home, pct age 5+, 2000	3.7%	5.2%
High school graduates, percent of persons age 25+, 2000	83.2%	87.2%
Bachelor's degree or higher, pct of persons age 25+, 2000	12.3%	24.4%
Persons with a disability, age 5+, 2000	776	145,732
Mean travel time to work (minutes), workers age 16+, 2000	22.6	17.7

Housing units, 2009	1,993	441,279
Homeownership rate, 2000	73.4%	69.1%
Housing units in multi-unit structures, percent, 2000	3.8%	15.7%
Median value of owner-occupied housing units, 2000	\$88,300	\$99,500

Households, 2000	1,584	358,667
Persons per household, 2000	2.41	2.45
Median household income, 2008	\$34,985	\$43,948
Per capita money income, 1999	\$15,166	\$17,151
Persons below poverty level, percent, 2008	17.1%	14.1%

Business QuickFacts	Mineral County	Montana
Private nonfarm establishments, 2007	133	37,755 ¹
Private nonfarm employment, 2007	905	353,807 ¹
Private nonfarm employment, percent change 2000-2007	8.4%	19.4% ¹
Nonemployer establishments, 2007	384	83,999
Total number of firms, 2002	449	100,402
Black-owned firms, percent, 2002	F	0.2%

American Indian and Alaska Native owned firms, percent, 2002	F	2.0%
Asian-owned firms, percent, 2002	F	0.5%
Native Hawaiian and Other Pacific Islander owned firms, percent, 2002	F	0.0%
Hispanic-owned firms, percent, 2002	F	1.0%
Women-owned firms, percent, 2002	F	24.4%

Manufacturers shipments, 2002 (\$1000)	NA	4,987,577
Wholesale trade sales, 2002 (\$1000)	D	7,223,420
Retail sales, 2002 (\$1000)	24,765	10,122,625
Retail sales per capita, 2002	\$6,490	\$11,116
Accommodation and foodservices sales, 2002 (\$1000)	8,749	1,537,986
Building permits, 2009	0	1,686
Federal spending, 2008	42,090	8,842,960 ¹

Geography QuickFacts	Mineral County	Montana
Land area, 2000 (square miles)	1,219.82	145,552.43
Persons per square mile, 2000	3.2	6.2

DP-1. Profile of General Demographic Characteristics: 2000

Data Set: Census 2000 Summary File 1 (SF 1) 100-Percent Data

Geographic Area: **Mineral County, Montana**

(http://factfinder.census.gov/servlet/QTTable?_bm=n&_lang=en&qv_name=DEC_2000_SF1_U_DP1&ds_name=DEC_2000_SF1_U&geo_id=05000US30061)

Subject	Number	Percent
Total population	3,884	100.0

Subject	Number	Percent
SEX AND AGE		
Male	2,000	51.5
Female	1,884	48.5
Under 5 years	194	5.0
5 to 9 years	250	6.4
10 to 14 years	296	7.6
15 to 19 years	297	7.6
20 to 24 years	155	4.0
25 to 34 years	380	9.8
35 to 44 years	604	15.6
45 to 54 years	634	16.3
55 to 59 years	277	7.1
60 to 64 years	247	6.4
65 to 74 years	335	8.6
75 to 84 years	173	4.5
85 years and over	42	1.1
Median age (years)	41.1	(X)
18 years and over	2,942	75.7
Male	1,511	38.9
Female	1,431	36.8
21 years and over	2,810	72.3
62 years and over	687	17.7
65 years and over	550	14.2
Male	279	7.2

Subject	Number	Percent
Female	271	7.0
RACE		
One race	3,787	97.5
White	3,673	94.6
Black or African American	8	0.2
American Indian and Alaska Native	75	1.9
Asian	20	0.5
Asian Indian	1	0.0
Chinese	1	0.0
Filipino	8	0.2
Japanese	4	0.1
Korean	6	0.2
Vietnamese	0	0.0
Other Asian ¹	0	0.0
Native Hawaiian and Other Pacific Islander	1	0.0
Native Hawaiian	0	0.0
Guamanian or Chamorro	1	0.0
Samoan	0	0.0
Other Pacific Islander ²	0	0.0
Some other race	10	0.3
Two or more races	97	2.5
<i>Race alone or in combination with one or more other races ³</i>		
White	3,767	97.0
Black or African American	19	0.5
American Indian and Alaska Native	139	3.6

Subject	Number	Percent
Asian	31	0.8
Native Hawaiian and Other Pacific Islander	2	0.1
Some other race	24	0.6
HISPANIC OR LATINO AND RACE		
Total population	3,884	100.0
Hispanic or Latino (of any race)	61	1.6
Mexican	39	1.0
Puerto Rican	3	0.1
Cuban	2	0.1
Other Hispanic or Latino	17	0.4
Not Hispanic or Latino	3,823	98.4
White alone	3,637	93.6
RELATIONSHIP		
Total population	3,884	100.0
In households	3,821	98.4
Householder	1,584	40.8
Spouse	914	23.5
Child	1,004	25.8
Own child under 18 years	837	21.5
Other relatives	109	2.8
Under 18 years	59	1.5
Nonrelatives	210	5.4
Unmarried partner	79	2.0
In group quarters	63	1.6
Institutionalized population	62	1.6

Subject	Number	Percent
Noninstitutionalized population	1	0.0
HOUSEHOLDS BY TYPE		
Total households	1,584	100.0
Family households (families)	1,068	67.4
With own children under 18 years	439	27.7
Married-couple family	914	57.7
With own children under 18 years	328	20.7
Female householder, no husband present	95	6.0
With own children under 18 years	69	4.4
Nonfamily households	516	32.6
Householder living alone	421	26.6
Householder 65 years and over	130	8.2
Households with individuals under 18 years	482	30.4
Households with individuals 65 years and over	378	23.9
Average household size	2.41	(X)
Average family size	2.90	(X)
HOUSING OCCUPANCY		
Total housing units	1,961	100.0
Occupied housing units	1,584	80.8
Vacant housing units	377	19.2
For seasonal, recreational, or occasional use	203	10.4
Homeowner vacancy rate (percent)	4.0	(X)

Subject	Number	Percent
Rental vacancy rate (percent)	11.3	(X)
HOUSING TENURE		
Occupied housing units	1,584	100.0
Owner-occupied housing units	1,162	73.4
Renter-occupied housing units	422	26.6
Average household size of owner-occupied unit	2.45	(X)
Average household size of renter-occupied unit	2.30	(X)

(X) Not applicable

¹ Other Asian alone, or two or more Asian categories.

² Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.

³ In combination with one or more other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrices P1, P3, P4, P8, P9, P12, P13, P,17, P18, P19, P20, P23, P27, P28, P33, PCT5, PCT8, PCT11, PCT15, H1, H3, H4, H5, H11, and H12.

Appendix J: CDC CHANGE Tool Assessment – Clark, Nelson & Schatte; MSU PHN Students

Agency description

Mineral County Health Department (MCHD) is a publically funded and governed public health agency located in Superior, Montana. The Department staff is comprised of four full-time registered nurses (RN), one part-time RN, one sanitation specialist and one administrative assistant. The Public Health Director, also one of the department RNs, is responsible to the Board of County Commissioners of Mineral County. The Chief Health Officer of Mineral County is a physician who practices at the Mineral Community Hospital. The mission of the MCHD, as described on their website, is to protect, maintain and improve the health of Mineral County residents. The MCHD provides health promotion and prevention services including immunizations, maternal-child health services, school nursing, home health, safety education, and well-child check-ups. The MCHD also administers the federal Women Infants and Children program in Mineral County (Mineral County Health Department, 2010). MCHD was designated as one of seven locations in Montana tasked with determining what is required to establish a model for accreditation of public health departments in Montana.

House Bill 173 (HB 173) is legislation that provides funding for a pilot project to help Montana public health agencies meet national guidelines by establishing a model for public health department accreditation (H. 0173, 2009). There is currently no process for accreditation of public health departments in the United States. In order for public health nursing to maintain relevance amidst changes in the way that health care is delivered, it is imperative that public health departments participate in evaluation of their practice (Hutchinson, Anderson, & Gottschalk, 2009). The National Association of County and City Health Officials, American Public Health Association, National Association of Local Boards of Health, the Public Health Accreditation Board and other national public health organizations have been developing a national accreditation program (H. 0173, 2009). Public health representatives in Montana, including members of the Montana Public Health Association (MPHA), the Association of Montana Public Health Officers (AMPHO) and the Department of Public Health and Human Services (DPHHS), collaborated to propose legislation that would fund efforts to establish a model accreditation process. (M. Sare, personal communication, September 29, 2010). The resulting legislation, HB 173, provides up to \$50,000 to each of up to eight selected public health agencies for a two-year period beginning July 1, 2009.

Project description

This project, which began in November 2009, is to complete a community health assessment in Mineral County, Montana. The project team for HB 173 in Mineral County consisted of a Mineral County Health Department RN and the authors, three students from Montana State University College of Nursing. Agency members include representatives of each of the seven pilot project sites in Montana. Community members involved in this assessment process were individuals identified as sources of data throughout the assessment process. Since this project is characterized by perceptions of the authors and community, involvement by community members is critical in obtaining an accurate assessment. Examples of those involved are the School Nurse and Superintendent of Superior schools, who were identified as valuable resources for information. Project stakeholders were agencies that provide health care in Mineral County,

MCHD, partner agencies such as Superior Public Schools, community organizations, and individual community members.

The goal of HB 173 is to implement a pilot project that would prepare health departments for an upcoming voluntary accreditation process. The specific goal within the project achieved by the authors was to complete a portion of the community assessment, specifically assessing student physical activity and nutrition within the Superior School system. Two objectives related to the project were (1) discuss with community members the facilitators and barriers related to physical activity and nutrition among children in Superior schools, and (2) identify the current state of these student services by November 30, 2010. The two objectives were met and project activities completed by the authors included collecting data about physical activity and nutrition within the school sector, and quantifying the data by using the CHANGE tool developed by Centers for Disease Control and Prevention (2010). A formative measure for evaluating the assessment was appraisal of the CHANGE tool used by the authors to quantify the collected data. The authors evaluated the CHANGE tool by identifying the strengths and limitations of the tool in relation to how accurately the quantified score represented the current state of the community as perceived by the authors. This evaluation will be reported as part of the project presentation to community members and the MCHD.

Article summaries

Coverdale and Lancaster (2006) indicate the importance of conducting a health needs assessment (HNA) of a community in order to allocate appropriate resources to address identified health issues of an indicated population. A HNA or community assessment is important in public health nursing because health priorities in the community must be identified before strategies can be implemented efficiently to promote and improve health (Anderson & McFarlane, 2008). Identifying community health needs initiates allocation of resources and offering needed services helps to decrease health disparities. Just as the CHANGE tool was used to identify problem areas for physical activity and nutrition in Superior schools, a HNA is a tool used similarly to approach healthcare based on the priorities of a community and not based solely on services offered. To conduct a HNA, the nurse must look at the health perceptions and preferences of the individuals being served and epidemiological evidence to provide solutions to address community problems holistically. A variety of assessment tools have been designed and implemented, but all including the CHANGE tool identify a population's need in a systematic way by collecting quantitative and qualitative data, involve prioritizing and planning of services to meet identified needs, and collaborate with key community members to implement and evaluate services provided. The CHANGE tool is evidenced-based, which is a significant reason for using it for HB 173 (Coverdale & Lancaster, 2006).

The article written by Joly et al. (2007) proposes the need for a model that would potentially show how public health accreditation could have a positive effect on community health outcomes, which supports the goal of HB 173. This article supports the project in Superior because public health accreditation will ensure continuous quality improvement in public health agencies, which will in turn improve community health outcomes (M. Sare, personal communication, November 18, 2010). Several studies have been conducted to show how accreditation is beneficial, but none have been done to show what effects public health accreditation would have on community health status, which is why there is currently no

accreditation process for health departments. The article proposes the Logic Model to link the positive effects accreditation would have on community health. The model assumes that (1) public health leads to improvement in health status of the community and (2) accreditation would improve public health practices. The Logic Model would be ideal for public health agencies to demonstrate the positive outcomes of public health accreditation in Montana. It would also provide a framework for studies to be conducted in areas that currently lack an evidence base, which would show how public health interventions are linked to improvement in community health; this would confirm that accreditation would enhance the effects of public health on community health status (Joly et al., 2007).

Student involvement in HB 173 or other similar community assessments should be continued in future semesters. The project provides an opportunity for students to be part of a community assessment as well as learn about how policy impacts public health. This provides students with the opportunity to apply theory to practice in public health nursing.

HP 2010 objectives

The student project addresses two healthy people 2010 (HP2010) objectives. The nutrition aspect relates to HP2010 Focus Area 19: Nutrition and Overweight, objective 19-15: Increase the proportion of children and adolescents aged 6 to 19 years whose intake of meals and snacks at school contributes to good overall dietary quality, focus area goal: promote health and reduce chronic disease associated with diet and weight (U.S. Department of Health and Human Services, 2000). The physical activity aspect relates to: HP focus area 22: physical activity and fitness, objective: 22-8 increase the proportion of the Nation's public and private schools that require daily physical education for all students, focus area goal: improve health, fitness, and quality of life through daily physical activity. Leading health indicator: overweight and obesity (U.S. Department of Health and Human Services, 2000).

Public health nursing concept

The concept of evidence-based practice is extremely relevant to HB 173. In order to maintain relevance and prioritize activities appropriately, it is imperative we use evidence to guide our decisions. Data needed to make decisions does not exist at this point, so the generation of data through a community assessment is necessary and will be most accurate if collected on a community-wide basis using a systematic method to obtain qualitative and quantitative data. The CHANGE tool is based on evidence and provides an opportunity for uniform community assessments that can be compared to one another. (Clark, Nelson & Schatte, December 2010)



Appendix K: Rural Healthy People 2010 Priorities
Healthy People 2010 Priorities Selected by State and Local Rural Health Leaders

Rank	<i>Healthy People 2010</i> Focus Areas
1	Access to quality health services
2	Heart disease and stroke
3	Diabetes
4	Mental health and mental disorders
5	Oral health
6	Tobacco use
7	Substance abuse
8	Education and community-based programs
9	Maternal, infant, and child health
10	Nutrition and overweight
11	Cancer
12	Public health infrastructure
13	Immunizations and infectious diseases
14	Injury and violence prevention

Appendix L: County Health Rankings – NACCHO

<http://www.countyhealthrankings.org/montana/mineral>

2011 | MINERAL, MONTANA

	Mineral County	Error Margin	National Benchmark*	Montana	Rank (of 45)
Health Outcomes					41
Mortality					36
Premature death	9,444	6,228-13,732	5,564	7,469	
Morbidity					45
Poor or fair health	18%	13-25%	10%	13%	
Poor physical health days	4.9	3.5-6.4	2.6	3.4	
Poor mental health days	4.2	2.6-5.8	2.3	3.1	
Low birthweight			6.0%	7.1%	
Health Factors					37
Health Behaviors					32
Adult smoking	24%	17-33%	15%	19%	
Adult obesity	25%	18-34%	25%	23%	
Excessive drinking	13%	7-21%	8%	19%	
Motor vehicle crash death rate			12	27	
Sexually transmitted infections	207		83	324	
Teen birth rate	41	27-54	22	37	
Clinical Care					39

	Mineral County	Error Margin	National Benchmark*	Montana	Rank (of 45)
Uninsured adults	24%	20-28%	13%	21%	
Primary care providers	1,931:1		631:1	813:1	
Preventable hospital stays	96	77-115	52	67	
Diabetic screening	72%	41-100%	89%	78%	
Mammography screening	62%	31-92%	74%	68%	
Social & Economic Factors					39
High school graduation	85%		92%	82%	
Some college	40%		68%	63%	
Unemployment	9.5%	8.2-10.9%	5.3%	6.2%	
Children in poverty	28%	20-35%	11%	19%	
Inadequate social support	20%	12-31%	14%	18%	
Single-parent households	20%		20%	27%	
Homicide rate			1	3	
Physical Environment					34
Air pollution-particulate matter days	12		0	6	
Air pollution-ozone days	0		0	0	
Access to healthy foods	75%		92%	41%	
Access to recreational facilities	0		17	14	

* 90th percentile, i.e., only 10% are better
 Note: Blank values reflect unreliable or missing data

2011 | MONTANA

Health Outcomes are the primary ranking used to rank the overall health of counties. The county ranked number 1 is considered the healthiest county in the state.

Beaverhead (BE) - 14	Flathead (FL) - 11	McCone (MC) - 8	Roosevelt (RO) - 45
Big Horn (BH) - 43	Gallatin (GA) - 1	Meagher (ME) - NR	Rosebud (RS) - 38
Blaine (BL) - 39	Garfield (GR) - NR	Mineral (MI) - 41	Sanders (SA) - 18
Broadwater (BR) - 40	Glacier (GC) - 44	Missoula (MS) - 4	Sheridan (SH) - 27
Carbon (CA) - 2	Golden Valley (GV) - NR	Musselshell (MU) - 31	Silver Bow (SB) - 35
Carter (CR) - NR	Granite (GN) - 33	Park (PA) - 17	Stillwater (SW) - 13
Cascade (CS) - 22	Hill (HI) - 28	Petroleum (PE) - NR	Sweet Grass (SG) - 26
Chouteau (CH) - 21	Jefferson (JE) - 16	Phillips (PH) - 36	Teton (TE) - 23
Custer (CU) - 30	Judith Basin (JB) - 24	Pondera (PO) - 12	Toole (TO) - 25
Daniels (DA) - NR	Lake (LA) - 37	Powder River (PR) - NR	Treasure (TR) - NR
Dawson (DW) - 10	Lewis and Clark (LC) - 20	Powell (PW) - 34	Valley (VA) - 7
Deer Lodge (DL) - 42	Liberty (LB) - NR	Prairie (PI) - NR	Wheatland (WH) - 19
Fallon (FA) - 29	Lincoln (LI) - 32	Ravalli (RA) - 5	Wibaux (WI) - NR
Fergus (FE) - 3	Madison (MA) - 6	Richland (RI) - 9	Yellowstone (YS) - 15