

2016 Monona County Community Health Needs Assessment

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DEFINITIONS

Age-Adjusted Rate: Age-adjusted rates are standardized rates that are used in order to adjust for different rates in different age groups. It is essential when comparing age-sensitive rates between geographic areas that have different age distributions. Unless otherwise noted, age-adjusted rates are per 100,000 population and use the 2000 US Std. Population.

Health Factors: The overall rankings in health factors represent what influences the health of a county. They are an estimate of the future health of counties as compared to other counties within a state. The ranks are based on four types of measures: health behaviors, clinical care, social and economic, and physical environment factors.

Health Outcomes: The overall rankings in health outcomes represent how healthy counties are within the state. The ranks are based on two types of measures: how long people live and how healthy people feel while alive.

Incidence: A measure of the risk of developing a new condition within a specified period of time.

Medicare: is a type of federally-funded health insurance available to disabled persons and the population age 65 and older.

Mortality: Death.

Prevalence: The total number of cases of a disease in the population at a given time; prevalence rate is the total number of cases in the population, divided by the number of individuals in the population.

Rate: A ratio, with the general formula including the number of events in a given time period in the numerator and the number of people at risk of the event during the same time period in the denominator.

Years of Potential Life Lost: A measure of premature mortality. YPLL is an estimate of the average additional years a person would have lived if he or she had not died prematurely.

MONONA COUNTY SNAPSHOT

	Monona County	Error Margin	Top U.S. Performers*	Iowa	Rank (of 99)
Health Outcomes					82
Length of Life					89
Premature death	8,064	5,719-10,410	5,200	5,911	
Quality of Life					55
Poor or fair health			10%	11%	
Poor physical health days	2.3	1.3-3.3	2.5	2.8	
Poor mental health days	1.5	0.7-2.4	2.3	2.6	
Low birthweight	7.7%	5.6-9.7%	5.9%	6.8%	
Health Factors					76
Health Behaviors					26
Adult smoking	17%	10-29%	14%	18%	
Adult obesity	29%	23-37%	25%	30%	
Food environment index	7.8		8.4	7.8	
Physical inactivity	27%	20-35%	20%	24%	
Access to exercise opportunities	71%		92%	79%	
Excessive drinking	18%	10-30%	10%	20%	
Alcohol-impaired driving deaths	12%		14%	23%	
Sexually transmitted infections	175		138	370	
Teen births	22	16-30	20	30	
Clinical Care					78
Uninsured	11%	10-13%	11%	10%	
Primary care physicians	1,141:1		1,045:1	1,375:1	
Dentists	3,040:1		1,377:1	1,670:1	
Mental health providers	4,561:1		386:1	904:1	
Preventable hospital stays	79	66-92	41	56	
Diabetic monitoring	90%	76-100%	90%	89%	
Mammography screening	64.3%	49.7-79.0%	70.7%	66.4%	
Social & Economic Factors					92
High school graduation				89%	
Some college	60.0%	50.1-69.9%	71.0%	69.1%	
Unemployment	6.1%		4.0%	4.6%	
Children in poverty	19%	14-24%	13%	16%	
Income inequality	4.2	3.5-4.9	3.7	4.2	
Children in single-parent households	35%	24-47%	20%	29%	
Social associations	17.5		22.0	15.6	
Violent crime	16		59	263	
Injury deaths	100	73-133	50	59	
Physical Environment					39
Air pollution - particulate matter	10.7		9.5	10.9	
Drinking water violations	1%		0%	7%	
Severe housing problems	9%	6-11%	9%	12%	
Driving alone to work	80%	76-84%	71%	80%	
Long commute - driving alone	29%	24-33%	15%	19%	

2015

* 90th percentile, i.e., only 10% are better.

Note: Blank values reflect unreliable or missing data

	Monona County	Iowa
Demographics		
Population	9,121	3,090,416
% below 18 years of age	21.6%	23.4%
% 65 and older	24.3%	15.6%
% Non-Hispanic African American	0.4%	3.1%
% American Indian and Alaskan Native	1.1%	0.5%
% Asian	0.3%	2.0%
% Native Hawaiian/Other Pacific Islander	0.1%	0.1%
% Hispanic	1.7%	5.5%
% Non-Hispanic white	95.5%	87.6%
% not proficient in English	0.2%	1.5%
% Females	50.6%	50.4%
% Rural	71.2%	36.0%
Health Outcomes		
Diabetes	11%	9%
HIV prevalence		68
Premature age-adjusted mortality	393.1	310.0
Infant mortality		5.2
Child mortality		45.8
Health Behaviors		
Food insecurity	14%	13%
Limited access to healthy foods	4%	6%
Motor vehicle crash deaths	23	13
Drug poisoning deaths		7
Health Care		
Uninsured adults	14%	12%
Uninsured children	4%	4%
Health care costs	\$8,441	\$8,201
Could not see doctor due to cost		8%
Other primary care providers	912:1	1,412:1
Social & Economic Factors		
Median household income	\$41,461	\$52,286
Children eligible for free lunch	43%	32%
Homicides		2

* Data supplied on behalf of state

Note: Blank values reflect unreliable or missing data

Source

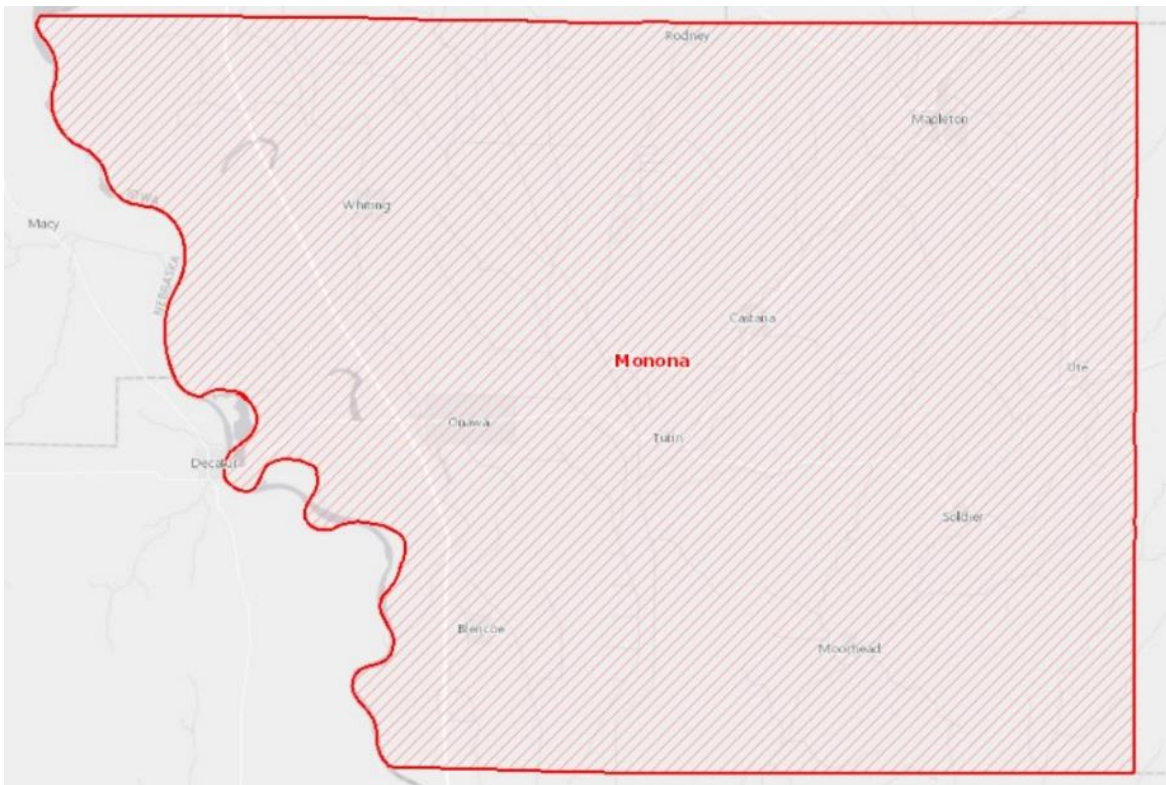
- Robert Wood Johnson Foundation County Profile:
<http://www.countyhealthrankings.org/app/iowa/2015/rankings/monona/county/outcomes/overall/additional>

SOCIODEMOGRAPHIC AND COMMUNITY CHARACTERISTICS

Demographic Characteristics

Population

Monona County is comprised of 10 towns. The county's population declined slightly in recent years, with a population of 9,243 in the year 2010 and with an estimated population of 9,121 in 2015. This represents a -2.7% population change from estimates in 2010. The demographic distribution of the Monona County residents remains consistent with previous census data.



Age

Monona County has a smaller proportion of adolescents and a larger proportion of older adults than state population distributions (Figure 1).

Figure 1: Total Population by Age Group

Report Area	Age 0-4	Age 5-17	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Monona County, IA	5.4%	16.55%	6.04%	8.98%	10.13%	14.9%	14.26%	23.74%
Iowa	6.45%	17.22%	10.15%	12.62%	11.86%	14.04%	12.58%	15.08%
United States	6.44%	17.28%	9.97%	13.39%	13.12%	14.29%	12.08%	13.43%

Race/Ethnicity

As in previous years, the racial background of Monona County is predominantly white (Figure 1). However, it should be noted that Monona County has a greater American Indian and Alaska Native diversity than the rest of the state of Iowa.

Figure 1: Racial Distribution of Monona County's Population

Ethnicity	Monona County	Iowa
White, percent, 2014	97.0%	92.1%
Black or African American, percent, 2014	0.5%	3.4%
American Indian and Alaska Native, percent, 2014	1.1%	0.5%
Asian, percent, 2014	0.3%	2.2%
Native Hawaiian and Other Pacific Islander, percent, 2014	0.1%	0.1%
Hispanic or Latino, percent, 2014	2.0%	5.6%

Gender

The population distribution between females and males is almost equal, with females representing 50.6% of the Monona County population. Iowa has a slightly lower proportions of female residents, at 50.3%.

Geography

Monona County is located in a rural geographic area. Monona County has a much higher proportion of rural geography, at 71.2%, compared to Iowa at 36.0%.

Sources

- Monona County Quick Facts from the US Census Bureau: <http://quickfacts.census.gov/qfd/states/19/19133.html>
- Robert Wood Johnson Foundation County Profile: <http://www.countyhealthrankings.org/app/iowa/2015/rankings/monona/county/outcomes/overall/additional>
- Community Commons: <http://www.communitycommons.org>

Social Characteristics

Household/Family Characteristics

Household/Family Size

The average household size in Monona County is 2.26, which is slightly smaller than the Iowa average level of 2.42.

Children in Single Parent Households

Children in single parent households, in Monona County, represent 35.0%, which is higher than the Iowa average of 29%.

Lack of Social or Emotional Support

Social and emotional support is critical for navigating the challenges of daily life as well as for good mental health. Social and emotional support is also linked to educational achievement and economic stability. Adults, aged 18 and older, in Monona County self-reported that 14.9% feel that they receive insufficient social and emotional support all or most of the time (Figure 1).

Figure 1: Adult, Age 18+, Without Adequate Social / Emotional Support, 2006-12

Report Area	Total Population Age 18+	Estimated Population Without Adequate Social / Emotional Support	Crude Percentage	Age-Adjusted Percentage
Monona County, IA	7,228	1,171	16.2%	14.9%
Iowa	2,307,562	355,365	15.4%	15.3%
United States	232,556,016	48,104,656	20.7%	20.7%

Foreign Born

Approximately 0.9% of Monona County residents are foreign born, compared to 4.5% of the state of Iowa residents.

Language

Nearly 2.6% of Monona County residents speak at least one language other than English at home, compared to 7.2% at the state level.

Sources

- Monona County Quick Facts from the US Census Bureau:
<http://quickfacts.census.gov/qfd/states/19/19133.html>
- Robert Wood Johnson Foundation County Profile:
<http://www.countyhealthrankings.org/app/iowa/2015/rankings/monona/county/outcomes/overall/additional>

Economic Characteristics

Education

Adults

Of Monona County residents aged 25 and older, 89.7% have completed a high school degree, and 14.3% hold a bachelor's degree. As you will see in (Figure 1) below, we are at a significantly lower rate, compared to the average in Iowa, for completing a bachelor's degree.

Figure 1: Percent of Population over the Age of 25 with a High School Diploma and Bachelor's Degree

Education Level Completed	Monona County	Iowa
High School Graduate or Higher, percent of persons age 25+, 2009 - 2013	89.7%	91.0%
Bachelor's Degree or Higher, percent of persons age 25+, 2009 - 2013	14.3%	25.7%

Youth

Monona County's percentage of ninth graders graduating with their class in four years increased slightly from the year 2000 to 2011, with 89.7% graduating in 2000 and 90.8% graduating in 2011.

When comparing the test scores from the Iowa Test of Basic Skills (ITBS), it appears that students in the state of Iowa decreased their scores for both 4th grade and 8th grade reading from 2011-2013 (Figure 2 and 4) but increased their scores for 11th grade reading from 2011-2013 (Figure 6).

Additionally, it appears that students in the state of Iowa that are eligible for free or reduced meals scored lower than students that are not eligible for free or reduced meals for 4th, 8th and 11th grades from 2011-2013 (Figure 3, 5 and 7).

Figure 2: Percent of Iowa Fourth Grade Students Proficient on ITBS/Iowa Assessments Reading Test

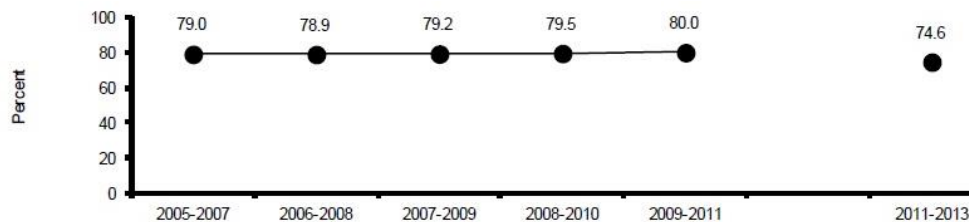


Figure 3: Percent of Iowa Fourth Grade Students Proficient on ITBS/Iowa Assessments Reading Test by Socioeconomic

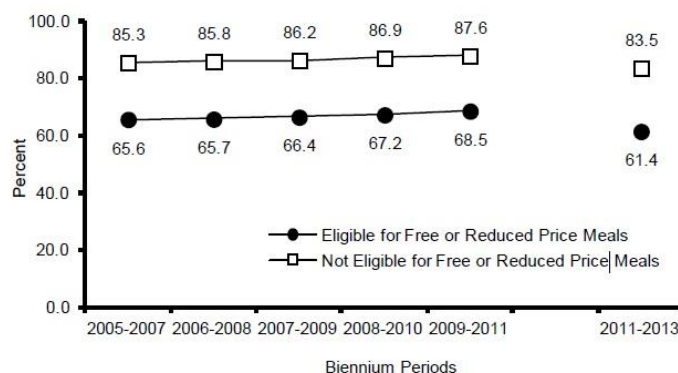


Figure 4: Percent of Iowa Eighth Grade Students Proficient on ITBS/Iowa Assessments Reading Test

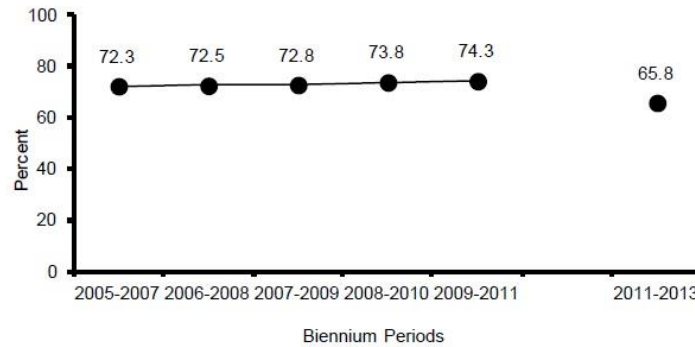


Figure 5: Percent of Iowa Eighth Grade Students Proficient on ITBS/Iowa Assessments Reading Test by Socioeconomic

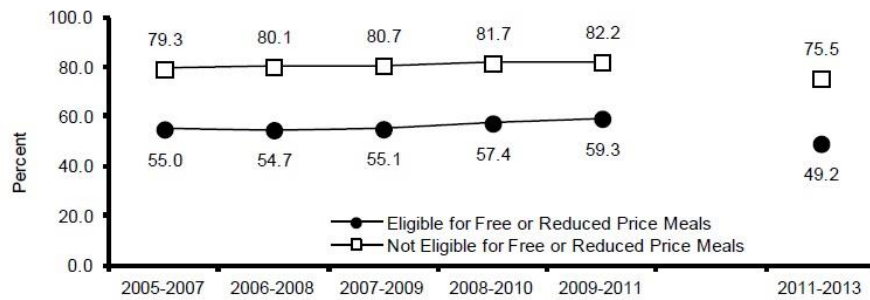


Figure 6: Percent of Iowa Eleventh Grade Students Proficient on ITBS/Iowa Assessments Reading Test

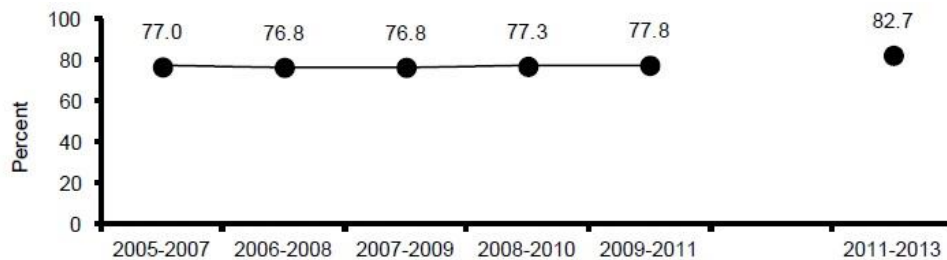
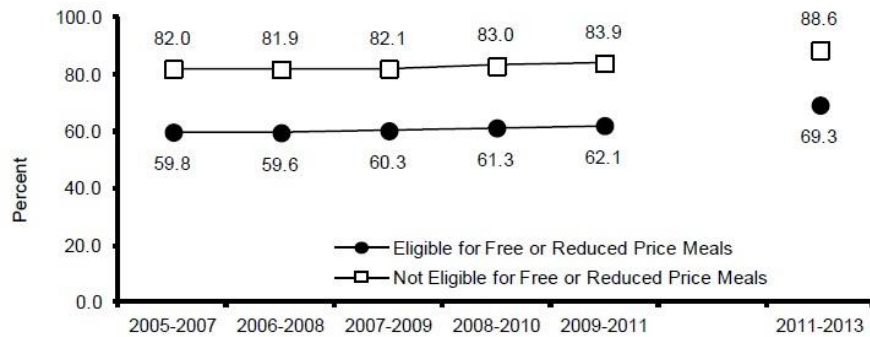


Figure 7: Percent of Iowa Eleventh Grade Students Proficient on ITBS/Iowa Assessments Reading Test by Socioeconomic



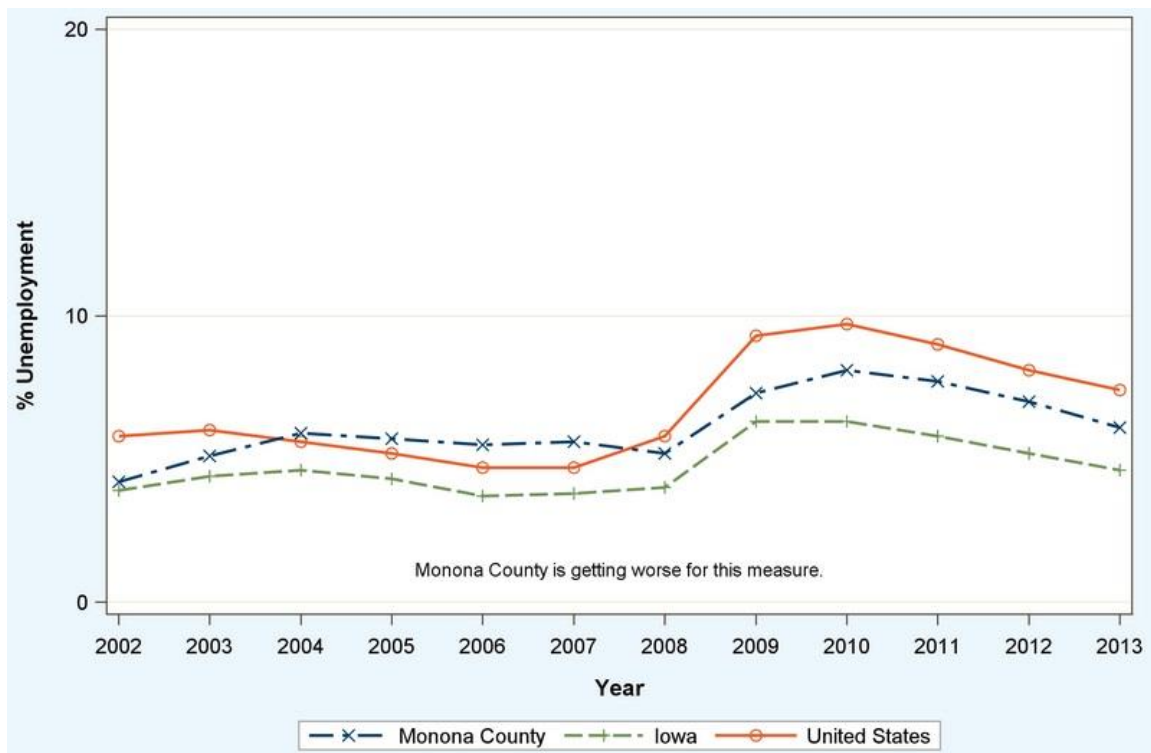
Employment

The unemployment rate in Monona County is 6.1%, which is higher than the state level of 4.6% (Figure 1).

Figure 1: Percent of the Population that are Unemployed

Unemployment Rate	Monona County	Iowa
Unemployed persons, percent, 2013	6.1%	4.6%

Figure 2: Unemployment Trends



Income

The median household income in Monona County is \$42,025, which is lower than the state of Iowa median of 51,843 (Figure 1).

Figure 1: Median Household Income

Median Household Income	Monona County	Iowa
Median Household Income, 2009-2013	\$42,025	\$51,843

Poverty

Poverty rates of 100% below the federal poverty level in Monona County were lower than the state rate in 2009-2013, with a reported rate of 9.0% of Monona County residents living below the poverty line; the state of Iowa reports 12.4% below the poverty line.

Poverty rates of 200% below the federal poverty level in Monona County were higher than the state rate in 2009-2013, with a reported rate of 33.2% of Monona County residents living below the poverty line; the state of Iowa reports 30.37% below the poverty line.

Additionally, (Figure 1) shows that 12.23% of children, age 17 and under, are below the 100% federal poverty level. (Figure 2) shows that 42.03% of children, age 17 and under, are below the 200% federal poverty level, which is higher than Iowa's 37.85%.

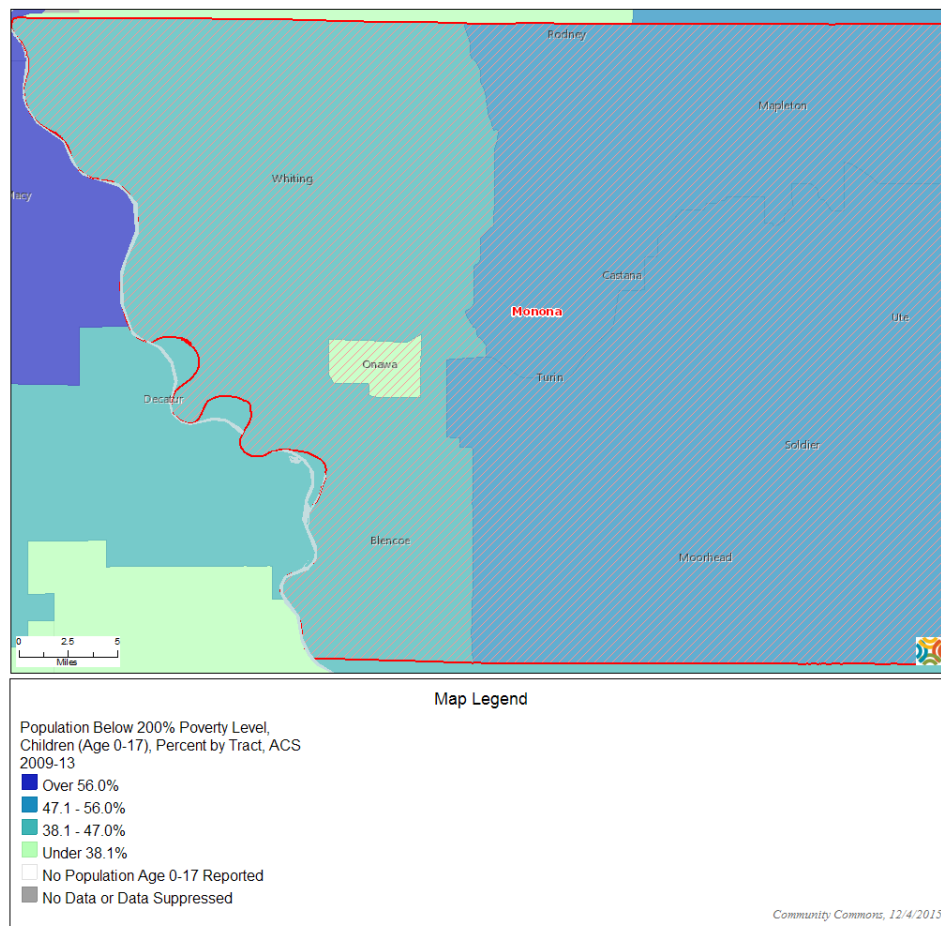
Figure 1: Children, Age 17 and Under, Below the 100% Federal Poverty Level, 2009-13

Report Area	Total Population	Population Under Age 18	Population Under Age 18 in Poverty	Percent Population Under Age 18 in Poverty
Monona County, IA	8,919	1,946	238	12.23%
Iowa	2,963,129	712,247	114,742	16.11%
United States	303,692,064	72,748,616	15,701,799	21.58%

Figure 2: Children, Age 17 and Under, Below the 200% Federal Poverty Level, 2009-13

Report Area	Total Population Under Age 18	Population Under Age 18 at or Below 200% FPL	Percent Population Under Age 18 at or Below 200% FPL
Monona County, IA	1,946	818	42.03%
Iowa	712,247	269,607	37.85%
United States	72,748,608	31,872,384	43.81%

Figure 3: Children, Age 17 and Under, Below the 200% Federal Poverty Level, by County Location, 2009-13



Assistance Programs

As shown in (Figure 1), Monona County's rate of food assistance program participation is comparable to the Iowa rate. Monona County's rate of participation in the Family Investment Program (Figure 2) and the Women, Infants and Children Program (Figure 3) is lower than the Iowa rate. On the other hand, Monona County's percent enrolled in the Free or Reduced School Lunch Program is higher than the Iowa average of students enrolled (Figure 4).

Figure 1: Food Assistance Program Participation

Assistance Program	Monona County
Average Number of Monthly Participants, 2013	1,249
Payment per Recipient	\$101

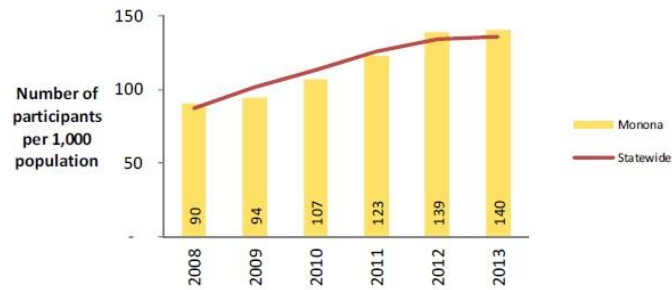


Figure 2: Family Investment Program Participation

Assistance Program	Monona County
Average Number of Monthly Participants, 2013	43
Payment per Recipient (\$)	\$156



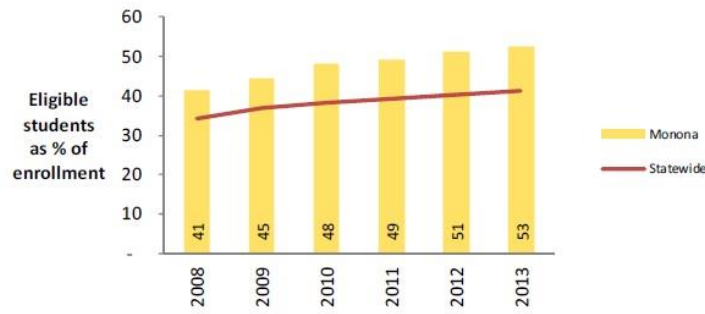
Figure 3: Women, Infants and Children Program

Assistance Program	Monona County
Infants and Children Annual Participation, 2013	185
Women Annual Participation, 2013	74



Figure 4: Free or Reduced School Lunch

Assistance Program	Monona County
Number of Eligible Students for Free Lunch, 2013	620
Number of Eligible Students for Reduced Price Lunch, 2013	161



Sources

- Iowa Kids Count: Trend in the Well Being of Iowa Children 2011
- Monona County Quick Facts from the US Census Bureau:
<http://quickfacts.census.gov/qfd/states/19/19133.html>
- Robert Wood Johnson Foundation County Profile:
<http://www.countyhealthrankings.org/app/iowa/2015/rankings/monona/county/outcomes/overall/additional>
- Iowa State Extension's Poverty & Food Needs:
http://www.icip.iastate.edu/sites/default/files/poverty/poverty_19133.pdf
- Community Commons: <http://www.communitycommons.org>

Housing Characteristics

Homeownership and Rental Properties

See (Figure 1-6) below for detailed housing information.

Figure 1: Monona County Housing

Housing	Monona County
Housing Units In Multi-Unit Structures, Percent, 2009-2013	11.3%
Persons Per Household, 2009-2013	2.26
Total Renters	2,072

Figure 2: Housing Units & Median Year Built, 2009-13

Report Area	Total Housing Units	Median Year Structures Built
Monona County, IA	4,697	1946
Iowa	1,341,001	1965
United States	132,057,808	1976

Figure 3: Housing Units by Age (Time Period Constructed), 2009-13

Report Area	Before 1960	1960-1979	1980-1999	2000-2010	After 2010
Monona County, IA	2,961	866	599	221	50
Iowa	592,944	341,132	241,999	156,034	8,892
United States	39,488,480	35,676,692	36,735,368	19,385,496	771,765

Figure 4: Housing Units by Percentage (Time Period Constructed), 2009-13

Report Area	Before 1960	1960-1979	1980-1999	2000-2010	After 2010
Monona County, IA	63.04%	18.44%	12.75%	4.71%	1.06%
Iowa	44.22%	25.44%	18.05%	11.64%	0.66%
United States	29.9%	27.02%	27.82%	14.68%	0.58%

Figure 5: Renter Occupied Housing Units by Age, 2009-13

Report Area	Before 1960	1960-1979	1980-1999	2000-2010	After 2010
Monona County, IA	606	273	235	32	22
Iowa	135,192	97,753	71,844	32,834	2,982
United States	12,652,058	11,909,361	10,618,427	5,083,632	271,038

Figure 6: Renter Occupied Housing Units by Percentage, 2009-13

Report Area	Before 1960	1960-1979	1980-1999	2000-2010	After 2010
Monona County, IA	51.88%	23.37%	20.12%	2.74%	1.88%
Iowa	39.69%	28.7%	21.09%	9.64%	0.88%
United States	31.21%	29.38%	26.2%	12.54%	0.67%

Assisted Housing

The average number of units per property for affordable rentals in Monona County is 13. The largest federally assisted affordable rental community in the county is Starview Apartments, in Onawa, at 24 units. There is currently 6 affordable housing properties providing rental assistance to 113 very low income households.

Sources

- Monona County Quick Facts from the US Census Bureau: <http://quickfacts.census.gov/qfd/states/19/19133.html>
- <http://affordablehousingonline.com/housing-search/iowa/Monona-County/>
- Community Commons: <http://www.communitycommons.org>

Recreation & Fitness Facility Access

Recreation & Fitness Facility Access

As of 2015, Monona County has 5 recreation/fitness facilities (Figure 1).

Figure 1: Monona County Recreation & Fitness Facility Access, 2015

Recreation & Fitness Facility	Location
Maple Valley Anthon Oto School Gym	Mapleton, Iowa
Burgess Medically Oriented Gym	Mapleton, Iowa
West Monona School Gym	Onawa, Iowa
Onawa Community Center	Onawa, Iowa
Burgess Medically Oriented Gym	Onawa, Iowa

Food Availability Characteristics

Food Access

On average, there are 366 low income person's with low access to food (Figure 1). A majority of these people located in the southeast corner of the county, including Turin, Moorhead, Soldier and Ute areas (Figure 2). Additionally, (Figure 3) shows that 16.34% of the general county population has low food access and (Figure 4) maps the county areas at the highest risk for low food access.

Figure 1: Low Income Population with Low Food Access, 2010

Report Area	Total Population	Low Income Population with Low Food Access	Percent Low Income Population with Low Food Access
Monona County, IA	9,243	366	3.96%
Iowa	3,046,355	199,383	6.54%
United States	308,745,538	19,347,047	6.27%

Figure 2: Low Income Population with Low Food Access, by Percent, 2010

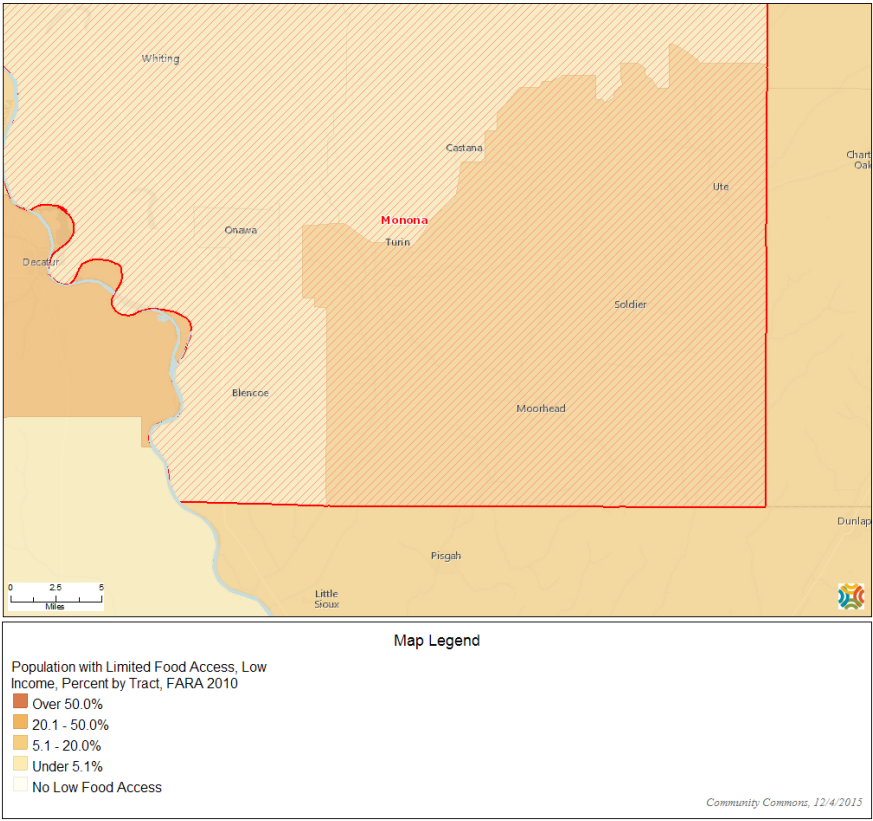
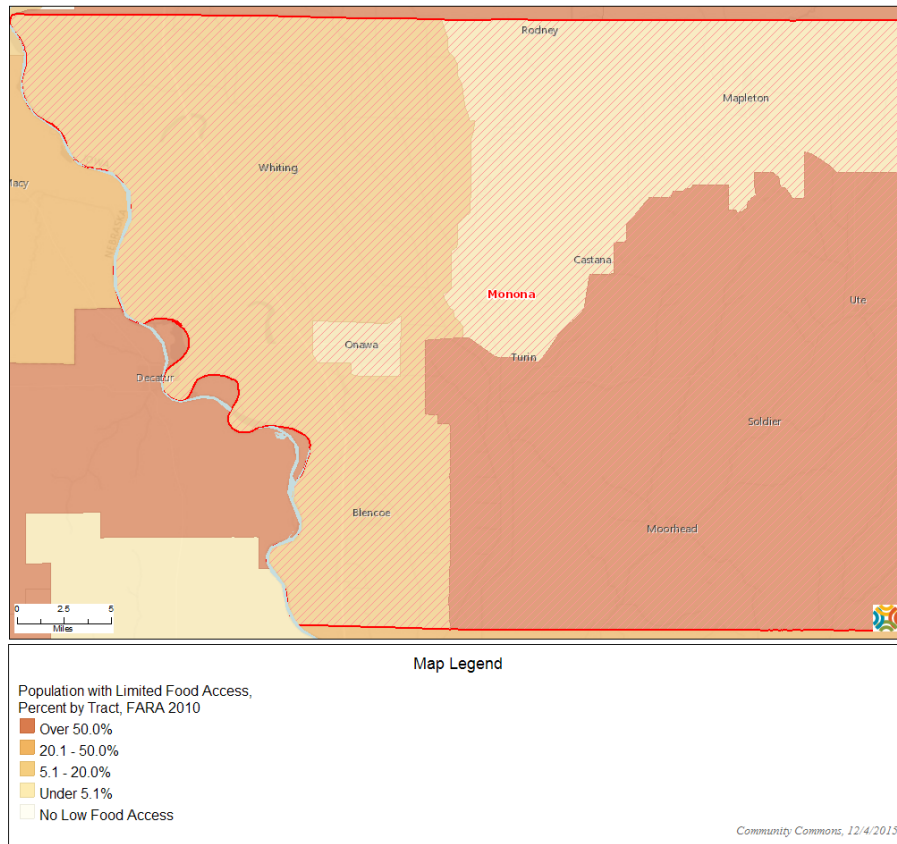


Figure 3: General Population with Low Food Access, by Percent, 2010

Report Area	Total Population	Population with Low Food Access	Percent Population with Low Food Access
Monona County, IA	9,243	1,510	16.34%
Iowa	3,046,355	691,782	22.71%
United States	308,745,538	72,905,540	23.61%

Figure 4: General Population with Low Food Access, by Percent, 2010



SNAP Authorized Food Store Access

SNAP (Supplemental Nutrition Assistance Program) authorized stores include grocery stores as well as supercenters, specialty food stores, and convenience stores that are authorized to accept SNAP benefits. Monona County has 5 retailers that are authorized to accept SNAP benefits (Figure 1).

Figure 1: SNAP Authorized Retailers, 2014

Report Area	Total Population	Total SNAP-Authorized Retailers	SNAP-Authorized Retailers, Rate per 100,000 Population
Monona County, IA	9,243	5	54.09
Iowa	3,046,355	2,647	86.89
United States	312,471,327	245,113	78.44

WIC Authorized Food Store Access

WIC Program (Special Supplemental Nutrition Program for Women, Infants, and Children) authorized stores include food stores and other retail establishments that are authorized to accept WIC benefits. WIC provides access to healthy food for women and children in poverty. Monona County has 4 retailers that are authorized to accept WIC benefits (Figure 1).

Figure 1: WIC Authorized Retailers, 2011

Report Area	Total Population (2011 Estimate)	Number WIC-Authorized Food Stores	WIC-Authorized Food Store Rate (Per 100,000 Pop.)
Monona County, IA	9,239	4	43.3
Iowa	3,069,845	681	22.1
United States	318,921,538	50,042	15.6

Sources

- Community Commons: <http://www.communitycommons.org>

Access to Healthcare

Uninsured

Health insurance coverage is an important aspect of access to healthcare. In Monona County, 9.09% of the population is uninsured (Figure 3), which is greater than the 8.61% in Iowa. As (Figure 1) shows, the largest uninsured population, by age group, is ages 18-64. (Figure 2) shows that the uninsured population in the county, by gender, is higher in males than it is in females.

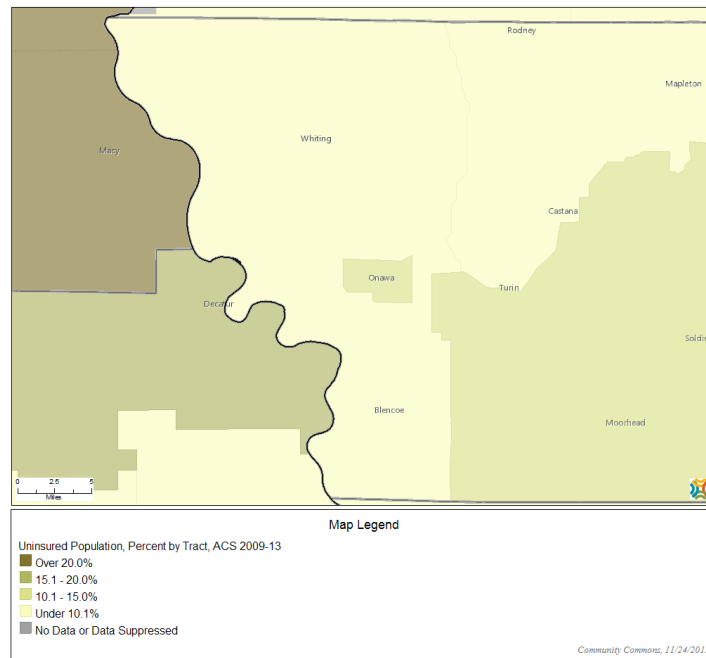
Figure 1: Uninsured Population by Age Group

Report Area	Under Age 18	Age 18 - 64	Age 65 +
Monona County, IA	1.34%	15.56%	0.9%
Iowa	4.13%	12.3%	0.31%
United States	7.61%	20.59%	0.97%

Figure 2: Uninsured Population by Gender

Report Area	Total Male	Total Female	Percent Male	Percent Female
Monona County, IA	441	376	9.8%	8.38%
Iowa	143,652	115,978	9.63%	7.61%
United States	24,500,364	21,069,298	16.38%	13.43%

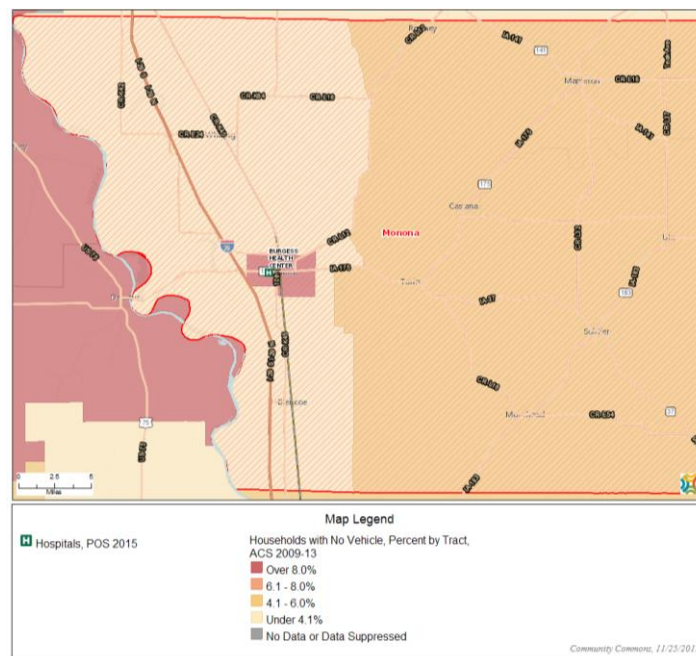
Figure 3: Uninsured Population



Households With No Motor Vehicle

Monona County's percentage of households with no motor vehicle is 5.2%, compared to 5.8% in Iowa. (Figure 1) shows the percentages throughout Monona County.

Figure 1: Households With No Motor Vehicle



Sources

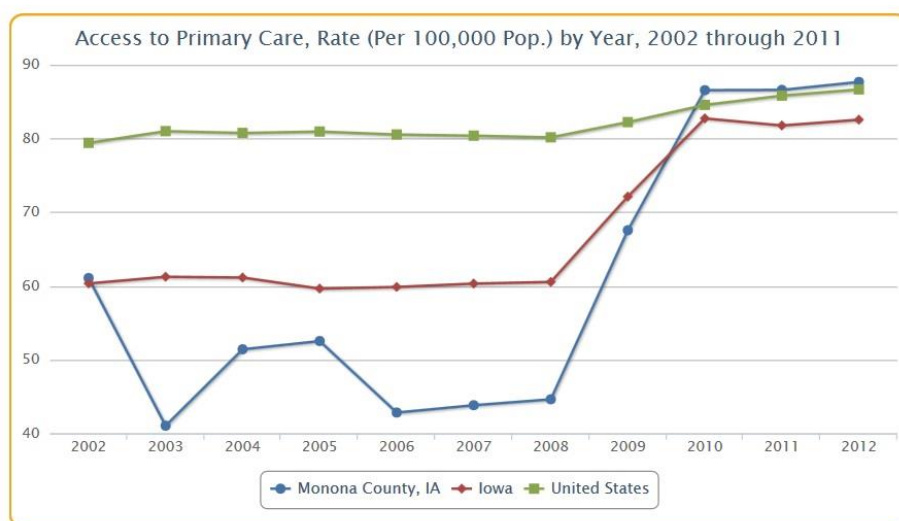
- Community Commons: <http://www.communitycommons.org>

Access to Preventative Care

Access to Primary Care

Preventive care is becoming a greater issue due to the rise of chronic illnesses. A lack of access to care presents barriers to good health. Since 2009, Monona County's access to primary care has been on the rise (Figure 1). 'Primary Care' includes: General Family Medicine MDs and DOs, General Practice MDs and DOs, General Internal Medicine MDs and General Pediatrics MDs. Physicians age 75 and over and physicians practicing sub-specialties within the listed specialties are excluded.

Figure 1: Access to Primary Care



Access to Dental Care

(Figure 2) shows that Monona County has 3 dentists available for dental care. This is a lower rate than the Iowa average.

Figure 1: Access to Dental Care

Report Area	Total Population, 2013	Dentists, 2013	Dentists, Rate per 100,000 Pop.
Monona County, IA	9,121	3	32.9
Iowa	3,090,416	1,851	59.9
United States	316,128,839	199,743	63.2

Sources

- Community Commons: <http://www.communitycommons.org>

Healthcare Assets

Residents of Monona County have the advantage of having various health care facilities to choose from. (Figure 1) lists the number of facilities available in Monona County. Burgess Health Center have a variety of different specialists that also practice in Monona County (Figure 2). (Figure 3) shows that Monona County has greater primary care access than the other surrounding counties.

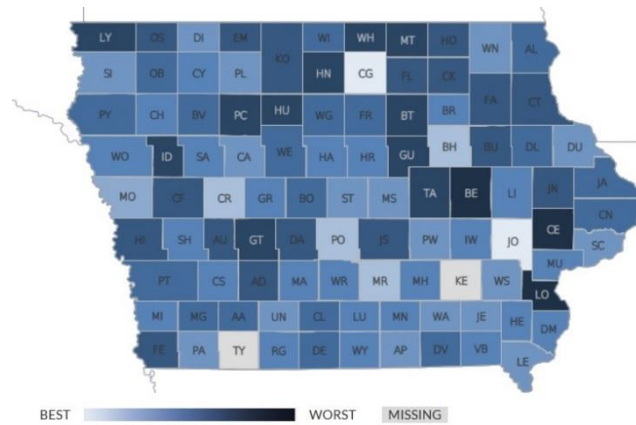
Figure 1: Healthcare Facilities in Monona County

Healthcare Facilities
Hospital 1)Burgess Health Center, Onawa IA
Clinics 1)Burgess Family Clinic, Mapleton IA 2)Burgess Clinic, Whiting IA 3)Horn Memorial Clinic, Mapleton IA 4)Family Medicine Clinic, Onawa IA
Dentists 1)Patera Family Dentistry, Mapleton IA 2)Richard Johnson, Mapleton IA 3)Family 1 st Dental, Onawa IA

Figure 2: Specialists in Monona County

Specialists
Audiology (hearing)
Cardiology (heart)
Dermatology (skin)
ENT (ear, nose and throat)
Gynecology (female reproductive)
Nephrology (kidney)
Neurosurgery (brain)
Oncology (cancer)
Ophthalmology (eye)
Ortho (bones, joints)
Podiatry (foot)
Psychiatry (mental health)
Pulmonary (lung)
Retinal (eye)
Rheumatology (arthritis)
Urology (kidney, bladder)

Figure 3: Primary Care Access in Iowa



Sources

- Burgess Health Center: <http://www.burgesshc.org>
- Robert Wood Johnson Foundation County Profile: <http://www.countyhealthrankings.org/app/iowa/2015/rankings/monona/county/outcomes/overall/additional>

HEALTH STATUS & BEHAVIORS

Top Causes of Death

Top Causes of Death

Figure 1: Top 10 Causes of Death in Iowa, by Age, 2014

Year	Rank	0-18 Years		19-64 Years		65+ Years		All Ages	
		Cause	#	Cause	#	Cause	#	Cause	#
2014	1	Perinatal Period Conditions	95	Diseases of Heart	1061	Diseases of Heart	5459	Diseases of Heart	6529
2014	2	Congenital & Chromosomal Anomalies	48	All Other Diseases (Residual)	578	All Other Diseases (Residual)	3189	All Other Diseases (Residual)	3780
2014	3	Transport Accidents	45	Trachea, Bronchus, Lung	412	Other Chronic Lower Respiratory Diseases	1542	Other Chronic Lower Respiratory Diseases	1746
2014	4	Nontransport Accidents	30	Nontransport Accidents	397	Alzheimer's Disease	1299	Trachea, Bronchus, Lung	1667
2014	5	Other & Unspecified Means & Sequelae	24	Transport Accidents	249	Cerebrovascular Diseases	1260	Cerebrovascular Diseases	1413
2014	6	Symptoms, Signs, Abnormal Clinical/Lab Findings	17	Other & Unspecified Means & Sequelae	245	Trachea, Bronchus, Lung	1253	Alzheimer's Disease	1308
2014	7	Unknown	14	Diabetes Mellitus	209	Diabetes Mellitus	806	Nontransport Accidents	1122
2014	8	All Other Diseases (Residual)	13	Other Chronic Lower Respiratory Diseases	204	Nontransport Accidents	695	Diabetes Mellitus	1015
2014	9	Firearms Discharge	12	All Other & Unspecified	192	All Other & Unspecified	566	All Other & Unspecified	766
2014	10	Diseases of Heart	9	Firearms Discharge	162	Malignant Neoplasms of Lymphoid, Hematopoietic & Related Tissue	548	Malignant Neoplasms of Lymphoid, Hematopoietic & Related Tissue	676

Figure 2: Top 5 Causes of Death in Monona County, by Age, 2014

Year	COUNTY	Rank	0-18 Years		19-64 Years		65+ Years		All Ages	
			Cause	#	Cause	#	Cause	#	Cause	#
2014	Monona	1	Perinatal Period Conditions	*	All Other Diseases (Residual)	6	Diseases of Heart	*	Diseases of Heart	38
2014	Monona	2	Diseases of Heart	*	All Other & Unspecified	*	All Other Diseases (Residual)	14	All Other Diseases (Residual)	20
2014	Monona	3	Nontransport Accidents	*	Cerebrovascular Diseases	*	Other Chronic Lower Respiratory Diseases	10	Other Chronic Lower Respiratory Diseases	10
2014	Monona	4	Transport Accidents	*	Nontransport Accidents	*	Trachea, Bronchus, Lung	10	Trachea, Bronchus, Lung	10
2014	Monona	5	NDA	NDA	Other Chronic Liver Disease & Cirrhosis	*	Diabetes Mellitus	8	Diabetes Mellitus	8

Sources

- Iowa Department of Public Health Tracking Portal, <https://pht.idph.state.ia.us/reports/pages/TopCauses.aspx>

Premature Death & Years of Life Lost

Premature Death and Years of Life Lost

A measure of premature death can provide a unique and comprehensive look at overall health status in Monona County. Premature death, or Years of Potential Life Lost (YPLL), is calculated by subtracting the age of death from the 75 year benchmark. In Monona County, there were 46 premature deaths, from 2008-10, and 683 years of potential life lost on average. These statistics put the county at a higher rate for years of potential life lost than the Iowa average (Figure 1).

Figure 1: Premature Deaths & Years of Life Lost, 2008-10

Report Area	Total Population, 2008-2010 Average	Total Premature Deaths, 2008-2010 Average	Total Years of Potential Life Lost, 2008-2010 Average	Years of Potential Life Lost, Rate per 100,000 Population
Monona County, IA	9,239	46	683	7,391
Iowa	3,062,309	10,015	184,182	6,014
United States	311,616,188	1,074,667	21,327,690	6,851

Sources

- Community Commons: <http://www.communitycommons.org>

Heart Disease

Heart Disease

Heart disease is the leading cause of death in Monona County, as well as in Iowa. Heart disease is related to high blood pressure, high cholesterol, and heart attacks. In (Figure 1), it shows that 28.86% of the Monona County Medicare population is suffering from heart disease, which is greater than Iowa's percent. Medicare is a type of federally-funded health insurance available to disabled persons and the population age 65 and older.

Figure 1: Heart Disease in the Medicare Population, 2012

Report Area	Total Medicare Beneficiaries	Beneficiaries with Heart Disease	Percent with Heart Disease
Monona County, IA	1,923	555	28.86%
Iowa	450,866	113,834	25.25%
United States	34,126,305	9,744,058	28.55%

Figure 2: Heart Disease Deaths, 2009-13

Report Area	Total Population	Average Annual Deaths, 2007-2011	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Monona County, IA	9,195	50	548.14	261.7
Iowa	3,061,227	6,911	225.75	170.9
United States	311,430,373	600,899	192.95	175

Sources

- Community Commons: <http://www.communitycommons.org>

Coronary Heart Disease

Coronary Heart Disease

Monona County has 41 annual deaths on average due to coronary heart disease. The county's age-adjusted death rate per 100,000 population is 212 which is highly greater than Iowa's rate of 122.6 (Figure 1). Additionally (Figure 2) shows that males have a higher rate of coronary heart disease than females do in the county.

Figure 1: Coronary Heart Disease Deaths, 2009-13

Report Area	Total Population	Average Annual Deaths, 2007-2011	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Monona County, IA	9,195	41	450.3	212
Iowa	3,061,227	4,935	161.2	122.6
United States	311,430,373	376,572	120.9	109.5
HP 2020 Target				<= 103.4

Figure 2: Coronary Heart Disease Deaths, Age-Adjusted Rate (Per 100,000 Pop.) by Gender, 2009-13

Report Area	Male	Female
Monona County, IA	244.2	181
Iowa	165.9	89.4
United States	146.2	81.3

Sources

- Community Commons: <http://www.communitycommons.org>

High Blood Pressure

High Blood Pressure

(Figure 2) shows that 64.07% of the Medicare population (population age 65 and older and disabled persons) are suffering from high blood pressure, which is dramatically higher than Iowa's 51.16%. This is one of the causes of high heart disease rates in Monona County's Medicare population.

Figure 1: High Blood Pressure, 2006-12

Report Area	Total Population (Age 18+)	Total Adults with High Blood Pressure	Percent Adults with High Blood Pressure
Monona County, IA	7,228	1,366	18.9%
Iowa	2,307,562	581,506	25.2%
United States	232,556,016	65,476,522	28.16%

Figure 2: High Blood Pressure in the Medicare Population, 2012

Report Area	Total Medicare Beneficiaries	Beneficiaries with High Blood Pressure	Percent with High Blood Pressure
Monona County, IA	1,923	1,232	64.07%
Iowa	450,866	230,684	51.16%
United States	34,126,305	18,936,118	55.49%

Sources

- Community Commons: <http://www.communitycommons.org>

High Cholesterol

High Cholesterol

(Figure 1) shows that 49.19% of the Medicare population (population age 65 and older and disabled persons) are suffering from high cholesterol, which is higher than Iowa's 40.25%. This is one of the causes of high heart disease rates in Monona County's Medicare population.

Figure 1: High Cholesterol in the Medicare Population, 2012

Report Area	Total Medicare Beneficiaries	Beneficiaries with High Cholesterol	Percent with High Cholesterol
Monona County, IA	1,923	946	49.19%
Iowa	450,866	181,463	40.25%
United States	34,126,305	15,273,052	44.75%

Sources

- Community Commons: <http://www.communitycommons.org>

Stroke

Stroke Mortality

On average annually, Monona County has 6 stroke related deaths (Figure 1) and a lower age-adjusted stroke death rate than Iowa.

**Figure 1: Stroke Mortality, Age-Adjusted Rate
(Per 100,000 Population), 2009-13**

Report Area	Total Population	Average Annual Deaths, 2007-2011	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Monona County, IA	9,195	6	69.6	34.4
Iowa	3,061,227	1,487	48.6	36.4
United States	311,430,373	128,955	41.4	37.9
HP 2020 Target				<= 33.8

Sources

- Community Commons: <http://www.communitycommons.org>

Lung Disease

Lung Disease

On average, (Figure 1) shows that there are 10 new cases of lung disease in Monona County annually. Additionally, (Figure 2) shows that on average there are 9 deaths caused by lung disease annually and on average males have a higher mortality rate than women do (Figure 3).

Figure 1: Lung Disease Incidence, 2007-11

Report Area	Total Population	Average New Cases per Year	Annual Incidence Rate (Per 100,000 Pop.)
Monona County, IA	9,299	10	61.9
Iowa	3,032,266	2,402	66.8
United States	306,603,776	212,768	64.9

Figure 2: Lung Disease Mortality, 2009-13

Report Area	Total Population	Average Annual Deaths, 2007-2011	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Monona County, IA	9,195	9	97.88	45.9
Iowa	3,061,227	1,816	59.32	47.1
United States	311,430,373	142,214	45.66	42.2

**Figure 3: Lung Disease Mortality, Age-Adjusted Rate
(Per 100,000 Pop.) by Gender, 2009-13**

Report Area	Male	Female
Monona County, IA	58.1	39.1
Iowa	57.9	40.5
United States	48.3	38.2

Sources

- Community Commons: <http://www.communitycommons.org>

Cancer

Cancer

Cancer death rates, per 100,000 population, are lower in Monona County than at the state and national levels (Figure 1). Males, in the county, have a higher cancer death rate than females do (Figure 2). (Figure 3) shows the top 10 types of cancer in Iowa, by gender.

Figure 1: Cancer Mortality

Report Area	Total Population	Average Annual Deaths, 2007-2011	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Monona County, IA	9,195	27	298	165.1
Iowa	3,061,227	6,407	209.3	170.4
United States	311,430,373	577,313	185.4	168.9
HP 2020 Target				<= 160.6

**Figure 2: Cancer Mortality, Age-Adjusted Rate, by Gender
(Per 100,000 Population)**

Report Area	Male	Female
Monona County, IA	216.1	127.8
Iowa	207.2	144.6
United States	204	143.9

Figure 3: Top 10 Types of Cancer in Iowa, for Females and Males

CANCER DEATHS IN FEMALES

TYPE	# OF CANCERS	% OF TOTAL
Lung	740	24.7
Breast	400	13.3
Colon & Rectum	290	9.7
Pancreas	210	7.0
Ovary	170	5.7
Non-Hodgkin Lymphoma	120	4.0
Leukemia	120	4.0
Uterus	110	3.7
Brain	70	2.3
Kidney & Renal Pelvis	70	2.3
All Others	700	23.3
TOTAL	3000	

CANCER DEATHS IN MALES

TYPE	# OF CANCERS	% OF TOTAL
Lung	950	28.0
Prostate	330	9.7
Colon & Rectum	300	8.8
Pancreas	210	6.2
Leukemia	160	4.7
Esophagus	150	4.4
Non-Hodgkin Lymphoma	140	4.1
Bladder	120	3.5
Kidney & Renal Pelvis	120	3.5
Brain	100	3.0
All Others	820	24.1
TOTAL	3400	

Sources

- Community Commons: <http://www.communitycommons.org>
- http://www.public-health.uiowa.edu/shri/pubs/pdf/Cancer_2014.pdf

Breast Cancer

Breast Cancer

Out of the approximate 4,702 females in Monona County, there is an average of 7 new cases of breast cancer reported in the county annually (Figure 1), which is a lower rate than in Iowa.

Figure 1: New Annual Breast Cancer Cases, 2007-11

Report Area	Female Population	Average New Cases per Year	Annual Incidence Rate (Per 100,000 Pop.)
Monona County, IA	4,702	7	98
Iowa	1,533,866	2,284	124.8
United States	155,863,552	216,052	122.7

Sources

- Community Commons: <http://www.communitycommons.org>

Colon & Rectum Cancer

Colon & Rectum Cancer

In Monona County, there is an average of 9 new cases of colon and rectum cancer reported in the county annually (Figure 1), which is a higher rate than in Iowa.

Figure 1: New Annual Colon & Rectum Cancer Cases, 2007-11

Report Area	Total Population	Average New Cases per Year	Annual Incidence Rate (Per 100,000 Pop.)
Monona County, IA	9,299	9	57
Iowa	3,032,266	1,753	48.4
United States	306,603,776	142,173	43.3
HP 2020 Target			<= 38.7

Sources

- Community Commons: <http://www.communitycommons.org>

Lung Cancer

Lung Cancer

In Monona County, there is an average of 10 new cases of lung cancer reported in the county annually (Figure 1), which is a lower rate than in Iowa.

Figure 1: New Annual Lung Cancer Cases, 2007-11

Report Area	Total Population	Average New Cases per Year	Annual Incidence Rate (Per 100,000 Pop.)
Monona County, IA	9,299	10	61.9
Iowa	3,032,266	2,402	66.8
United States	306,603,776	212,768	64.9

Sources

- Community Commons: <http://www.communitycommons.org>

Prostate Cancer

Prostate Cancer

In Monona County, there is an average of 10 new cases of prostate cancer reported in the county annually (Figure 1), which is a lower rate than in Iowa.

Figure 1: New Annual Prostate Cancer Cases, 2007-11

Report Area	Male Population	Average New Cases per Year	Annual Incidence Rate (Per 100,000 Pop.)
Monona County, IA	4,597	9	128.61
Iowa	1,498,400	2,224	133.3
United States	150,740,224	220,000	142.3

Sources

- Community Commons: <http://www.communitycommons.org>

Depression

Depression

In (Figure 1), it shows that 18.9 percent of the Monona County Medicare population (population age 65 and older and disabled persons) are suffering from depression, which is greater than Iowa's 14.9 percent.

Figure 1: Medicare Population Suffering from Depression, 2012

Report Area	Total Medicare Beneficiaries	Beneficiaries with Depression	Percent with Depression
Monona County, IA	1,923	363	18.9%
Iowa	450,866	67,386	14.9%
United States	34,126,305	5,271,176	15.4%

Sources

- Community Commons: <http://www.communitycommons.org>

Diabetes

Diabetes

Diabetes is a prevalent problem in the United States; it may indicate an unhealthy lifestyle and puts individuals at risk for further health issues. In (Figure 1), it shows that of all Monona County adults, age 20 or older, 771 of these adults have diagnosed diabetes. (Figure 2) shows that 7.7 percent of males in the county have been diagnosed with diabetes, while 6.5 percent of females have been diagnosed. As (Figure 3) shows, diagnosed diabetes has continued to increase, in Monona County, Iowa and the United States, from the year 2004 to 2012. In (Figure 4), it shows that 26.42 percent of the Monona County Medicare population (population age 65 and older and disabled persons) are suffering from diabetes, which is greater than Iowa's 23.78 percent.

Figure 1: Adults, Age 20 or Older, With Diabetes, 2012

Report Area	Total Population Age 20+	Population with Diagnosed Diabetes	Population with Diagnosed Diabetes, Crude Rate	Population with Diagnosed Diabetes, Age-Adjusted Rate
Monona County, IA	7,009	771	11	8.1%
Iowa	2,257,885	214,520	9.5	8.45%
United States	234,058,710	23,059,940	9.85	9.11%

Figure 2: Adults, Age 20 or Older, With Diabetes, by Gender, 2012

Report Area	Total Males with Diabetes	Percent Males with Diabetes	Total Females with Diabetes	Percent Females with Diabetes
Monona County, IA	344	7.7%	332	6.5%
Iowa	98,005	8.33%	94,419	7.14%
United States	10,907,085	9.62%	10,574,108	8.28%

Figure 3: Adults, Age 20 or Older, With Diabetes, by Year, 2012

Report Area	2004	2005	2006	2007	2008	2009	2010	2011
Monona County, IA	6.6%	6.8%	6.7%	6.7%	6.8%	7%	7.1%	7.9%
Iowa	6.51%	6.78%	6.89%	6.96%	7.17%	7.42%	7.68%	8.18%
United States	7.31%	7.58%	8.04%	8.33%	8.55%	8.72%	8.89%	9.03%

Figure 4: Medicare Population with Diabetes, 2012

Report Area	Total Medicare Beneficiaries	Beneficiaries with Diabetes	Percent with Diabetes
Monona County, IA	1,923	508	26.42%
Iowa	450,866	107,238	23.78%
United States	34,126,305	9,224,278	27.03%

Sources

- Community Commons: <http://www.communitycommons.org>

Obesity

Obesity

(Figure 1) shows that 29% of Monona County adults, aged 20 and older, self-report that they have a Body Mass Index (BMI) greater than 30.0, which is considered obese. Excess weight may indicate an unhealthy lifestyle and puts individuals at risk for further health issues, such as high blood pressure, diabetes, and high cholesterol. A child, teen or adult's BMI can be calculated using a BMI calculator, <http://www.cdc.gov/healthyweight/assessing/bmi/index.html>.

(Figure 2) shows that obesity is slightly more prevalent in Monona County males than females. Additionally, obesity is on the rise in Monona County, Iowa and the United States, from the year 2004 through 2012 (Figure 3).

Figure 1: Adults, Age 20 or Older, Suffering from Obesity, 2012

Report Area	Total Population Age 20+	Adults with BMI > 30.0 (Obese)	Percent Adults with BMI > 30.0 (Obese)
Monona County, IA	7,007	2,074	29%
Iowa	2,259,684	693,423	30.4%
United States	231,417,834	63,336,403	27.1%

Figure 2: Adults, Age 20 or Older, Suffering from Obesity, by Gender, 2012

Report Area	Total Males Obese	Percent Males Obese	Total Females Obese	Percent Females Obese
Monona County, IA	1,076	30.8%	998	27.3%
Iowa	355,248	31.69%	338,181	29.17%
United States	31,423,447	27.7%	31,912,963	26.59%

Figure 3: Adults, Age 20 or Older, Suffering from Obesity, by Year, 2012

Report Area	2004	2005	2006	2007	2008	2009	2010	2011	2012
Monona County, IA	24.4%	25.91%	27.2%	27%	27.7%	27.2%	27.1%	28.7%	29%
Iowa	24.61%	25.38%	26.65%	27.13%	28.08%	28.97%	29.29%	29.58%	30.4%
United States	23.07%	23.79%	24.82%	25.64%	26.36%	27.35%	27.29%	27.19%	27.14%

Sources

- Center for Disease Control & Prevention: <http://www.cdc.gov/healthyweight/assessing/bmi/index.html>
- Community Commons: <http://www.communitycommons.org>

Chronic Lower Respiratory Disease

Chronic Lower Respiratory Disease

Chronic lower respiratory diseases are the third leading cause of death in Monona County. Chronic lower respiratory diseases are diseases that affect the lungs. The most deadly of these is chronic obstructive pulmonary disease (COPD), which makes it hard to breathe. COPD includes two main illnesses, 1) emphysema and 2) chronic bronchitis. Emphysema and chronic bronchitis also are strongly associated with lung cancer. Damage to the lungs caused by COPD cannot be repaired. Cigarette smoking is the main cause of COPD. (Figure 1) shows that Monona County's death rate, due to chronic lower respiratory disease, has been higher than the Iowa average both in the time periods 2008 through 2012 and 2010 through 2014.

Figure 1: Monona County Chronic Lower Respiratory Disease Death Rate, 2008-14

	Monona County	Iowa
Chronic Lower Respiratory Disease Death Rate (age-adjusted per 100,000)		
Monona		
2010-2014	48.13	46.75
2009-2013	45.40	46.90
2008-2012	47.67	47.16

Sources

- Iowa Department of Public Health, <https://pht.idph.state.ia.us/Pages/default.aspx>
- <http://www.womenshealth.gov/mens-health/top-health-concerns-for-men/chronic-lower-respiratory-diseases.html>

Asthma

Asthma

Asthma is a chronic disease that affects the airways that carry oxygen in and out of the lungs. If a person has asthma, the inside of these airways is irritated and swollen. Asthma can cause shortness of breath, wheezing, coughing, and tightness in the chest.

Large racial, income, and geographic disparities exist in asthma prevalence. It is one of the leading chronic health conditions among children. Asthma causes lower quality of life, and large direct and indirect economic costs.

In 2007, a CDC study showed that 34 million or 1 in 9 Americans had been diagnosed with asthma during their lifetimes. Of that 34 million, 12.3 million had experienced an asthma attack in the previous year. In 2006, asthma was responsible for 1.6 million emergency department visits, and almost half a million hospitalizations.

Figure 1: Asthma Emergency Department Visit Rate by Age, 2008-14

	Monona County	Iowa
Asthma Emergency Department Visit Rate - Ages 0-4 (per 100,000)		
Monona		
2010-2014	695.65	686.94
2009-2013	856.16	706.44
2008-2012	1005.45	750.71
Asthma Emergency Department Visit Rate - Ages 5-14 (per 100,000)		
Monona		
2010-2014	486.22	509.04
2009-2013	493.96	513.12
2008-2012	575.89	517.40
Asthma Emergency Department Visit Rate - Ages 15-34 (per 100,000)		
Monona		
2010-2014	455.43	462.56
2009-2013	439.46	469.58
2008-2012	349.45	474.40
Asthma Emergency Department Visit Rate - Ages 35-64 (per 100,000)		
Monona		
2010-2014	129.73	257.09
2009-2013	134.51	261.27
2008-2012	144.63	263.85
Asthma Emergency Department Visit Rate - Ages 65+ (per 100,000)		
Monona		
2010-2014	72.93	115.36
2009-2013	147.45	116.02
2008-2012	139.51	121.30

Sources

- Iowa Department of Public Health, <https://pht.idph.state.ia.us/Pages/default.aspx>

Sexually Transmitted Infections

Chlamydia

Chlamydia is primarily spread through unsafe sex practices. In Monona County, there were 16 chlamydia infection cases reported, which is a lower rate than the Iowa rate (Figure 1).

Figure 1: Chlamydia Infection Cases, 2012

Report Area	Total Population	Total Chlamydia Infections	Chlamydia Infection Rate (Per 100,000 Pop.)
Monona County, IA	9,239	16	173.2
Iowa	3,062,309	11,377	371.5
United States	311,577,841	1,422,976	456.7

Figure 2: Chlamydia Infection Incidence Rate, by Year, 2003-11

Report Area	2003	2004	2005	2006	2007	2008	2009	2010	2011
Monona County, IA	61.6	82.2	94.5	139.1	142.4	122.7	247.7	173.1	151.5
Iowa	220.48	235.44	249.13	281.35	289.25	312.13	312.71	346.05	351.4
United States	298.78	313.66	326.59	341.74	365.5	395.54	402.72	420.56	454.12

Gonorrhea

Gonorrhea is primarily spread through unsafe sex practices. In Monona County, there have not been any reported cases of gonorrhea infection since 2008 (Figure 2).

Figure 1: Gonorrhea Infection Cases, 2012

Report Area	Total Population	Total Gonorrhea Infections	Gonorrhea Infection Rate (Per 100,000 Pop.)
Monona County, IA	9,239	0	0
Iowa	3,062,309	2,006	65.51
United States	311,466,046	334,826	107.5

Figure 2: Gonorrhea Infection Incidence Rate, by Year, 2003-11

Report Area	2003	2004	2005	2006	2007	2008	2009	2010	2011
Monona County, IA	10.3	20.6	0	10.7	0	22.3	0	0	0
Iowa	52.78	42.28	54.14	65.93	64.52	56.62	55.12	59.19	63.03
United States	113.82	111.02	113.17	118.23	116.63	109.46	96.96	99.08	103.09

Sources

- Community Commons: <http://www.communitycommons.org>

Maternal Health

Teen Births

From the time period 2006-12, there were 6 births to teen mothers that were ages 15-19 (Figure 1).

Figure 1: Teen Births, 2006-12

Report Area	Female Population Age 15 - 19	Births to Mothers Age 15 - 19	Teen Birth Rate (Per 1,000 Population)
Monona County, IA	285	6	22
Iowa	105,598	3,157	29.9
United States	10,736,677	392,962	36.6

Infants Breastfed at Hospital Discharge

Breastfeeding provides important bonding time, nutritious and antibodies for the newborn infant. Studies also show that for each month of breastfeeding, up to 9 months, the odds of the child growing up to be overweight decreases by 4%. (Figure 1) shows that approximately 75% of infants, in Monona County, are breastfed at hospital discharge, compared to 76% in Iowa.

Figure 1: Infants Breastfed at Hospital Discharge, 2014



Low Birth Weight

Low birth weight in infants can lead to a higher risk for health problems. Low birth weight can also show the existence of health disparities. In Monona County, 7.7% of infants born are low weight births (Under 2500g = 5lb, 8.18oz.). This is higher than the Iowa average of 6.8% (Figure 1). (Figure 2) does show that the county's average did decrease from the time period 2005-11 to the time period 2006-12.

Figure 1: Total & Low Weight Births, 2006-12

Report Area	Total Live Births	Low Weight Births (Under 2500g)	Low Weight Births, Percent of Total
Monona County, IA	686	53	7.7%
Iowa	277,340	18,859	6.8%
United States	29,300,495	2,402,641	8.2%
HP 2020 Target			<= 7.8%

Figure 2: Low Weight Births, by Time Period, 2002-08 through 2006-12

Report Area	2002-2008	2003-2009	2004-2010	2005-2011	2006-2012
Monona County, IA	7.3%	7.4%	8.5%	8.9%	7.7%
Iowa	6.8%	6.8%	6.9%	6.8%	6.8%
United States	8.1%	8.1%	8.2%	8.2%	8.2%

Mothers With No Prenatal Care During the First Trimester

From 2010 – 2014, 12% of mothers, in their first trimester, did not access prenatal care (Figure 1).

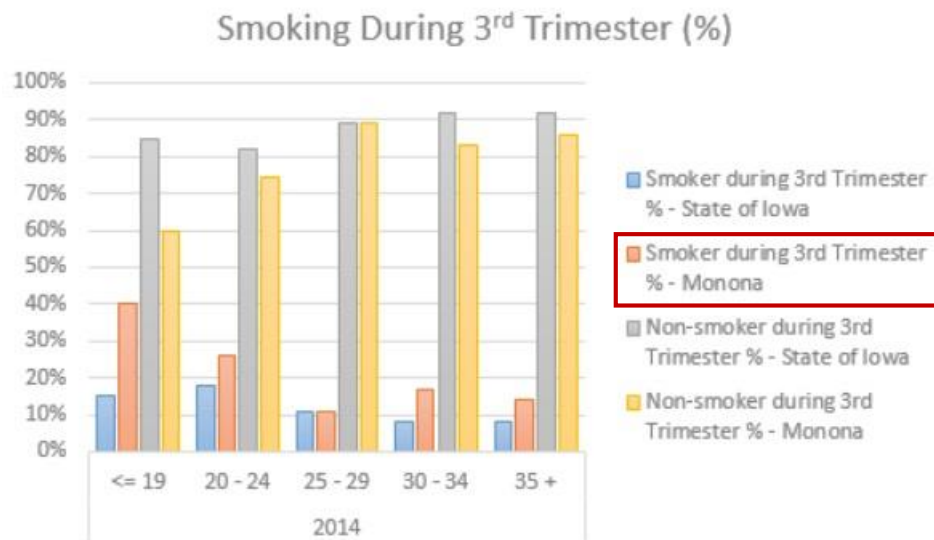
Figure 1: Mothers With No Prenatal Care During the First Trimester, 2008-14

	Monona County	Iowa
2010-2014	0.12	0.15
2009-2013	13%	15%
2008-2012	13%	16%

Smoking During the 3rd Trimester

Smoking during pregnancy can lead to significant health issues in the newborn, including asthma. (Figure 1) shows that approximately 14% through 40% of mother's are smoking during their 3rd trimester, compared to 8% through 15% of mother's state wide.

Figure 1: Mothers Who Are Smoking During the 3rd Trimester, 2014



Infant Deaths

Rates of infant mortality can indicate the existence of broader issues pertaining to access to care and maternal and child health. From year 2006-10, Monona County has had 1 infant death (Figure 1).

Figure 1: Infant (less than 1 year of age) Deaths, 2006-10

Report Area	Total Births	Total Infant Deaths	Infant Mortality Rate (Per 1,000 Births)
Monona County, IA	455	1	2
Iowa	199,795	1,039	5.2
United States	20,913,535	136,369	6.5
HP 2020 Target			<= 6.0

Medicaid Supported Births

From 2008 through 2014, the rate of births with Medicaid as the primary payer source has been significantly higher than the Iowa rate.

Figure 1: Births with Medicaid as the Primary Payer Source

	Monona County	Iowa
Births: Medicaid as Primary Payer Source (%)		
Monona		
2010-2014	0.46	0.38
2009-2013	45%	39%
2008-2012	45%	38%

Sources

- Iowa Department of Public Health, <https://pht.idph.state.ia.us/Pages/default.aspx>
- Community Commons: <http://www.communitycommons.org>

Child Abuse & Neglect

Child Abuse & Neglect

Iowa defines child abuse as harm suffered as the result of the acts or omissions of someone who is responsible for the care of a child. Iowa defines neglect as depriving a child of their basic needs (e.g. food, clothing, warmth and shelter, emotional and physical security and protection, medical and dental care, cleanliness, education and supervision). According to *Prevent Child Abuse America 2007*, child abuse and neglect have pervasive and long lasting effects on children, their families and society. Children who have been abused or neglected are more likely to experience adverse outcomes throughout their life span. These include poor physical health, poor emotional and mental health, social difficulties, cognitive dysfunctions, high risk health behaviors and behavioral problems.

Figure 1: Child Abuse & Neglect Risk Indicators

Risk Indicator	Monona	IA
Births to mothers 19 or younger *	5.6%	NA
Children in single-parent households*****	35.0%	29.0%
Births to mothers with < high school educ. **	14.0%	8.0%
Unintended pregnancy **	74.0%	66.0%
Children in poverty*****	19.0%	16.0%

Smoked during pregnancy rate *** Per 1000 Live Births	254.3	161.6
Low birth weight births *****	7.7%	6.8%
Child abuse and neglect rate **** Per 1000, aged 0-17	14.2	17.0
Food Assistance received ****	14.0%	13.6%
Receive free/reduced-price school lunch ****	51.4%	40.3%

Sources

- *Eyes Open Iowa
- **Iowa Prenatal Care Barriers Project 2013 (IA Hospital Survey, Harrison births in NE Hospitals Not Available)
- ***2013 Iowa Health Fact Book
- **** Kids Count Data Center 2013
- ***** Robert Wood Johnson Foundation County Profile,
<http://www.countyhealthrankings.org/app/iowa/2015/rankings/monona/county/outcomes/overall/additional>

Unintentional Injury (Accidents)

Unintentional Injury (Accident) Deaths

Accidents are a leading cause of death in the United States. On average, Monona County had 9 unintentional deaths annually from 2007-11. This is a much higher age-adjusted death rate than Iowa's average (Figure 1).

Figure 1: Unintentional Injury (Accident) Deaths, 2009-13

Report Area	Total Population	Average Annual Deaths, 2007-2011	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Monona County, IA	9,195	9	100.06	82.1
Iowa	3,061,227	1,338	43.69	38.7
United States	311,430,373	124,733	40.05	38.6
HP 2020 Target				<= 36.0

Motor Vehicle Deaths

Motor vehicle crashes include collisions with another motor vehicle, a nonmotorist, a fixed object, and a non-fixed object, an overturn, and any other non-collision. Motor vehicle crash deaths are preventable and they are a cause of premature death.

On average, Monona County had 3 unintentional deaths annually from 2007-11 (Figure 1).

Figure 1: Motor Vehicle Deaths, 2009-13

Report Area	Total Population	Average Annual Deaths, 2007-2011	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Monona County, IA	9,195	3	32.6	no data
Iowa	3,061,227	356	11.6	11.4
United States	311,430,373	34,139	11	10.8

Pedestrian Accident Deaths

Pedestrian-motor vehicle crash deaths are preventable and they are a cause of premature death. On average, Monona County has had 0 pedestrian-motor vehicle crash deaths 2011-13 (Figure 1).

Figure 1: Pedestrian-Motor Vehicle Crash Accident Deaths, 2011-13

Report Area	Total Population (2010)	Total Pedestrian Deaths, 2011-2013	Average Annual Deaths, Rate per 100,000 Pop.
Monona County, IA	9,243	0	0
Iowa	3,046,355	68	0.7
United States	312,732,537	15,591	1.7
HP 2020 Target			<= 1.3

Fall Accidents

From 2008 through 2012, fall accidents that resulted in an emergency department visit are continuously at a higher rate, in aged 35 through 85 and older, than Iowa's rate.

Figure 1: Fall Accident Emergency Department Visit Rate, by Age Range, 2008-14

	Monona County	Iowa
Falls Emergency Department Visit Rate - Ages 35-64 (per 100,000)		
Monona		
2010-2014	1821.87	1766.35
2009-2013	1765.40	1645.87
2008-2012	1846.80	1562.27
Falls Emergency Department Visit Rate - Ages 65-84 (per 100,000)		
Monona		
2010-2014	4578.53	3611.38
2009-2013	4584.66	3402.88
2008-2012	4615.03	3222.82
Falls Emergency Department Visit Rate - Ages 85+ (per 100,000)		
Monona		
2010-2014	11738.70	10729.55
2009-2013	12457.09	10014.44
2008-2012	12360.64	9452.99

Sources

- Iowa Department of Public Health, <https://pht.idph.state.ia.us/Pages/default.aspx>
- Community Commons: <http://www.communitycommons.org>

Oral Health

Oral Health

Oral health is an important part of a person's overall health. Poor oral health can lead to pain and discomfort, infections, and even hinder the ability to speak, eat, learn, and work.

Untreated tooth decay is a serious problem across the United States. Around 15% of children and adolescents between the ages of 8 and 17, and 25% of adults aged 35 – 44 had untreated dental cavities in 2011-2012. Without treatment, these cavities may

become serious and need emergency treatment. Additionally, between 2000 and 2010, the number of oral health- related visits to hospital emergency departments increased from 1.1 million to 2.1 million.

The oral health of lowans is similar to the national level. Nearly 30% of Iowa adults have not received dental care in the last year according to a 2012 survey, slightly below the national average. Slightly more adults are missing all of their teeth (17%). Slightly more children are reported to have excellent or very good teeth (72%).

Most dental care received in hospital settings could be provided more effectively and at a lower cost in a dental office, and many hospital visits could be prevented altogether with earlier intervention and treatment. The high rates of oral health related hospitalizations and emergency department visits indicate that improvements are needed in oral health care access.

Figure 1: Iowa Adults aged 18+ Who Have Received a Teeth Cleaning in the Last Year, 1999-2010

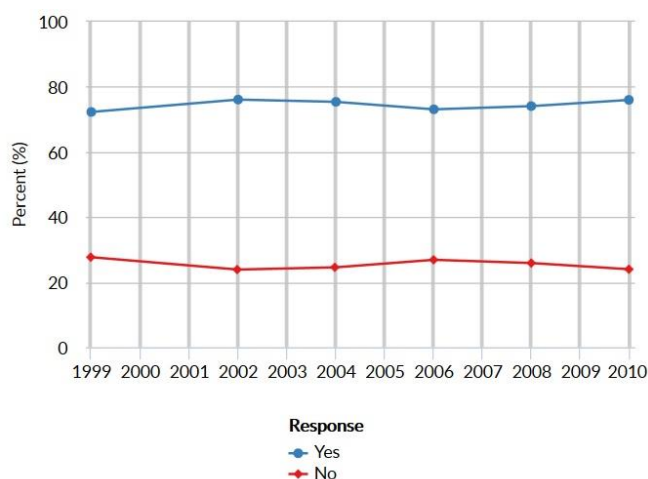


Figure 2: Iowa Adults aged 65+ Who Have Lost Six+ Teeth Due to Tooth Decay/Gum Disease, 2012

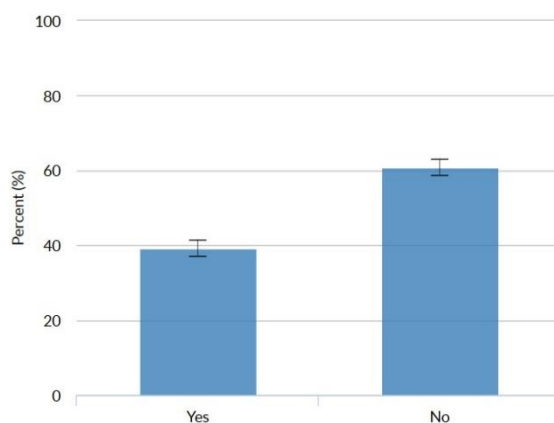


Figure 3: Iowa 3rd Grade Students with Untreated Tooth Decay, 2004-11

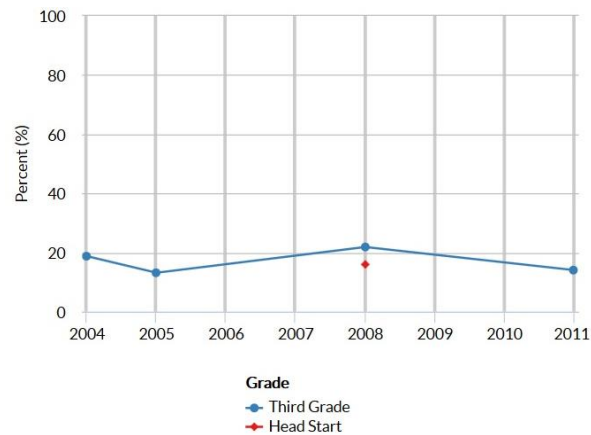


Figure 4: Iowa 3rd Grade Students with Dental Sealants on at Least One Permanent Molar Tooth, 2004-11

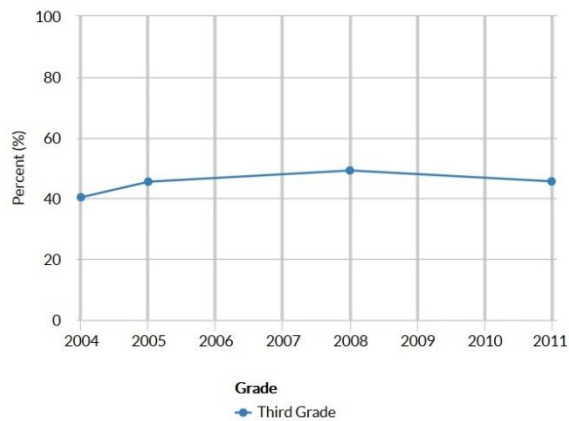
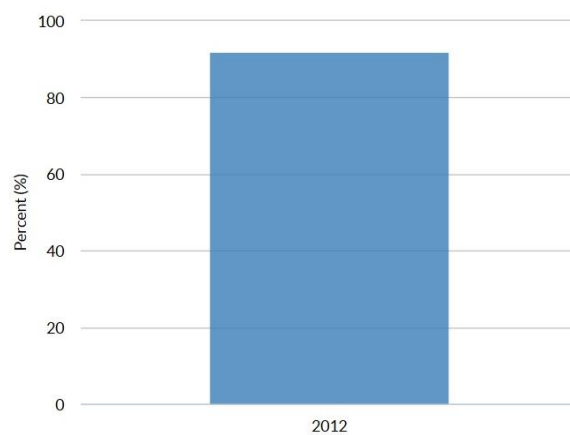


Figure 5: The Iowa Population Served by Community Water Systems who Receive Fluoridated Water, 2012



Sources

Iowa Department of Public Health, <https://pht.idph.state.ia.us/Pages/default.aspx>

Immunizations

Maintenance of high immunization levels provide the foundation for controlling vaccine preventable diseases (VPD) in the child, adolescent, and adult populations. Immunization coverage levels of 90% are, in general, sufficient to prevent circulation of viruses and bacteria-causing VPD.

Children

Determining whether a population is protected against a VPD is best evaluated by examining the coverage level of individual immunizations. It's recommended that children 24 months of age receive the 4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 Hepatitis B, 1 varicella, 4 pneumococcal vaccine series.

At mid-year 2015, Monona County Public Health immunization data for children 24 months of age, that the agency serves, show coverage levels at 80%. In comparison, immunization data for children 24 months of age, that the county medical clinics serves, show coverage levels at 66%. The below average coverage levels of children 24 months of age may be due to waning funding available for immunization campaigns to promote immunizations for the general public and health care providers. Immunization entry requirements for child care and school age children are one of the most effective interventions that the states and counties have at their disposal to ensure that children are appropriately vaccinated.

Adolescents

It's recommended that adolescents 13 through 15 years of age receive the 1 Td/Tdap, 3 Hepatitis B, 2 MMR, 2 varicella, and 1 meningococcal vaccine series. Additionally, three doses of HPV vaccine for females in this age range.

At mid-year 2015, Monona County Public Health immunization data for adolescents 13 through 15 years of age, that the agency serves, show coverage levels at 40% for the vaccine series and 25% for the HPV vaccine. In comparison, immunization data for adolescents 13 through 15 years of age, that the county medical clinics serves, show coverage levels at 26% for the vaccine series and 31% for the HPV vaccine.

Again, the below average coverage levels of adolescents 13 through 15 years of age may be due to waning funding available for immunization campaigns to promote immunizations for the general public and health care providers.

Pneumonia or Influenza Hospitalization

Adult immunization coverage data is not available at the county level. (Figure 1) shows that pneumonia and influenza hospitalization rates have primarily been at a higher rate than Iowa's average. Both pneumonia and influenza can be prevented or lessened through immunizations.

Figure 1: Pneumonia or Influenza Hospitalization Rates, by Age Range, 2008-14

	Monona County	Iowa
Pneumonia or Influenza Hospitalization Rate - Ages 55+ (age-adjusted per 100,000)		
Monona		
2010-2014	1884.19	1184.90
2009-2013	2000.61	1215.85
2008-2012	2204.02	1280.00
Pneumonia or Influenza Hospitalization Rate (age-adjusted per 100,000)		
Monona		
2010-2014	544.12	360.74
2009-2013	577.73	375.61
2008-2012	630.60	397.62
Pneumonia or Influenza Death Rate - Ages 20+ (age-adjusted per 100,000)		
Monona		
2010-2014	23.22	21.03
2009-2013	24.51	21.67
2008-2012	19.79	22.28

Sources

- Monona County Public Health immunization grant mid-year report
- Iowa Department of Public Health, <https://pht.idph.state.ia.us/Pages/default.aspx>

Screenings

Screenings can help detect a variety of health conditions, which can lead to earlier detection, treatment and better outcomes.

Mammogram Cancer Screening in the Medicare Population

Of the 115 female Medicare population aged 67-69 in Monona County, 73 of this population have received a mammogram in the past 2 years. This is a rate of 64.3% which is lower than the 66.4% Iowa average. This lower rate could highlight a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.

Figure 1: Mammogram Cancer Screening in the Medicare Population, 2012

Report Area	Total Medicare Enrollees	Female Medicare Enrollees Age 67-69	Female Medicare Enrollees with Mammogram in Past 2 Years	Percent Female Medicare Enrollees with Mammogram in Past 2 Year
Monona County, IA	1,636	115	73	64.3%
Iowa	366,817	27,805	18,466	66.4%
United States	53,131,712	4,402,782	2,772,990	63%

Colonoscopy Cancer Screening

In Monona County, 51.8% of people 50 and older, at an age-adjusted percentage, have received a colonoscopy cancer screening (Figure 1). This is lower than the 60% Iowa average rate. This lower rate could highlight a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.

Figure 1: Colonoscopy Cancer Screening in People 50 and Older, 2006-12

Report Area	Total Population Age 50+	Estimated Population Ever Screened for Colon Cancer	Crude Percentage	Age-Adjusted Percentage
Monona County, IA	3,447	2,023	58.7%	51.8%
Iowa	812,983	517,870	63.7%	60%
United States	75,116,406	48,549,269	64.6%	61.3%

Physical Inactivity

Physical Inactivity

In Monona County, 25.9% of adults, aged 20 and older, self-report no leisure time for activity, based on the question: "During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?". Physical inactivity data is important to pay close attention to as people's current behaviors are determinants of future health and this data may illustrate a cause of significant health issues, such as obesity and heart health related issues. Monona County has a higher percent of the adult population not getting leisure time physical activity compared to others in the state of Iowa (Figure 1).

Additionally, 27.3% of male adults, in Monona County, are not getting leisure time physical activity, which is higher than females in the county, at 24.3% (Figure 2). From the year 2004 through 2012, the percent of no leisure time physical activity has fluctuated up and down in the county, Iowa and United States (Figure 3).

Figure 1: Adults with No Leisure Time Physical Activity, 2012

Report Area	Total Population Age 20+	Population with no Leisure Time Physical Activity	Percent Population with no Leisure Time Physical Activity
Monona County, IA	6,989	1,992	25.9%
Iowa	2,259,109	564,776	24.2%
United States	231,341,061	53,415,737	22.6%

Figure 2: Adults with No Leisure Time Physical Activity, by Gender, 2012

Report Area	Total Males with No Leisure-Time Physical Activity	Percent Males with No Leisure-Time Physical Activity	Total Females with No Leisure-Time Physical Activity	Percent Females with No Leisure-Time Physical Activity
Monona County, IA	982	27.3%	1,010	24.3%
Iowa	280,109	24.92%	284,671	23.34%
United States	24,071,561	21.2%	29,344,293	23.94%

Figure 3: Adults with No Leisure Time Physical Activity, by Year, 2004-12

Report Area	2004	2005	2006	2007	2008	2009	2010	2011	2012
Monona County, IA	24.2%	23.8%	23.8%	25.4%	24.5%	29.7%	26.4%	24.7%	25.9%
Iowa	22.66%	22.3%	22.42%	22.92%	23.47%	24.49%	24.54%	23.52%	24.24%
United States	22.96%	22.82%	22.93%	23.2%	23.51%	23.67%	23.41%	22.47%	22.64%

Sources

- Community Commons: <http://www.communitycommons.org>

Alcohol Consumption

Alcohol Consumption

How many alcoholic drinks a person consumes is a determinants of future health. When a person drinks excessively (defined as more than two drinks per day on average for men and one drink per day on average for women), this may lead to significant health issues, such as liver disease, cancers, and untreated mental and behavioral health

needs. In Monona County, the percentage of people, age 18 and older, who self-report drinking excessively is 20.5% (age-adjusted percentage), which is lower than Iowa's 21.4% (Figure 1).

Figure 1: Person's 18+ Drinking Excessively, 2006-12

Report Area	Total Population Age 18+	Estimated Adults Drinking Excessively	Estimated Adults Drinking Excessively (Crude Percentage)	Estimated Adults Drinking Excessively (Age-Adjusted Percentage)
Monona County, IA	7,228	1,308	18.1%	20.5%
Iowa	2,307,562	463,820	20.1%	21.4%
United States	232,556,016	38,248,349	16.4%	16.9%

Sources

- Community Commons: <http://www.communitycommons.org>

Tobacco Usage

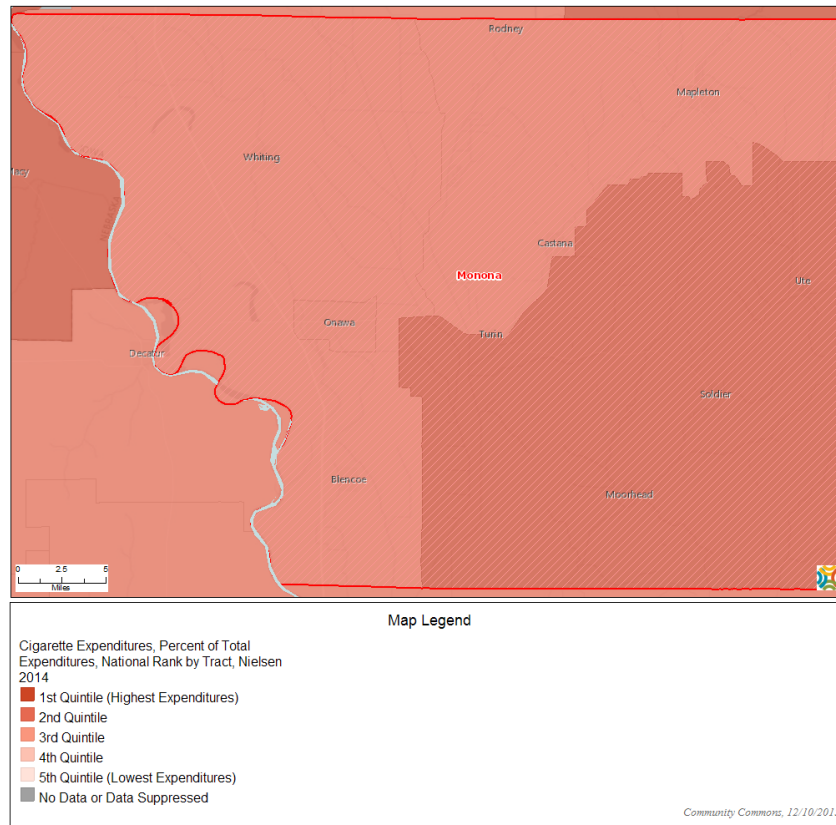
Tobacco Usage

Tobacco usage is linked to leading causes of death, such as cancer and heart disease. In Monona County, 17% of people age 18 or older self-report smoking cigarettes some days or every day, according to (Figure 1). As the (Figure 2) map outlines, there is a higher percentage of cigarette purchases being made in the Southeast section of Monona County (Turin, Castana, Moorhead, Ute and Soldier), than in any other area of the county.

Figure 1: Tobacco Usage, 2006-12

Report Area	Total Population Age 18+	Total Adults Regularly Smoking Cigarettes	Percent Population Smoking Cigarettes (Crude)	Percent Population Smoking Cigarettes (Age-Adjusted)
Monona County, IA	7,228	1,229	17%	suppressed
Iowa	2,307,562	403,823	17.5%	18.1%
United States	232,556,016	41,491,223	17.8%	18.1%

Figure 2: Cigarette Expenditures Map, 2014



Sources

- Community Commons: <http://www.communitycommons.org>

Prepare For, Respond To, & Recover From Public Health Emergencies

Public Health Emergencies

In 2015, the Monona County Emergency Preparedness Healthcare Coalition conducted a series of interrelated public health emergency preparedness exercises (Figure 1) to test our coalition's plans and readiness for a future public health emergency. Currently, the organizations involved in the coalition are Monona County Public Health, Burgess Health Center, Monona County Environmental Health and Monona County Emergency Management Agency (EMA).

Figure 1: 2015 Public Health Emergency Preparedness Exercises

June 2, 2015	Table Top Public Health Emergency Preparedness Exercise
August 18, 2015	Functional Public Health Emergency Preparedness Exercise
September 1, 2015	Full Scale Public Health Emergency Preparedness Exercise

After each of these three exercises, an After Action Report (AAR) was developed to outline what went well during the exercise and what the coalition needs to further develop (Figure 2) to ensure we are prepared for a potential future public health emergency in Monona County.

Figure 2: After Action Report Improvement Plans, 2015

Issue	Improvement Action
New staff need further training and practice in the distribution of medical supplies.	Opportunities for training and practice will be scheduled for staff on an ongoing basis in order for them to retain and apply the principles of emergency preparation.
Responders need to have counseling and staff debriefing available due to the high risk level to which they are exposed.	Mental Health Counselors will be available for assessing the responders ongoing mental, spiritual and emotional conditions, due to high risk exposure to emergency situations
The Personal Protective Equipment (PPE) that was outdated was not inspected to verify as to meeting CDC Guidelines.	All PPE will be inspected to meet ongoing CDC Guidelines. All PPE must be inventoried and fitted prior to an emergency situation.
Designating I-SERV as a primary tool for assessing and obtaining volunteers could be a mainstay for Public Health in meeting the needs of the community and will allow other staff more time for ongoing emergency issues.	Public Health will refer all volunteers to register with I-SERV and/or assist in this process if needed.
Identification, monitoring and safety of the volunteers need to be actively processed during the ongoing emergency.	Badges will be assigned to all volunteers for the purpose of identification.

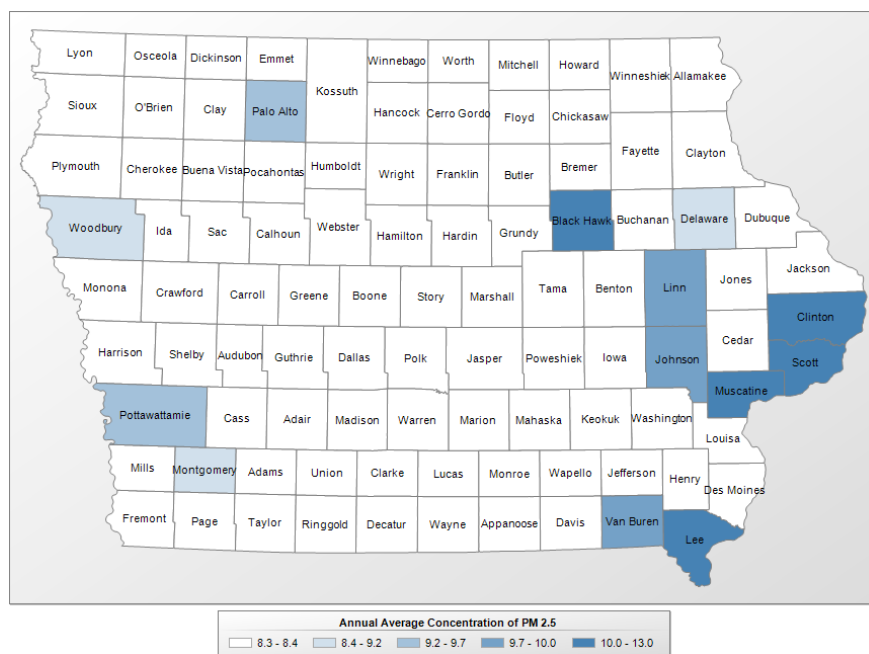
Communication amongst the Emergency Operating Center (EOC) was not as frequent or in depth as preferred.	Being educated in the process of the exercise of Emergency Preparedness will increase awareness in methodology and options for modes of communication. Also, opportunities for practice of such exercises will be implemented to increase preparedness stance.
As the number of patients increase it will become more difficult to determine possibility of responding to ventilator assistance and when and how to make the decision to remove life support.	The hospital will select an ethics committee to assist in making difficult decisions in relation to the patients' needs and available services. They will review such information to determine the possibility of responding to ventilator assistance and when and how to make the decision to remove life support.
The coalition needs to add more entities to the coalition (i.e. Nursing Homes, Physician Offices, pharmacies, etc.).	Set up times to discuss disaster preparedness with like groups. Explain the purpose and goals of the coalition. Ask them to join us as we work on this as a coalition.

Environmental Health

Air Quality

Particle pollution, or particulate matter, consists of particles that are in the air, including dust, dirt, soot and smoke, and little drops of liquid. Fine particles are concerning because they are most likely to cause health problems. Their small size allows these particles to get into the deep part of your lungs. Being exposed to any kind of particulate matter may cause health issues such as: lung cancer, early death, decreased lung growth in children, low birth weight in newborns, heart problems and worsening of asthma symptoms. Fine particles that are between 0.1 micrometers and 2.5 micrometers (referred to as PM 2.5) are continuously being monitored. (Figure 1) shows that Monona County has a low concentration of particle matters 2.5.

Figure 1: Annual Average Concentration of Particle Matter 2.5, 2014



Child Blood Lead Levels

Most of Iowa's pre-1950 homes contain lead-based paint. Young children who live in pre-1950 homes can become lead-poisoned when they put paint chips or exterior soil in their mouths or when they get house dust and soil on their hands and put their hands in their mouths. In addition, adults who remodel or repaint these homes may be lead-poisoned if they disturb the lead-based paint. Lead poisoning testing procedures must be kept to the standard that exists now in order to continue the decline in elevated lead levels.

The Centers for Disease Control and Prevention (CDC) now use a reference level of 5 micrograms per deciliter ($\mu\text{g}/\text{dL}$) to identify children with blood lead levels that are much higher than most children's levels. In 2010, (Figure 1) shows that in Monona County there were 43 confirmed cases of children, under 6 years old, that tested positive for being within the 5 to <10 micrograms per deciliter range, which means the amount of lead in their blood was at a point of concern and could negatively affect their health. In comparison, in 2013, (Figure 2) shows that in Monona County there were 18 confirmed cases of children, under 6 years old, that tested positive for being within the 5 to <10 micrograms per deciliter range, which means the amount of lead in their blood was at a point of concern and could negatively affect their health.

Additionally, (Figure 3) points out that Monona County was at its peak for testing children, under 6 years old, for lead poisoning. The decline in testing, starting in 2011, was highly due to the transfer from the state's Systematic Tracking of Elevated Lead Levels and Remediation (STELLAR) data tracking system to the state's Healthy Homes

and Lead Poisoning Surveillance System (HHPSS) data input and tracking system. With malfunctioning issues and a learning curve, Iowa counties are now adjusting to the HHPSS data system.

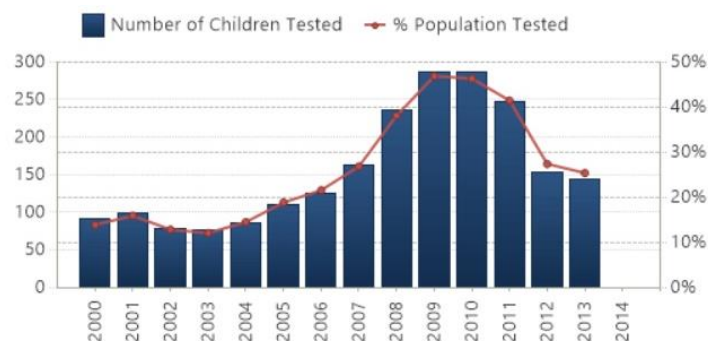
Figure 1: Monona County Blood Lead Tests for Children Under 6 Years Old, 2010

Blood Lead Level	Confirmed	Unconfirmed
▲ Total	61	225
0 to < 5	15	148
5 to < 10	43	76
>= 10	*	*

Figure 2: Monona County Blood Lead Tests for Children Under 6 Years Old, 2013

Blood Lead Level	Confirmed	Unconfirmed
▲ Total	33	110
0 to < 5	15	98
5 to < 10	18	11
>= 10	*	*

Figure 3: Monona County Blood Lead Tests for Children Under 6 Years Old, by Year



Radon

According to the Environmental Protection Agency (EPA), radon is the top cause of lung cancer among nonsmokers and the second leading cause of lung cancer overall. It is an invisible, odorless, and tasteless gas. Radon is a decay product from uranium, which is present in nearly all soil, rock, and water. The amount of radon depends on the soil chemistry, which can vary from house to house. The Midwest has a higher radon concentration due to glacial movement, as it redistributes uranium-rich rock. As the glaciers grind the rock, more surface area is created, thus releasing more radon.

Residents of Monona County are encouraged to use radon test kits which are available at Monona County Environmental Health to see if their home has a higher than acceptable amount of radon.

The Iowa Radon Survey has indicated that Iowa has the largest percentage (or 71.6%) of homes above the US Environmental Protection Agency action level of 4pCi/L. It is also designated by the US EPA as an entirely zone 1 state, which means that at least 50% of the homes are above US EPA's recommended action level (Figure 1). (Figure 2) shows the number of radon kits that were provided by Monona County Environmental Health and their results. The average test results, in each of the towns listed, were primarily above the 4pCi/L recommended radon level, therefore urging the business or home to consider radon mitigation.

Figure 1: United States Radon Zones

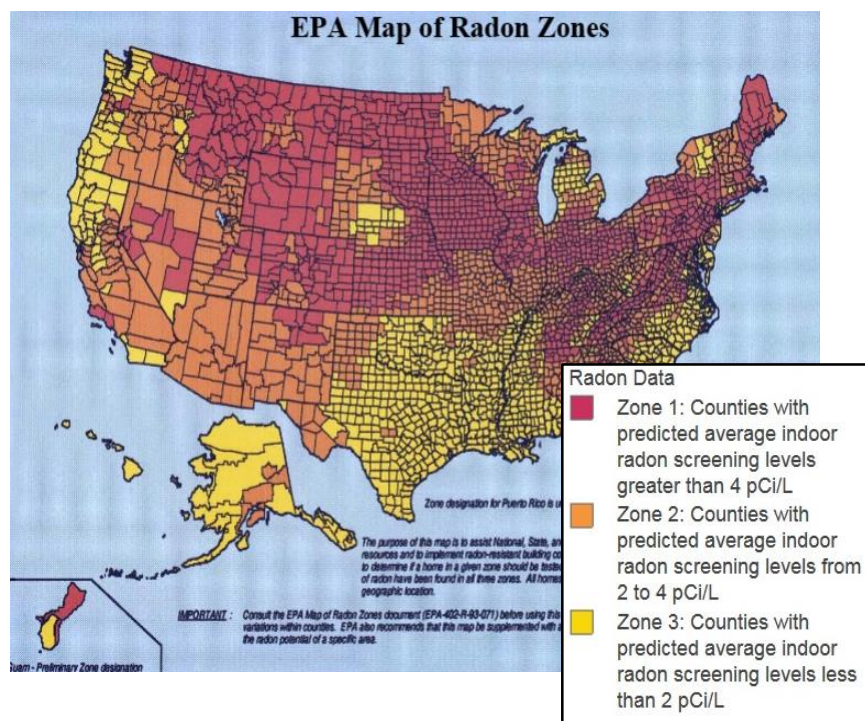
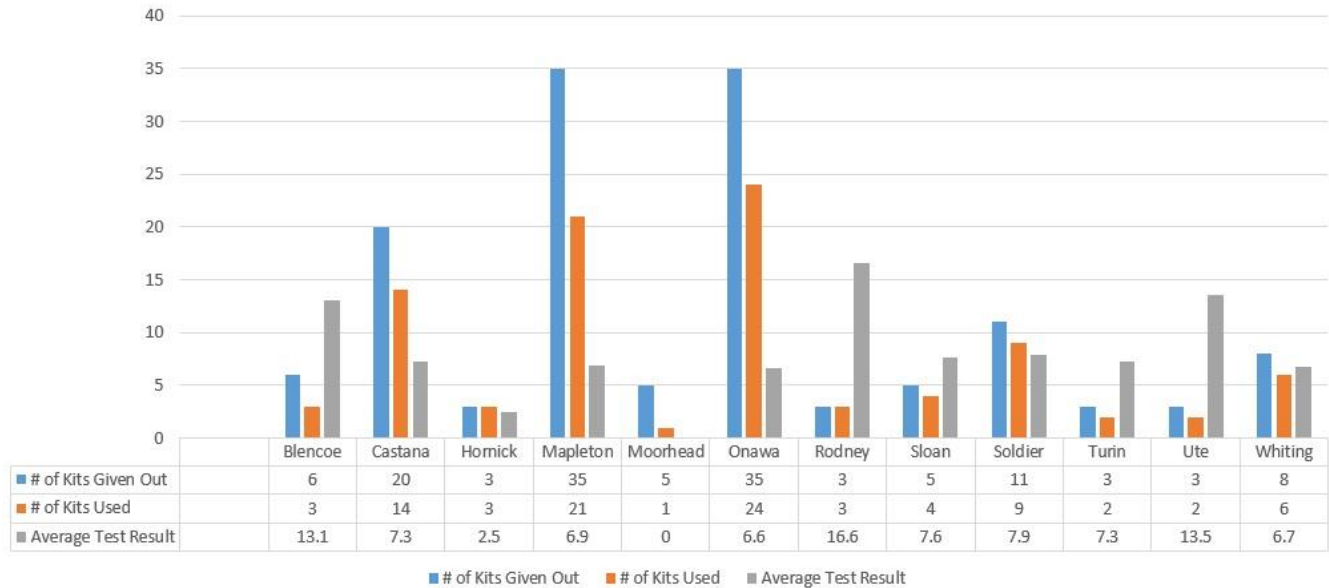


Figure 2: Monona County Radon Test Kit Usage & Results, 2015



Public System Drinking Water Quality

Figure 1: Population Served with Public System Drinking Water, 2008-14

	Monona County	Iowa
2010-2014	6143.80	2721106.40
2009-2013	6141.40	2719733.60
2008-2012	6139.00	2705498.00

Private Well Water Quality

Major health organizations recommend that private water system owners test their well and water system at least once per year to safeguard the health of the children and adults that are consuming the water. With funding from Iowa Grants to Counties, Monona County Environmental Health provides well water testing, and cistern / well plugging to Monona County residents. In Monona County in 2015, Monona County Environmental Health performed 84 well water tests (Figure 1), issued 30 well permits (Figure 2), and plugged 11 wells and 8 cisterns (Figure 3).

Figure 1: Monona County Private Water Well Tests & Results, 2015

Total number of tests performed	84
Normal test results	66
High Bacteria results	14
High Nitrate results	10
Lead tests	1
Arsenic tests	0
Unknown tests results	
(not back from lab)	4

Figure 2: Monona County Private Water Well Permits Issued, 2015

Well permits issued	30
Household	10
Irrigation	11
Geothermal	9

Figure 3: Monona County Well & Cistern Plugging's, 2015

Well pluggings	11
Cistern pluggings	8

Sources

- Unites States Environmental Protection Agency, <http://www.epa.gov/radon/find-information-about-local-radon-zones-and-radon-programs#stateradon>
- Monona County Environmental Health county data
- Iowa Department of Public Health, <https://pht.idph.state.ia.us/Pages/default.aspx> and <http://www.idph.iowa.gov/radon/resources> and <https://pht.idph.state.ia.us/reports/pages/healthsnapshots.aspx>
- Department of Natural Resources, <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Private-Well-Program>

Septic System Permits

A septic system is a small-scale sewage treatment system common in residential and business properties that are outside town limits and that lack connection to main sewage pipes provided by the town. Monona County Environmental Health provides septic system inspection and permits to Monona County residents. In 2015, Monona County Environmental Health issued 31 septic system permits and inspected 33 installed septic systems, which included 11 time of transfer (TOT) septic system inspections for properties that were being purchased and were required to install a new septic system, before the sale was completed, to bring their system up to code (Figure 1).

Figure 1: Monona County Septic Systems Installed & Permits Issued, 2015

Permits issued			31
Systems installed			22
Systems installed - TOT requirements			11

Sources

- Monona County Environmental Health county data

NEXT STEPS

Now that the community assessment is complete, the data needs to be utilized to improve the health of Monona County. The first step will be to hold a community meeting. At this meeting, community partners, from a variety of fields, and the general public will be invited to attend and offer their input as to what the highest priority health needs in Monona County are at this time. This input will be crucial in establishing the top priorities and strategies that will help to develop the upcoming 5-year Health Improvement Plan. This plan will give community partners and the general community a 'road map' of goals to work towards achieving during the next 5-year time period.