

# **The 2013 Iowa Health Fact Book**

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## Welcome to the 2013 Iowa Health Fact Book!

This book is the ninth in a series of Iowa Health Fact Book biennial publications and has been produced as a collaborative effort between The University of Iowa College of Public Health, Iowa Department of Public Health, and other interested partners working to improve the health of Iowans. The Fact Book editions are intended to present a longitudinal picture of the changing Iowa health landscape. Where possible, the information in the book is presented for each of Iowa's 99 counties and includes demographics and vital statistics, data on disease incidence and mortality, health and social determinants of health, health resources, and environmental factors. Whenever possible, we have included the same types of information in the same tabular and graphical format as in the past. With this book, we present a tool that is useful to Iowa's health care providers, health policy-makers, public health practitioners, and health researchers alike as we continually assess our needs and look for ways to enhance the overall well-being of Iowans.

This and previous editions are available for download via the College of Public Health website ([www.public-health.uiowa.edu/factbook](http://www.public-health.uiowa.edu/factbook)) and via a link from the Iowa Department of Public Health website ([www.idph.state.ia.us](http://www.idph.state.ia.us)) under "Iowa Health Fact Book" in the A-Z Index. A limited number of CDs and printed copies of the 2013 edition will be available for those who request such. Note that the pages of the 2013 and earlier books can be printed from the PDF files on our website.

As we continue this effort over the years, we are in a better position to track changes, measure progress, and identify areas of weakness. As with the previous editions, we present the data in a descriptive format, without analysis/or and interpretation of trends. The interested reader is free to use these data in his/her own analyses, and is encouraged to do so with care and attention paid to analytic issues such as small counts, shifting county sizes, possible changes in the way the data are collected, or changes in definition as described in the Introduction chapter. The data source is given for each page of the book, with contact information for that source in the Appendix. Those responsible for collecting the data can address any questions you may have. The Appendix also includes listings of other health information resources and their contact information.

We are pleased to make this rich source of health information available to the public and hope that you find it useful.

Sincerely,

Susan J. Curry, Ph.D.  
Dean, College of Public Health

Jane Pendergast, Ph.D., Director  
Lincoln Lourens, M.S., Editor  
Center for Public Health Statistics

WELCOME

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## Introduction

In the 2013 Iowa Health Fact Book, state-wide data relating to health outcomes, social determinants of health, health behaviors, and health care resources are presented, generally at the county level. The data have been compiled in this book, but were collected using different methodologies by various organizations and reporting mechanisms. We encourage readers who would like to use these data to learn about the data collection processes and data definitions from those responsible for collecting the information. The use of U.S. Census data to compute adjusted rates, sparse data concerns, data groupings, data definitions, and use of ranks are described in the Fact Book Conventions section of this Introduction. Information on the demographic makeup of the state of Iowa can be found in the Demographics section, and a high level comparison of healthcare in Iowa to other states can be found in the State Snapshot section with data provided by the Agency for Healthcare Research and Quality.

The remaining eleven sections provide valuable information on a variety of aspects of the health of Iowans. The Social Determinants of Health section places emphasis on social and behavioral conditions affecting health. The Health Behaviors section tracks behaviors affecting our health, including the 2012 Iowa Youth Survey. The Prenatal and Infant Health section covers information not only regarding infants, but also the well-being of their mothers during pregnancy. The Infectious Diseases section focuses mainly on sexually transmitted diseases, although other infectious disease data are presented as well. The Cancer Incidence and Mortality section provides both crude and age-adjusted rates for selected major types of cancer. The Injury Mortality section reveals both crude and age-adjusted rates for certain causes of mortality, such as motor vehicle deaths and deaths caused by firearms. Closely related is the Youth Injury Mortality section, providing the same type of data but restricted to individuals aged less than 20. The last mortality section, Other Mortality, lays out crude and age-adjusted rates for mortality not caused by cancer or the causes listed in the previous two sections. A component of a good health care system is adequate capacity of both facilities and health care providers. The Health Care Providers chapter shows counts and crude rates of various types of providers across the state. The Health Care Facilities chapter details counts and crude rates for a variety of types of facilities. The final section of the book, entitled Environmental Health Indicators, focuses exclusively on the testing of blood lead poisoning of children in Iowa.

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## Fact Book Conventions

### Layout

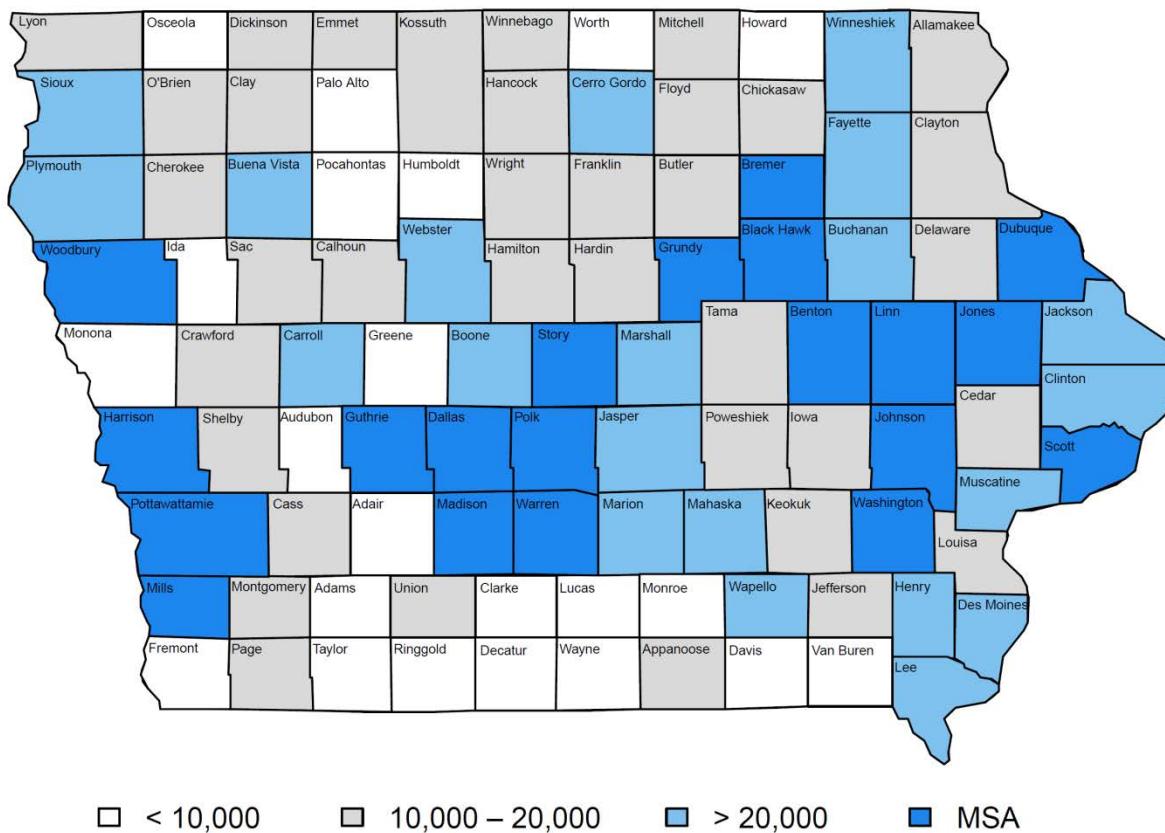
The time interval covered differs across the data items, mainly due to differences in data availability. Where reasonable and possible, county-specific data are presented. When it is not presented in that format, it is either because the data were too sparse (that is, a relatively small number of counties with non-zero counts) or they were not available at the county level. Since many of the data items presented would be expected to vary with county population size, the counties have been organized into groups based on their county population size. Both crude and age-adjusted population rates are presented when reasonable, which also facilitates comparisons across counties. For data items in which historical counts earlier than those presented in this book are available, line graphs showing time trends by county grouping are presented as well.

### Four County Groupings

An MSA (Metropolitan Statistical Area) county is defined by the U. S. Census Bureau as a central city along with the counties economically and socially connected to it. Each MSA must have one city with at least 50,000 inhabitants or a Census-defined urbanized area with a total metropolitan population of at least 100,000 (75,000 in New England). Under the year 2000 standards, rural counties may be included in an MSA if at least 25 percent of the workers who live in the county work within the central county or counties (that is, the county or counties containing the urban core of 50,000 or more population) of the MSA. A county can also be included if at least 25 percent of the jobs in the county are filled by workers living in the central counties of the MSA. This definition was updated following the 2000 Census resulting in many newly classified MSA counties.

There were twenty counties defined by the U. S. Census Bureau as MSA from the 2000 Census, and this was the definition used in the 2013 Fact Book as much of the data used spans the 2000-2009 period. The seventy-nine other counties were classified into groups based on population size using a 10 year average from 2000 – 2009. No counties switched categories between the 2009 Fact Book and this one. There are 22 counties with less than 10,000 residents, 36 counties with 10,000 to 20,000 residents and 21 counties with 20,000 to 50,000 residents. See the map on the following page to identify the counties in each group.

### County Group Based on 2002–2011 Average Population



### Small Numbers

If the number of county-specific events in a health outcome table was less than or equal to five, we masked the count by replacing it with an asterisk (\*) to protect subject confidentiality. However, all numbers are included in the computations needed for the line graphs and other charts accompanying the health outcomes tables, which summarizes data over a larger number of people. If only one value in a county grouping is masked with an (\*), then we do not report the grouping total. In some cases, the data was only available if the count was less than 10. The rule used in suppressing values in a particular table can be found in the footnotes.

### Population Standard

The Year 2000 Estimated United States Standard Million Population from the United States Census Bureau has been used for adjustment purposes.

**Adjustment Calculations**

Both crude and age-adjusted rates have been calculated and presented in many of the data tables. Crude rates for an entity (e.g., county) are the number of events of a health outcome divided by the population at risk in the county. The age-adjusted rates used in this book are a weighted average of the age-specific rates from the targeted population (e.g., county), where the weights are the proportions of persons in the corresponding age groups of a standard population. As stated above, the Year 2000 United States population was used as the standard population. If data only represent one age group then the age-adjusted rate is identical to the crude rate and thus not reported (e.g., Live Births).

There are no hard and fast rules as to when one should use either the crude or the adjusted rate for comparisons. A few guidelines can, however, be noted. A crude rate for a county reflects the disease or mortality burden for a county and may be useful to the health policy makers in the county. If a county has a relatively high proportion of elderly and the disease is associated with older individuals, crude rates will reflect that higher burden due to greater numbers of elderly. The age-adjusted rate is also useful as a county comparison index, but after putting both counties on the same playing field with respect to the age distribution in each. These rates have been adjusted to the same standard population, so the effect of differing age distributions in two counties is eliminated before the comparison is made. Hence, both are useful descriptive indices of diseases, but with differences in interpretation.

**Ranks**

The county rank represents the ranking of the county among the 99 counties of Iowa, with a rank of “1” given to the county with the largest rate and “99” to the county with the smallest rate. In general, ranks were presented for a data table when no counts in the table were suppressed.

**Maps**

State maps were created to present the data for Health Care Providers and Health Care Facilities instead of tables. The number in the county represents the 2013 count. The crude rates were calculated from the estimated 2011 county population, the most recent year for which estimates were available at the time the maps were created. These rates were grouped into four categories of approximately twenty-five counties each when possible, and shaded on the map. If a county rate fell on the border between two categories, it was shaded using the smaller region.

## Demographics

Many of the health indicators in the 2013 Iowa Health Fact Book are presented with rates calculated using the population of the county and state. These rates are also stratified into population subgroups based on a 10-year average of each county's population. This not only contrasts the rural and urban aspects of the state but also includes trends in age and ethnic distribution of the population. The Year 2000 U.S. standard population age distribution is used for calculating age-adjusted rates. Population estimates have been obtained from the U.S. Census and from the State Health Registry of Iowa via the National Cancer Institute's SEER\*Stat software program. Estimates are used for individual years and for year groupings where appropriate.

### KEY FEATURES IN IOWA DEMOGRAPHICS...

- Increasing urbanization
- Females represent 50.4% of population
- Median age 38.1 years
- Over 65 represents 14.9% of population

### CHARACTERISTICS OF RACE / ETHNICITY

White	92.8%
Black or African American	3.2%
Asian	2.0%
Some other race or races	2.0%
Hispanic or Latino (of any race)	5.3%

population of 3,062,309 lived in MSA counties.

The population in Iowa is becoming increasingly urbanized. Using the 2000 Census, twenty counties were defined as Metropolitan Statistical Areas (MSA) doubling the previous number of ten MSA defined counties. The Metropolitan Statistical Areas are Ames (Story County), Cedar Rapids (Benton, Jones, Linn Counties), Davenport (Scott County), Des Moines (Dallas, Guthrie, Madison, Polk, Warren Counties), Dubuque (Dubuque County), Iowa City (Johnson, Washington Counties), Omaha-Council Bluffs (Harrison, Mills, Pottawattamie Counties), Sioux City (Woodbury County), Waterloo-Cedar Falls (Black Hawk, Bremer, Grundy Counties). Iowa's estimated population surpassed 3 million in 2008 and almost 57% of the 2011 estimated Iowa

The distribution of the population by age differs among the county groupings. Larger counties have a greater percentage young adults (15-44 years), and the smaller counties have a larger percentage of persons 65 years of age or older. These age distributions are used to standardize the data in the following chapters so risk factors other than age can be compared. Also, the population of the state has become older since 1970. The percent of Iowans age 65 and older increased steadily through the early 1990's, but has slightly decreased since then.

# State Population Distributions

**Estimated Annual Population Distribution 2002-2011**

<b>County</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
<b>Counties with Average Population &lt; 10,000</b>	Adair	8,059	8,050	8,019	7,932	7,924	7,871
	Adams	4,370	4,365	4,307	4,226	4,224	4,195
	Audubon	6,572	6,479	6,430	6,324	6,265	6,222
	Clarke	9,213	9,282	9,307	9,180	9,196	9,149
	Davis	8,586	8,534	8,612	8,583	8,619	8,676
	Decatur	8,603	8,575	8,580	8,618	8,576	8,569
	Fremont	7,787	7,743	7,655	7,616	7,622	7,642
	Greene	10,105	9,996	9,932	9,800	9,611	9,548
	Howard	9,860	9,808	9,792	9,760	9,664	9,636
	Humboldt	10,176	10,154	10,121	10,033	10,038	9,935
	Ida	7,636	7,571	7,457	7,369	7,247	7,228
	Lucas	9,360	9,384	9,508	9,462	9,331	9,280
	Monona	9,791	9,819	9,681	9,566	9,479	9,423
	Monroe	7,887	7,954	7,969	7,955	7,911	7,877
	Osceola	6,899	6,888	6,863	6,743	6,713	6,600
	Palo Alto	9,896	9,748	9,753	9,702	9,586	9,577
	Pocahontas	8,355	8,170	8,003	7,835	7,694	7,667
	Ringgold	5,339	5,332	5,335	5,304	5,230	5,201
	Taylor	6,813	6,747	6,689	6,534	6,557	6,448
	Van Buren	7,722	7,672	7,665	7,638	7,660	7,690
	Wayne	6,665	6,614	6,561	6,494	6,478	6,376
	Worth	7,795	7,734	7,731	7,742	7,649	7,655
	<b>Total</b>	<b>177,489</b>	<b>176,619</b>	<b>175,970</b>	<b>174,416</b>	<b>173,274</b>	<b>172,465</b>
<b>Counties with Average Population 10,000 – 20,000</b>	Allamakee	14,289	14,345	14,324	14,371	14,378	14,335
	Appanoose	13,420	13,522	13,462	13,453	13,319	13,105
	Butler	14,926	14,939	14,985	14,965	14,931	14,961
	Calhoun	10,683	10,488	10,382	10,228	10,093	9,947
	Cass	14,242	14,275	14,142	14,002	14,021	13,988
	Cedar	18,150	18,224	18,248	18,213	18,332	18,321
	Cherokee	12,685	12,579	12,510	12,380	12,215	12,152
	Chickasaw	12,941	12,770	12,691	12,561	12,603	12,540
	Clay	17,086	16,985	16,960	16,848	16,812	16,725
	Clayton	18,369	18,357	18,358	18,269	18,272	18,259
	Crawford	16,981	16,953	16,941	16,920	16,868	16,931
	Delaware	18,271	18,190	18,066	17,955	17,957	17,981
	Dickinson	16,351	16,339	16,506	16,644	16,667	16,634
	Emmet	10,815	10,724	10,553	10,527	10,437	10,417
	Floyd	16,670	16,641	16,586	16,520	16,586	16,497
	Franklin	10,674	10,655	10,716	10,766	10,699	10,759
	Hamilton	16,337	16,366	16,285	16,261	16,144	15,987
	Hancock	11,846	11,905	11,838	11,834	11,729	11,580
	Hardin	18,476	18,327	18,164	17,974	17,893	17,789
	Iowa	15,911	16,062	16,108	16,297	16,391	16,308
	Jefferson	16,131	16,194	16,298	16,315	16,401	16,600
	Keokuk	11,330	11,186	11,061	10,881	10,713	10,688
	Kossuth	16,670	16,525	16,437	16,287	16,045	15,878
	Louisa	12,225	12,230	12,115	11,862	11,904	11,892
	Lyon	11,670	11,702	11,692	11,677	11,604	11,536
	Mitchell	10,822	10,830	10,898	10,800	10,836	10,812
	Montgomery	11,313	11,211	11,191	11,214	11,179	10,981
	O'Brien	14,808	14,762	14,564	14,552	14,558	14,421

## State Population Distributions (continued)

Estimated Annual Population Distribution 2002-2011							
County	2009	2010	2011	%Chg <sup>1</sup>	10 Yr Ave <sup>2</sup>	Male <sup>3</sup>	Female <sup>3</sup>
Counties with Average Population < 10,000	Adair	7,676	7,676	7,527	-6.6	7,848	3,851
	Adams	4,047	4,028	4,004	-8.38	4,192	2,042
	Audubon	6,136	6,115	6,034	-8.19	6,278	2,983
	Clarke	9,228	9,304	9,356	1.55	9,243	4,581
	Davis	8,701	8,776	8,787	2.34	8,655	4,304
	Decatur	8,506	8,437	8,284	-3.71	8,521	4,241
	Fremont	7,453	7,430	7,367	-5.39	7,580	3,750
	Greene	9,329	9,334	9,285	-8.11	9,636	4,662
	Howard	9,568	9,560	9,565	-2.99	9,684	4,755
	Humboldt	9,843	9,807	9,802	-3.68	9,982	4,866
	Ida	7,090	7,077	7,086	-7.2	7,298	3,562
	Lucas	8,948	8,895	8,847	-5.48	9,215	4,506
	Monona	9,247	9,238	9,239	-5.64	9,483	4,577
	Monroe	7,924	7,984	8,056	2.14	7,942	3,914
	Osceola	6,509	6,448	6,357	-7.86	6,664	3,280
	Palo Alto	9,510	9,397	9,419	-4.82	9,607	4,709
	Pocahontas	7,395	7,283	7,180	-14.06	7,709	3,717
	Ringgold	5,119	5,137	5,119	-4.12	5,228	2,510
	Taylor	6,355	6,313	6,305	-7.46	6,511	3,163
	Van Buren	7,628	7,559	7,510	-2.75	7,644	3,840
	Wayne	6,393	6,408	6,309	-5.34	6,467	3,107
	Worth	7,610	7,585	7,544	-3.22	7,668	3,807
	<b>Total</b>	170,215	169,791	168,982	-4.79	173,054	84,727
Counties with Average Population 10,000 - 20,000	Allamakee	14,263	14,347	14,274	-0.1	14,325	7,284
	Appanoose	12,896	12,883	12,797	-4.64	13,181	6,312
	Butler	14,699	14,908	14,939	0.09	14,921	7,316
	Calhoun	9,684	9,668	9,626	-9.89	10,064	4,810
	Cass	13,949	13,950	13,817	-2.98	14,032	6,829
	Cedar	18,458	18,494	18,400	1.38	18,330	9,119
	Cherokee	11,953	12,112	12,069	-4.86	12,267	5,973
	Chickasaw	12,465	12,424	12,449	-3.8	12,592	6,298
	Clay	16,708	16,648	16,590	-2.9	16,806	8,191
	Clayton	18,185	18,085	18,014	-1.93	18,238	9,109
	Crawford	16,944	17,144	17,277	1.74	16,984	8,561
	Delaware	17,755	17,785	17,658	-3.36	17,946	8,889
	Dickinson	16,666	16,672	16,899	3.35	16,607	8,204
	Emmet	10,361	10,284	10,104	-6.57	10,467	5,168
	Floyd	16,248	16,312	16,070	-3.6	16,446	8,031
	Franklin	10,656	10,691	10,730	0.52	10,704	5,351
	Hamilton	15,739	15,650	15,538	-4.89	16,017	7,894
	Hancock	11,371	11,318	11,287	-4.72	11,623	5,733
	Hardin	17,535	17,536	17,426	-5.68	17,881	8,778
	Iowa	16,406	16,338	16,320	2.57	16,248	8,070
	Jefferson	16,782	16,800	16,815	4.24	16,494	8,763
	Keokuk	10,552	10,501	10,378	-8.4	10,791	5,263
	Kossuth	15,630	15,519	15,396	-7.64	16,007	7,794
	Louisa	11,416	11,374	11,369	-7	11,822	5,959
	Lyon	11,557	11,585	11,670	0	11,624	5,757
	Mitchell	10,763	10,797	10,783	-0.36	10,816	5,315
	Montgomery	10,803	10,714	10,640	-5.95	11,007	5,249
	O'Brien	14,412	14,386	14,210	-4.04	14,501	7,140

<sup>1</sup>Percent change from 2002 to 2011<sup>2</sup>2002-2011 Average<sup>3</sup>2006-2010 Average

Source: Population Division, U. S. Census Bureau and SEER\*Stat

## State Population Distributions (continued)

Estimated Annual Population Distribution 2002-2011								
	County	2002	2003	2004	2005	2006	2007	2008
<b>Counties with Average Population 10,000 – 20,000</b>	Page	16,506	16,356	16,227	16,274	16,331	16,256	16,083
	Poweshiek	18,941	19,060	19,106	19,002	19,053	19,140	19,025
	Sac	11,119	10,967	10,871	10,716	10,707	10,532	10,475
	Shelby	12,869	12,819	12,750	12,547	12,480	12,496	12,338
	Tama	18,017	18,030	18,167	18,197	18,149	18,064	17,986
	Union	12,163	12,004	12,085	12,143	12,225	12,319	12,447
	Winnebago	11,403	11,412	11,321	11,340	11,138	10,986	10,927
	Wright	13,957	13,831	13,808	13,717	13,588	13,492	13,375
	<b>Total</b>	<b>519,067</b>	<b>517,765</b>	<b>516,416</b>	<b>514,512</b>	<b>513,258</b>	<b>511,309</b>	<b>509,071</b>
<b>Counties with Average Population &gt; 20,000</b>	Boone	26,086	26,232	26,372	26,500	26,471	26,553	26,454
	Buchanan	20,796	20,822	20,910	20,831	20,957	21,069	21,154
	Buena Vista	20,233	20,141	20,000	19,970	19,909	19,798	19,855
	Carroll	21,159	21,024	20,936	20,973	20,832	20,869	20,742
	Cerro Gordo	45,430	45,412	44,993	44,741	44,531	44,461	44,285
	Clinton	49,659	49,585	49,498	49,475	49,487	49,342	49,303
	Des Moines	41,138	41,047	40,562	40,332	40,192	40,206	40,235
	Fayette	21,643	21,604	21,415	21,426	21,265	21,005	20,910
	Henry	20,086	20,225	20,225	20,354	20,326	20,359	20,307
	Jackson	20,142	20,148	20,146	20,124	20,092	20,015	19,919
	Jasper	37,552	37,703	37,645	37,482	37,288	37,167	37,103
	Lee	36,960	36,627	36,587	36,364	36,291	36,130	35,819
	Mahaska	22,394	22,156	22,240	22,454	22,298	22,388	22,483
	Marion	32,572	32,547	32,618	32,774	33,396	33,279	33,515
	Marshall	39,297	39,397	39,711	39,646	39,601	39,875	40,151
	Muscatine	41,757	41,654	41,758	41,894	42,145	42,325	42,515
	Plymouth	24,729	24,858	25,042	24,980	24,982	24,886	24,898
	Sioux	32,164	32,318	32,547	32,726	33,077	33,150	33,364
	Wapello	35,796	35,750	35,709	35,855	35,776	35,458	35,381
	Webster	39,654	39,377	38,922	38,562	38,534	38,393	38,273
	Winneshiek	21,183	21,006	21,040	21,060	21,012	21,078	20,980
	<b>Total</b>	<b>650,430</b>	<b>649,633</b>	<b>648,876</b>	<b>648,523</b>	<b>648,462</b>	<b>647,806</b>	<b>647,646</b>
<b>MSA Counties</b>	Benton	25,829	25,946	26,181	26,265	26,137	26,066	26,097
	Black Hawk	126,876	126,491	126,682	127,021	127,486	127,756	129,203
	Bremer	23,386	23,549	23,728	23,833	24,054	24,237	24,162
	Dallas	44,960	47,118	50,387	53,042	56,158	59,164	62,144
	Dubuque	89,132	90,012	90,462	90,769	91,258	92,130	92,519
	Grundy	12,372	12,348	12,383	12,406	12,436	12,317	12,359
	Guthrie	11,227	11,343	11,389	11,249	11,150	11,116	11,038
	Harrison	15,421	15,444	15,412	15,362	15,346	15,177	14,946
	Johnson	114,948	116,673	118,891	120,300	122,226	124,541	127,113
	Jones	20,283	20,406	20,613	20,605	20,678	20,803	20,848
	Linn	195,987	196,920	198,314	200,395	202,709	205,840	208,558
	Madison	14,312	14,481	14,733	14,918	15,262	15,418	15,517
	Mills	14,546	14,621	14,715	14,905	15,214	15,239	15,214
	Polk	384,355	388,277	392,164	399,030	405,990	413,024	419,495
	Pottawattamie	88,447	88,821	89,762	90,198	90,867	91,239	91,781
	Scott	158,086	158,048	158,145	158,543	159,597	160,077	161,824
	Story	81,885	82,068	82,754	82,884	84,739	86,540	87,831
	Warren	41,422	42,187	42,584	43,339	44,178	44,868	45,450
	Washington	21,108	21,190	21,258	21,350	21,472	21,588	21,686
	Woodbury	102,666	102,039	101,816	100,589	100,693	100,492	100,910
	<b>Total</b>	<b>1,587,248</b>	<b>1,597,982</b>	<b>1,612,373</b>	<b>1,627,003</b>	<b>1,647,650</b>	<b>1,667,632</b>	<b>1,688,695</b>

## State Population Distributions (continued)

Estimated Annual Population Distribution 2002-2011								
	County	2009	2010	2011	% Chg <sup>1</sup>	10 Yr Ave <sup>2</sup>	Male <sup>3</sup>	
<b>Counties with Average Population 10,000 – 20,000</b>	Page	15,885	15,933	15,987	-3.14	16,184	8,320	
	Poweshiek	18,958	18,899	18,804	-0.72	18,999	9,277	
	Sac	10,342	10,349	10,241	-7.9	10,632	5,136	
	Shelby	12,165	12,173	12,039	-6.45	12,468	6,044	
	Tama	17,833	17,743	17,695	-1.79	17,988	8,843	
	Union	12,527	12,517	12,545	3.14	12,298	6,027	
	Winnebago	10,917	10,840	10,789	-5.38	11,107	5,416	
	Wright	13,262	13,194	13,068	-6.37	13,529	6,625	
	<b>Total</b>	<b>506,745</b>	<b>506,573</b>	<b>504,713</b>	<b>-2.77</b>	<b>511,943</b>	<b>252,847</b>	
		<b>Total</b>	<b>506,745</b>	<b>506,573</b>	<b>-2.77</b>	<b>511,943</b>	<b>252,847</b>	<b>256,544</b>
<b>Counties with Average Population &gt; 20,000</b>	Boone	26,360	26,279	26,255	0.65	26,356	13,177	
	Buchanan	21,016	20,948	20,923	0.61	20,943	10,460	
	Buena Vista	20,004	20,327	20,406	0.86	20,064	9,966	
	Carroll	20,743	20,830	20,861	-1.41	20,897	10,106	
	Cerro Gordo	44,239	44,107	43,938	-3.28	44,614	21,512	
	Clinton	49,147	49,120	49,015	-1.3	49,363	24,166	
	Des Moines	40,379	40,288	40,169	-2.36	40,455	19,532	
	Fayette	20,939	20,864	20,973	-3.1	21,204	10,443	
	Henry	20,202	20,131	20,284	0.99	20,250	10,392	
	Jackson	19,841	19,848	19,796	-1.72	20,007	9,878	
	Jasper	36,879	36,816	36,547	-2.68	37,218	18,858	
	Lee	35,856	35,842	35,621	-3.62	36,210	18,105	
	Mahaska	22,364	22,399	22,530	0.61	22,371	11,263	
	Marion	33,468	33,261	33,335	2.34	33,077	16,572	
	Marshall	40,280	40,706	40,980	4.28	39,964	20,115	
	Muscatine	42,783	42,732	42,815	2.53	42,238	21,099	
	Plymouth	24,904	24,993	24,896	0.68	24,917	12,343	
	Sioux	33,587	33,726	33,900	5.4	33,056	16,634	
	Wapello	35,481	35,625	35,421	-1.05	35,625	17,388	
	Webster	38,316	37,884	37,660	-5.03	38,558	19,558	
	Winneshiek	21,025	21,057	21,024	-0.75	21,047	10,430	
	<b>Total</b>	<b>647,813</b>	<b>647,783</b>	<b>647,349</b>	<b>-0.47</b>	<b>648,432</b>	<b>321,995</b>	
		<b>Total</b>	<b>647,813</b>	<b>647,783</b>	<b>-0.47</b>	<b>648,432</b>	<b>321,995</b>	<b>325,907</b>
	<b>MSA Counties</b>	Benton	26,117	26,073	26,092	1.02	26,080	13,007
		Black Hawk	130,595	131,196	131,549	3.68	128,486	62,675
Bremer		24,183	24,290	24,281	3.83	23,970	11,800	
Dallas		64,489	66,673	69,444	54.46	57,358	30,242	
Dubuque		92,948	93,888	94,648	6.19	91,777	45,453	
Grundy		12,447	12,454	12,459	0.7	12,398	6,130	
Guthrie		10,939	10,959	10,901	-2.9	11,131	5,461	
Harrison		14,972	14,922	14,828	-3.85	15,183	7,388	
Johnson		129,864	131,238	133,038	15.74	123,883	63,335	
Jones		20,562	20,673	20,608	1.6	20,608	10,798	
Linn		210,217	211,564	213,875	9.13	204,438	102,166	
Madison		15,510	15,733	15,779	10.25	15,166	7,689	
Mills		15,056	15,060	14,992	3.07	14,956	7,638	
Polk		425,737	432,256	437,399	13.8	409,773	205,232	
Pottawattamie		92,395	93,385	93,518	5.73	91,041	45,105	
Scott		163,582	165,759	167,095	5.7	161,076	79,399	
Story		89,285	89,567	89,663	9.5	85,722	45,327	
Warren		45,926	46,317	46,732	12.82	44,300	22,115	
Washington		21,692	21,712	21,855	3.54	21,491	10,588	
Woodbury		101,581	102,336	102,509	-0.15	101,563	49,806	
<b>Total</b>		<b>1,708,097</b>	<b>1,726,055</b>	<b>1,741,265</b>	<b>9.7</b>	<b>1,660,400</b>	<b>831,355</b>	
		<b>Total</b>	<b>1,708,097</b>	<b>1,726,055</b>	<b>9.7</b>	<b>1,660,400</b>	<b>831,355</b>	<b>856,271</b>

<sup>1</sup>Percent change from 2002 to 2011<sup>2</sup>2002-2011 Average; <sup>3</sup>2006-2010 Average

Source: Population Division, U.S. Census Bureau and SEER\*Stat

## Average Annual Population Distribution by Age: 2006-2010

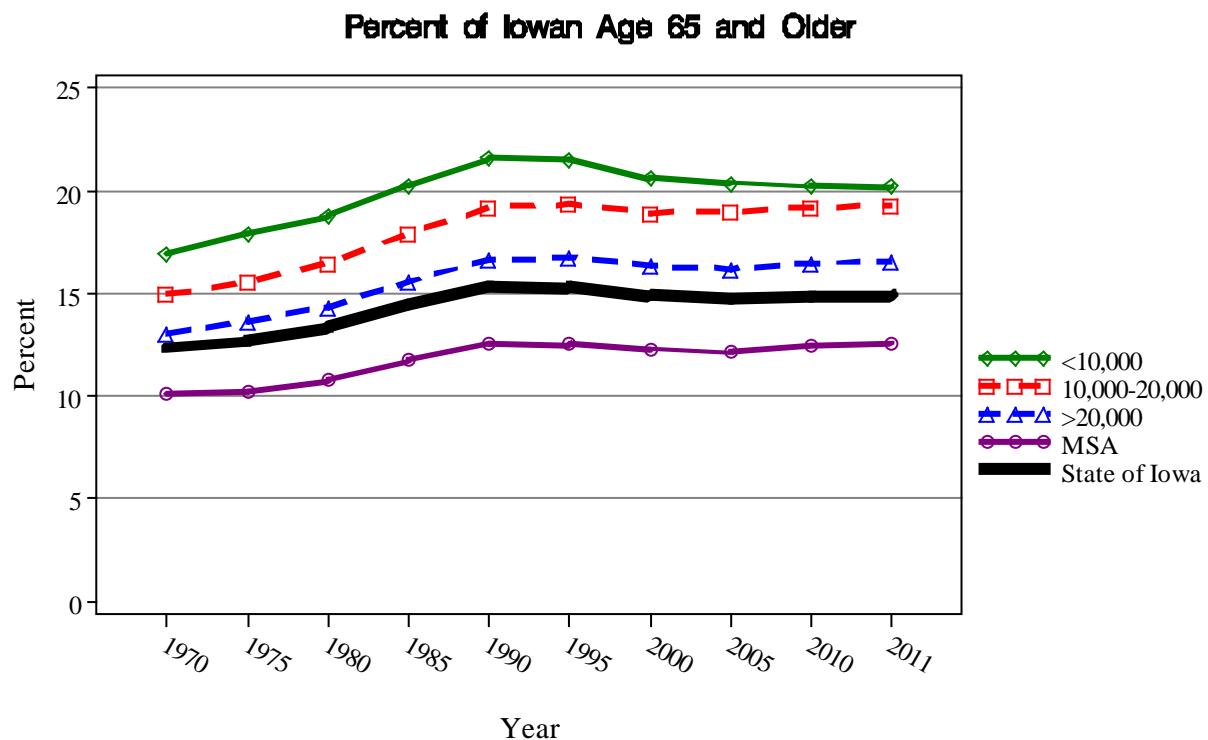
County	% <1	% 1-4	% 5-14	% 15-24	% 25-44	% 45-64	% 65-84	% 85 +	
Counties with Average Population < 10,000	Adair	1.06%	4.55%	12.69%	10.31%	20.91%	28.93%	17.14%	4.41%
	Adams	1.16%	4.47%	11.65%	10.59%	20.01%	30.47%	18.01%	3.64%
	Audubon	1.01%	4.34%	12.04%	10.54%	19.35%	29.38%	18.70%	4.65%
	Clarke	1.38%	5.72%	13.56%	12.18%	22.86%	27.51%	14.12%	2.68%
	Davis	1.79%	6.73%	15.88%	12.06%	20.81%	25.68%	14.44%	2.60%
	Decatur	1.30%	5.01%	12.25%	18.91%	19.28%	25.04%	15.52%	2.69%
	Fremont	1.24%	4.93%	12.11%	11.06%	20.44%	30.71%	16.43%	3.08%
	Greene	1.04%	4.47%	13.07%	10.96%	19.91%	29.71%	16.75%	4.09%
	Howard	1.36%	5.72%	13.54%	11.24%	21.86%	26.97%	15.51%	3.80%
	Humboldt	1.15%	5.12%	12.73%	11.22%	20.83%	28.20%	17.06%	3.68%
	Ida	1.50%	5.28%	12.88%	10.46%	20.30%	28.96%	16.75%	3.87%
	Lucas	1.21%	5.08%	13.62%	11.04%	20.44%	28.57%	16.50%	3.55%
	Monona	1.00%	4.43%	12.50%	10.11%	18.78%	29.52%	19.20%	4.45%
	Monroe	1.29%	5.12%	13.11%	11.35%	22.52%	27.99%	15.60%	3.02%
	Osceola	1.12%	4.88%	12.57%	11.34%	21.70%	28.50%	16.41%	3.47%
	Palo Alto	1.08%	5.24%	11.89%	12.94%	20.29%	27.23%	17.10%	4.23%
	Pocahontas	0.94%	4.70%	11.50%	10.77%	18.64%	31.19%	17.98%	4.29%
	Ringgold	1.20%	5.20%	13.83%	10.25%	18.72%	27.15%	18.58%	5.07%
	Taylor	0.98%	5.12%	13.47%	10.26%	20.77%	28.23%	16.97%	4.20%
	Van Buren	1.44%	5.07%	12.92%	11.00%	21.66%	28.10%	16.76%	3.06%
	Wayne	1.27%	5.17%	12.80%	11.35%	19.02%	28.20%	18.08%	4.11%
	Worth	1.01%	4.23%	13.01%	11.31%	22.30%	30.03%	14.78%	3.34%
	<b>Total</b>	1.21%	5.06%	12.93%	11.52%	20.59%	28.38%	16.63%	3.69%
Counties with Average Population 10,000 - 20,000	Allamakee	1.30%	5.34%	12.35%	11.47%	21.14%	28.96%	16.48%	2.95%
	Appanoose	1.19%	5.04%	12.15%	11.39%	21.33%	28.80%	16.79%	3.32%
	Butler	1.23%	5.32%	12.89%	9.93%	21.93%	28.81%	16.20%	3.70%
	Calhoun	1.19%	4.31%	11.74%	10.14%	19.41%	29.53%	18.92%	4.75%
	Cass	1.28%	5.17%	12.12%	10.68%	20.67%	29.09%	17.39%	3.59%
	Cedar	1.22%	4.91%	13.65%	10.87%	23.21%	29.48%	13.67%	3.00%
	Cherokee	1.10%	4.46%	11.67%	10.62%	19.49%	30.87%	17.70%	4.10%
	Chickasaw	1.12%	5.30%	13.06%	11.34%	20.83%	29.25%	15.89%	3.21%
	Clay	1.13%	5.31%	12.61%	11.18%	22.89%	28.50%	14.79%	3.59%
	Clayton	1.16%	4.86%	12.76%	10.97%	20.44%	30.46%	16.01%	3.33%
	Crawford	1.53%	5.91%	14.34%	13.62%	22.09%	26.19%	13.33%	3.00%
	Delaware	1.11%	5.10%	14.04%	11.41%	22.12%	29.51%	14.21%	2.51%
	Dickinson	0.92%	4.07%	10.94%	9.28%	20.98%	31.69%	18.70%	3.42%
	Emmet	1.12%	5.26%	12.07%	14.45%	21.39%	26.77%	15.12%	3.81%
	Floyd	1.16%	5.09%	12.92%	11.61%	21.28%	27.94%	16.44%	3.57%
	Franklin	1.27%	5.02%	12.92%	11.31%	21.98%	28.13%	15.83%	3.53%
	Hamilton	1.12%	4.87%	13.79%	10.90%	22.73%	28.33%	14.95%	3.30%
	Hancock	1.09%	4.87%	13.25%	10.37%	21.09%	30.52%	15.31%	3.51%
	Hardin	1.04%	4.82%	12.38%	13.02%	20.37%	27.40%	16.91%	4.06%
	Iowa	1.15%	4.94%	13.44%	11.22%	22.98%	28.99%	14.04%	3.23%
	Jefferson	0.80%	3.72%	10.14%	14.88%	21.97%	33.66%	12.33%	2.51%
	Keokuk	1.15%	4.66%	13.20%	11.31%	21.50%	28.97%	15.91%	3.30%
	Kossuth	1.04%	4.67%	12.44%	10.49%	19.45%	29.99%	18.00%	3.91%
	Louisa	1.08%	4.88%	15.17%	12.15%	24.21%	27.67%	12.97%	1.87%
	Lyon	1.42%	6.45%	15.17%	11.18%	23.00%	25.81%	13.84%	3.13%
	Mitchell	1.05%	4.97%	13.90%	11.56%	19.72%	27.06%	17.32%	4.42%
	Montgomery	1.00%	4.65%	13.46%	10.60%	21.14%	29.23%	16.10%	3.83%
	O'Brien	1.21%	5.20%	13.03%	10.86%	21.01%	28.08%	16.51%	4.10%
	Page	1.10%	4.62%	11.45%	11.90%	22.45%	28.50%	16.33%	3.65%

## Average Annual Population Distribution by Age: 2006-2010 (cont.)

	County	% <1	% 1-4	% 5-14	% 15-24	% 25-44	% 45-64	% 65-84	% 85 +
Counties with Average Population 10,000 - 20,000	Poweshiek	1.00%	4.36%	11.67%	17.61%	20.12%	26.80%	14.97%	3.47%
	Sac	1.03%	4.86%	12.62%	9.65%	19.76%	29.85%	17.54%	4.70%
	Shelby	1.14%	4.26%	13.50%	10.55%	20.02%	29.55%	16.93%	4.06%
	Tama	1.15%	5.13%	14.25%	11.86%	21.99%	27.24%	15.16%	3.21%
	Union	1.27%	5.37%	12.90%	12.79%	22.12%	27.59%	14.82%	3.13%
	Winnebago	1.02%	4.33%	12.17%	13.73%	20.64%	28.96%	15.38%	3.76%
	Wright	1.22%	5.03%	12.77%	11.14%	20.56%	28.28%	16.80%	4.21%
	<b>Total</b>	1.14%	4.92%	12.84%	11.69%	21.39%	28.81%	15.74%	3.48%
Counties with Average Population > 20,000	Boone	1.10%	4.83%	13.24%	12.34%	23.83%	28.70%	13.32%	2.63%
	Buchanan	1.49%	5.95%	15.16%	11.90%	23.14%	27.04%	12.98%	2.34%
	Buena Vista	1.45%	5.60%	13.33%	16.24%	22.03%	26.26%	11.84%	3.26%
	Carroll	1.30%	5.56%	13.29%	11.33%	22.06%	27.82%	15.02%	3.63%
	Cerro Gordo	1.08%	4.58%	11.94%	12.38%	22.25%	29.86%	14.91%	3.01%
	Clinton	1.25%	5.01%	13.16%	12.36%	22.90%	28.53%	14.07%	2.70%
	Des Moines	1.23%	5.26%	12.66%	11.58%	23.58%	28.19%	14.59%	2.90%
	Fayette	1.21%	4.77%	12.17%	13.73%	20.47%	28.16%	16.18%	3.32%
	Henry	1.19%	4.60%	13.18%	13.20%	24.43%	27.48%	13.17%	2.76%
	Jackson	1.04%	4.49%	13.24%	11.25%	21.74%	29.63%	15.79%	2.83%
	Jasper	1.10%	4.72%	12.98%	11.14%	24.67%	28.81%	14.10%	2.48%
	Lee	1.24%	4.58%	12.19%	12.05%	23.11%	29.85%	14.16%	2.80%
	Mahaska	1.31%	5.40%	13.60%	13.70%	23.34%	26.58%	13.17%	2.91%
	Marion	1.28%	5.34%	13.95%	14.72%	22.76%	26.33%	13.10%	2.52%
	Marshall	1.37%	5.76%	13.84%	12.71%	22.78%	27.25%	13.44%	2.86%
	Muscatine	1.40%	5.81%	14.51%	12.50%	24.91%	27.26%	11.51%	2.10%
	Plymouth	1.19%	5.30%	14.45%	11.40%	22.45%	28.61%	13.91%	2.70%
	Sioux	1.59%	6.24%	14.62%	18.11%	22.20%	22.95%	11.68%	2.62%
	Wapello	1.32%	5.28%	12.25%	13.55%	23.80%	27.45%	13.70%	2.65%
	Webster	1.16%	4.77%	12.17%	15.21%	22.44%	27.69%	13.85%	2.71%
	Winneshiek	0.99%	4.11%	11.46%	20.59%	19.15%	26.92%	13.78%	2.99%
	<b>Total</b>	1.25%	5.16%	13.18%	13.29%	22.92%	27.75%	13.69%	2.76%
MSA Counties	Benton	1.19%	5.05%	14.38%	11.54%	24.23%	28.32%	12.72%	2.58%
	Blackhawk	1.31%	5.11%	11.58%	19.65%	23.75%	24.73%	11.63%	2.24%
	Bremer	1.00%	4.72%	12.40%	16.88%	21.82%	25.99%	14.21%	2.98%
	Dallas	1.70%	6.87%	16.46%	10.16%	31.78%	23.29%	8.32%	1.44%
	Dubuque	1.28%	5.09%	13.26%	14.68%	23.67%	26.72%	12.86%	2.44%
	Grundy	1.24%	4.99%	13.10%	11.14%	22.04%	28.60%	15.59%	3.29%
	Guthrie	1.05%	4.45%	13.72%	9.74%	21.35%	29.96%	16.75%	2.98%
	Harrison	1.25%	4.85%	13.11%	11.50%	22.04%	29.47%	14.63%	3.16%
	Johnson	1.31%	4.81%	10.58%	25.36%	28.14%	21.28%	7.28%	1.23%
	Jones	1.10%	4.71%	12.30%	11.09%	24.17%	29.38%	14.38%	2.85%
	Linn	1.34%	5.35%	13.79%	13.84%	26.93%	25.78%	11.02%	1.94%
	Madison	1.42%	5.61%	15.75%	10.29%	24.67%	27.65%	12.30%	2.32%
	Mills	1.14%	5.17%	14.52%	11.07%	23.36%	31.30%	11.61%	1.84%
	Polk	1.53%	6.10%	13.94%	13.13%	29.62%	24.85%	9.26%	1.58%
	Pottawattamie	1.41%	5.32%	13.30%	13.40%	24.63%	27.66%	12.26%	2.01%
	Scott	1.35%	5.41%	13.66%	13.09%	26.04%	27.40%	11.03%	2.02%
	Story	1.06%	4.18%	9.53%	32.66%	23.15%	19.41%	8.31%	1.68%
	Warren	1.17%	5.15%	14.98%	13.85%	24.47%	27.11%	11.31%	1.97%
	Washington	1.24%	5.22%	14.18%	11.07%	23.03%	27.86%	13.86%	3.54%
	Woodbury	1.53%	6.18%	14.45%	14.74%	25.07%	25.12%	10.96%	1.94%
	<b>Total</b>	1.37%	5.47%	13.29%	15.64%	26.52%	25.26%	10.54%	1.91%

Source: Population Division, U.S. Census Bureau and SEER\*Stat

## Aging Trend in Iowa



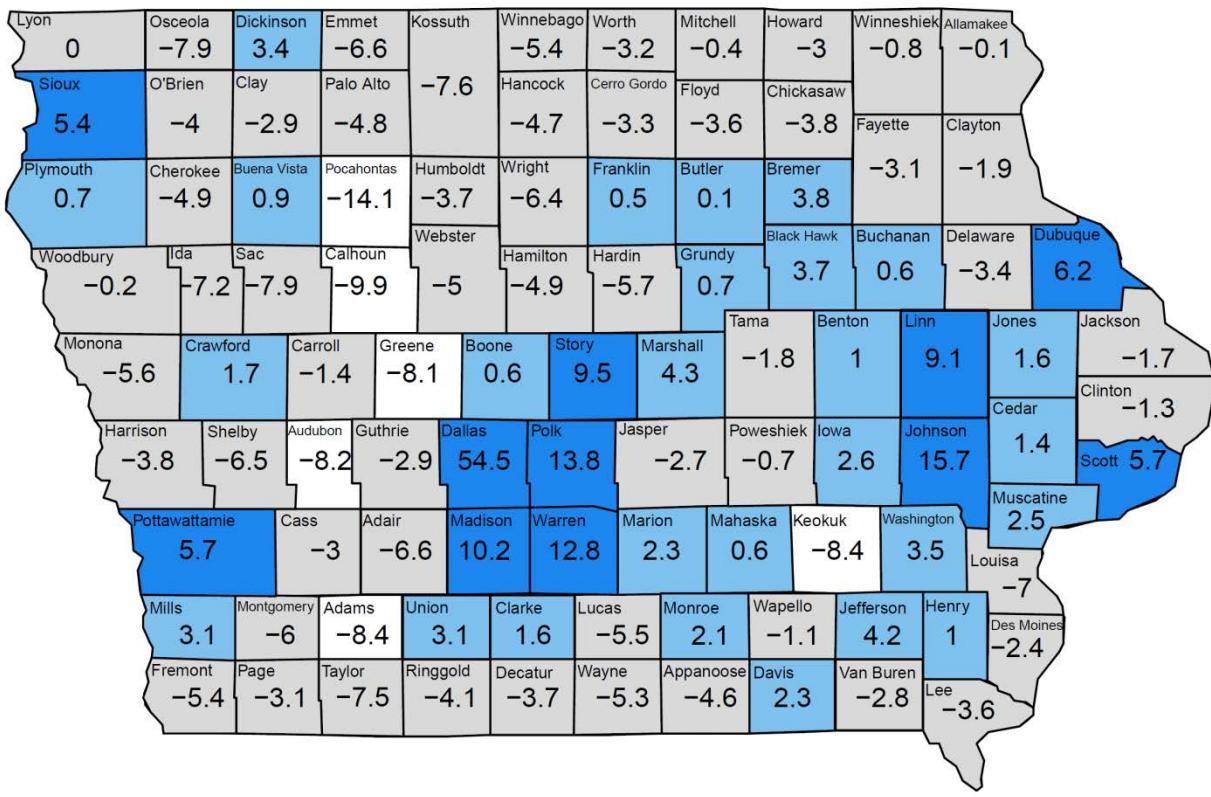
## Estimated Year 2000 US Standard Population

Age Range	Population	Percent of Total
<1	13,818	1.4%
01-04	55,317	5.5%
05-09	72,533	7.3%
10-14	73,032	7.3%
15-19	72,169	7.2%
20-24	66,478	6.6%
25-29	64,529	6.5%
30-34	71,044	7.1%
35-39	80,762	8.1%
40-44	81,851	8.2%
45-49	72,118	7.2%
50-54	62,716	6.3%
55-59	48,454	4.8%
60-64	38,793	3.9%
65-69	34,264	3.4%
70-74	31,773	3.2%
75-79	26,999	2.7%
80-84	17,842	1.8%
85+	15,508	1.6%
Total	1,000,000	100.0%

Source: Population Division, U.S. Census Bureau and SEER\*Stat

# Population Change

Percent Population Change from 2002–2011



<-8

-7.9 to 0

0.1 to 5

>5

Source: Population Division, U.S. Census Bureau and SEER\*Stat



## Social Determinants of Health

The social determinants of health are the circumstances in which people are born, grow up, live, work and age, as well as the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies and politics. The social environment—the level and quality of connectedness with friends, family, and community along with socio-economic conditions such as unemployment and job control, income inequality, and race/ethnicity, and the availability of resources to meet basic daily needs; as well as the physical environment—the natural environment such as improved water and sanitation and the built environment—buildings, spaces, transportation systems, and products created or modified by people; are significantly interconnected. Multi-level interventions that change policies and improve the social and physical environments can have a long-lasting impact on outcomes.

Two powerful social determinants of health are income and education. Both relate to health care access. The National Longitudinal Mortality Study cited in the Institute of Medicine's (IOM) report, *The Future of the Public's Health*, found that mortality was associated with income, education, and occupation. Another 16-year study, also cited in the report, found that median family income in one's zip code of residence was predictive of death from a variety of causes. There is a strong relationship between social and economic status and risk-related health behaviors such as smoking, physical inactivity, less nutritious diet, and heavy alcohol consumption. After reviewing a number of studies, the Institute of Medicine report concluded that those with more economic and social resources tend to adopt health-promoting behaviors and reduce risky behaviors at a faster rate than those who had fewer resources.

The more recent IOM report, *U.S. Health in International Perspective: Shorter Lives, Poorer Health* (2013), examined health of Americans relative to 16 comparable high-income or "peer" countries: Austria, Canada, Denmark, Finland, France, Germany, Italy, Japan, Norway, Portugal, Spain, Sweden, Switzerland, the Netherlands, and the United Kingdom. They found that although the United States is among the wealthiest nations in the world, it is far from the healthiest. The U.S. spends more per capita on health care than any other nation, yet we are dying at younger ages than people in almost all other high-income countries, and that difference is growing and pervasive across all age groups up to age 75. While no single factor can explain this disadvantage, social determinants of health play key roles.

*Sources:* Institute of Medicine, *The Future of the Public's Health in the 21<sup>st</sup> Century*, pp. 58-60, (2002)  
Institute of Medicine, *U. S. Health in International Perspective: Shorter Lives, Poorer Health* (2013)

**4-Year High School Graduation Rates 2011-2012**

County	# Diplomas	Crude	County	# Diplomas	Crude	
Counties with Average Population < 10,000	Adair	70	0.97	Lucas	122	0.92
	Adams	50	1.00	Monona	122	0.98
	Audubon	48	0.96	Monroe	67	0.91
	Clarke	91	0.90	Osceola	53	0.96
	Davis	90	0.96	Palo Alto	119	0.98
	Decatur	73	0.97	Pocahontas	72	0.91
	Fremont	78	0.94	Ringgold	40	0.93
	Greene	108	0.96	Taylor	58	0.91
	Howard	126	0.93	Van Buren	69	0.81
	Humboldt	97	0.92	Wayne	82	0.93
	Ida	125	0.99	Worth	81	0.95
			<b>Total</b>	1,841	0.94	
Counties with Average Population 10,000 – 20,000	Allamakee	167	0.94	Hardin	194	0.92
	Appanoose	123	0.88	Iowa	186	0.95
	Butler	136	0.96	Jefferson	106	0.81
	Calhoun	116	0.94	Keokuk	140	0.95
	Cass	156	0.89	Kossuth	137	0.94
	Cedar	189	0.86	Louisa	168	0.80
	Cherokee	105	0.90	Lyon	142	0.93
	Chickasaw	148	0.93	Mitchell	119	0.98
	Clay	172	0.90	Montgomery	119	0.93
	Clayton	141	0.95	O'Brien	156	0.90
	Crawford	236	0.89	Page	162	0.92
	Delaware	249	0.96	Poweshiek	210	0.93
	Dickinson	170	0.90	Sac	79	0.98
	Emmet	116	0.94	Shelby	139	0.96
	Floyd	152	0.89	Tama	141	0.90
	Franklin	176	0.95	Union	110	0.90
	Hamilton	168	0.89	Winnebago	159	0.93
	Hancock	129	0.91	<b>Total</b>	5,463	0.92
Counties with Average Population > 20,000	Boone	254	0.90	Lee	313	0.84
	Buchanan	186	0.92	Mahaska	166	0.85
	Buena Vista	245	0.76	Marion	384	0.92
	Carroll	197	0.92	Marshall	434	0.88
	Cerro Gordo	383	0.89	Muscatine	458	0.84
	Clinton	481	0.86	Plymouth	276	0.97
	Des Moines	365	0.81	Sioux	296	0.92
	Fayette	262	0.95	Wapello	374	0.86
	Henry	217	0.88	Webster	324	0.87
	Jackson	223	0.93	Winneshiek	239	0.99
	Jasper	410	0.93	<b>Total</b>	6,487	0.88
MSA Counties	Benton	267	0.87	Linn	2,124	0.87
	Black Hawk	1,056	0.84	Madison	225	0.95
	Bremer	393	0.96	Mills	152	0.89
	Dallas	728	0.96	Polk	3,968	0.88
	Dubuque	968	0.90	Pottawattamie	892	0.85
	Grundy	219	0.93	Scott	1,561	0.84
	Guthrie	165	0.96	Story	697	0.93
	Harrison	196	0.94	Warren	581	0.96
	Johnson	910	0.90	Washington	219	0.85
	Jones	209	0.88	Woodbury	1,036	0.87
			<b>Total</b>	16,566	0.88	
	<b>State Total</b>	30,357	0.89			

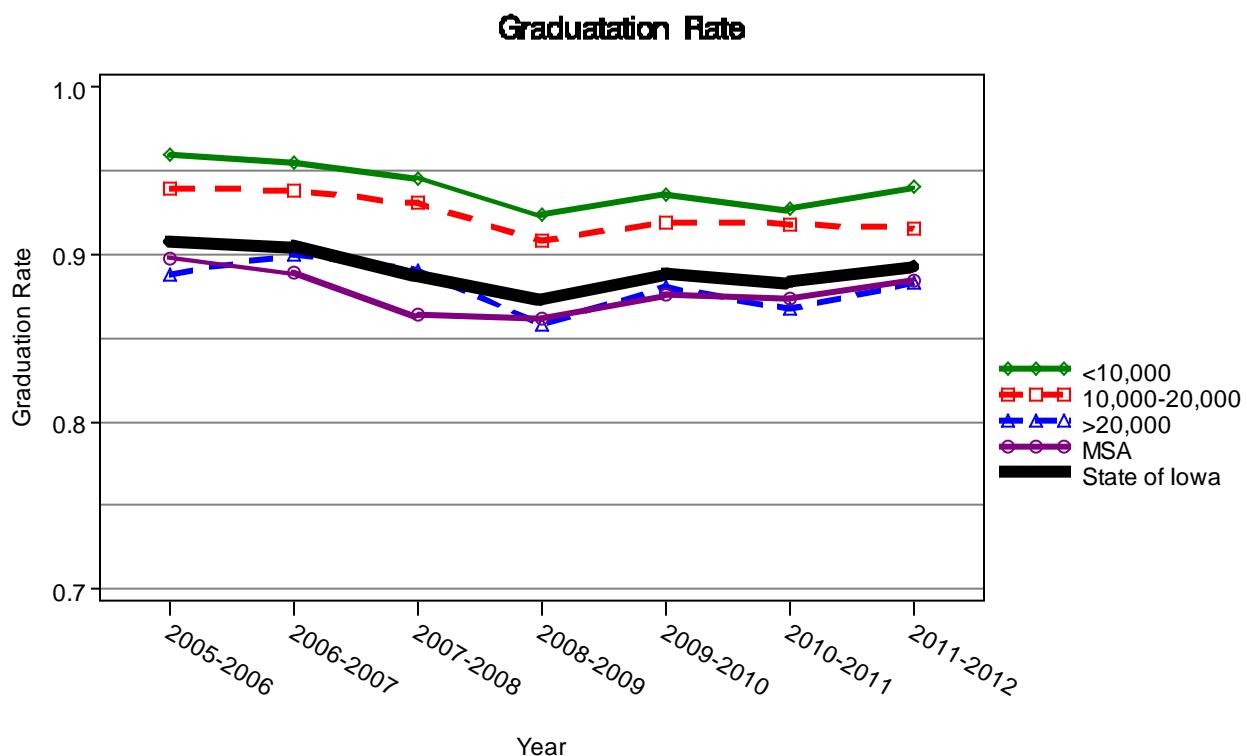
Source: Iowa Department of Education, Bureau of Information and Analysis,  
Student Reporting in Iowa (EASIER) Files

## 5-Year High School Graduation Rates 2011-2012

	County	# Diplomas	Crude		County	# Diplomas	Crude
Counties with Average Population < 10,000	Adair	63	0.98		Lucas	97	0.96
	Adams	47	0.98		Monona	122	0.93
	Audubon	73	0.92		Monroe	94	0.96
	Clarke	109	0.88		Osceola	69	0.97
	Davis	72	0.91		Palo Alto	129	0.96
	Decatur	79	0.95		Pocahontas	89	0.92
	Fremont	87	0.88		Ringgold	68	0.97
	Greene	115	0.91		Taylor	65	0.92
	Howard	121	0.94		Van Buren	76	0.92
	Humboldt	107	0.98		Wayne	80	0.94
	Ida	133	1.00		Worth	109	0.99
					<b>Total</b>	2,004	0.94
Counties with Average Population 10,000 – 20,000	Allamakee	204	1.00		Hardin	199	0.93
	Appanoose	157	0.95		Iowa	236	0.96
	Butler	101	0.92		Jefferson	120	0.89
	Calhoun	141	0.97		Keokuk	157	0.96
	Cass	214	0.96		Kossuth	133	0.94
	Cedar	235	0.97		Louisa	174	0.91
	Cherokee	111	0.91		Lyon	129	0.98
	Chickasaw	139	0.86		Mitchell	142	0.99
	Clay	150	0.91		Montgomery	123	0.93
	Clayton	165	0.95		O'Brien	172	0.92
	Crawford	267	0.92		Page	167	0.93
	Delaware	247	0.98		Poweshiek	198	0.93
	Dickinson	168	0.93		Sac	72	0.95
	Emmet	96	0.91		Shelby	149	0.96
	Floyd	167	0.94		Tama	172	0.93
	Franklin	182	0.98		Union	125	0.94
	Hamilton	188	0.92		Winnebago	192	0.97
	Hancock	153	0.97		Wright	184	0.97
					<b>Total</b>	5,929	0.94
Counties with Average Population > 20,000	Boone	267	0.93		Lee	385	0.88
	Buchanan	213	0.95		Mahaska	213	0.91
	Buena Vista	287	0.89		Marion	444	0.94
	Carroll	191	0.95		Marshall	427	0.86
	Cerro Gordo	388	0.93		Muscatine	457	0.88
	Clinton	527	0.87		Plymouth	321	0.96
	Des Moines	410	0.85		Sioux	296	0.94
	Fayette	299	0.94		Wapello	388	0.85
	Henry	248	0.92		Webster	354	0.88
	Jackson	254	0.95		Winneshiek	247	0.96
	Jasper	441	0.93		<b>Total</b>	7,057	0.90
MSA Counties	Benton	292	0.90		Linn	2,276	0.90
	Black Hawk	1,083	0.86		Madison	240	0.98
	Bremer	386	0.97		Mills	192	0.94
	Dallas	747	0.97		Polk	4,157	0.90
	Dubuque	942	0.91		Pottawattamie	973	0.87
	Grundy	196	0.98		Scott	1,724	0.87
	Guthrie	196	0.96		Story	771	0.96
	Harrison	232	0.93		Warren	582	0.94
	Johnson	985	0.94		Washington	231	0.92
	Jones	258	0.97		Woodbury	1,159	0.90
					<b>Total</b>	17,622	0.91
	<b>State Total</b>	32,612	0.91				

Source: Iowa Department of Education, Bureau of Information and Analysis,  
Student Reporting in Iowa (EASIER) Files

## High School Graduation Rates 2006-2012 by Academic Year



## Poverty Levels 2011

	County	%	% Margin of Error <sup>1</sup>		County	%	% Margin of Error <sup>1</sup>
Counties with Average Population < 10,000	Adair	11.2	2.3	Counties with Average Population 10,000 – 20,000	Lucas	17.5	3.2
	Adams	13.4	2.9		Monona	11.8	2.7
	Audubon	9.8	2.3		Monroe	11.8	2.7
	Clarke	12.9	2.7		Osceola	9.7	2.0
	Davis	16.8	3.4		Palo Alto	11.4	2.3
	Decatur	21.4	4.6		Pocahontas	12.5	2.4
	Fremont	11.8	2.6		Ringgold	14	3.5
	Greene	14.4	2.4		Taylor	13.4	2.9
	Howard	12.3	2.8		Van Buren	16.3	3.5
	Humboldt	9.7	2.2		Wayne	17.2	3.5
	Ida	12	2.3		Worth	11	2.0
Counties with Average Population 10,000 – 20,000	Allamakee	15.1	2.6	Counties with Average Population > 20,000	Hardin	12	2.4
	Appanoose	16.3	3.7		Iowa	7.3	1.6
	Butler	9.8	1.9		Jefferson	17.4	3.8
	Calhoun	12.1	2.3		Keokuk	12.1	2.6
	Cass	13.4	2.9		Kossuth	10.7	2.2
	Cedar	8.1	1.7		Louisa	12.3	2.3
	Cherokee	10.2	2.2		Lyon	9	1.9
	Chickasaw	9.9	2.1		Mitchell	10.3	2.3
	Clay	10.7	2.3		Montgomery	14.4	2.7
	Clayton	12.9	2.3		O'Brien	8.8	2.0
	Crawford	13.3	2.6		Page	15.9	3.1
	Delaware	10.5	2.1		Poweshiek	11.5	2.5
	Dickinson	7.9	1.8		Sac	9.5	2.3
	Emmet	11.8	2.7		Shelby	9.5	2.0
	Floyd	12.1	2.5		Tama	10.9	2.4
	Franklin	12.2	2.3		Union	14.5	3.0
	Hamilton	10.4	2.1		Winnebago	10.5	2.3
	Hancock	8.4	1.9		Wright	11.8	2.4
Counties with Average Population > 20,000	Boone	9.9	2.0	MSA Counties	Lee	15.5	2.7
	Buchanan	10.8	2.3		Mahaska	13.6	2.7
	Buena Vista	10.9	2.4		Marion	10	2.0
	Carroll	9.5	1.7		Marshall	13.4	2.6
	Cerro Gordo	13.5	2.4		Muscatine	13.4	2.4
	Clinton	13.6	2.4		Plymouth	7.4	1.6
	Des Moines	15.4	2.6		Sioux	9	1.4
	Fayette	12.3	2.6		Wapello	18.9	2.9
	Henry	13.8	2.7		Webster	15.4	2.7
	Jackson	11.2	2.4		Winneshiek	10.7	2.4
	Jasper	10.8	2.2				
MSA Counties	Benton	9	1.7	MSA Counties	Linn	10.6	1.2
	Black Hawk	16.4	1.6		Madison	8.7	1.9
	Bremer	7.6	1.4		Mills	9.8	2.2
	Dallas	6.3	1.3		Polk	12.5	1.1
	Dubuque	10.2	1.8		Pottawattamie	14.5	2.0
	Grundy	6.4	1.3		Scott	13.8	1.9
	Guthrie	10.4	2.1		Story	21.3	1.5
	Harrison	10.2	2.1		Warren	6.5	1.5
	Johnson	17.5	1.8		Washington	11.4	2.1
	Jones	10.4	2.3		Woodbury	16.7	1.8
<b>State Total</b>		<b>12.7</b>	<b>0.3</b>				

<sup>1</sup>Based on 90% confidence intervals

Source: U.S. Census Bureau, Small Area Income &amp; Poverty Estimates

**Uninsured (Under 65) 2010**

County	%	% Margin of Error <sup>1</sup>	County	%	% Margin of Error <sup>1</sup>	
Counties with Average Population < 10,000	Adair	10.8	1.3	Lucas	11.8	1.4
	Adams	12.9	1.5	Monona	12.8	1.4
	Audubon	14.2	1.5	Monroe	12.9	1.5
	Clarke	13.6	1.5	Osceola	13.5	1.5
	Davis	17.9	1.9	Palo Alto	11.9	1.4
	Decatur	15	1.8	Pocahontas	11.3	1.3
	Fremont	10.7	1.2	Ringgold	15.5	1.7
	Greene	11.2	1.3	Taylor	13	1.5
	Howard	12.9	1.5	Van Buren	15	1.6
	Humboldt	11.5	1.3	Wayne	15.9	1.7
	Ida	10.3	1.2	Worth	11.1	1.3
			<b>Total</b>	12.9		
Counties with Average Population 10,000 – 20,000	Allamakee	18.2	1.7	Hardin	10.9	1.3
	Appanoose	12.7	1.4	Iowa	8.3	1
	Butler	10.8	1.2	Jefferson	14.4	1.5
	Calhoun	11.5	1.3	Keokuk	12.2	1.3
	Cass	12.1	1.3	Kossuth	10.8	1.2
	Cedar	9.2	1.1	Louisa	14.8	1.5
	Cherokee	11.4	1.3	Lyon	11.8	1.3
	Chickasaw	11.7	1.3	Mitchell	11.7	1.3
	Clay	11.2	1.3	Montgomery	11.1	1.3
	Clayton	13.7	1.5	O'Brien	12	1.4
	Crawford	16.8	1.6	Page	11.1	1.3
	Delaware	11.5	1.2	Poweshiek	10.1	1.2
	Dickinson	10.8	1.2	Sac	12.6	1.4
	Emmet	13.2	1.5	Shelby	10	1.2
	Floyd	11.7	1.3	Tama	13.9	1.4
	Franklin	15.4	1.5	Union	11.3	1.4
	Hamilton	10.1	1.2	Winnebago	10.1	1.2
	Hancock	11.3	1.3	Wright	11.8	1.3
			<b>Total</b>	12		
Counties with Average Population > 20,000	Boone	9.1	1.1	Lee	11.2	1.2
	Buchanan	11.4	1.3	Mahaska	10.6	1.3
	Buena Vista	14.8	1.5	Marion	8.5	1
	Carroll	9.5	1.1	Marshall	13.2	1.3
	Cerro Gordo	9.9	1.1	Muscatine	11.8	1.2
	Clinton	9.3	1	Plymouth	8.7	1
	Des Moines	10.2	1.2	Sioux	12.1	1.3
	Fayette	12.3	1.3	Wapello	12.2	1.3
	Henry	10.6	1.2	Webster	11.5	1.2
	Jackson	11.6	1.3	Winneshiek	10	1.2
	Jasper	10.4	1.1	<b>Total</b>	10.9	
MSA Counties	Benton	9.3	1	Linn	8.8	0.9
	Black Hawk	10.8	1.1	Madison	9.5	1.1
	Bremer	8.2	1	Mills	9.5	1.1
	Dallas	8.4	1	Polk	10.2	0.8
	Dubuque	8.5	0.9	Pottawattamie	11.4	1.1
	Grundy	8.7	1	Scott	10.3	1
	Guthrie	10.9	1.2	Story	10.4	1.3
	Harrison	10.8	1.2	Warren	7.8	1
	Johnson	9.6	1.2	Washington	12.7	1.3
	Jones	10.6	1.2	Woodbury	14.8	1.3
			<b>Total</b>	10.2		
	<b>State Total</b>	10.7				

<sup>1</sup>Based on 90% confidence intervals

Source: U.S. Census Bureau, Small Area Health Insurance Estimates

## Health Behaviors

Health behaviors are vitally important to understand because unlike personal genetic makeup, health behaviors are modifiable. Health behaviors impact us from the womb to the grave. If we want to impact the health of individuals or a population we can create, maintain or increase healthy behaviors or reduce or cease unhealthy behaviors. The behaviors of our mothers during pregnancy impacts health outcomes for children. Behaviors important to our health include immunization, physical activity, healthy eating, stress management, preventive care and screening with providers, wearing seatbelts and helmets, family planning, and stress management. All of these impact the prevention of countless injuries and illnesses, delay the onset and/or severity of chronic diseases, extend life and quality of life, and reduce health care costs. One's own health behaviors can also negatively impact the health of others such as the use of tobacco, alcohol and other drugs or positively impact the health of others through social support.

This section provides an overview of selected surveys and statistics collected in Iowa to track the effects of these influences on the health of Iowans. Introductions are provided individually for each of the surveys with links to more detailed information on survey methodology and additional data, where available. Information on marriages and dissolutions is included at the end of this section, because it

characterizes and contrasts the population dynamics that can affect health.

### QUESTIONS TO CONSIDER WHEN USING

#### SURVEY RESULTS...

- What was the method used to conduct the survey, i.e., telephone, mail, personal interview?
- What was the response rate of those surveyed and what factors might influence who responds and who doesn't?
- Are the survey respondents representative of and thus generalizable to a particular population?
- Because a survey provides only estimates based on the sampled population, what are the variability measures of these estimates?
- Were the survey questions cross-sectional in that they represent attitudes, behaviors, or disease status of different people, or were the same people surveyed repeatedly over time?

section because it characterizes and contrasts the population dynamics that can affect health.

The health of individuals and their communities is determined by a variety of factors including biologic, environmental, social, and behavioral influences. This section provides an overview of selected surveys and statistics collected in Iowa to track the effects of these various influences on the health of Iowans. Introductions are provided individually for each of the surveys with links to more detailed information on survey methodology and additional data where available. Information on marriages and dissolutions is included at the end of this

## Behavioral Risk Factor Surveillance System (BRFSS)

The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey that is conducted each year in every state, including Iowa, as well as in the District of Columbia and three territories. It is financially and technically supported by the Centers for Disease Control and Prevention (CDC) and is a scientifically designed and validated method of collecting information.

The Iowa BRFSS collects health risk behavior information from over 7,000 household telephone surveys in both English and Spanish, and is designed to collect information on nationally agreed upon topics and on additional areas of special interest to Iowa. Because the BRFSS is ongoing, the prevalence of these behaviors may be followed over time. The risk behaviors of those surveyed (Iowa residents age 18 and over) are major contributions to illness, disability, and premature death.

The goal of the Iowa BRFSS is to provide data to initiate and guide health promotion and disease prevention programs. The BRFSS program achieves this goal by:

- determining state specific prevalence of personal health behaviors related to the leading cause of premature death;
- developing the capacity of the state health department to conduct credible telephone surveys; and
- advancing the understanding that health-related behaviors are critical indices of health.

The BRFSS results can help inform health professionals as to health behaviors and beliefs of the general population, and can be used as a measure of the effectiveness of various public health strategies.

### BRFSS KEY AREAS...

- Health Status
- Health Care Coverage
- Physical Inactivity
- Body Weight
- Smoking
- Alcohol Consumption
- Hypertension
- Cholesterol Awareness
- Colorectal Cancer Screening
- Diabetes
- Adult Immunizations
- Injury Control
- Women's Health
- HIV/AIDS

# Iowa Behavioral Risk Factor Surveillance System 2011-2012

	<b>Definition</b>	<b>Iowa</b>		<b>US Median<sup>1</sup></b>	
		<b>2011 % (95% CI)<sup>2</sup></b>	<b>2012 % (95% CI)</b>	<b>2011 %</b>	<b>2012 %</b>
Binge drinking	Men having five or more women having four or more alcoholic beverages on one or more occasions in the past month.	23.1 (21.7, 24.5)	21.7 (20.3, 23.1)	18.3	16.9
Heavy drinking	Men having an average of greater than two drinks per day or women having an average of greater than one drink per day.	8.1 (7.1, 9.1)	6.2 (5.4, 7.0)	6.6	6.1
Current smoker	All respondents smoking 100 cigarettes in their lifetime and currently smoking every day or some days.	20.4 (19.2, 21.6)	18.1 (16.9, 19.3)	21.2	19.6
Diabetes	All respondents ever being diagnosed with diabetes, excluding gestational diabetes.	8.2 (7.6, 8.8)	9.7 (8.9, 10.5)	9.5	9.7
High blood pressure	All respondents being told by a health professional that they had high blood pressure.	29.9 (28.7, 31.1)	**	30.8	**
Cholesterol checked	All respondents having their cholesterol checked in the past five years.	73.7 (72.3, 75.1)	**	75.5	**
High cholesterol	All respondents being told by a health professional that they had high cholesterol.	38.1 (36.7, 39.5)	**	38.4	**
No insurance coverage	All respondents who currently did not have any kind of health care coverage.	11.6 (10.6, 12.6)	11.0 (10.0, 12.0)	17.9	17.1
Mammogram	Female respondents age 40 and older having a mammogram in the past two years.	**	75.9 (74.1, 77.7)	**	74.0
Pap test	Female respondents with a uterine cervix having a pap smear in the past three years.	**	78.0 (75.8, 80.2)	**	78.0
Obesity	All respondents who had a calculated body mass index (BMI) of 30.0 or above.	29.0 (27.6, 30.4)	30.4 (29.0, 31.8)	27.8	27.6
Overweight	All respondents who had a calculated body mass index (BMI) from 25.0 to 29.9, inclusive.	35.8 (34.4, 37.2)	34.3 (32.9, 35.7)	35.7	35.8
Sigmoidoscopy/ Colonoscopy	Respondents age 50 and over who ever had a sigmoidoscopy or colonoscopy	**	69.3 (67.7, 70.9)	**	67.3
Tested for HIV	Respondents age 18 and older who have ever had a HIV test, excluding for blood donations.	26.5 (25.1, 27.8)	25.9 (24.5, 27.3)	34.5	34.0
Current asthma	All respondents who currently have asthma.	8.3 (7.5, 9.1)	8.1 (7.3 - 8.9)	9.1	8.9
Health status	All respondents who rate their current health as good, very good, or excellent.	87.0 (86.0, 88.0)	86.0 (85.0, 87.0)	83.1	83.1

\*\* This question was not asked in Iowa in the given year.

<sup>1</sup> Half of the 50 states fall above this point; half below,

<sup>2</sup> 95% confidence interval for the Iowa estimated %

Source: BRFSS, Centers for Disease Control and Prevention  
Prevention and the Iowa Department of Public Health

# Iowa Behavioral Risk Factor Surveillance System 2011-2012

	<b>Definition</b>	<b>Iowa</b>		<b>US Median<sup>1</sup></b>	
		<b>2011 % (95% CI)<sup>2</sup></b>	<b>2012 % (95% CI)</b>	<b>2011 %</b>	<b>2012 %</b>
Physical activity	Adults reporting participating in recommended levels of aerobic and strengthening physical activity.	17.2 (16.0, 18.4)	**	21.0	**
Fruit and vegetable consumption	Adults reporting consumption of fruit and vegetables at least 5 times a day on the average.	13.5 (12.5, 14.5)	**	16.6	**
Vaccination for influenza	Adults age 65 years and older vaccinated for influenza in the past year.	70.2 (67.8, 72.6)	70.1 (68.1, 72.1)	61.3	60.1
Vaccination for influenza	All adults vaccinated for influenza in the past year.	46.9 (45.5, 48.3)	45.5 (44.1, 46.9)	38.3	37.5
Vaccination for pneumonia	Adults age 65 years and older ever vaccinated for pneumonia.	70.9 (68.5, 73.3)	70.8 (68.8, 72.8)	70.0	68.8
Vaccination for pneumonia	All Adults ever vaccinated for pneumonia.	30.6 (29.2, 32.0)	31.4 (30.0, 32.8)	31.3	30.0

\*\* This question was not asked in Iowa in the given year

<sup>1</sup>Half of the 50 states fall above this point, and half below

<sup>2</sup>95% confidence interval for the Iowa estimated %

Source: BRFSS, Centers for Disease Control & Prevention and the Iowa Department of Public Health

## Iowa Youth Survey

The Iowa Youth Survey (IYS) is administered every other year by the Iowa Department of Public Health Division of Behavioral Health. The Division works collaboratively with IDPH's Division of Tobacco Use Prevention and Control and with other State agencies and stakeholders such as the Department of Education, the Department of Human Rights Division of Criminal and Juvenile Justice Planning, and the University of Iowa Consortium for Substance Abuse Research and Evaluation, in organizing the survey and analyzing and reporting its results.

### **Survey scope.**

The 2012 IYS is the 14<sup>th</sup> in a series of surveys conducted originally every three years, and more recently, every two years, since 1975. The surveys done during 1999-2012 differ from previous years in both the procedures used to implement the survey and in the students who were asked to participate. Earlier surveys were given to approximately one-third of Iowa's public school districts to be taken by a sample of their 6<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup> and 12<sup>th</sup> grade students. Starting with the 1999 IYS, participation was sought from all public school districts and all students in grades 6, 8 and 11, as well as 14-18 year-old students in alternative programs. These changes made it possible to provide youth development data for each participating school and for each county in which participating students reside, making it feasible to use IYS results to assess the outcomes of specific community and school youth development programs. The changes also, however, restrict certain direct comparisons with surveys prior to 1999. Starting with the 2002 IYS, participation was sought from all Iowa public school districts and non-public schools. By including all Iowa students in 6<sup>th</sup>, 8<sup>th</sup> and 11<sup>th</sup> grades, the survey results more accurately reflect the attitudes and perceptions of all Iowa students in those grades.

### **LEVEL OF PARTICIPATION... 2012**

Grade	Number Enrolled	Number Completed IYS	Percent Completed IYS
6	38,336	24,170	63.0%
8	37,874	24,294	64.1%
11	38,220	21,963	57.5%

In 2012, a modification was made to the survey structure to reduce the time it took younger students to complete the survey. "Skip" questions were introduced for alcohol, tobacco, and marijuana use and for gambling and suicidal ideation. When a "no" response to a skip question was selected, all related questions were classified with null responses (No, Never, etc.) as well, allowing the student to skip those questions. If all "skips" were selected, the survey was reduced by 34 questions.

## **Survey Content.**

The 2012 survey included questions about student behaviors, attitudes and beliefs, as well as their perceptions of their peer, family, school, and neighborhood/community environments. Prior research has shown that each of these environments plays a significant role in positive youth development. Selection of specific survey questions was based on:

- 1) analysis of data collected in previous Iowa Youth Surveys;
- 2) a literature review of established youth development models, especially those widely accepted in Iowa; and
- 3) discussions with youth development professionals – community service providers, school district personnel and academicians.

The general content of the 2012 IYS questions was similar to that of previous surveys. Approximately three-quarters of the questions and response options from the 2010 IYS were utilized with little or no modification; 27 questions from the 2010 IYS were eliminated, 30 questions from 2010 were significantly changed, and 24 new questions were added. The changes to the questions were intended to elicit additional, more detailed information on suicide, feelings about the school environment, and supportive peer environments.

The appropriateness of any comparison between the 2012 IYS and surveys from previous years must be considered on a question-by-question basis. It is important to note that in some cases, the question numbers have changed from year-to-year. Question wording, response options, and time frames may also have changed. Trend analyses should be considered exploratory. If comparisons are made, the results may indicate that school districts appear to be significantly different, for better or worse, from the reports generated by previous surveys. However, this appearance may be due to differences in question wording and the representativeness of the sample rather than actual changes in Iowa's youth.

**The following charts contain data from the full IYS report which can be found at  
[www.iowayouthsurvey.iowa.gov](http://www.iowayouthsurvey.iowa.gov)  
(Question numbers in parentheses)**

**Iowa Youth Survey (IYS) 2012**

Substance Use Behaviors	Definition	% <sup>1</sup> 6 <sup>th</sup> grade	% <sup>1</sup> 8 <sup>th</sup> grade	% <sup>1</sup> 11 <sup>th</sup> grade	% <sup>2</sup> State
Alcohol	Percentage of students who reported having 1 or more alcoholic drinks during the past 30 days. (B18)	2	7	26	11
	Percentage of students who reported having 5 or more alcoholic drinks in a row, within a couple of hours, during the past 30 days. (B16)	1	4	19	8
Tobacco	Percentage of students who reported smoking cigarettes during the past 30 days. (B33)	1	3	11	5
	Percentage of students who reported smoking cigars during the past 30 days. (B34)	0	1	7	3
	Percentage of students who reported using smokeless tobacco during the past 30 days. (B35)	0	1	7	3
Marijuana	Percentage of students who reported using marijuana during the past 30 days. (B37)	0	3	11	5
Inhalants	Percentage of students who reported sniffing glue, breathing the contents of gases or sprays in order to get high during the past 30 days. (B39)	3	3	2	2
Prescription Medications	Percent of students who reported using prescription medications that were not prescribed for them. (B41)	2	3	6	4
Steroid Pills/Shots	Percentage of students who reported taking steroid pills or shots without a doctor's prescription during the past 30 days. (B42)	1	1	2	1
Cocaine	Percentage of students who reported using cocaine during the past 30 days. (B43)	1	1	2	1
Methamphetamines	Percentage of students who reported using methamphetamines during the past 30 days. (B44)	0	1	1	1
Amphetamines	Percentage of students who reported using amphetamines (other than methamphetamines) during the past 30 days. (B45)	1	1	3	1

%<sup>1</sup> Unweighted Percentage%<sup>2</sup> Weighted Percentage

Source: Iowa Department of Public Health, Division of Behavioral Health

Iowa Youth Survey (IYS) 2012

	Definition	Strongly Agree	% <sup>1</sup> 6 <sup>th</sup> grade	% <sup>1</sup> 8 <sup>th</sup> grade	% <sup>1</sup> 11 <sup>th</sup> grade	% <sup>2</sup> State
			Strongly Agree	Agree	Disagree	Strongly Disagree
Attitudes about self	I am accepting of those different than me (racially, culturally, socio-economically). (C4)	Strongly Agree	58	60	55	58
		Agree	35	35	39	37
		Disagree	5	3	4	4
		Strongly Disagree	2	1	2	2
	I can say "no" when someone wants me to do things I know are wrong or dangerous. (C6)	Strongly Agree	76	65	56	66
		Agree	19	28	37	28
Attitudes about alcohol	Violence is the worst way to solve problems. (C8)	Strongly Agree	58	39	32	43
		Agree	27	37	42	35
		Disagree	8	17	20	15
		Strongly Disagree	7	7	7	7
	It is against my values to have sex as a teenager. (E20)	Strongly Agree	69	53	21	48
		Agree	16	26	24	22
Attitudes about school		Disagree	7	14	36	19
		Strongly Disagree	8	7	19	11
	It is against my values to use alcohol and drugs as a teenager. (E22)	Strongly Agree	82	70	35	63
		Agree	9	19	29	19
		Disagree	3	7	27	12
		Strongly Disagree	6	3	8	6
Attitudes about alcohol	In past 12 months, Have you tried to kill yourself? (NOT comparable to previous years) (B63)	Percentage answering YES	1	4	3	3
	How much do you think you risk harming yourself (physically or otherwise) if you: drink 3 or more drinks (glasses, cans, or bottles of beer; wine; liquor or mixed drinks) of alcohol nearly every day? (C9)	Great Risk	58	62	53	58
		Moderate Risk	12	17	22	17
		Slight Risk	4	6	12	7
		No Risk	20	11	10	14
Attitudes about school		Don't Know	6	4	3	4
	How wrong would your parents/guardians feel it would be for you to go to a party where kids under 21 were using alcohol? (F19)	Very Wrong	93	86	64	81
		Wrong	5	9	20	11
		A Little Wrong	1	3	11	5
		Not Wrong at All	1	1	4	2
		Don't Know	1	1	2	1
Attitudes about school	Would you be more or less likely to be popular (respected or cool) with the other students in your school if you drank alcoholic beverages? (D2)	A Lot More Popular	2	3	9	5
		More Popular	5	9	25	13
		Less Popular	15	21	12	16
		A Lot Less Popular	55	41	10	36
		Wouldn't Change My Popularity	23	25	44	31
Attitudes about school	There are clear rules about what students can and cannot do. (E29)	Strongly Agree	67	51	37	52
		Agree	28	41	51	40
		Disagree	3	6	9	6
		Strongly Disagree	1	2	3	2

<sup>1</sup>Unweighted Percentage<sup>2</sup>Weighted Percentage

Source: Iowa Department of Public Health, Division of Behavioral Health

Iowa Youth Survey (IYS) 2012

	Definition	% <sup>1</sup> 6 <sup>th</sup> grade	% <sup>1</sup> 8 <sup>th</sup> grade	% <sup>1</sup> 11 <sup>th</sup> grade	% <sup>2</sup> State
		Strongly Agree	Agree	Disagree	Strongly Disagree
<b>Attitudes about school (continued)</b>	Students caught drinking, smoking, or using an illegal drug are not allowed to participate in any extracurricular activity for some time period. (E32)	79 14 3 4	70 24 4 3	53 36 8 4	67 24 5 3
	If I skipped school at least one of my parents/guardians would be notified. (E31)	70 22 5 4	60 32 6 2	47 42 8 3	59 32 6 3
	Students in my school treat each other with respect. (E45)	37 42 17 5	22 42 26 10	14 45 31 10	24 43 24 8
	I feel safe at school. (E46)	59 33 6 2	45 43 8 4	35 55 7 3	46 44 7 3
	There is at least one adult at school who I could go to for help with a problem. (E52)	72 22 4 2	55 33 8 5	44 43 9 4	57 32 7 4
<b>Attitudes about family</b>	In my home there are clear rules about what I can and cannot do. (F1)	69 27 3 1	58 35 5 1	47 43 8 2	58 35 5 1
	I have a happy home. (F2)	68 26 5 1	55 34 8 3	46 41 10 3	56 34 7 3
	There are people living in my home who have a serious alcohol or drug problem. (F3)	7 6 17 70	7 7 19 67	6 8 22 64	6 7 19 67
	I can get help and support when I need it from someone in my home. (F6)	76 19 3 2	62 28 6 4	50 38 8 4	63 28 6 3
	A parent/guardian knows where I am and who I am with, especially in the evening and on weekends.	Never Sometimes Often Always	5 7 16 72	5 10 24 61	5 18 32 45

<sup>1</sup> Unweighted Percentage<sup>2</sup> Weighted Percentage

Source: Iowa Department of Public Health, Division of Behavioral Health

**Iowa Youth Survey (IYS) 2012****Attitudes about community**

Definition		% <sup>1</sup> 6 <sup>th</sup> grade	% <sup>1</sup> 8 <sup>th</sup> grade	% <sup>1</sup> 11 <sup>th</sup> grade	% <sup>2</sup> State
My neighborhood is a safe place to live. (G18)	Strongly Agree Agree Disagree Strongly Disagree	61 32 5 2	56 37 6 2	50 43 5 2	56 37 5 2
Adults in my neighborhood or community help me when I need help. (G24)	Strongly Agree Agree Disagree Strongly Disagree	48 32 14 7	33 34 21 12	21 38 27 13	34 34 21 11
In your neighborhood or community how difficult do you think it would be for a kid your age to get...					
...cigarettes? (G1)	Very hard Hard Easy Very Easy Don't know	53 20 9 4 15	32 26 20 9 13	11 16 36 27 10	32 21 21 13 13
...alcoholic beverages (beer, wine, liquor)? (G2)	Very hard Hard Easy Very Easy Don't know	51 20 11 5 13	29 24 24 12 12	9 14 38 31 8	30 19 24 15 11
...marijuana (pot, grass, hash, bud, weed)? (G3)	Very hard Hard Easy Very Easy Don't know	68 11 4 3 14	47 19 12 7 14	17 18 29 23 13	44 16 15 11 14
...methamphetamines (crank, ice)? (G4)	Very hard Hard Easy Very Easy Don't know	69 10 3 2 16	54 19 6 4 17	32 27 11 6 23	52 19 7 4 19
...amphetamines other than methamphetamines (like stimulants, uppers, speed)? (G5)	Very hard Hard Easy Very Easy Don't know	68 11 3 2 16	54 19 6 4 17	32 26 12 7 23	51 19 7 4 19
... any other illegal drug (cocaine, etc.)? (G6)	Very hard Hard Easy Very Easy Don't know	69 11 3 2 14	54 19 8 4 16	32 25 13 8 22	52 18 8 5 17
...a handgun? (G7)	Very hard Hard Easy Very Easy Don't know	56 18 7 4 14	42 25 13 6 14	29 27 17 9 19	42 23 12 6 16

<sup>1</sup> Unweighted Percentage<sup>2</sup> Weighted Percentage

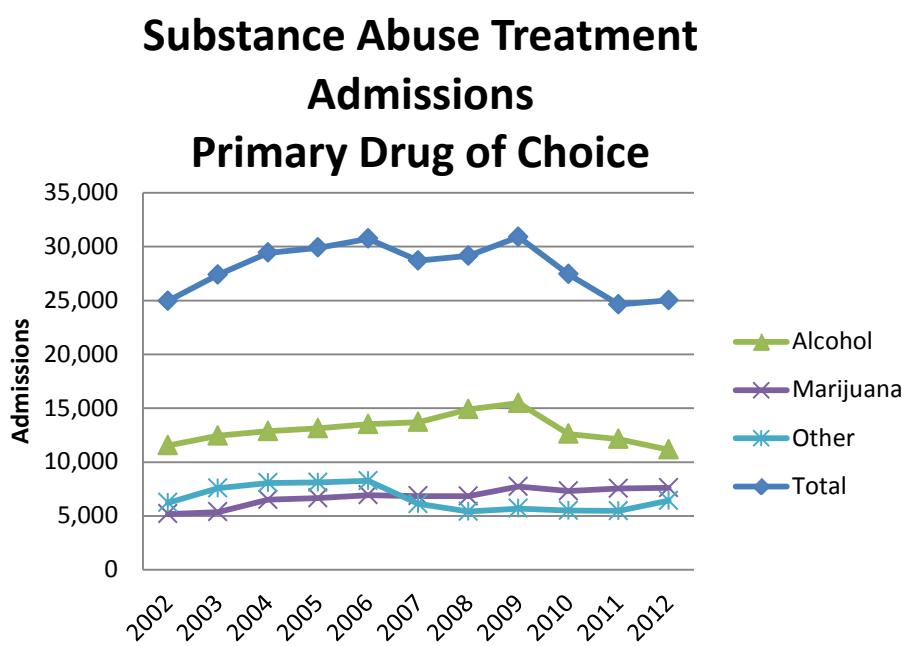
Source: Iowa Department of Public Health, Division of Behavioral Health

## Substance Abuse Treatment

The Iowa Department of Public Health (IDPH) licenses 121 substance abuse assessment and treatment programs in Iowa. These programs provide services to over 50,000 Iowans – men and women, adults and juveniles – every year. The majority of the programs accept Medicaid or commercial insurance as payment for services.

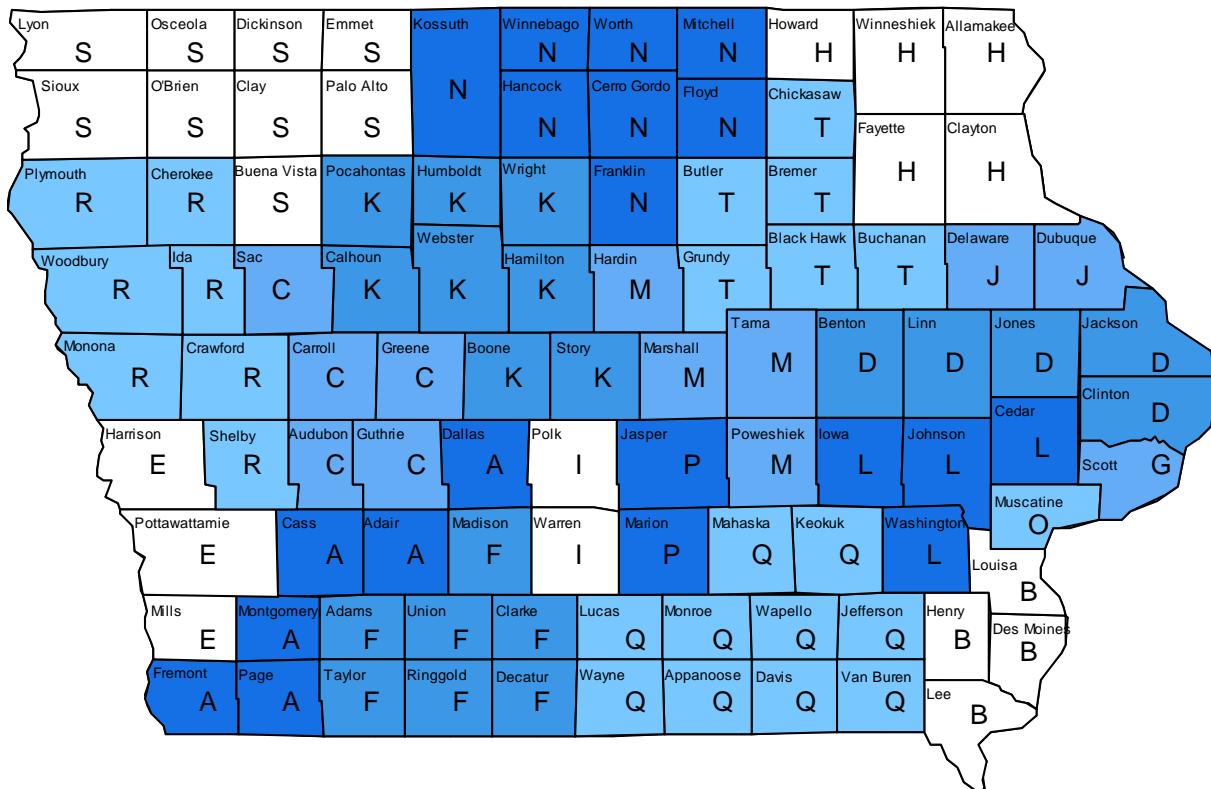
Each year, “IDPH funding” – a combination of State General Fund appropriations and the federal Substance Abuse Prevention and Treatment Block Grant – supports substance abuse treatment for more than 21,500 Iowans who don’t have insurance, Medicaid, or other resources to pay for treatment. IDPH-funded substance abuse treatment is part of the Iowa Plan for Behavioral Health, along with Medicaid funding for mental health and substance abuse services. The Iowa Plan is administered by Magellan Behavioral Care. In 2009, an Iowa Plan RFP competitively selected a *limited panel of licensed programs* to provide IDPH-funded substance abuse treatment from January 2010 - June 2014. Twenty-three programs – all local community-based organizations – were selected to assure *outpatient treatment* to residents of all 99 Iowa counties through *20 geographic service areas* (see map on next page). Eleven of the 23 programs also provide *statewide residential treatment* for adults or juveniles, nine provide specialized *Women and Children* services, three provide opioid treatment, and there are three culturally competent programs.

The chart below shows Iowa substance abuse treatment admissions, sorted by primary drug of choice, for calendar years 2002-2012.



# Local Sites for Substance Abuse Treatment

## IDPH FUNDED SUBSTANCE ABUSE TREATMENT SERVICE AREAS AND PROVIDERS



Service Area	Provider (Treatment Services)	Service Area	Provider (Treatment Services)
A	Zion Recovery Services, Atlantic (1)	J	Substance Abuse Services Center (SASC), Dubuque (5)
B	Alcohol and Drug Dependency Services (ADDS), Burlington (1)	K	Community and Family Resources (CFR), Fort Dodge (1,4,5)
C	New Opportunities, Carroll	L	MECCA Services, Iowa City (1,5) Phone: 319-351-4357
D	Area Substance Abuse Council (ASAC), Cedar Rapids (1,2,3,5)	M	Substance Abuse Treatment Unit of Central Iowa (SATUCI), Marshalltown
E	Heartland Family Service, Council Bluffs (1,5,6)	N	Prairie Ridge Addiction Treatment Services, Mason City (1,5)
F	Crossroads Mental Health Center, Creston (5)	O	Trinity Muscatine-New Horizons, Muscatine
G	Center for Alcohol & Drug Services (CADS), Davenport (1,4,5,6)	P	House of Mercy, Newton
H	North East Iowa Behavioral Health, Decorah		United Community Services (UCS), Knoxville
I	Broadlawns Medical Center, Des Moines	Q	SIEDA, Ottumwa
	Employee and Family Resources (EFR), Des Moines	R	Jackson Recovery Centers, Sioux City (1,2,3,4,5)
	House of Mercy, Des Moines (5)	S	Compass Pointe, Spencer
	MECCA Services, Des Moines (1,5)	T	Pathways Behavioral Services, Waterloo (1)
	United Community Services (UCS), Des Moines (4,6)		Youth and Shelter Services (YSS), Ames (2)
Specialized Treatment Services			
1 – Adult Residential Services (statewide)	3 – Culturally Competent Program	5 – Women and Children Program	
2 – Juvenile Residential Services (statewide)	4 – Jail-Based Treatment Program	6 – Opioid Treatment Program	

Source: Iowa Department of Public Health, Division of Behavioral Health

## Marriages 2010-2011

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
<b>Counties with Average Population &lt; 10,000</b>	Adair	99	6.5 (55)	Lucas	115	6.5 (54)	
	Adams	53	6.6 (57)	Monona	91	4.9 (11)	
	Audubon	66	5.4 (21)	Monroe	74	4.6 (4)	
	Clarke	131	7 (68)	Osceola	93	7.3 (72)	
	Davis	117	6.7 (60)	Palo Alto	100	5.3 (15)	
	Decatur	105	6.3 (45)	Pocahontas	81	5.6 (27)	
	Fremont	122	8.2 (90)	Ringgold	97	9.5 (96)	
	Greene	100	5.4 (18)	Taylor	80	6.3 (47)	
	Howard	133	7 (67)	Van Buren	117	7.8 (85)	
	Humboldt	139	7.1 (69)	Wayne	68	5.3 (16)	
	Ida	85	6 (35)	Worth	92	6.1 (40)	
				<b>Total</b>	2,158	6.4	
<b>Counties with Average Population 10,000 - 20,000</b>	Allamakee	213	7.4 (77)	Hardin	223	6.4 (49)	
	Appanoose	230	9 (93)	Iowa	246	7.5 (80)	
	Butler	148	5 (12)	Jefferson	187	5.6 (26)	
	Calhoun	122	6.3 (46)	Keokuk	134	6.4 (51)	
	Cass	130	4.7 (6)	Kossuth	160	5.2 (14)	
	Cedar	175	4.7 (9)	Louisa	95	4.2 (3)	
	Cherokee	202	8.4 (92)	Lyon	127	5.5 (23)	
	Chickasaw	545	21.9 (99)	Mitchell	129	6 (34)	
	Clay	188	5.7 (28)	Montgomery	155	7.3 (71)	
	Clayton	266	7.4 (76)	O'Brien	155	5.4 (20)	
	Crawford	210	6.1 (41)	Page	189	5.9 (32)	
	Delaware	265	7.5 (78)	Poweshiek	227	6 (37)	
	Dickinson	412	12.3 (98)	Sac	140	6.8 (63)	
	Emmet	98	4.8 (10)	Shelby	160	6.6 (58)	
	Floyd	163	5 (13)	Tama	241	6.8 (64)	
	Franklin	99	4.6 (5)	Union	203	8.1 (89)	
	Hamilton	170	5.5 (22)	Winnebago	134	6.2 (43)	
	Hancock	121	5.4 (17)	<b>Total</b>	6,760	6.7	
	<b>Counties with Average Population &gt; 20,000</b>	Boone	414	7.9 (86)	Lee	495	6.9 (66)
		Buchanan	306	7.3 (73)	Mahaska	263	5.9 (31)
		Buena Vista	313	7.7 (83)	Marion	453	6.8 (65)
		Carroll	330	7.9 (87)	Marshall	492	6 (38)
		Cerro Gordo	664	7.5 (81)	Muscatine	655	7.7 (82)
		Clinton	630	6.4 (52)	Plymouth	318	6.4 (48)
		Des Moines	637	7.9 (88)	Sioux	442	6.5 (56)
Fayette		197	4.7 (8)	Wapello	590	8.3 (91)	
Henry		274	6.8 (62)	Webster	488	6.5 (53)	
Jackson		238	6 (36)	<b>Total</b>	9,051	7.0	
<b>MSA Counties</b>		Benton	245	4.7 (7)	Linn	2,359	5.5 (24)
		Black Hawk	1,424	5.4 (19)	Madison	211	6.7 (61)
		Bremer	290	6 (33)	Mills	275	9.2 (95)
	Dallas	822	6 (39)	Polk	6,381	7.3 (75)	
	Dubuque	1,698	9 (94)	Pottawattamie	1,445	7.7 (84)	
	Grundy	96	3.9 (2)	Scott	2,493	7.5 (79)	
	Guthrie	160	7.3 (74)	Story	1,095	6.1 (42)	
	Harrison	174	5.8 (30)	Warren	597	6.4 (50)	
	Johnson	1,918	7.3 (70)	Washington	288	6.6 (59)	
	Jones	229	5.5 (25)	Woodbury	1,278	6.2 (44)	
				<b>Total</b>	23,478	6.8	
		<b>State Total</b>	41,447	6.8			

<sup>1</sup>Rates per 1,000 population<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics

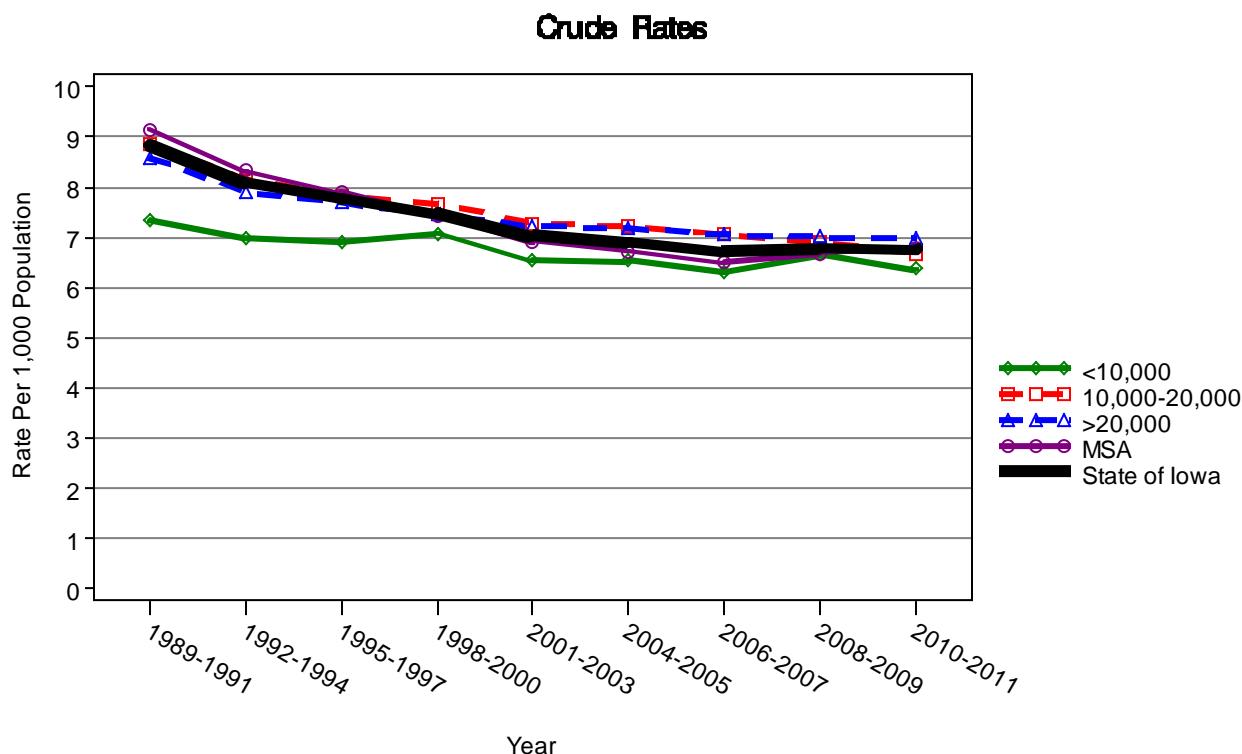
**Dissolutions 2010-2011**

County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )
<b>Counties with Average Population &lt; 10,000</b>			<b>Counties with Average Population &lt; 10,000</b>		
Adair	41	2.7 (52)	Lucas	49	2.8 (57)
Adams	20	2.5 (46)	Monona	56	3 (73)
Audubon	49	4 (96)	Monroe	53	3.3 (83)
Clarke	36	1.9 (21)	Osceola	28	2.2 (29)
Davis	51	2.9 (65)	Palo Alto	57	3 (72)
Decatur	41	2.5 (45)	Pocahontas	44	3 (74)
Fremont	52	3.5 (89)	Ringgold	30	2.9 (67)
Greene	45	2.4 (40)	Taylor	29	2.3 (31)
Howard	41	2.1 (27)	Van Buren	42	2.8 (58)
Humboldt	42	2.1 (26)	Wayne	45	3.5 (90)
Ida	53	3.7 (94)	Worth	16	1.1 (3)
			<b>Total</b>	920	2.7
<b>Counties with Average Population 10,000 - 20,000</b>			<b>Counties with Average Population 10,000 - 20,000</b>		
Allamakee	76	2.7 (49)	Hardin	103	2.9 (70)
Appanoose	33	1.3 (6)	Iowa	58	1.8 (18)
Butler	60	2 (22)	Jefferson	115	3.4 (86)
Calhoun	45	2.3 (36)	Keokuk	61	2.9 (66)
Cass	101	3.6 (92)	Kossuth	85	2.7 (56)
Cedar	107	2.9 (64)	Louisa	61	2.7 (50)
Cherokee	36	1.5 (10)	Lyon	32	1.4 (7)
Chickasaw	59	2.4 (38)	Mitchell	50	2.3 (34)
Clay	81	2.4 (42)	Montgomery	92	4.3 (97)
Clayton	93	2.6 (48)	O'Brien	91	3.2 (81)
Crawford	105	3.1 (76)	Page	108	3.4 (84)
Delaware	100	2.8 (62)	Poweshiek	116	3.1 (77)
Dickinson	114	3.4 (85)	Sac	68	3.3 (82)
Emmet	48	2.4 (37)	Shelby	92	3.8 (95)
Floyd	53	1.6 (14)	Tama	85	2.4 (39)
Franklin	41	1.9 (20)	Union	116	4.6 (99)
Hamilton	80	2.6 (47)	Winnebago	47	2.2 (28)
Hancock	26	1.2 (4)	Wright	61	2.3 (35)
			<b>Total</b>	2,699	2.7
<b>Counties with Average Population &gt; 20,000</b>			<b>Counties with Average Population &gt; 20,000</b>		
Boone	160	3 (75)	Lee	146	2 (24)
Buchanan	59	1.4 (8)	Mahaska	126	2.8 (61)
Buena Vista	120	2.9 (69)	Marion	208	3.1 (80)
Carroll	114	2.7 (55)	Marshall	228	2.8 (59)
Cerro Gordo	203	2.3 (33)	Muscatine	379	4.4 (98)
Clinton	141	1.4 (9)	Plymouth	61	1.2 (5)
Des Moines	56	0.7 (1)	Sioux	136	2 (23)
Fayette	114	2.7 (53)	Wapello	210	3 (71)
Henry	69	1.7 (16)	Webster	235	3.1 (79)
Jackson	97	2.4 (44)	Winneshiek	68	1.6 (13)
			<b>Total</b>	3,001	2.3
<b>MSA Counties</b>			<b>MSA Counties</b>		
Benton	127	2.4 (41)	Linn	1,188	2.8 (60)
Black Hawk	435	1.7 (15)	Madison	112	3.6 (91)
Bremer	78	1.6 (12)	Mills	104	3.5 (87)
Dallas	239	1.8 (17)	Polk	2,121	2.4 (43)
Dubuque	545	2.9 (63)	Pottawattamie	686	3.7 (93)
Grundy	67	2.7 (51)	Scott	743	2.2 (30)
Guthrie	68	3.1 (78)	Story	375	2.1 (25)
Harrison	104	3.5 (88)	Warren	254	2.7 (54)
Johnson	401	1.5 (11)	Washington	128	2.9 (68)
Jones	95	2.3 (32)	Woodbury	370	1.8 (19)
			<b>Total</b>	8,240	2.4
<b>State Total</b>	14,860	2.4			

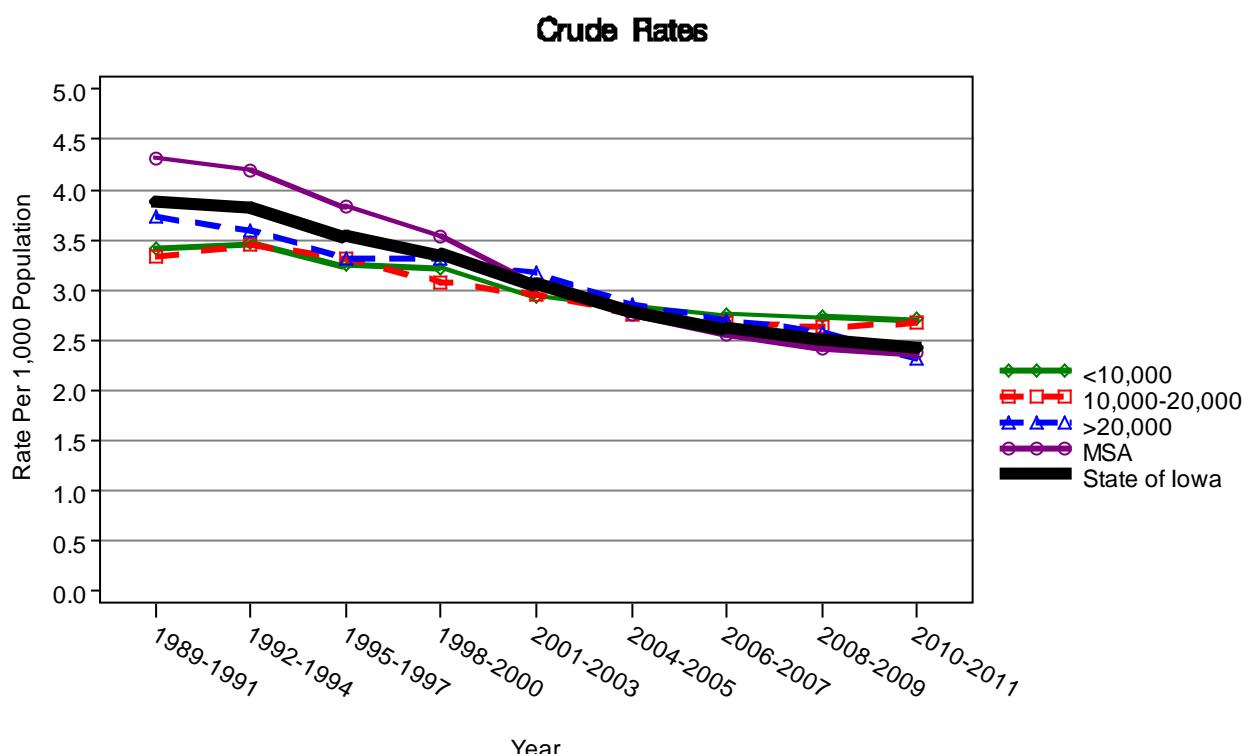
<sup>1</sup>Rates per 1,000 population<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics

## Marriages 1989-2011



## Dissolutions 1989-2011





## Prenatal and Infant Health

Each year families across the United States bring home a healthy baby who has all the potential for a full and productive life. However, some families will suffer the loss of their child soon after birth.

Infant morbidity and mortality are critical indicators of the health of a population. Low birth weight and preterm birth result in a significant loss of life; surviving infants often sustain residual injuries that affect quality of life, and there is substantial financial cost to individuals and to society in caring for these children.

Certain factors have proven to increase the likelihood of delivering a low birth weight or preterm infant, such as (1) multiple births; (2) cigarette smoking during pregnancy; (3) substance abuse immediately prior to conception and during pregnancy (including alcohol abuse); (4) maternal age extremes; and (5) short inter-pregnancy interval.

### IN IOWA IN 2010

- 3.7% of all live births were multiple births.
- 30.3% of all live births were cesarean deliveries.
- About 3.9% of live births were born to a woman receiving late or no prenatal care.

### IN AN AVERAGE WEEK IN IOWA<sup>1</sup>

- 745 babies are born.
- 52 babies are born with low birth weight.
- 86 babies are born preterm.
- 4 babies die before their first birthday.

Inherited and congenital disorders rank as the leading cause of mortality in full-term newborn babies in the United States. Iowa's overall rate for 43 selected major inherited and congenital disorders is approximately 2.3% of all births. The state of Iowa has taken a leadership role in surveillance for these disorders and

serves as a model to other states. Among other factors, adequate folic acid intake by women of reproductive years has been demonstrated to decrease the risk of neural tube defects in children. The Iowa Department of Public Health supports and sponsors a number of programs regarding folic acid intake and other factors influencing prenatal and infant health.

Early prenatal care for mothers and health education to women and medical providers allow for a healthier pregnancy and improved birth outcomes. Interventions need to focus on providing preconceptional health care to women, early and comprehensive prenatal care, and family support that includes promotion of healthy lifestyles.

<sup>1</sup>Source: March of Dimes perinatal statistics: [www.marchofdimes.com/peristats](http://www.marchofdimes.com/peristats)

**Live Births 2010-2011**

County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with Average Population < 10,000	Adair	150	9.9 (12)	Lucas	213	12 (71)
	Adams	87	10.8 (39)	Monona	173	9.4 (6)
	Audubon	115	9.5 (9)	Monroe	179	11.2 (50)
	Clarke	246	13.2 (86)	Osceola	121	9.4 (8)
	Davis	276	15.7 (99)	Palo Alto	197	10.5 (28)
	Decatur	179	10.7 (36)	Pocahontas	148	10.2 (21)
	Fremont	148	10 (16)	Ringgold	105	10.2 (22)
	Greene	193	10.4 (27)	Taylor	143	11.3 (54)
	Howard	220	11.5 (59)	Van Buren	190	12.6 (79)
	Humboldt	214	10.9 (41)	Wayne	169	13.3 (87)
	Ida	157	11.1 (48)	Worth	141	9.3 (5)
			<b>Total</b>	3,764	11.1	
Counties with Average Population 10,000 – 20,000	Allamakee	333	11.6 (62)	Hardin	377	10.8 (38)
	Appanoose	310	12.1 (72)	Iowa	362	11.1 (47)
	Butler	318	10.7 (33)	Jefferson	273	8.1 (1)
	Calhoun	203	10.5 (29)	Keokuk	250	12 (70)
	Cass	311	11.2 (51)	Kossuth	341	11 (45)
	Cedar	373	10.1 (20)	Louisa	258	11.3 (56)
	Cherokee	236	9.8 (11)	Lyon	347	14.9 (92)
	Chickasaw	294	11.8 (66)	Mitchell	263	12.2 (74)
	Clay	397	11.9 (68)	Montgomery	211	9.9 (13)
	Clayton	373	10.3 (24)	O'Brien	322	11.3 (52)
	Crawford	515	15 (93)	Page	338	10.6 (30)
	Delaware	379	10.7 (35)	Poweshiek	390	10.3 (25)
	Dickinson	317	9.4 (7)	Sac	205	10 (15)
	Emmet	216	10.6 (31)	Shelby	244	10.1 (18)
	Floyd	393	12.1 (73)	Tama	424	12 (69)
	Franklin	254	11.9 (67)	Union	293	11.7 (64)
	Hamilton	331	10.6 (32)	Winnebago	222	10.3 (23)
	Hancock	203	9 (4)	Wright	305	11.6 (61)
			<b>Total</b>	11,181	11.1	
Counties with Average Population > 20,000	Boone	607	11.6 (60)	Lee	790	11.1 (46)
	Buchanan	584	13.9 (91)	Mahaska	573	12.8 (82)
	Buena Vista	614	15.1 (95)	Marion	732	11 (43)
	Carroll	526	12.6 (80)	Marshall	1,095	13.4 (89)
	Cerro Gordo	965	11 (42)	Muscatine	1,105	12.9 (84)
	Clinton	1,216	12.4 (77)	Plymouth	549	11 (44)
	Des Moines	944	11.7 (65)	Sioux	1,024	15.1 (96)
	Fayette	451	10.8 (37)	Wapello	878	12.4 (76)
	Henry	471	11.7 (63)	Webster	865	11.5 (58)
	Jackson	394	9.9 (14)	Winneshiek	353	8.4 (2)
	Jasper	832	11.3 (55)	<b>Total</b>	15,568	12
MSA Counties	Benton	568	10.9 (40)	Linn	5,493	12.9 (83)
	Black Hawk	3,320	12.6 (81)	Madison	355	11.3 (53)
	Bremer	461	9.5 (10)	Mills	302	10 (17)
	Dallas	2,094	15.4 (98)	Polk	13,019	15 (94)
	Dubuque	2,328	12.3 (75)	Pottawattamie	2,515	13.5 (90)
	Grundy	285	11.4 (57)	Scott	4,376	13.1 (85)
	Guthrie	195	8.9 (3)	Story	1,915	10.7 (34)
	Harrison	308	10.4 (26)	Warren	1,038	11.2 (49)
	Johnson	3,525	13.3 (88)	Washington	546	12.5 (78)
	Jones	417	10.1 (19)	Woodbury	3,145	15.4 (97)
			<b>Total</b>	46,205	13.3	
	<b>State Total</b>	76,718	12.6			

<sup>1</sup>Rates per 1,000 population<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

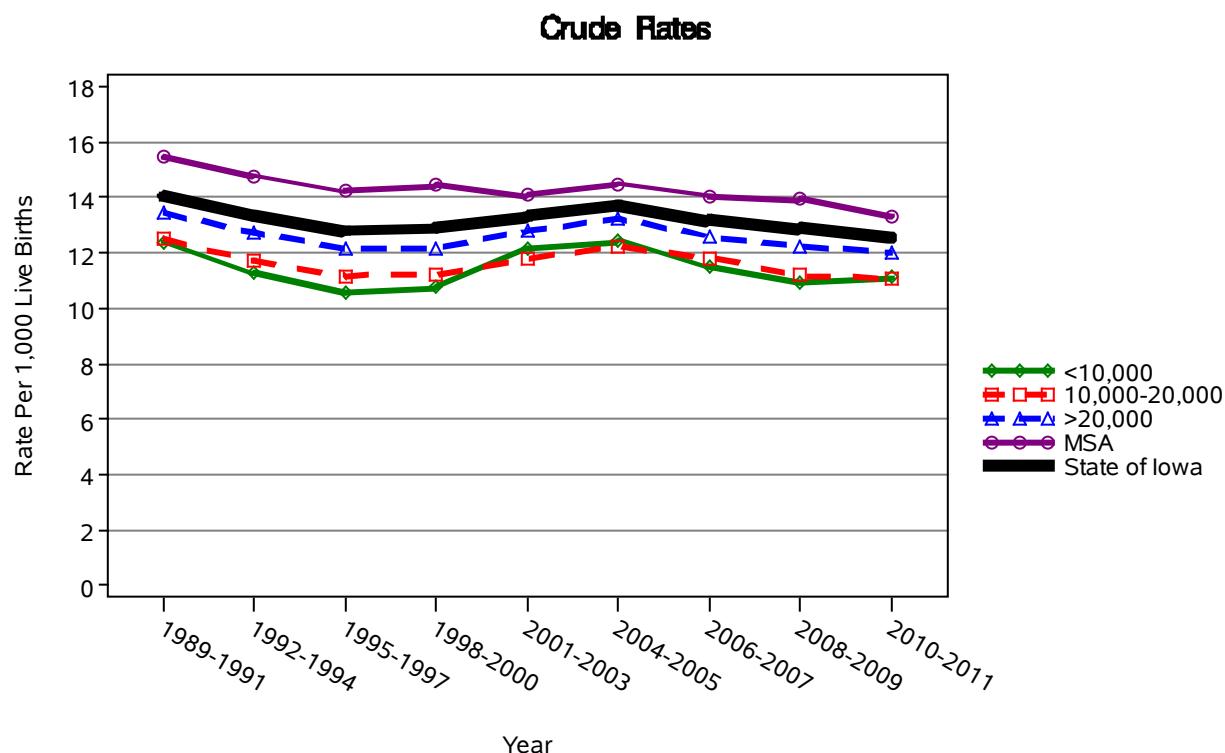
## Out-of-Wedlock Births 2010-2011

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )
<b>Counties with Average Population &lt; 10,000</b>	Adair	47	313.3 (42)	Lucas	65	305.2 (36)
	Adams	22	252.9 (18)	Monona	59	341 (58)
	Audubon	46	400 (79)	Monroe	65	363.1 (68)
	Clarke	110	447.2 (90)	Osceola	41	338.8 (57)
	Davis	41	148.6 (3)	Palo Alto	68	345.2 (60)
	Decatur	58	324 (49)	Pocahontas	54	364.9 (70.5)
	Fremont	54	364.9 (70.5)	Ringgold	20	190.5 (6)
	Greene	84	435.2 (87)	Taylor	49	342.7 (59)
	Howard	50	227.3 (12)	Van Buren	59	310.5 (40)
	Humboldt	79	369.2 (74)	Wayne	40	236.7 (15)
	Ida	48	305.7 (37)	Worth	45	319.1 (47)
				<b>Total</b>	1,204	319.9
<b>Counties with Average Population 10,000 – 20,000</b>	Allamakee	97	291.3 (30)	Hardin	126	334.2 (55)
	Appanoose	131	422.6 (84)	Iowa	85	234.8 (14)
	Butler	66	207.5 (8)	Jefferson	98	359 (65)
	Calhoun	55	270.9 (24)	Keokuk	79	316 (43)
	Cass	104	334.4 (56)	Kossuth	100	293.3 (31)
	Cedar	113	302.9 (35)	Louisa	93	360.5 (66)
	Cherokee	75	317.8 (45)	Lyon	46	132.6 (1)
	Chickasaw	77	261.9 (21)	Mitchell	52	197.7 (7)
	Clay	141	355.2 (63)	Montgomery	96	455 (92)
	Clayton	105	281.5 (27)	O'Brien	99	307.5 (39)
	Crawford	203	394.2 (77)	Page	150	443.8 (89)
	Delaware	94	248 (17)	Poweshiek	142	364.1 (69)
	Dickinson	116	365.9 (72)	Sac	63	307.3 (38)
	Emmet	89	412 (82)	Shelby	73	299.2 (33)
	Floyd	138	351.1 (62)	Tama	196	462.3 (94)
	Franklin	91	358.3 (64)	Union	111	378.8 (76)
	Hamilton	134	404.8 (81)	Winnebago	72	324.3 (50)
	Hancock	61	300.5 (34)	Wright	143	468.9 (95)
				<b>Total</b>	3,714	332.2
<b>Counties with Average Population &gt; 20,000</b>	Boone	192	316.3 (44)	Lee	376	475.9 (96)
	Buchanan	155	265.4 (23)	Mahaska	186	324.6 (51)
	Buena Vista	222	361.6 (67)	Marion	193	263.7 (22)
	Carroll	149	283.3 (28)	Marshall	434	396.3 (78)
	Cerro Gordo	387	401 (80)	Muscatine	488	441.6 (88)
	Clinton	580	477 (97)	Plymouth	134	244.1 (16)
	Des Moines	456	483.1 (99)	Sioux	192	187.5 (5)
	Fayette	166	368.1 (73)	Wapello	399	454.4 (91)
	Henry	165	350.3 (61)	Webster	394	455.5 (93)
	Jackson	147	373.1 (75)	Winneshiek	81	229.5 (13)
	Jasper	269	323.3 (48)	<b>Total</b>	5,765	370.3
<b>MSA Counties</b>	Benton	157	276.4 (26)	Linn	1,835	334.1 (54)
	Black Hawk	1,431	431 (86)	Madison	92	259.2 (20)
	Bremer	68	147.5 (2)	Mills	96	317.9 (46)
	Dallas	327	156.2 (4)	Polk	4,292	329.7 (52)
	Dubuque	771	331.2 (53)	Pottawattamie	1,060	421.5 (83)
	Grundy	62	217.5 (11)	Scott	1,870	427.3 (85)
	Guthrie	56	287.2 (29)	Story	399	208.4 (9)
	Harrison	92	298.7 (32)	Warren	269	259.2 (19)
	Johnson	756	214.5 (10)	Washington	150	274.7 (25)
	Jones	130	311.8 (41)	Woodbury	1,510	480.1 (98)
				<b>Total</b>	15,423	333.8
	<b>State Total</b>	26,106	340.3			

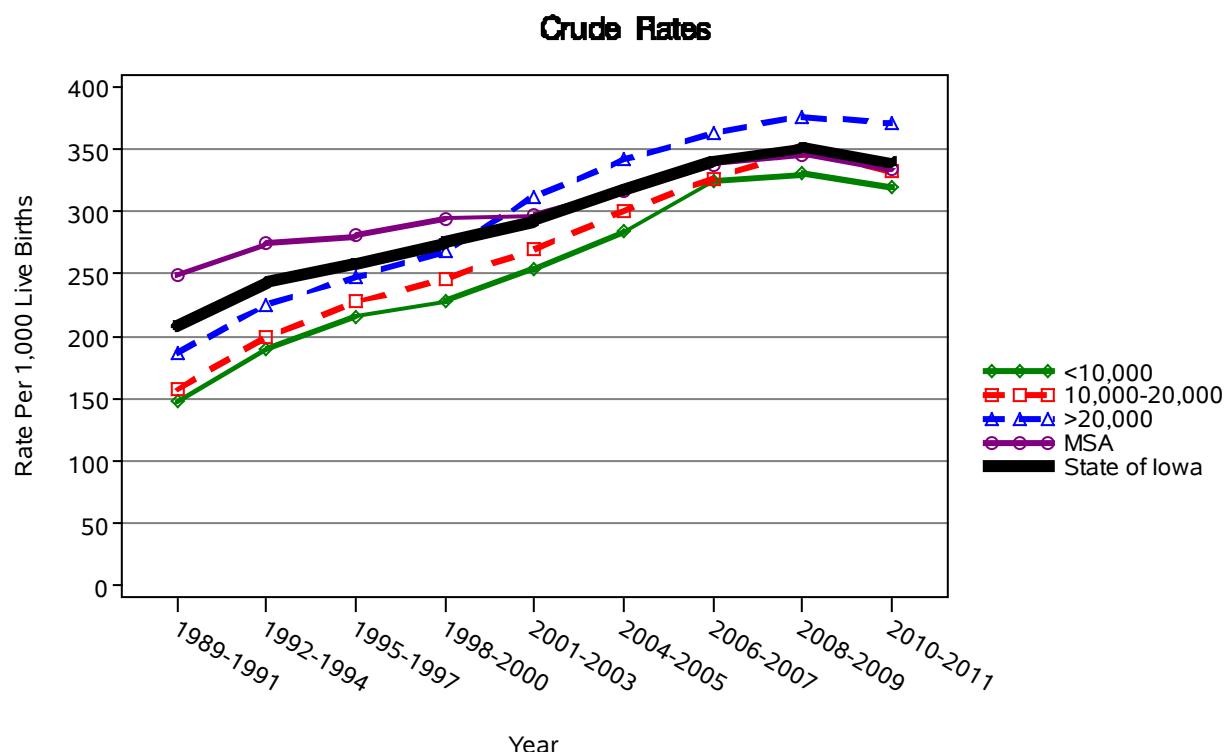
<sup>1</sup>Rates per 1,000 live births<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

## Live Births by County Group 1989-2011



## Out of Wedlock Births by County Group 1989-2011



**Mothers under Age 20 2010-2011**

County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with Average Population < 10,000	Adair	7	46.7	Lucas	24	112.7
	Adams	*	*	Monona	13	75.1
	Audubon	12	104.3	Monroe	20	111.7
	Clarke	31	126	Osceola	10	82.6
	Davis	15	54.3	Palo Alto	13	66
	Decatur	18	100.6	Pocahontas	9	60.8
	Fremont	17	114.9	Ringgold	*	*
	Greene	28	145.1	Taylor	11	76.9
	Howard	9	40.9	Van Buren	12	63.2
	Humboldt	15	70.1	Wayne	12	71
	Ida	10	63.7	Worth	9	63.8
			<b>Total</b>	301	80	
	Allamakee	25	75.1	Hardin	25	66.3
Counties with Average Population 10,000 – 20,000	Appanoose	36	116.1	Iowa	16	44.2
	Butler	11	34.6	Jefferson	21	76.9
	Calhoun	16	78.8	Keokuk	23	92
	Cass	25	80.4	Kossuth	16	46.9
	Cedar	17	45.6	Louisa	25	96.9
	Cherokee	20	84.7	Lyon	8	23.1
	Chickasaw	14	47.6	Mitchell	8	30.4
	Clay	29	73	Montgomery	37	175.4
	Clayton	20	53.6	O'Brien	37	114.9
	Crawford	62	120.4	Page	41	121.3
	Delaware	25	66	Poweshiek	36	92.3
	Dickinson	26	82	Sac	13	63.4
	Emmet	24	111.1	Shelby	13	53.3
	Floyd	43	109.4	Tama	43	101.4
	Franklin	26	102.4	Union	29	99
	Hamilton	25	75.5	Winnebago	12	54.1
	Hancock	10	49.3	Wright	26	85.2
			<b>Total</b>	883	79	
Counties with Average Population > 20,000	Boone	37	61	Lee	91	115.2
	Buchanan	37	63.4	Mahaska	36	62.8
	Buena Vista	76	123.8	Marion	52	71
	Carroll	30	57	Marshall	137	125.1
	Cerro Gordo	74	76.7	Muscatine	113	102.3
	Clinton	146	120.1	Plymouth	18	32.8
	Des Moines	104	110.2	Sioux	50	48.8
	Fayette	37	82	Wapello	118	134.4
	Henry	39	82.8	Webster	66	76.3
	Jackson	27	68.5	Winneshiek	11	31.2
	Jasper	70	84.1	<b>Total</b>	1,369	87.9
MSA Counties	Benton	32	56.3	Linn	356	64.8
	Black Hawk	288	86.7	Madison	24	67.6
	Bremer	23	49.9	Mills	20	66.2
	Dallas	56	26.7	Polk	927	71.2
	Dubuque	163	70	Pottawattamie	252	100.2
	Grundy	7	24.6	Scott	406	92.8
	Guthrie	10	51.3	Story	55	28.7
	Harrison	23	74.7	Warren	73	70.3
	Johnson	119	33.8	Washington	22	40.3
	Jones	25	60	Woodbury	329	104.6
			<b>Total</b>	3,210	69.5	
<b>State Total</b>		5,763	75.1			

<sup>1</sup>Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

**Low Birth Weight (<2500 Grams) 2010-2011**

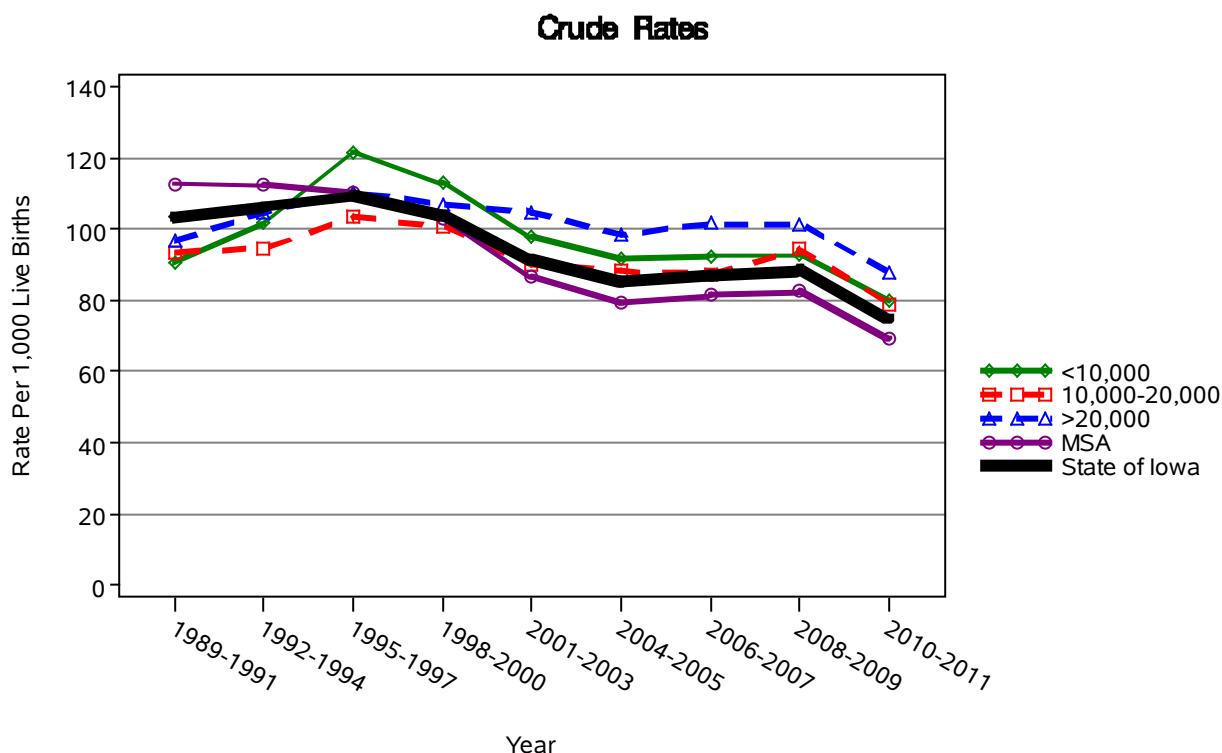
County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with Average Population < 10,000	Adair	10	66.7	Lucas	15	70.4
	Adams	8	92	Monona	19	109.8
	Audubon	11	95.7	Monroe	15	83.8
	Clarke	15	61	Osceola	*	*
	Davis	13	47.1	Palo Alto	10	50.8
	Decatur	12	67	Pocahontas	15	101.4
	Fremont	14	94.6	Ringgold	9	85.7
	Greene	16	82.9	Taylor	10	69.9
	Howard	7	31.8	Van Buren	10	52.6
	Humboldt	7	32.7	Wayne	13	76.9
	Ida	10	63.7	Worth	10	70.9
			<b>Total</b>	254	67.5	
Counties with Average Population 10,000 – 20,000	Allamakee	21	63.1	Hardin	33	87.5
	Appanoose	21	67.7	Iowa	23	63.5
	Butler	14	44	Jefferson	7	25.6
	Calhoun	16	78.8	Keokuk	18	72
	Cass	25	80.4	Kossuth	19	55.7
	Cedar	25	67	Louisa	15	58.1
	Cherokee	14	59.3	Lyon	18	51.9
	Chickasaw	8	27.2	Mitchell	12	45.6
	Clay	24	60.5	Montgomery	18	85.3
	Clayton	15	40.2	O'Brien	21	65.2
	Crawford	36	69.9	Page	19	56.2
	Delaware	28	73.9	Poweshiek	24	61.5
	Dickinson	17	53.6	Sac	7	34.1
	Emmet	11	50.9	Shelby	16	65.6
	Floyd	21	53.4	Tama	46	108.5
	Franklin	20	78.7	Union	20	68.3
	Hamilton	28	84.6	Winnebago	11	49.5
	Hancock	13	64	Wright	24	78.7
			<b>Total</b>	708	63.3	
Counties with Average Population > 20,000	Boone	42	69.2	Lee	60	75.9
	Buchanan	42	71.9	Mahaska	35	61.1
	Buena Vista	35	57	Marion	45	61.5
	Carroll	28	53.2	Marshall	77	70.3
	Cerro Gordo	51	52.8	Muscatine	76	68.8
	Clinton	80	65.8	Plymouth	32	58.3
	Des Moines	74	78.4	Sioux	52	50.8
	Fayette	37	82	Wapello	61	69.5
	Henry	30	63.7	Webster	64	74
	Jackson	26	66	Winneshiek	24	68
	Jasper	63	75.7	<b>Total</b>	1,034	66.4
MSA Counties	Benton	37	65.1	Linn	354	64.4
	Black Hawk	276	83.1	Madison	27	76.1
	Bremer	39	84.6	Mills	29	96
	Dallas	128	61.1	Polk	969	74.4
	Dubuque	137	58.8	Pottawattamie	185	73.6
	Grundy	22	77.2	Scott	294	67.2
	Guthrie	21	107.7	Story	104	54.3
	Harrison	22	71.4	Warren	62	59.7
	Johnson	218	61.8	Washington	35	64.1
	Jones	23	55.2	Woodbury	209	66.5
			<b>Total</b>	3,191	69.1	
<b>State Total</b>		*	*			

<sup>1</sup>Rates per 1,000 population<sup>2</sup>Rank among 99 Iowa counties

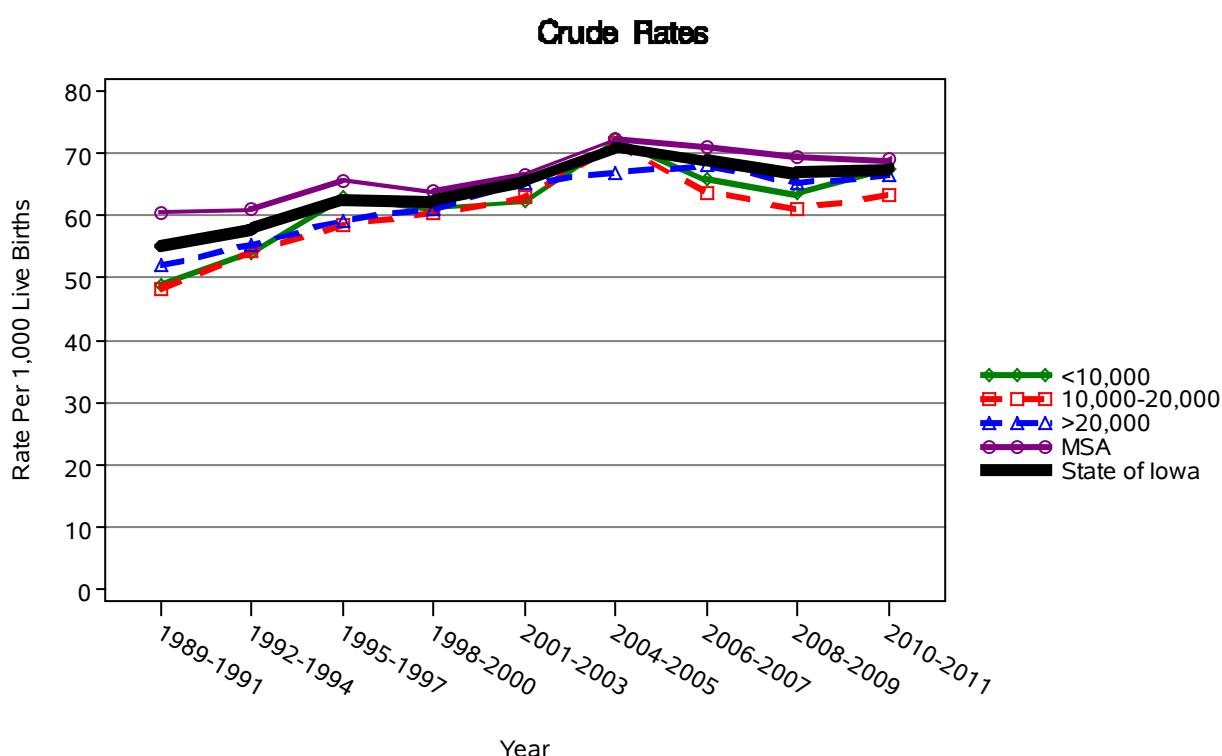
\* represents a count less than 5

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

## Mothers under Age 20 by County Group 1989-2011



## Low Birth Weight (<2500 grams) by County Group 1989-2011



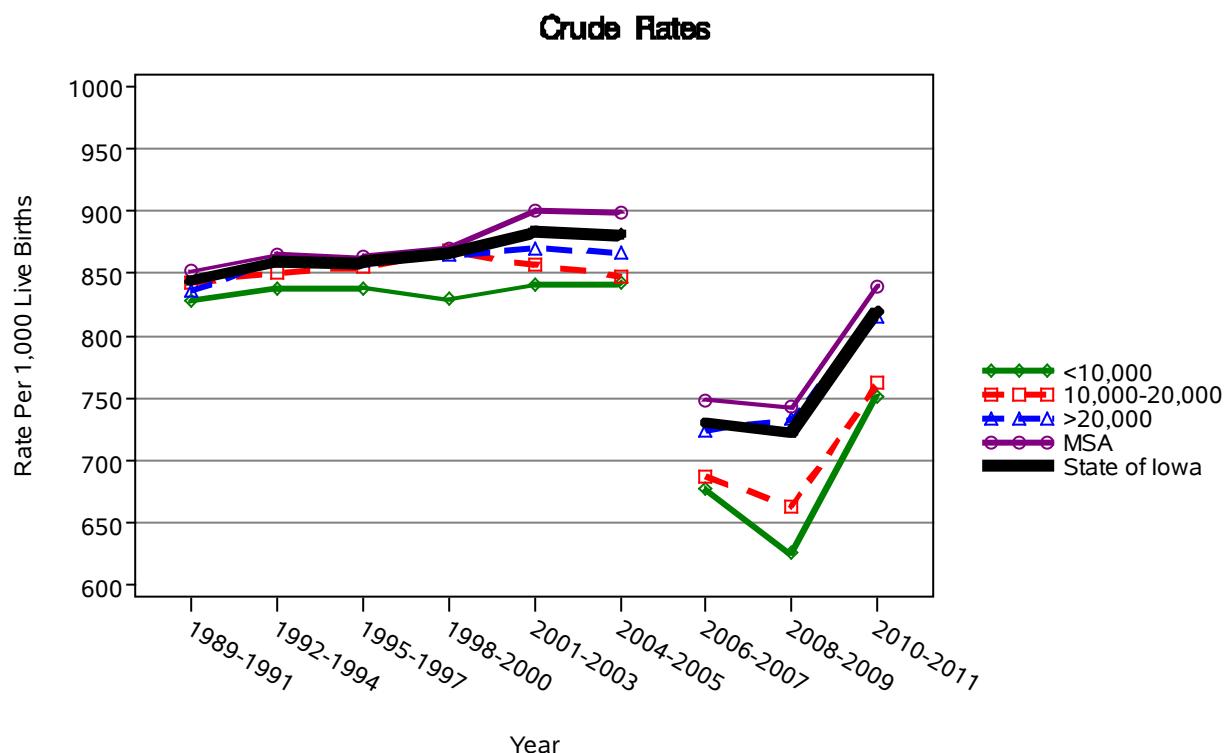
**Mothers Who Began Prenatal Care in First Trimester 2010-2011**

County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with Average Population < 10,000	Adair	126	840 (74)	Lucas	156	732.4 (18)
	Adams	68	781.6 (40)	Monona	145	838.2 (71)
	Audubon	92	800 (50.5)	Monroe	151	843.6 (78)
	Clarke	182	739.8 (23)	Osceola	85	702.5 (11)
	Davis	160	579.7 (3)	Palo Alto	163	827.4 (66)
	Decatur	128	715.1 (15)	Pocahontas	122	824.3 (62)
	Fremont	114	770.3 (29)	Ringgold	67	638.1 (7)
	Greene	149	772 (32)	Taylor	112	783.2 (41)
	Howard	149	677.3 (9)	Van Buren	144	757.9 (27)
	Humboldt	177	827.1 (65)	Wayne	118	698.2 (10)
	Ida	130	828 (67)	Worth	93	659.6 (8)
			<b>Total</b>	2,831	752.1	
Counties with Average Population 10,000 – 20,000	Allamakee	206	618.6 (5)	Hardin	297	787.8 (45)
	Appanoose	242	780.6 (38)	Iowa	321	886.7 (96)
	Butler	278	874.2 (89)	Jefferson	199	728.9 (16)
	Calhoun	165	812.8 (57)	Keokuk	208	832 (69)
	Cass	243	781.4 (39)	Kossuth	263	771.3 (31)
	Cedar	328	879.4 (92)	Louisa	200	775.2 (35)
	Cherokee	182	771.2 (30)	Lyon	255	734.9 (20)
	Chickasaw	216	734.7 (19)	Mitchell	148	562.7 (1)
	Clay	309	778.3 (37)	Montgomery	161	763 (28)
	Clayton	238	638.1 (6)	O'Brien	266	826.1 (64)
	Crawford	316	613.6 (4)	Page	262	775.1 (34)
	Delaware	350	923.5 (99)	Poweshiek	306	784.6 (43)
	Dickinson	266	839.1 (72)	Sac	164	800 (50.5)
	Emmet	153	708.3 (13)	Shelby	211	864.8 (86)
	Floyd	277	704.8 (12)	Tama	314	740.6 (24)
	Franklin	181	712.6 (14)	Union	214	730.4 (17)
	Hamilton	264	797.6 (48)	Winnebago	126	567.6 (2)
	Hancock	158	778.3 (36)	Wright	231	757.4 (26)
		206	618.6 (5)	<b>Total</b>	8,518	761.8
Counties with Average Population > 20,000	Boone	517	851.7 (80)	Lee	628	794.9 (47)
	Buchanan	432	739.7 (22)	Mahaska	502	876.1 (91)
	Buena Vista	481	783.4 (42)	Marion	636	868.9 (88)
	Carroll	443	842.2 (76)	Marshall	809	738.8 (21)
	Cerro Gordo	728	754.4 (25)	Muscatine	911	824.4 (63)
	Clinton	1,002	824 (61)	Plymouth	492	896.2 (98)
	Des Moines	789	835.8 (70)	Sioux	829	809.6 (55)
	Fayette	361	800.4 (52)	Wapello	703	800.7 (53)
	Henry	387	821.7 (60)	Webster	745	861.3 (84)
	Jackson	315	799.5 (49)	Winneshiek	273	773.4 (33)
	Jasper	720	865.4 (87)	<b>Total</b>	12,703	816
MSA Counties	Benton	487	857.4 (82)	Linn	4,807	875.1 (90)
	Black Hawk	2,844	856.6 (81)	Madison	306	862 (85)
	Bremer	411	891.5 (97)	Mills	246	814.6 (58)
	Dallas	1,849	883 (94)	Polk	10,816	830.8 (68)
	Dubuque	1,955	839.8 (73)	Pottawattamie	1,975	785.3 (44)
	Grundy	251	880.7 (93)	Scott	3,556	812.6 (56)
	Guthrie	164	841 (75)	Story	1,614	842.8 (77)
	Harrison	251	814.9 (59)	Warren	918	884.4 (95)
	Johnson	3,033	860.4 (83)	Washington	431	789.4 (46)
	Jones	353	846.5 (79)	Woodbury	2,538	807 (54)
			<b>Total</b>	38,805	839.8	
<b>State Total</b>		62,857	819.3			

<sup>1</sup>Rates per 1,000 live births<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

## Mothers Who Began Prenatal Care in First Trimester by County Group 1989-2005, 2006-2011



**Note:**

*Prenatal care statistics prior to 2005 and after 2006 cannot be directly compared, due to changes in the format of the birth certificates from which these data are collected. This is indicated by a break in the above graph.*

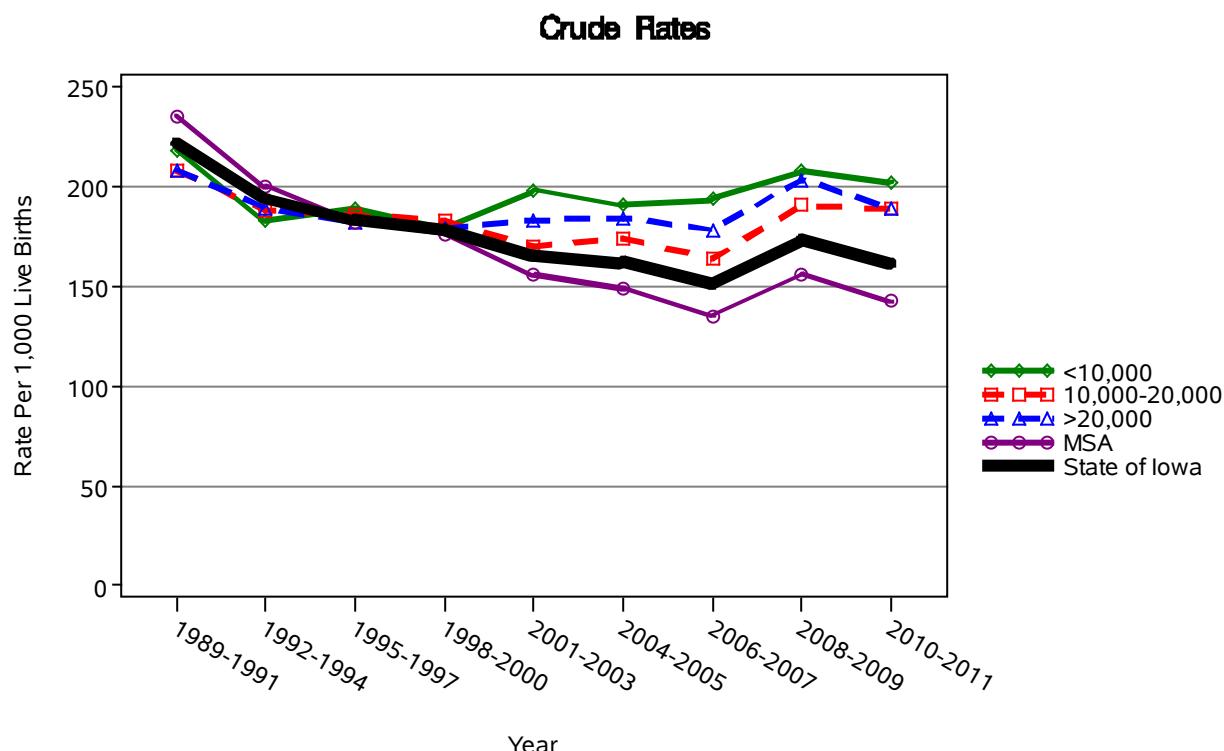
# Mothers Who Smoked During Pregnancy 2010-2011

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )
<b>Counties with Average Population &lt; 10,000</b>	Adair	36	240 (84)	Lucas	33	154.9 (23)
	Adams	15	172.4 (36)	Monona	44	254.3 (91)
	Audubon	32	278.3 (96)	Monroe	42	234.6 (83)
	Clarke	46	187 (53)	Osceola	22	181.8 (44)
	Davis	33	119.6 (10)	Palo Alto	34	172.6 (37)
	Decatur	33	184.4 (48)	Pocahontas	32	216.2 (74)
	Fremont	37	250 (89)	Ringgold	23	219 (76)
	Greene	54	279.8 (97)	Taylor	27	188.8 (56)
	Howard	31	140.9 (18)	Van Buren	41	215.8 (73)
	Humboldt	53	247.7 (88)	Wayne	41	242.6 (86)
	Ida	28	178.3 (38)	Worth	24	170.2 (33)
				<b>Total</b>	761	202.2
<b>Counties with Average Population 10,000 – 20,000</b>	Allamakee	50	150.2 (22)	Hardin	81	214.9 (72)
	Appanoose	80	258.1 (92)	Iowa	52	143.6 (20)
	Butler	67	210.7 (69)	Jefferson	46	168.5 (32)
	Calhoun	44	216.7 (75)	Keokuk	57	228 (81)
	Cass	82	263.7 (94)	Kossuth	62	181.8 (44)
	Cedar	47	126 (12)	Louisa	48	186 (51)
	Cherokee	39	165.3 (29)	Lyon	39	112.4 (8)
	Chickasaw	53	180.3 (42)	Mitchell	27	102.7 (7)
	Clay	81	204 (63)	Montgomery	55	260.7 (93)
	Clayton	60	160.9 (27)	O'Brien	67	208.1 (65)
	Crawford	68	132 (16)	Page	93	275.1 (95)
	Delaware	60	158.3 (25)	Poweshiek	74	189.7 (57)
	Dickinson	58	183 (46)	Sac	40	195.1 (60)
	Emmet	40	185.2 (49)	Shelby	48	196.7 (62)
	Floyd	67	170.5 (34)	Tama	82	193.4 (58)
	Franklin	36	141.7 (19)	Union	84	286.7 (99)
	Hamilton	71	214.5 (71)	Winnebago	51	229.7 (82)
	Hancock	46	226.6 (80)	Wright	56	183.6 (47)
				<b>Total</b>	2,111	188.8
<b>Counties with Average Population &gt; 20,000</b>	Boone	127	209.2 (66)	Lee	222	281 (98)
	Buchanan	94	161 (28)	Mahaska	108	188.5 (55)
	Buena Vista	44	71.7 (3)	Marion	142	194 (59)
	Carroll	84	159.7 (26)	Marshall	162	147.9 (21)
	Cerro Gordo	203	210.4 (68)	Muscatine	199	180.1 (40)
	Clinton	305	250.8 (90)	Plymouth	75	136.6 (17)
	Des Moines	209	221.4 (77)	Sioux	76	74.2 (4)
	Fayette	109	241.7 (85)	Wapello	186	211.8 (70)
	Henry	99	210.2 (67)	Webster	214	247.4 (87)
	Jackson	71	180.2 (41)	Winneshiek	42	119 (9)
	Jasper	173	207.9 (64)	<b>Total</b>	2,944	189.1
<b>MSA Counties</b>	Benton	106	186.6 (52)	Linn	864	157.3 (24)
	Black Hawk	595	179.2 (39)	Madison	61	171.8 (35)
	Bremer	43	93.3 (5)	Mills	56	185.4 (50)
	Dallas	150	71.6 (2)	Polk	1,668	128.1 (14)
	Dubuque	307	131.9 (15)	Pottawattamie	563	223.9 (78)
	Grundy	36	126.3 (13)	Scott	731	167 (31)
	Guthrie	44	225.6 (79)	Story	181	94.5 (6)
	Harrison	56	181.8 (44)	Warren	128	123.3 (11)
	Johnson	210	59.6 (1)	Washington	91	166.7 (30)
	Jones	78	187.1 (54)	Woodbury	614	195.2 (61)
				<b>Total</b>	6,582	142.5
	<b>State Total</b>	12,398	161.6			

<sup>1</sup>Rates per 1,000 live births<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

## Mothers Who Smoked During Pregnancy by County Group 1989-2011



**Fetal Deaths 2007-2011**

County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Adair	*	*	Lucas	*	*
Adams	*	*	Monona	*	*
Audubon	*	*	Monroe	*	*
Clarke	*	*	Osceola	*	*
Davis	7	10	Palo Alto	*	*
Decatur	*	*	Pocahontas	*	*
Fremont	*	*	Ringgold	*	*
Greene	6	12.2	Taylor	*	*
Howard	*	*	Van Buren	6	12.4
Humboldt	*	*	Wayne	*	*
Ida	*	*	Worth	*	*
			<b>Total</b>	60	6
Allamakee	*	*	Hardin	*	*
Appanoose	8	9.9	Iowa	6	6.4
Butler	*	*	Jefferson	*	*
Calhoun	*	*	Keokuk	*	*
Cass	*	*	Kossuth	*	*
Cedar	*	*	Louisa	*	*
Cherokee	*	*	Lyon	*	*
Chickasaw	*	*	Mitchell	*	*
Clay	*	*	Montgomery	*	*
Clayton	6	6.2	O'Brien	*	*
Crawford	*	*	Page	*	*
Delaware	*	*	Poweshiek	*	*
Dickinson	*	*	Sac	*	*
Emmet	*	*	Shelby	*	*
Floyd	*	*	Tama	*	*
Franklin	*	*	Union	*	*
Hamilton	*	*	Winnebago	*	*
Hancock	*	*	Wright	*	*
			<b>Total</b>	115	4
Boone	10	6.5	Lee	14	6.9
Buchanan	9	6	Mahaska	8	5.5
Buena Vista	8	5.4	Marion	13	6.5
Carroll	*	*	Marshall	13	4.5
Cerro Gordo	11	4.4	Muscatine	14	4.7
Clinton	14	4.6	Plymouth	7	4.6
Des Moines	20	7.9	Sioux	14	5.4
Fayette	6	5.1	Wapello	12	5.1
Henry	10	8.4	Webster	7	3
Jackson	9	8.8	Winneshiek	*	*
Jasper	14	6.7	<b>Total</b>	218	5.4
Benton	8	5.5	Linn	68	4.8
Black Hawk	54	6.3	Madison	*	*
Bremer	*	*	Mills	*	*
Dallas	21	4.1	Polk	176	5.3
Dubuque	35	5.8	Pottawattamie	11	1.7
Grundy	*	*	Scott	73	6.5
Guthrie	*	*	Story	19	3.8
Harrison	*	*	Warren	14	5.3
Johnson	63	7.3	Washington	6	4.5
Jones	*	*	Woodbury	38	4.7
<b>State Total</b>	1,001	5.1	<b>Total</b>	608	5.2

<sup>1</sup>Rates per 1,000 live births

\*represents a count less than 5

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

**Neonatal Deaths 2007-2011**

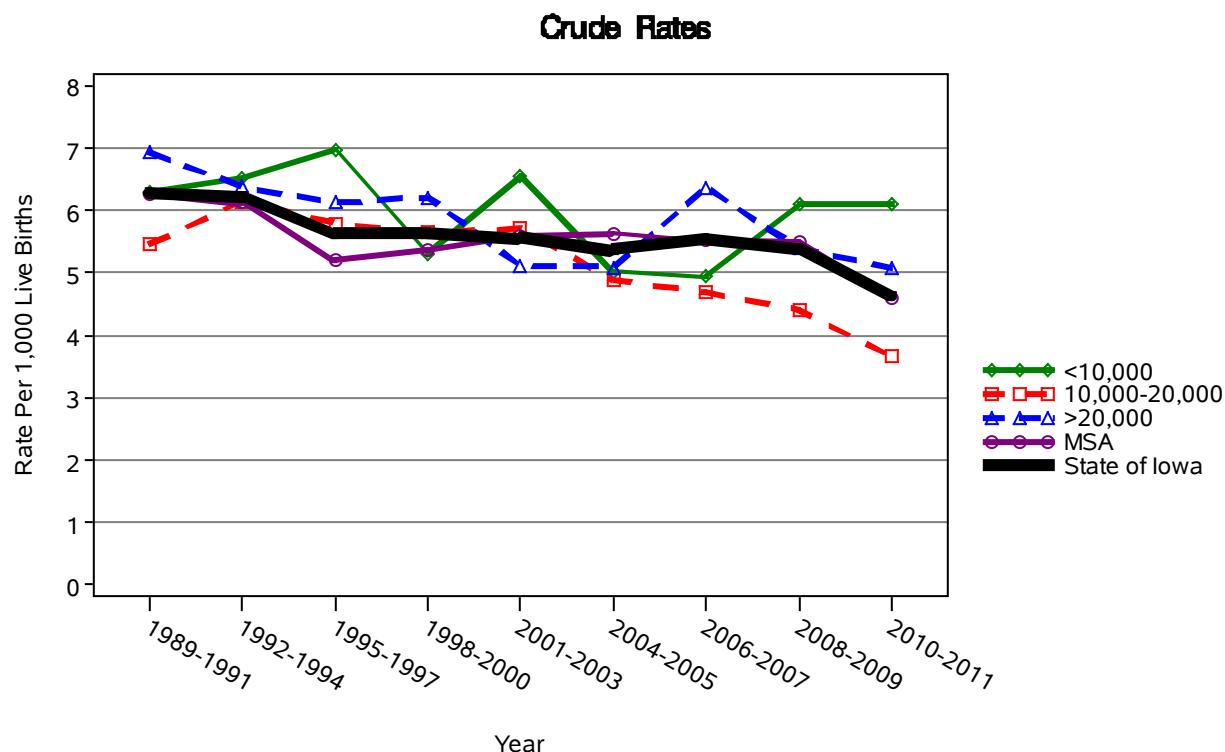
County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Adair	*	*	Lucas	*	*
Adams	*	*	Monona	*	*
Audubon	*	*	Monroe	*	*
Clarke	*	*	Osceola	*	*
Davis	*	*	Palo Alto	*	*
Decatur	*	*	Pocahontas	*	*
Fremont	*	*	Ringgold	*	*
Greene	*	*	Taylor	*	*
Howard	*	*	Van Buren	*	*
Humboldt	*	*	Wayne	*	*
Ida	*	*	Worth	*	*
			<b>Total</b>	41	4.1
Allamakee	*	*	Hardin	*	*
Appanoose	*	*	Iowa	*	*
Butler	*	*	Jefferson	*	*
Calhoun	*	*	Keokuk	*	*
Cass	*	*	Kossuth	*	*
Cedar	*	*	Louisa	*	*
Cherokee	*	*	Lyon	*	*
Chickasaw	*	*	Mitchell	*	*
Clay	*	*	Montgomery	*	*
Clayton	*	*	O'Brien	*	*
Crawford	*	*	Page	*	*
Delaware	*	*	Poweshiek	*	*
Dickinson	*	*	Sac	*	*
Emmet	*	*	Shelby	*	*
Floyd	*	*	Tama	*	*
Franklin	*	*	Union	*	*
Hamilton	7	8	Winnebago	*	*
Hancock	*	*	Wright	*	*
			<b>Total</b>	76	2.6
Boone	*	*	Lee	*	*
Buchanan	*	*	Mahaska	*	*
Buena Vista	8	5.4	Marion	*	*
Carroll	7	5.2	Marshall	*	*
Cerro Gordo	11	4.4	Muscatine	*	*
Clinton	17	5.6	Plymouth	*	*
Des Moines	12	4.7	Sioux	16	6.2
Fayette	*	*	Wapello	*	*
Henry	*	*	Webster	9	3.9
Jackson	*	*	Winneshiek	6	6.2
Jasper	*	*	<b>Total</b>	130	3.2
Benton	*	*	Linn	36	2.6
Black Hawk	24	2.8	Madison	*	*
Bremer	*	*	Mills	*	*
Dallas	*	*	Polk	120	3.6
Dubuque	16	2.7	Pottawattamie	21	3.3
Grundy	*	*	Scott	30	2.7
Guthrie	*	*	Story	15	3
Harrison	*	*	Warren	11	4.2
Johnson	26	3	Washington	*	*
Jones	*	*	Woodbury	24	3
			<b>Total</b>	345	2.9
<b>State Total</b>	592	3			

<sup>1</sup>Rates per 1,000 live births

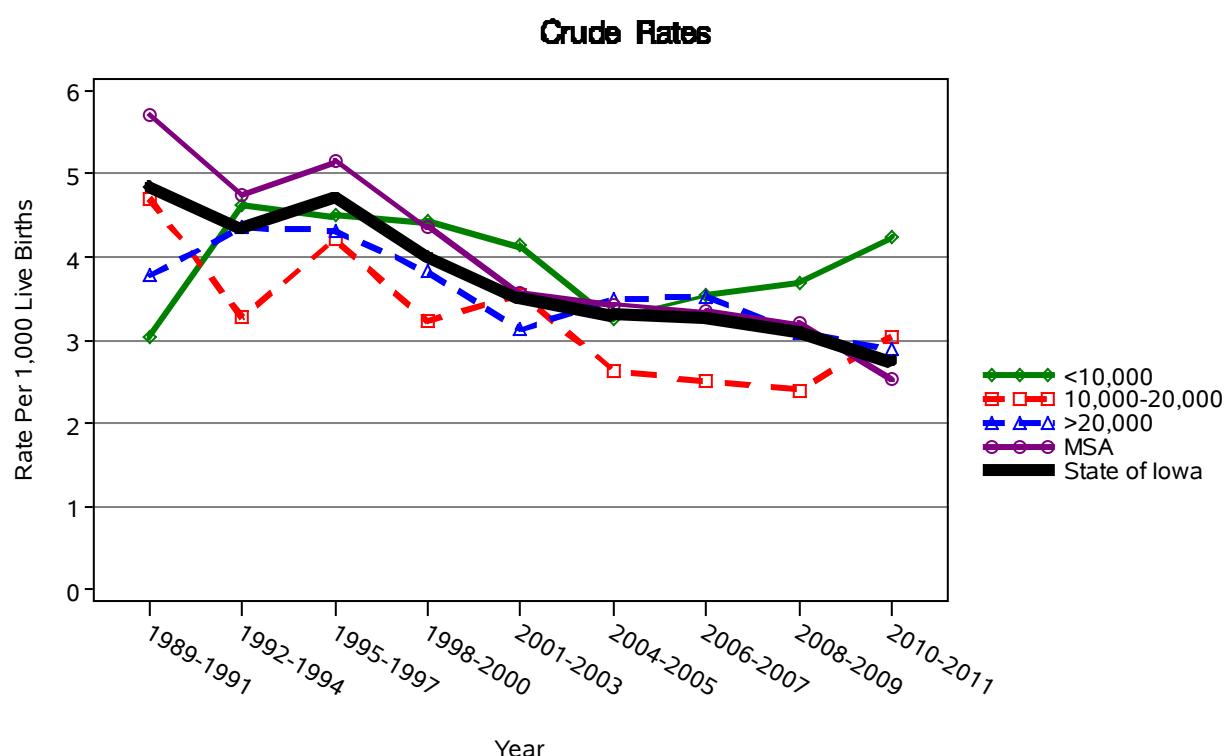
\* represents a count less than 5

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates

## Fetal Deaths by County Group 1989-2011



## Neonatal Deaths by County Group 1989-2011



**Perinatal Deaths 2007-2011**

County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>			
Adair	*	*	Lucas	9	16.5			
Adams	*	*	Monona	*	*			
Audubon	*	*	Monroe	*	*			
Clarke	7	10.5	Osceola	*	*			
Davis	7	10	Palo Alto	*	*			
Decatur	*	*	Pocahontas	6	15.8			
Fremont	*	*	Ringgold	*	*			
Greene	6	12.2	Taylor	*	*			
Howard	*	*	Van Buren	7	14.5			
Humboldt	*	*	Wayne	6	14.2			
Ida	7	15.8	Worth	*	*			
<b>Total</b>			<b>Total</b>					
<b>Counties with Average Population &lt; 10,000</b>			<b>Counties with Average Population &lt; 10,000</b>					
Allamakee	*	*	Hardin	*	*			
Appanoose	12	14.9	Iowa	10	10.7			
Butler	*	*	Jefferson	6	8.2			
Calhoun	*	*	Keokuk	*	*			
Cass	6	7.3	Kossuth	7	8.4			
Cedar	*	*	Louisa	*	*			
Cherokee	*	*	Lyon	*	*			
Chickasaw	6	8.1	Mitchell	*	*			
Clay	8	7.8	Montgomery	*	*			
Clayton	8	8.2	O'Brien	*	*			
Crawford	9	7.2	Page	6	6.8			
Delaware	*	*	Poweshiek	*	*			
Dickinson	*	*	Sac	6	11.3			
Emmet	6	10.1	Shelby	*	*			
Floyd	7	7.2	Tama	*	*			
Franklin	*	*	Union	7	9.2			
Hamilton	11	12.5	Winnebago	6	10.7			
Hancock	*	*	Wright	*	*			
<b>Total</b>			<b>Total</b>					
<b>Counties with Average Population 10,000 – 20,000</b>			<b>Counties with Average Population 10,000 – 20,000</b>					
Boone	15	9.8	Lee	17	8.4			
Buchanan	14	9.3	Mahaska	11	7.6			
Buena Vista	16	10.8	Marion	17	8.5			
Carroll	10	7.5	Marshall	16	5.5			
Cerro Gordo	22	8.8	Muscatine	18	6.1			
Clinton	31	10.2	Plymouth	8	5.3			
Des Moines	32	12.6	Sioux	30	11.7			
Fayette	9	7.7	Wapello	17	7.2			
Henry	13	10.9	Webster	16	7			
Jackson	11	10.8	Winneshiek	8	8.2			
Jasper	17	8.2	<b>Total</b>					
<b>Counties with Average Population &gt; 20,000</b>			<b>Counties with Average Population &gt; 20,000</b>					
Benton	9	6.2	Linn	104	7.4			
Black Hawk	78	9.1	Madison	6	6.2			
Bremer	7	5.6	Mills	7	8.3			
Dallas	24	4.7	Polk	296	8.9			
Dubuque	51	8.5	Pottawattamie	32	5.1			
Grundy	*	*	Scott	103	9.1			
Guthrie	*	*	Story	34	6.9			
Harrison	*	*	Warren	25	9.4			
Johnson	89	10.3	Washington	8	6			
Jones	*	*	Woodbury	62	7.7			
<b>Total</b>			<b>Total</b>					
<b>MSA Counties</b>			<b>Total</b>					
<b>State Total</b>		1,593	<b>Total</b>					
<b>Crude<sup>1</sup></b>								
8.1								

<sup>1</sup>Rates per 1,000 live births

\* represents a count less than 5

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates

**Infant Deaths 2007-2011**

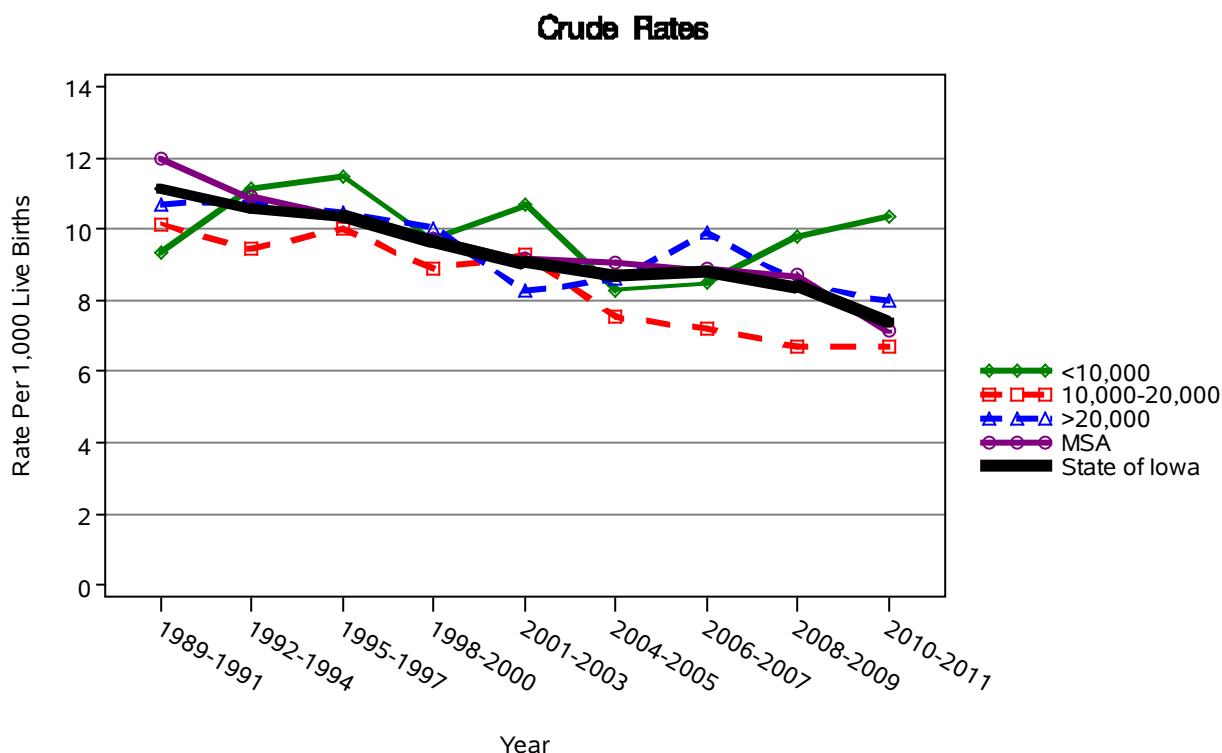
County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Adair	*	*	Lucas	7	12.8
Adams	*	*	Monona	*	*
Audubon	*	*	Monroe	*	*
Clarke	*	*	Osceola	*	*
Davis	*	*	Palo Alto	*	*
Decatur	*	*	Pocahontas	*	*
Fremont	*	*	Ringgold	*	*
Greene	*	*	Taylor	*	*
Howard	*	*	Van Buren	*	*
Humboldt	*	*	Wayne	*	*
Ida	*	*	Worth	*	*
			<b>Total</b>	63	6.3
Allamakee	*	*	Hardin	*	*
Appanoose	*	*	Iowa	*	*
Butler	*	*	Jefferson	*	*
Calhoun	*	*	Keokuk	6	9.8
Cass	*	*	Kossuth	*	*
Cedar	*	*	Louisa	6	9.1
Cherokee	*	*	Lyon	*	*
Chickasaw	*	*	Mitchell	*	*
Clay	*	*	Montgomery	*	*
Clayton	7	7.2	O'Brien	6	7.1
Crawford	8	6.4	Page	*	*
Delaware	*	*	Poweshiek	*	*
Dickinson	*	*	Sac	*	*
Emmet	*	*	Shelby	*	*
Floyd	6	6.1	Tama	*	*
Franklin	*	*	Union	*	*
Hamilton	9	10.3	Winnebago	*	*
Hancock	*	*	Wright	*	*
			<b>Total</b>	136	4.7
Boone	9	5.9	Lee	7	3.5
Buchanan	7	4.7	Mahaska	*	*
Buena Vista	9	6.1	Marion	13	6.5
Carroll	9	6.7	Marshall	6	2.1
Cerro Gordo	14	5.6	Muscatine	8	2.7
Clinton	25	8.2	Plymouth	*	*
Des Moines	13	5.1	Sioux	21	8.2
Fayette	*	*	Wapello	10	4.2
Henry	*	*	Webster	10	4.3
Jackson	*	*	Winneshiek	6	6.2
Jasper	10	4.8	<b>Total</b>	198	4.9
Benton	*	*	Linn	68	4.8
Black Hawk	45	5.3	Madison	*	*
Bremer	*	*	Mills	7	8.3
Dallas	8	1.6	Polk	201	6
Dubuque	29	4.8	Pottawattamie	35	5.6
Grundy	*	*	Scott	60	5.3
Guthrie	*	*	Story	23	4.6
Harrison	*	*	Warren	18	6.8
Johnson	39	4.5	Washington	*	*
Jones	*	*	Woodbury	39	4.9
<b>State Total</b>	998	5.1	<b>Total</b>	601	5.1

<sup>1</sup>Rates per 1,000 live births

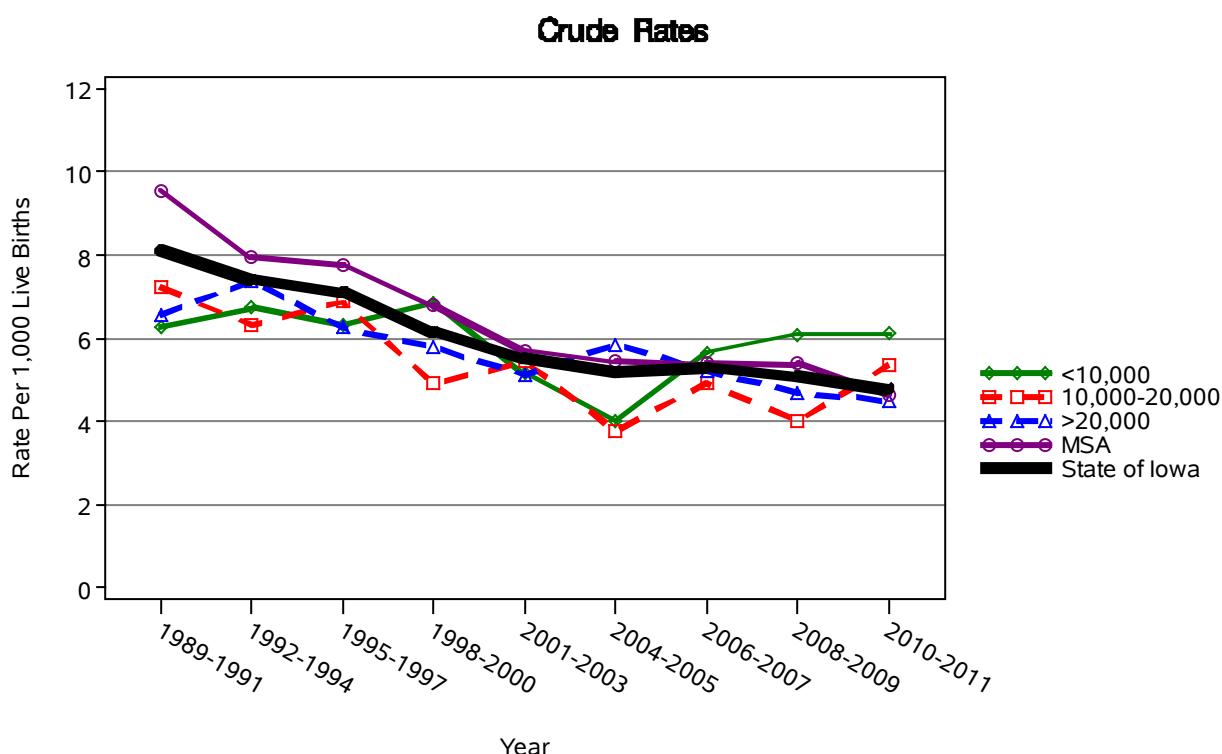
\* represents a count less than 5

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates

## Perinatal Deaths by County Group 1989-2011



## Infant Deaths by County Group 1989-2011

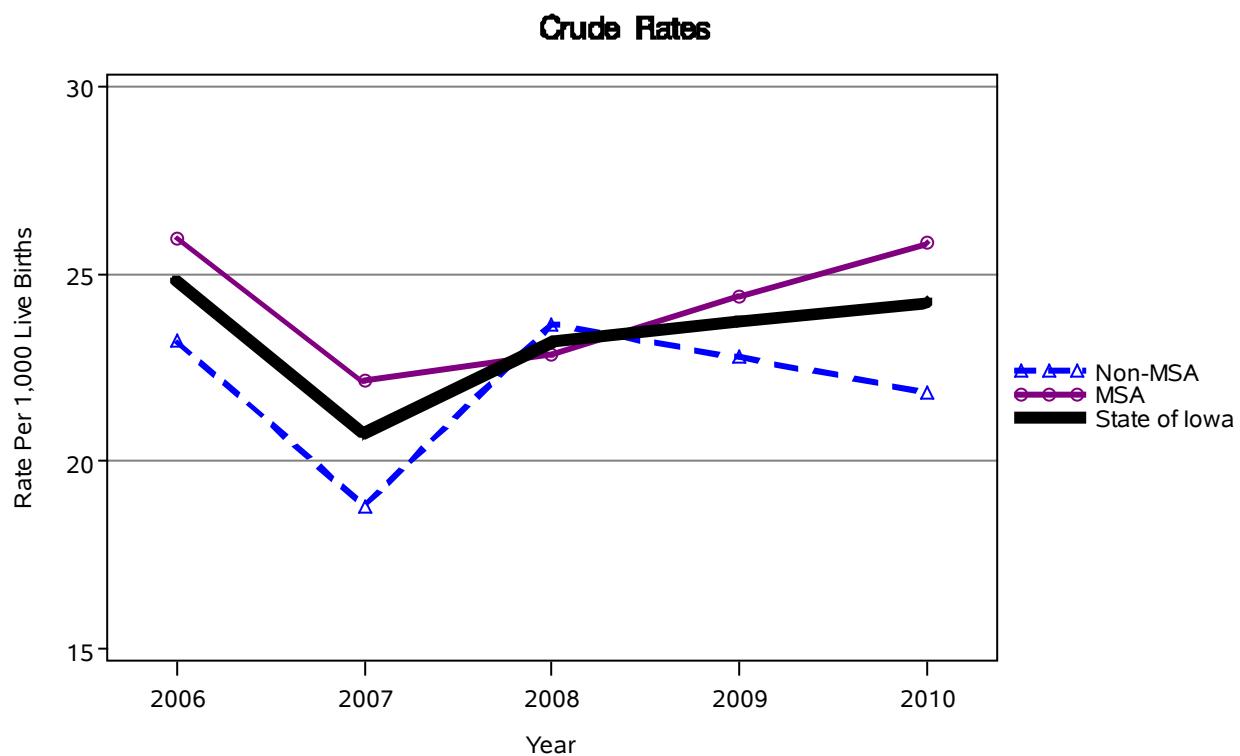


**Congenital and Inherited Disorders 2006-2010**

County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with Average Population < 10,000	Adair	7	17.07	Lucas	18	31.58
	Adams	6	24.59	Monona	8	16.43
	Audubon	6	19.05	Monroe	12	25.75
	Clarke	18	27.07	Osceola	5	14.84
	Davis	11	15.69	Palo Alto	8	14.34
	Decatur	19	36.05	Pocahontas	7	19.02
	Fremont	8	17.70	Ringgold	7	23.33
	Greene	12	22.39	Taylor	6	17.44
	Howard	*	*	Van Buren	9	18.48
	Humboldt	11	19.78	Wayne	8	19.05
	Ida	6	13.02	Worth	8	19.80
			<b>Total</b>	200-204 <sup>2</sup>	19.5-19.9 <sup>2</sup>	
Counties with Average Population 10,000 - 20,000	Allamakee	16	16.77	Hardin	33	33.37
	Appanoose	11	13.84	Iowa	27	27.95
	Buena Vista	27	31.29	Jefferson	22	30.01
	Butler	15	27.68	Keokuk	14	22.80
	Calhoun	16	19.21	Kossuth	16	19.00
	Cass	24	23.30	Louisa	17	24.85
	Cedar	*	*	Lyon	*	*
	Cherokee	17	22.94	Mitchell	9	14.68
	Chickasaw	14	13.58	Montgomery	11	17.74
	Clay	14	13.83	O'Brien	8	9.26
	Clayton	29	23.29	Page	10	11.36
	Crawford	27	26.32	Poweshiek	17	17.32
	Delaware	*	*	Sac	6	11.13
	Dickinson	5	7.84	Shelby	6	9.90
	Emmet	18	18.31	Tama	28	25.76
	Floyd	23	32.95	Union	23	29.41
	Franklin	17	19.17	Winnebago	13	21.67
	Hamilton	18	30.20	Wright	11	13.10
	Hancock	16	16.77	<b>Total</b>	562-574 <sup>2</sup>	19.1-19.5 <sup>2</sup>
Counties with Average Population > 20,000	Boone	28	18.16	Lee	66	31.84
	Buchanan	47	30.30	Mahaska	24	16.11
	Carroll	33	22.95	Marion	61	29.50
	Cerro Gordo	31	22.73	Marshall	77	25.65
	Clinton	77	30.37	Muscatine	63	20.50
	Des Moines	97	31.07	Plymouth	27	17.59
	Fayette	64	24.35	Sioux	29	11.16
	Henry	34	29.04	Wapello	64	26.21
	Jackson	35	29.69	Webster	51	21.59
	Jasper	31	30.04	Winneshiek	22	22.54
			<b>Total</b>	1,009	24.46	
MSA Counties	Benton	41	27.35	Linn	331	23.28
	Black Hawk	273	31.33	Madison	19	18.63
	Bremer	31	23.74	Mills	18	20.62
	Dallas	114	23.16	Polk	837	24.79
	Dubuque	177	29.09	Pottawattamie	94	14.86
	Grundy	23	32.53	Scott	321	28.51
	Guthrie	12	20.87	Story	92	18.48
	Harrison	22	24.42	Warren	65	24.57
	Johnson	205	24.15	Washington	36	25.90
	Jones	16	14.30	Woodbury	153	18.79
			<b>Total</b>	2,880	24.22	
<b>State Total</b>		4,651-4,667 <sup>2</sup>	23.28	-23.36 <sup>2</sup>		

<sup>1</sup>Rates per 1,000 live births<sup>2</sup>Range given to mask small counts

Source: Iowa Registry for Congenital and Inherited Disorders, University of Iowa

**Congenital and Inherited Disorders by County Group 2006-2010**

# Selected Congenital and Inherited Disorders in Iowa 2006-2010

Disorder Name	Cases	Crude Rate <sup>1</sup>
Anencephalus	60	3.00
Spina bifida without anencephalus	92	4.60
Hydrocephalus without spina bifida	233	11.66
Encephalocele	21	1.05
Microcephalus	224	11.21
Anophthalmia/microphthalmia	46	2.30
Congenital Cataract	55	2.75
Anotia/microtia	42	2.10
Common truncus	9	0.45
Transposition of great arteries	66	3.30
Tetralogy of Fallot	72	3.60
Ventricular septal defect	1,095	54.80
Atrial septal defect	598	29.93
Endocardial cushion defect	135	6.76
Pulmonary valve atresia and stenosis	238	11.91
Tricuspid valve atresia and stenosis	51	2.55
Ebsteins's anomaly	19	0.95
Aortic valve stenosis	64	3.20
Hypoplastic left heart syndrome	51	2.55
Patent ductus arteriosus	545	27.27
Coarctation of aorta	108	5.41
Cleft palate without cleft lip	150	7.51
Cleft lip with and without cleft palate	205	10.26
Choanal atresia	37	1.85
Esophageal atresia/tracheoesophageal fistula	42	2.10
Rectal and large intestinal atresia/stenosis	98	4.90
Pyloric stenosis	487	24.37
Hirschsprung's disease (congenital megacolon)	35	1.75
Biliary atresia	9	0.45
Renal agenesis/hypoplasia	141	7.06
Bladder exstrophy	*	*
Obstructive genitourinary defect	578	28.93
Hypospadias 2nd and 3rd degree	232	11.61
Reduction deformity, upper limbs	88	4.40
Reduction deformity, lower limbs	41	2.05
Gastroschisis	102	5.10
Omphalocele	52	2.60
Congenital hip dislocation	104	5.21
Diaphragmatic hernia	22	1.10
Trisomy 13	31	1.55
Down syndrome	298	14.91
Trisomy 18	67	3.35
Amniotic bands	26	1.30

<sup>1</sup>Rates per 10,000 live births

\* Represents a count of less than 5

Source: Iowa Registry for Congenital and Inherited Disorders, The University of Iowa

## Infectious Diseases

Fifty-one specific infectious diseases are listed as reportable conditions in the Iowa Administrative Code 641, Chapter 1, although many other diseases are reportable as rare or unusual diseases. Disease surveillance, consulting, and outbreak management are provided by the Center for Acute Disease Epidemiology. The Bureau of Prevention and Immunization provided education programs and vaccine distribution services. Local public health nurses or disease prevention

specialists, in conjunction with the staff epidemiologists at the Iowa Department of Public Health, interview persons with selected conditions or diseases and conduct investigations of disease outbreaks. Disease prevention steps include promoting vaccinations, partner counseling/referral services for sexually transmitted diseases, and disease

### HIGHLIGHTS...

- IDPH received 1,736 cases of pertussis.
- IDPH received 46 cases of Tuberculosis.
- IDPH followed-up on 622 cases of Salmonella in 2012.

education initiatives.

The number of reported cases of disease in 2012 increased for some diseases and decreased for others.

- Vaccine-preventable disease cases decreased when compared to the previous three-year average (2009-2011).
- Pertussis cases increased significantly. In 2012, there were 1,736 cases of pertussis reported to IDPH, a 344 percent increase over the three-year average of 391 cases.
- Enteric diseases like salmonellosis, shigellosis, E. coli and other shiga-toxin-producing bacterial infections increased when compared to the previous three year average, while campylobacteriosis, giardiasis, and cryptosporidiosis decreased.

# Sexually Transmitted Diseases<sup>1</sup> 2011-2012

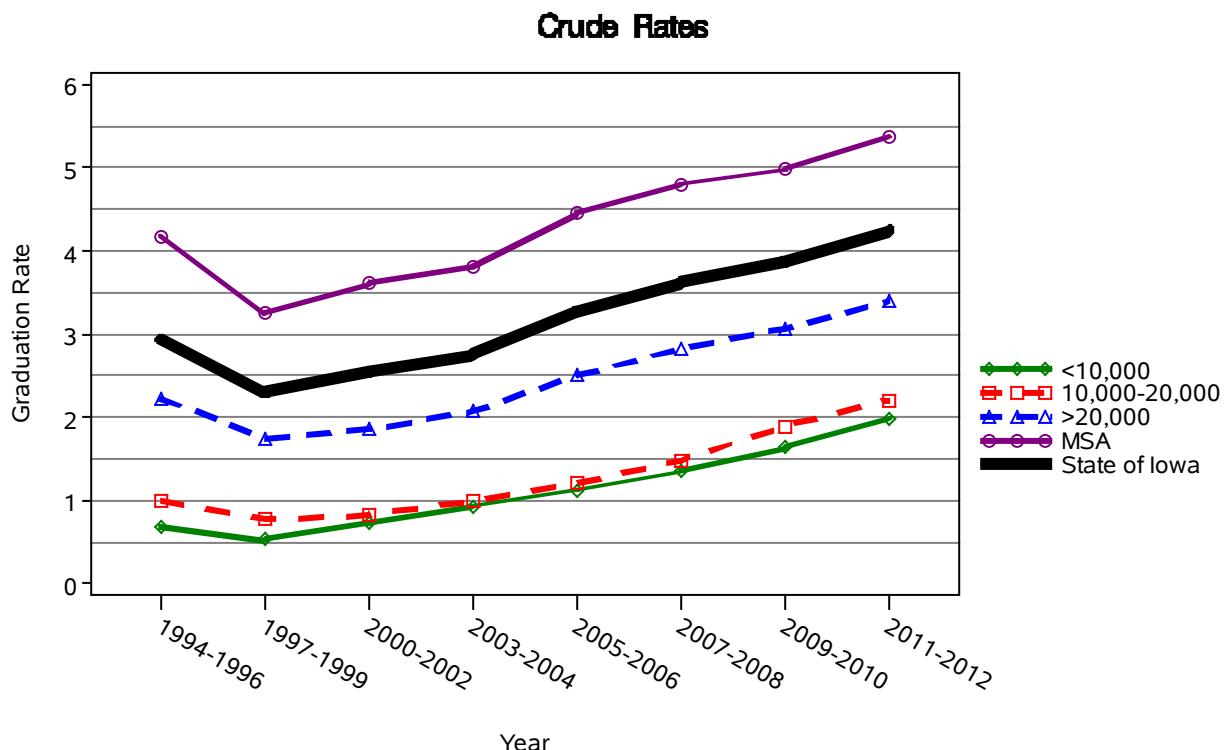
	County	#	Crude Rate <sup>2</sup>		County	#	Crude Rate <sup>2</sup>
<b>Counties with Average Population &lt; 10,000</b>	Adair	19	1.27		Lucas	40	2.27
	Adams	20	2.53		Monona	30	1.63
	Audubon	48	4.02		Monroe	37	2.30
	Clarke	56	2.99		Osceola	10	0.80
	Davis	35	2.00		Palo Alto	25	1.34
	Decatur	61	3.69		Pocahontas	19	1.33
	Fremont	18	1.24		Ringgold	14	1.37
	Greene	63	3.42		Taylor	21	1.68
	Howard	28	1.46		Van Buren	21	1.40
	Humboldt	38	1.95		Wayne	20	1.58
	Ida	28	1.97		Worth	19	1.26
					<b>Total</b>	670	1.99
<b>Counties with Average Population 10,000 - 20,000</b>	Allamakee	43	1.51		Hardin	79	2.27
	Appanoose	55	2.16		Iowa	72	2.21
	Butler	62	2.07		Jefferson	47	1.40
	Calhoun	47	2.41		Keokuk	50	2.41
	Cass	85	3.09		Kossuth	35	1.14
	Cedar	90	2.44		Louisa	72	3.18
	Cherokee	28	1.17		Lyon	22	0.94
	Chickasaw	34	1.38		Mitchell	22	1.02
	Clay	91	2.74		Montgomery	40	1.89
	Clayton	46	1.28		O'Brien	43	1.52
	Crawford	128	3.70		Page	99	3.12
	Delaware	69	1.96		Poweshiek	125	3.33
	Dickinson	46	1.36		Sac	20	0.98
	Emmet	59	2.92		Shelby	39	1.62
	Floyd	96	2.99		Tama	139	3.95
	Franklin	62	2.91		Union	84	3.34
	Hamilton	85	2.75		Winnebago	44	2.06
	Hancock	19	0.85		Wright	48	1.84
					<b>Total</b>	2,225	2.21
<b>Counties with Average Population &gt; 20,000</b>	Boone	123	2.35		Lee	302	4.24
	Buchanan	91	2.17		Mahaska	135	3.00
	Buena Vista	108	2.63		Marion	148	2.22
	Carroll	87	2.10		Marshall	380	4.64
	Cerro Gordo	247	2.82		Muscatine	343	4.00
	Clinton	406	4.15		Plymouth	114	2.29
	Des Moines	493	6.12		Sioux	88	1.29
	Fayette	103	2.47		Wapello	325	4.59
	Henry	138	3.41		Webster	409	5.46
	Jackson	93	2.35		Winneshiek	65	1.54
	Jasper	204	2.79		<b>Total</b>	4,402	3.40
<b>MSA Counties</b>	Benton	106	2.04		Linn	2,582	6.02
	Black Hawk	2,213	8.40		Madison	50	1.59
	Bremer	109	2.24		Mills	63	2.11
	Dallas	306	2.16		Polk	5,223	5.93
	Dubuque	858	4.52		Pottawattamie	868	4.66
	Grundy	58	2.33		Scott	2,354	7.01
	Guthrie	36	1.66		Story	685	3.79
	Harrison	68	2.31		Warren	196	2.09
	Johnson	1,656	6.15		Washington	119	2.72
	Jones	84	2.04		Woodbury	1,167	5.70
					<b>Total</b>	18,801	5.37
<b>State Total</b>		26,098	4.25				

<sup>1</sup>Includes syphilis, gonorrhea, and Chlamydia, but not latent cases (infection > 1 year)

Source: Disease Prevention Program, Iowa Dept. of Public Health

<sup>2</sup>Rates per 1,000 population

# Sexually Transmitted Diseases by County Group 1994-2012



**Selected Infectious Diseases  
State of Iowa  
2004 – 2012**

	Number of Cases Reported									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	
AIDS	70	78	79	68	66	91	73	73	72	
Campylobacteriosis	558	539	449	527	583	559	751	747	534	
Chlamydia	6,958	7,390	8,393	8,643	9,247	9,406	10,542	10,705	11,377	
Cryptosporidiosis	89	122	231	612	284	232	399	364	328	
E. coli	124	108	172	185	222	179	178	202	191	
Giardiasis	301	283	302	302	322	299	284	271	251	
Gonorrhea	1,249	1,606	1,967	1,928	1,600	1,658	1,803	1,920	2,006	
Hepatitis A	50	22	13	48	109	37	11	8	7	
HIV	105	113	108	124	101	125	115	119	120	
Measles	3					1		1		
Mumps	2	6	1,964	26	24	15	38	8	6	
Pertussis	1,066	1,106	345	152	255	239	705	232	1,736	
Rubella										
Salmonella	433	413	475	478	425	410	530	448	622	
Shigellosis	69	99	141	109	210	58	57	18	91	
Syphilis (primary or secondary)	5	15	19	21	15	23	19	20	70	
Tuberculosis	47	55	36	43	49	42	48	40	46	

Source: Bureau of Infectious Diseases, Iowa Department of Public Health

## Cancer Incidence and Mortality

From 2006 through 2010, cancer was the second leading cause of death in Iowa with 31,766 Iowans dying from cancer, which accounted for 23% of all deaths. During this period, 83,196 Iowans were newly diagnosed with some type of invasive cancer. Although cancer occurs in people of all ages, 80 percent of these new cancers were diagnosed in those 55 years of age and older.

For all cancer mortality, the age-adjusted rates by time period increased slightly as the average population increased across the five time periods spanning 1976 through 1992. For the 1993-2010 periods, however, these rates began to decrease, with the largest decrease seen in 2006-2010. Between 2006 and 2010, the age-adjusted mortality rates were higher in the more densely populated county groups, however, the crude rates were higher in counties with average populations < 10,000. This reflects a larger proportion of older people in the smaller, more rural counties. (See tables and graphs in Demographics).

### FOUR PRIMARY TYPES

#### OF CANCER IN IOWA ...

- Lung
- Female Breast
- Prostate
- Colorectum

### MOST COMMON CANCERS IN IOWA

#### **Females**

- Breast
- Lung
- Colorectum

#### **Males**

- Prostate
- Lung
- Colorectum

#### **Children (0-19)**

- Leukemia
- Brain and other central nervous system
- Lymphoma

Since the 1990s, the U.S. and Iowa have experienced a decline in age-adjusted cancer mortality rates led by reductions in prostate, female breast, and colorectal cancer mortality rates. Today, less than half of Iowans newly diagnosed with a cancer will die from it. Survival rates, however, vary considerably by cancer site.

For all cancer incidences, the age-adjusted rates by time periods increased from 1976 through 2001, but have leveled off since. Over time, these rates vary by cancer site and show the steepest increases for non-Hodgkin lymphoma and skin melanoma. Between 2006 and 2010, the age-adjusted rates showed increasing incidence rates with county groupings of increasing population density, however, the crude rates showed the opposite trend, again reflecting the larger proportion of older people residing in smaller, rural counties, as cancer occurs most frequently in older people.

Tobacco use is the leading modifiable risk factor for cancer, and is associated with cancers of the lung, oral cavity (excluding lip) and pharynx, esophagus, larynx, pancreas, stomach, uterine cervix, urinary bladder, kidney and renal pelvis, and acute myelogenous leukemia. Alcohol consumption is also a known risk factor, particularly for cancers of the upper aerodigestive tract including oral cavity

(excluding lip) and pharynx, esophagus, and larynx. Ongoing research indicates that dietary factors may play an important role in the occurrence of cancers of the prostate and colorectum. Other important risk factors include obesity for cancers of the uterine corpus and kidney, excessive sunlight exposure for skin melanoma, and genetic predisposition (or positive family history) for colorectal, prostate, and breast cancers.

Screening and early detection are one way Iowans can survive cancer, particularly for colorectal, female breast and cervical cancers. Vaccines can also prevent some types of cancer, most notably liver, anogenital, and likely oropharyngeal cancers.

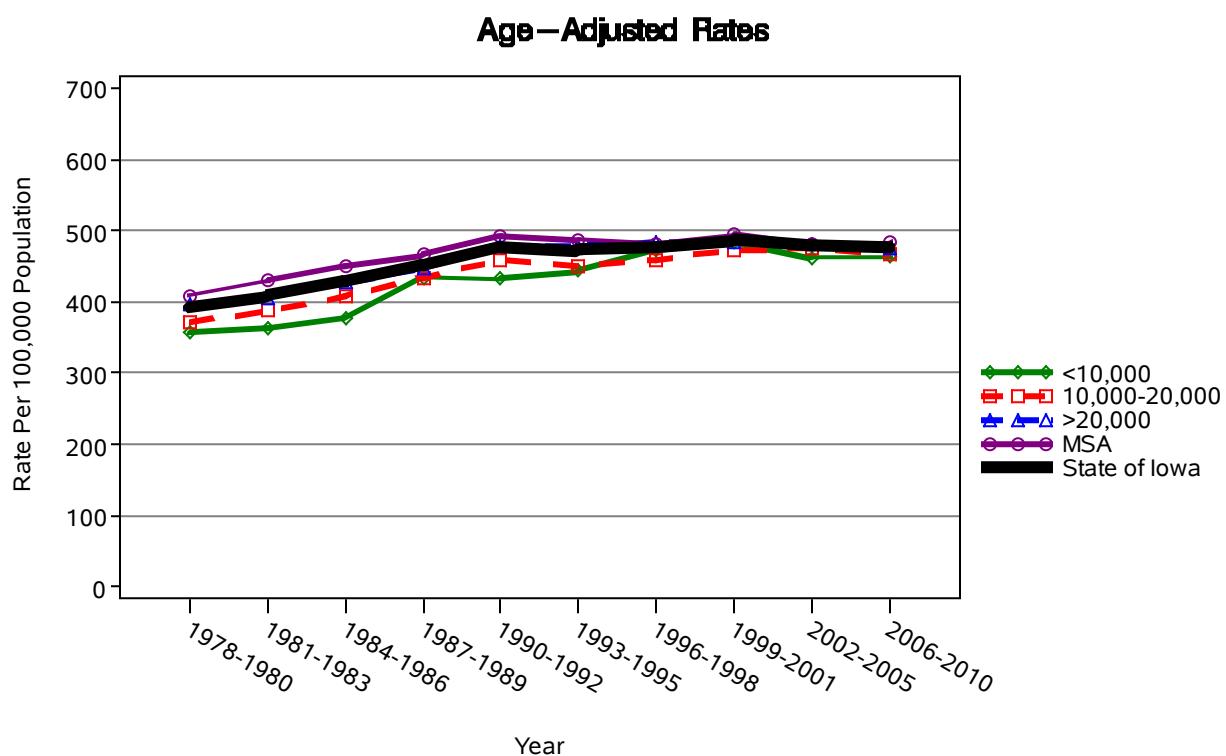
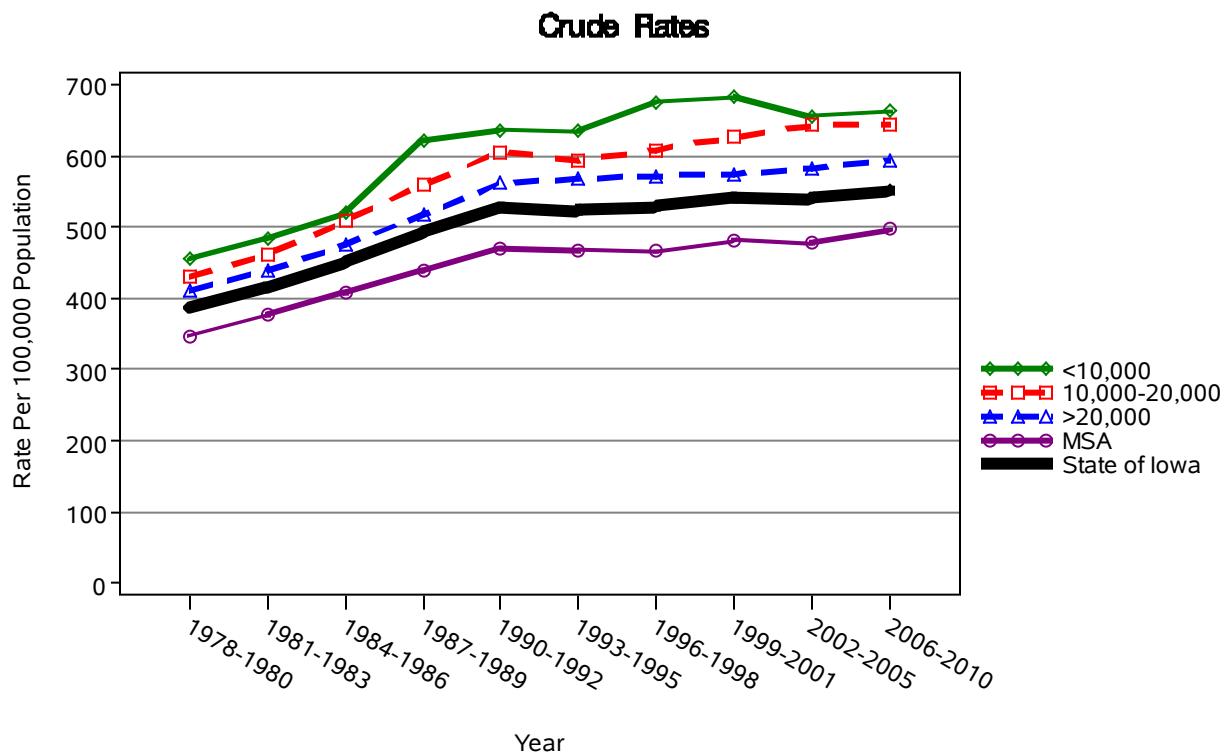
The State Health Registry of Iowa has been recording the occurrence of cancer in Iowa since 1973. It receives mortality data from the Iowa Department of Public Health (IDPH). The Registry's incidence and IDPH's mortality databases have been used to generate the cancer incidence and cancer mortality statistics provided in this section of the 2013 Iowa Health Fact Book via a software program called SEER\*Stat (version 8.0.4), which is provided by the National Cancer Institute.

## All Cancer Incidence 2006-2010

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )		County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	269	691.6 (19)	463.0 (59)		Lucas	264	579.1 (67)	403.9 (98)
	Adams	151	731.4 (09)	493.4 (21)		Monona	354	757.4 (05)	481.0 (37)
	Audubon	234	756.4 (06)	484.3 (32)		Monroe	256	646.5 (39)	485.2 (30)
	Clarke	267	579.3 (66)	445.3 (78)		Osceola	195	592.9 (58)	430.3 (88)
	Davis	223	513.3 (93)	414.2 (94)		Palo Alto	347	729.7 (10)	505.5 (12)
	Decatur	249	585.3 (63)	442.8 (80)		Pocahontas	267	711.1 (15)	471.6 (49)
	Fremont	276	733.3 (08)	518.4 (05)		Ringgold	179	692.4 (18)	422.1 (93)
	Greene	342	724.0 (12)	485.5 (29)		Taylor	229	715.2 (13)	480.2 (39)
	Howard	297	618.1 (47)	465.6 (56)		Van Buren	248	648.6 (37)	462.7 (62)
	Humboldt	297	599.6 (55)	409.4 (95)		Wayne	217	677.5 (26)	440.5 (81)
	Ida	280	780.9 (03)	537.2 (02)		Worth	232	608.4 (52)	455.2 (69)
						<b>Total</b>	5,673	661.9	462.8
Counties with Average Population 10,000 - 20,000	Allamakee	473	660.2 (31)	484.8 (31)		Hardin	601	679.5 (23)	481.3 (36)
	Appanoose	512	785.8 (01)	554.6 (01)		Iowa	531	649.3 (36)	507.5 (09)
	Butler	477	640.6 (41)	447.4 (77)		Jefferson	455	546.9 (80)	436.2 (85)
	Calhoun	373	757.6 (04)	483.7 (34)		Keokuk	316	595.4 (57)	433.7 (86)
	Cass	468	670.1 (28)	447.6 (75)		Kossuth	552	700.9 (17)	473.9 (45)
	Cedar	563	611.5 (51)	484.1 (33)		Louisa	336	575.2 (70)	496.5 (18)
	Cherokee	384	635.3 (44)	408.9 (96)		Lyon	363	627.7 (46)	500.3 (14)
	Chickasaw	424	678.4 (25)	497.3 (16)		Mitchell	367	679.3 (24)	462.8 (61)
	Clay	545	652.0 (35)	478.6 (40)		Montgomery	362	664.2 (30)	461.1 (64)
	Clayton	559	614.2 (50)	440.2 (82)		O'Brien	474	657.3 (32)	447.8 (74)
	Crawford	490	578.0 (68)	463.9 (57)		Page	591	734.3 (07)	517.5 (06)
	Delaware	518	580.0 (65)	468.0 (54)		Poweshiek	516	542.7 (83)	408.2 (97)
	Dickinson	653	783.6 (02)	507.7 (08)		Sac	373	711.8 (14)	463.3 (58)
	Emmet	304	585.2 (64)	424.6 (91)		Shelby	399	647.2 (38)	443.7 (79)
	Floyd	566	690.5 (20)	495.2 (19)		Tama	575	640.5 (42)	483.5 (35)
	Franklin	349	652.4 (33)	470.6 (53)		Union	356	573.9 (71)	431.8 (87)
	Hamilton	470	592.1 (59)	452.0 (71)		Winnebago	296	540.1 (85)	402.5 (99)
	Hancock	363	631.1 (45)	459.6 (67)		Wright	461	689.0 (21)	468.0 (54)
						<b>Total</b>	16,415	644.5	466.9
Counties with Average Population > 20,000	Boone	714	540.4 (84)	436.4 (84)		Lee	1,154	641.3 (40)	489.7 (23)
	Buchanan	576	547.8 (78)	463.0 (59)		Mahaska	642	573.6 (73)	471.4 (51)
	Buena Vista	535	535.6 (87)	452.0 (71)		Marion	926	554.8 (76)	474.0 (44)
	Carroll	594	571.1 (74)	428.1 (89)		Marshall	1,180	588.2 (62)	471.6 (49)
	Cerro Gordo	1,508	680.4 (22)	504.4 (13)		Muscatine	1,111	522.8 (90)	471.0 (52)
	Clinton	1,521	617.3 (49)	490.5 (22)		Plymouth	735	589.6 (61)	475.9 (42)
	Des Moines	1,313	652.3 (34)	495.1 (20)		Sioux	784	469.7 (95)	427.6 (90)
	Fayette	672	640.1 (43)	460.6 (65)		Wapello	1,098	617.8 (48)	496.9 (17)
	Henry	598	590.2 (60)	488.2 (26)		Webster	1,147	599.3 (56)	480.4 (38)
	Jackson	674	675.9 (27)	509.5 (07)		Winneshiek	606	576.3 (69)	473.3 (47)
	Jasper	1,111	599.7 (54)	474.4 (43)		<b>Total</b>	19,199	592.7	476.1
MSA Counties	Benton	688	527.2 (88)	447.5 (76)		Linn	5,228	503.2 (94)	477.4 (41)
	Black Hawk	3,522	545.0 (82)	499.0 (15)		Madison	408	526.9 (89)	462.3 (63)
	Bremer	662	547.4 (79)	437.7 (83)		Mills	407	537.1 (86)	456.5 (68)
	Dallas	1,238	401.1 (97)	452.4 (70)		Polk	9,689	462.2 (96)	487.1 (28)
	Dubuque	2,635	569.4 (75)	488.7 (25)		Pottawattamie	2,637	573.7 (72)	507.1 (10)
	Grundy	450	725.7 (11)	532.0 (04)		Scott	4,428	546.1 (81)	505.9 (11)
	Guthrie	368	666.6 (29)	459.9 (66)		Story	1,630	372.2 (99)	450.6 (73)
	Harrison	532	705.9 (16)	536.3 (03)		Warren	1,181	520.9 (91)	487.4 (27)
	Johnson	2,365	372.5 (98)	473.6 (46)		Washington	658	608.4 (52)	473.0 (48)
	Jones	571	551.3 (77)	423.5 (92)		Woodbury	2,612	516.2 (92)	489.2 (24)
						<b>Total</b>	41,909	496.7	483.6
	<b>State Total</b>	83,196	551.6	476.4					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

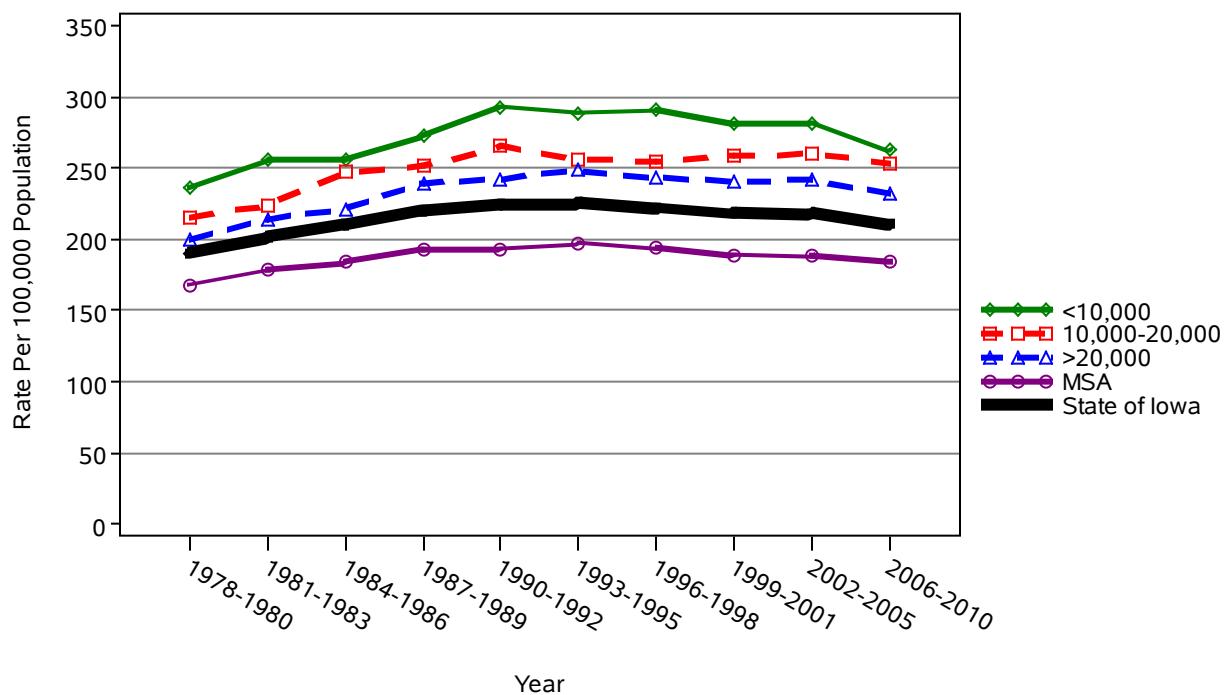
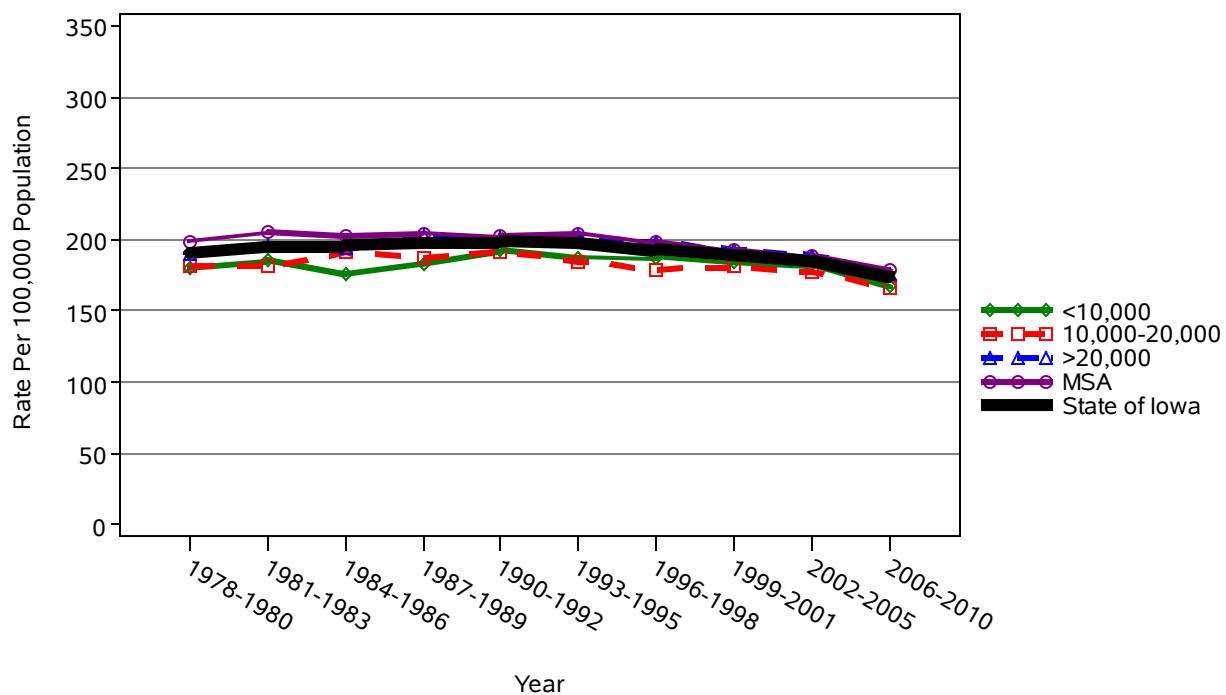
**All Cancer Incidence by County Group 1978-2010**

# All Cancer Mortality 2006-2010

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )		County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	122	313.7 (03)	198.1 (05)		Lucas	133	291.7 (15)	186.8 (17)
	Adams	55	266.4 (30)	158.4 (71)		Monona	133	284.6 (18)	154.0 (82)
	Audubon	89	287.7 (16)	168.2 (54)		Monroe	104	262.6 (32)	183.7 (23)
	Clarke	102	221.3 (68)	161.6 (65)		Osceola	83	252.4 (39)	171.1 (49)
	Davis	76	174.9 (95)	136.5 (95)		Palo Alto	131	275.5 (23)	160.7 (66)
	Decatur	114	268.0 (26)	189.6 (13)		Pocahontas	105	279.6 (19)	156.1 (75)
	Fremont	94	249.8 (43)	167.7 (55)		Ringgold	83	321.1 (02)	178.0 (37)
	Greene	138	292.1 (13)	181.1 (30)		Taylor	95	296.7 (09)	176.2 (41)
	Howard	105	218.5 (71)	145.6 (91)		Van Buren	116	303.4 (06)	206.6 (03)
	Humboldt	103	207.9 (79)	128.7 (99)		Wayne	96	299.7 (07)	182.2 (26)
	Ida	96	267.7 (27)	156.5 (74)		Worth	83	217.7 (72)	156.7 (73)
						<b>Total</b>	2,256	263.2	167.1
Counties with Average Population 10,000 – 20,000	Allamakee	170	237.3 (51)	160.3 (67)		Hardin	260	294.0 (11)	183.3 (24)
	Appanoose	218	334.6 (01)	215.1 (01)		Iowa	210	256.8 (36)	185.5 (18)
	Butler	190	255.2 (37)	163.3 (62)		Jefferson	163	195.9 (88)	150.8 (87)
	Calhoun	152	308.7 (05)	167.5 (56)		Keokuk	109	205.4 (80)	134.6 (97)
	Cass	219	313.6 (04)	197.9 (06)		Kossuth	210	266.6 (29)	155.8 (76)
	Cedar	198	215.1 (74)	158.3 (72)		Louisa	143	244.8 (48)	208.9 (02)
	Cherokee	173	286.2 (17)	170.3 (50)		Lyon	123	212.7 (75)	154.1 (81)
	Chickasaw	141	225.6 (65)	153.2 (83)		Mitchell	124	229.5 (60)	137.1 (94)
	Clay	225	269.2 (25)	177.8 (40)		Montgomery	135	247.7 (45)	165.2 (60)
	Clayton	228	250.5 (42)	166.5 (58)		O'Brien	212	294.0 (11)	184.3 (22)
	Crawford	192	226.5 (62)	171.6 (48)		Page	239	296.9 (08)	189.3 (14)
	Delaware	176	197.0 (85)	148.9 (89)		Poweshiek	221	232.4 (56)	158.9 (70)
	Dickinson	230	276.0 (21)	164.6 (61)		Sac	153	292.0 (14)	166.1 (59)
	Emmet	132	254.1 (38)	168.9 (53)		Shelby	152	246.5 (46)	147.1 (90)
	Floyd	194	236.7 (53)	154.6 (80)		Tama	240	267.3 (28)	181.5 (28)
	Franklin	125	233.7 (55)	149.1 (88)		Union	168	270.8 (24)	194.7 (09)
	Hamilton	176	221.7 (67)	152.4 (86)		Winnebago	124	226.2 (63)	155.7 (78)
	Hancock	118	205.1 (81)	138.7 (93)		<b>Total</b>	6,440	252.9	166.6
Counties with Average Population > 20,000	Boone	307	232.4 (56)	181.5 (28)		Lee	438	243.4 (49)	181.1 (30)
	Buchanan	244	232.1 (58)	187.3 (16)		Mahaska	256	228.7 (61)	178.8 (35)
	Buena Vista	201	201.2 (83)	155.8 (76)		Marion	369	221.1 (69)	178.3 (36)
	Carroll	272	261.5 (33)	175.0 (43)		Marshall	475	236.8 (52)	180.7 (32)
	Cerro Gordo	556	250.9 (41)	177.9 (39)		Muscatine	417	196.2 (87)	175.9 (42)
	Clinton	606	245.9 (47)	185.4 (19)		Plymouth	260	208.6 (78)	153.1 (84)
	Des Moines	507	251.9 (40)	180.5 (33)		Sioux	271	162.4 (96)	136.0 (96)
	Fayette	290	276.2 (20)	184.9 (21)		Wapello	443	249.3 (44)	193.1 (11)
	Henry	220	217.1 (73)	171.7 (47)		Webster	451	235.6 (54)	178.0 (37)
	Jackson	241	241.7 (50)	172.8 (44)		Winneshiek	190	180.7 (92)	132.3 (98)
	Jasper	488	263.4 (31)	198.8 (04)		<b>Total</b>	7,502	231.6	176.0
MSA Counties	Benton	261	200.0 (84)	162.8 (63)		Linn	1,870	180.0 (93)	169.0 (52)
	Black Hawk	1,353	209.4 (77)	185.0 (20)		Madison	175	226.0 (64)	194.4 (10)
	Bremer	234	193.5 (91)	140.1 (92)		Mills	147	194.0 (90)	166.9 (57)
	Dallas	401	129.9 (98)	152.5 (85)		Polk	3,696	176.3 (94)	190.1 (12)
	Dubuque	1,023	221.1 (69)	179.8 (34)		Pottawattamie	1,024	222.8 (66)	195.0 (08)
	Grundy	161	259.6 (35)	172.5 (45)		Scott	1,597	197.0 (85)	182.1 (27)
	Guthrie	144	260.9 (34)	169.7 (51)		Story	579	132.2 (97)	159.4 (69)
	Harrison	208	276.0 (21)	197.6 (07)		Warren	444	195.8 (89)	183.2 (25)
	Johnson	751	118.3 (99)	159.5 (68)		Washington	250	231.2 (59)	161.9 (64)
	Jones	220	212.4 (76)	155.3 (79)		Woodbury	1,030	203.6 (82)	188.1 (15)
	<b>State Total</b>	31,766	210.6	174.3		<b>Total</b>	15,568	184.5	178.4

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

**All Cancer Mortality by County Group 1978-2010****Crude Rates****Age-Adjusted Rates**

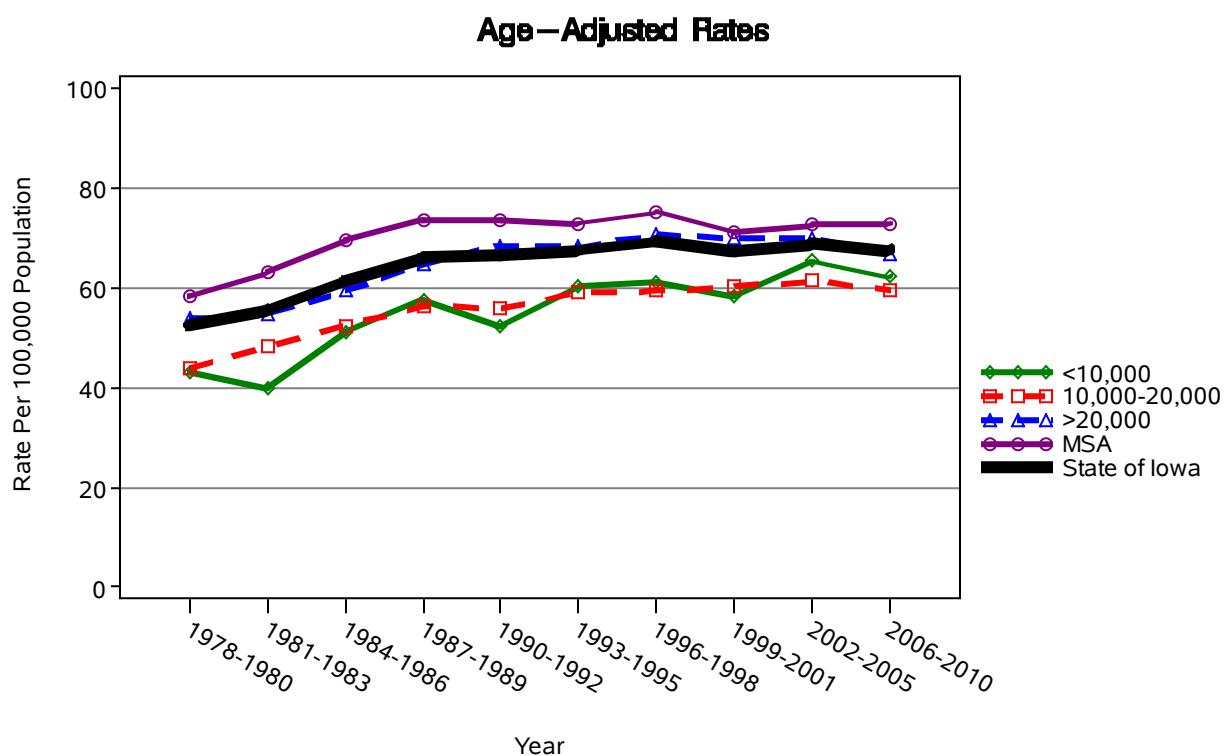
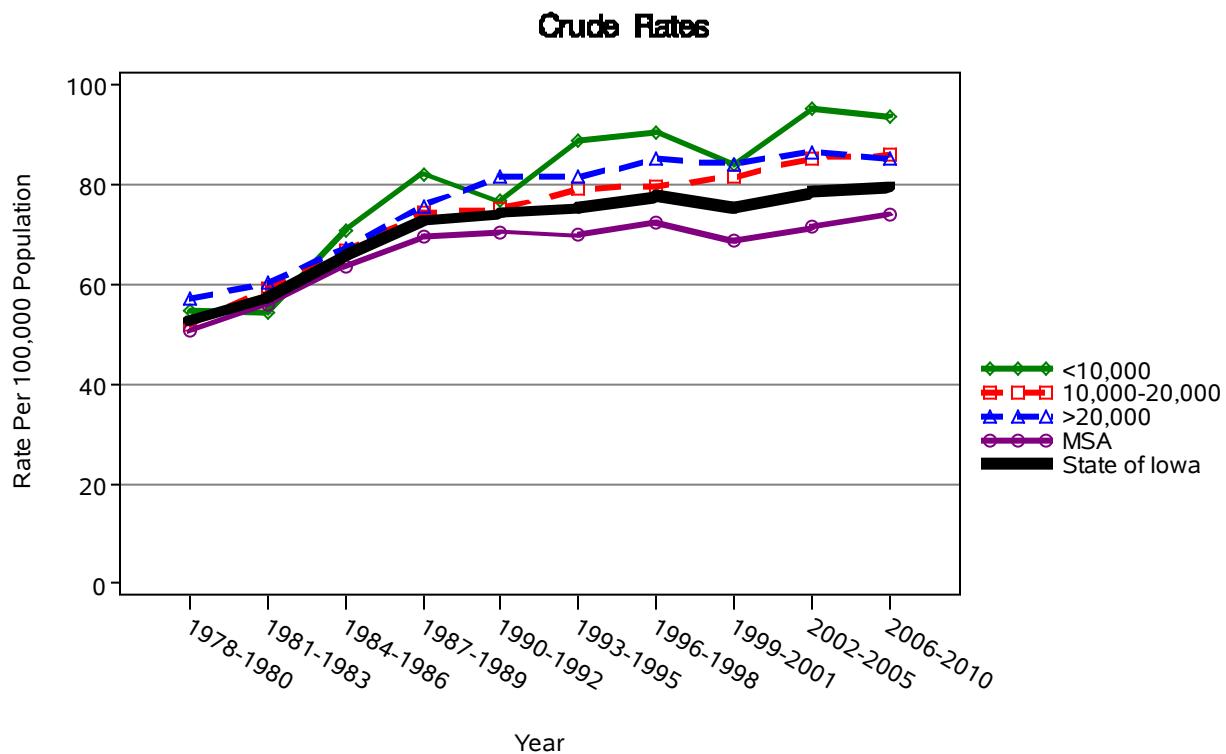
## Lung Cancer Incidence 2006-2010

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )		County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
<b>Counties with Average Population &lt; 10,000</b>	Adair	40	102.8 (20)	66.4 (35)		Lucas	41	89.9 (36)	61.7 (55)
	Adams	18	87.2 (46)	59.7 (60)		Monona	46	98.4 (23)	59.4 (63)
	Audubon	35	113.1 (10)	67.6 (32)		Monroe	51	128.8 (01)	87.0 (02)
	Clarke	40	86.8 (51)	65.9 (36)		Osceola	24	73.0 (79)	51.6 (81)
	Davis	21	48.3 (95)	39.9 (98)		Palo Alto	51	107.2 (12)	67.3 (33)
	Decatur	37	87.0 (48)	63.9 (44)		Pocahontas	35	93.2 (29)	58.7 (66)
	Fremont	45	119.6 (04)	80.3 (11)		Ringgold	27	104.4 (17)	59.7 (60)
	Greene	55	116.4 (06)	73.6 (18)		Taylor	32	99.9 (21)	62.7 (53)
	Howard	32	66.6 (85)	43.9 (94)		Van Buren	40	104.6 (16)	68.1 (30)
	Humboldt	47	94.9 (25)	59.8 (59)		Wayne	41	128.0 (02)	83.5 (06)
	Ida	23	64.1 (88)	42.2 (97)		Worth	22	57.7 (92)	42.6 (96)
						<b>Total</b>	803	93.7	62.4
<b>Counties with Average Population 10,000 – 20,000</b>	Allamakee	53	74.0 (75)	52.7 (77)		Hardin	78	88.2 (45)	58.9 (65)
	Appanoose	82	125.9 (03)	85.6 (04)		Iowa	67	81.9 (57)	61.3 (56)
	Butler	60	80.6 (59)	53.9 (74)		Jefferson	59	70.9 (81)	59.0 (64)
	Calhoun	53	107.6 (11)	61.1 (57)		Keokuk	45	84.8 (53)	58.0 (67)
	Cass	74	106.0 (13)	69.5 (26)		Kossuth	74	94.0 (26)	60.8 (58)
	Cedar	74	80.4 (60)	62.9 (50)		Louisa	52	89.0 (41)	75.5 (17)
	Cherokee	46	76.1 (70)	45.8 (90)		Lyon	38	65.7 (87)	51.6 (81)
	Chickasaw	48	76.8 (67)	51.7 (80)		Mitchell	42	77.7 (64)	47.3 (88)
	Clay	75	89.7 (39)	63.7 (46)		Montgomery	49	89.9 (36)	62.2 (54)
	Clayton	69	75.8 (71)	52.0 (79)		O'Brien	53	73.5 (78)	50.2 (85)
	Crawford	59	69.6 (83)	53.9 (74)		Page	96	119.3 (05)	81.6 (08)
	Delaware	80	89.6 (40)	68.8 (28)		Poweshiek	59	62.1 (90)	44.8 (92)
	Dickinson	72	86.4 (52)	52.6 (78)		Sac	42	80.1 (61)	48.3 (87)
	Emmet	55	105.9 (14)	72.7 (22)		Shelby	42	68.1 (84)	45.1 (91)
	Floyd	74	90.3 (35)	64.1 (43)		Tama	87	96.9 (24)	72.1 (24)
	Franklin	41	76.6 (68)	51.4 (83)		Union	55	88.7 (43)	65.5 (37)
	Hamilton	69	86.9 (49)	63.4 (47)		Winnebago	41	74.8 (72)	54.1 (73)
	Hancock	47	81.7 (58)	56.3 (70)		<b>Total</b>	2,186	85.8	59.6
<b>Counties with Average Population &gt; 20,000</b>	Boone	122	92.3 (30)	72.9 (20)		Lee	164	91.1 (32)	68.6 (29)
	Buchanan	81	77.0 (66)	64.9 (38)		Mahaska	105	93.8 (27)	75.8 (15)
	Buena Vista	47	47.1 (96)	42.8 (95)		Marion	106	63.5 (89)	53.4 (76)
	Carroll	92	88.4 (44)	62.8 (52)		Marshall	165	82.2 (54)	62.9 (50)
	Cerro Gordo	202	91.1 (32)	64.2 (42)		Muscatine	157	73.9 (76)	66.9 (34)
	Clinton	226	91.7 (31)	69.4 (27)		Plymouth	89	71.4 (80)	55.8 (71)
	Des Moines	230	114.3 (08)	84.3 (05)		Sioux	70	41.9 (98)	37.4 (99)
	Fayette	98	93.3 (28)	63.1 (48)		Wapello	175	98.5 (22)	78.8 (13)
	Henry	91	89.8 (38)	73.3 (19)		Webster	197	102.9 (19)	80.3 (11)
	Jackson	87	87.2 (46)	63.0 (49)		Winneshiek	59	56.1 (93)	44.1 (93)
	Jasper	194	104.7 (15)	80.7 (10)		<b>Total</b>	2,757	85.1	66.6
<b>MSA Counties</b>	Benton	92	70.5 (82)	59.5 (62)		Linn	792	76.2 (69)	72.7 (22)
	Black Hawk	584	90.4 (34)	82.1 (07)		Madison	60	77.5 (65)	67.7 (31)
	Bremer	74	61.2 (91)	46.9 (89)		Mills	56	73.9 (76)	63.9 (44)
	Dallas	164	53.1 (94)	64.8 (39)		Polk	1,564	74.6 (73)	81.3 (09)
	Dubuque	363	78.4 (63)	64.8 (39)		Pottawattamie	478	104.0 (18)	92.1 (01)
	Grundy	51	82.2 (54)	55.7 (72)		Scott	665	82.0 (56)	76.8 (14)
	Guthrie	49	88.8 (42)	57.9 (68)		Story	202	46.1 (97)	57.1 (69)
	Harrison	87	115.4 (07)	86.3 (03)		Warren	168	74.1 (74)	69.6 (25)
	Johnson	227	35.7 (99)	50.7 (84)		Washington	72	66.6 (85)	49.4 (86)
	Jones	90	86.9 (49)	64.3 (41)		Woodbury	404	79.8 (62)	75.7 (16)
						<b>Total</b>	6,242	74.0	72.8
	<b>State Total</b>	11,988	79.5	67.6					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Lung Cancer Incidence by County Group 1978-2010



# Lung Cancer Mortality 2006-2010

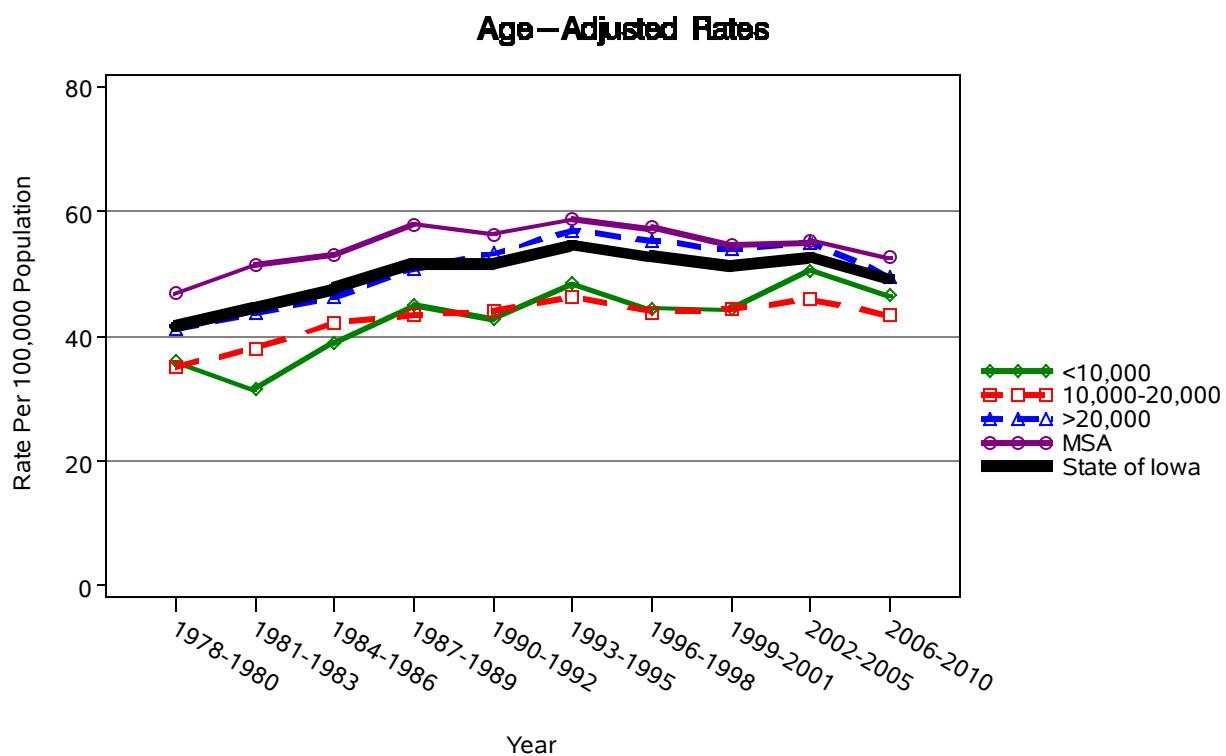
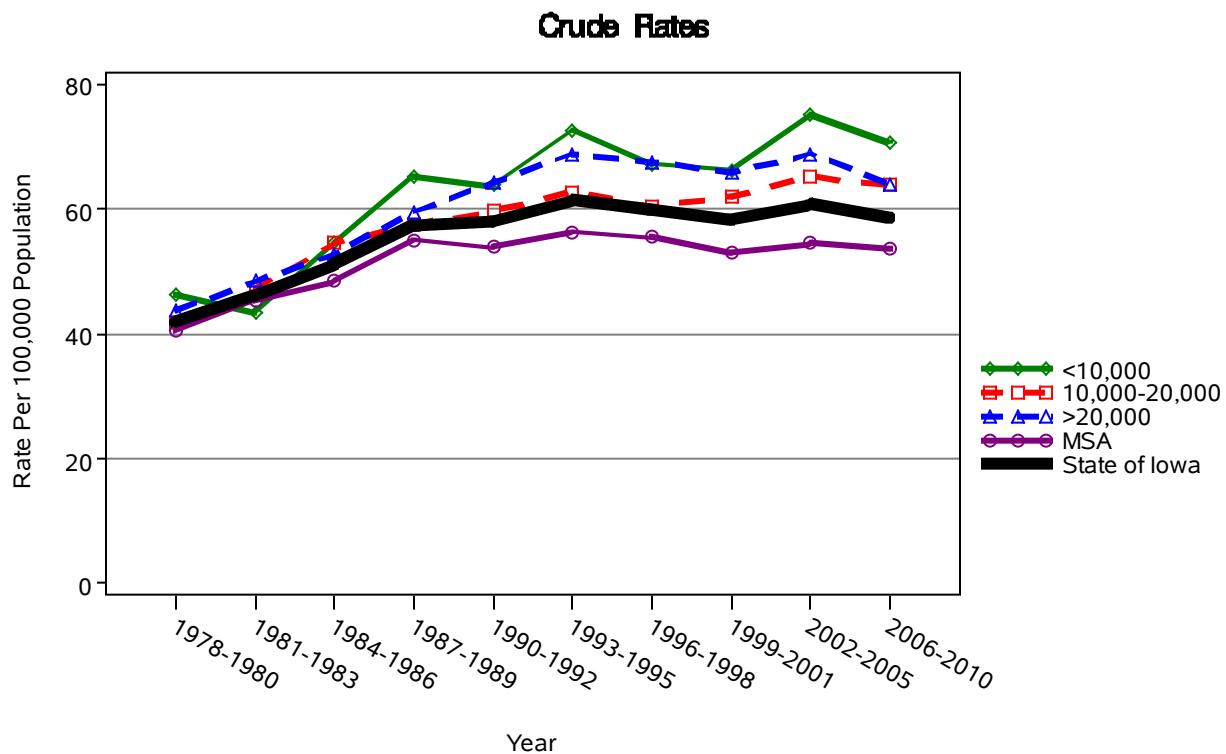
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	28	72.0	46.6	Lucas	38	83.3	55.9
	Adams	*	*	*	Monona	25	53.5	31.3
	Audubon	26	84.0	50.4	Monroe	38	96.0	65.2
	Clarke	26	56.4	41.2	Osceola	24	73.0	50.0
	Davis	15	34.5	29.2	Palo Alto	32	67.3	42.1
	Decatur	30	70.5	51.1	Pocahontas	25	66.6	40.5
	Fremont	33	87.7	61.8	Ringgold	26	100.6	57.3
	Greene	49	103.7	65.3	Taylor	23	71.8	43.5
	Howard	23	47.9	30.6	Van Buren	38	99.4	66.0
	Humboldt	36	72.7	48.2	Wayne	24	74.9	45.5
	Ida	18	50.2	31.5	Worth	21	55.1	39.7
					<b>Total</b>	607	70.8	46.5
Counties with Average Population 10,000 – 20,000	Allamakee	50	69.8	46.9	Hardin	70	79.1	53.1
	Appanoose	63	96.7	66.1	Iowa	45	55.0	41.7
	Butler	50	67.2	44.1	Jefferson	39	46.9	39.0
	Calhoun	44	89.4	48.7	Keokuk	39	73.5	49.2
	Cass	54	77.3	50.0	Kossuth	53	67.3	41.1
	Cedar	54	58.7	44.6	Louisa	42	71.9	60.8
	Cherokee	38	62.9	36.8	Lyon	28	48.4	38.2
	Chickasaw	36	57.6	36.6	Mitchell	22	40.7	23.7
	Clay	65	77.8	51.9	Montgomery	38	69.7	48.1
	Clayton	44	48.3	32.7	O'Brien	45	62.4	41.6
	Crawford	38	44.8	34.7	Page	57	70.8	47.3
	Delaware	43	48.1	35.9	Poweshiek	47	49.4	34.3
	Dickinson	51	61.2	37.2	Sac	30	57.2	33.4
	Emmet	40	77.0	51.8	Shelby	35	56.8	37.0
	Floyd	58	70.8	48.6	Tama	51	56.8	41.5
	Franklin	27	50.5	33.6	Union	53	85.4	62.7
	Hamilton	52	65.5	48.4	Winnebago	39	71.2	49.4
	Hancock	35	60.8	40.3	Wright	51	76.2	47.7
					<b>Total</b>	1,626	63.8	43.3
Counties with Average Population > 20,000	Boone	85	64.3	49.4	Lee	121	67.2	50.7
	Buchanan	57	54.2	44.3	Mahaska	80	71.5	59.3
	Buena Vista	43	43.0	38.3	Marion	94	56.3	46.9
	Carroll	67	64.4	44.4	Marshall	131	65.3	50.4
	Cerro Gordo	147	66.3	46.8	Muscatine	122	57.4	51.6
	Clinton	171	69.4	52.2	Plymouth	67	53.7	40.0
	Des Moines	159	79.0	56.9	Sioux	56	33.6	28.9
	Fayette	79	75.3	50.3	Wapello	142	79.9	64.4
	Henry	64	63.2	51.0	Webster	135	70.5	54.7
	Jackson	48	48.1	34.8	Winneshiek	38	36.1	28.4
	Jasper	167	90.1	68.1	<b>Total</b>	2,073	64.0	49.5
MSA Counties	Benton	78	59.8	49.1	Linn	545	52.5	50.0
	Black Hawk	424	65.6	58.5	Madison	44	56.8	49.8
	Bremer	53	43.8	33.4	Mills	39	51.5	42.0
	Dallas	99	32.1	38.2	Polk	1,150	54.9	59.7
	Dubuque	290	62.7	51.0	Pottawattamie	321	69.8	61.5
	Grundy	43	69.3	47.0	Scott	482	59.4	55.4
	Guthrie	43	77.9	50.3	Story	157	35.8	44.3
	Harrison	64	84.9	63.0	Warren	115	50.7	47.9
	Johnson	171	26.9	38.1	Washington	51	47.2	34.4
	Jones	63	60.8	45.1	Woodbury	300	59.3	56.2
					<b>Total</b>	4,532	53.7	52.6
	<b>State Total</b>	8,838	58.6	49.3				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Lung Cancer Mortality by County Group 1978-2010



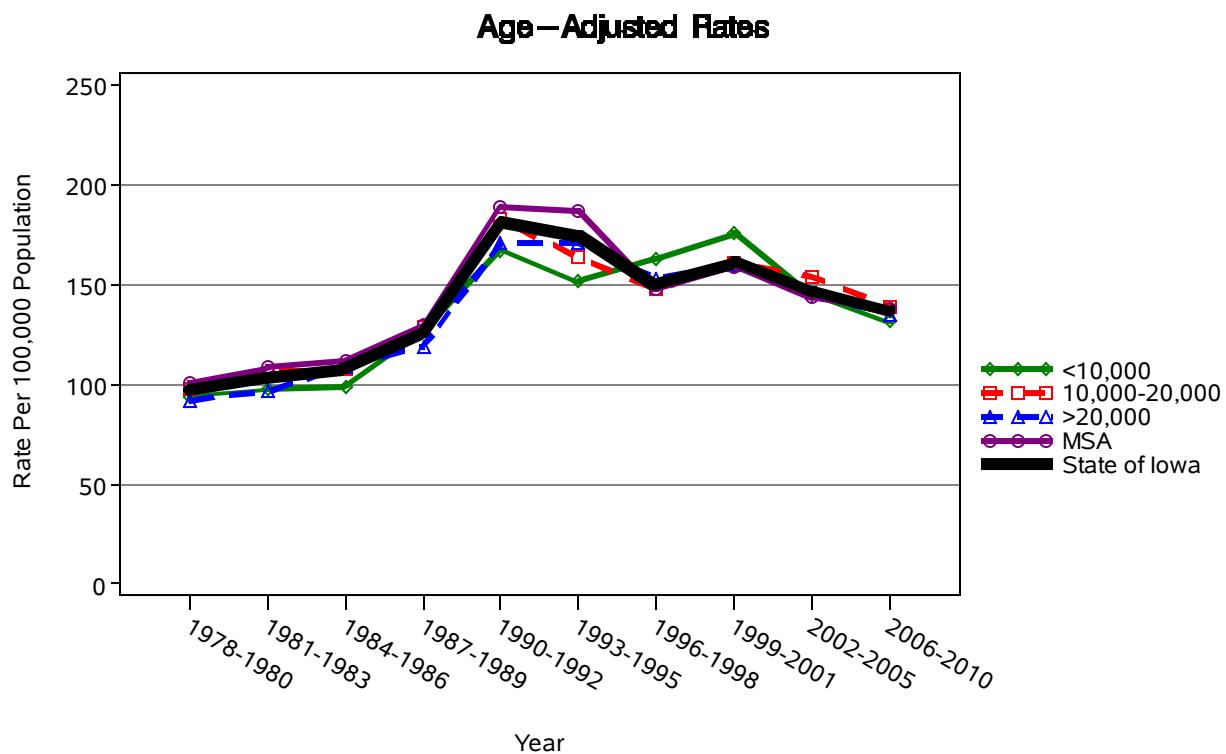
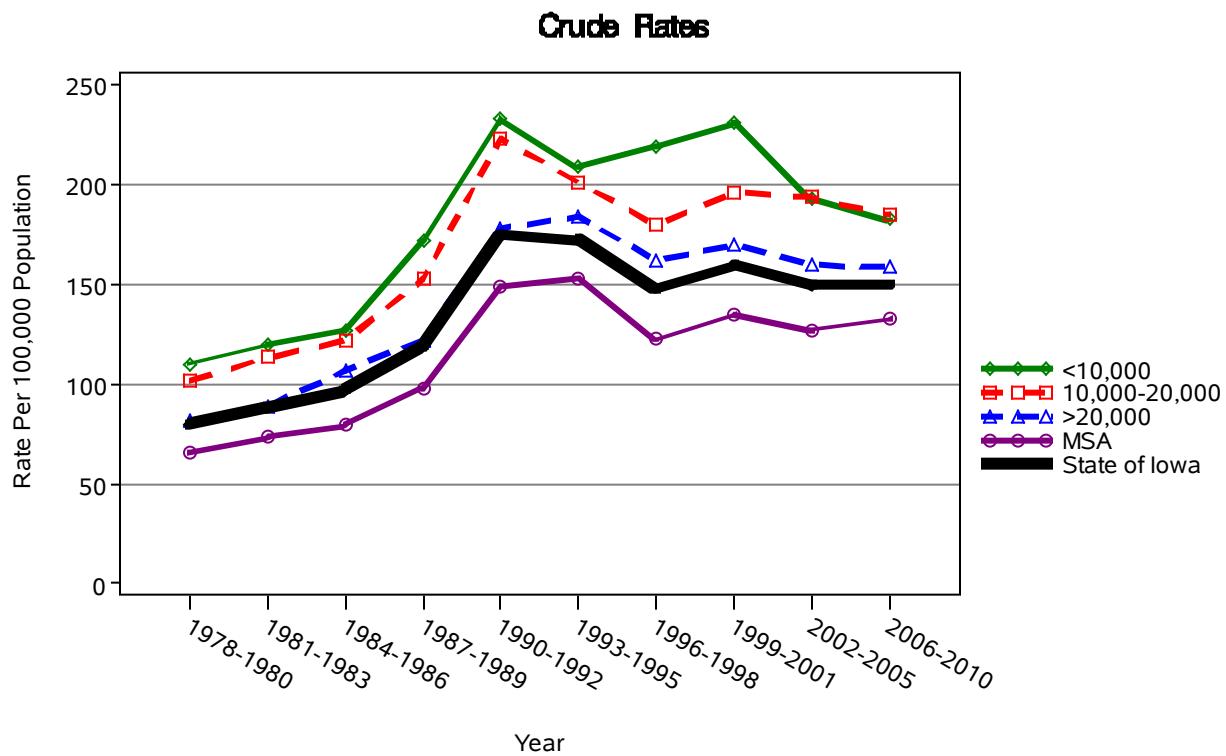
## Prostate Cancer Incidence 2006-2010

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )		County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
<b>Counties with Average Population &lt; 10,000</b>	Adair	42	218.1 (12)	153.6 (23)		Lucas	39	173.1 (45)	124.8 (66)
	Adams	17	166.5 (50)	107.0 (92)		Monona	47	205.4 (20)	130.9 (52)
	Audubon	37	248.0 (04)	160.4 (17)		Monroe	34	173.8 (43)	131.2 (51)
	Clarke	31	135.3 (81)	112.0 (85)		Osceola	25	152.5 (64)	113.3 (83)
	Davis	48	223.0 (11)	184.5 (04)		Palo Alto	48	203.9 (22)	152.6 (24)
	Decatur	24	113.2 (97)	92.7 (98)		Pocahontas	43	231.4 (08)	151.0 (25)
	Fremont	37	197.3 (30)	139.0 (41)		Ringgold	19	151.4 (65)	99.2 (96)
	Greene	35	150.2 (68)	107.1 (91)		Taylor	30	189.7 (33)	136.6 (43)
	Howard	35	147.2 (72)	117.5 (77)		Van Buren	25	130.2 (86)	90.6 (99)
	Humboldt	38	156.2 (58)	111.5 (86)		Wayne	36	231.8 (07)	150.5 (26)
	Ida	45	252.7 (03)	181.4 (05)		Worth	38	199.7 (26)	150.4 (27)
						<b>Total</b>	773	182.5	131.4
<b>Counties with Average Population 10,000 - 20,000</b>	Allamakee	90	247.1 (05)	180.5 (06)		Hardin	76	173.2 (44)	129.3 (55)
	Appanoose	50	158.4 (56)	114.0 (81)		Iowa	80	198.3 (28)	162.0 (12)
	Butler	57	155.8 (59)	108.0 (90)		Jefferson	63	143.8 (73)	122.2 (69)
	Calhoun	51	212.1 (15)	134.7 (44)		Keokuk	44	167.2 (49)	129.3 (55)
	Cass	61	178.7 (39)	127.9 (59)		Kossuth	74	189.9 (32)	128.8 (58)
	Cedar	94	206.2 (19)	164.4 (11)		Louisa	37	124.2 (90)	115.9 (78)
	Cherokee	61	204.3 (21)	139.1 (40)		Lyon	74	257.1 (02)	217.3 (01)
	Chickasaw	68	215.9 (14)	161.3 (14)		Mitchell	61	229.5 (09)	165.7 (10)
	Clay	94	229.5 (09)	180.3 (07)		Montgomery	36	137.2 (80)	101.1 (94)
	Clayton	81	177.8 (40)	126.9 (60)		O'Brien	58	162.5 (52)	118.5 (74)
	Crawford	77	179.9 (38)	158.3 (19)		Page	81	194.7 (31)	150.2 (28)
	Delaware	67	150.8 (66)	122.4 (68)		Poweshiek	66	142.3 (75)	110.5 (87)
	Dickinson	121	295.0 (01)	190.6 (03)		Sac	56	218.1 (12)	148.2 (33)
	Emmet	41	158.7 (55)	120.1 (71)		Shelby	57	188.6 (34)	133.5 (45)
	Floyd	94	234.1 (06)	167.2 (09)		Tama	74	167.4 (48)	129.4 (54)
	Franklin	37	138.3 (78)	99.4 (95)		Union	40	132.7 (83)	104.2 (93)
	Hamilton	69	174.8 (41)	139.4 (38)		Winnebago	32	118.2 (94)	94.5 (97)
	Hancock	47	164.0 (51)	125.7 (64)		<b>Total</b>	2,335	184.7	139.0
<b>Counties with Average Population &gt; 20,000</b>	Boone	83	126.0 (89)	108.3 (89)		Lee	169	186.7 (36)	149.4 (30)
	Buchanan	78	149.1 (69)	133.2 (46)		Mahaska	69	122.5 (91)	109.1 (88)
	Buena Vista	101	202.7 (23)	191.9 (02)		Marion	115	138.8 (77)	125.0 (65)
	Carroll	78	154.4 (60)	126.2 (63)		Marshall	154	153.1 (63)	123.5 (67)
	Cerro Gordo	202	187.8 (35)	150.1 (29)		Muscatine	179	169.7 (46)	160.5 (16)
	Clinton	192	158.9 (54)	129.3 (55)		Plymouth	87	141.0 (76)	118.3 (75)
	Des Moines	164	167.9 (47)	132.7 (48)		Sioux	115	138.3 (78)	137.1 (42)
	Fayette	110	210.7 (16)	158.8 (18)		Wapello	129	148.4 (70)	126.6 (62)
	Henry	66	127.0 (88)	113.6 (82)		Webster	131	134.0 (82)	118.2 (76)
	Jackson	103	208.5 (18)	156.6 (20)		Winneshiek	109	209.0 (17)	176.4 (08)
	Jasper	123	130.4 (85)	112.7 (84)		<b>Total</b>	2,557	158.8	135.1
<b>MSA Counties</b>	Benton	98	150.7 (67)	131.4 (50)		Linn	650	127.2 (87)	129.8 (53)
	Black Hawk	493	157.3 (57)	149.0 (31)		Madison	51	132.7 (83)	115.4 (80)
	Bremer	91	154.2 (61)	126.7 (61)		Mills	61	159.7 (53)	133.0 (47)
	Dallas	149	98.5 (99)	119.9 (72)		Polk	1,171	114.1 (96)	131.7 (49)
	Dubuque	396	174.2 (42)	154.8 (22)		Pottawattamie	275	121.9 (92)	115.7 (79)
	Grundy	56	182.7 (37)	139.2 (39)		Scott	610	153.7 (62)	146.7 (34)
	Guthrie	55	201.4 (24)	146.5 (35)		Story	234	103.3 (98)	144.4 (36)
	Harrison	74	200.3 (25)	161.0 (15)		Warren	133	120.3 (93)	118.9 (73)
	Johnson	366	115.6 (95)	154.9 (21)		Washington	105	198.3 (28)	162.0 (12)
	Jones	80	148.2 (71)	122.2 (69)		Woodbury	357	143.4 (74)	148.3 (32)
						<b>Total</b>	5,505	132.4	137.7
	<b>State Total</b>	11,170	149.8	137.2					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Prostate Cancer Incidence by County Group 1978-2010



# Prostate Cancer Mortality 2006-2010

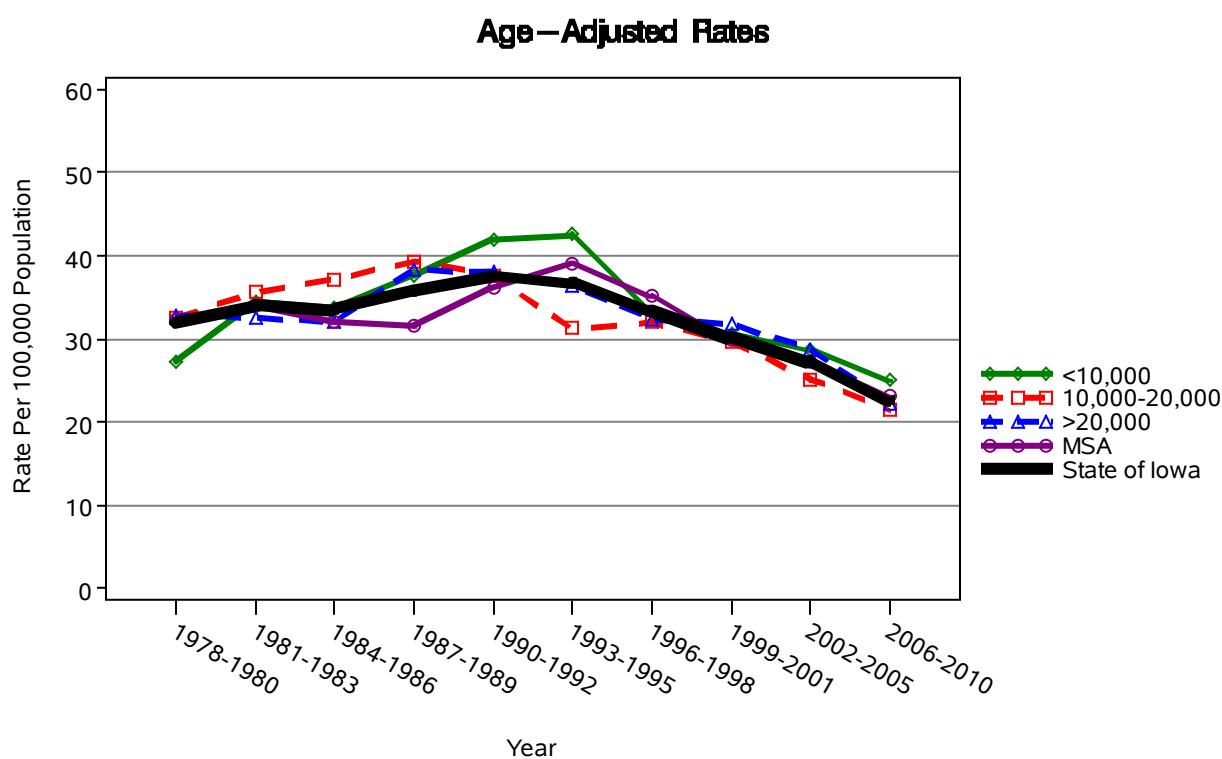
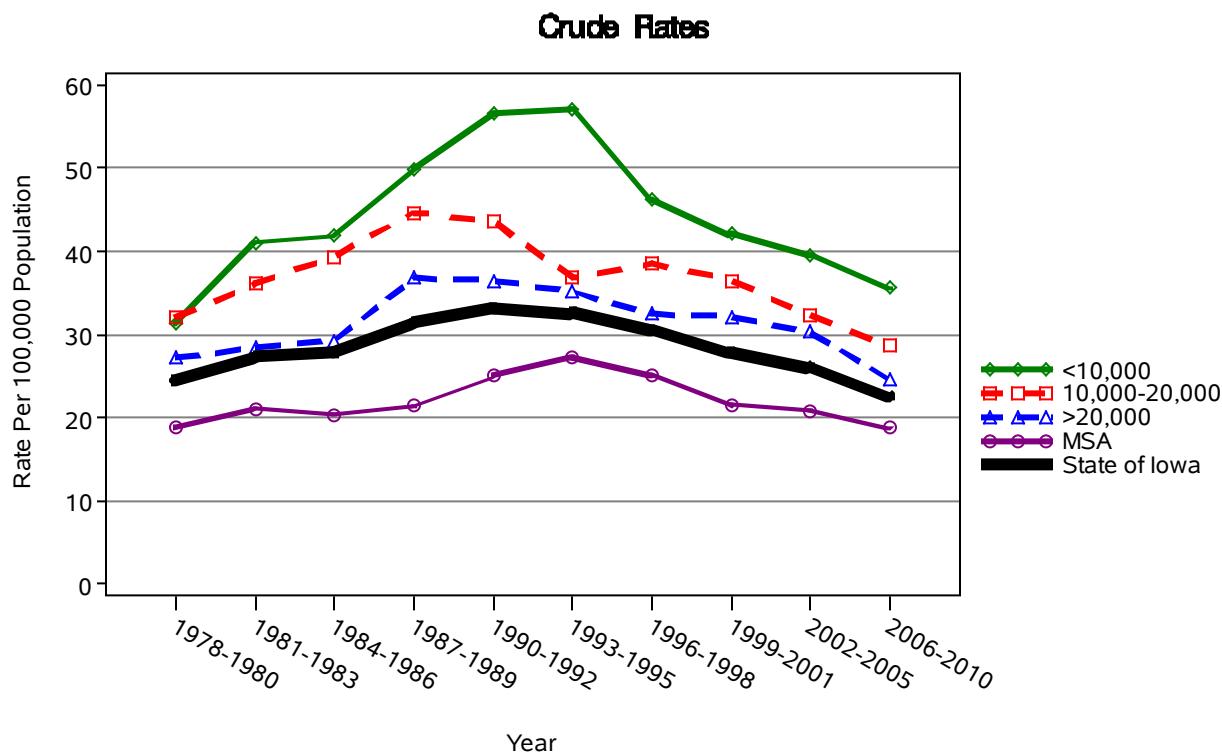
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	10	51.9	33.3	Lucas	10	44.4	31.6
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	11	48.0	42.3	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	10	53.8	30.9
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	10	52.1	36.7
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	151	35.6	25.0
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	15	34.2	22.7
	Appanoose	10	31.7	23.2	Iowa	17	42.1	35.5
	Butler	*	*	*	Jefferson	11	25.1	26.6
	Calhoun	10	41.6	24.8	Keokuk	*	*	*
	Cass	10	29.3	20.3	Kossuth	13	33.4	22.0
	Cedar	*	*	*	Louisa	*	*	*
	Cherokee	14	46.9	30.3	Lyon	*	*	*
	Chickasaw	*	*	*	Mitchell	*	*	*
	Clay	14	34.2	25.5	Montgomery	*	*	*
	Clayton	10	22.0	16.5	O'Brien	*	*	*
	Crawford	14	32.7	30.9	Page	17	40.9	32.6
	Delaware	*	*	*	Poweshiek	10	21.6	16.5
	Dickinson	11	26.8	17.8	Sac	*	*	*
	Emmet	*	*	*	Shelby	*	*	*
	Floyd	11	27.4	19.2	Tama	23	52.0	40.5
	Franklin	*	*	*	Union	11	36.5	30.5
	Hamilton	18	45.6	34.1	Winnebago	*	*	*
	Hancock	*	*	*	Wright	18	54.3	33.5
					<b>Total</b>	363	28.7	21.4
Counties with Average Population > 20,000	Boone	16	24.3	23.3	Lee	17	18.8	16.9
	Buchanan	*	*	*	Mahaska	17	30.2	26.3
	Buena Vista	12	24.1	19.1	Marion	20	24.1	23.4
	Carroll	*	*	*	Marshall	32	31.8	26.8
	Cerro Gordo	31	28.8	24.9	Muscatine	32	30.3	35.5
	Clinton	29	24.0	22.9	Plymouth	16	25.9	21.6
	Des Moines	29	29.7	26.4	Sioux	11	13.2	12.9
	Fayette	16	30.6	23.1	Wapello	20	23.0	20.1
	Henry	13	25.0	23.3	Webster	26	26.6	23.3
	Jackson	17	34.4	28.5	Winneshiek	15	28.8	23.7
	Jasper	18	19.1	18.4	<b>Total</b>	396	24.6	22.2
MSA Counties	Benton	13	20.0	18.9	Linn	91	17.8	20.8
	Black Hawk	55	17.6	18.4	Madison	11	28.6	28.9
	Bremer	20	33.9	30.4	Mills	*	*	*
	Dallas	19	12.6	19.2	Polk	196	19.1	27.9
	Dubuque	42	18.5	18.9	Pottawattamie	47	20.8	22.9
	Grundy	*	*	*	Scott	82	20.7	24.1
	Guthrie	*	*	*	Story	29	12.8	19.8
	Harrison	12	32.5	25.9	Warren	19	17.2	21.0
	Johnson	47	14.8	27.3	Washington	13	24.6	18.3
	Jones	15	27.8	25.4	Woodbury	52	20.9	24.1
					<b>Total</b>	782	18.8	23.1
	<b>State Total</b>	1,692	22.7	22.7				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Prostate Cancer Mortality by County Group 1978-2010

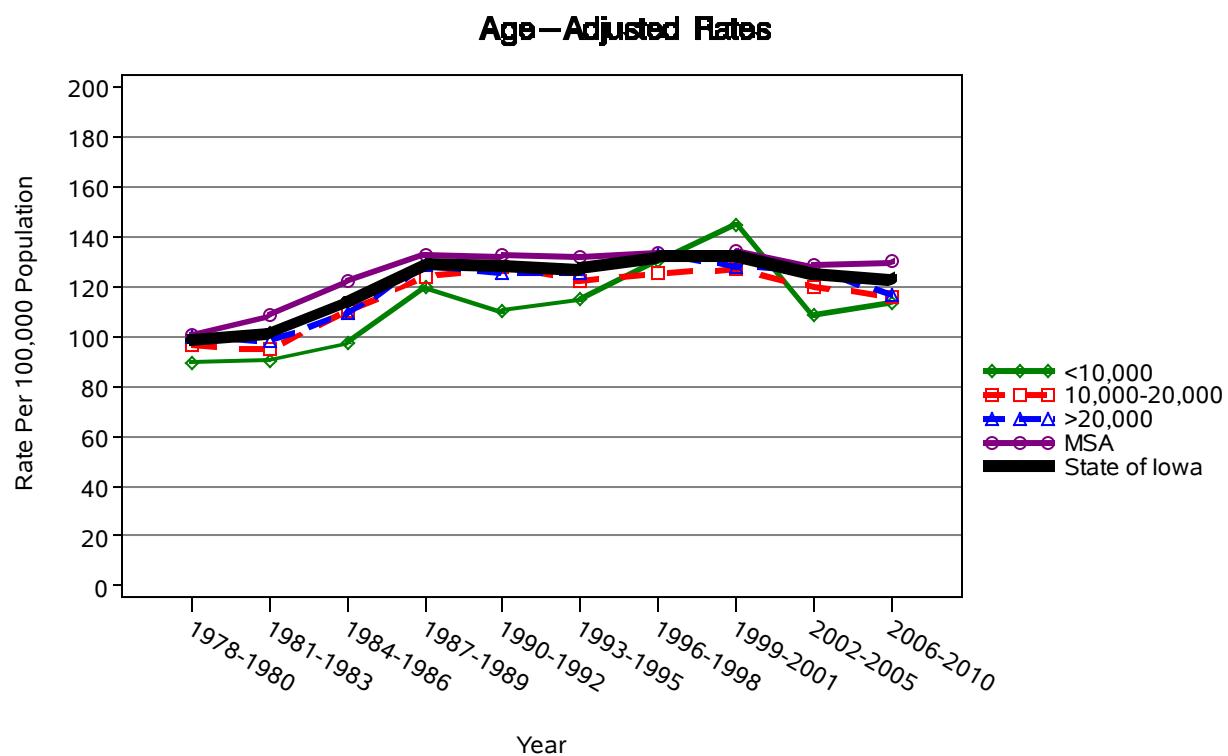
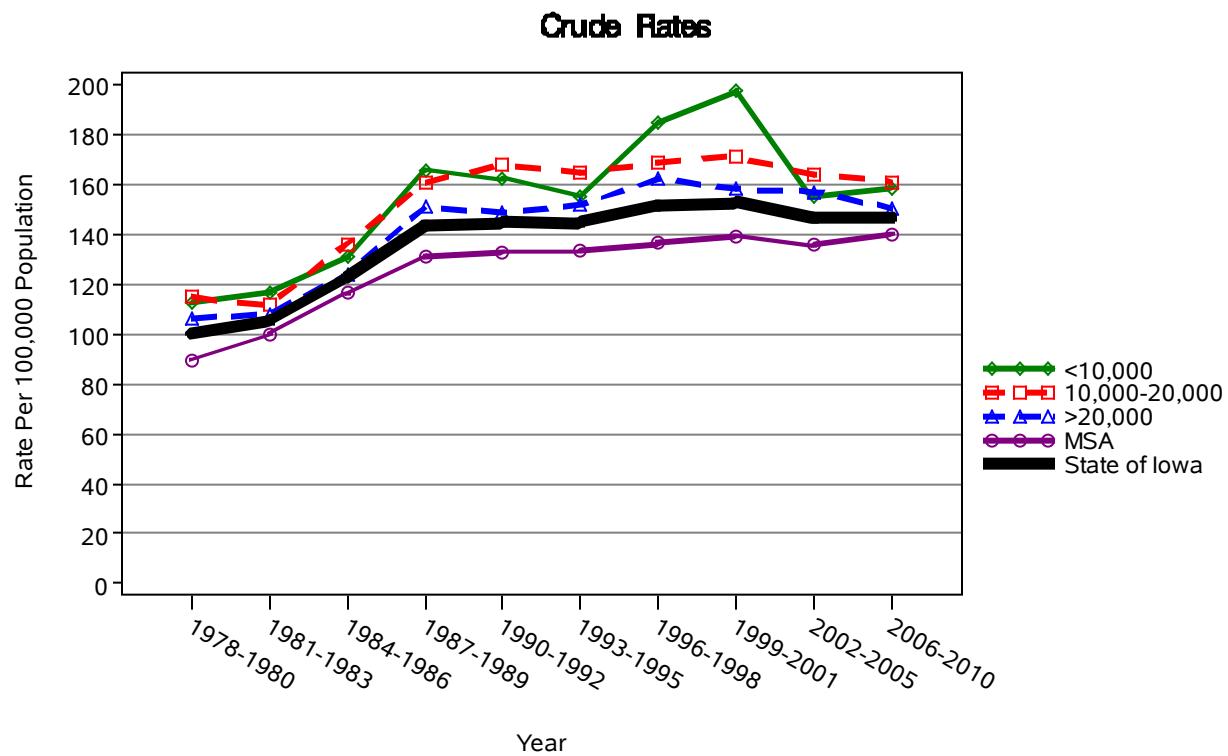


## Female Breast Cancer Incidence 2006-2010

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
			(Rank <sup>3</sup> )	(Rank <sup>3</sup> )			(Rank <sup>3</sup> )	(Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	36	183.3 (10)	120.6 (40)	Lucas	28	121.4 (88)	84.6 (94)
	Adams	18	172.5 (25)	106.9 (77)	Monona	37	155.1 (53)	101.9 (83)
	Audubon	25	156.0 (52)	113.0 (63)	Monroe	21	104.8 (97)	79.7 (96)
	Clarke	25	107.8 (96)	89.2 (93)	Osceola	28	169.8 (26)	120.8 (39)
	Davis	24	109.5 (95)	95.4 (89)	Palo Alto	39	162.4 (37)	116.8 (56)
	Decatur	41	192.1 (08)	139.8 (09)	Pocahontas	41	216.2 (03)	149.3 (04)
	Fremont	40	211.8 (04)	151.7 (02)	Ringgold	21	157.9 (45)	101.5 (84)
	Greene	43	179.7 (14)	118.1 (47)	Taylor	25	154.3 (54)	117.4 (55)
	Howard	30	123.6 (86)	100.9 (85)	Van Buren	26	136.6 (77)	93.2 (90)
	Humboldt	41	162.7 (36)	106.1 (78)	Wayne	19	115.2 (94)	70.6 (99)
	Ida	49	271.5 (01)	206.7 (01)	Worth	30	157.1 (47)	117.7 (52)
					<b>Total</b>	687	158.5	113.5
Counties with Average Population 10,000 - 20,000	Allamakee	63	178.8 (15)	135.8 (14)	Hardin	78	175.1 (23)	124.4 (31)
	Appanoose	63	187.5 (09)	130.9 (21)	Iowa	73	176.2 (20)	136.1 (13)
	Butler	60	158.4 (43)	112.3 (68)	Jefferson	72	182.9 (11)	137.9 (12)
	Calhoun	45	178.6 (16)	117.8 (50)	Keokuk	47	175.6 (21)	116.0 (59)
	Cass	57	159.7 (40)	112.6 (65)	Kossuth	71	178.5 (17)	118.4 (45)
	Cedar	60	129.1 (84)	99.0 (87)	Louisa	42	146.7 (65)	123.4 (34)
	Cherokee	48	157.0 (49)	105.7 (79)	Lyon	42	144.6 (70)	117.7 (52)
	Chickasaw	49	158.0 (44)	108.5 (75)	Mitchell	45	163.9 (34)	111.3 (71)
	Clay	77	180.6 (13)	126.8 (25)	Montgomery	47	166.4 (29)	116.5 (57)
	Clayton	47	103.4 (99)	71.2 (98)	O'Brien	83	228.0 (02)	144.9 (05)
	Crawford	64	152.5 (56)	122.9 (35)	Page	68	174.9 (24)	126.3 (26)
	Delaware	66	147.1 (64)	113.3 (62)	Poweshiek	59	121.2 (89)	91.1 (92)
	Dickinson	85	200.9 (06)	124.6 (30)	Sac	55	205.8 (05)	129.6 (22)
	Emmet	37	141.7 (71)	118.1 (47)	Shelby	62	197.2 (07)	139.6 (10)
	Floyd	69	165.0 (32)	124.2 (33)	Tama	64	140.5 (72)	104.0 (81)
	Franklin	42	157.1 (47)	111.3 (71)	Union	53	166.1 (30)	127.5 (24)
	Hamilton	52	130.3 (82)	98.2 (88)	Winnebago	29	104.6 (98)	79.6 (97)
	Hancock	38	131.7 (80)	91.9 (91)	Wright	53	156.9 (50)	114.0 (61)
					<b>Total</b>	2,065	161.0	116.1
Counties with Average Population 20,000	Boone	98	148.0 (62)	113.0 (63)	Lee	134	149.9 (59)	108.1 (76)
	Buchanan	70	132.5 (79)	109.9 (73)	Mahaska	67	120.5 (90)	100.9 (85)
	Buena Vista	76	151.8 (57)	118.0 (49)	Marion	122	145.1 (67)	118.3 (46)
	Carroll	62	115.9 (93)	84.6 (94)	Marshall	139	138.9 (74)	109.9 (73)
	Cerro Gordo	207	181.5 (12)	131.9 (19)	Muscatine	138	129.0 (85)	111.5 (69)
	Clinton	205	163.3 (35)	128.9 (23)	Plymouth	100	158.9 (42)	119.5 (43)
	Des Moines	170	164.0 (33)	119.7 (42)	Sioux	116	138.5 (75)	125.5 (29)
	Fayette	83	157.3 (46)	104.2 (80)	Wapello	132	145.4 (66)	111.5 (69)
	Henry	76	153.9 (55)	122.0 (37)	Webster	131	139.9 (73)	103.0 (82)
	Jackson	76	151.0 (58)	116.2 (58)	Winneshiek	89	167.9 (28)	143.1 (06)
	Jasper	161	177.0 (19)	131.6 (20)	<b>Total</b>	2,452	150.5	116.7
MSA Counties	Benton	95	145.1 (67)	124.3 (32)	Linn	707	133.9 (78)	121.5 (38)
	Black Hawk	433	130.1 (83)	118.6 (44)	Madison	62	159.0 (41)	134.0 (16)
	Bremer	105	169.6 (27)	135.2 (15)	Mills	56	149.0 (60)	125.6 (28)
	Dallas	192	122.0 (87)	125.8 (27)	Polk	1,476	137.9 (76)	134.0 (16)
	Dubuque	341	144.8 (69)	122.4 (36)	Pottawattamie	415	177.2 (18)	149.4 (03)
	Grundy	52	165.8 (31)	120.1 (41)	Scott	663	160.2 (39)	141.5 (07)
	Guthrie	49	175.6 (21)	117.5 (54)	Story	247	116.9 (92)	132.3 (18)
	Harrison	62	161.4 (38)	114.1 (60)	Warren	182	156.7 (51)	140.1 (08)
	Johnson	373	117.2 (91)	139.3 (11)	Washington	82	148.5 (61)	112.5 (66)
	Jones	73	147.3 (63)	112.5 (66)	Woodbury	335	130.4 (81)	117.8 (50)
					<b>Total</b>	6,000	140.1	130.1
	<b>State Total</b>	11,204	146.9	123.4				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

**Female Breast Cancer Incidence by County Group 1978-2010**

# Female Breast Cancer Mortality 2006-2010

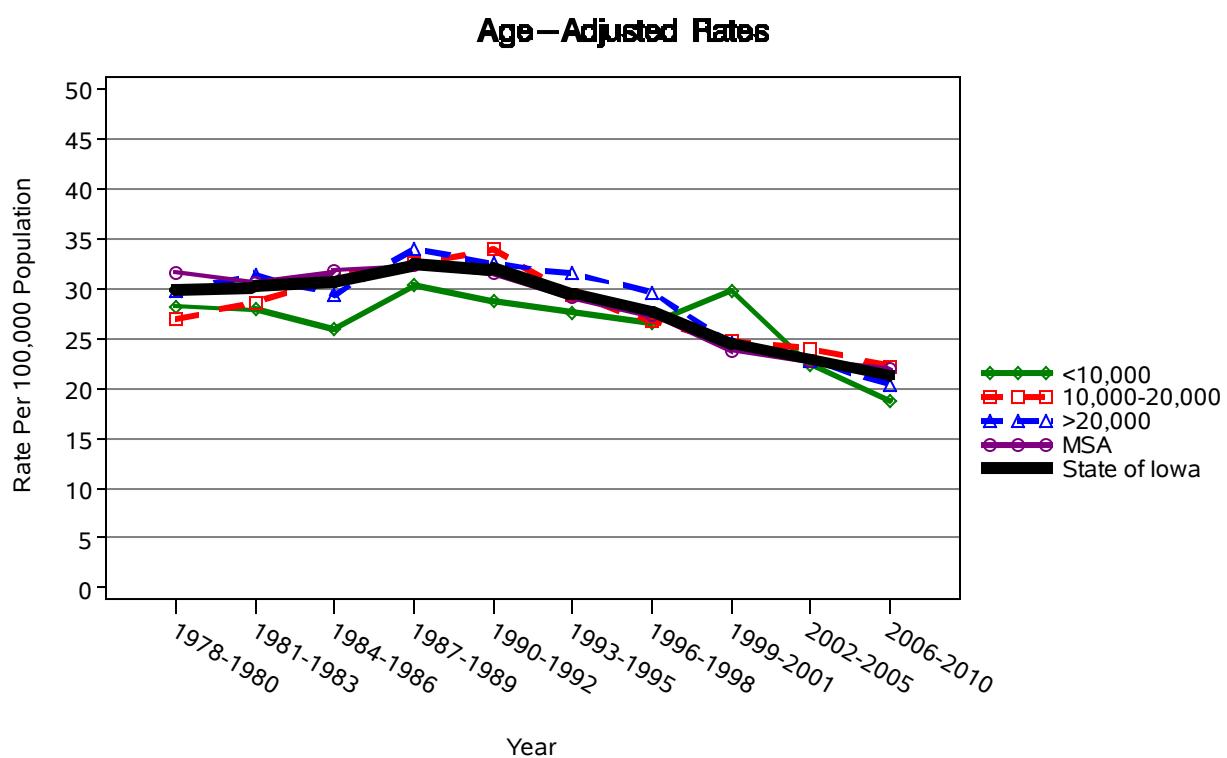
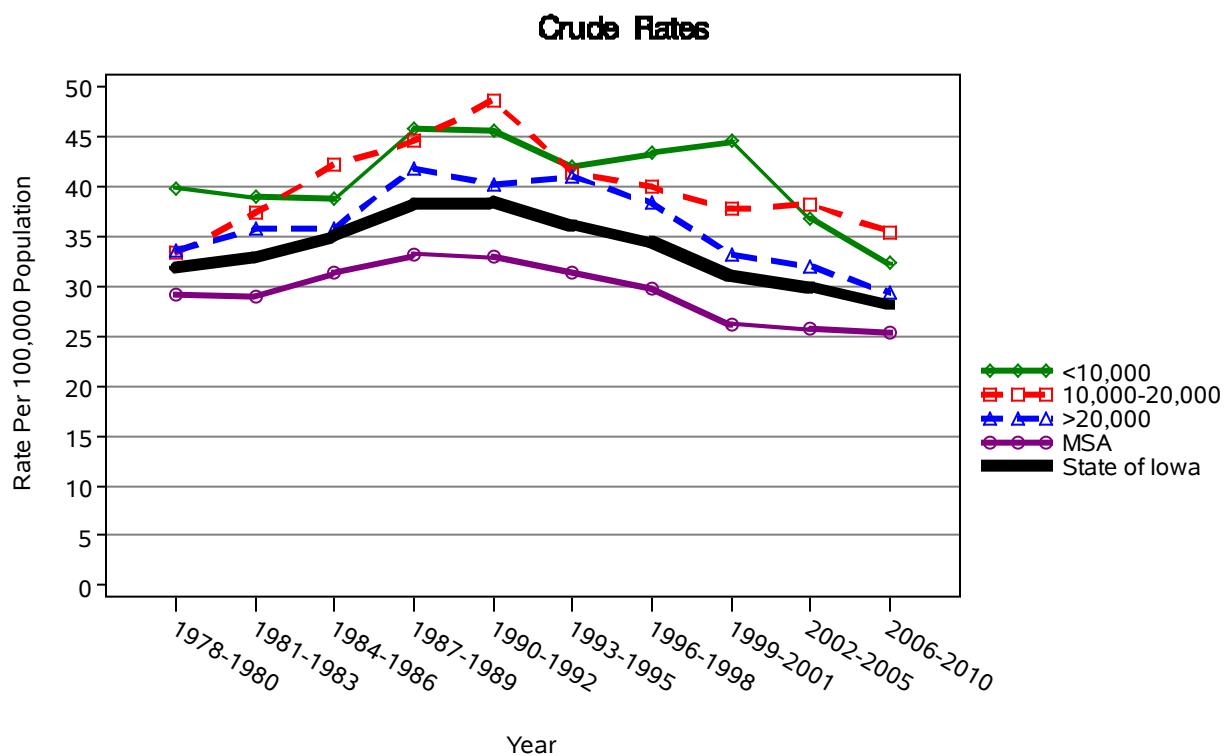
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	
<b>Counties with Average Population &lt; 10,000</b>	Adair	*	*	*	Lucas	16	69.4	39.3	
	Adams	*	*	*	Monona	*	*	*	
	Audubon	*	*	*	Monroe	*	*	*	
	Clarke	*	*	*	Osceola	*	*	*	
	Davis	*	*	*	Palo Alto	14	58.3	29.6	
	Decatur	*	*	*	Pocahontas	*	*	*	
	Fremont	*	*	*	Ringgold	*	*	*	
	Greene	*	*	*	Taylor	*	*	*	
	Howard	*	*	*	Van Buren	*	*	*	
	Humboldt	*	*	*	Wayne	*	*	*	
Ida	10	55.4	31.5	Worth	*	*	*		
				<b>Total</b>	140	32.3	18.8		
<b>Counties with Average Population 10,000 - 20,000</b>	Allamakee	10	28.4	17.4	Hardin	19	42.6	23.6	
	Appanoose	12	35.7	22.9	Iowa	17	41.0	29.0	
	Butler	12	31.7	20.0	Jefferson	12	30.5	21.9	
	Calhoun	11	43.7	21.1	Keokuk	11	41.1	25.6	
	Cass	21	58.8	37.9	Kossuth	19	47.8	25.8	
	Cedar	13	28.0	16.6	Louisa	11	38.4	27.1	
	Cherokee	10	32.7	20.4	Lyon	13	44.8	31.3	
	Chickasaw	10	32.2	28.3	Mitchell	12	43.7	27.0	
	Clay	11	25.8	14.9	Montgomery	10	35.4	23.9	
	Clayton	12	26.4	16.3	O'Brien	19	52.2	29.8	
	Crawford	11	26.2	18.0	Page	13	33.4	15.4	
	Delaware	17	37.9	32.2	Poweshiek	16	32.9	22.8	
	Dickinson	14	33.1	16.6	Sac	13	48.6	24.0	
	Emmet	*	*	*	Shelby	12	38.2	25.1	
	Floyd	*	*	*	Tama	15	32.9	23.4	
	Franklin	12	44.9	23.7	Union	13	40.8	26.0	
	Hamilton	*	*	*	Winnebago	*	*	*	
	Hancock	*	*	*	Wright	13	38.5	25.2	
					<b>Total</b>	454	35.4	22.2	
	<b>Counties with Average Population &gt; 20,000</b>	Boone	26	39.3	26.3	Lee	22	24.6	16.6
Buchanan		15	28.4	22.4	Mahaska	10	18.0	13.0	
Buena Vista		13	26.0	18.6	Marion	34	40.4	27.1	
Carroll		18	33.7	20.4	Marshall	29	29.0	20.2	
Cerro Gordo		36	31.6	20.5	Muscatine	22	20.6	17.2	
Clinton		47	37.4	26.6	Plymouth	20	31.8	21.2	
Des Moines		29	28.0	19.0	Sioux	19	22.7	18.8	
Fayette		20	37.9	24.0	Wapello	24	26.4	18.3	
Henry		15	30.4	21.8	Webster	27	28.8	19.8	
Jackson		14	27.8	21.2	Winneshiek	11	20.8	14.2	
Jasper		26	28.6	18.5	<b>Total</b>	477	29.3	20.4	
<b>MSA Counties</b>		Benton	13	19.9	16.0	Linn	132	25.0	21.5
		Black Hawk	80	24.0	19.9	Madison	18	46.2	36.2
	Bremer	23	37.1	24.0	Mills	15	39.9	32.3	
	Dallas	37	23.5	23.4	Polk	255	23.8	22.3	
	Dubuque	75	31.9	22.6	Pottawattamie	62	26.5	21.4	
	Grundy	10	31.9	19.3	Scott	109	26.3	22.4	
	Guthrie	*	*	*	Story	42	19.9	19.7	
	Harrison	10	26.0	19.9	Warren	36	31.0	26.8	
	Johnson	47	14.8	17.0	Washington	18	32.6	21.1	
	Jones	11	22.2	15.0	Woodbury	84	32.7	26.8	
					<b>Total</b>	*	*	*	
<b>State Total</b>		*	*	*					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Female Breast Cancer Mortality by County Group 1978-2010



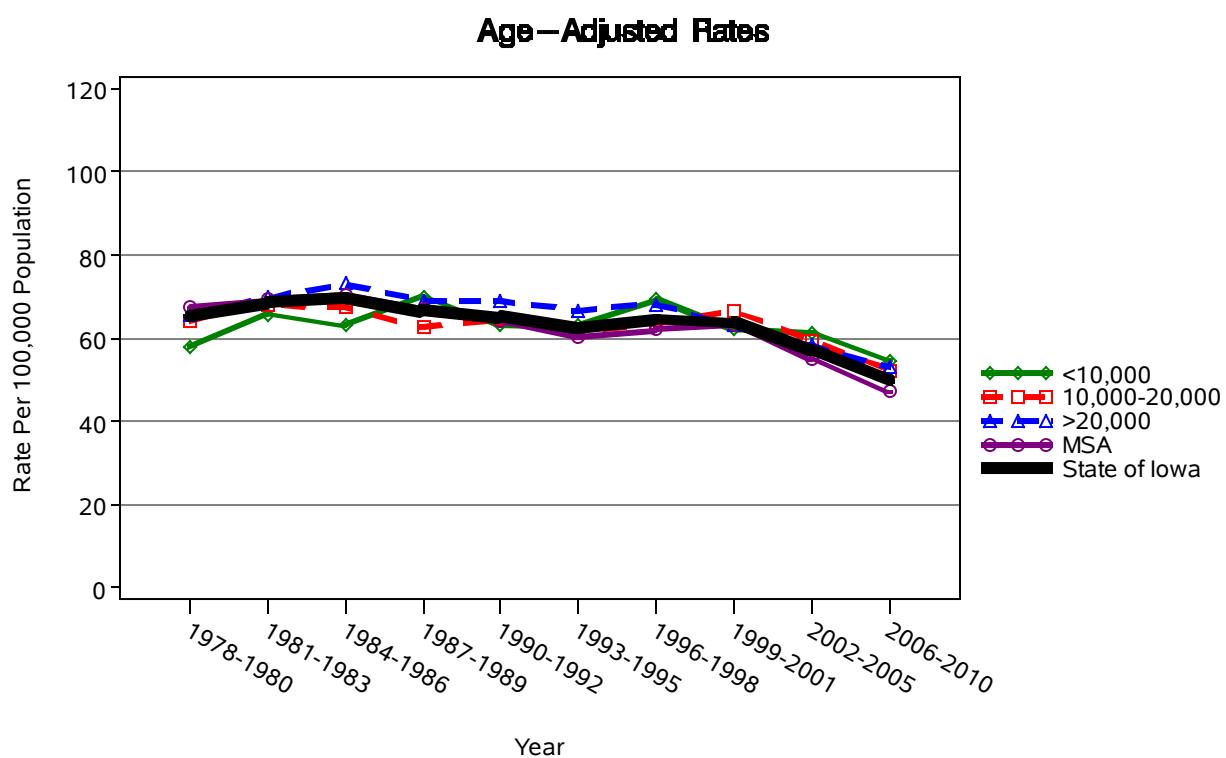
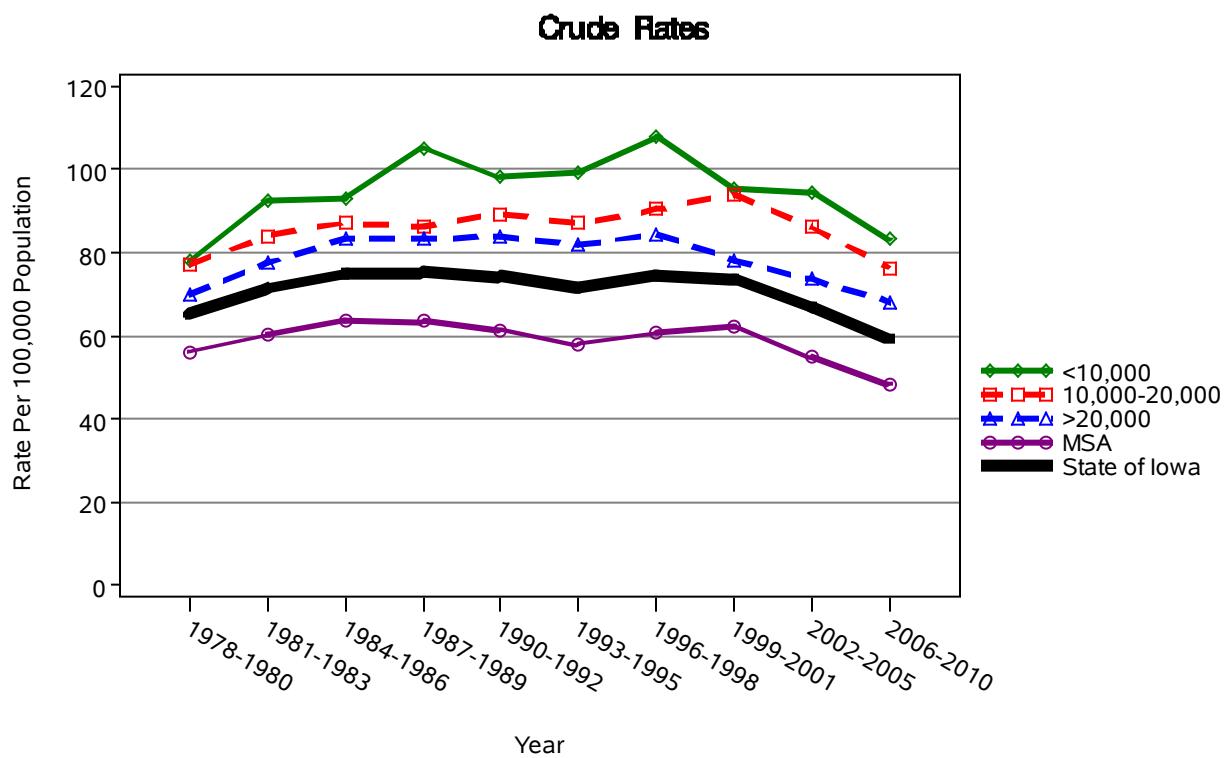
# Colorectal Cancer Incidence 2006-2010

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )		County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	26	66.8 (65)	41.7 (90)		Lucas	55	120.6 (01)	77.6 (01)
	Adams	19	92.0 (13)	59.3 (16)		Monona	43	92.0 (13)	52.4 (48)
	Audubon	33	106.7 (03)	66.9 (06)		Monroe	23	58.1 (81)	38.2 (95)
	Clarke	32	69.4 (55)	51.3 (53)		Osceola	34	103.4 (04)	74.1 (02)
	Davis	29	66.7 (66)	49.9 (61)		Palo Alto	43	90.4 (17)	57.1 (19)
	Decatur	31	72.9 (41)	55.0 (32)		Pocahontas	25	66.6 (67)	37.5 (97)
	Fremont	26	69.1 (57)	45.1 (84)		Ringgold	22	85.1 (25)	49.0 (64)
	Greene	52	110.1 (02)	71.7 (04)		Taylor	22	68.7 (59)	41.0 (92)
	Howard	40	83.2 (27)	59.1 (17)		Van Buren	37	96.8 (11)	66.5 (08)
	Humboldt	30	60.6 (75)	36.4 (98)		Wayne	25	78.1 (32)	50.7 (58)
	Ida	31	86.5 (22)	53.5 (40)		Worth	38	99.7 (06)	71.0 (05)
						<b>Total</b>	716	83.5	54.7
Counties with Average Population 10,000 – 20,000	Allamakee	54	75.4 (37)	54.0 (35)		Hardin	69	78.0 (34)	47.9 (67)
	Appanoose	51	78.3 (31)	56.1 (25)		Iowa	50	61.1 (74)	43.0 (88)
	Butler	44	59.1 (80)	39.9 (94)		Jefferson	50	60.1 (76)	51.3 (53)
	Calhoun	47	95.5 (12)	53.8 (36)		Keokuk	38	71.6 (44)	48.5 (65)
	Cass	61	87.3 (21)	56.0 (26)		Kossuth	65	82.5 (28)	51.2 (56)
	Cedar	64	69.5 (54)	53.7 (38)		Louisa	33	56.5 (84)	47.7 (69)
	Cherokee	49	81.1 (29)	49.1 (63)		Lyon	42	72.6 (42)	55.3 (30)
	Chickasaw	39	62.4 (73)	42.8 (89)		Mitchell	48	88.9 (19)	59.4 (15)
	Clay	56	67.0 (64)	46.4 (75)		Montgomery	53	97.2 (10)	62.9 (12)
	Clayton	63	69.2 (56)	47.3 (70)		O'Brien	43	59.6 (78)	41.3 (91)
	Crawford	59	69.6 (53)	53.3 (42)		Page	81	100.6 (05)	66.7 (07)
	Delaware	56	62.7 (72)	50.4 (60)		Poweshiek	74	77.8 (36)	53.4 (41)
	Dickinson	76	91.2 (15)	55.4 (29)		Sac	52	99.2 (07)	64.3 (10)
	Emmet	51	98.2 (08)	64.7 (09)		Shelby	60	97.3 (09)	56.9 (21)
	Floyd	72	87.8 (20)	63.7 (11)		Tama	64	71.3 (47)	48.1 (66)
	Franklin	45	84.1 (26)	50.6 (59)		Union	44	70.9 (50)	51.1 (57)
	Hamilton	57	71.8 (43)	52.7 (44)		Winnebago	39	71.2 (48)	52.0 (52)
	Hancock	39	67.8 (62)	45.5 (79)		<b>Total</b>	1,945	76.4	52.3
Counties with Average Population > 20,000	Boone	73	55.3 (86)	44.0 (85)		Lee	132	73.4 (39)	55.1 (31)
	Buchanan	59	56.1 (85)	45.3 (81)		Mahaska	100	89.3 (18)	72.4 (03)
	Buena Vista	70	70.1 (52)	56.3 (24)		Marion	114	68.3 (61)	56.8 (22)
	Carroll	81	77.9 (35)	54.3 (34)		Marshall	136	67.8 (62)	52.3 (50)
	Cerro Gordo	179	80.8 (30)	57.6 (18)		Muscatine	108	50.8 (91)	45.3 (81)
	Clinton	170	69.0 (58)	52.3 (50)		Plymouth	89	71.4 (46)	55.7 (27)
	Des Moines	144	71.5 (45)	54.9 (33)		Sioux	96	57.5 (82)	51.3 (53)
	Fayette	82	78.1 (32)	52.4 (48)		Wapello	130	73.1 (40)	57.1 (19)
	Henry	56	55.3 (86)	43.1 (87)		Webster	114	59.6 (78)	46.4 (75)
	Jackson	71	71.2 (48)	52.5 (47)		Winneshiek	72	68.5 (60)	52.7 (44)
	Jasper	130	70.2 (51)	53.6 (39)		<b>Total</b>	2,206	68.1	53.0
MSA Counties	Benton	71	54.4 (88)	43.7 (86)		Linn	506	48.7 (93)	45.7 (78)
	Black Hawk	342	52.9 (89)	47.3 (70)		Madison	32	41.3 (96)	36.2 (99)
	Bremer	79	65.3 (68)	53.1 (43)		Mills	43	56.7 (83)	47.2 (73)
	Dallas	127	41.1 (97)	47.3 (70)		Polk	934	44.6 (95)	47.8 (68)
	Dubuque	210	45.4 (94)	38.0 (96)		Pottawattamie	300	65.3 (68)	56.8 (22)
	Grundy	46	74.2 (38)	52.6 (46)		Scott	398	49.1 (92)	45.8 (77)
	Guthrie	50	90.6 (16)	60.5 (14)		Story	165	37.7 (98)	45.5 (79)
	Harrison	65	86.2 (23)	61.2 (13)		Warren	136	60.0 (77)	55.7 (27)
	Johnson	194	30.6 (99)	40.4 (93)		Washington	68	62.9 (70)	45.2 (83)
	Jones	65	62.8 (71)	46.7 (74)		Woodbury	265	52.4 (90)	49.2 (62)
						<b>Total</b>	4,096	48.5	47.2
	<b>State Total</b>	8,963	59.4	50.1					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Colorectal Cancer Incidence by County Group 1978-2010



# Colorectal Cancer Mortality 2006-2010

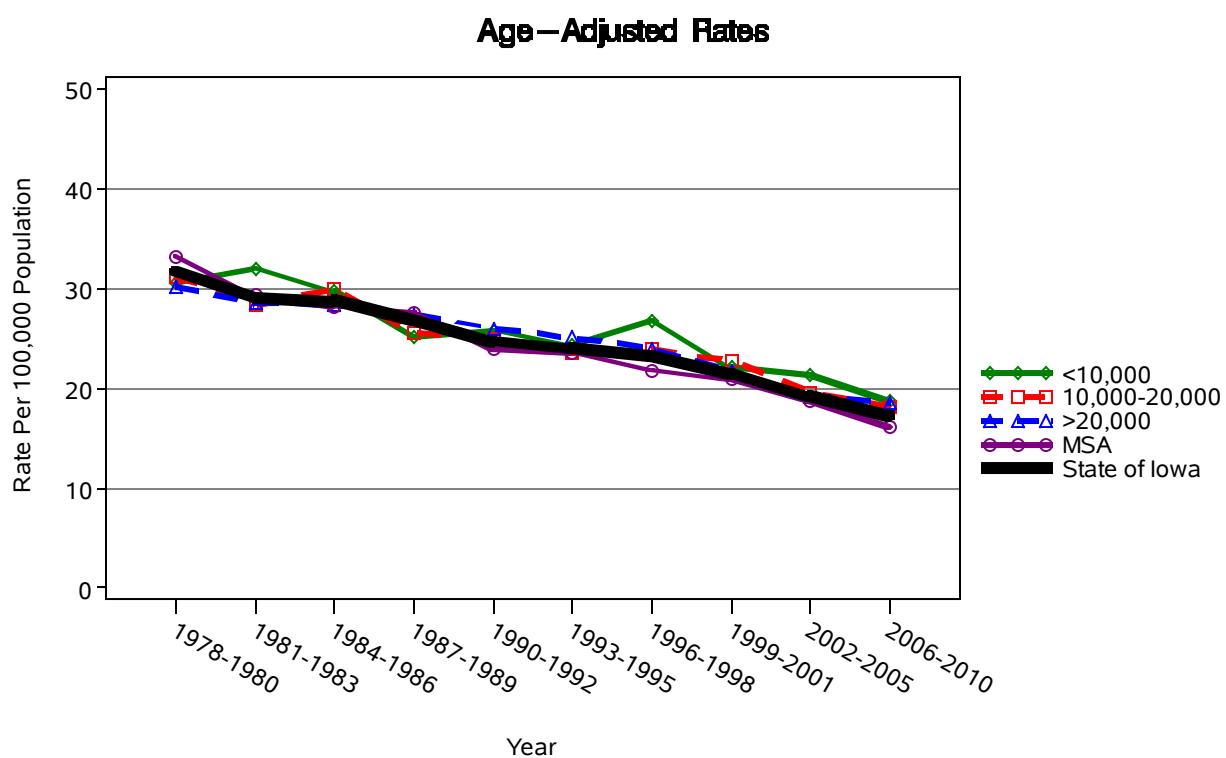
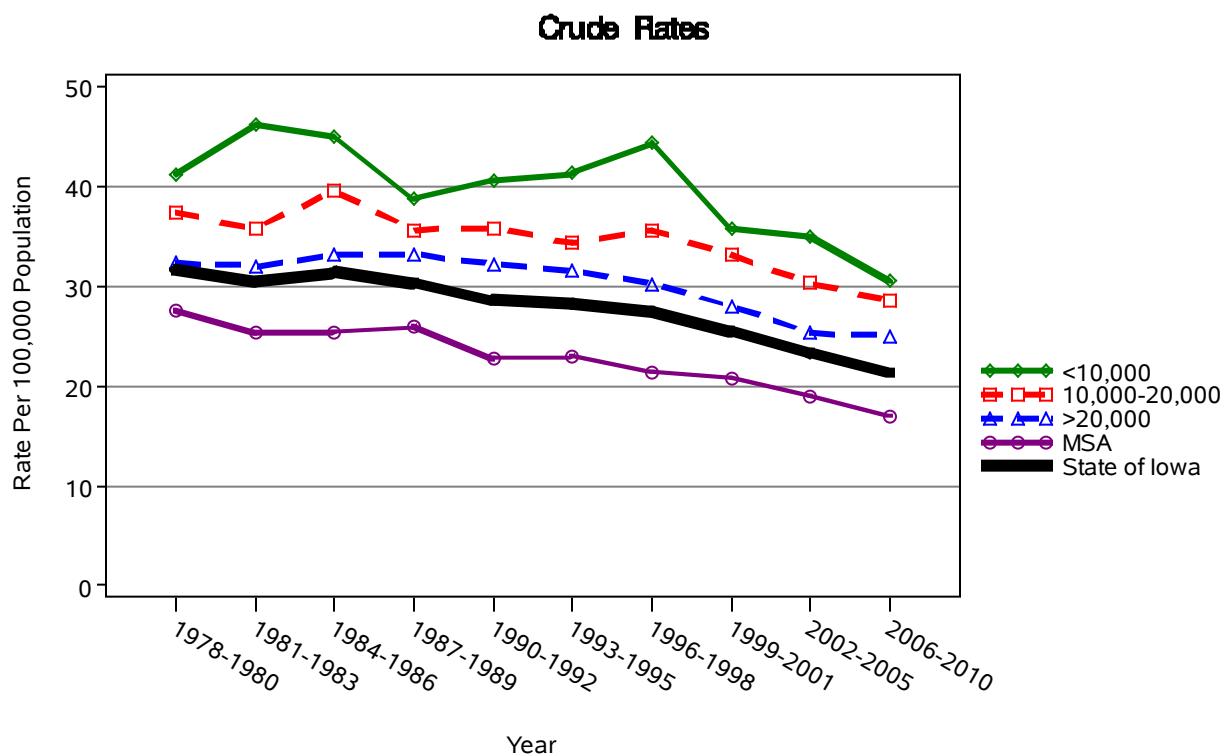
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>		County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	14	36.0	22.0		Lucas	21	46.1	28.0
	Adams	*	*	*		Monona	16	34.2	18.7
	Audubon	10	32.3	18.6		Monroe	*	*	*
	Clarke	11	23.9	19.2		Osceola	10	30.4	18.5
	Davis	*	*	*		Palo Alto	12	25.2	14.0
	Decatur	13	30.6	20.8		Pocahontas	15	39.9	19.6
	Fremont	15	39.9	24.9		Ringgold	12	46.4	28.9
	Greene	20	42.3	25.5		Taylor	*	*	*
	Howard	11	22.9	15.5		Van Buren	*	*	*
	Humboldt	10	20.2	11.3		Wayne	*	*	*
	Ida	10	27.9	17.8		Worth	12	31.5	22.7
						<b>Total</b>	261	30.5	18.7
Counties with Average Population 10,000 - 20,000	Allamakee	22	30.7	20.4		Hardin	28	31.7	17.3
	Appanoose	16	24.6	14.7		Iowa	19	23.2	15.5
	Butler	18	24.2	14.4		Jefferson	14	16.8	14.0
	Calhoun	21	42.7	21.8		Keokuk	13	24.5	15.8
	Cass	20	28.6	16.5		Kossuth	18	22.9	14.9
	Cedar	20	21.7	16.0		Louisa	14	24.0	20.3
	Cherokee	16	26.5	14.9		Lyon	11	19.0	13.7
	Chickasaw	*	*	*		Mitchell	18	33.3	19.4
	Clay	19	22.7	14.5		Montgomery	14	25.7	15.0
	Clayton	20	22.0	13.9		O'Brien	25	34.7	19.0
	Crawford	24	28.3	22.1		Page	32	39.8	25.8
	Delaware	23	25.8	19.3		Poweshiek	38	40.0	25.9
	Dickinson	30	36.0	20.1		Sac	22	42.0	24.9
	Emmet	19	36.6	21.0		Shelby	26	42.2	22.8
	Floyd	19	23.2	14.5		Tama	34	37.9	22.9
	Franklin	15	28.0	15.5		Union	19	30.6	22.4
	Hamilton	22	27.7	18.9		Winnebago	*	*	*
	Hancock	14	24.3	14.2		<b>Total</b>	727	28.5	18.1
Counties with Average Population > 20,000	Boone	24	18.2	15.1		Lee	63	35.0	25.1
	Buchanan	29	27.6	21.9		Mahaska	31	27.7	22.0
	Buena Vista	29	29.0	20.3		Marion	46	27.6	22.0
	Carroll	33	31.7	19.5		Marshall	48	23.9	18.0
	Cerro Gordo	43	19.4	13.6		Muscatine	49	23.1	20.3
	Clinton	61	24.8	18.3		Plymouth	26	20.9	15.3
	Des Moines	43	21.4	15.0		Sioux	32	19.2	15.4
	Fayette	37	35.2	21.4		Wapello	44	24.8	18.2
	Henry	27	26.6	20.6		Webster	34	17.8	12.7
	Jackson	30	30.1	20.7		Winneshiek	24	22.8	16.8
	Jasper	57	30.8	22.6		<b>Total</b>	810	25.0	18.5
MSA Counties	Benton	28	21.5	16.4		Linn	167	16.1	14.7
	Black Hawk	115	17.8	14.8		Madison	18	23.2	19.4
	Bremer	24	19.8	13.9		Mills	11	14.5	13.4
	Dallas	43	13.9	15.7		Polk	341	16.3	17.4
	Dubuque	84	18.2	14.1		Pottawattamie	106	23.1	20.0
	Grundy	17	27.4	17.7		Scott	142	17.5	16.2
	Guthrie	11	19.9	12.6		Story	37	8.4	10.0
	Harrison	26	34.5	23.6		Warren	50	22.1	20.2
	Johnson	67	10.6	13.8		Washington	27	25.0	16.5
	Jones	20	19.3	14.1		Woodbury	102	20.2	18.5
						<b>Total</b>	1,436	17.0	16.1
	<b>State Total</b>	3,234	21.4	17.3					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Colorectal Cancer Mortality by County Group 1978-2010



# Non-Hodgkin's Lymphoma Incidence 2006-2010

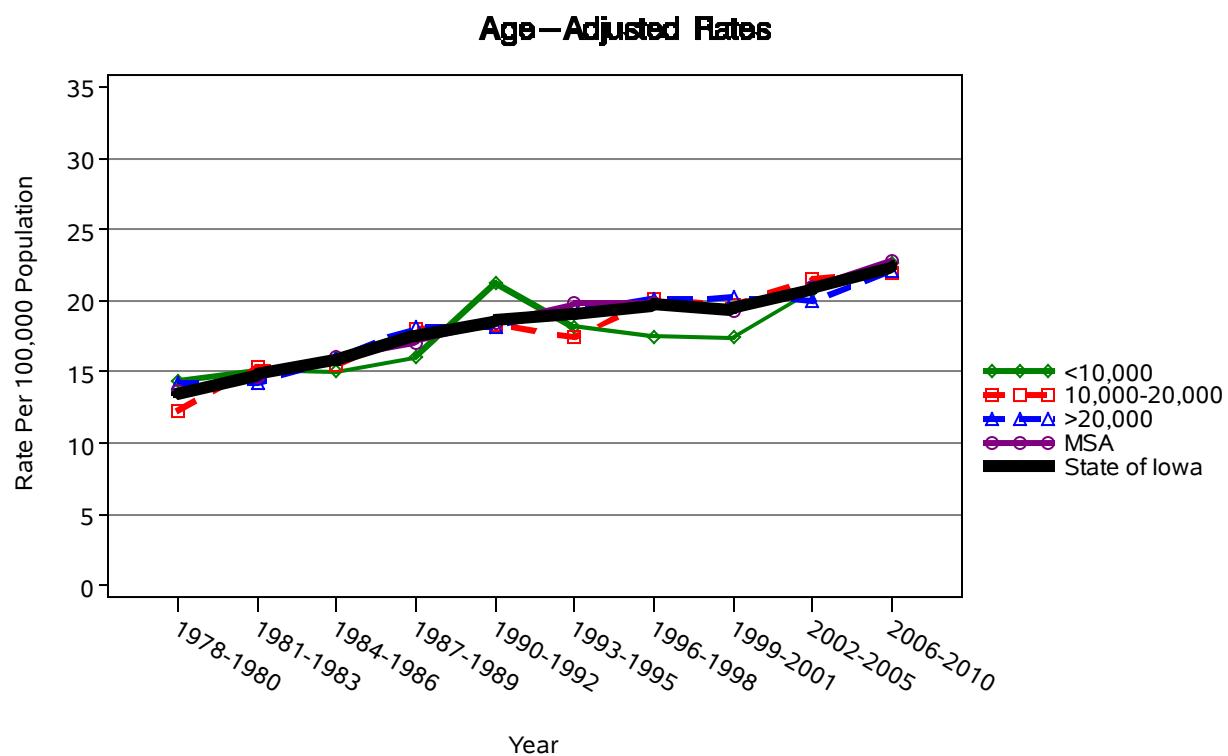
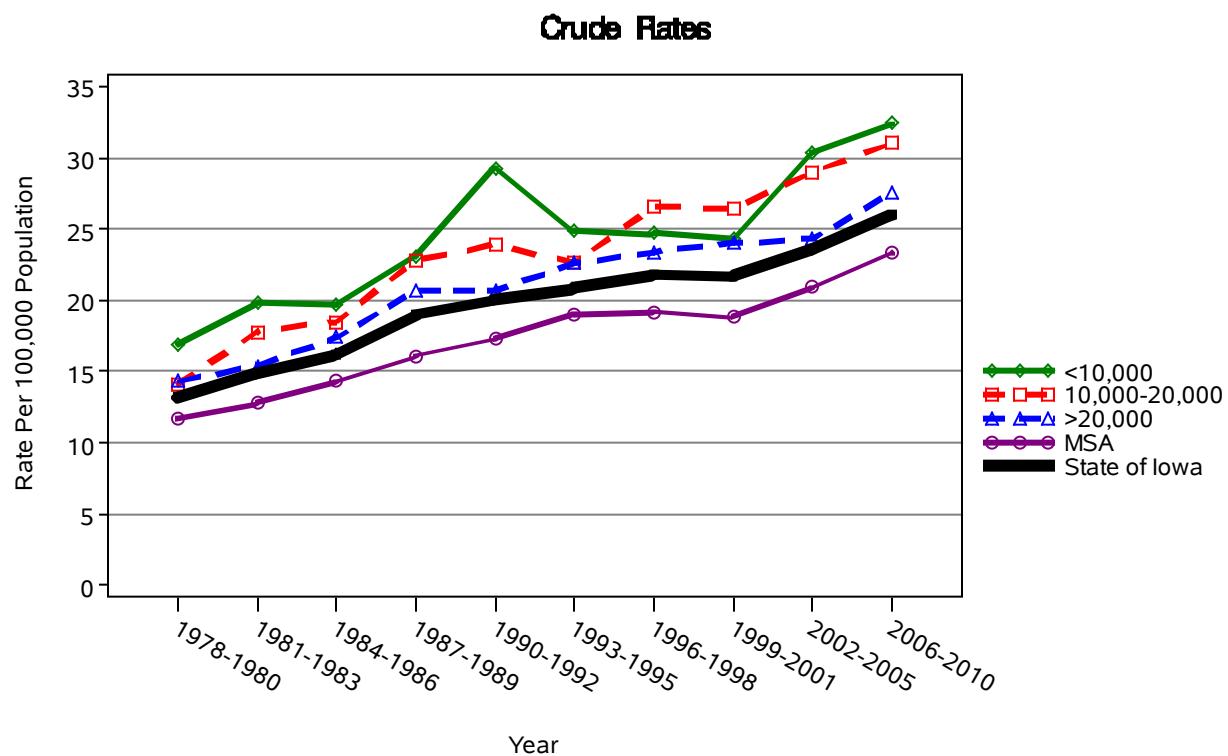
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>		County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	9	23.1	13.4		Lucas	12	26.3	16.2
	Adams	10	48.4	31.2		Monona	12	25.7	13.4
	Audubon	10	32.3	20.3		Monroe	11	27.8	20.9
	Clarke	14	30.4	23.6		Osceola	*	*	*
	Davis	16	36.8	30.2		Palo Alto	21	44.2	27.9
	Decatur	11	25.9	21.3		Pocahontas	20	53.3	37.3
	Fremont	8	21.3	16.6		Ringgold	13	50.3	29.7
	Greene	21	44.5	35.3		Taylor	20	62.5	38.0
	Howard	18	37.5	27.3		Van Buren	6	15.7	10.4
	Humboldt	12	24.2	17.2		Wayne	12	37.5	26.9
	Ida	10	27.9	19.8		Worth	8	21.0	16.5
						<b>Total</b>	*	*	*
Counties with Average Population 10,000 - 20,000	Allamakee	22	30.7	23.3		Hardin	25	28.3	20.2
	Appanoose	27	41.4	30.4		Iowa	42	51.4	39.8
	Butler	36	48.4	31.2		Jefferson	17	20.4	16.6
	Calhoun	14	28.4	18.6		Keokuk	18	33.9	25.1
	Cass	23	32.9	22.1		Kossuth	25	31.7	19.1
	Cedar	32	34.8	26.2		Louisa	15	25.7	21.7
	Cherokee	25	41.4	25.0		Lyon	15	25.9	18.9
	Chickasaw	30	48.0	34.2		Mitchell	19	35.2	20.3
	Clay	22	26.3	19.5		Montgomery	11	20.2	13.2
	Clayton	28	30.8	21.8		O'Brien	22	30.5	19.6
	Crawford	17	20.1	16.7		Page	26	32.3	21.9
	Delaware	20	22.4	17.7		Poweshiek	16	16.8	13.0
	Dickinson	37	44.4	26.3		Sac	18	34.3	28.0
	Emmet	10	19.3	13.4		Shelby	21	34.1	25.6
	Floyd	20	24.4	16.8		Tama	29	32.3	24.4
	Franklin	19	35.5	24.9		Union	15	24.2	18.6
	Hamilton	25	31.5	21.6		Winnebago	22	40.1	29.8
	Hancock	16	27.8	20.3		<b>Total</b>	790	31.0	22.0
Counties with Average Population > 20,000	Boone	19	14.4	11.5		Lee	39	21.7	16.8
	Buchanan	18	17.1	14.4		Mahaska	26	23.2	18.8
	Buena Vista	17	17.0	14.8		Marion	55	33.0	28.0
	Carroll	37	35.6	28.5		Marshall	59	29.4	25.1
	Cerro Gordo	85	38.4	27.8		Muscatine	46	21.6	19.4
	Clinton	53	21.5	17.4		Plymouth	50	40.1	31.5
	Des Moines	64	31.8	23.1		Sioux	27	16.2	13.4
	Fayette	36	34.3	25.6		Wapello	69	38.8	30.8
	Henry	38	37.5	30.5		Webster	37	19.3	15.9
	Jackson	34	34.1	25.9		Winneshiek	28	26.6	21.0
	Jasper	53	28.6	22.9		<b>Total</b>	890	27.5	22.1
MSA Counties	Benton	28	21.5	18.5		Linn	253	24.4	23.1
	Black Hawk	173	26.8	24.0		Madison	23	29.7	23.9
	Bremer	37	30.6	24.9		Mills	15	19.8	17.0
	Dallas	59	19.1	21.5		Polk	443	21.1	22.5
	Dubuque	137	29.6	25.0		Pottawattamie	114	24.8	22.4
	Grundy	13	21.0	14.9		Scott	205	25.3	23.9
	Guthrie	17	30.8	20.2		Story	71	16.2	20.4
	Harrison	23	30.5	22.8		Warren	52	22.9	21.9
	Johnson	108	17.0	22.8		Washington	41	37.9	27.4
	Jones	26	25.1	19.9		Woodbury	129	25.5	24.0
						<b>Total</b>	1,967	23.3	22.8
	<b>State Total</b>	*	*	*					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than or equal to 5

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Non-Hodgkin's Lymphoma Incidence by County Group 1978-2010



# Non-Hodgkin's Lymphoma Mortality 2006-2010

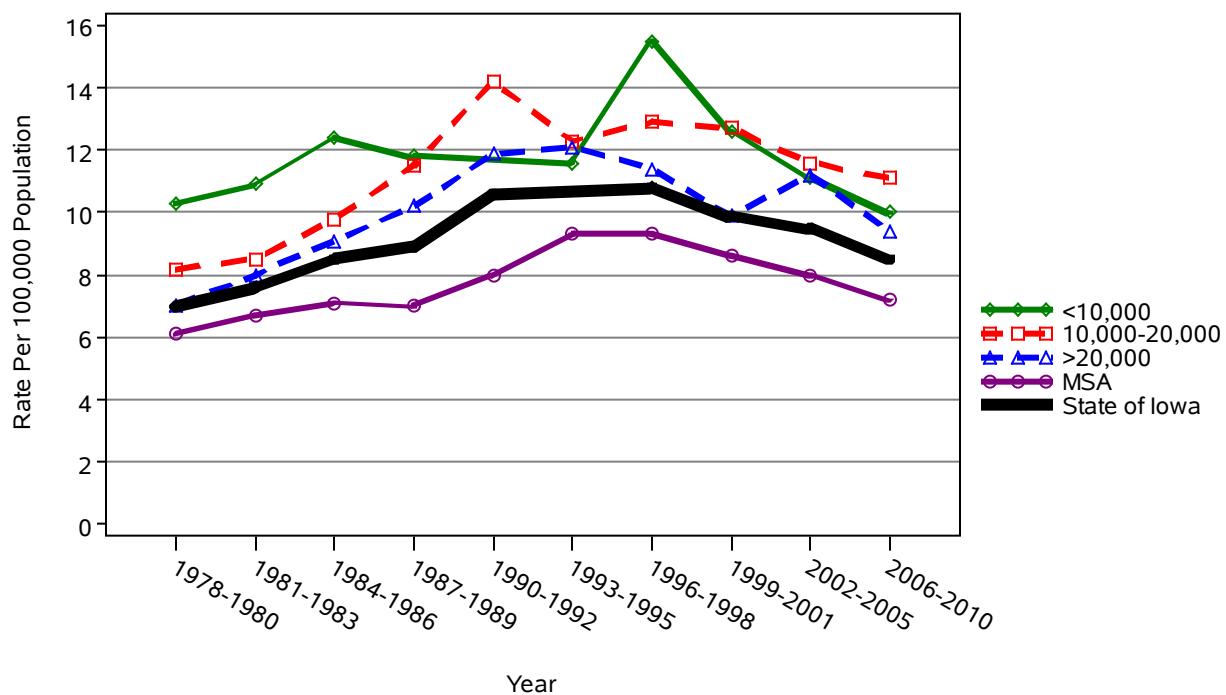
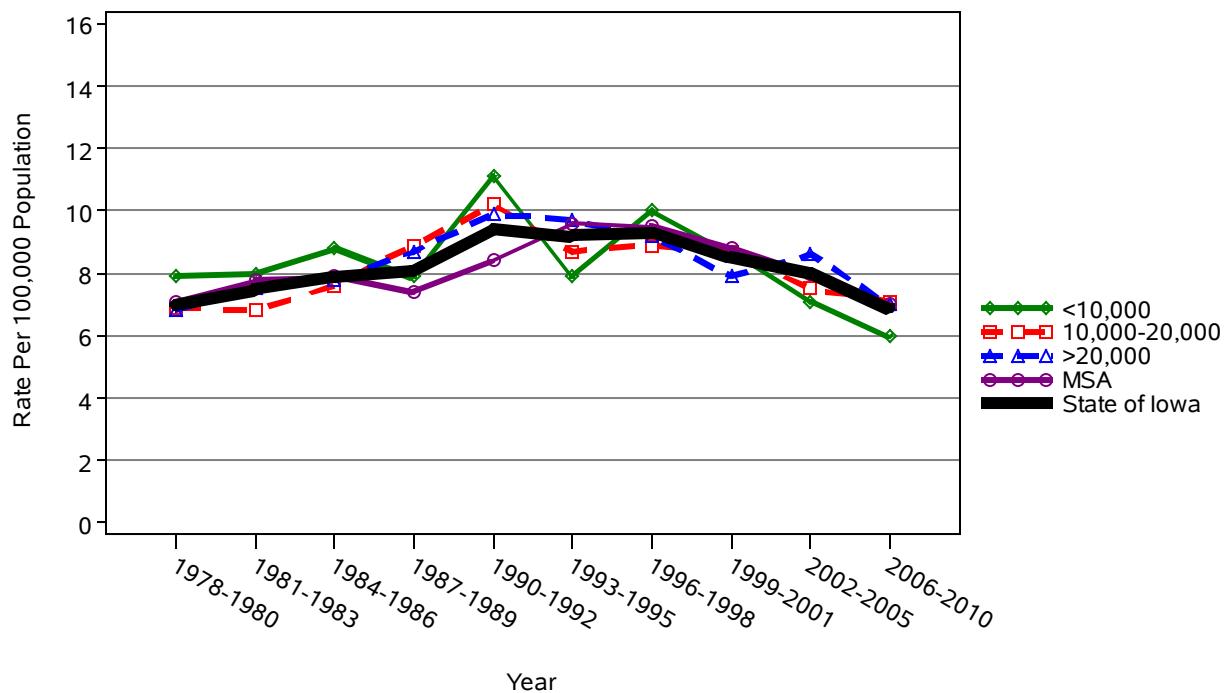
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	86	10.0	6.0
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	13	15.9	11.2
	Butler	11	14.8	9.2	Jefferson	*	*	*
	Calhoun	*	*	*	Keokuk	*	*	*
	Cass	19	27.2	17.8	Kossuth	*	*	*
	Cedar	*	*	*	Louisa	*	*	*
	Cherokee	15	24.8	14.1	Lyon	*	*	*
	Chickasaw	*	*	*	Mitchell	*	*	*
	Clay	*	*	*	Montgomery	*	*	*
	Clayton	10	11.0	6.3	O'Brien	13	18.0	11.0
	Crawford	*	*	*	Page	13	16.2	8.8
	Delaware	*	*	*	Poweshiek	*	*	*
	Dickinson	15	18.0	10.1	Sac	*	*	*
	Emmet	*	*	*	Shelby	*	*	*
	Floyd	14	17.1	11.9	Tama	*	*	*
	Franklin	*	*	*	Union	*	*	*
	Hamilton	*	*	*	Winnebago	*	*	*
	Hancock	*	*	*	Wright	*	*	*
					<b>Total</b>	282	11.1	7.1
Counties with Average Population > 20,000	Boone	12	9.1	6.4	Lee	14	7.8	5.9
	Buchanan	12	11.4	9.1	Mahaska	*	*	*
	Buena Vista	11	11.0	8.5	Marion	11	6.6	5.1
	Carroll	15	14.4	9.8	Marshall	18	9.0	6.4
	Cerro Gordo	32	14.4	10.3	Muscatine	12	5.6	5.0
	Clinton	20	8.1	5.4	Plymouth	17	13.6	9.1
	Des Moines	27	13.4	9.7	Sioux	10	6.0	4.4
	Fayette	11	10.5	8.4	Wapello	22	12.4	9.4
	Henry	11	10.9	8.7	Webster	17	8.9	6.2
	Jackson	*	*	*	Winneshiek	*	*	*
	Jasper	16	8.6	6.8	<b>Total</b>	306	9.4	7.0
MSA Counties	Benton	11	8.4	6.8	Linn	74	7.1	6.8
	Black Hawk	53	8.2	7.2	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	12	3.9	4.6	Polk	135	6.4	7.1
	Dubuque	45	9.7	7.6	Pottawattamie	38	8.3	7.1
	Grundy	*	*	*	Scott	59	7.3	6.9
	Guthrie	*	*	*	Story	22	5.0	6.3
	Harrison	*	*	*	Warren	24	10.6	9.8
	Johnson	34	5.4	7.5	Washington	12	11.1	7.4
	Jones	*	*	*	Woodbury	42	8.3	7.2
					<b>Total</b>	611	7.2	7.0
	<b>State Total</b>	1,285	8.5	6.9				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Non-Hodgkin's Lymphoma Mortality by County Group 1978-2010

**Crude Rates****Age-Adjusted Rates**

## Skin Melanoma Incidence 2006-2010

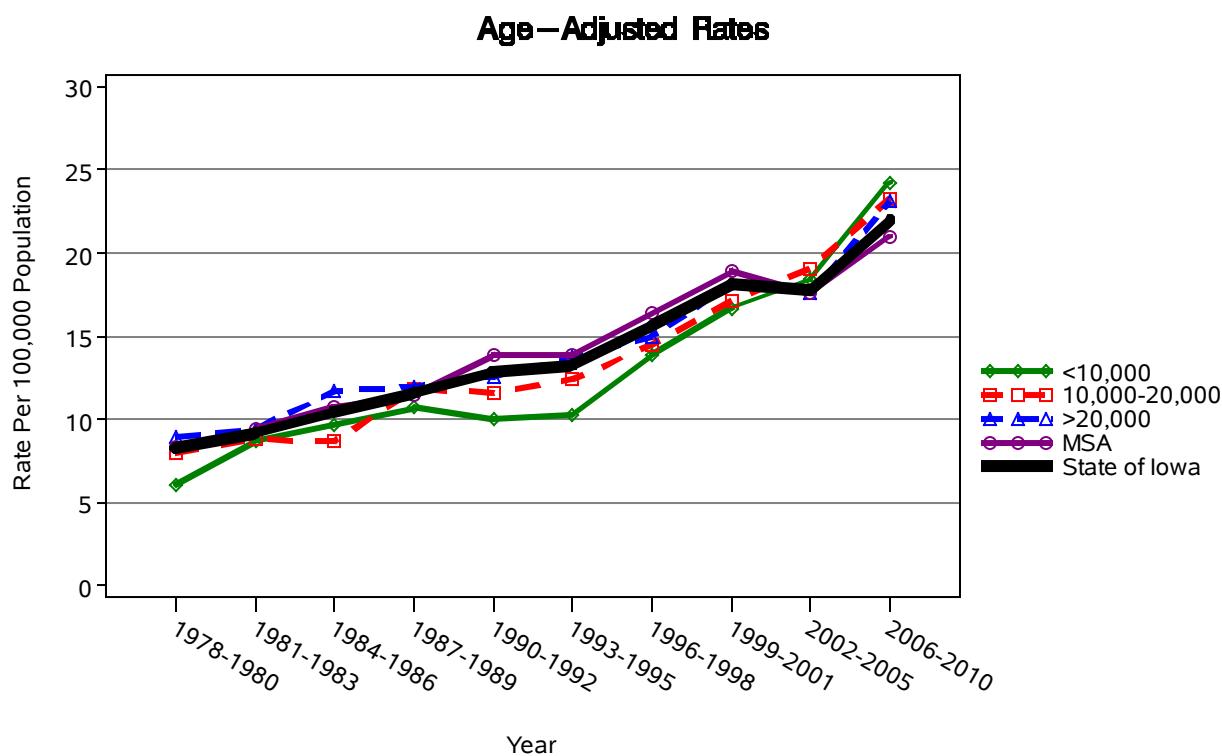
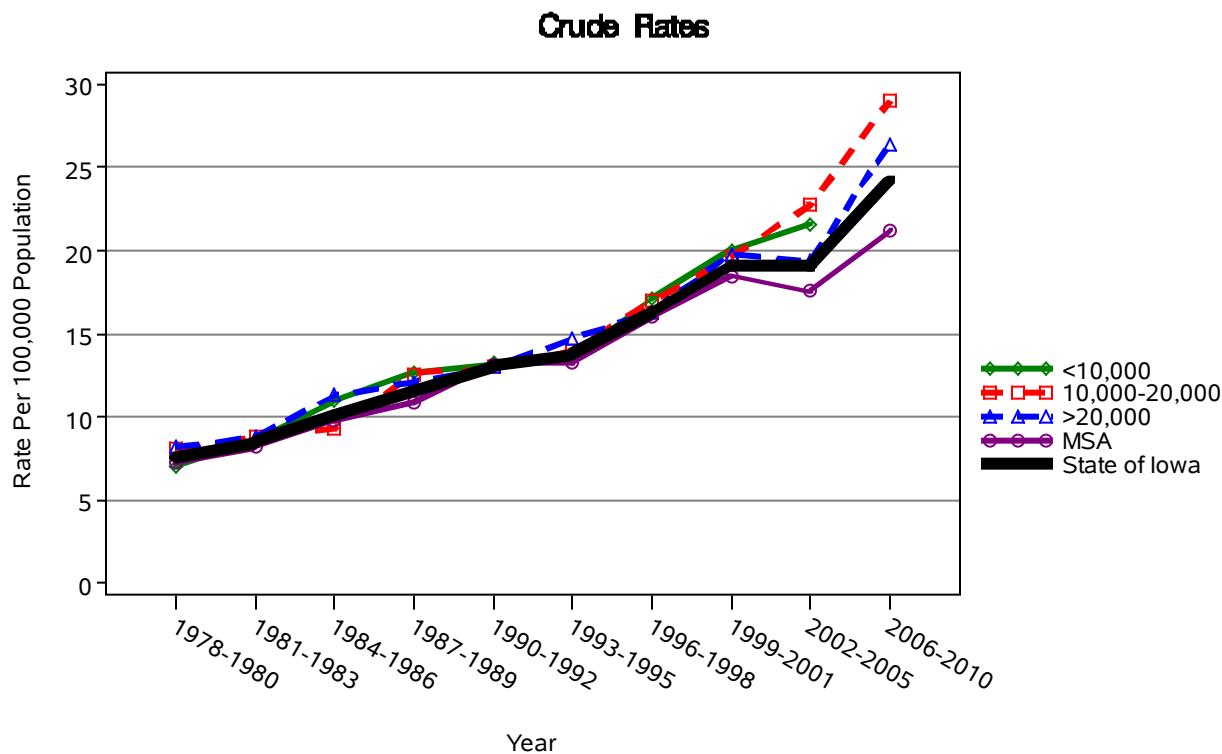
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>		County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	13	33.4	22.7		Lucas	12	26.3	19.0
	Adams	8	38.8	29.7		Monona	18	38.5	30.5
	Audubon	8	25.9	17.9		Monroe	12	30.3	28.1
	Clarke	11	23.9	19.9		Osceola	*	*	*
	Davis	9	20.7	17.2		Palo Alto	19	40.0	34.6
	Decatur	10	23.5	21.7		Pocahontas	*	*	*
	Fremont	7	18.6	16.1		Ringgold	7	27.1	15.5
	Greene	21	44.5	30.0		Taylor	19	59.3	43.6
	Howard	19	39.5	32.2		Van Buren	15	39.2	32.7
	Humboldt	13	26.2	20.2		Wayne	*	*	*
	Ida	12	33.5	27.1		Worth	17	44.6	37.3
						<b>Total</b>	262	30.6	24.2
Counties with Average Population 10,000 – 20,000	Allamakee	20	27.9	22.7		Hardin	23	26.0	23.8
	Appanoose	15	23.0	19.8		Iowa	21	25.7	23.6
	Butler	28	37.6	29.6		Jefferson	17	20.4	18.7
	Calhoun	18	36.6	28.9		Keokuk	13	24.5	21.3
	Cass	19	27.2	21.3		Kossuth	37	47.0	38.1
	Cedar	26	28.2	25.1		Louisa	12	20.5	18.0
	Cherokee	20	33.1	21.1		Lyon	8	13.8	11.9
	Chickasaw	23	36.8	29.8		Mitchell	19	35.2	25.6
	Clay	19	22.7	19.9		Montgomery	16	29.4	22.7
	Clayton	20	22.0	17.7		O'Brien	24	33.3	25.7
	Crawford	15	17.7	14.6		Page	28	34.8	25.5
	Delaware	29	32.5	26.9		Poweshiek	23	24.2	17.9
	Dickinson	24	28.8	21.3		Sac	13	24.8	18.8
	Emmet	11	21.2	19.8		Shelby	12	19.5	12.6
	Floyd	34	41.5	28.6		Tama	24	26.7	21.8
	Franklin	18	33.6	27.9		Union	15	24.2	19.3
	Hamilton	23	29.0	23.1		Winnebago	22	40.1	33.8
	Hancock	19	33.0	26.8		<b>Total</b>	738	29.0	23.3
Counties with Average Population > 20,000	Boone	40	30.3	25.9		Lee	32	17.8	14.3
	Buchanan	22	20.9	18.9		Mahaska	24	21.4	19.7
	Buena Vista	22	22.0	18.1		Marion	43	25.8	22.7
	Carroll	31	29.8	28.3		Marshall	63	31.4	25.1
	Cerro Gordo	64	28.9	23.8		Muscatine	50	23.5	21.9
	Clinton	78	31.7	27.2		Plymouth	55	44.1	43.2
	Des Moines	43	21.4	18.1		Sioux	50	30.0	28.9
	Fayette	22	21.0	17.0		Wapello	35	19.7	17.1
	Henry	23	22.7	20.5		Webster	55	28.7	24.2
	Jackson	33	33.1	26.1		Winneshiek	33	31.4	34.7
	Jasper	38	20.5	17.5		<b>Total</b>	856	26.4	23.1
MSA Counties	Benton	39	29.9	26.6		Linn	229	22.0	21.5
	Black Hawk	146	22.6	21.3		Madison	15	19.4	18.1
	Bremer	35	28.9	23.8		Mills	21	27.7	24.7
	Dallas	54	17.5	18.5		Polk	341	16.3	17.0
	Dubuque	141	30.5	28.3		Pottawattamie	72	15.7	14.4
	Grundy	35	56.4	47.4		Scott	219	27.0	25.5
	Guthrie	13	23.5	17.3		Story	71	16.2	20.1
	Harrison	18	23.9	21.5		Warren	37	16.3	15.6
	Johnson	125	19.7	22.5		Washington	20	18.5	15.7
	Jones	20	19.3	16.3		Woodbury	139	27.5	27.0
						<b>Total</b>	1,790	21.2	21.0
	<b>State Total</b>	3,646	24.2	22.0					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than or equal to 5

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Skin Melanoma Incidence by County Group 1978-2010



# Skin Melanoma Mortality 2006-2010

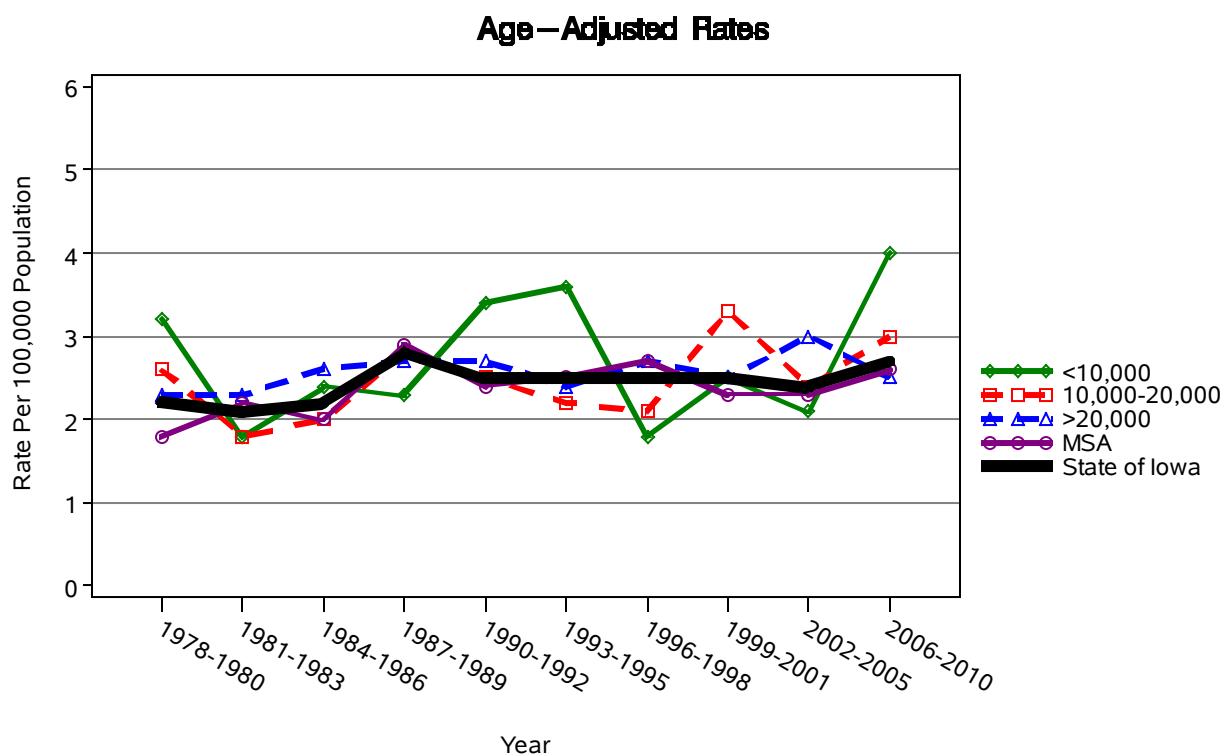
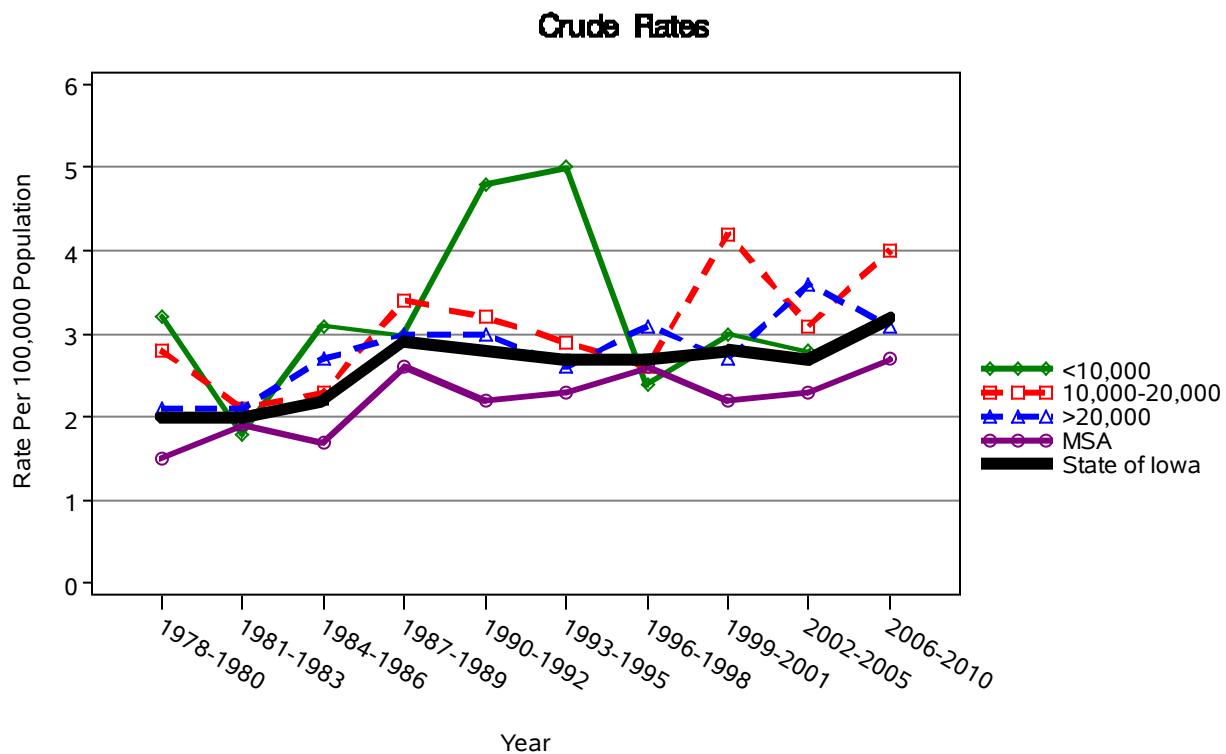
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	52	6.1	4.0
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Butler	*	*	*	Jefferson	*	*	*
	Calhoun	*	*	*	Keokuk	*	*	*
	Cass	*	*	*	Kossuth	*	*	*
	Cedar	*	*	*	Louisa	*	*	*
	Cherokee	*	*	*	Lyon	*	*	*
	Chickasaw	*	*	*	Mitchell	*	*	*
	Clay	*	*	*	Montgomery	*	*	*
	Clayton	*	*	*	O'Brien	*	*	*
	Crawford	*	*	*	Page	*	*	*
	Delaware	*	*	*	Poweshiek	*	*	*
	Dickinson	*	*	*	Sac	*	*	*
	Emmet	*	*	*	Shelby	*	*	*
	Floyd	*	*	*	Tama	*	*	*
	Franklin	*	*	*	Union	*	*	*
	Hamilton	*	*	*	Winnebago	*	*	*
	Hancock	*	*	*	<b>Total</b>	103	4.0	3.0
Counties with Average Population > 20,000	Boone	*	*	*	Lee	*	*	*
	Buchanan	*	*	*	Mahaska	*	*	*
	Buena Vista	*	*	*	Marion	*	*	*
	Carroll	*	*	*	Marshall	*	*	*
	Cerro Gordo	*	*	*	Muscatine	*	*	*
	Clinton	*	*	*	Plymouth	*	*	*
	Des Moines	*	*	*	Sioux	*	*	*
	Fayette	*	*	*	Wapello	*	*	*
	Henry	*	*	*	Webster	10	5.2 (01)	4.1 (02)
	Jackson	*	*	*	Winneshiek	*	*	*
	Jasper	*	*	*	<b>Total</b>	99	3.1	2.5
MSA Counties	Benton	*	*	*	Linn	28	2.7 (06)	2.5 (08)
	Black Hawk	15	2.3 (10)	2.1 (10)	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	*	*	*	Polk	52	2.5 (09)	2.6 (07)
	Dubuque	14	3.0 (05)	2.5 (08)	Pottawattamie	16	3.5 (04)	2.9 (06)
	Grundy	*	*	*	Scott	29	3.6 (03)	3.1 (05)
	Guthrie	*	*	*	Story	12	2.7 (06)	3.4 (03)
	Harrison	*	*	*	Warren	10	4.4 (02)	4.5 (01)
	Johnson	17	2.7 (06)	3.2 (04)	Washington	*	*	*
	Jones	*	*	*	Woodbury	*	*	*
					<b>Total</b>	225	2.7	2.6
	<b>State Total</b>	479	3.2	2.7				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Skin Melanoma Mortality by County Group 1978-2010



# Leukemia Incidence 2006-2010

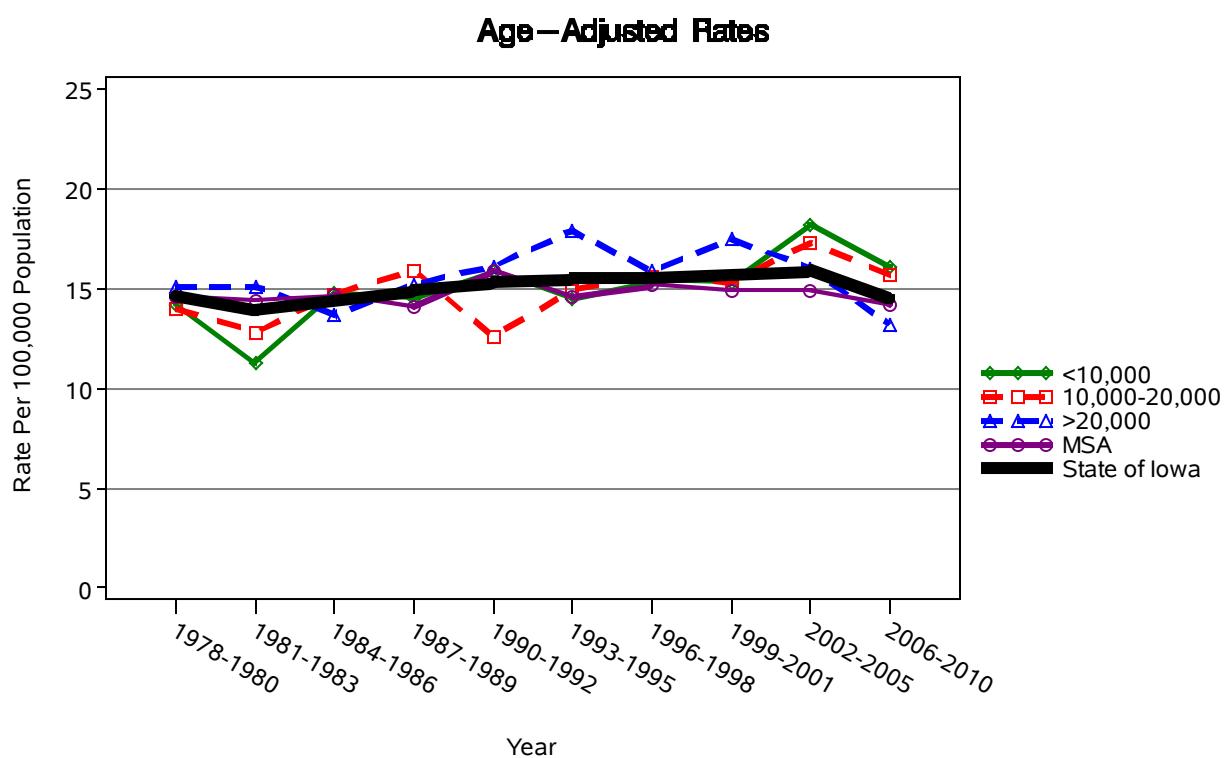
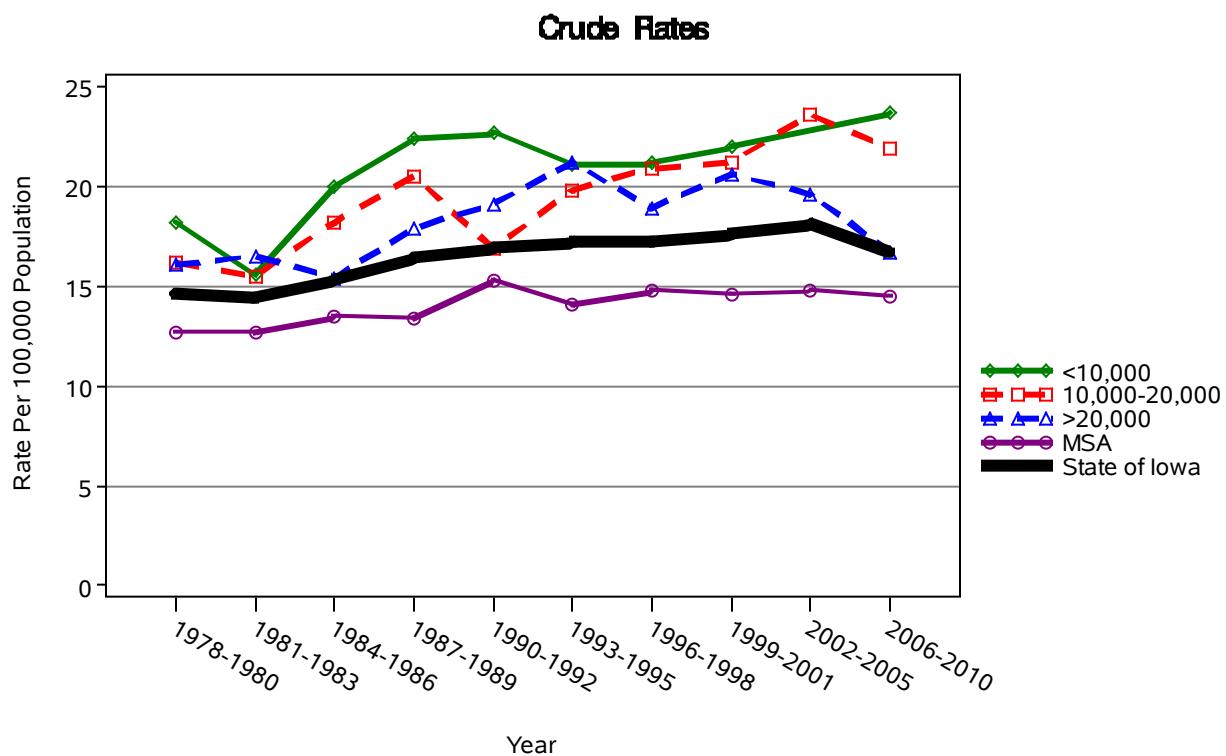
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	12	30.9	16.6	Lucas	7	15.4	11.9
	Adams	8	38.8	25.8	Monona	15	32.1	20.0
	Audubon	15	48.5	29.2	Monroe	7	17.7	12.8
	Clarke	9	19.5	14.2	Osceola	7	21.3	14.3
	Davis	15	34.5	29.3	Palo Alto	10	21.0	11.8
	Decatur	6	14.1	11.8	Pocahontas	*	*	*
	Fremont	8	21.3	14.8	Ringgold	6	23.2	14.2
	Greene	10	21.2	12.5	Taylor	8	25.0	18.1
	Howard	9	18.7	16.0	Van Buren	7	18.3	14.5
	Humboldt	9	18.2	12.3	Wayne	10	31.2	19.2
	Ida	12	33.5	19.0	Worth	8	21.0	14.5
					<b>Total</b>	*	*	*
Counties with Average Population 10,000 – 20,000	Allamakee	23	32.1	22.6	Hardin	15	17.0	9.9
	Appanoose	14	21.5	16.3	Iowa	15	18.3	16.8
	Butler	18	24.2	15.8	Jefferson	16	19.2	15.5
	Calhoun	9	18.3	9.3	Keokuk	12	22.6	14.5
	Cass	24	34.4	20.3	Kossuth	25	31.7	21.2
	Cedar	16	17.4	12.6	Louisa	8	13.7	11.7
	Cherokee	16	26.5	20.4	Lyon	12	20.8	16.5
	Chickasaw	11	17.6	13.8	Mitchell	13	24.1	19.1
	Clay	11	13.2	11.5	Montgomery	8	14.7	11.9
	Clayton	18	19.8	14.7	O'Brien	26	36.1	21.3
	Crawford	25	29.5	23.6	Page	18	22.4	17.5
	Delaware	13	14.6	11.2	Poweshiek	20	21.0	15.5
	Dickinson	18	21.6	15.3	Sac	16	30.5	20.5
	Emmet	8	15.4	9.5	Shelby	13	21.1	14.6
	Floyd	18	22.0	16.6	Tama	21	23.4	17.6
	Franklin	14	26.2	17.4	Union	13	21.0	15.4
	Hamilton	14	17.6	13.4	Winnebago	10	18.2	13.6
	Hancock	16	27.8	19.7	Wright	10	14.9	8.6
					<b>Total</b>	557	21.9	15.7
Counties with Average Population > 20,000	Boone	19	14.4	11.3	Lee	29	16.1	11.7
	Buchanan	21	20.0	16.1	Mahaska	18	16.1	13.9
	Buena Vista	15	15.0	13.6	Marion	36	21.6	18.5
	Carroll	12	11.5	9.2	Marshall	39	19.4	15.8
	Cerro Gordo	48	21.7	15.4	Muscatine	39	18.4	16.2
	Clinton	30	12.2	9.5	Plymouth	16	12.8	10.7
	Des Moines	33	16.4	12.6	Sioux	27	16.2	13.6
	Fayette	18	17.1	12.2	Wapello	30	16.9	14.1
	Henry	18	17.8	14.7	Webster	28	14.6	10.8
	Jackson	25	25.1	18.4	Winneshiek	16	15.2	12.2
	Jasper	24	13.0	10.0	<b>Total</b>	541	16.7	13.2
MSA Counties	Benton	18	13.8	11.8	Linn	156	15.0	14.2
	Black Hawk	112	17.3	15.9	Madison	13	16.8	15.1
	Bremer	15	12.4	10.0	Mills	12	15.8	12.1
	Dallas	50	16.2	18.9	Polk	287	13.7	14.6
	Dubuque	61	13.2	11.2	Pottawattamie	57	12.4	11.6
	Grundy	15	24.2	18.5	Scott	130	16.0	15.3
	Guthrie	9	16.3	11.4	Story	57	13.0	15.6
	Harrison	15	19.9	14.6	Warren	31	13.7	12.8
	Johnson	73	11.5	15.2	Washington	28	25.9	19.1
	Jones	20	19.3	15.0	Woodbury	64	12.6	11.7
					<b>Total</b>	1,223	14.5	14.2
	<b>State Total</b>	*	*	*				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than or equal to 5

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Leukemia Incidence by County Group 1978-2010



# Leukemia Mortality 2006-2010

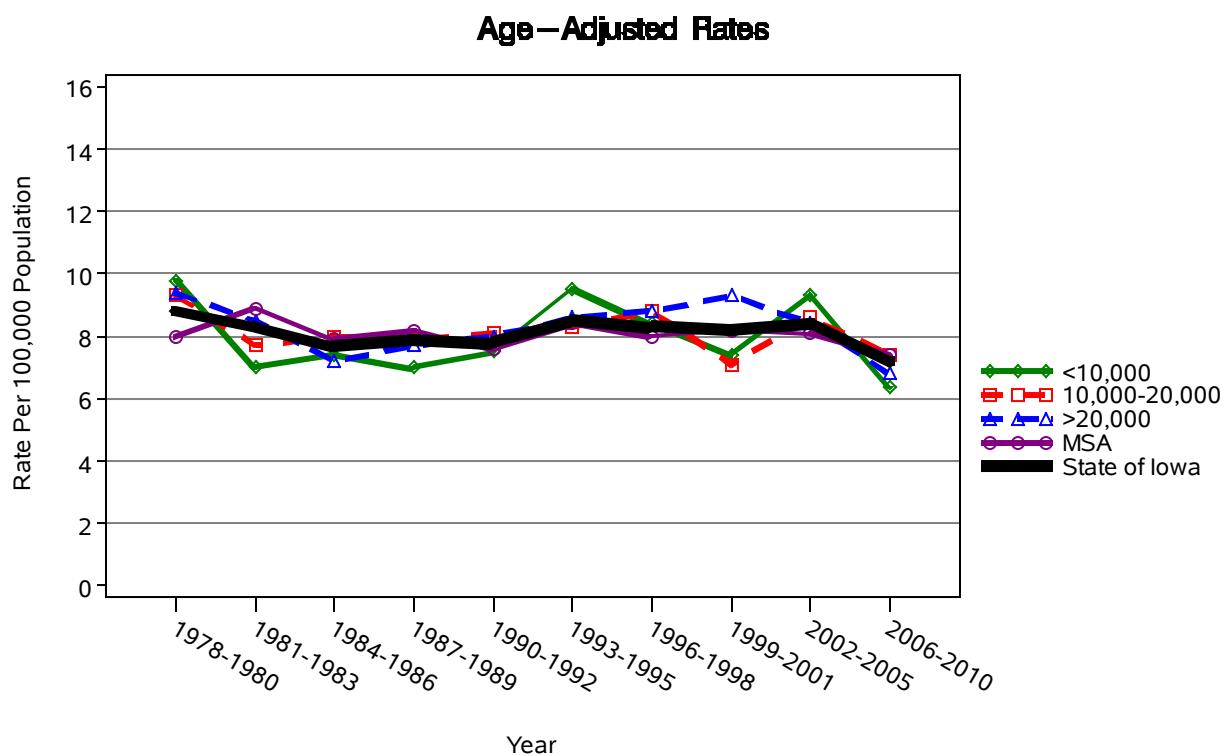
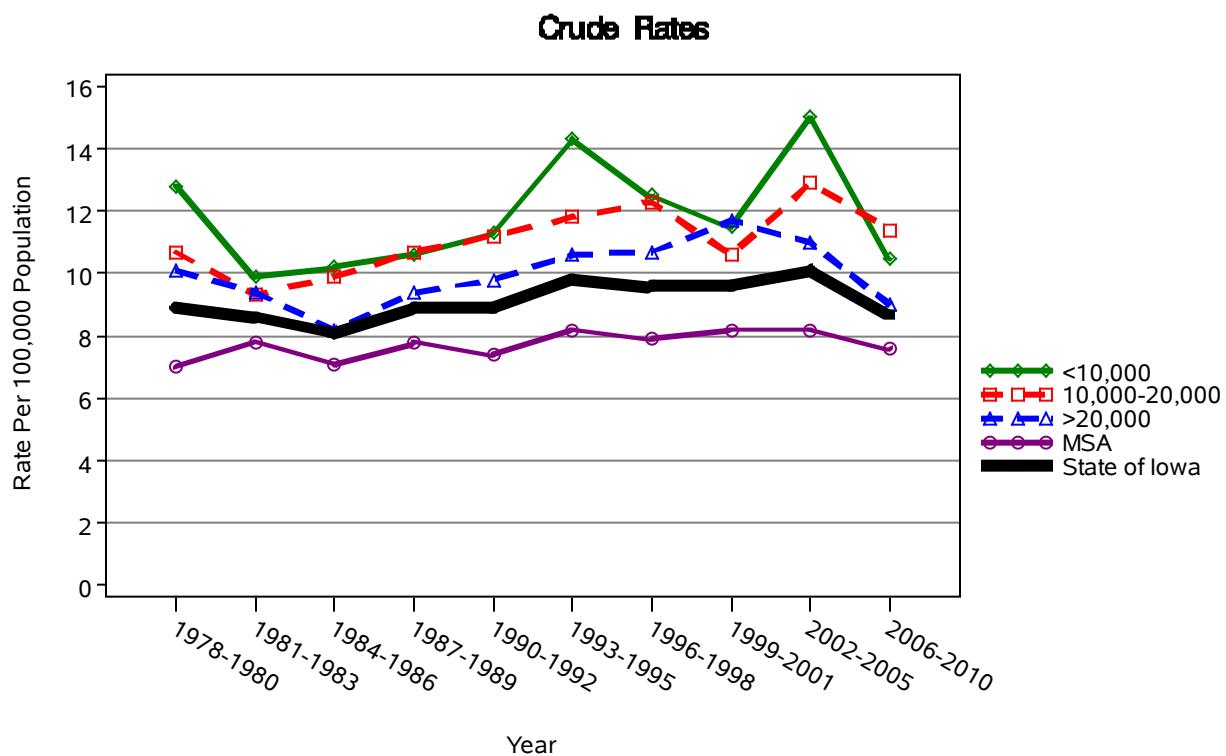
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	90	10.5	6.4
Counties with Average Population 10,000 – 20,000	Allamakee	13	18.1	13.3	Hardin	12	13.6	8.3
	Appanoose	12	18.4	12.4	Iowa	10	12.2	9.2
	Butler	12	16.1	10.0	Jefferson	13	15.6	11.7
	Calhoun	*	*	*	Keokuk	*	*	*
	Cass	15	21.5	13.9	Kossuth	12	15.2	7.9
	Cedar	10	10.9	7.6	Louisa	*	*	*
	Cherokee	*	*	*	Lyon	*	*	*
	Chickasaw	*	*	*	Mitchell	*	*	*
	Clay	*	*	*	Montgomery	*	*	*
	Clayton	13	14.3	8.8	O'Brien	11	15.3	9.0
	Crawford	*	*	*	Page	*	*	*
	Delaware	*	*	*	Poweshiek	10	10.5	6.5
	Dickinson	*	*	*	Sac	13	24.8	12.5
	Emmet	*	*	*	Shelby	*	*	*
	Floyd	*	*	*	Tama	11	12.3	8.2
	Franklin	*	*	*	Union	*	*	*
	Hamilton	*	*	*	Winnebago	*	*	*
	Hancock	*	*	*	Wright	*	*	*
					<b>Total</b>	290	11.4	7.4
Counties with Average Population > 20,000	Boone	13	9.8	7.5	Lee	18	10.0	7.7
	Buchanan	11	10.5	8.3	Mahaska	10	8.9	7.1
	Buena Vista	*	*	*	Marion	*	*	*
	Carroll	11	10.6	6.8	Marshall	19	9.5	7.4
	Cerro Gordo	26	11.7	8.8	Muscatine	19	8.9	7.8
	Clinton	15	6.1	4.3	Plymouth	*	*	*
	Des Moines	14	7.0	4.6	Sioux	19	11.4	8.7
	Fayette	13	12.4	9.0	Wapello	15	8.4	6.9
	Henry	*	*	*	Webster	20	10.4	7.8
	Jackson	13	13.0	8.8	Winneshiek	*	*	*
	Jasper	17	9.2	6.9	<b>Total</b>	293	9.0	6.8
MSA Counties	Benton	*	*	*	Linn	80	7.7	7.1
	Black Hawk	54	8.4	7.4	Madison	*	*	*
	Bremer	11	9.1	5.7	Mills	*	*	*
	Dallas	16	5.2	6.6	Polk	136	6.5	7.2
	Dubuque	50	10.8	9.0	Pottawattamie	35	7.6	6.8
	Grundy	*	*	*	Scott	58	7.2	6.4
	Guthrie	*	*	*	Story	41	9.4	11.3
	Harrison	11	14.6	10.1	Warren	14	6.2	6.3
	Johnson	38	6.0	8.2	Washington	14	12.9	8.8
	Jones	*	*	*	Woodbury	40	7.9	7.1
					<b>Total</b>	643	7.6	7.4
	<b>State Total</b>	1,316	8.7	7.2				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Leukemia Mortality by County Group 1978-2010



# Oral Cavity Cancer Incidence 2006-2010

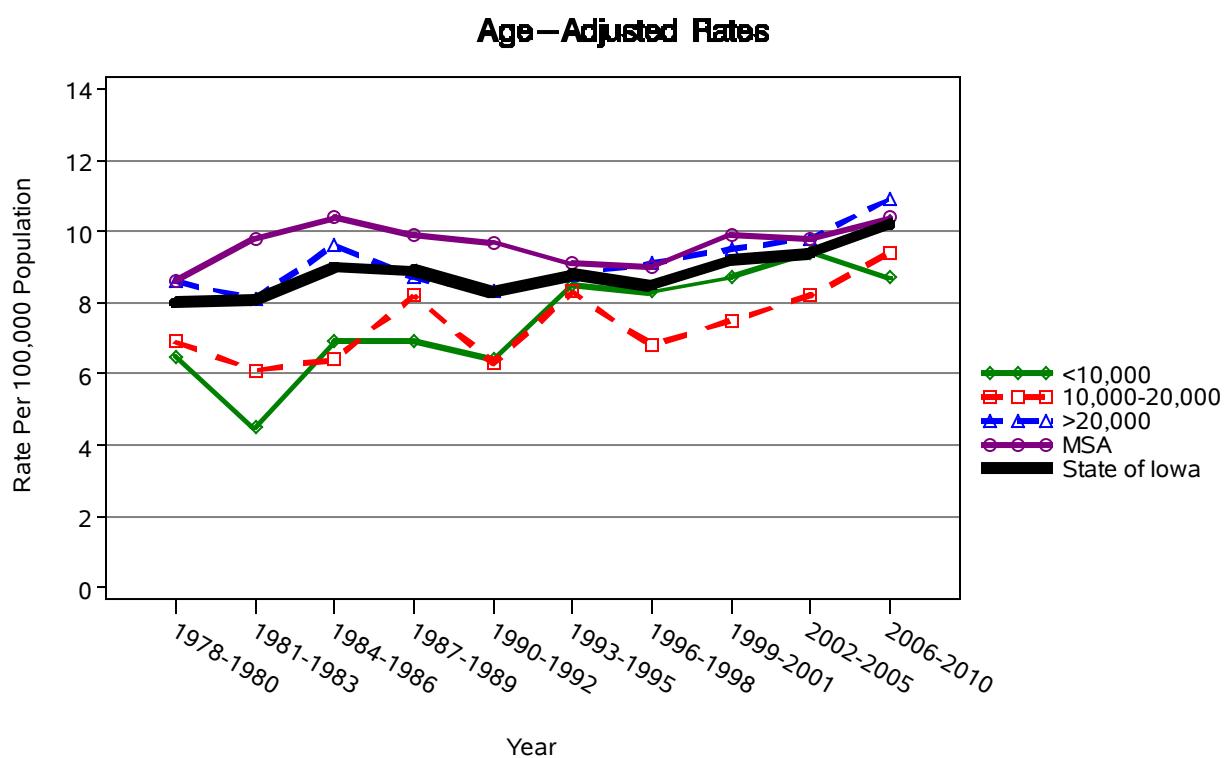
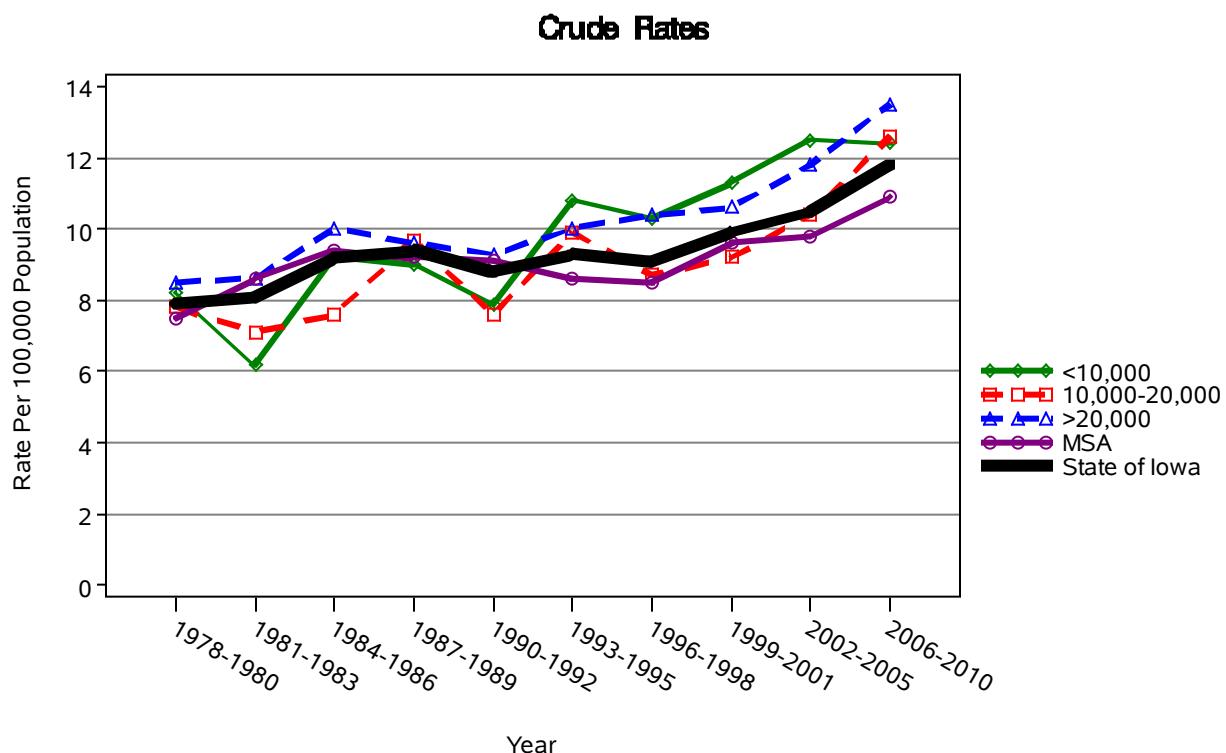
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	6	13.0	9.8	Osceola	8	24.3	16.1
	Davis	*	*	*	Palo Alto	7	14.7	10.4
	Decatur	6	14.1	10.5	Pocahontas	*	*	*
	Fremont	7	18.6	12.1	Ringgold	6	23.2	12.7
	Greene	6	12.7	8.2	Taylor	*	*	*
	Howard	9	18.7	13.6	Van Buren	*	*	*
	Humboldt	9	18.2	12.3	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	106	12.4	8.7
Counties with Average Population 10,000 – 20,000	Allamakee	7	9.8	6.9	Hardin	13	14.7	11.8
	Appanoose	*	*	*	Iowa	13	15.9	11.7
	Butler	9	12.1	8.9	Jefferson	18	21.6	17.1
	Calhoun	12	24.4	14.2	Keokuk	*	*	*
	Cass	8	11.5	7.9	Kossuth	10	12.7	8.7
	Cedar	8	8.7	7.0	Louisa	10	17.1	14.5
	Cherokee	6	9.9	7.5	Lyon	8	13.8	12.4
	Chickasaw	7	11.2	7.6	Mitchell	*	*	*
	Clay	8	9.6	7.0	Montgomery	10	18.3	11.7
	Clayton	12	13.2	9.9	O'Brien	8	11.1	7.0
	Crawford	9	10.6	9.6	Page	10	12.4	9.5
	Delaware	10	11.2	8.9	Poweshiek	9	9.5	9.2
	Dickinson	13	15.6	10.4	Sac	7	13.4	9.6
	Emmet	*	*	*	Shelby	*	*	*
	Floyd	7	8.5	7.2	Tama	13	14.5	11.3
	Franklin	6	11.2	10.6	Union	9	14.5	11.4
	Hamilton	6	7.6	5.9	Winnebago	7	12.8	8.4
	Hancock	16	27.8	19.5	Wright	9	13.5	9.4
					<b>Total</b>	320	12.6	9.4
Counties with Average Population > 20,000	Boone	16	12.1	9.1	Lee	30	16.7	12.3
	Buchanan	18	17.1	14.4	Mahaska	9	8.0	6.6
	Buena Vista	11	11.0	10.8	Marion	20	12.0	10.2
	Carroll	*	*	*	Marshall	31	15.5	12.2
	Cerro Gordo	33	14.9	11.4	Muscatine	24	11.3	9.6
	Clinton	34	13.8	11.0	Plymouth	23	18.4	15.4
	Des Moines	37	18.4	14.1	Sioux	15	9.0	8.6
	Fayette	12	11.4	7.4	Wapello	26	14.6	12.0
	Henry	21	20.7	18.0	Webster	32	16.7	13.5
	Jackson	10	10.0	6.6	Winneshiek	12	11.4	9.4
	Jasper	19	10.3	8.3	<b>Total</b>	*	*	*
MSA Counties	Benton	13	10.0	9.0	Linn	113	10.9	9.9
	Black Hawk	72	11.1	10.6	Madison	9	11.6	9.6
	Bremer	15	12.4	9.6	Mills	6	7.9	7.5
	Dallas	28	9.1	9.8	Polk	218	10.4	10.8
	Dubuque	58	12.5	10.8	Pottawattamie	55	12.0	10.2
	Grundy	12	19.4	13.8	Scott	109	13.4	12.2
	Guthrie	*	*	*	Story	26	5.9	7.1
	Harrison	11	14.6	10.8	Warren	19	8.4	7.2
	Johnson	56	8.8	10.9	Washington	17	15.7	13.9
	Jones	13	12.6	9.9	Woodbury	65	12.8	11.6
				<b>Total</b>	*	*	*	
	<b>State Total</b>	1,784	11.8	10.2				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

\* Represents a count less than or equal to 5

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Oral Cavity (Excluding Lip) Cancer Incidence by County Group 1978-2010



# Oral Cavity Cancer Mortality 2006-2010

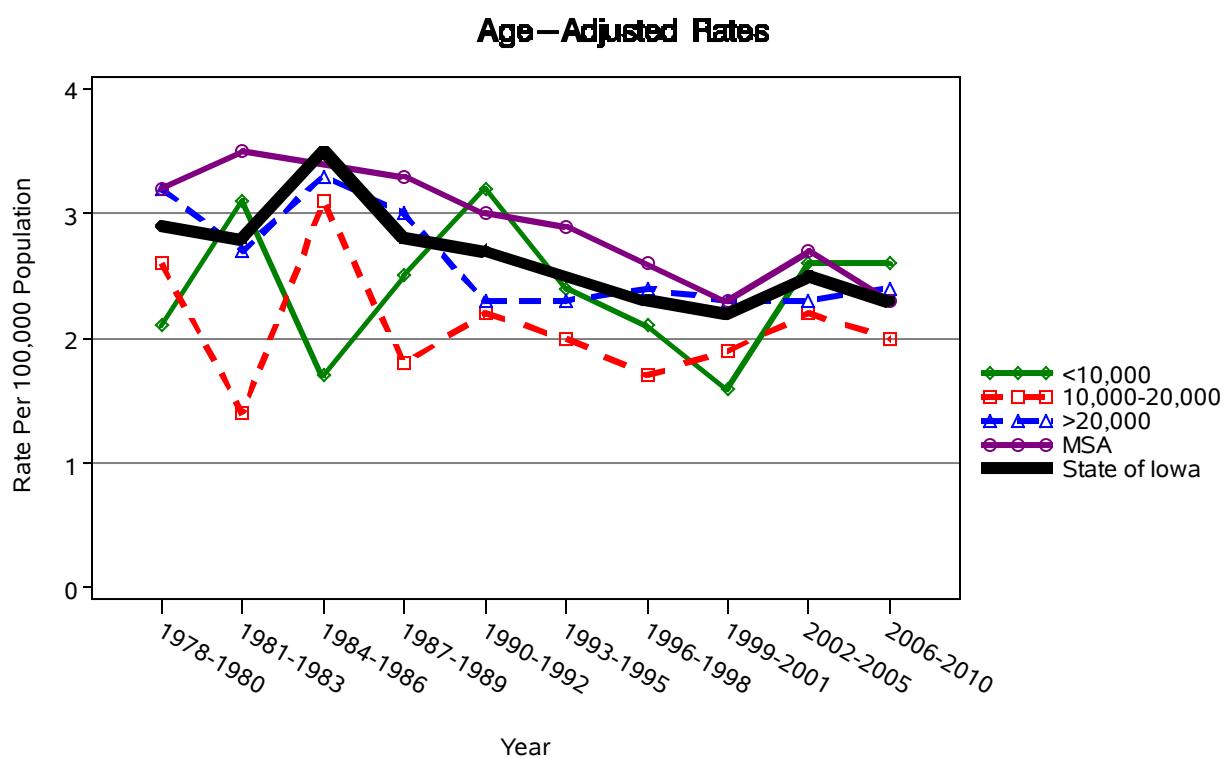
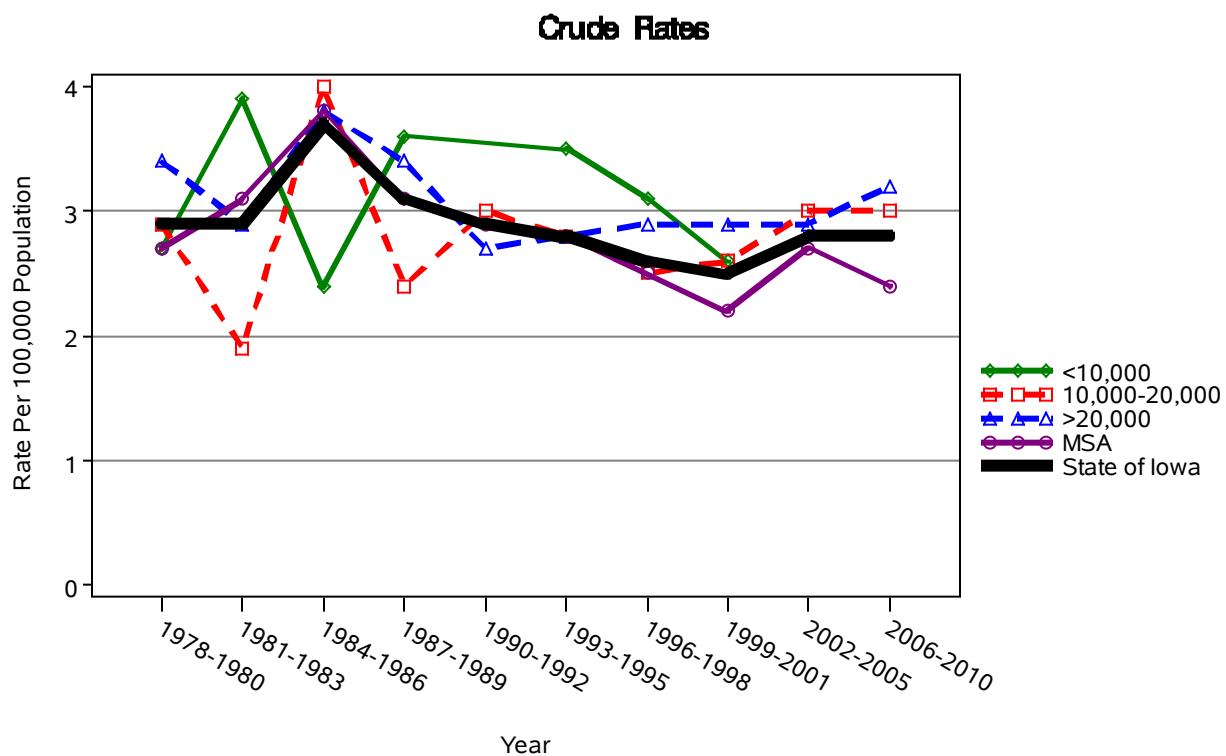
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
			*	*			*	*
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	35	4.1	2.6
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	77	3.0	2.0
Counties with Average Population > 20,000	Boone	*	*	*	Lee	*	*	*
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	*	*	*
	Cerro Gordo	*	*	*	Marshall	*	*	*
	Clinton	*	*	*	Muscatine	*	*	*
	Des Moines	*	*	*	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	10	5.6	4.4
	Jackson	*	*	*	Webster	*	*	*
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	103	3.2	2.4
MSA Counties	Benton	*	*	*	Linn	23	2.2	2.0
	Black Hawk	18	2.8	2.5	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	*	*	*	Polk	57	2.7	2.9
	Dubuque	13	2.8	2.4	Pottawattamie	12	2.6	2.1
	Grundy	*	*	*	Scott	20	2.5	2.2
	Guthrie	*	*	*	Story	*	*	*
	Harrison	*	*	*	Warren	*	*	*
	Johnson	12	1.9	2.4	Washington	*	*	*
	Jones	*	*	*	Woodbury	13	2.6	2.3
					<b>Total</b>	204	2.4	2.3
<b>State Total</b>		419	2.8	2.3				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Oral Cavity (Excluding Lip) Cancer Mortality by County Group 1978-2010



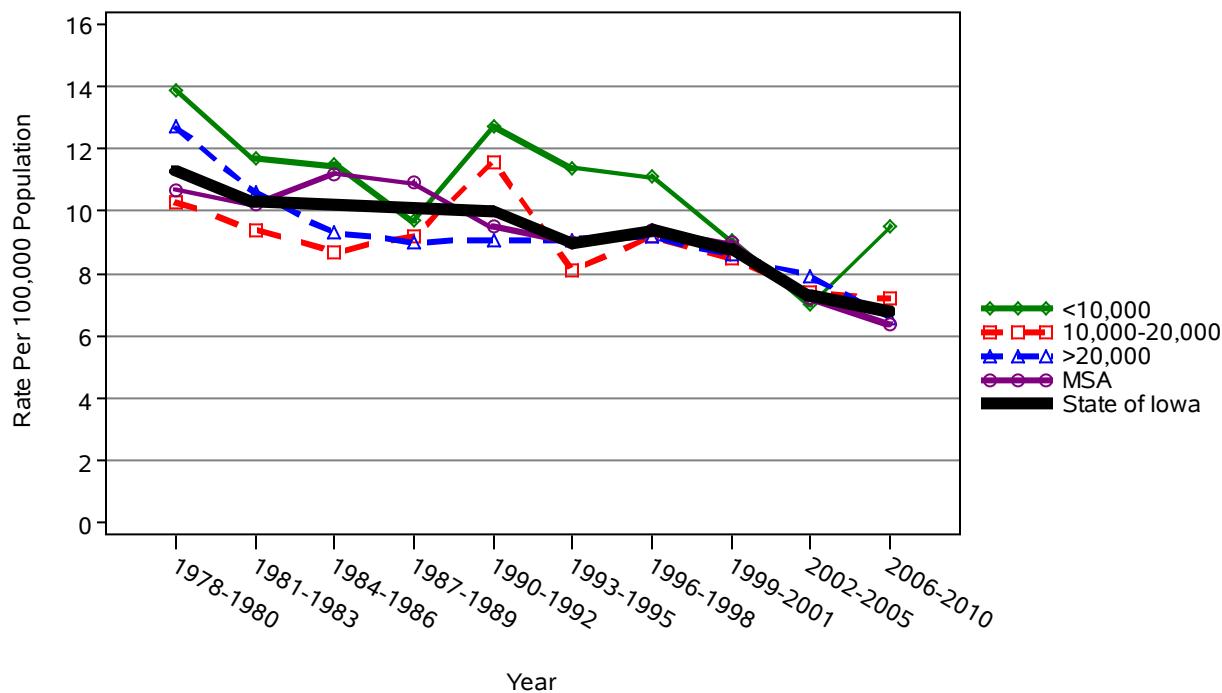
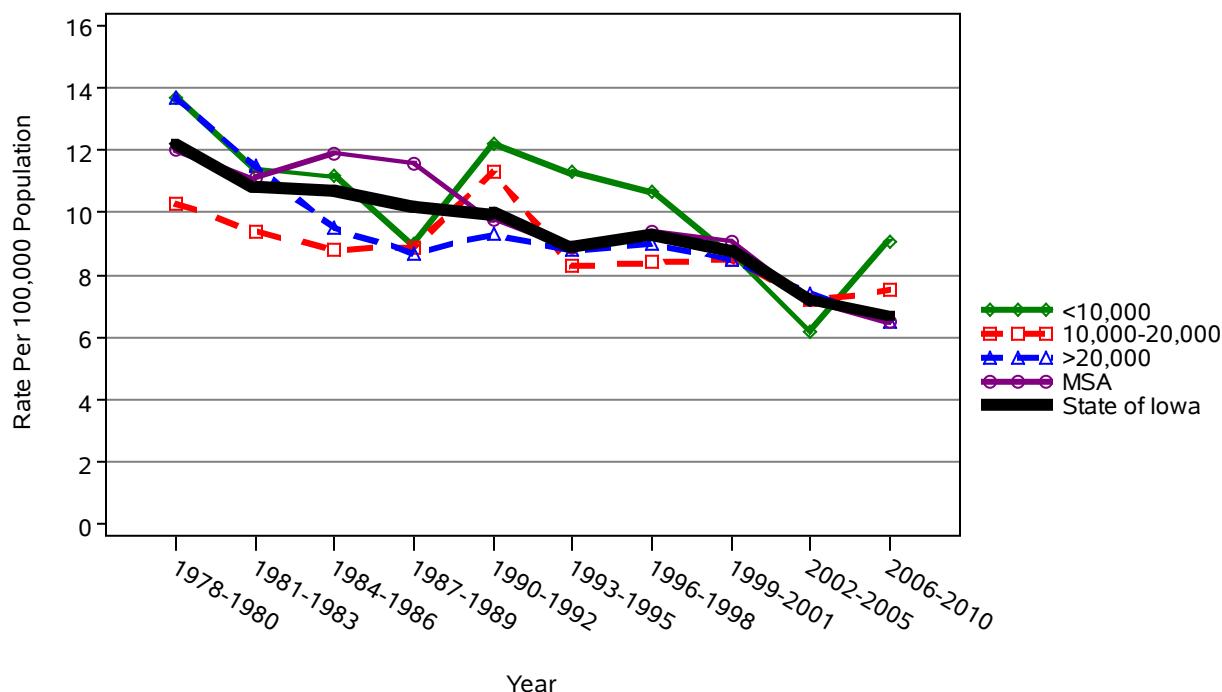
**Cervical Cancer Incidence 2006-2010**

County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*	*
	Adams	*	*	Monona	*	*	*
	Audubon	*	*	Monroe	6	30.0	32.7
	Clarke	*	*	Osceola	*	*	*
	Davis	*	*	Palo Alto	*	*	*
	Decatur	*	*	Pocahontas	*	*	*
	Fremont	*	*	Ringgold	*	*	*
	Greene	*	*	Taylor	*	*	*
	Howard	*	*	Van Buren	*	*	*
	Humboldt	*	*	Wayne	*	*	*
	Ida	*	*	Worth	*	*	*
				<b>Total</b>	41	9.5	9.1
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*	*
	Appanoose	*	*	Iowa	*	*	*
	Butler	*	*	Jefferson	*	*	*
	Calhoun	*	*	Keokuk	*	*	*
	Cass	*	*	Kossuth	*	*	*
	Cedar	*	*	Louisa	*	*	*
	Cherokee	*	*	Lyon	*	*	*
	Chickasaw	*	*	Mitchell	*	*	*
	Clay	*	*	Montgomery	*	*	*
	Clayton	*	*	O'Brien	*	*	*
	Crawford	*	*	Page	*	*	*
	Delaware	*	*	Poweshiek	*	*	*
	Dickinson	*	*	Sac	*	*	*
	Emmet	*	*	Shelby	*	*	*
	Floyd	*	*	Tama	6	13.2	14.1
	Franklin	*	*	Union	*	*	*
	Hamilton	*	*	Winnebago	*	*	*
	Hancock	*	*	Wright	*	*	*
				<b>Total</b>	92	7.2	7.5
Counties with Average Population > 20,000	Boone	*	*	Lee	6	6.7	7.4
	Buchanan	*	*	Mahaska	*	*	*
	Buena Vista	*	*	Marion	*	*	*
	Carroll	6	11.2	Marshall	*	*	*
	Cerro Gordo	8	7.0	Muscatine	11	10.3	10.4
	Clinton	6	4.8	Plymouth	*	*	*
	Des Moines	6	5.8	Sioux	*	*	*
	Fayette	*	*	Wapello	6	6.6	5.7
	Henry	*	*	Webster	11	11.8	10.9
	Jackson	8	15.9	Winneshiek	*	*	*
	Jasper	*	*	<b>Total</b>	107	6.6	6.5
MSA Counties	Benton	*	*	Linn	30	5.7	5.8
	Black Hawk	25	7.5	Madison	*	*	*
	Bremer	*	*	Mills	*	*	*
	Dallas	11	7.0	Polk	70	6.5	6.4
	Dubuque	8	3.4	Pottawattamie	16	6.8	6.1
	Grundy	*	*	Scott	35	8.5	8.2
	Guthrie	*	*	Story	8	3.8	4.5
	Harrison	*	*	Warren	14	12.1	11.2
	Johnson	17	5.3	Washington	*	*	*
	Jones	6	12.1	Woodbury	18	7.0	7.6
				<b>Total</b>	276	6.4	6.5
	<b>State Total</b>	516	6.8				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than or equal to 5

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

**Cervical Cancer Incidence by County Group 1978-2010****Crude Rates****Age-Adjusted Rates**

# Cervical Cancer Mortality 2006-2010

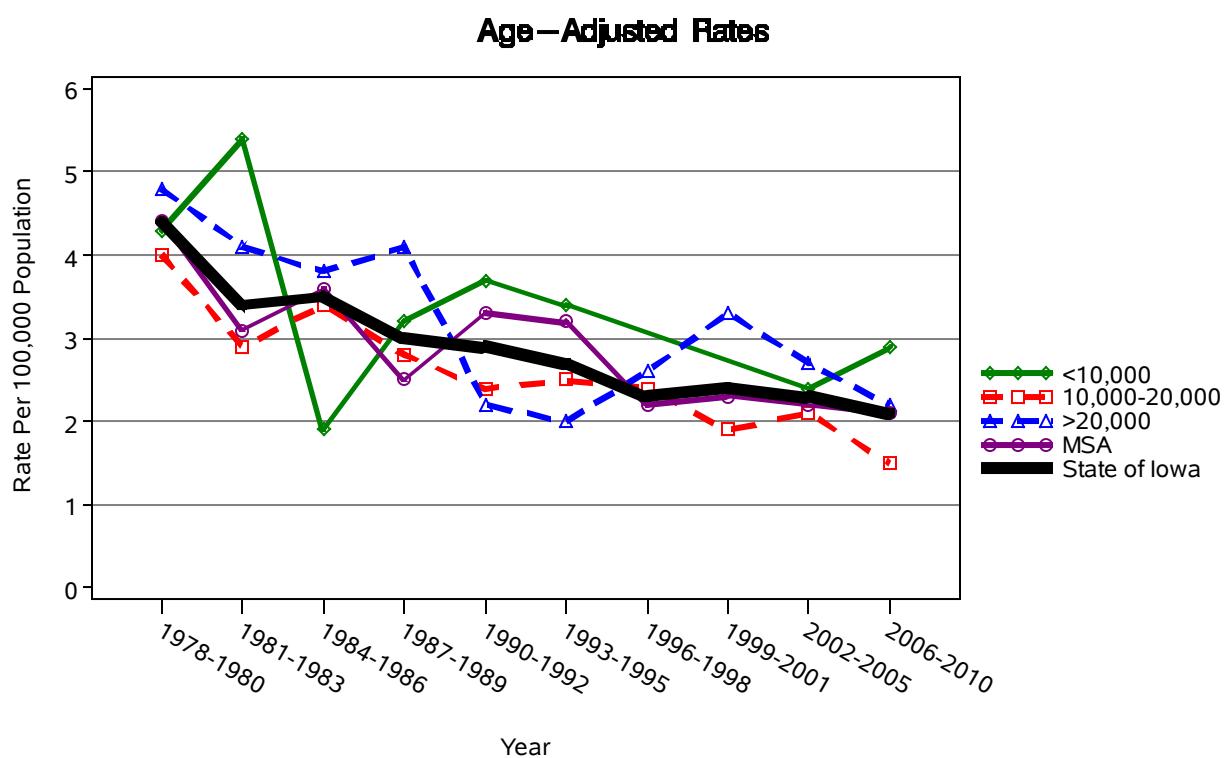
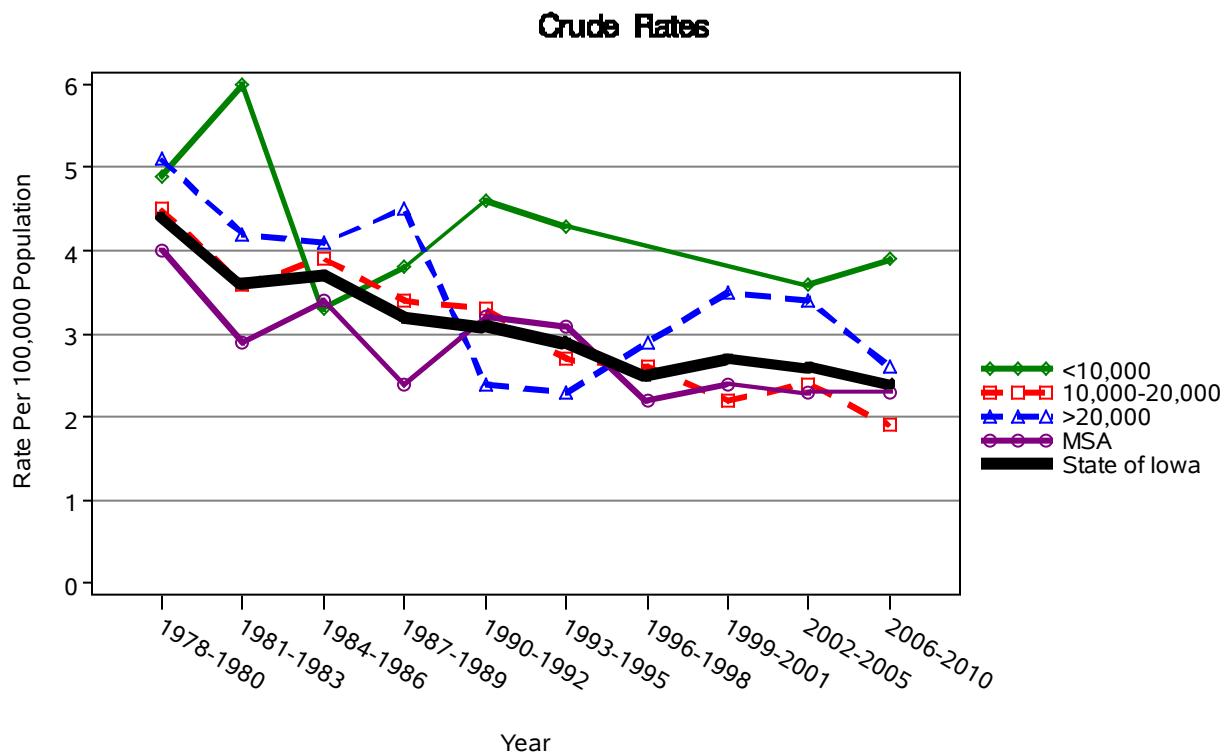
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	17	3.9	2.9
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	25	1.9	1.5
Counties with Average Population > 20,000	Boone	*	*	*	Lee	*	*	*
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	*	*	*
	Cerro Gordo	*	*	*	Marshall	*	*	*
	Clinton	*	*	*	Muscatine	*	*	*
	Des Moines	*	*	*	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	*	*	*
	Jackson	*	*	*	Webster	*	*	*
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	43	2.6	2.2
MSA Counties	Benton	*	*	*	Linn	18	3.4 (01)	3.0 (01)
	Black Hawk	11	3.3 (02)	2.9 (02)	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	*	*	*	Polk	26	2.4 (03)	2.4 (03)
	Dubuque	*	*	*	Pottawattamie	*	*	*
	Grundy	*	*	*	Scott	*	*	*
	Guthrie	*	*	*	Story	*	*	*
	Harrison	*	*	*	Warren	*	*	*
	Johnson	*	*	*	Washington	*	*	*
	Jones	*	*	*	Woodbury	*	*	*
					<b>Total</b>	99	2.3	2.1
	<b>State Total</b>	184	2.4	2.1				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Cervical Cancer Mortality by County Group 1978-2010



## Injury Mortality

Transportation-related mortality accounted for 2,153 deaths in Iowa from 2007-2011, 89% of which were motor vehicle fatalities. For the time periods between 1979 and 2011, the rates for these fatalities are highest in the rural counties and lowest in the most urban counties. Rates for firearm mortality are also highest in the most rural counties. The mortality rates for suicide show that the gaps in rates by county group have narrowed for the most recent time period. The crude rates for mortality from falls tend to be highest in the more rural county groups, because of the greater numbers of elderly. This difference goes away when the rates are age-adjusted. Homicide rates are consistently higher in the MSA county group. Poisoning mortality rates have shown variation in earlier years for each county group, but in the most recent decade, the rates are significantly increasing across all county groups, with the highest rates seen in the MSA counties. The state's mortality rate from burns decreased from 1979-2011. In general, drowning deaths have decreased across the state since the 1979-1983 period, but the pattern has been erratic, indicating that the rates are unstable due to the small number of events. Deaths from all other unintentional injuries show a slight decline statewide over time but can be difficult to compare for 1999-2011 versus preceding years due to changes in the mortality classification systems (discussed below).

Beginning in 1999, the tenth revision of the International Classification of Diseases (ICD-10) replaced the ninth version (ICD-9) as the standard mortality classification system. ICD-10 is more detailed than ICD-9; ICD-10 has about 8,000 categories while ICD-9 has about 5,000 categories. Also, some of the coding rules and rules for selecting the underlying cause of death have changed. Because of the new classification system, observed changes in mortality rates between 1999 and 2011 versus preceding years could be due, in part, to changes in the method of mortality classification. The ICD-9 and ICD-10 codes used for each type of Injury Mortality are listed in Appendix III.

The source of these mortality data are the cause of death data obtained from death certificates filed at the Iowa Department of Public Health.

### HIGHLIGHTS...

- Injuries are the leading cause of death in persons 1-34 years of age.
- Motor vehicle deaths account for 89% of all transportation deaths in Iowa during 2007-2011.
- Crude mortality rates from motor vehicle accidents, firearms, and falls are highest in rural counties, whereas homicides are highest in MSA counties.

# All Transportation Mortality 2007-2011

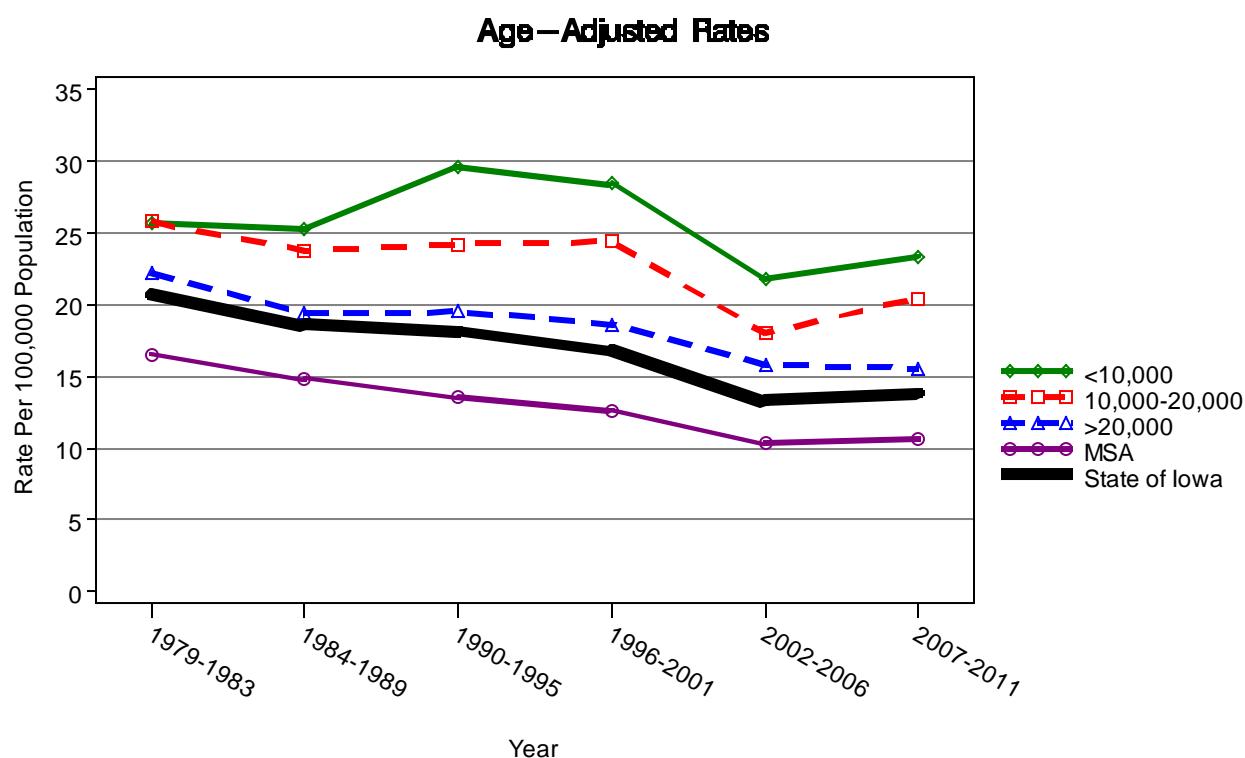
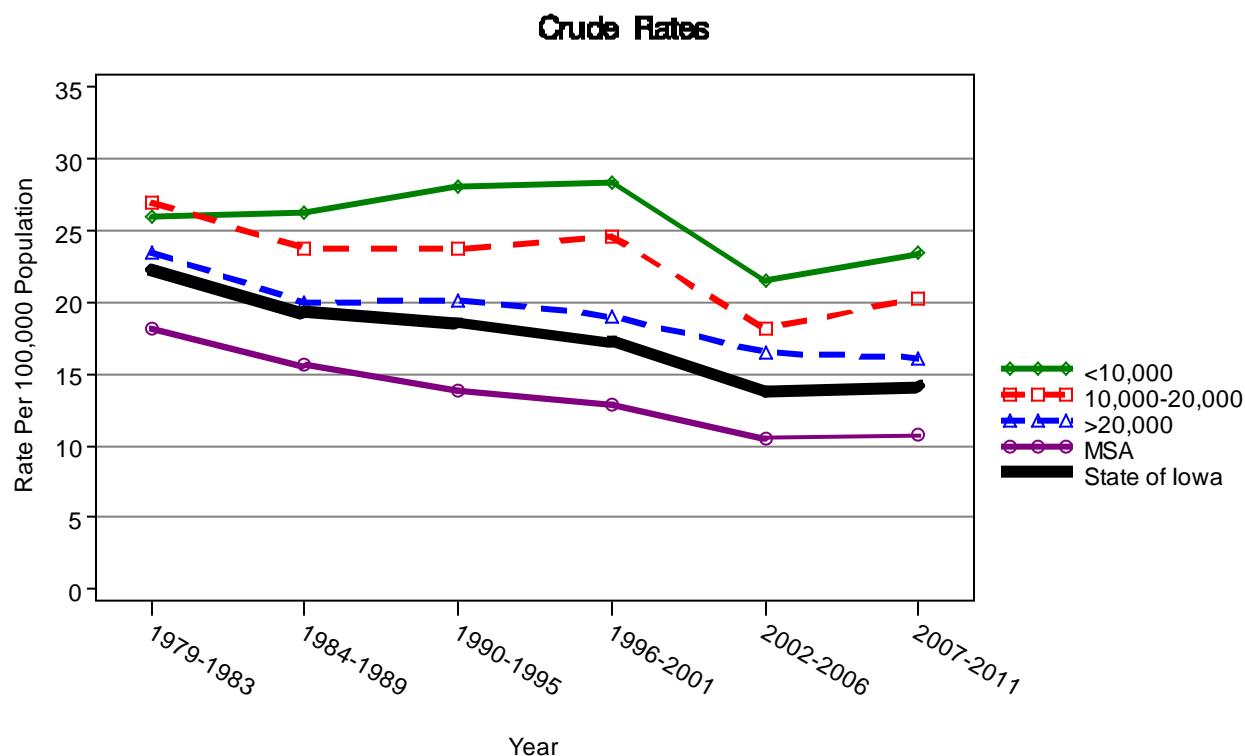
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>		County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	10	26	22.2	Counties with Average Population > 10,000	Lucas	14	31	32.8
	Adams	*	*	*		Monona	15	32.3	34.7
	Audubon	7	22.8	21.2		Monroe	10	25.2	29.3
	Clarke	8	17.3	17.6		Osceola	10	30.7	29
	Davis	8	18.3	21		Palo Alto	12	25.3	22.1
	Decatur	6	14.2	16.6		Pocahontas	*	*	*
	Fremont	9	24.1	20.3		Ringgold	*	*	*
	Greene	12	25.6	27.1		Taylor	6	18.9	12.5
	Howard	12	25	22.2		Van Buren	13	34.1	31.4
	Humboldt	11	22.3	29		Wayne	7	22	18.2
	Ida	10	28	34		Worth	10	26.3	25.3
						<b>Total</b>	200	23.5	23.4
Counties with Average Population 10,000 - 20,000	Allamakee	13	18.2	18.7	Counties with Average Population > 20,000	Hardin	20	22.7	18.7
	Appanoose	23	35.6	34.4		Iowa	15	18.4	19.5
	Butler	20	26.9	29.7		Jefferson	12	14.4	13.8
	Calhoun	11	22.6	21		Keokuk	9	17.1	17.4
	Cass	12	17.2	20.2		Kossuth	11	14.1	14.4
	Cedar	14	15.2	17.9		Louisa	18	31.1	31.7
	Cherokee	17	28.2	28		Lyon	8	13.8	18.1
	Chickasaw	7	11.2	11.2		Mitchell	16	29.6	28.8
	Clay	15	18	19.7		Montgomery	15	27.8	24.8
	Clayton	27	29.8	30.1		O'Brien	10	13.9	12.2
	Crawford	17	20	19.9		Page	17	21.2	22.2
	Delaware	17	19.1	20.9		Poweshiek	16	16.9	18.3
	Dickinson	12	14.4	13.5		Sac	18	34.7	37
	Emmet	6	11.6	13.1		Shelby	15	24.5	21.6
	Floyd	8	9.8	10.2		Tama	24	26.9	31.8
	Franklin	13	24.3	20.9		Union	13	20.8	22
	Hamilton	15	19	17.6		Winnebago	11	20.2	16.7
	Hancock	9	15.8	17.3		Wright	12	18.1	16.4
						<b>Total</b>	516	20.3	20.5
MSA Counties	Boone	26	19.7	18.9	MSA Counties	Lee	43	24	22.1
	Buchanan	17	16.2	17.4		Mahaska	15	13.4	12.7
	Buena Vista	17	16.9	15.9		Marion	13	7.8	7.3
	Carroll	23	22.1	18.9		Marshall	33	16.3	15.7
	Cerro Gordo	28	12.7	11.6		Muscatine	24	11.3	11.9
	Clinton	37	15	14.3		Plymouth	26	20.9	23
	Des Moines	23	11.4	11.4		Sioux	26	15.5	15.4
	Fayette	15	14.3	14.9		Wapello	34	19.2	17.6
	Henry	19	18.8	18.3		Webster	40	21	20.9
	Jackson	18	18.1	18.2		Winneshiek	9	8.6	9.2
	Jasper	36	19.5	17.9		<b>Total</b>	522	16.1	15.5
State Total	Benton	27	20.7	21.8	State Total	Linn	82	7.8	7.7
	Black Hawk	75	11.5	11.3		Madison	10	12.8	12
	Bremer	14	11.6	11.6		Mills	18	23.8	23.6
	Dallas	25	7.8	8.4		Polk	210	9.9	10
	Dubuque	49	10.5	10.5		Pottawattamie	75	16.2	16.3
	Grundy	7	11.3	10.6		Scott	84	10.3	10.2
	Guthrie	*	*	*		Story	47	10.6	11.4
	Harrison	12	16	20.8		Warren	32	14	14.4
	Johnson	47	7.3	7.4		Washington	18	16.6	17
	Jones	19	18.4	19.1		Woodbury	60	11.8	11.7
						<b>Total</b>	915	10.7	10.6

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

Source: Iowa Department of Public Health, Vital Statistics

# All Transportation Mortality by County Group 1979-2011



# Falls Mortality 2007-2011

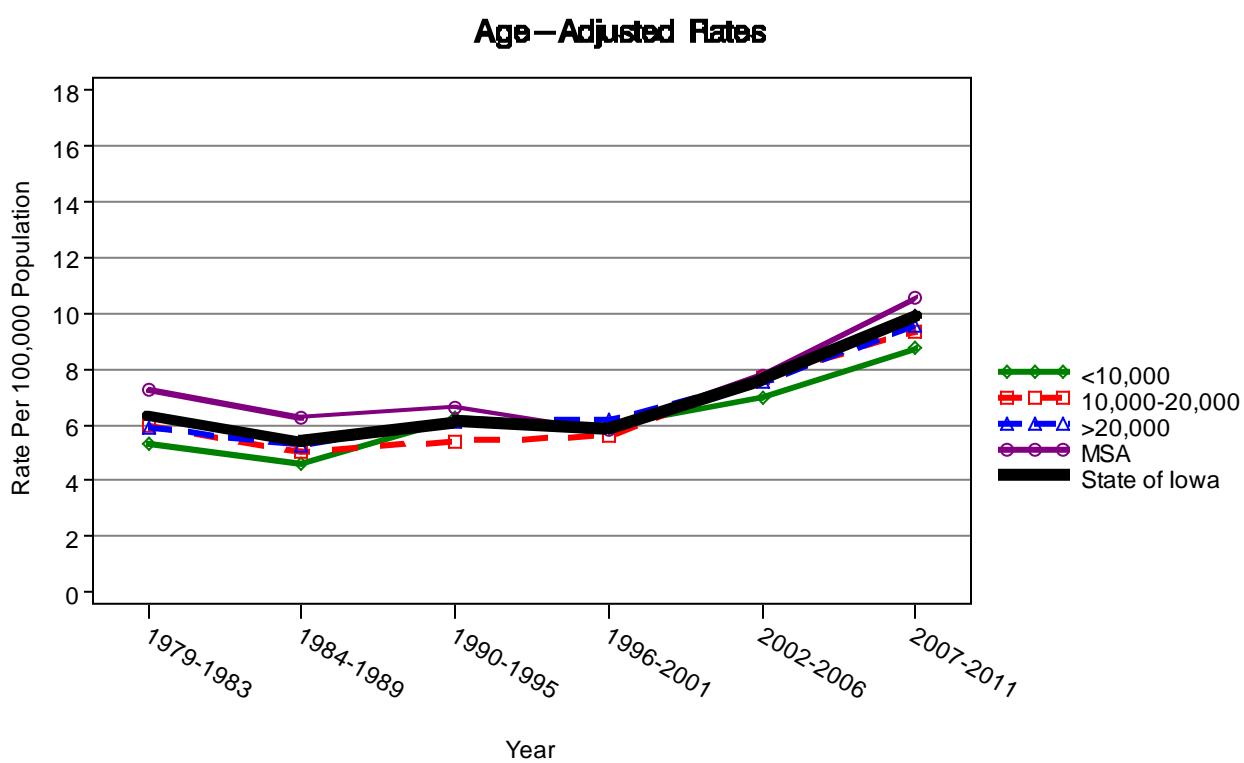
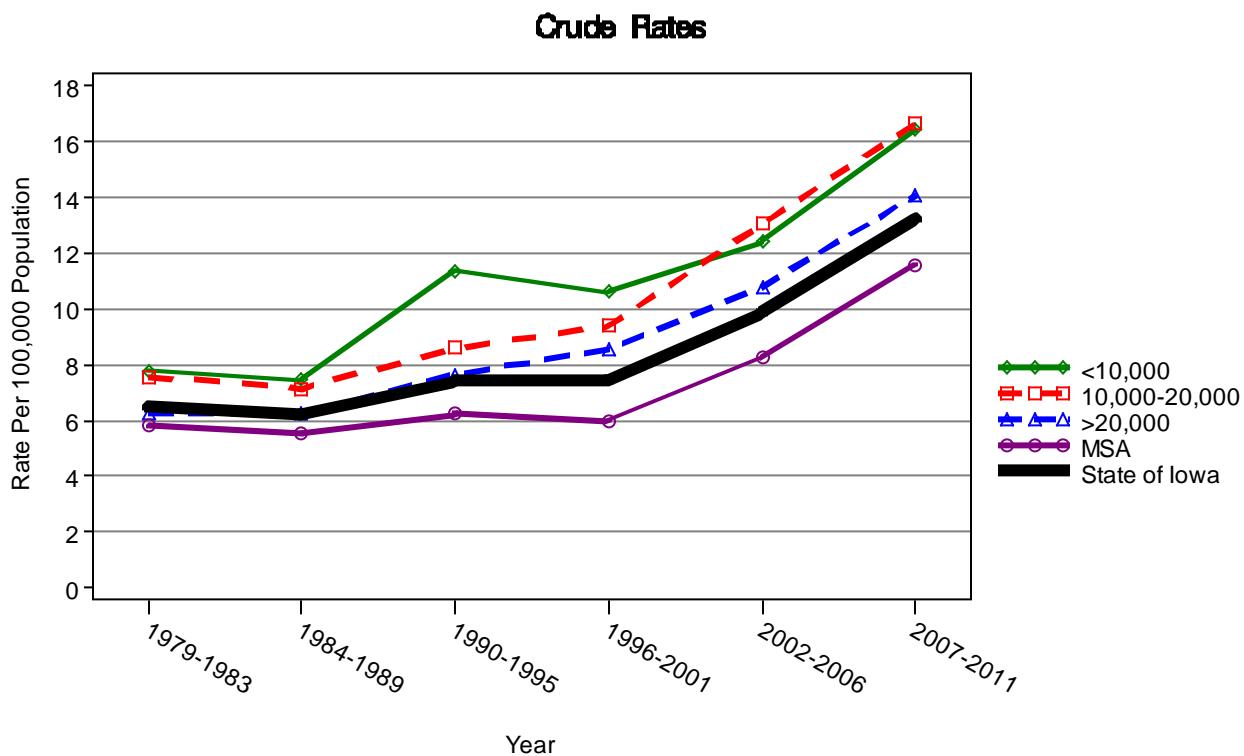
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>		County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	15	39	18.4		Lucas	*	*	*
	Adams	*	*	*		Monona	7	15.1	7.2
	Audubon	10	32.6	16		Monroe	9	22.6	14.7
	Clarke	8	17.3	10		Osceola	*	*	*
	Davis	7	16	11.3		Palo Alto	*	*	*
	Decatur	6	14.2	9.3		Pocahontas	9	24.3	9.8
	Fremont	6	16.1	13.2		Ringgold	*	*	*
	Greene	8	17.1	7.1		Taylor	*	*	*
	Howard	8	16.7	8.9		Van Buren	*	*	*
	Humboldt	6	12.2	6.5		Wayne	10	31.4	14.5
	Ida	*	*	*		Worth	*	*	*
						<b>Total</b>	140	16.4	8.7
Counties with Average Population 10,000 - 20,000	Allamakee	11	15.4	9.2		Hardin	12	13.6	5.9
	Appanoose	6	9.3	5.2		Iowa	16	19.6	12
	Butler	10	13.4	9.2		Jefferson	15	17.9	14.7
	Calhoun	10	20.5	9.1		Keokuk	*	*	*
	Cass	22	31.6	15.4		Kossuth	15	19.2	9
	Cedar	15	16.3	10.3		Louisa	8	13.8	11.8
	Cherokee	13	21.6	10.3		Lyon	14	24.2	15.2
	Chickasaw	8	12.8	7.4		Mitchell	6	11.1	4.7
	Clay	14	16.8	9.2		Montgomery	9	16.7	9.4
	Clayton	11	12.1	8		O'Brien	9	12.5	8.9
	Crawford	19	22.3	14.1		Page	9	11.2	6.2
	Delaware	12	13.5	9.5		Poweshiek	12	12.7	7.9
	Dickinson	14	16.8	10.6		Sac	8	15.4	7.5
	Emmet	7	13.6	6.4		Shelby	9	14.7	8
	Floyd	18	22.1	11.8		Tama	14	15.7	8.9
	Franklin	8	14.9	7.9		Union	11	17.6	9.8
	Hamilton	15	19	10.5		Winnebago	13	23.9	11.6
	Hancock	10	17.5	9.2		Wright	17	25.6	10.8
						<b>Total</b>	423	16.7	9.4
Counties with Average Population > 20,000	Boone	28	21.2	15.4		Lee	26	14.5	10.2
	Buchanan	12	11.4	8.4		Mahaska	15	13.4	8.6
	Buena Vista	*	*	*		Marion	28	16.8	12
	Carroll	12	11.5	6.2		Marshall	45	22.3	14.7
	Cerro Gordo	55	24.9	14.9		Muscatine	23	10.8	9
	Clinton	23	9.4	7.2		Plymouth	9	7.2	4.6
	Des Moines	38	18.9	12.5		Sioux	15	8.9	6.5
	Fayette	15	14.3	8.8		Wapello	19	10.7	7.3
	Henry	11	10.9	7.1		Webster	42	22	14.3
	Jackson	7	7	4.7		Winneshiek	8	7.6	4.3
	Jasper	21	11.4	8.8		<b>Total</b>	456	14.1	9.6
MSA Counties	Benton	12	9.2	6		Linn	115	11	9.9
	Black Hawk	81	12.5	10.7		Madison	11	14.1	10.8
	Bremer	14	11.6	7.8		Mills	9	11.9	10.7
	Dallas	23	7.1	8.3		Polk	287	13.5	14.1
	Dubuque	48	10.3	7.9		Pottawattamie	57	12.3	10.5
	Grundy	9	14.5	7.7		Scott	83	10.1	9.5
	Guthrie	6	10.9	6.5		Story	33	7.5	8.3
	Harrison	13	17.4	10.1		Warren	30	13.1	11.4
	Johnson	65	10.1	13.3		Washington	33	30.4	17.9
	Jones	18	17.4	10		Woodbury	41	8.1	7
						<b>Total</b>	988	11.6	10.6
	<b>State Total</b>	2,007	13.2	9.9					

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

Source: Iowa Department of Public Health, Vital Statistics

## Falls Mortality by County Group 1979-2011



# Motor Vehicle Traffic Mortality 2007-2011

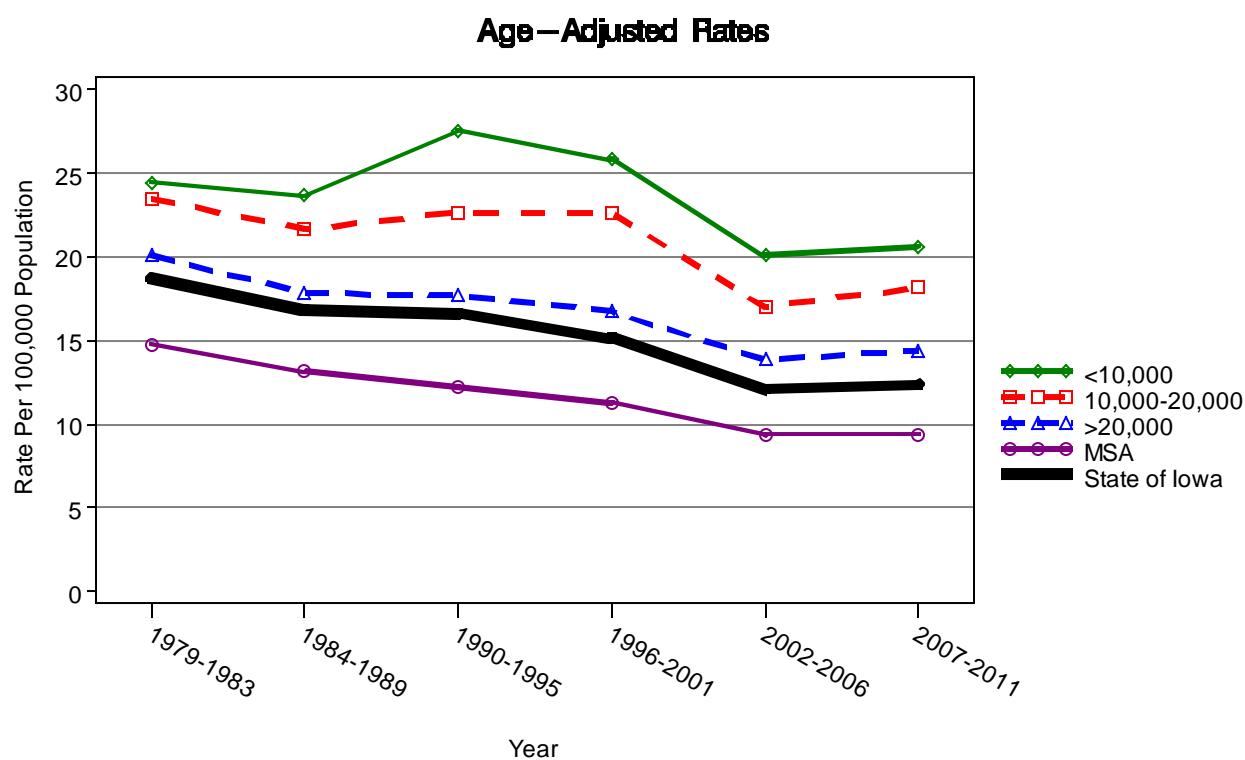
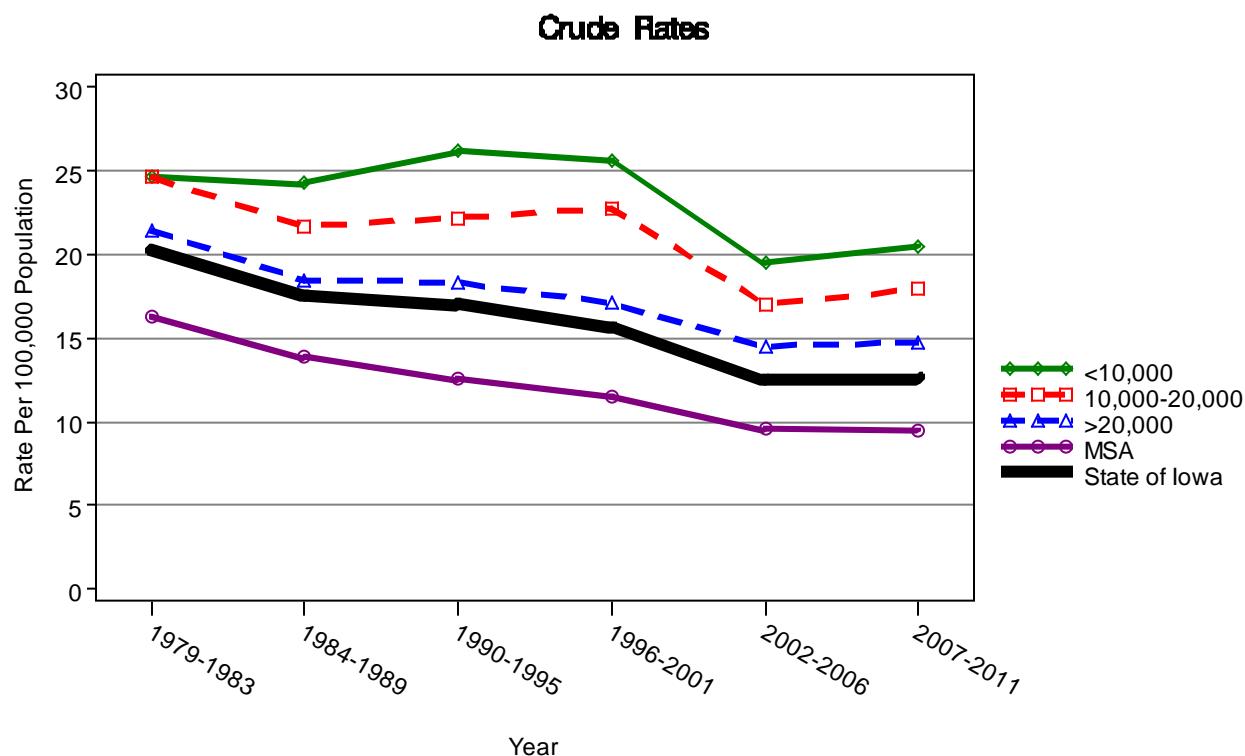
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>		County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	10	26	22.2	Counties with Average Population > 10,000	Lucas	12	26.6	28.5
	Adams	*	*	*		Monona	10	21.5	23.5
	Audubon	7	22.8	21.2		Monroe	10	25.2	29.3
	Clarke	7	15.1	15.2		Osceola	10	30.7	29
	Davis	8	18.3	21		Palo Alto	11	23.2	19.9
	Decatur	*	*	*		Pocahontas	*	*	*
	Fremont	9	24.1	20.3		Ringgold	*	*	*
	Greene	11	23.4	25.6		Taylor	*	*	*
	Howard	7	14.6	13.4		Van Buren	11	28.9	28.1
	Humboldt	9	18.3	24.1		Wayne	6	18.8	17
	Ida	9	25.2	29.6		Worth	8	21	20.2
						<b>Total</b>	175	20.5	20.7
Counties with Average Population 10,000 - 20,000	Allamakee	11	15.4	16.9	Counties with Average Population > 20,000	Hardin	18	20.5	17.1
	Appanoose	21	32.5	32.1		Iowa	11	13.5	14.6
	Butler	18	24.2	27		Jefferson	10	12	11.6
	Calhoun	11	22.6	21		Keokuk	9	17.1	17.4
	Cass	11	15.8	19.1		Kossuth	11	14.1	14.4
	Cedar	13	14.1	16.6		Louisa	15	25.9	26.7
	Cherokee	15	24.9	24.4		Lyon	7	12.1	16.3
	Chickasaw	7	11.2	11.2		Mitchell	13	24.1	22.3
	Clay	15	18	19.7		Montgomery	13	24.1	21.1
	Clayton	25	27.5	27.7		O'Brien	7	9.8	9.4
	Crawford	12	14.1	14.3		Page	15	18.7	19
	Delaware	15	16.9	18.5		Poweshiek	14	14.8	16.8
	Dickinson	12	14.4	13.5		Sac	18	34.7	37
	Emmet	6	11.6	13.1		Shelby	15	24.5	21.6
	Floyd	7	8.6	8.4		Tama	21	23.5	27.6
	Franklin	11	20.6	17.1		Union	10	16	17.7
	Hamilton	13	16.5	15		Winnebago	7	12.9	11.3
	Hancock	8	14	15.4		Wright	10	15.1	14.7
						<b>Total</b>	455	17.9	18.2
MSA Counties	Boone	25	19	18.2	MSA Counties	Lee	36	20.1	18.6
	Buchanan	17	16.2	17.4		Mahaska	13	11.6	11.3
	Buena Vista	16	15.9	14.9		Marion	13	7.8	7.3
	Carroll	22	21.1	17.7		Marshall	29	14.4	14.3
	Cerro Gordo	27	12.2	11.2		Muscatine	23	10.8	11.3
	Clinton	36	14.6	14		Plymouth	26	20.9	23
	Des Moines	21	10.4	10.7		Sioux	24	14.3	14.2
	Fayette	13	12.4	12.4		Wapello	29	16.4	15.6
	Henry	19	18.8	18.3		Webster	36	18.9	19
	Jackson	14	14.1	15.3		Winneshiek	8	7.6	8.3
	Jasper	32	17.3	16.5		<b>Total</b>	479	14.8	14.4
State Total	Benton	25	19.2	20.6	State Total	Linn	74	7	6.9
	Black Hawk	62	9.5	9.4		Madison	10	12.8	12
	Bremer	12	9.9	10.2		Mills	16	21.2	20.8
	Dallas	25	7.8	8.4		Polk	189	8.9	9
	Dubuque	45	9.7	9.6		Pottawattamie	65	14.1	14
	Grundy	*	*	*		Scott	69	8.4	8.4
	Guthrie	*	*	*		Story	44	9.9	10.6
	Harrison	10	13.4	17.4		Warren	29	12.6	13.4
	Johnson	39	6	6		Washington	17	15.7	16.2
	Jones	16	15.5	15.7		Woodbury	56	11	10.9
						<b>Total</b>	812	9.5	9.4

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

Source: Iowa Department of Public Health, Vital Statistics

# Motor Vehicle Traffic Mortality by County Group 1979-2011



**Suicides 2007-2011**

County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Adair	6	15.6	13.9	Lucas	8	17.7	14.4
Adams	*	*	*	Monona	11	23.7	27.8
Audubon	*	*	*	Monroe	*	*	*
Clarke	*	*	*	Osceola	*	*	*
Davis	6	13.8	12.7	Palo Alto	*	*	*
Decatur	8	18.9	17.4	Pocahontas	7	18.9	19.2
Fremont	*	*	*	Ringgold	*	*	*
Greene	10	21.3	17.4	Taylor	*	*	*
Howard	*	*	*	Van Buren	6	15.8	16.5
Humboldt	9	18.3	17.2	Wayne	*	*	*
Ida	*	*	*	Worth	6	15.8	14.4
				<b>Total</b>	116	13.6	13.3
Counties with Average Population < 10,000							
Allamakee	10	14	14.2	Hardin	13	14.8	15.2
Appanoose	11	17	17.1	Iowa	9	11	13.3
Butler	6	8.1	8.8	Jefferson	10	12	10.6
Calhoun	7	14.4	17.9	Keokuk	9	17.1	18.9
Cass	11	15.8	17.3	Kossuth	7	9	7.2
Cedar	16	17.4	16.9	Louisa	10	17.3	17.8
Cherokee	9	14.9	13.6	Lyon	6	10.4	11.9
Chickasaw	13	20.9	20.5	Mitchell	*	*	*
Clay	12	14.4	13.7	Montgomery	*	*	*
Clayton	12	13.2	13.2	O'Brien	6	8.4	10.3
Crawford	11	12.9	15	Page	11	13.7	16.4
Delaware	15	16.9	17.8	Poweshiek	15	15.8	16.4
Dickinson	8	9.6	12.2	Sac	9	17.3	16.8
Emmet	*	*	*	Shelby	*	*	*
Floyd	10	12.3	12.5	Tama	13	14.6	16.2
Franklin	6	11.2	10.5	Union	12	19.2	20.1
Hamilton	9	11.4	10.9	Winnebago	*	*	*
Hancock	6	10.5	10.8	<b>Total</b>	329	13	13.8
Counties with Average Population 10,000 - 20,000							
Boone	14	10.6	10.5	Lee	23	12.8	11.7
Buchanan	10	9.5	9.8	Mahaska	9	8	8
Buena Vista	12	12	12.3	Marion	22	13.2	13.6
Carroll	14	13.5	13.8	Marshall	21	10.4	10.9
Cerro Gordo	35	15.8	15.9	Muscatine	28	13.1	12.7
Clinton	40	16.3	15.7	Plymouth	10	8	7.1
Des Moines	32	15.9	18.4	Sioux	7	4.2	4.2
Fayette	22	21	20.8	Wapello	24	13.5	12.5
Henry	11	10.9	10	Webster	29	15.2	15.7
Jackson	15	15.1	16.2	Winneshiek	9	8.6	10.5
Jasper	28	15.2	15.2	<b>Total</b>	415	12.8	12.8
Counties with Average Population > 20,000							
Benton	14	10.7	11.8	Linn	106	10.1	9.8
Black Hawk	55	8.5	8.7	Madison	7	9	9.9
Bremer	10	8.3	7.6	Mills	8	10.6	10.9
Dallas	25	7.8	8.2	Polk	300	14.1	14.2
Dubuque	59	12.7	13.3	Pottawattamie	60	13	13.2
Grundy	6	9.7	9.8	Scott	104	12.7	12.9
Guthrie	10	18.2	15.9	Story	35	7.9	8.7
Harrison	7	9.4	9.7	Warren	25	10.9	10.7
Johnson	67	10.4	10.9	Washington	11	10.1	9.5
Jones	16	15.5	15.2	Woodbury	58	11.4	11.6
<b>State Total</b>	1,843	12.2	12.1	<b>Total</b>	983	11.5	11.5

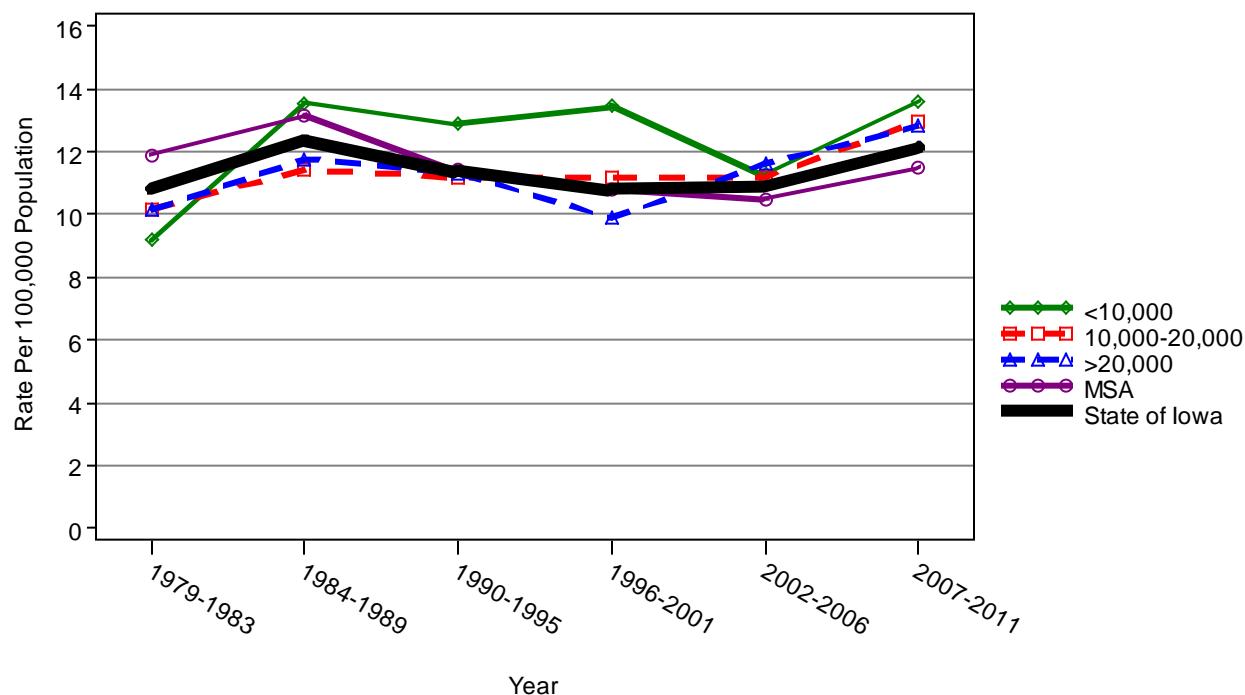
<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

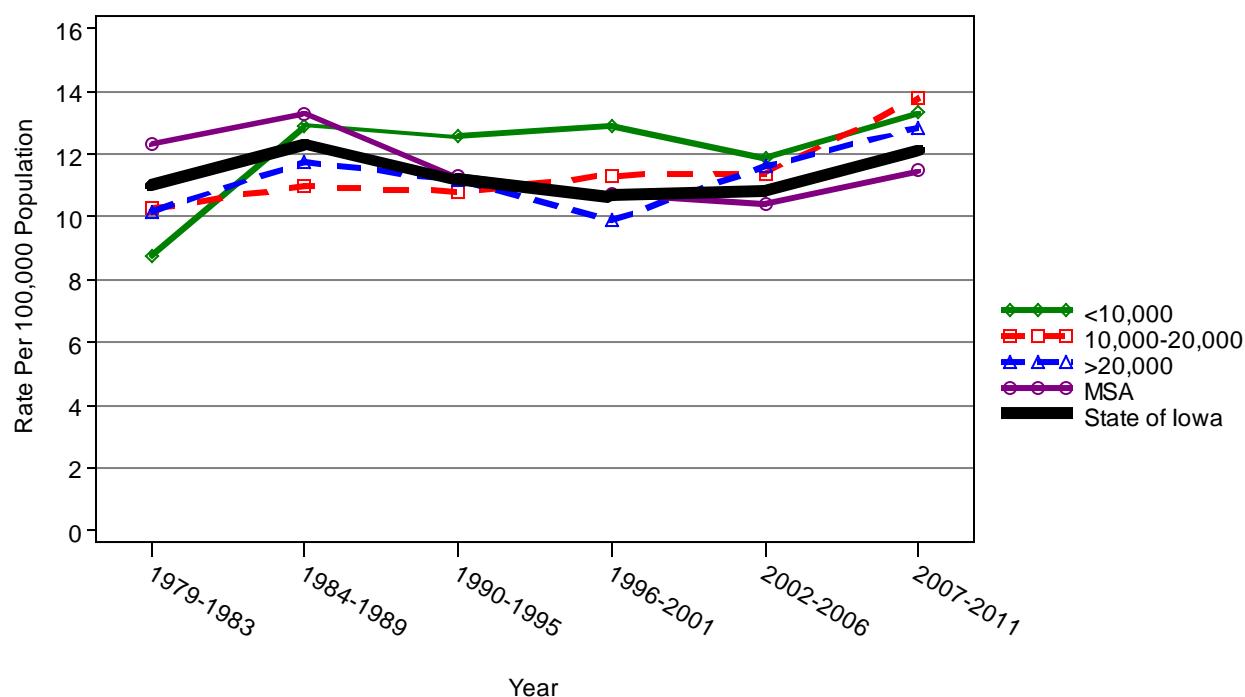
Source: Iowa Department of Public Health, Vital Statistics

## Suicides by County Group 1979-2011

**Crude Rates**



**Age-Adjusted Rates**



**Firearms Mortality 2007-2011**

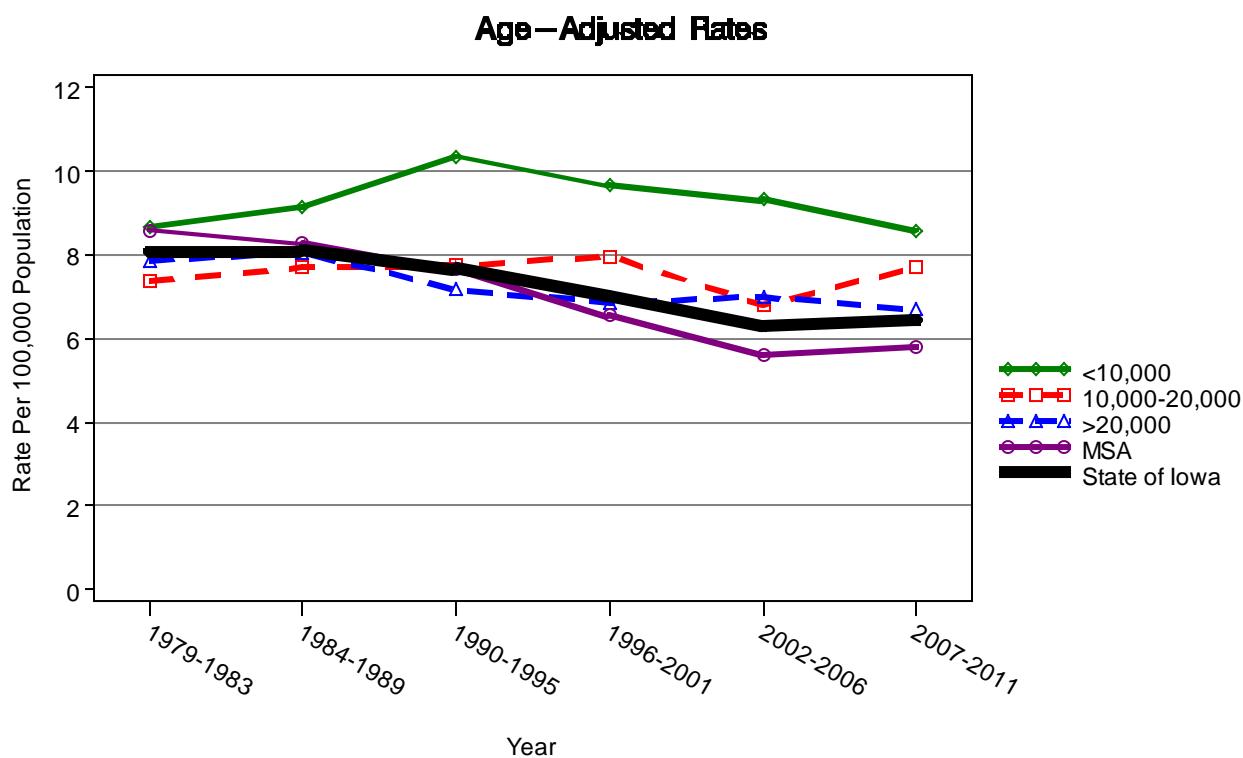
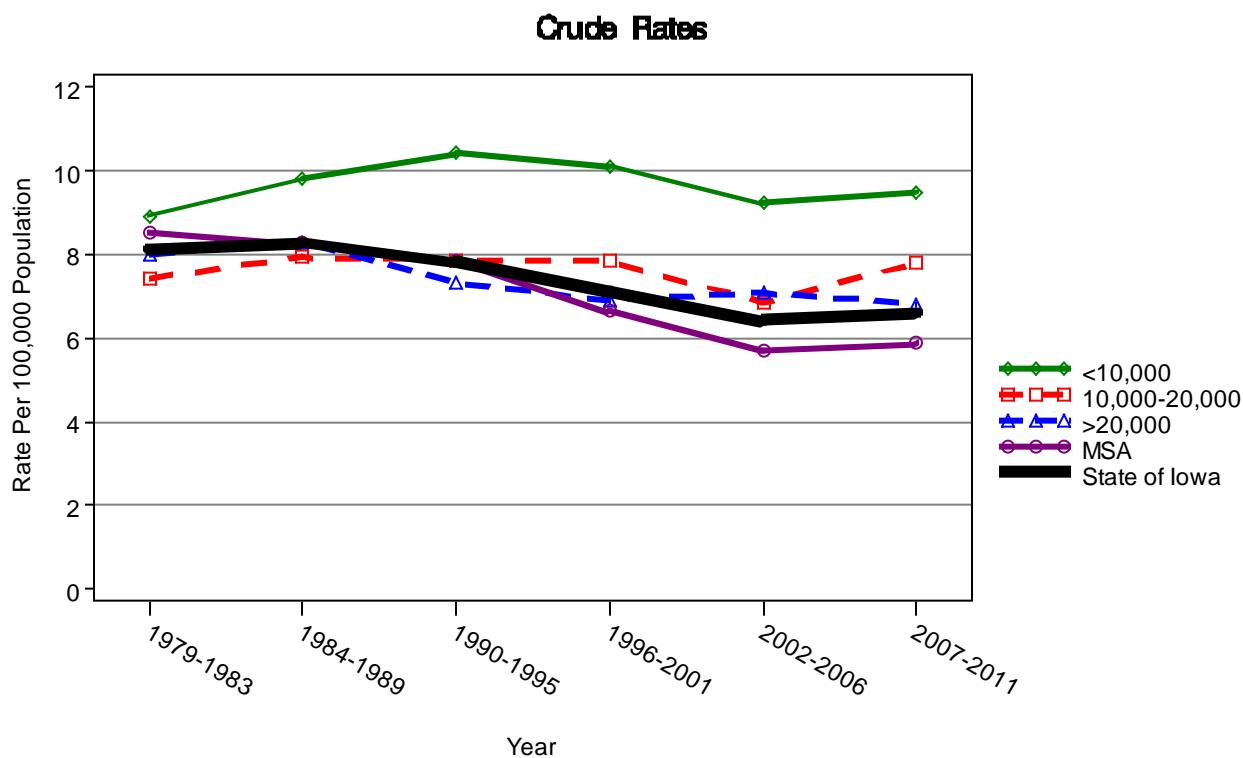
County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	8	17.7	15.4
	Adams	*	*	Monona	6	12.9	13.9
	Audubon	*	*	Monroe	*	*	*
	Clarke	*	*	Osceola	*	*	*
	Davis	6	13.8	Palo Alto	*	*	*
	Decatur	8	18.9	Pocahontas	*	*	*
	Fremont	*	*	Ringgold	*	*	*
	Greene	7	14.9	Taylor	*	*	*
	Howard	*	*	Van Buren	*	*	*
	Humboldt	9	18.3	Wayne	*	*	*
	Ida	*	*	Worth	*	*	*
				<b>Total</b>	81	9.5	8.6
Counties with Average Population 10,000 - 20,000	Allamakee	9	12.6	Hardin	6	6.8	7
	Appanoose	11	17	Iowa	*	*	*
	Butler	*	*	Jefferson	7	8.4	8
	Calhoun	*	*	Keokuk	10	19	20.1
	Cass	*	*	Kossuth	*	*	*
	Cedar	*	*	Louisa	*	*	*
	Cherokee	6	10	Lyon	*	*	*
	Chickasaw	8	12.8	Mitchell	*	*	*
	Clay	6	7.2	Montgomery	*	*	*
	Clayton	10	11	O'Brien	*	*	*
	Crawford	6	7	Page	7	8.7	8.9
	Delaware	11	12.4	Poweshiek	*	*	*
	Dickinson	*	*	Sac	6	11.6	10.6
	Emmet	*	*	Shelby	*	*	*
	Floyd	*	*	Tama	7	7.8	8.3
	Franklin	*	*	Union	9	14.4	14.3
	Hamilton	*	*	Winnebago	*	*	*
	Hancock	*	*	<b>Total</b>	198	7.8	7.7
Counties with Average Population > 20,000	Boone	11	8.3	Lee	13	7.3	6.4
	Buchanan	*	*	Mahaska	*	*	*
	Buena Vista	*	*	Marion	12	7.2	7
	Carroll	*	*	Marshall	12	5.9	5.8
	Cerro Gordo	18	8.1	Muscatine	15	7	6.9
	Clinton	24	9.8	Plymouth	6	4.8	4.3
	Des Moines	13	6.5	Sioux	*	*	*
	Fayette	9	8.6	Wapello	19	10.7	9.2
	Henry	6	5.9	Webster	14	7.3	7.3
	Jackson	9	9.1	Winneshiek	*	*	*
	Jasper	12	6.5	<b>Total</b>	221	6.8	6.7
MSA Counties	Benton	*	*	Linn	52	5	4.8
	Black Hawk	31	4.8	Madison	*	*	*
	Bremer	6	5	Mills	*	*	*
	Dallas	15	4.7	Polk	154	7.2	7.3
	Dubuque	18	3.9	Pottawattamie	41	8.9	8.7
	Grundy	*	*	Scott	61	7.5	7.4
	Guthrie	7	12.7	Story	18	4.1	5
	Harrison	*	*	Warren	16	7	6.8
	Johnson	19	2.9	Washington	11	10.1	9.7
	Jones	8	7.7	Woodbury	27	5.3	5.4
				<b>Total</b>	502	5.9	5.8
	<b>State Total</b>	1,002	6.6				

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

Source: Iowa Department of Public Health, Vital Statistics

## Firearms Mortality by County Group 1979-2011



# Poisoning Mortality 2007-2011

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	45	5.3	5.8
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	8	12.4	15	Iowa	*	*	*
	Butler	*	*	*	Jefferson	6	7.2	7.8
	Calhoun	*	*	*	Keokuk	*	*	*
	Cass	*	*	*	Kossuth	*	*	*
	Cedar	*	*	*	Louisa	*	*	*
	Cherokee	*	*	*	Lyon	*	*	*
	Chickasaw	*	*	*	Mitchell	*	*	*
	Clay	*	*	*	Montgomery	9	16.7	20
	Clayton	*	*	*	O'Brien	*	*	*
	Crawford	*	*	*	Page	*	*	*
	Delaware	6	6.7	6.8	Poweshiek	*	*	*
	Dickinson	*	*	*	Sac	*	*	*
	Emmet	*	*	*	Shelby	*	*	*
	Floyd	*	*	*	Tama	*	*	*
	Franklin	*	*	*	Union	*	*	*
	Hamilton	*	*	*	Winnebago	*	*	*
	Hancock	*	*	*	Wright	*	*	*
					<b>Total</b>	96	3.8	4.1
Counties with Average Population > 20,000	Boone	8	6.1	6.3	Lee	12	6.7	6.5
	Buchanan	*	*	*	Mahaska	*	*	*
	Buena Vista	*	*	*	Marion	6	3.6	3.9
	Carroll	*	*	*	Marshall	12	5.9	7
	Cerro Gordo	11	5	5.1	Muscatine	8	3.8	4
	Clinton	14	5.7	5.8	Plymouth	*	*	*
	Des Moines	20	9.9	10.3	Sioux	*	*	*
	Fayette	6	5.7	5.8	Wapello	7	3.9	4.5
	Henry	*	*	*	Webster	17	8.9	10.1
	Jackson	8	8	8.3	Winneshiek	*	*	*
	Jasper	11	6	6.4	<b>Total</b>	169	5.2	5.5
MSA Counties	Benton	*	*	*	Linn	84	8	8.1
	Black Hawk	31	4.8	5	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	14	4.3	4.5	Polk	182	8.6	8.4
	Dubuque	17	3.6	3.7	Pottawattamie	31	6.7	7.5
	Grundy	*	*	*	Scott	82	10	10.4
	Guthrie	*	*	*	Story	19	4.3	5.2
	Harrison	6	8	9.6	Warren	10	4.4	4.9
	Johnson	22	3.4	3.5	Washington	*	*	*
	Jones	*	*	*	Woodbury	38	7.5	7.9
					<b>Total</b>	558	6.5	6.6

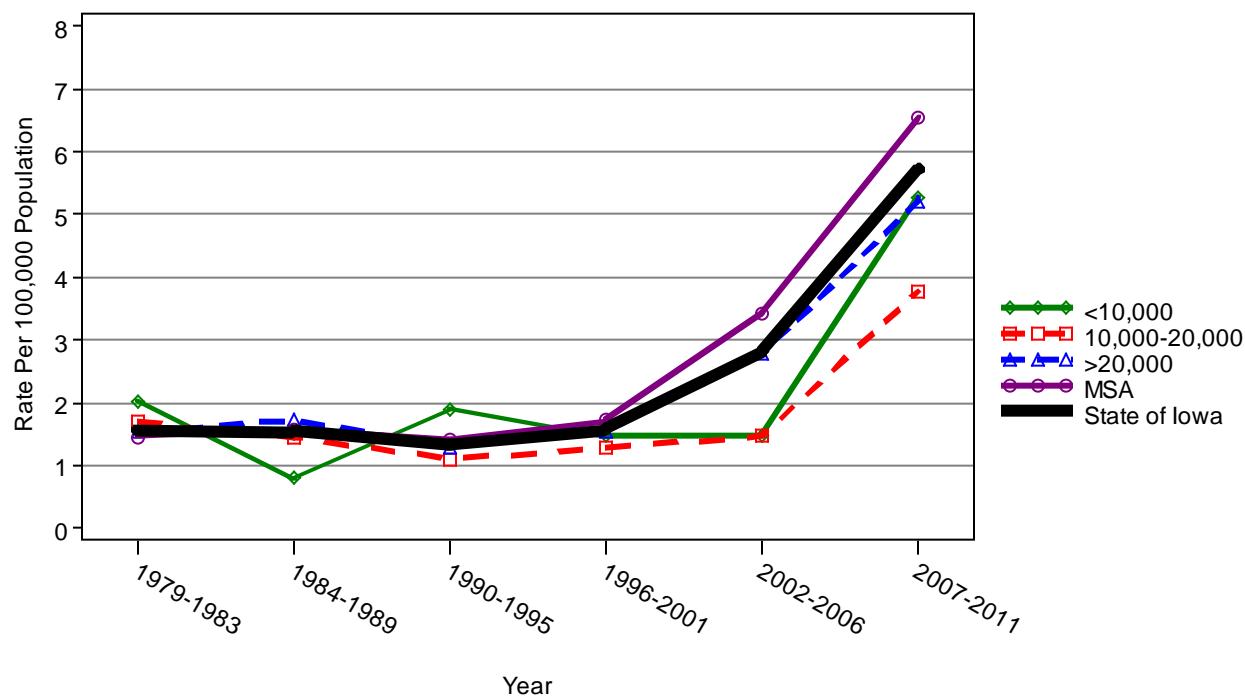
<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

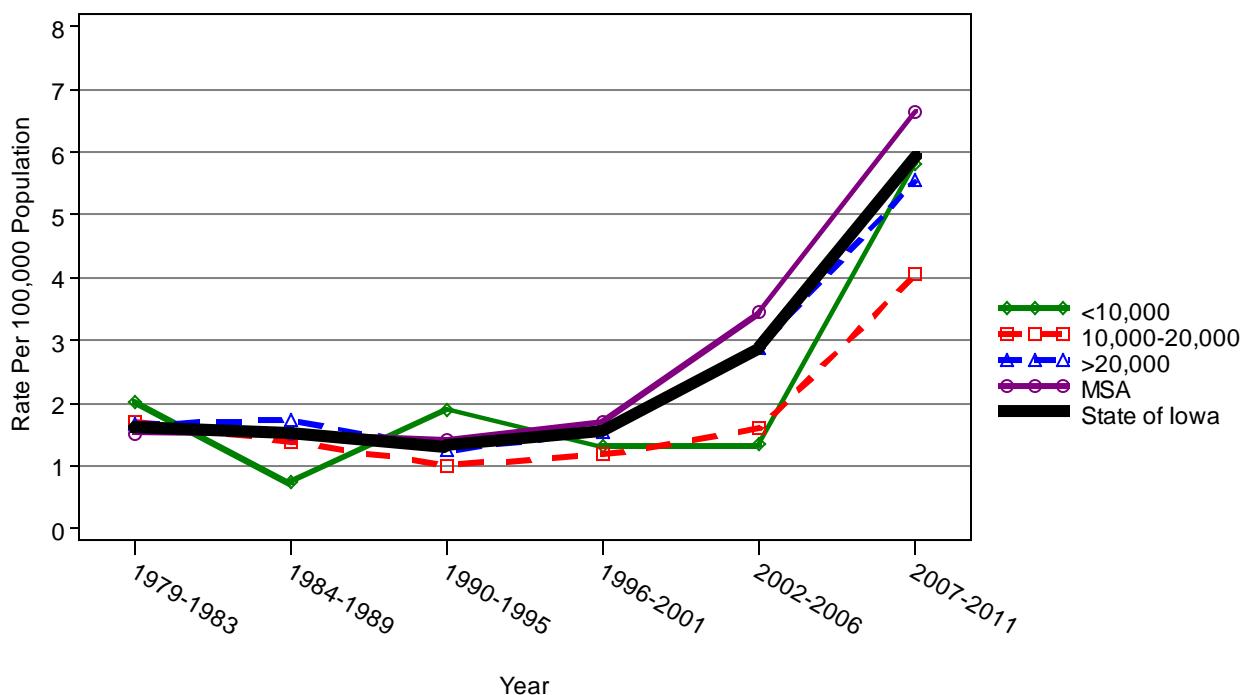
Source: Iowa Department of Public Health, Vital Statistics

## Poisoning Mortality by County Group 1979-2011

**Crude Rates**



**Age-Adjusted Rates**



**Homicides 2007-2011**

County	#	Crude Rate <sup>1</sup>	Adjusted Rate <sup>1,2</sup>	County	#	Crude Rate <sup>1</sup>	Adjusted Rate <sup>1,2</sup>
Adair	*	*	*	Lucas	*	*	*
Adams	*	*	*	Monona	*	*	*
Audubon	*	*	*	Monroe	*	*	*
Clarke	*	*	*	Osceola	*	*	*
Davis	*	*	*	Palo Alto	*	*	*
Decatur	*	*	*	Pocahontas	*	*	*
Fremont	*	*	*	Ringgold	*	*	*
Greene	*	*	*	Taylor	*	*	*
Howard	*	*	*	Van Buren	*	*	*
Humboldt	*	*	*	Wayne	*	*	*
Ida	*	*	*	Worth	*	*	*
				<b>Total</b>	9	1.1	1.2
Counties with Average Population < 10,000				Hardin	*	*	*
Allamakee	*	*	*	Iowa	*	*	*
Appanoose	*	*	*	Jefferson	*	*	*
Butler	*	*	*	Keokuk	*	*	*
Calhoun	*	*	*	Kossuth	*	*	*
Cass	*	*	*	Louisa	*	*	*
Cedar	*	*	*	Lyon	*	*	*
Cherokee	*	*	*	Mitchell	*	*	*
Chickasaw	*	*	*	Montgomery	*	*	*
Clay	*	*	*	O'Brien	*	*	*
Clayton	*	*	*	Page	*	*	*
Crawford	*	*	*	Poweshiek	*	*	*
Delaware	*	*	*	Sac	*	*	*
Dickinson	*	*	*	Shelby	*	*	*
Emmet	*	*	*	Tama	*	*	*
Floyd	*	*	*	Union	*	*	*
Franklin	*	*	*	Winnebago	*	*	*
Hamilton	*	*	*	Wright	*	*	*
Hancock	*	*	*	<b>Total</b>	39	1.5	1.7
Counties with Average Population 10,000 – 20,000				Lee	*	*	*
Allamakee	*	*	*	Mahaska	*	*	*
Appanoose	*	*	*	Marion	*	*	*
Butler	*	*	*	Marshall	*	*	*
Calhoun	*	*	*	Muscatine	*	*	*
Cass	*	*	*	Plymouth	*	*	*
Cedar	*	*	*	Sioux	*	*	*
Cherokee	*	*	*	Wapello	*	*	*
Chickasaw	*	*	*	Webster	*	*	*
Clay	*	*	*	Winneshiek	*	*	*
Clayton	*	*	*	<b>Total</b>	49	1.5	1.7
Crawford	*	*	*	Boone	*	*	*
Delaware	*	*	*	Buchanan	*	*	*
Dickinson	*	*	*	Buena Vista	*	*	*
Emmet	*	*	*	Carroll	*	*	*
Floyd	*	*	*	Cerro Gordo	*	*	*
Franklin	*	*	*	Clinton	*	*	*
Hamilton	*	*	*	Des Moines	*	*	*
Hancock	*	*	*	Fayette	*	*	*
				Henry	*	*	*
Counties with Average Population > 20,000				Jackson	*	*	*
Boone	*	*	*	Jasper	*	*	*
Buchanan	*	*	*				
Buena Vista	*	*	*	Lee	*	*	*
Carroll	*	*	*	Mahaska	*	*	*
Cerro Gordo	*	*	*	Marion	*	*	*
Clinton	*	*	*	Marshall	*	*	*
Des Moines	*	*	*	Muscatine	*	*	*
Fayette	*	*	*	Plymouth	*	*	*
Henry	*	*	*	Sioux	*	*	*
Jackson	*	*	*	Wapello	*	*	*
Jasper	*	*	*	Webster	*	*	*
				Winneshiek	*	*	*
<b>Total</b>	49	1.5	1.7	<b>Total</b>	49	1.5	1.7
MSA Counties				Benton	*	*	*
Black Hawk	18	2.8	2.5	Black Hawk	*	*	*
Bremer	*	*	*	Benton	*	*	*
Dallas	*	*	*	Polk	58	2.7	2.7
Dubuque	6	1.3	1.4	Pottawattamie	18	3.9	4
Grundy	*	*	*	Scott	26	3.2	3.2
Guthrie	*	*	*	Story	8	1.8	2.5
Harrison	*	*	*	Warren	*	*	*
Johnson	14	2.2	2.8	Washington	*	*	*
Jones	*	*	*	Woodbury	11	2.2	2.2
				<b>Total</b>	191	2.2	2.3
<b>State Total</b>	288	1.9	2				

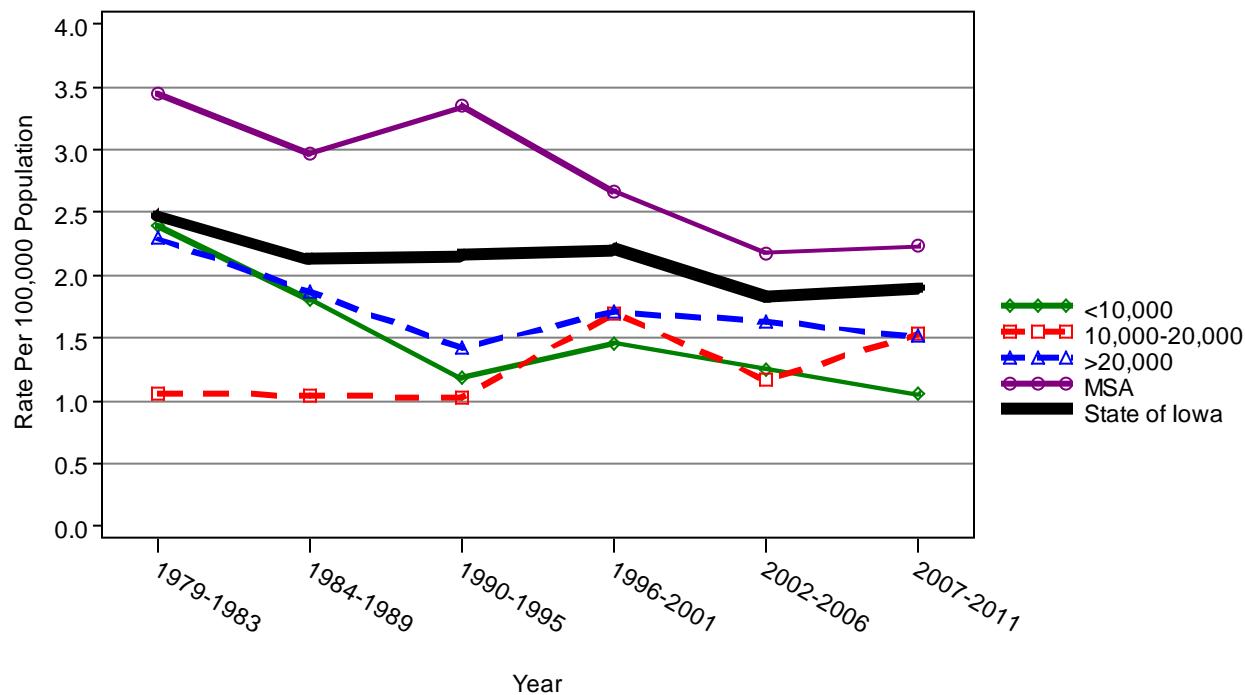
<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

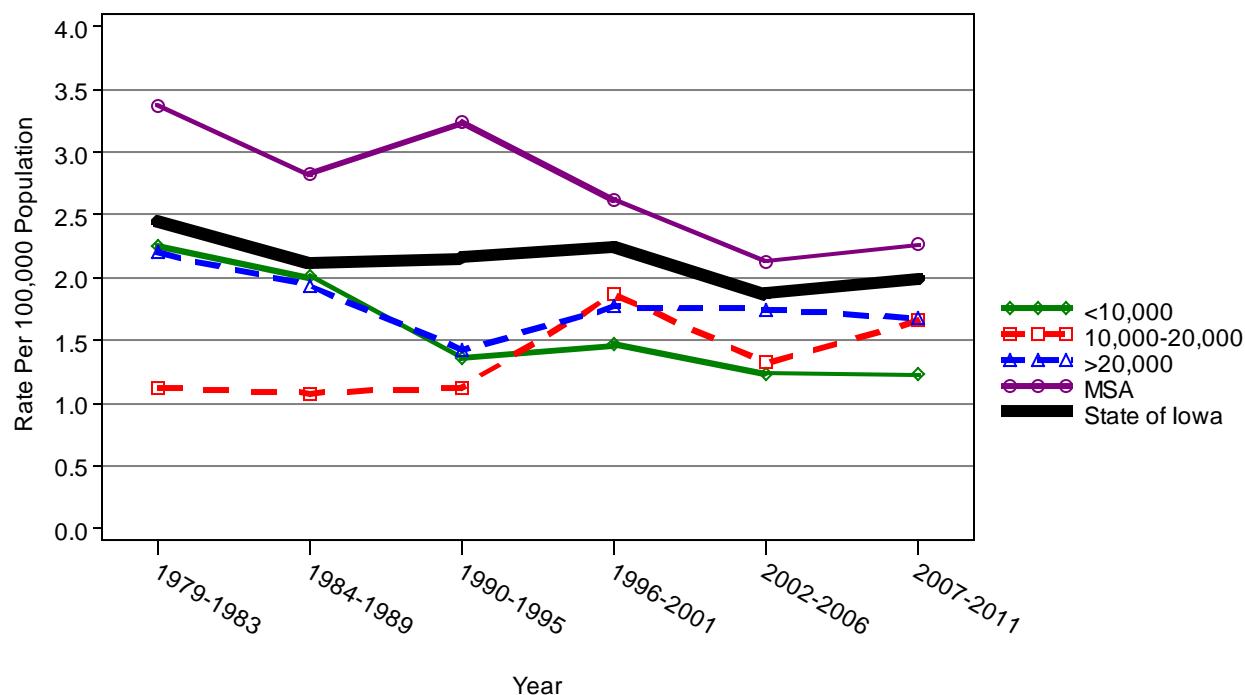
Source: Iowa Department of Public Health, Vital Statistics

## Homicides by County Group 1979-2011

**Crude Rates**



**Age-Adjusted Rates**



# Burns Mortality 2007-2011

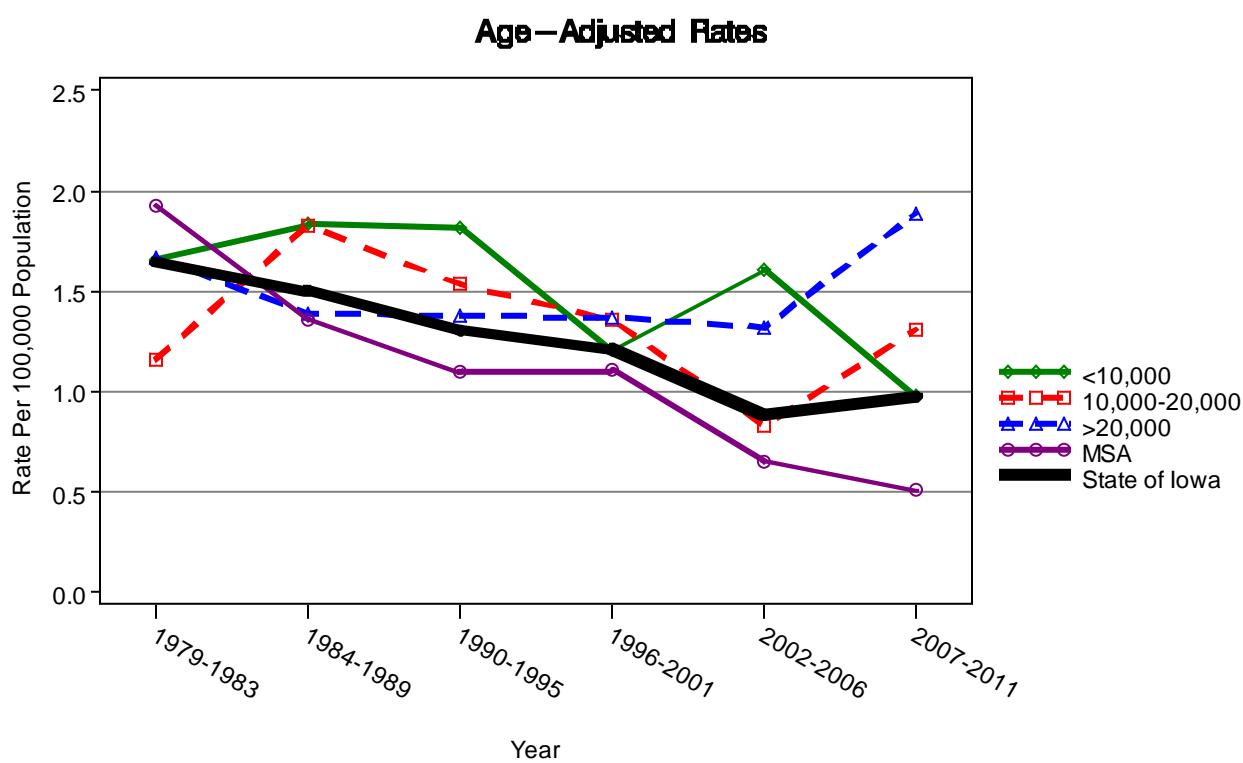
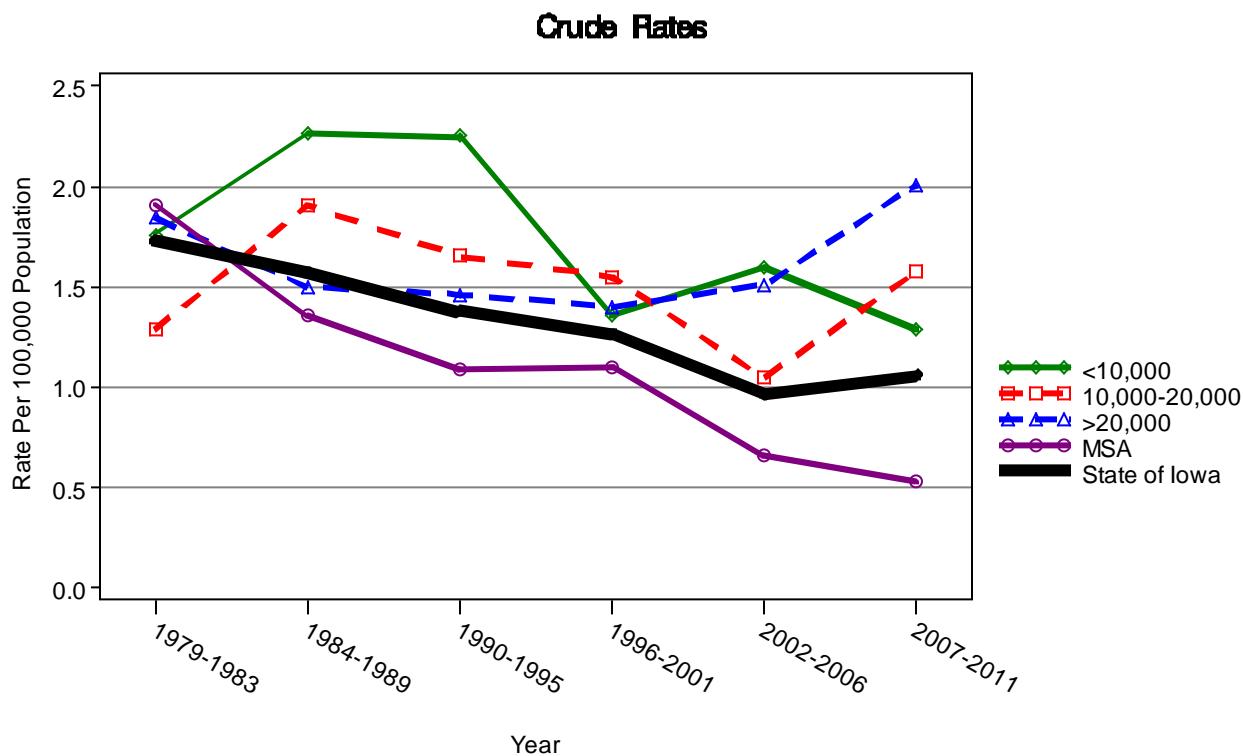
County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*	*
	Adams	*	*	Monona	*	*	*
	Audubon	*	*	Monroe	*	*	*
	Clarke	*	*	Osceola	*	*	*
	Davis	*	*	Palo Alto	*	*	*
	Decatur	*	*	Pocahontas	*	*	*
	Fremont	*	*	Ringgold	*	*	*
	Greene	*	*	Taylor	*	*	*
	Howard	*	*	Van Buren	*	*	*
	Humboldt	*	*	Wayne	*	*	*
	Ida	*	*	Worth	*	*	*
				<b>Total</b>	11	1.3	1
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*	*
	Appanoose	*	*	Iowa	*	*	*
	Butler	*	*	Jefferson	*	*	*
	Calhoun	*	*	Keokuk	*	*	*
	Cass	*	*	Kossuth	*	*	*
	Cedar	*	*	Louisa	*	*	*
	Cherokee	*	*	Lyon	*	*	*
	Chickasaw	*	*	Mitchell	*	*	*
	Clay	*	*	Montgomery	*	*	*
	Clayton	*	*	O'Brien	*	*	*
	Crawford	*	*	Page	*	*	*
	Delaware	*	*	Poweshiek	*	*	*
	Dickinson	*	*	Sac	*	*	*
	Emmet	*	*	Shelby	*	*	*
	Floyd	*	*	Tama	*	*	*
	Franklin	*	*	Union	*	*	*
	Hamilton	*	*	Winnebago	*	*	*
	Hancock	*	*	Wright	*	*	*
				<b>Total</b>	40	1.6	1.3
Counties with Average Population > 20,000	Boone	*	*	Lee	8	4.5	4
	Buchanan	*	*	Mahaska	*	*	*
	Buena Vista	*	*	Marion	*	*	*
	Carroll	*	*	Marshall	*	*	*
	Cerro Gordo	6	2.7	Muscatine	*	*	*
	Clinton	10	4.1	Plymouth	*	*	*
	Des Moines	*	*	Sioux	*	*	*
	Fayette	*	*	Wapello	7	3.9	3.6
	Henry	*	*	Webster	*	*	*
	Jackson	*	*	Winneshiek	*	*	*
	Jasper	*	*	<b>Total</b>	65	2	1.9
MSA Counties	Benton	*	*	Linn	6	0.6	0.5
	Black Hawk	*	*	Madison	*	*	*
	Bremer	*	*	Mills	*	*	*
	Dallas	*	*	Polk	8	0.4	0.4
	Dubuque	*	*	Pottawattamie	7	1.5	1.6
	Grundy	*	*	Scott	*	*	*
	Guthrie	*	*	Story	*	*	*
	Harrison	*	*	Warren	*	*	*
	Johnson	*	*	Washington	*	*	*
	Jones	*	*	Woodbury	*	*	*
				<b>Total</b>	45	0.5	0.5
	<b>State Total</b>	161	1.1				

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

Source: Iowa Department of Public Health, Vital Statistics

## Burns Mortality by County Group 1979-2011



# Drowning Mortality 2007-2011

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	8	0.9	1.1
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Butler	*	*	*	Jefferson	*	*	*
	Calhoun	*	*	*	Keokuk	*	*	*
	Cass	*	*	*	Kossuth	*	*	*
	Cedar	*	*	*	Louisa	*	*	*
	Cherokee	*	*	*	Lyon	*	*	*
	Chickasaw	*	*	*	Mitchell	*	*	*
	Clay	*	*	*	Montgomery	*	*	*
	Clayton	*	*	*	O'Brien	*	*	*
	Crawford	*	*	*	Page	*	*	*
	Delaware	*	*	*	Poweshiek	*	*	*
	Dickinson	*	*	*	Sac	*	*	*
	Emmet	*	*	*	Shelby	*	*	*
	Floyd	*	*	*	Tama	*	*	*
	Franklin	*	*	*	Union	*	*	*
	Hamilton	*	*	*	Winnebago	*	*	*
	Hancock	*	*	*	<b>Total</b>	21	0.8	0.8
Counties with Average Population > 20,000	Boone	*	*	*	Lee	6	3.3	3.5
	Buchanan	*	*	*	Mahaska	*	*	*
	Buena Vista	*	*	*	Marion	*	*	*
	Carroll	*	*	*	Marshall	*	*	*
	Cerro Gordo	*	*	*	Muscatine	*	*	*
	Clinton	*	*	*	Plymouth	*	*	*
	Des Moines	*	*	*	Sioux	*	*	*
	Fayette	*	*	*	Wapello	*	*	*
	Henry	*	*	*	Webster	*	*	*
	Jackson	*	*	*	Winneshiek	*	*	*
	Jasper	*	*	*	<b>Total</b>	41	1.3	1.3
MSA Counties	Benton	*	*	*	Linn	*	*	*
	Black Hawk	6	0.9	0.9	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	*	*	*	Polk	27	1.3	1.2
	Dubuque	*	*	*	Pottawattamie	*	*	*
	Grundy	*	*	*	Scott	9	1.1	1.2
	Guthrie	*	*	*	Story	*	*	*
	Harrison	*	*	*	Warren	*	*	*
	Johnson	*	*	*	Washington	*	*	*
	Jones	*	*	*	Woodbury	*	*	*
					<b>Total</b>	71	0.8	0.8
	<b>State Total</b>	141	0.9	0.9				

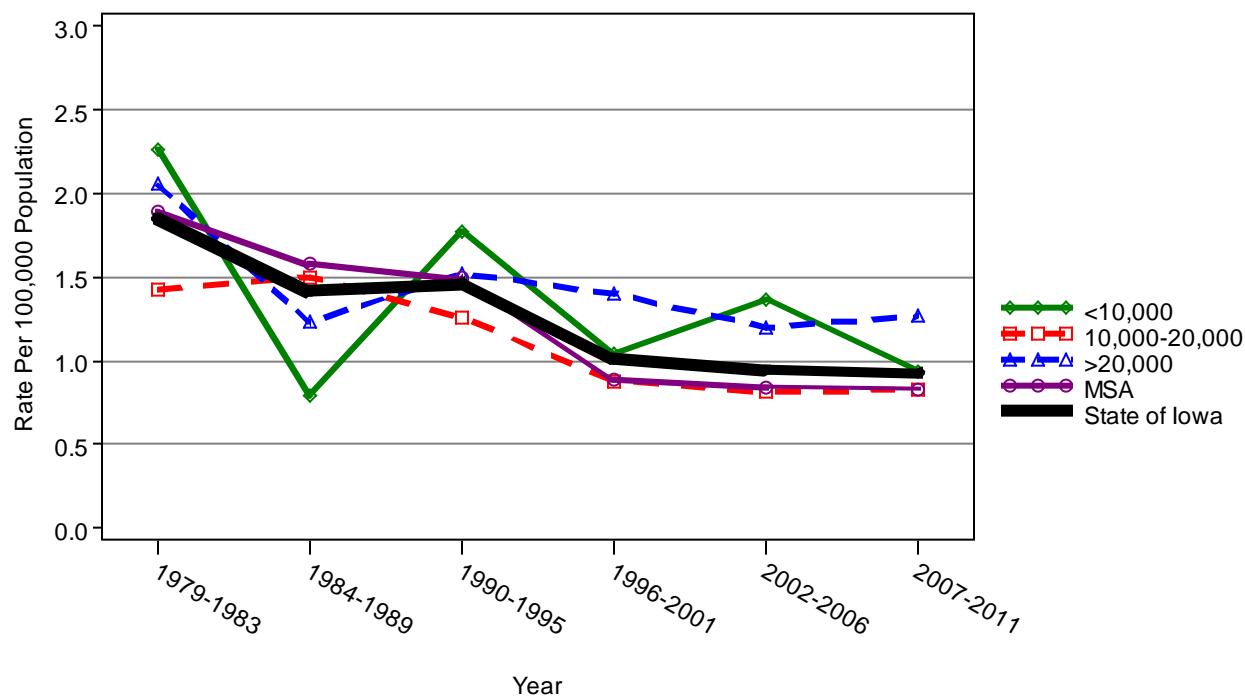
<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

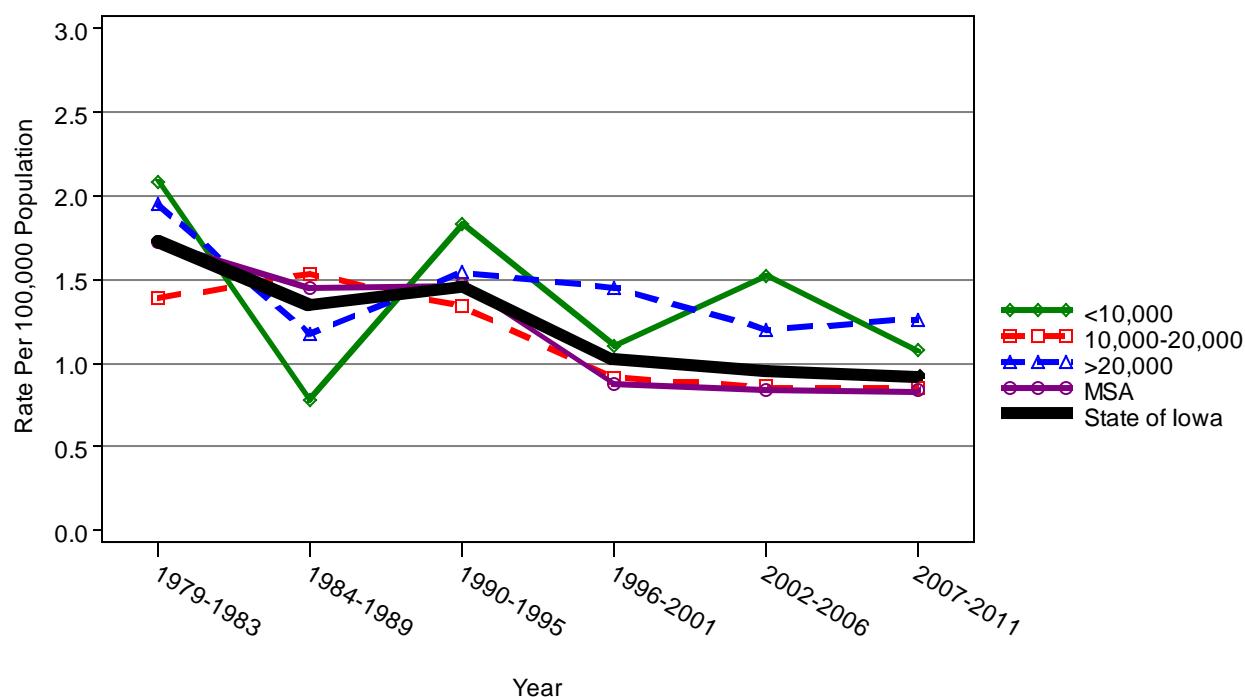
Source: Iowa Department of Public Health, Vital Statistics

## Drowning Mortality by County Group 1979-2011

**Crude Rates**



**Age-Adjusted Rates**



# All Other Unintentional Mortality 2007-2011

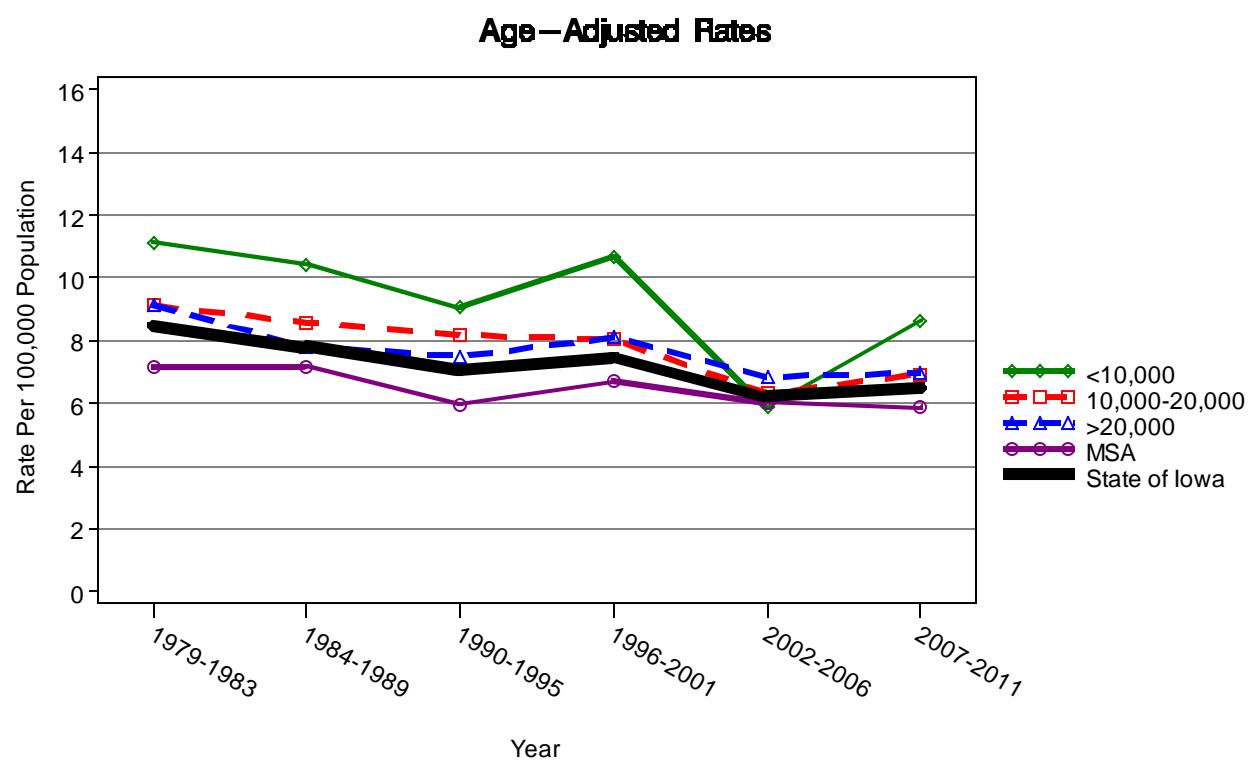
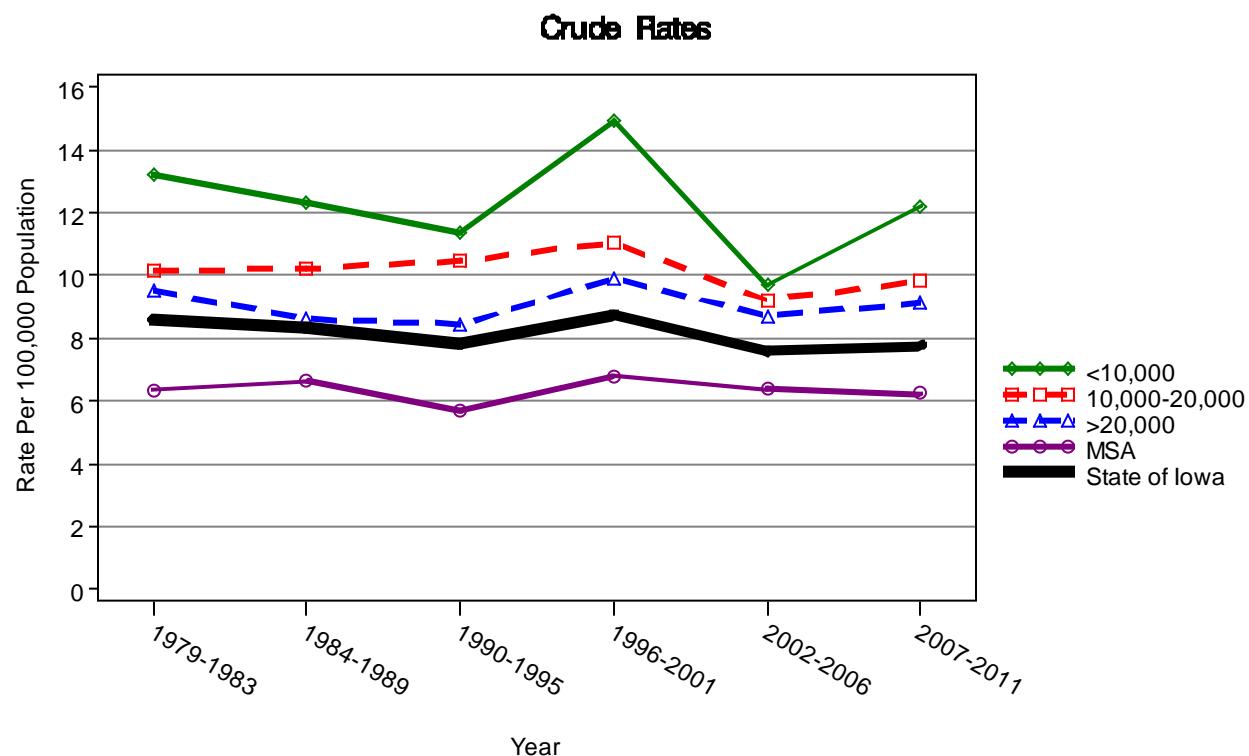
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	8	17.7	11.8
	Adams	*	*	*	Monona	9	19.4	11.3
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	9	19	12.3
	Decatur	6	14.2	11.2	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	7	14.6	12.1	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	8	22.4	12.7	Worth	*	*	*
					<b>Total</b>	104	12.2	8.6
Counties with Average Population 10,000 - 20,000	Allamakee	10	14	10.9	Hardin	8	9.1	5.4
	Appanoose	6	9.3	7.2	Iowa	6	7.3	5.6
	Butler	12	16.1	9.7	Jefferson	8	9.6	7.9
	Calhoun	6	12.3	9.5	Keokuk	*	*	*
	Cass	*	*	*	Kossuth	7	9	6.5
	Cedar	10	10.9	7.5	Louisa	*	*	*
	Cherokee	9	14.9	9.1	Lyon	6	10.4	8.4
	Chickasaw	*	*	*	Mitchell	*	*	*
	Clay	17	20.4	12.6	Montgomery	7	13	8.5
	Clayton	*	*	*	O'Brien	9	12.5	8
	Crawford	*	*	*	Page	7	8.7	6.4
	Delaware	6	6.7	5.9	Poweshiek	10	10.5	8.2
	Dickinson	*	*	*	Sac	*	*	*
	Emmet	9	17.4	13.1	Shelby	9	14.7	9.6
	Floyd	7	8.6	5.8	Tama	*	*	*
	Franklin	6	11.2	7.8	Union	6	9.6	7.3
	Hamilton	8	10.2	7.4	Winnebago	*	*	*
	Hancock	6	10.5	6.5	Wright	8	12	10.9
					<b>Total</b>	249	9.8	6.9
Counties with Average Population > 20,000	Boone	10	7.6	5.4	Lee	17	9.5	7.8
	Buchanan	11	10.5	8	Mahaska	21	18.7	13.1
	Buena Vista	8	8	7.5	Marion	16	9.6	7.6
	Carroll	7	6.7	4.7	Marshall	19	9.4	6.3
	Cerro Gordo	16	7.2	4.7	Muscatine	17	8	7.2
	Clinton	18	7.3	5.6	Plymouth	17	13.6	9.3
	Des Moines	23	11.4	9.2	Sioux	17	10.1	7.9
	Fayette	9	8.6	6.7	Wapello	10	5.6	4.9
	Henry	7	6.9	6.1	Webster	18	9.4	6.8
	Jackson	7	7	4.8	Winneshiek	6	5.7	4.1
	Jasper	22	11.9	9.3	<b>Total</b>	296	9.1	7
MSA Counties	Benton	11	8.4	6.3	Linn	78	7.4	6.7
	Black Hawk	56	8.6	7.6	Madison	6	7.7	7.7
	Bremer	*	*	*	Mills	10	13.2	12.5
	Dallas	21	6.5	7.4	Polk	97	4.6	4.6
	Dubuque	25	5.4	4.4	Pottawattamie	27	5.8	5.4
	Grundy	9	14.5	9.6	Scott	50	6.1	5.8
	Guthrie	8	14.6	14.2	Story	26	5.9	6.3
	Harrison	7	9.4	7	Warren	12	5.2	5.4
	Johnson	18	2.8	3.2	Washington	11	10.1	7.3
	Jones	11	10.6	8.5	Woodbury	47	9.3	8.4
				<b>Total</b>	532	6.2	5.9	
	<b>State Total</b>	1,181	7.8	6.5				

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

\* Represents a count less than or equal to 5

Source: Iowa Department of Public Health, Vital Statistics

# All Other Unintentional Mortality by County Group 1979-2011





## Youth Injury Mortality

Injuries remain the leading cause of death in persons age 1-34 years and contribute the most to years of life lost (YLL), particularly for those events of pre-adult ages. Deaths from unintentional injuries, homicides, and suicides are important public health problems in those 15-24 years of age and many of these deaths are preventable.

Transportation fatalities accounted for 104 deaths for youth aged 0-14 from 2007-2011. Of these, 82% were due to motor vehicle traffic death. In the 15-19 age range, 205 transportation deaths occurred over this same period with 94% accounted for by motor vehicle traffic deaths. In general, over time the transportation mortality rates have been higher in the more rural counties for both age groups. For 15-19 year-olds during 2007 through 2011, the mortality rate in the most rural of counties was almost double that of the state rate. Tables other than transportation are not presented due to the small number of events in both age ranges.

### HIGHLIGHTS...

- Unintentional injuries, homicides, and suicides are important public health problems in those 15-24 years of age.
- Injuries contribute the most to years of life lost (YLL).
- Motor vehicle deaths accounted for 94% of all transportation deaths in youth aged 15-19 in Iowa.

The cause of death data are obtained from death certificates filed at the Iowa Department of Public Health. Crude and age-adjusted rates for ages 15-19 are identical to one another because only one age group in the age-adjustment analysis is represented. The crude and age-adjusted rates for the 0-14 age group show only slight differences as this represents four age groups (<1, 1-4, 5-9, and 10-14) in the age-adjustment analysis. We therefore display only crude rates in the tables and graphs.

**Age 0-14: All Transportation Mortality 2007-2011**

County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	*	Lucas	*	*
	Adams	*	Monona	*	*
	Audubon	*	Monroe	*	*
	Clarke	*	Osceola	*	*
	Davis	*	Palo Alto	*	*
	Decatur	*	Pocahontas	*	*
	Fremont	*	Ringgold	*	*
	Greene	*	Taylor	*	*
	Howard	*	Van Buren	*	*
	Humboldt	*	Wayne	*	*
	Ida	*	Worth	*	*
			<b>Total</b>	8	4.9
Counties with Average Population 10,000 – 20,000	Allamakee	*	Hardin	*	*
	Appanoose	*	Iowa	*	*
	Butler	*	Jefferson	*	*
	Calhoun	*	Keokuk	*	*
	Cass	*	Kossuth	*	*
	Cedar	*	Louisa	*	*
	Cherokee	*	Lyon	*	*
	Chickasaw	*	Mitchell	*	*
	Clay	*	Montgomery	*	*
	Clayton	*	O'Brien	*	*
	Crawford	*	Page	*	*
	Delaware	*	Poweshiek	*	*
	Dickinson	*	Sac	*	*
	Emmet	*	Shelby	*	*
	Floyd	*	Tama	*	*
	Franklin	*	Union	*	*
	Hamilton	*	Winnebago	*	*
	Hancock	*	Wright	*	*
			<b>Total</b>	28	5.8
Counties with Average Population > 20,000	Boone	*	Lee	*	*
	Buchanan	*	Mahaska	*	*
	Buena Vista	*	Marion	*	*
	Carroll	*	Marshall	*	*
	Cerro Gordo	*	Muscatine	*	*
	Clinton	*	Plymouth	*	*
	Des Moines	*	Sioux	*	*
	Fayette	*	Wapello	*	*
	Henry	*	Webster	*	*
	Jackson	*	Winneshiek	*	*
	Jasper	*	<b>Total</b>	25	3.9
	Benton	*	Linn	*	*
	Black Hawk	6	Madison	*	*
	Bremer	*	Mills	*	*
	Dallas	*	Polk	10	2.2
	Dubuque	*	Pottawattamie	*	*
	Grundy	*	Scott	*	*
	Guthrie	*	Story	*	*
	Harrison	*	Warren	*	*
	Johnson	*	Washington	*	*
	Jones	*	Woodbury	6	5.3
			<b>Total</b>	43	2.5
<b>State Total</b>		104		3.5	

<sup>1</sup>Rates per 100,000 Population

\* Represents a count less than or equal to 5

Source: Iowa Department of Public Health, Vital Statistics

**Age 15-19: All Transportation Mortality 2007-2011**

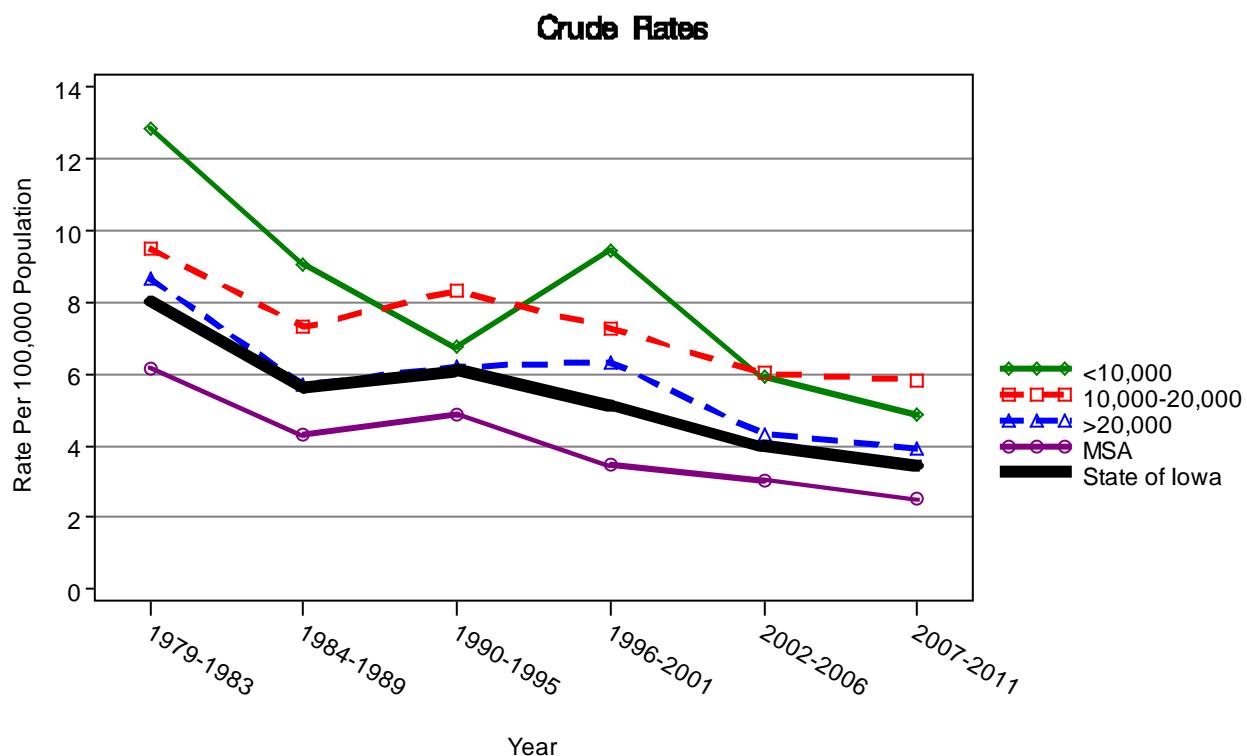
County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Adair	*	*	Lucas	*	*
Adams	*	*	Monona	*	*
Audubon	*	*	Monroe	*	*
Clarke	*	*	Osceola	*	*
Davis	*	*	Palo Alto	*	*
Decatur	*	*	Pocahontas	*	*
Fremont	*	*	Ringgold	*	*
Greene	*	*	Taylor	*	*
Howard	*	*	Van Buren	*	*
Humboldt	*	*	Wayne	*	*
Ida	*	*	Worth	*	*
			<b>Total</b>	20	34.4
Allamakee	*	*	Hardin	*	*
Appanoose	*	*	Iowa	*	*
Butler	*	*	Jefferson	*	*
Calhoun	*	*	Keokuk	*	*
Cass	*	*	Kossuth	*	*
Cedar	*	*	Louisa	*	*
Cherokee	*	*	Lyon	*	*
Chickasaw	*	*	Mitchell	*	*
Clay	*	*	Montgomery	*	*
Clayton	*	*	O'Brien	*	*
Crawford	*	*	Page	*	*
Delaware	*	*	Poweshiek	*	*
Dickinson	*	*	Sac	7	222
Emmet	*	*	Shelby	*	*
Floyd	*	*	Tama	*	*
Franklin	*	*	Union	*	*
Hamilton	*	*	Winnebago	*	*
Hancock	*	*	Wright	*	*
			<b>Total</b>	58	33.3
Boone	*	*	Lee	*	*
Buchanan	*	*	Mahaska	*	*
Buena Vista	*	*	Marion	*	*
Carroll	*	*	Marshall	*	*
Cerro Gordo	*	*	Muscatine	*	*
Clinton	*	*	Plymouth	*	*
Des Moines	*	*	Sioux	*	*
Fayette	*	*	Wapello	*	*
Henry	*	*	Webster	6	40
Jackson	*	*	Winneshiek	*	*
Jasper	*	*	<b>Total</b>	43	18.2
Benton	*	*	Linn	*	*
Black Hawk	*	*	Madison	*	*
Bremer	*	*	Mills	*	*
Dallas	*	*	Polk	28	20.3
Dubuque	7	20.0	Pottawattamie	9	26.9
Grundy	*	*	Scott	*	*
Guthrie	*	*	Story	*	*
Harrison	*	*	Warren	*	*
Johnson	5	8.5	Washington	*	*
Jones	*	*	Woodbury	6	15.6
			<b>Total</b>	84	13.5
<b>State Total</b>	205	18.8			

<sup>1</sup>Rates per 100,000 Population

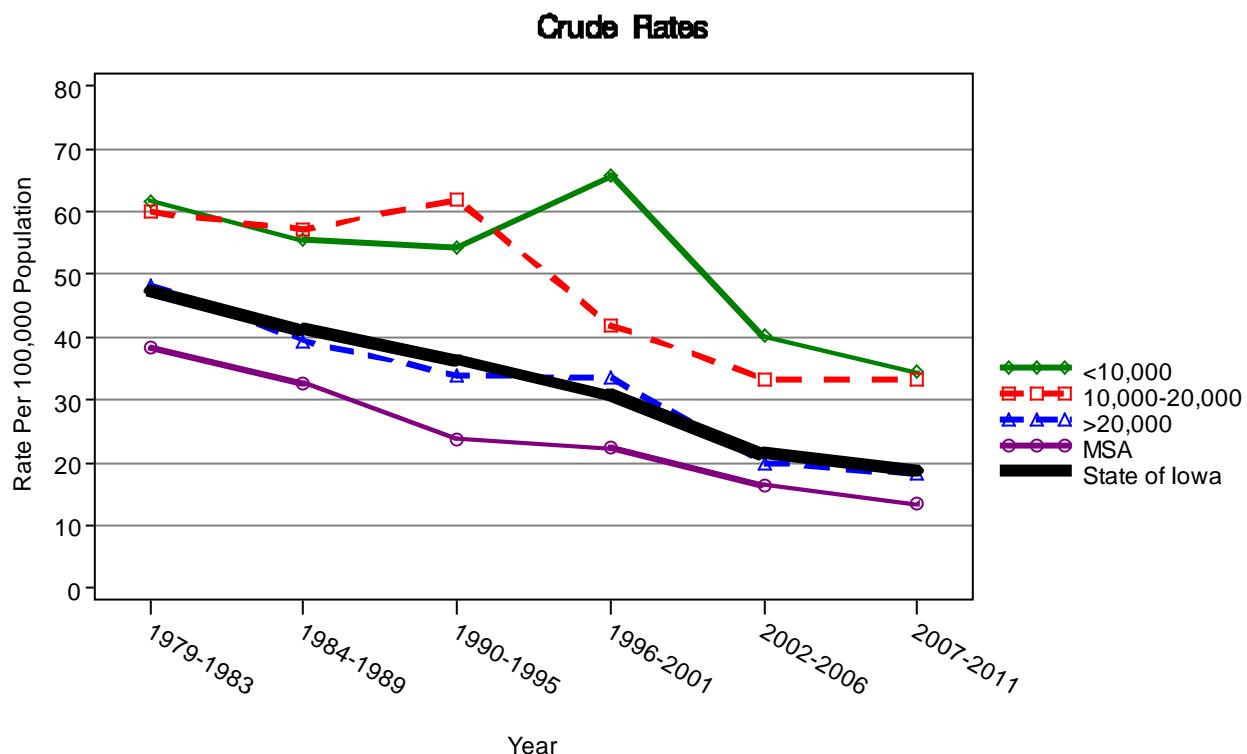
\* Represents a count less than or equal to 5

Source: Iowa Department of Public Health, Vital Statistics

## Age 0-14: All Transportation Mortality by County Group 1979-2011



## Age 15-19: All Transportation Mortality by County Group 1979-2011



# Age 0-14: Motor Vehicle Traffic Mortality 2007-2011

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
<b>Counties with Average Population &lt; 10,000</b>	Adair	*	*	Lucas	*	*
	Adams	*	*	Monona	*	*
	Audubon	*	*	Monroe	*	*
	Clarke	*	*	Osceola	*	*
	Davis	*	*	Palo Alto	*	*
	Decatur	*	*	Pocahontas	*	*
	Fremont	*	*	Ringgold	*	*
	Greene	*	*	Taylor	*	*
	Howard	*	*	Van Buren	*	*
	Humboldt	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				<b>Total</b>	6	3.7
<b>Counties with Average Population 10,000 – 20,000</b>	Allamakee	*	*	Hardin	*	*
	Appanoose	*	*	Iowa	*	*
	Butler	*	*	Jefferson	*	*
	Calhoun	*	*	Keokuk	*	*
	Cass	*	*	Kossuth	*	*
	Cedar	*	*	Louisa	*	*
	Cherokee	*	*	Lyon	*	*
	Chickasaw	*	*	Mitchell	*	*
	Clay	*	*	Montgomery	*	*
	Clayton	*	*	O'Brien	*	*
	Crawford	*	*	Page	*	*
	Delaware	*	*	Poweshiek	*	*
	Dickinson	*	*	Sac	*	*
	Emmet	*	*	Shelby	*	*
	Floyd	*	*	Tama	*	*
	Franklin	*	*	Union	*	*
	Hamilton	*	*	Winnebago	*	*
	Hancock	*	*	Wright	*	*
				<b>Total</b>	21	4.4
<b>Counties with Average Population &gt; 20,000</b>	Boone	*	*	Lee	*	*
	Buchanan	*	*	Mahaska	*	*
	Buena Vista	*	*	Marion	*	*
	Carroll	*	*	Marshall	*	*
	Cerro Gordo	*	*	Muscatine	*	*
	Clinton	*	*	Plymouth	*	*
	Des Moines	*	*	Sioux	*	*
	Fayette	*	*	Wapello	*	*
	Henry	*	*	Webster	*	*
	Jackson	*	*	Winneshiek	*	*
	Jasper	*	*	<b>Total</b>	22	3.5
<b>MSA Counties</b>	Benton	*	*	Linn	*	*
	Black Hawk	*	*	Madison	*	*
	Bremer	*	*	Mills	*	*
	Dallas	*	*	Polk	9	2
	Dubuque	*	*	Pottawattamie	*	*
	Grundy	*	*	Scott	*	*
	Guthrie	*	*	Story	*	*
	Harrison	*	*	Warren	*	*
	Johnson	*	*	Washington	*	*
	Jones	*	*	Woodbury	6	5.3
				<b>Total</b>	36	2.1
	<b>State Total</b>	85	2.8			

<sup>1</sup>Rates per 100,000 Population

\* Represents a count less than or equal to 5

Source: Iowa Department of Public Health, Vital Statistics

**Age 15-19: Motor Vehicle Traffic Mortality 2007-2011**

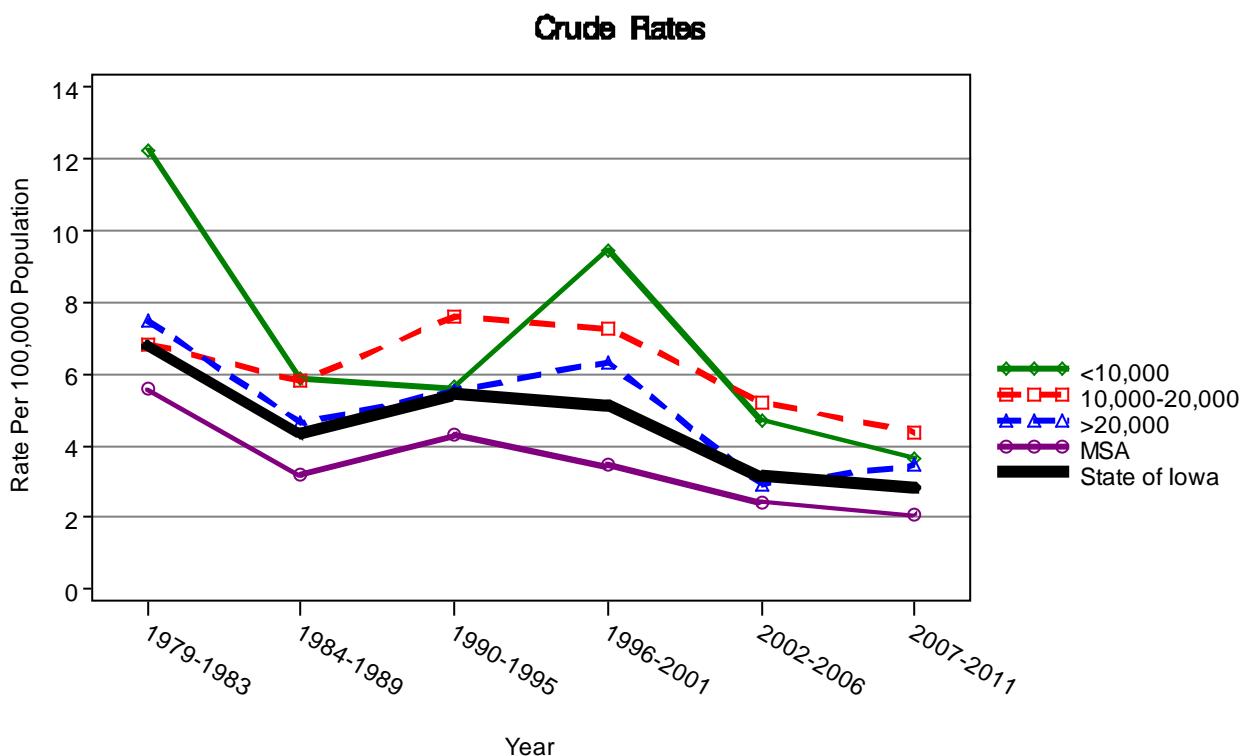
County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monona	*	*
	Audubon	*	*	Monroe	*	*
	Clarke	*	*	Osceola	*	*
	Davis	*	*	Palo Alto	*	*
	Decatur	*	*	Pocahontas	*	*
	Fremont	*	*	Ringgold	*	*
	Greene	*	*	Taylor	*	*
	Howard	*	*	Van Buren	*	*
	Humboldt	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
			<b>Total</b>	18	31	
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*
	Appanoose	*	*	Iowa	*	*
	Butler	*	*	Jefferson	*	*
	Calhoun	*	*	Keokuk	*	*
	Cass	*	*	Kossuth	*	*
	Cedar	*	*	Louisa	*	*
	Cherokee	*	*	Lyon	*	*
	Chickasaw	*	*	Mitchell	*	*
	Clay	*	*	Montgomery	*	*
	Clayton	*	*	O'Brien	*	*
	Crawford	*	*	Page	*	*
	Delaware	*	*	Poweshiek	*	*
	Dickinson	*	*	Sac	7	222
	Emmet	*	*	Shelby	*	*
	Floyd	*	*	Tama	*	*
	Franklin	*	*	Union	*	*
	Hamilton	*	*	Winnebago	*	*
	Hancock	*	*	Wright	*	*
			<b>Total</b>	55	31.5	
Counties with Average Population > 20,000	Boone	*	*	Lee	*	*
	Buchanan	*	*	Mahaska	*	*
	Buena Vista	*	*	Marion	*	*
	Carroll	*	*	Marshall	*	*
	Cerro Gordo	*	*	Muscatine	*	*
	Clinton	*	*	Plymouth	*	*
	Des Moines	*	*	Sioux	*	*
	Fayette	*	*	Wapello	*	*
	Henry	*	*	Webster	*	*
	Jackson	*	*	Winneshiek	*	*
	Jasper	*	*	<b>Total</b>	39	16.5
MSA Counties	Benton	*	*	Linn	*	*
	Black Hawk	*	*	Madison	*	*
	Bremer	*	*	Mills	*	*
	Dallas	*	*	Polk	27	19.6
	Dubuque	*	*	Pottawattamie	9	26.9
	Grundy	*	*	Scott	*	*
	Guthrie	*	*	Story	*	*
	Harrison	*	*	Warren	*	*
	Johnson	*	*	Washington	*	*
	Jones	*	*	Woodbury	*	*
			<b>Total</b>	81	13	
	<b>State Total</b>	193	17.7			

<sup>1</sup>Rates per 100,000 Population

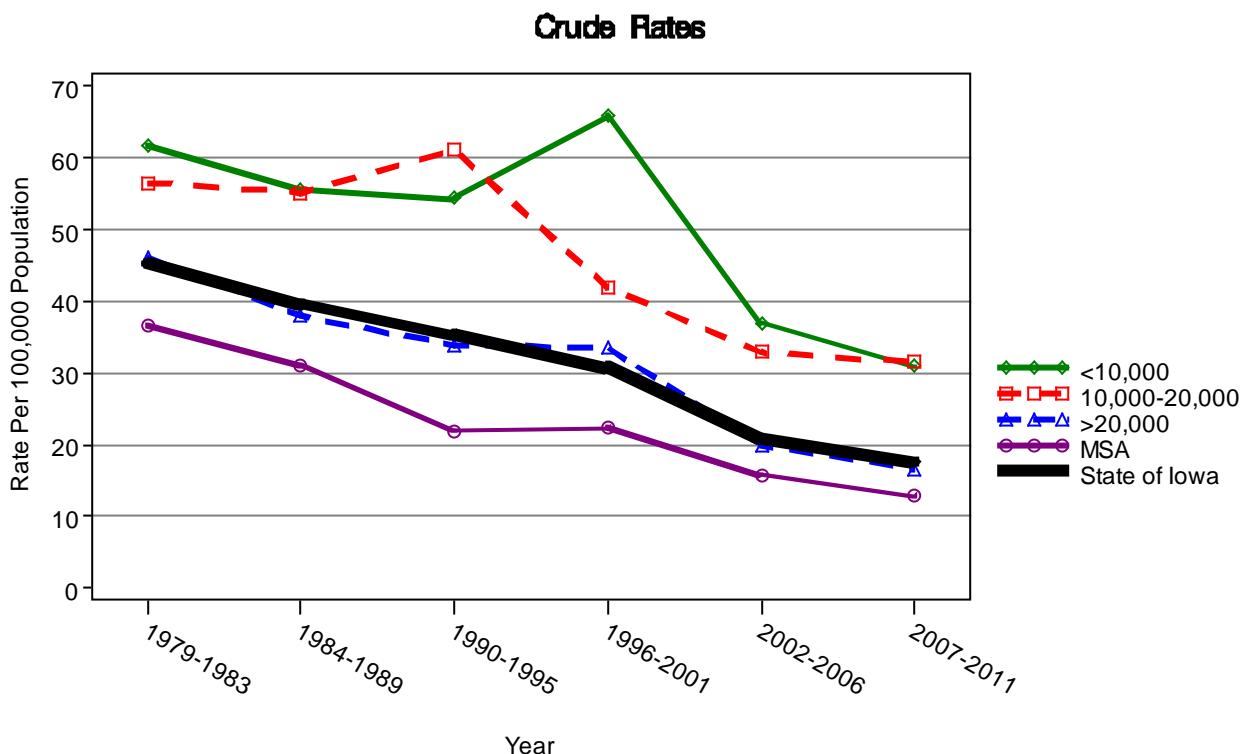
\* Represents a count less than or equal to 5

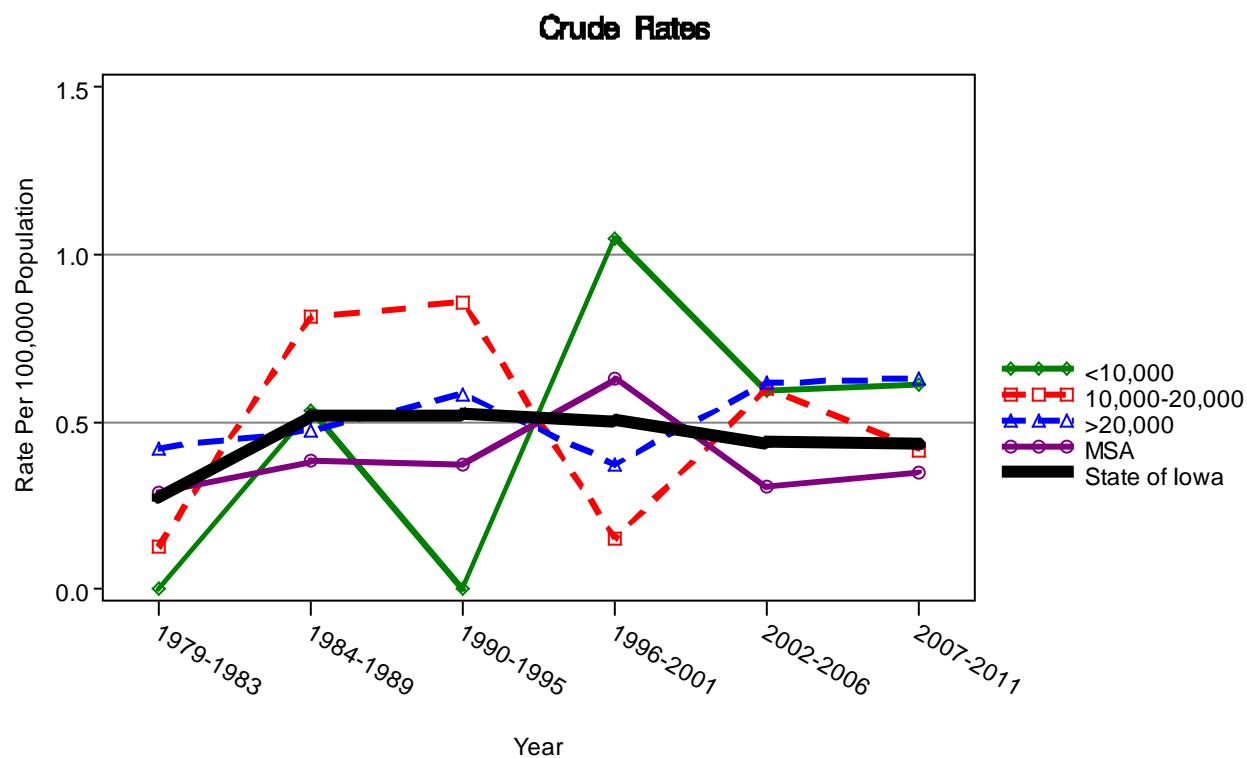
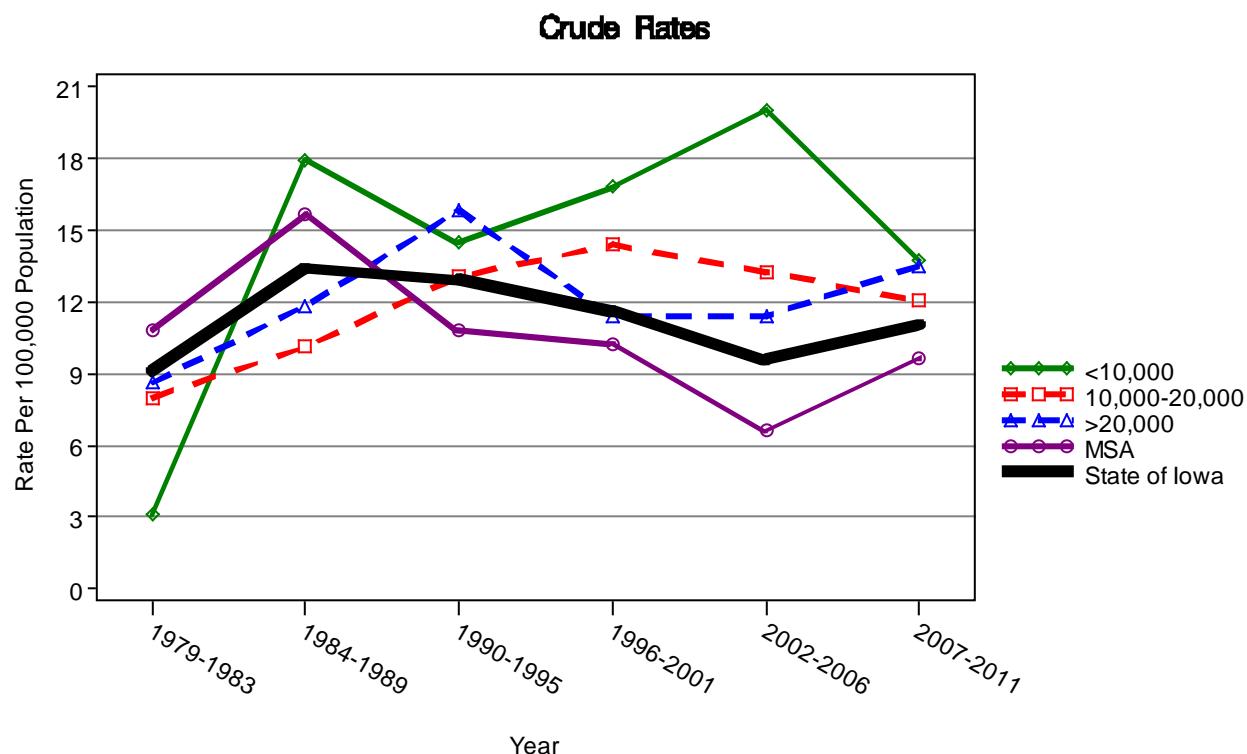
Source: Iowa Department of Public Health, Vital Statistics

## Age 0-14: Motor Vehicle Traffic Mortality by County Group 1979-2011

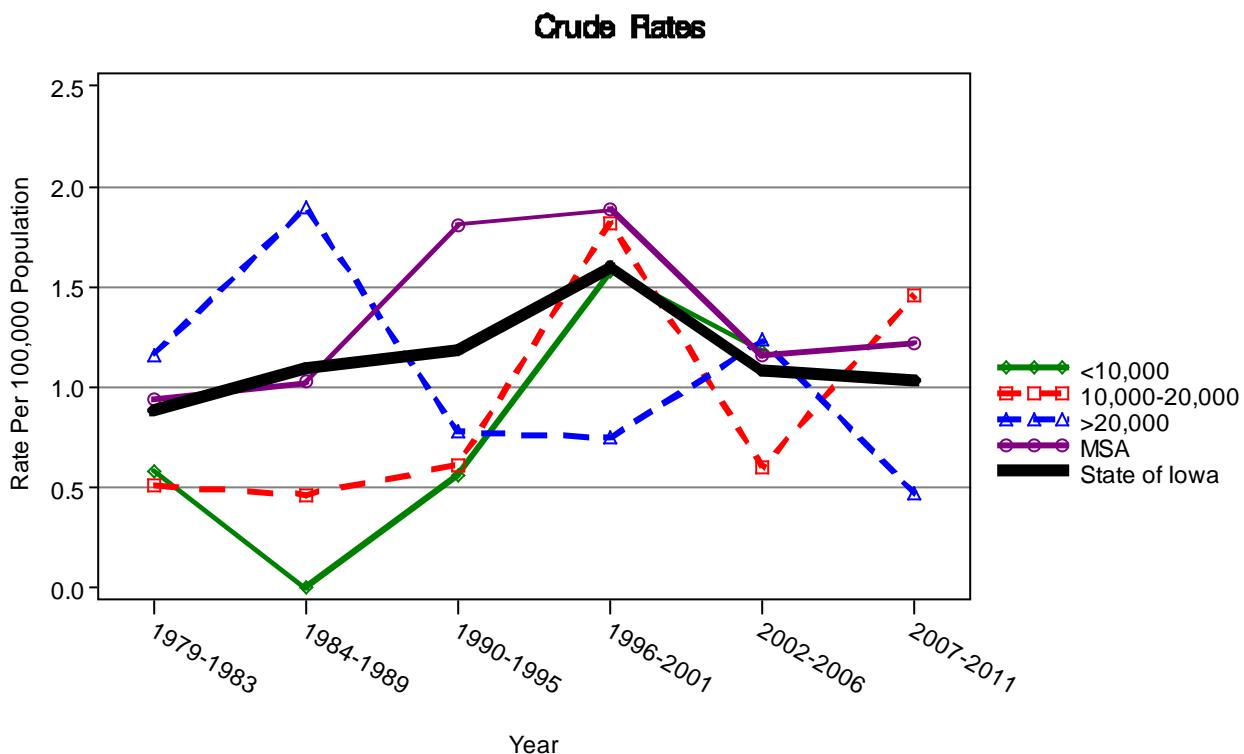


## Age 15-19: Motor Vehicle Traffic Mortality by County Group 1979-2011

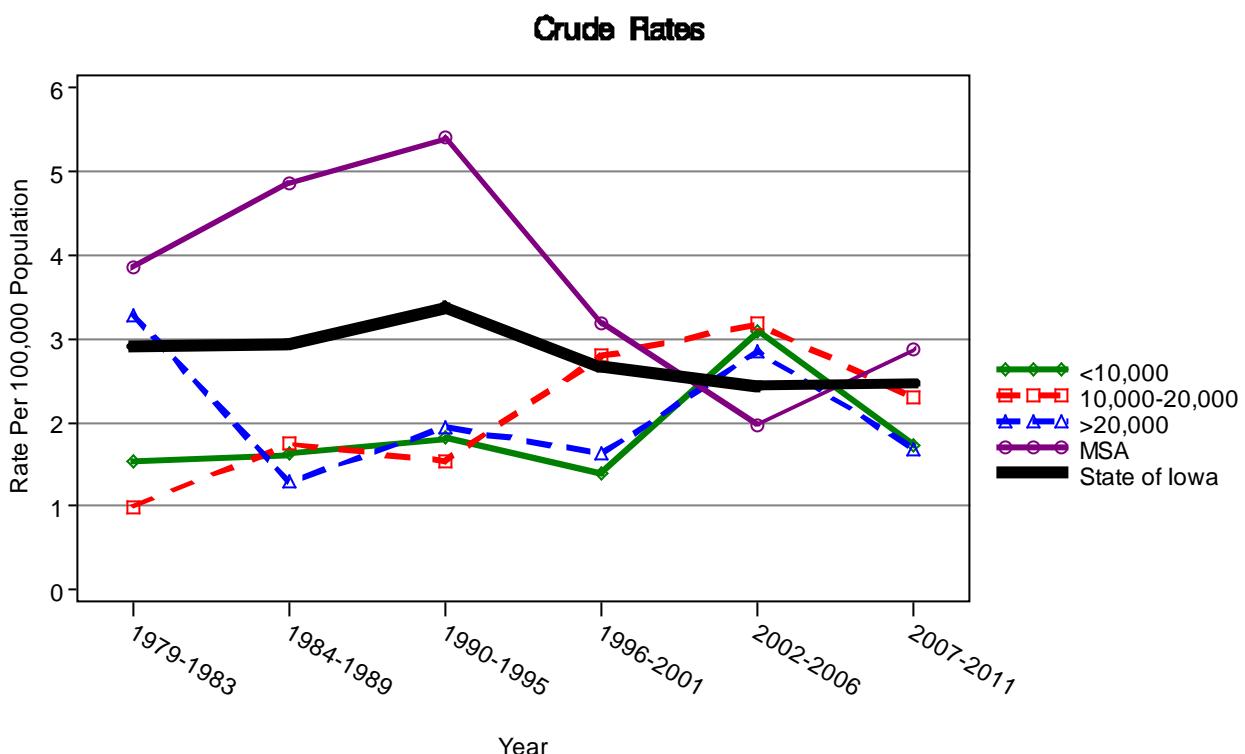


**Age 0-14: Suicides by County Group 1979-2011****Age 15-19: Suicides by County Group 1979-2011**

## Age 0-14: Homicides by County Group 1979-2011



## Age 15-19: Homicides by County Group 1979-2011





## Other Mortality

With the population aging, chronic disease has become a major determinant of the health of Iowans and the need for health care services in the state.

Heart disease, still the number one cause of death in Iowa from 2006-2010, accounted for 177 deaths per 100,000 persons (crude rate). Using age-adjusted rates for heart disease, the four county groupings (based on county size) do not vary much, and we do see a consistent decline over time. In the 1978 to 1980 period, the state age-adjusted mortality rate was 374 per 100,000, whereas it has dropped steadily to 178 per 100,000 by the 2006-2010 period. This represents a 52% decline.

The age-adjusted mortality rates for chronic obstructive pulmonary disease, the third leading cause of death in Iowa, have been increasing across time with the higher population density county groupings experiencing the highest rates in 2006-2010. Stroke is currently the fourth leading cause of death in Iowa, with a crude mortality rate of 55 per 100,000 between 2006 and 2010. From 1978 through 2010, Iowa experienced a decline in age-adjusted stroke mortality similar to what was observed for heart disease with a 57% decline when comparing the 1978-1980 time period with the most recent time period. Death from Alzheimer's disease, the fifth leading cause of death, has shown increasing crude and age-adjusted mortality rates statewide since the 1978-1980 period. The sixth leading cause of death, accidents and adverse effects, includes motor vehicle collisions. The age-adjusted rates show a 20% decrease since the 1978-1980 time period. Overall, crude rates are highest in the smaller counties due to their larger proportion of elderly. The smaller population counties in Iowa are exhibiting a greater problem with mortality due to diabetes and pneumonia/influenza, based upon crude mortality rates, which when compared to the age-adjusted rates indicate this is primarily due to their larger proportion of elderly. However, since 2002, even age-adjusted rates for diabetes are highest in these counties. In the 1980s and 1990s, diabetes mortality rates were increasing across Iowa, but more recently these rates have been leveling off.

These data were obtained from death certificates filed at the Iowa Department of Public Health via the National Center for Health Statistics and the SEER\*Stat (version 8.0.4) software program provided by the National Cancer Institute.

### MAJOR CAUSES OF DEATH IN IOWA...

- Heart disease
- Cancer
- Chronic obstructive pulmonary disease
- Stroke
- Alzheimer's disease
- Accidents and adverse effects
- Diabetes
- Pneumonia/influenza

OTHER MORTALITY

All Causes Mortality 2006-2010

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )		County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	539	1,385.8 (08)	736.5 (36)		Lucas	526	1,153.7 (39)	717.7 (50)
	Adams	247	1,196.4 (28)	716.0 (51)		Monona	756	1,617.6 (01)	835.9 (08)
	Audubon	408	1,318.8 (15)	662.3 (80)		Monroe	469	1,184.3 (31)	771.8 (22)
	Clarke	500	1,084.7 (58)	773.3 (20)		Osceola	394	1,198.0 (27)	729.6 (44)
	Davis	407	936.8 (77)	674.8 (73)		Palo Alto	632	1,329.0 (14)	719.3 (49)
	Decatur	502	1,179.9 (32)	810.0 (15)		Pocahontas	527	1,403.5 (06)	740.9 (34)
	Fremont	423	1,123.9 (50)	709.8 (57)		Ringgold	382	1,477.7 (02)	732.4 (39)
	Greene	571	1,208.8 (25)	692.3 (67)		Taylor	436	1,361.6 (12)	708.2 (59)
	Howard	585	1,217.4 (22)	714.7 (53)		Van Buren	460	1,203.1 (26)	775.8 (19)
	Humboldt	564	1,138.6 (43)	658.6 (83)		Wayne	473	1,476.8 (03)	818.0 (14)
	Ida	492	1,372.1 (09)	765.5 (23)		Worth	400	1,049.0 (64)	673.4 (74)
						<b>Total</b>	10,693	1,247.6	732.0
Counties with Average Population 10,000 – 20,000	Allamakee	814	1,136.1 (44)	731.4 (41)		Hardin	1,210	1,368.1 (11)	763.1 (24)
	Appanoose	916	1,405.9 (05)	883.6 (01)		Iowa	824	1,007.6 (67)	662.8 (79)
	Butler	913	1,226.2 (21)	720.7 (48)		Jefferson	765	919.6 (81)	709.6 (58)
	Calhoun	707	1,435.9 (04)	707.0 (60)		Keokuk	557	1,049.5 (63)	658.0 (84)
	Cass	942	1,348.7 (13)	783.7 (18)		Kossuth	894	1,135.1 (45)	618.7 (94)
	Cedar	853	926.5 (80)	628.8 (91)		Louisa	571	977.5 (70)	836.8 (06)
	Cherokee	761	1,259.0 (19)	686.3 (69)		Lyon	609	1,053.1 (61)	687.2 (68)
	Chickasaw	622	995.2 (68)	632.6 (89)		Mitchell	622	1,151.4 (40)	592.6 (97)
	Clay	941	1,125.7 (47)	697.0 (64)		Montgomery	757	1,389.0 (07)	834.7 (09)
	Clayton	956	1,050.4 (62)	667.3 (76)		O'Brien	987	1,368.8 (10)	747.5 (28)
	Crawford	828	976.8 (71)	694.3 (65)		Page	1,028	1,277.2 (17)	772.8 (21)
	Delaware	804	900.2 (87)	661.1 (81)		Poweshiek	1,069	1,124.4 (48)	698.7 (62)
	Dickinson	907	1,088.5 (57)	626.2 (92)		Sac	688	1,312.9 (16)	682.2 (70)
	Emmet	610	1,174.3 (34)	714.9 (52)		Shelby	698	1,132.2 (46)	621.0 (93)
	Floyd	994	1,212.6 (23)	726.4 (46)		Tama	982	1,093.8 (53)	712.7 (54)
	Franklin	610	1,140.3 (42)	680.6 (71)		Union	740	1,192.9 (29)	805.2 (16)
	Hamilton	808	1,017.9 (66)	649.8 (85)		Winnebago	651	1,187.8 (30)	710.9 (55)
	Hancock	629	1,093.5 (54)	663.5 (78)		<b>Total</b>	29,118	1,143.2	700.4
Counties with Average Population > 20,000	Boone	1,475	1,116.4 (51)	822.9 (12)		Lee	2,120	1,178.2 (33)	845.3 (04)
	Buchanan	966	918.7 (82)	730.3 (43)		Mahaska	1,072	957.7 (73)	698.1 (63)
	Buena Vista	939	940.0 (75)	648.7 (86)		Marion	1,602	959.7 (72)	732.3 (40)
	Carroll	1,218	1,171.0 (35)	709.9 (56)		Marshall	2,320	1,156.5 (37)	836.8 (06)
	Cerro Gordo	2,434	1,098.3 (52)	744.7 (31)		Muscatine	1,797	845.6 (90)	746.5 (29)
	Clinton	2,691	1,092.1 (55)	793.1 (17)		Plymouth	1,177	944.1 (74)	664.5 (77)
	Des Moines	2,180	1,083.0 (59)	755.4 (25)		Sioux	1,237	741.1 (95)	564.3 (98)
	Fayette	1,214	1,156.4 (38)	726.5 (45)		Wapello	2,038	1,146.7 (41)	848.1 (03)
	Henry	1,036	1,022.5 (65)	743.7 (33)		Webster	2,314	1,209.0 (24)	880.4 (02)
	Jackson	1,071	1,074.1 (60)	730.8 (42)		Winneshiek	846	804.5 (93)	561.0 (99)
	Jasper	1,839	992.7 (69)	743.8 (32)		<b>Total</b>	33,586	1,036.8	751.0
MSA Counties	Benton	1,110	850.6 (89)	659.1 (82)		Linn	7,916	762.0 (94)	699.6 (61)
	Black Hawk	5,591	865.2 (88)	734.0 (38)		Madison	705	910.4 (84)	748.7 (27)
	Bremer	1,097	907.2 (86)	618.4 (95)		Mills	704	929.0 (78)	840.7 (05)
	Dallas	1,711	554.4 (98)	644.3 (87)		Polk	14,818	706.8 (96)	751.4 (26)
	Dubuque	4,296	928.4 (79)	722.8 (47)		Pottawattamie	4,318	939.4 (76)	825.3 (11)
	Grundy	697	1,124.0 (49)	671.3 (75)		Scott	6,553	808.2 (92)	739.6 (35)
	Guthrie	640	1,159.4 (36)	735.2 (37)		Story	2,455	560.6 (97)	631.6 (90)
	Harrison	926	1,228.7 (20)	833.6 (10)		Warren	1,837	810.2 (91)	745.6 (30)
	Johnson	2,905	457.5 (99)	610.8 (96)		Washington	1,180	1,091.1 (56)	680.6 (71)
	Jones	941	908.6 (85)	637.7 (88)		Woodbury	4,615	912.0 (83)	820.7 (13)
	<b>State Total</b>	138,412	917.8	725.7		<b>Total</b>	65,015	770.5	726.1

<sup>1</sup>Rates per 100,000 population

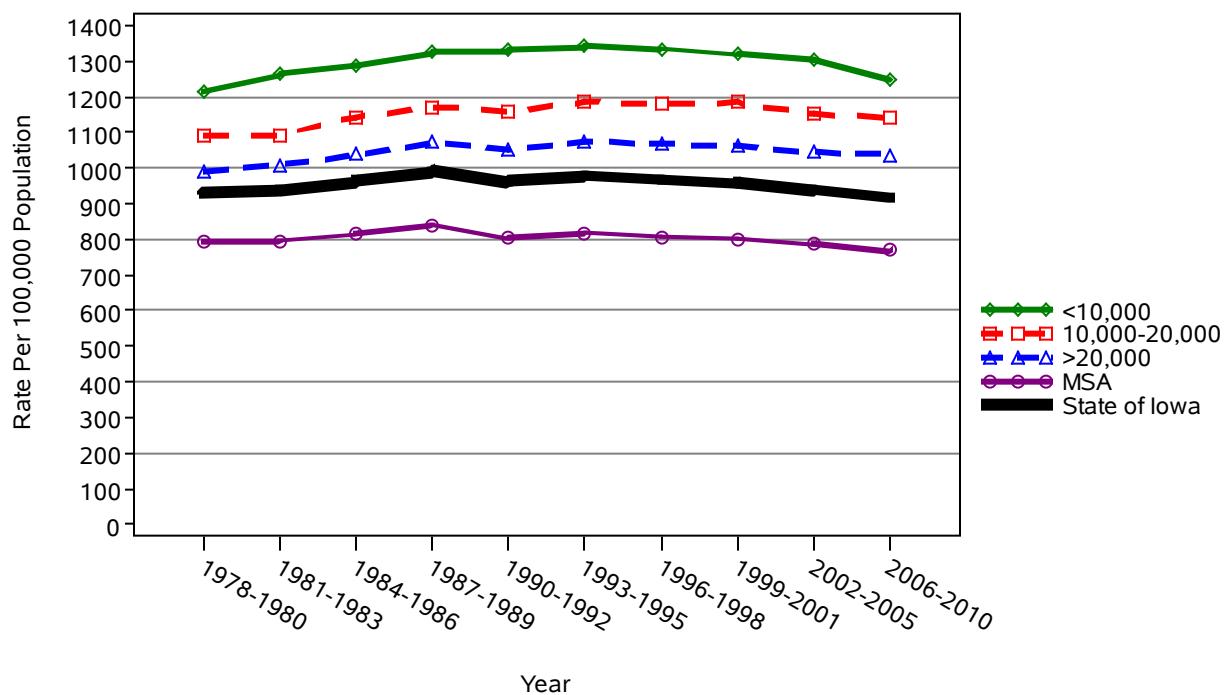
<sup>2</sup>Adjusted to year 2000 population

<sup>3</sup>Rank among 99 counties

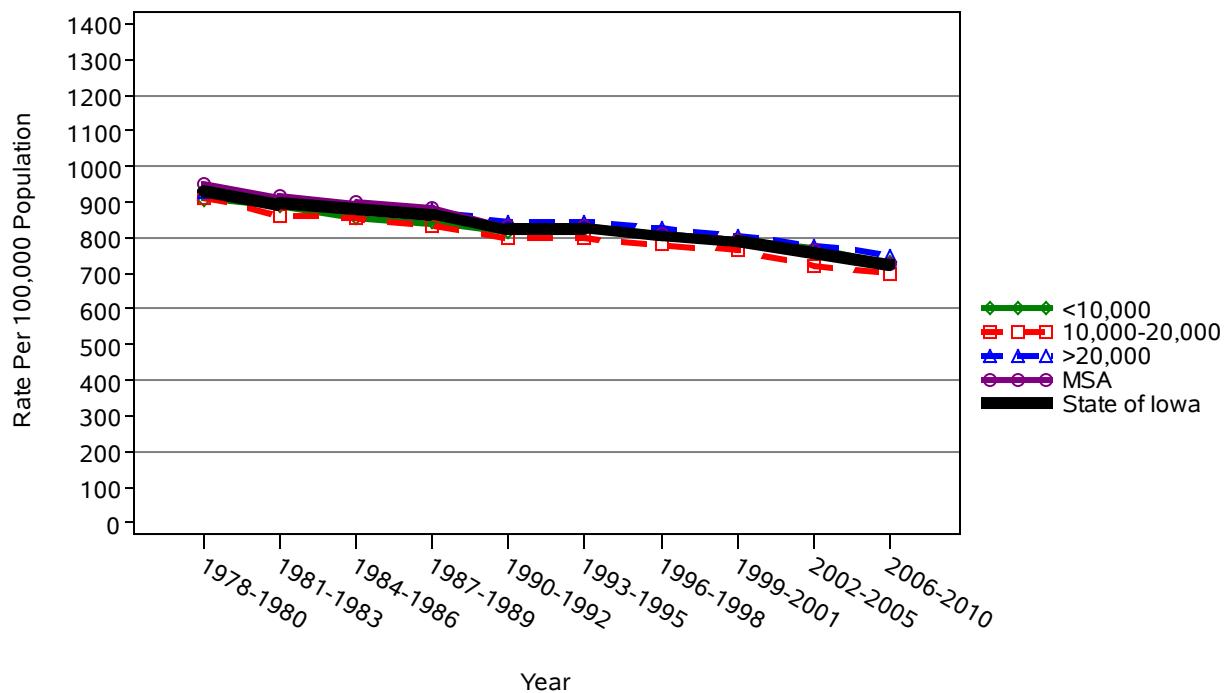
Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## All Causes Mortality by County Group 1978-2010

### Crude Rates



### Age-Adjusted Rates



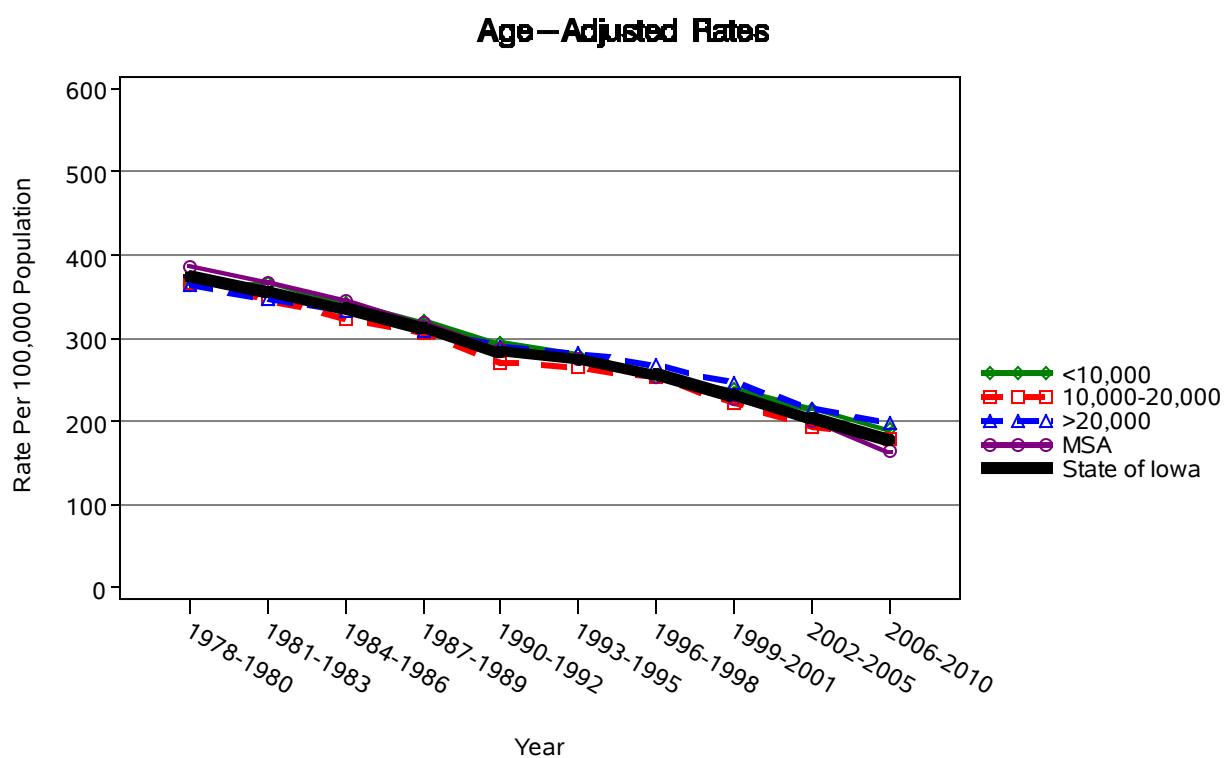
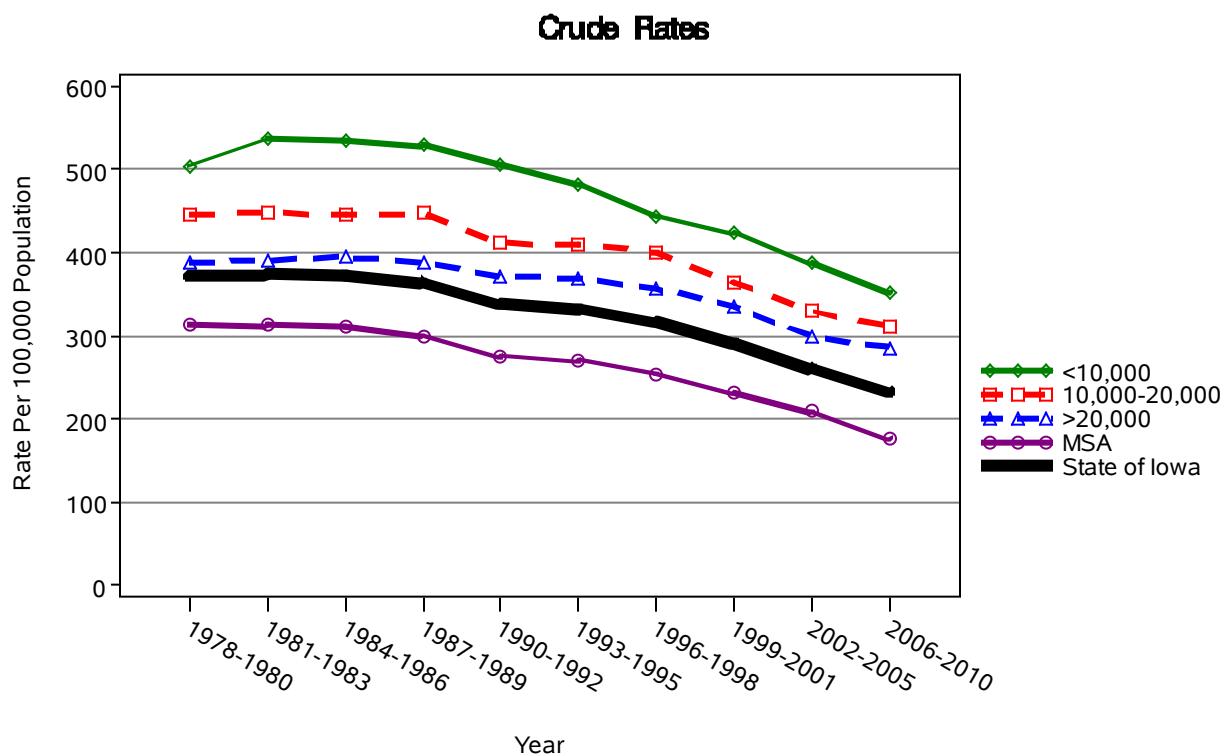
# Heart Disease Mortality 2006-2010

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )		County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	148	380.5 (13)	189.0 (33)		Lucas	135	296.1 (52)	168.6 (66)
	Adams	79	382.7 (12)	204.8 (18)		Monona	229	490.0 (02)	241.8 (06)
	Audubon	101	326.5 (32)	149.6 (91)		Monroe	113	285.4 (58)	173.7 (58)
	Clarke	150	325.4 (33)	220.5 (12)		Osceola	146	443.9 (03)	246.2 (05)
	Davis	114	262.4 (68)	181.1 (46)		Palo Alto	169	355.4 (19)	186.5 (36)
	Decatur	126	296.2 (51)	193.9 (27)		Pocahontas	147	391.5 (09)	193.5 (28)
	Fremont	93	247.1 (76)	150.4 (89)		Ringgold	103	398.4 (08)	159.2 (78)
	Greene	157	332.4 (29)	170.9 (62)		Taylor	121	377.9 (14)	182.6 (41)
	Howard	170	353.8 (20)	190.3 (31)		Van Buren	115	300.8 (48)	182.0 (43)
	Humboldt	219	442.1 (04)	224.0 (11)		Wayne	135	421.5 (05)	208.8 (16)
	Ida	133	370.9 (16)	196.2 (26)		Worth	117	306.8 (44)	183.4 (40)
						<b>Total</b>	3,020	352.4	191.2
Counties with Average Population 10,000 – 20,000	Allamakee	183	255.4 (71)	157.4 (81)		Hardin	324	366.3 (17)	198.0 (24)
	Appanoose	370	567.9 (01)	326.8 (01)		Iowa	216	264.1 (67)	163.6 (72)
	Butler	297	398.9 (07)	214.0 (15)		Jefferson	222	266.9 (66)	198.8 (23)
	Calhoun	171	347.3 (25)	155.2 (85)		Keokuk	143	269.4 (62)	160.1 (77)
	Cass	237	339.3 (27)	187.4 (35)		Kossuth	243	308.5 (43)	158.2 (80)
	Cedar	240	260.7 (69)	163.8 (71)		Louisa	163	279.0 (59)	230.9 (09)
	Cherokee	202	334.2 (28)	174.0 (57)		Lyon	182	314.7 (37)	192.0 (30)
	Chickasaw	225	360.0 (18)	215.3 (14)		Mitchell	207	383.2 (11)	174.1 (56)
	Clay	195	233.3 (81)	137.0 (96)		Montgomery	191	350.5 (21)	197.1 (25)
	Clayton	243	267.0 (65)	159.2 (78)		O'Brien	238	330.1 (31)	164.1 (69)
	Crawford	199	234.8 (79)	160.5 (76)		Page	252	313.1 (38)	181.3 (45)
	Delaware	213	238.5 (78)	168.9 (65)		Poweshiek	294	309.2 (41)	181.9 (44)
	Dickinson	276	331.2 (30)	178.2 (50)		Sac	162	309.1 (42)	148.9 (93)
	Emmet	182	350.4 (22)	201.8 (22)		Shelby	216	350.4 (22)	174.7 (54)
	Floyd	264	322.1 (35)	178.9 (49)		Tama	223	248.4 (75)	154.4 (86)
	Franklin	170	317.8 (36)	175.1 (53)		Union	253	407.8 (06)	255.9 (04)
	Hamilton	231	291.0 (55)	171.8 (61)		Winnebago	147	268.2 (63)	149.4 (92)
	Hancock	174	302.5 (46)	176.0 (52)		<b>Total</b>	7,948	312.1	179.4
Counties with Average Population > 20,000	Boone	413	312.6 (39)	220.3 (13)		Lee	692	384.6 (10)	265.3 (02)
	Buchanan	242	230.2 (83)	179.2 (47)		Mahaska	270	241.2 (77)	164.6 (68)
	Buena Vista	252	252.3 (74)	163.0 (73)		Marion	422	252.8 (73)	185.3 (38)
	Carroll	324	311.5 (40)	173.5 (59)		Marshall	513	255.7 (70)	182.4 (42)
	Cerro Gordo	650	293.3 (54)	189.5 (32)		Muscatine	453	213.2 (87)	185.7 (37)
	Clinton	916	371.8 (15)	256.2 (03)		Plymouth	272	218.2 (86)	144.3 (95)
	Des Moines	607	301.5 (47)	202.3 (21)		Sioux	303	181.5 (93)	134.3 (99)
	Fayette	319	303.9 (45)	184.3 (39)		Wapello	573	322.4 (34)	235.7 (08)
	Henry	299	295.1 (53)	203.9 (19)		Webster	654	341.7 (26)	238.7 (07)
	Jackson	348	349.0 (24)	226.2 (10)		Winneshiek	244	232.0 (82)	155.8 (84)
	Jasper	495	267.2 (64)	193.1 (29)		<b>Total</b>	9,261	285.9	199.0
MSA Counties	Benton	360	275.9 (60)	203.2 (20)		Linn	1,714	165.0 (94)	147.8 (94)
	Black Hawk	1,276	197.5 (89)	163.0 (73)		Madison	145	187.2 (92)	152.5 (88)
	Bremer	351	290.3 (56)	188.3 (34)		Mills	173	228.3 (85)	206.0 (17)
	Dallas	402	130.3 (98)	150.3 (90)		Polk	3,263	155.6 (95)	164.9 (67)
	Dubuque	1,084	234.3 (80)	176.6 (51)		Pottawattamie	950	206.7 (88)	179.0 (48)
	Grundy	180	290.3 (56)	164.1 (69)		Scott	1,531	188.8 (91)	169.8 (64)
	Guthrie	141	255.4 (71)	156.8 (82)		Story	646	147.5 (97)	162.7 (75)
	Harrison	206	273.3 (61)	173.3 (60)		Warren	338	149.1 (96)	135.2 (98)
	Johnson	639	100.6 (99)	136.0 (97)		Washington	324	299.6 (49)	174.5 (55)
	Jones	238	229.8 (84)	153.7 (87)		Woodbury	964	190.5 (90)	170.4 (63)
						<b>Total</b>	14,925	176.9	164.0
	<b>State Total</b>	35,154	233.1	178.1					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Heart Disease Mortality by County Group 1978-2010



## OTHER MORTALITY

**Chronic Obstructive Pulmonary Disease Mortality 2006-2010**

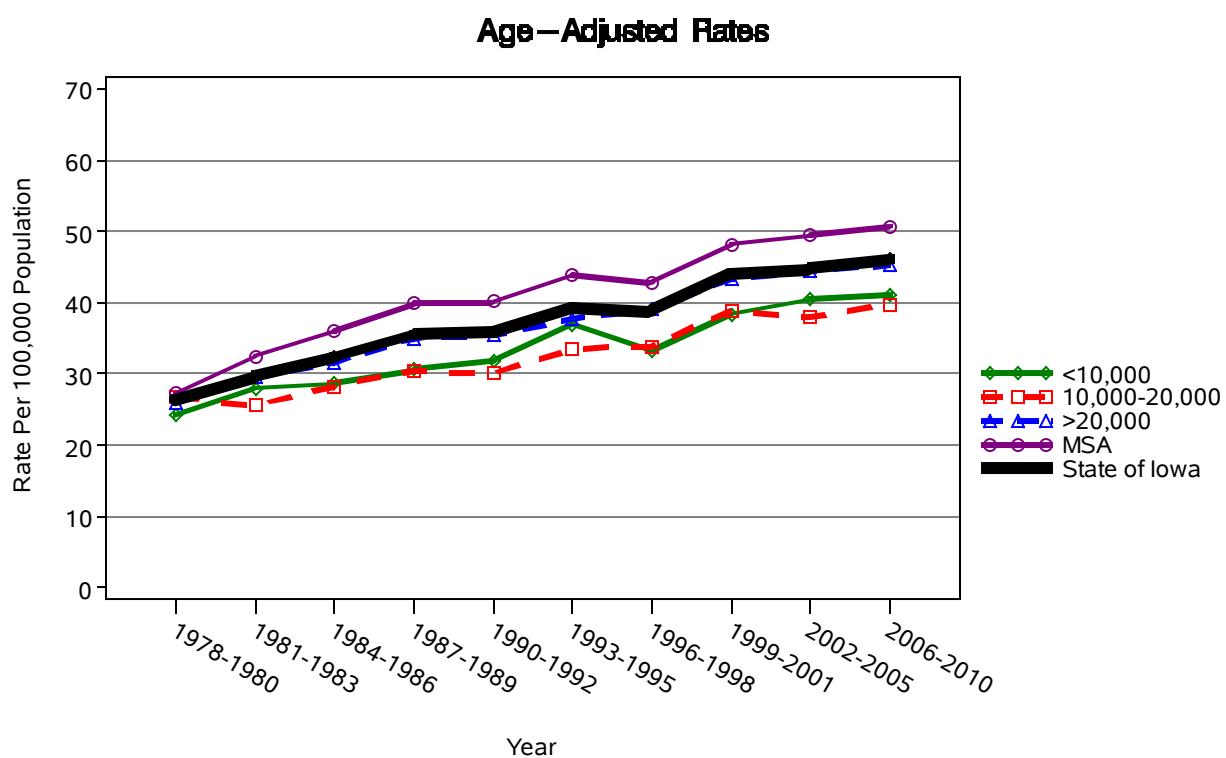
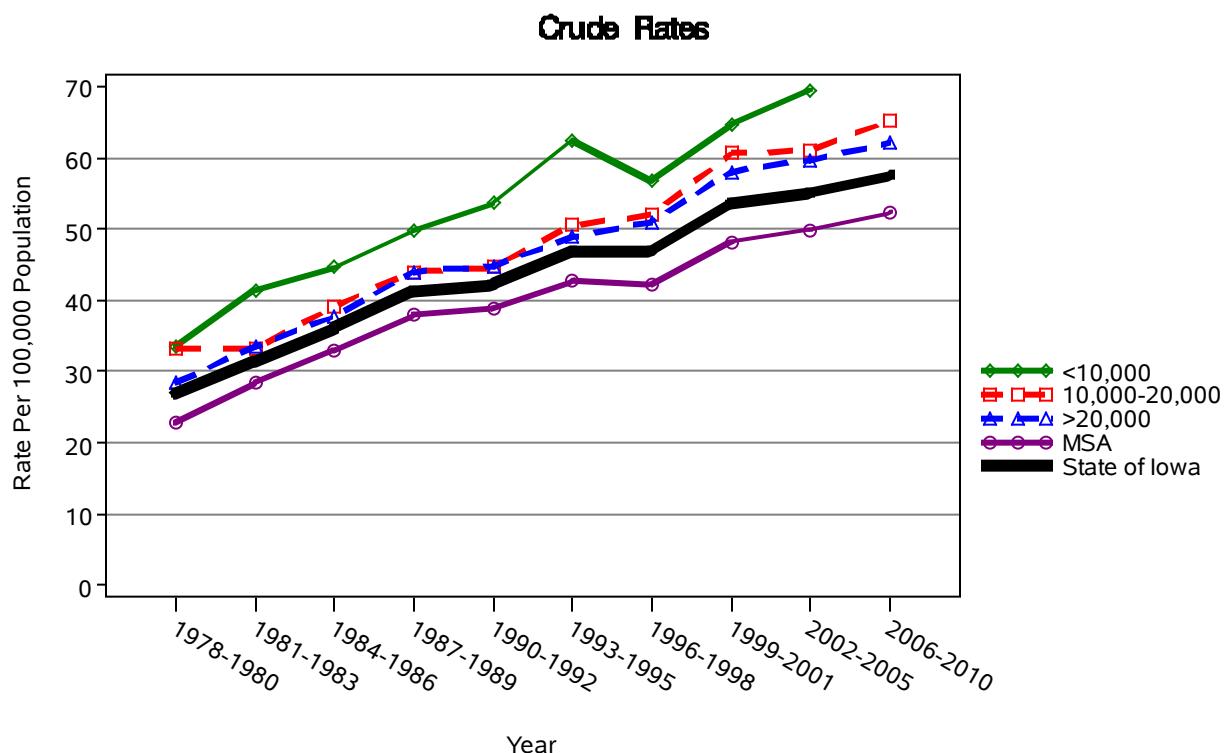
County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	
Counties with Average Population < 10,000	Adair	30	77.1	40.6	Lucas	23	50.4	32.7
	Adams	*	*	Monona	42	89.9	40.1	
	Audubon	24	77.6	36.1	Monroe	32	80.8	49.4
	Clarke	24	52.1	36.9	Osceola	15	45.6	28.7
	Davis	24	55.2	38.2	Palo Alto	44	92.5	50.4
	Decatur	36	84.6	59.7	Pocahontas	33	87.9	42.9
	Fremont	37	98.3	59.7	Ringgold	30	116.0	60.9
	Greene	38	80.4	46.3	Taylor	26	81.2	44.8
	Howard	17	35.4	23.1	Van Buren	19	49.7	31.4
	Humboldt	31	62.6	34.4	Wayne	31	96.8	57.8
	Ida	27	75.3	41.4	Worth	16	42.0	27.2
				<b>Total</b>	*	*	*	
Counties with Average Population 10,000 - 20,000	Allamakee	48	67.0	41.4	Hardin	61	69.0	38.2
	Appanoose	28	43.0	26.4	Iowa	30	36.7	23.7
	Butler	46	61.8	35.5	Jefferson	42	50.5	42.9
	Calhoun	48	97.5	45.4	Keokuk	46	86.7	52.1
	Cass	49	70.2	40.2	Kossuth	48	60.9	33.4
	Cedar	42	45.6	32.3	Louisa	42	71.9	61.6
	Cherokee	47	77.8	42.3	Lyon	26	45.0	28.3
	Chickasaw	19	30.4	19.1	Mitchell	23	42.6	22.8
	Clay	54	64.6	38.9	Montgomery	67	122.9	74.4
	Clayton	49	53.8	33.4	O'Brien	61	84.6	46.3
	Crawford	53	62.5	45.7	Page	78	96.9	60.4
	Delaware	43	48.1	36.0	Poweshiek	74	77.8	48.3
	Dickinson	51	61.2	33.0	Sac	48	91.6	47.1
	Emmet	30	57.8	33.7	Shelby	30	48.7	26.6
	Floyd	61	74.4	44.7	Tama	64	71.3	46.1
	Franklin	38	71.0	43.5	Union	46	74.2	50.2
	Hamilton	51	64.2	40.5	Winnebago	36	65.7	43.0
	Hancock	40	69.5	42.1	<b>Total</b>	1,660	65.2	39.8
Counties with Average Population > 20,000	Boone	94	71.1	51.8	Lee	132	73.4	54.0
	Buchanan	56	53.3	42.6	Mahaska	54	48.2	35.5
	Buena Vista	68	68.1	46.2	Marion	69	41.3	34.0
	Carroll	64	61.5	38.6	Marshall	178	88.7	65.1
	Cerro Gordo	174	78.5	52.3	Muscatine	86	40.5	37.3
	Clinton	138	56.0	40.0	Plymouth	49	39.3	28.2
	Des Moines	155	77.0	53.4	Sioux	69	41.3	32.6
	Fayette	65	61.9	38.3	Wapello	128	72.0	53.2
	Henry	55	54.3	41.7	Webster	177	92.5	68.0
	Jackson	62	62.2	41.2	Winneshiek	44	41.8	29.4
	Jasper	90	48.6	35.4	<b>Total</b>	2,007	62.0	45.3
MSA Counties	Benton	65	49.8	38.1	Linn	566	54.5	51.5
	Black Hawk	403	62.4	52.5	Madison	34	43.9	37.9
	Bremer	44	36.4	25.4	Mills	44	58.1	55.7
	Dallas	116	37.6	46.6	Polk	986	47.0	52.2
	Dubuque	264	57.1	44.8	Pottawattamie	380	82.7	72.4
	Grundy	31	50.0	30.4	Scott	477	58.8	54.5
	Guthrie	49	88.8	57.5	Story	124	28.3	33.1
	Harrison	75	99.5	66.8	Warren	105	46.3	43.3
	Johnson	151	23.8	34.5	Washington	74	68.4	42.6
	Jones	62	59.9	41.1	Woodbury	370	73.1	67.8
				<b>Total</b>	4,420	52.4	50.7	
	<b>State Total</b>	*	*	*				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Chronic Obstructive Pulmonary Disease Mortality by County Group 1978-2010



## OTHER MORTALITY

**Stroke Mortality 2006-2010**

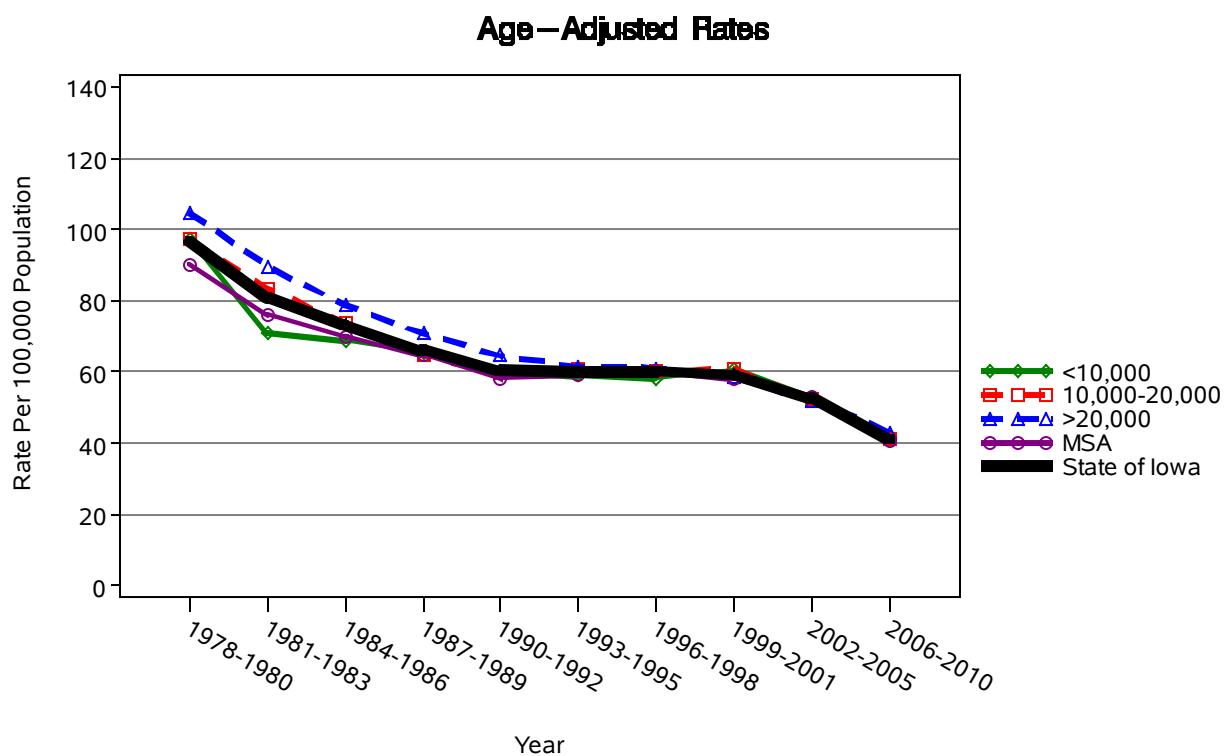
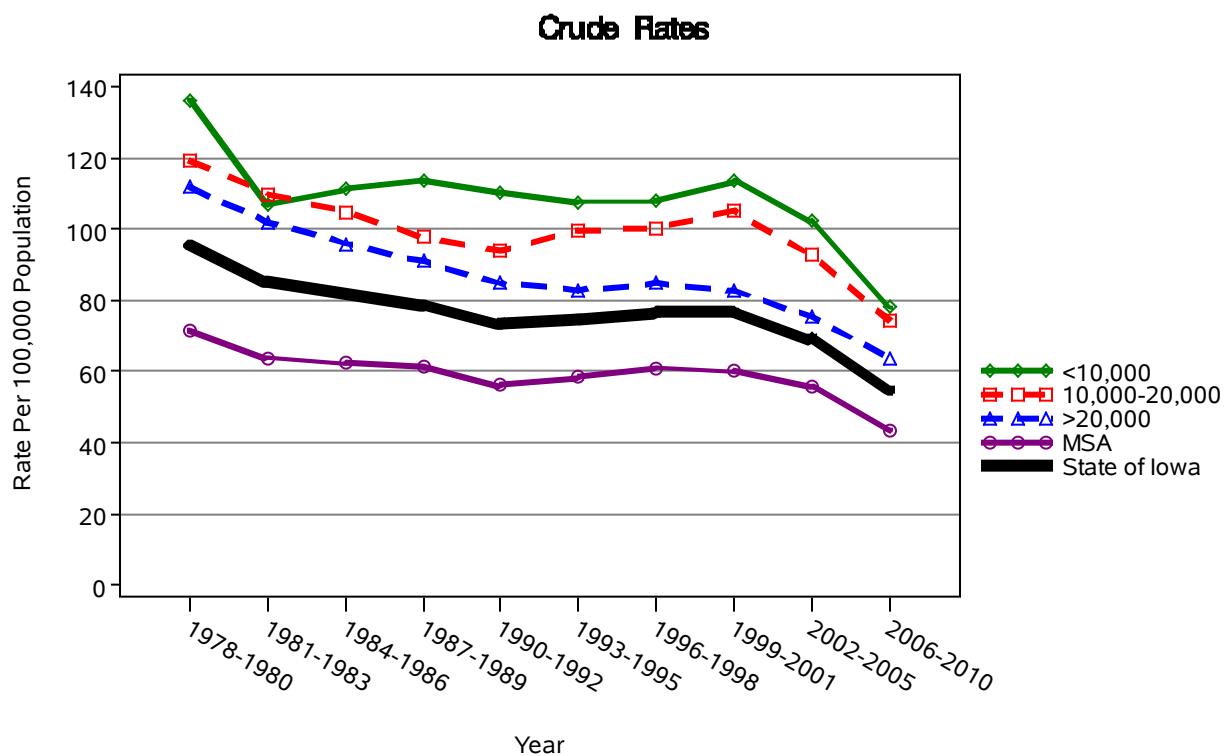
County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	
Counties with Average Population < 10,000	Adair	29	74.6	33.8	Lucas	36	79.0	45.6
	Adams	15	72.7	39.1	Monona	47	100.6	45.7
	Audubon	26	84.0	39.0	Monroe	54	136.4	84.8
	Clarke	22	47.7	31.3	Osceola	35	106.4	57.4
	Davis	28	64.4	45.1	Palo Alto	33	69.4	33.9
	Decatur	34	79.9	49.7	Pocahontas	39	103.9	54.5
	Fremont	25	66.4	38.2	Ringgold	*	*	*
	Greene	39	82.6	41.9	Taylor	22	68.7	32.4
	Howard	28	58.3	29.8	Van Buren	28	73.2	43.6
	Humboldt	30	60.6	32.3	Wayne	38	118.6	53.2
	Ida	28	78.1	41.5	Worth	26	68.2	41.6
				<b>Total</b>	*	*	*	
Counties with Average Population 10,000 – 20,000	Allamakee	61	85.1	51.9	Hardin	96	108.5	52.8
	Appanoose	47	72.1	44.5	Iowa	46	56.2	34.0
	Butler	50	67.2	36.5	Jefferson	59	70.9	51.2
	Calhoun	47	95.5	40.7	Keokuk	24	45.2	25.8
	Cass	73	104.5	52.0	Kossuth	74	94.0	47.8
	Cedar	80	86.9	52.1	Louisa	28	47.9	39.7
	Cherokee	39	64.5	29.3	Lyon	49	84.7	49.9
	Chickasaw	20	32.0	19.2	Mitchell	37	68.5	31.5
	Clay	70	83.7	47.8	Montgomery	57	104.6	50.5
	Clayton	72	79.1	45.4	O'Brien	61	84.6	40.1
	Crawford	34	40.1	26.2	Page	53	65.8	36.3
	Delaware	54	60.5	41.5	Poweshiek	97	102.0	54.8
	Dickinson	55	66.0	35.3	Sac	71	135.5	60.8
	Emmet	31	59.7	32.8	Shelby	44	71.4	36.5
	Floyd	60	73.2	39.8	Tama	46	51.2	29.5
	Franklin	38	71.0	45.1	Union	37	59.6	36.9
	Hamilton	43	54.2	30.9	Winnebago	32	58.4	29.4
	Hancock	51	88.7	50.9	<b>Total</b>	1,896	74.4	41.2
Counties with Average Population > 20,000	Boone	99	74.9	51.4	Lee	122	67.8	46.8
	Buchanan	63	59.9	45.1	Mahaska	82	73.3	50.5
	Buena Vista	67	67.1	43.0	Marion	94	56.3	42.5
	Carroll	76	73.1	37.3	Marshall	122	60.8	41.1
	Cerro Gordo	146	65.9	41.4	Muscatine	129	60.7	53.1
	Clinton	147	59.7	40.3	Plymouth	65	52.1	33.4
	Des Moines	131	65.1	42.0	Sioux	70	41.9	29.2
	Fayette	57	54.3	31.9	Wapello	134	75.4	51.9
	Henry	109	107.6	70.2	Webster	125	65.3	43.7
	Jackson	59	59.2	38.7	Winneshiek	64	60.9	37.4
	Jasper	105	56.7	40.4	<b>Total</b>	2,066	63.8	43.1
MSA Counties	Benton	44	33.7	24.4	Linn	412	39.7	35.9
	Black Hawk	376	58.2	46.2	Madison	35	45.2	38.9
	Bremer	76	62.8	39.6	Mills	33	43.5	38.0
	Dallas	98	31.8	37.4	Polk	819	39.1	42.1
	Dubuque	280	60.5	44.5	Pottawattamie	234	50.9	44.1
	Grundy	52	83.9	45.4	Scott	393	48.5	44.1
	Guthrie	30	54.3	32.6	Story	152	34.7	37.5
	Harrison	48	63.7	39.8	Warren	91	40.1	36.4
	Johnson	174	27.4	37.9	Washington	70	64.7	35.0
	Jones	56	54.1	35.8	Woodbury	203	40.1	35.8
				<b>Total</b>	3,676	43.6	40.4	
	<b>State Total</b>	*	*	*				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Stroke Mortality by County Group 1978-2010



## Alzheimer's Disease Mortality 2006-2010

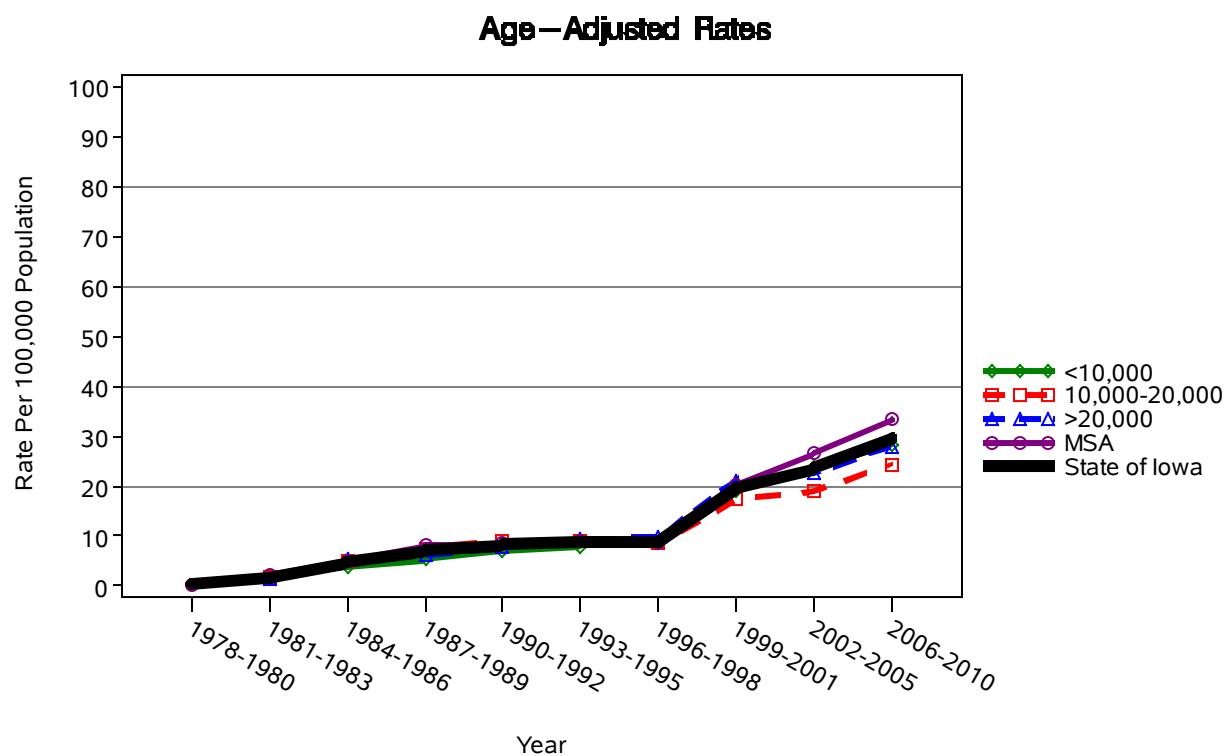
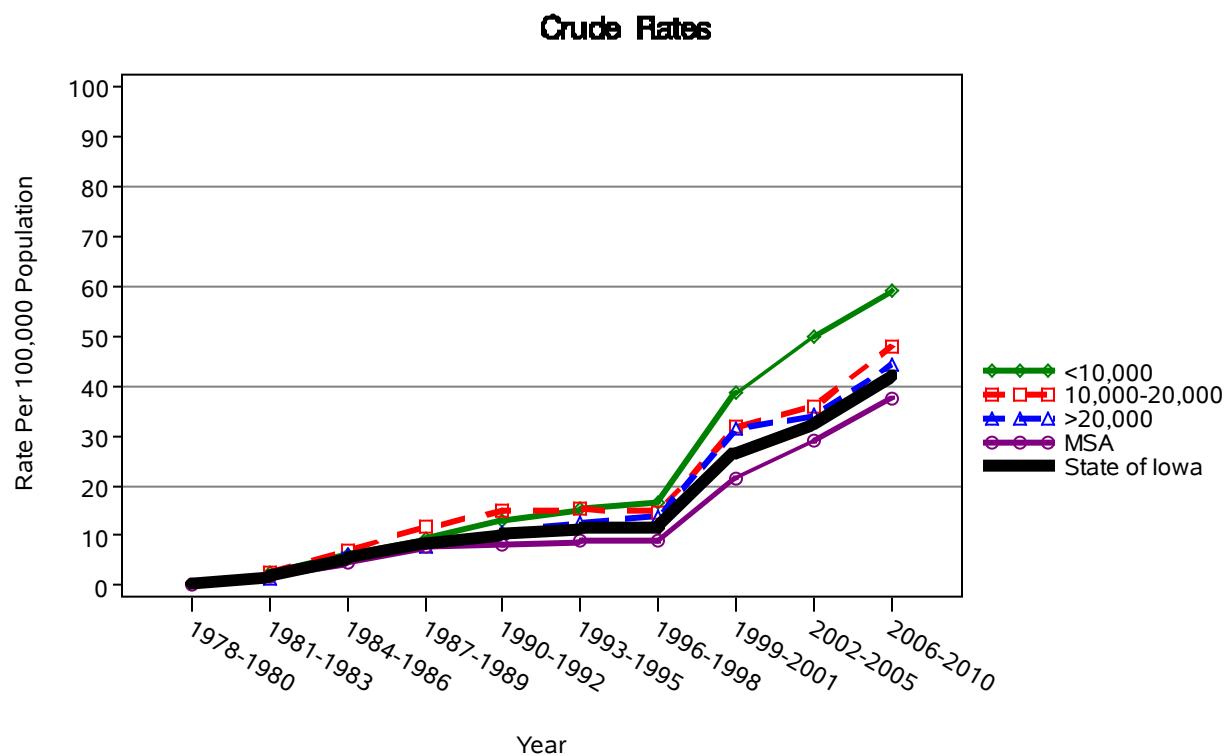
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>		County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	16	41.1	18.4		Lucas	33	72.4	35.3
	Adams	*	*	*		Monona	28	59.9	23.5
	Audubon	29	93.7	34.6		Monroe	14	35.4	19.8
	Clarke	48	104.1	67.1		Osceola	*	*	*
	Davis	10	23.0	15.3		Palo Alto	30	63.1	27.1
	Decatur	19	44.7	28.2		Pocahontas	28	74.6	30.7
	Fremont	18	47.8	24.4		Ringgold	40	154.7	65.2
	Greene	18	38.1	17.8		Taylor	18	56.2	23.8
	Howard	38	79.1	38.9		Van Buren	20	52.3	27.2
	Humboldt	*	*	*		Wayne	19	59.3	24.8
	Ida	35	97.6	43.9		Worth	21	55.1	29.9
						<b>Total</b>	506	59.0	28.4
Counties with Average Population 10,000 - 20,000	Allamakee	41	57.2	32.8		Hardin	85	96.1	42.9
	Appanoose	21	32.2	16.7		Iowa	51	62.4	33.1
	Buena Vista	22	29.5	14.5		Jefferson	15	18.0	13.1
	Butler	67	136.1	47.9		Keokuk	12	22.6	12.3
	Calhoun	44	63.0	30.0		Kossuth	39	49.5	21.8
	Cass	21	22.8	15.0		Louisa	19	32.5	27.3
	Cedar	22	36.4	16.7		Lyon	29	50.1	27.4
	Cherokee	16	25.6	13.3		Mitchell	11	20.4	7.7
	Chickasaw	28	33.5	16.9		Montgomery	31	56.9	26.7
	Clay	37	40.7	22.3		O'Brien	51	70.7	30.6
	Clayton	48	56.6	34.9		Page	28	34.8	16.3
	Crawford	43	48.1	32.3		Poweshiek	43	45.2	23.2
	Delaware	22	26.4	13.2		Sac	19	36.3	13.9
	Dickinson	38	73.2	38.8		Shelby	32	51.9	23.8
	Emmet	46	56.1	28.7		Tama	77	85.8	46.0
	Floyd	31	57.9	27.4		Union	24	38.7	22.7
	Franklin	37	46.6	24.8		Winnebago	23	42.0	18.1
	Hamilton	20	34.8	18.2		Wright	30	44.8	18.8
	Hancock	41	57.2	32.8		<b>Total</b>	1,223	48.0	24.4
Counties with Average Population > 20,000	Boone	70	53.0	34.6		Lee	113	62.8	38.2
	Buchanan	21	20.0	14.5		Mahaska	24	21.4	13.4
	Carroll	30	30.0	17.2		Marion	85	50.9	35.0
	Cerro Gordo	45	43.3	21.4		Marshall	146	72.8	46.4
	Clinton	103	46.5	27.3		Muscatine	34	16.0	13.3
	Des Moines	77	31.3	20.9		Plymouth	55	44.1	27.7
	Fayette	104	51.7	30.6		Sioux	69	41.3	27.8
	Henry	41	39.1	20.1		Wapello	126	70.9	45.3
	Jackson	31	30.6	19.7		Webster	111	58.0	35.9
	Jasper	37	37.1	22.3		Winneshiek	26	24.7	15.3
						<b>Total</b>	1,435	44.3	28.0
MSA Counties	Benton	33	25.3	17.0		Linn	278	26.8	23.5
	Black Hawk	147	22.7	17.3		Madison	41	52.9	40.5
	Bremer	45	37.2	22.9		Mills	30	39.6	35.4
	Dallas	126	40.8	47.1		Polk	936	44.6	46.9
	Dubuque	236	51.0	36.0		Pottawattamie	171	37.2	31.5
	Grundy	39	62.9	32.0		Scott	289	35.6	30.8
	Guthrie	35	63.4	35.0		Story	83	19.0	20.2
	Harrison	62	82.3	47.7		Warren	229	101.0	88.3
	Johnson	102	16.1	22.0		Washington	57	52.7	26.3
	Jones	32	30.9	19.3		Woodbury	196	38.7	32.4
						<b>Total</b>	3,167	37.5	33.3
	<b>State Total</b>	6,331	42.0	29.5					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Alzheimer's Disease Mortality by County Group 1978-2010



## Accidents and Adverse Effects Mortality 2006-2010

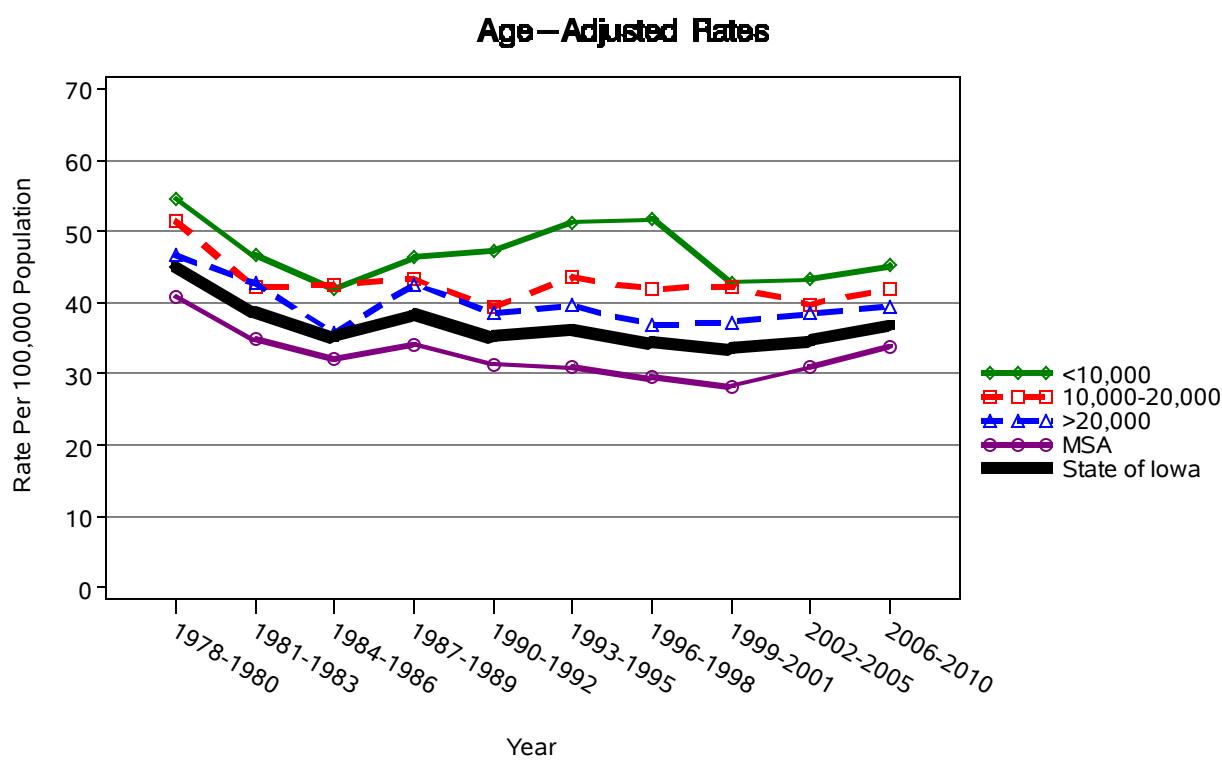
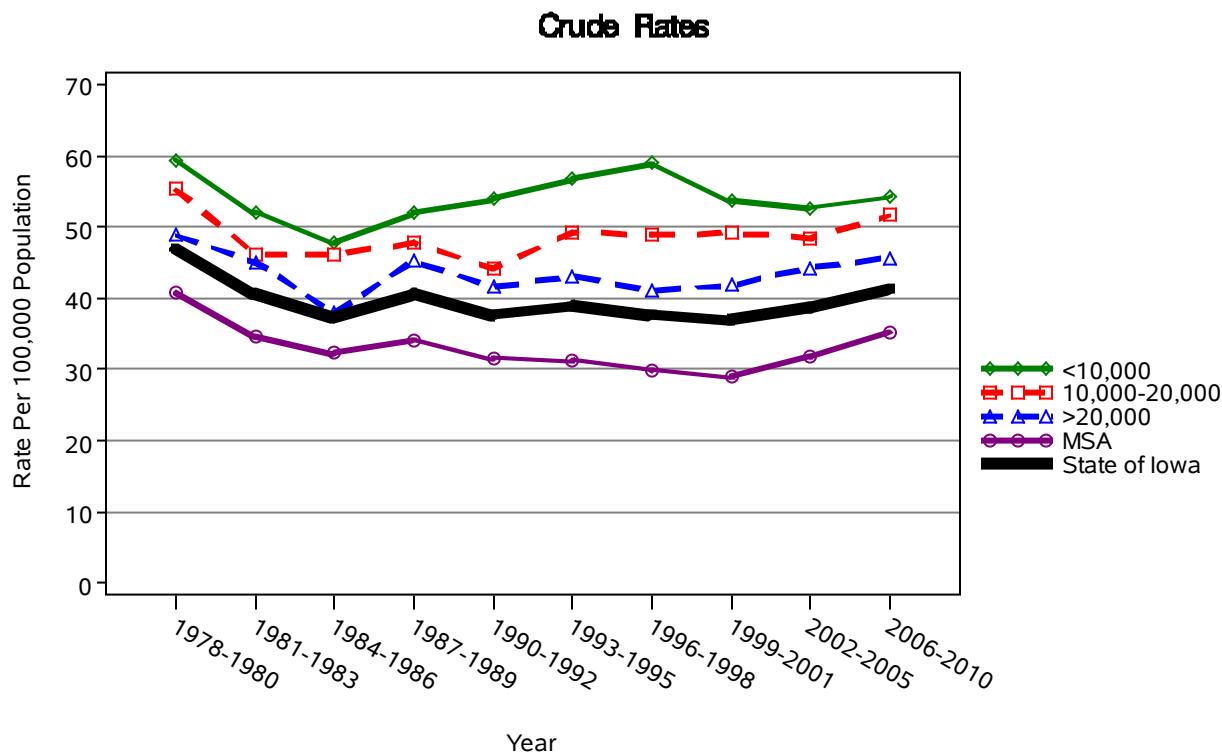
County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	
Counties with Average Population < 10,000	Adair	28	72.0	50.7	Lucas	24	52.6	46.5
	Adams	*	*	*	Monona	34	72.7	57.1
	Audubon	14	45.3	33.9	Monroe	20	50.5	46.6
	Clarke	26	56.4	52.9	Osceola	20	60.8	48.3
	Davis	16	36.8	34.2	Palo Alto	27	56.8	41.9
	Decatur	22	51.7	46.9	Pocahontas	13	34.6	27.6
	Fremont	17	45.2	41.8	Ringgold	*	*	*
	Greene	28	59.3	46.5	Taylor	19	59.3	33.0
	Howard	33	68.7	57.9	Van Buren	21	54.9	44.0
	Humboldt	21	42.4	45.4	Wayne	24	74.9	55.8
	Ida	24	66.9	60.8	Worth	17	44.6	40.9
					<b>Total</b>	465	54.3	45.2
Counties with Average Population 10,000 – 20,000	Allamakee	41	57.2	48.7	Hardin	54	61.1	40.9
	Appanoose	36	55.3	50.9	Iowa	36	44.0	34.6
	Butler	52	69.8	56.2	Jefferson	42	50.5	43.1
	Calhoun	33	67.0	52.6	Keokuk	22	41.5	36.2
	Cass	48	68.7	51.2	Kossuth	42	53.3	39.4
	Cedar	37	40.2	34.0	Louisa	37	63.3	60.5
	Cherokee	38	62.9	45.5	Lyon	32	55.3	45.8
	Chickasaw	25	40.0	33.7	Mitchell	26	48.1	39.4
	Clay	41	49.0	39.7	Montgomery	40	73.4	67.2
	Clayton	43	47.2	40.1	O'Brien	28	38.8	30.4
	Crawford	40	47.2	39.3	Page	42	52.2	45.1
	Delaware	40	44.8	41.5	Poweshiek	38	40.0	34.8
	Dickinson	38	45.6	37.6	Sac	28	53.4	42.4
	Emmet	18	34.7	25.0	Shelby	30	48.7	37.8
	Floyd	29	35.4	27.8	Tama	52	57.9	51.9
	Franklin	26	48.6	38.0	Union	37	59.6	50.3
	Hamilton	43	54.2	42.1	Winnebago	34	62.0	41.6
	Hancock	25	43.5	32.3	Wright	42	62.8	52.0
					<b>Total</b>	1,315	51.6	41.8
Counties with Average Population > 20,000	Boone	86	65.1	56.1	Lee	95	52.8	46.3
	Buchanan	43	40.9	37.2	Mahaska	57	50.9	41.2
	Buena Vista	33	33.0	29.2	Marion	61	36.5	31.2
	Carroll	55	52.9	43.6	Marshall	105	52.3	42.8
	Cerro Gordo	107	48.3	38.3	Muscatine	76	35.8	35.3
	Clinton	93	37.7	33.8	Plymouth	56	44.9	40.5
	Des Moines	110	54.6	46.2	Sioux	59	35.3	30.5
	Fayette	47	44.8	37.3	Wapello	83	46.7	41.3
	Henry	45	44.4	39.5	Webster	113	59.0	52.3
	Jackson	37	37.1	34.0	Winneshiek	35	33.3	31.2
	Jasper	83	44.8	38.0	<b>Total</b>	1,479	45.7	39.4
MSA Counties	Benton	62	47.5	43.2	Linn	371	35.7	34.1
	Black Hawk	246	38.1	35.1	Madison	26	33.6	28.9
	Bremer	33	27.3	23.9	Mills	42	55.4	55.2
	Dallas	86	27.9	30.2	Polk	749	35.7	36.2
	Dubuque	142	30.7	27.4	Pottawattamie	185	40.2	39.6
	Grundy	19	30.6	22.0	Scott	298	36.8	36.1
	Guthrie	25	45.3	39.6	Story	109	24.9	26.7
	Harrison	40	53.1	49.3	Warren	87	38.4	38.1
	Johnson	151	23.8	27.9	Washington	63	58.3	44.0
	Jones	48	46.3	38.0	Woodbury	192	37.9	36.1
					<b>Total</b>	2,974	35.2	33.9
	<b>State Total</b>	6,233	41.3	36.8				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Accidents and Adverse Effects Mortality by County Group 1978-2010



**Diabetes Mellitus Mortality 2006-2010**

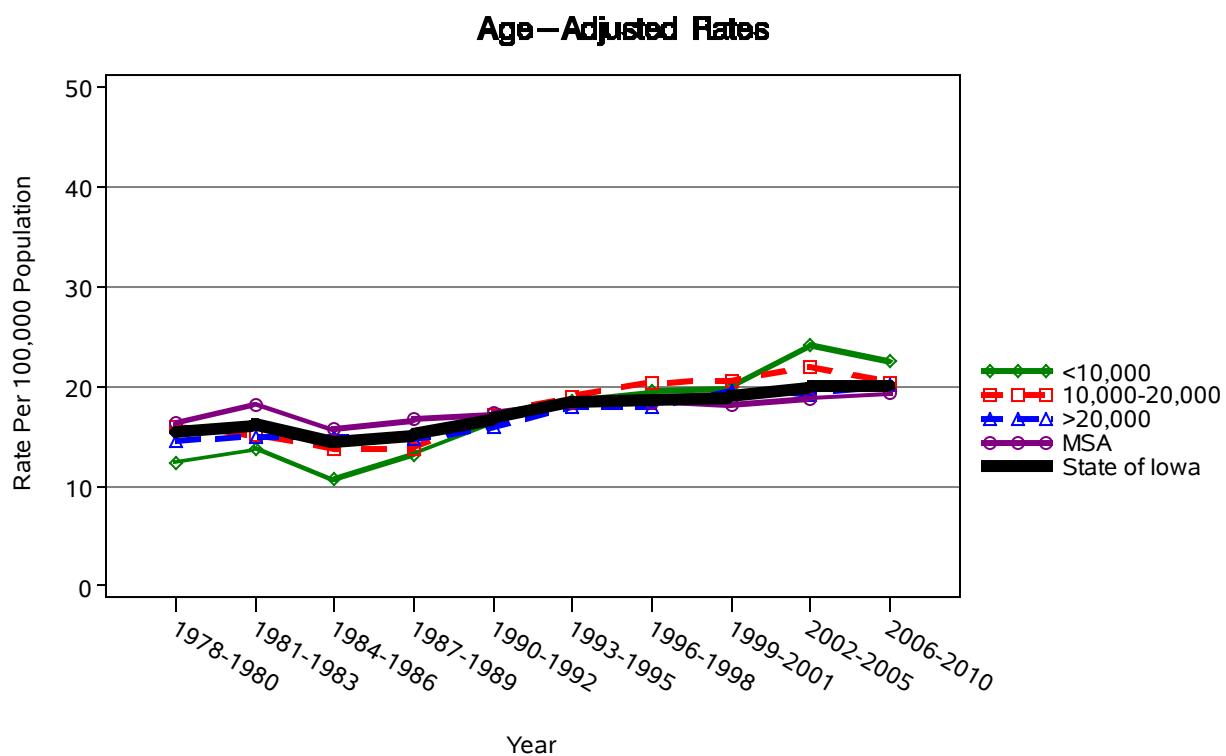
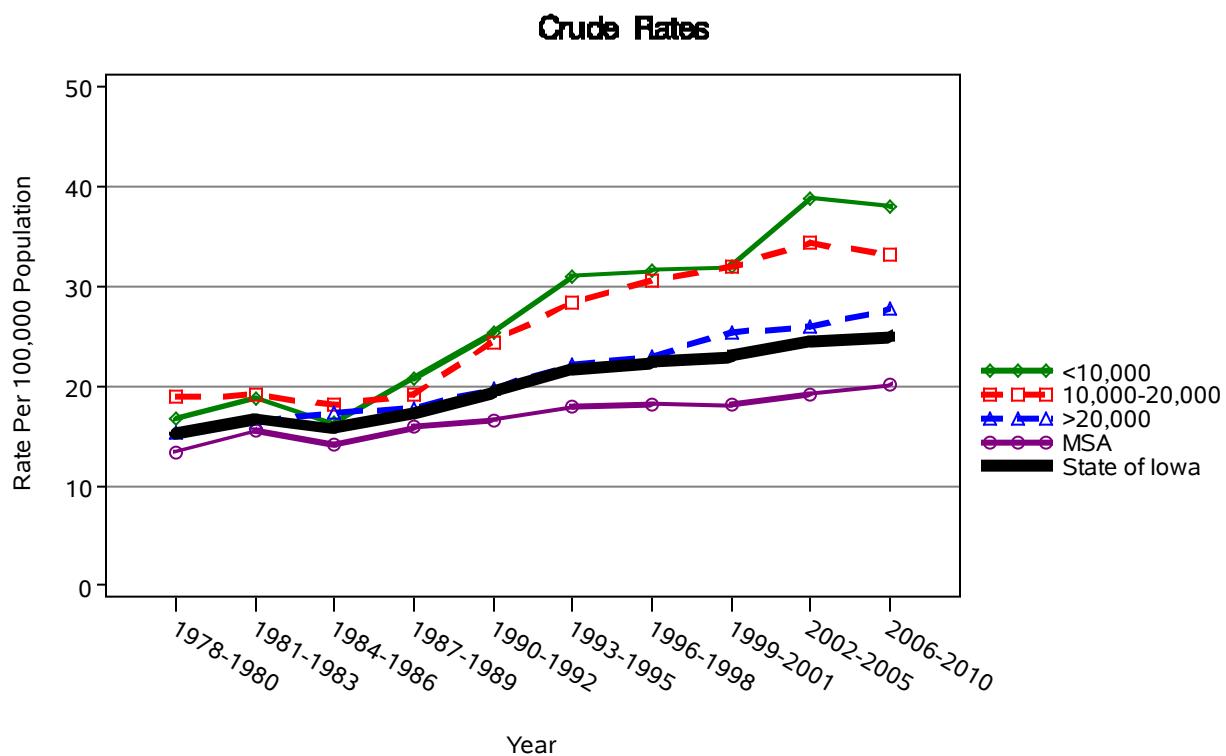
County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	
Counties with Average Population < 10,000	Adair	14	36.0	18.8	Lucas	29	63.6	39.8
	Adams	*	*	Monona	22	47.1	21.3	
	Audubon	12	38.8	21.6	Monroe	*	*	*
	Clarke	20	43.4	31.9	Osceola	13	39.5	21.5
	Davis	15	34.5	23.9	Palo Alto	12	25.2	13.4
	Decatur	*	*	Pocahontas	13	34.6	17.7	
	Fremont	10	26.6	15.4	Ringgold	26	100.6	48.0
	Greene	12	25.4	13.6	Taylor	14	43.7	25.1
	Howard	14	29.1	16.6	Van Buren	16	41.8	29.1
	Humboldt	22	44.4	30.4	Wayne	15	46.8	27.1
	Ida	17	47.4	25.0	Worth	*	*	*
					<b>Total</b>	326	38.0	22.5
Counties with Average Population 10,000 – 20,000	Allamakee	21	29.3	18.4	Hardin	41	46.4	26.4
	Appanoose	27	41.4	29.3	Iowa	18	22.0	15.0
	Buena Vista	30	40.3	21.6	Jefferson	24	28.8	21.2
	Butler	15	30.5	16.0	Keokuk	15	28.3	16.6
	Calhoun	36	51.5	31.9	Kossuth	24	30.5	18.4
	Cass	12	13.0	8.3	Louisa	*	*	*
	Cedar	27	44.7	25.0	Lyon	26	45.0	30.5
	Cherokee	15	24.0	14.4	Mitchell	12	22.2	10.9
	Chickasaw	30	35.9	24.7	Montgomery	12	22.0	12.2
	Clay	28	30.8	20.9	O'Brien	18	25.0	14.7
	Clayton	45	53.1	35.3	Page	38	47.2	27.5
	Crawford	29	32.5	23.3	Poweshiek	34	35.8	21.5
	Delaware	33	39.6	22.4	Sac	14	26.7	14.2
	Dickinson	18	34.7	21.6	Shelby	22	35.7	20.8
	Emmet	14	17.1	12.0	Tama	26	29.0	18.8
	Floyd	14	26.2	15.5	Union	19	30.6	21.4
	Franklin	28	35.3	21.8	Winnebago	24	43.8	25.8
	Hamilton	26	45.2	26.1	Wright	21	31.4	18.7
	Hancock	21	29.3	18.4	<b>Total</b>	*	*	*
Counties with Average Population > 20,000	Boone	58	43.9	32.7	Lee	43	23.9	17.0
	Buchanan	44	41.8	33.5	Mahaska	31	27.7	21.0
	Carroll	43	43.0	30.3	Marion	36	21.6	16.7
	Cerro Gordo	28	26.9	15.6	Marshall	59	29.4	21.9
	Clinton	50	22.6	15.5	Muscatine	49	23.1	20.9
	Des Moines	92	37.3	25.9	Plymouth	56	44.9	31.3
	Fayette	29	14.4	10.3	Sioux	29	17.4	13.5
	Henry	28	26.7	17.1	Wapello	36	20.3	15.6
	Jackson	18	17.8	12.6	Webster	51	26.6	18.7
	Jasper	31	31.1	20.9	Winneshiek	22	20.9	15.1
				<b>Total</b>	897	27.7	20.2	
MSA Counties	Benton	27	20.7	16.1	Linn	250	24.1	22.3
	Black Hawk	127	19.7	17.2	Madison	21	27.1	21.9
	Bremer	18	14.9	10.4	Mills	*	*	*
	Dallas	47	15.2	17.8	Polk	377	18.0	19.4
	Dubuque	72	15.6	12.4	Pottawattamie	133	28.9	25.2
	Grundy	20	32.3	19.2	Scott	144	17.8	16.5
	Guthrie	24	43.5	27.1	Story	43	9.8	11.5
	Harrison	39	51.7	36.1	Warren	53	23.4	21.3
	Johnson	54	8.5	12.0	Washington	50	46.2	29.1
	Jones	33	31.9	22.3	Woodbury	165	32.6	29.0
				<b>Total</b>	*	*	*	
	<b>State Total</b>	3,770	25.0	20.1				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Diabetes Mellitus Mortality by County Group 1978-2010



## Pneumonia/Influenza Mortality 2006-2010

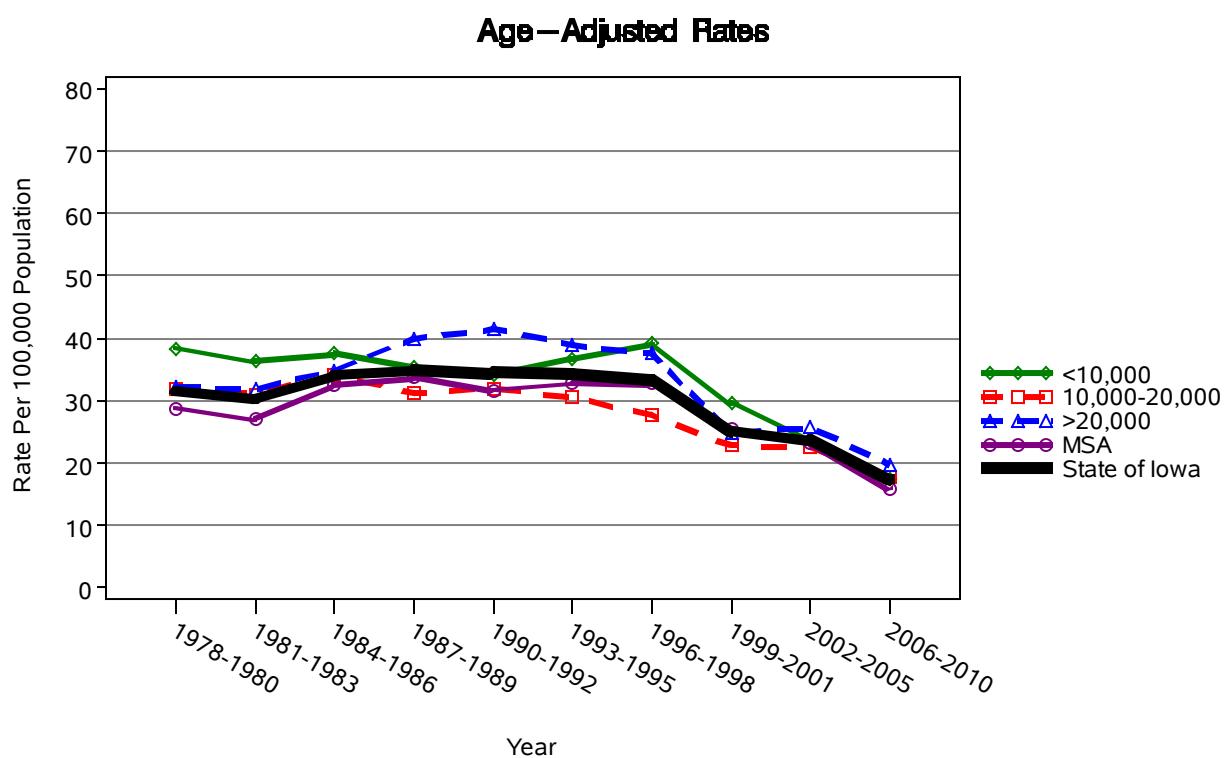
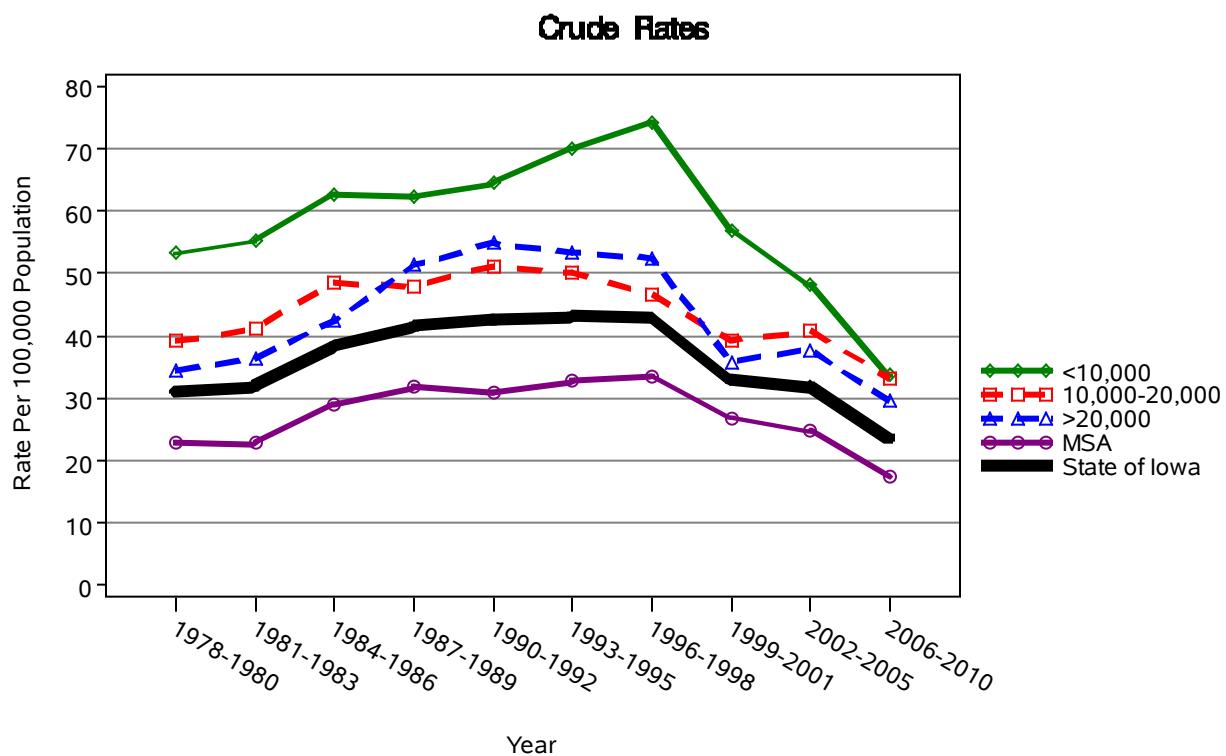
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>		County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	26	66.8	27.9		Lucas	19	41.7	21.3
	Adams	*	*	*		Monona	22	47.1	21.8
	Audubon	*	*	*		Monroe	20	50.5	30.0
	Clarke	*	*	*		Osceola	*	*	*
	Davis	31	71.4	46.8		Palo Alto	*	*	*
	Decatur	12	28.2	18.8		Pocahontas	27	71.9	37.6
	Fremont	11	29.2	17.1		Ringgold	*	*	*
	Greene	*	*	*		Taylor	*	*	*
	Howard	25	52.0	27.5		Van Buren	12	31.4	16.9
	Humboldt	16	32.3	17.0		Wayne	12	37.5	19.1
	Ida	*	*	*		Worth	*	*	*
						<b>Total</b>	289	33.7	17.5
Counties with Average Population 10,000 - 20,000	Allamakee	28	39.1	22.8		Hardin	15	17.0	7.8
	Appanoose	20	30.7	15.6		Iowa	15	18.3	9.9
	Butler	21	28.2	14.9		Jefferson	32	38.5	29.5
	Calhoun	17	34.5	13.5		Keokuk	15	28.3	16.6
	Cass	29	41.5	20.5		Kossuth	27	34.3	16.1
	Cedar	26	28.2	18.9		Louisa	23	39.4	33.1
	Cherokee	11	18.2	8.2		Lyon	12	20.8	11.1
	Chickasaw	*	*	*		Mitchell	48	88.9	39.5
	Clay	41	49.0	26.4		Montgomery	25	45.9	23.7
	Clayton	14	15.4	9.8		O'Brien	37	51.3	22.9
	Crawford	*	*	*		Page	45	55.9	30.2
	Delaware	20	22.4	15.3		Poweshiek	27	28.4	13.4
	Dickinson	34	40.8	20.5		Sac	29	55.3	22.5
	Emmet	12	23.1	11.9		Shelby	31	50.3	23.2
	Floyd	17	20.7	12.1		Tama	17	18.9	10.7
	Franklin	15	28.0	18.3		Union	16	25.8	16.2
	Hamilton	27	34.0	21.0		Winnebago	14	25.5	14.6
	Hancock	24	41.7	20.5		Wright	50	74.7	29.8
						<b>Total</b>	846	33.2	17.8
Counties with Average Population > 20,000	Boone	39	29.5	20.5		Lee	82	45.6	32.0
	Buchanan	17	16.2	11.9		Mahaska	36	32.2	20.0
	Buena Vista	36	36.0	20.2		Marion	54	32.4	23.4
	Carroll	36	34.6	20.1		Marshall	51	25.4	17.5
	Cerro Gordo	51	23.0	15.0		Muscatine	31	14.6	12.4
	Clinton	51	20.7	14.1		Plymouth	21	16.8	10.7
	Des Moines	74	36.8	24.4		Sioux	32	19.2	12.6
	Fayette	88	83.8	44.8		Wapello	62	34.9	23.2
	Henry	27	26.6	18.4		Webster	91	47.5	31.0
	Jackson	19	19.1	12.1		Winneshiek	18	17.1	9.8
	Jasper	39	21.1	16.1		<b>Total</b>	955	29.5	19.8
MSA Counties	Benton	27	20.7	15.4		Linn	176	16.9	15.2
	Black Hawk	87	13.5	10.9		Madison	29	37.4	29.3
	Bremer	29	24.0	15.6		Mills	26	34.3	30.1
	Dallas	42	13.6	16.0		Polk	365	17.4	18.6
	Dubuque	130	28.1	20.0		Pottawattamie	101	22.0	19.0
	Grundy	19	30.6	15.8		Scott	128	15.8	13.8
	Guthrie	14	25.4	15.5		Story	66	15.1	16.1
	Harrison	16	21.2	12.6		Warren	38	16.8	15.0
	Johnson	58	9.1	12.3		Washington	23	21.3	13.2
	Jones	25	24.1	15.4		Woodbury	80	15.8	13.6
						<b>Total</b>	1,479	17.5	16.0
	<b>State Total</b>	3,569	23.7	17.4					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Pneumonia/Influenza Mortality by County Group 1978-2010



**Infectious/Parasitic Mortality 2006-2010**

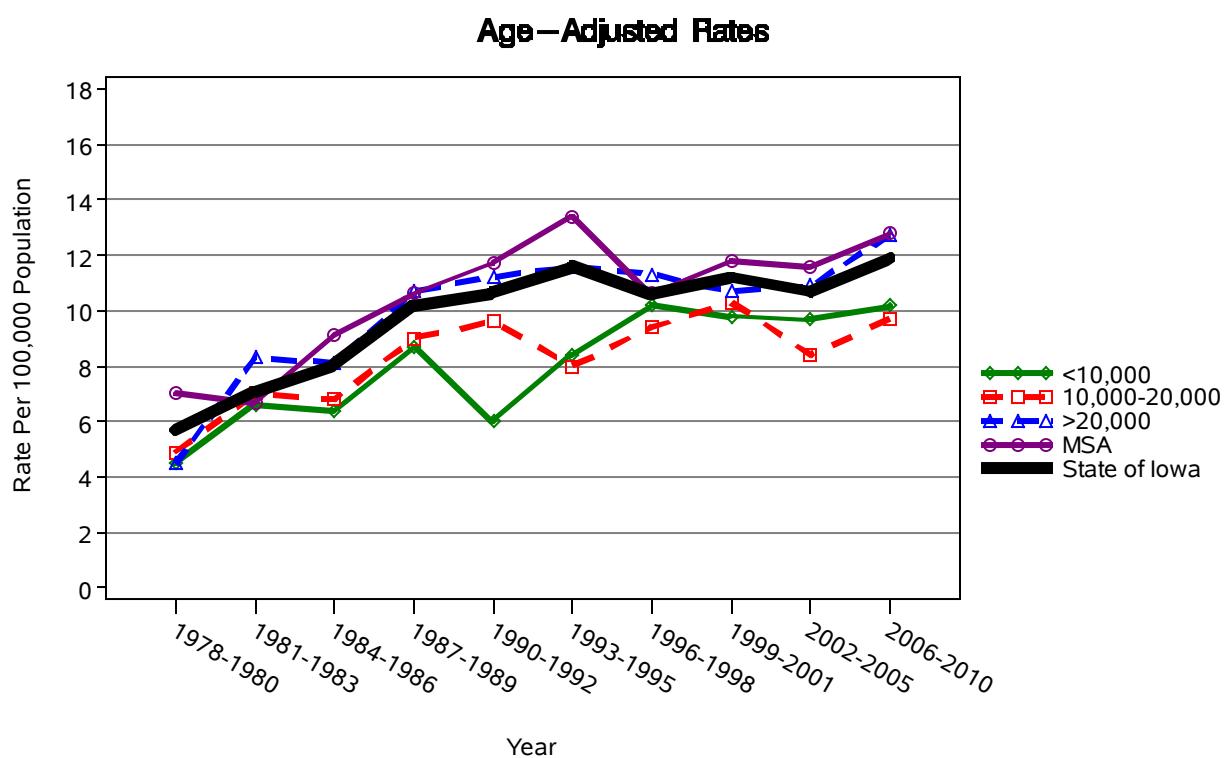
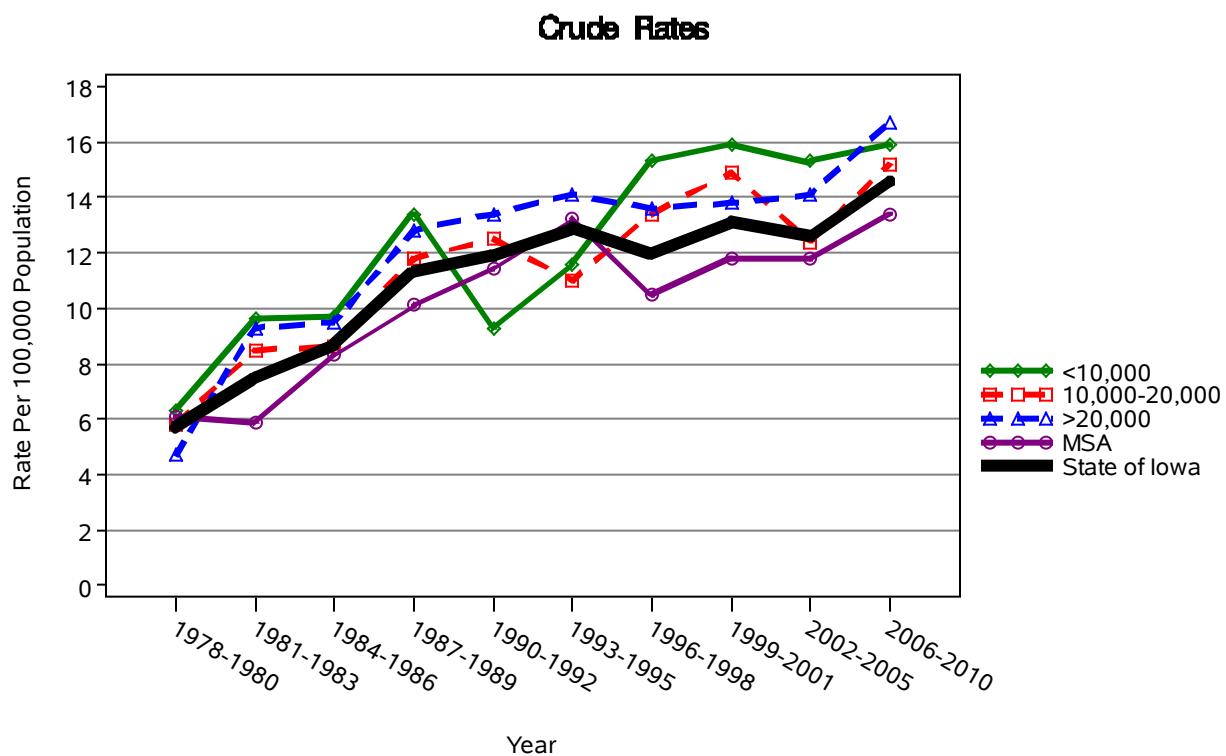
County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Adair	*	*	*	Lucas	10	21.9	13.3
Adams	*	*	*	Monona	12	25.7	15.6
Audubon	*	*	*	Monroe	*	*	*
Clarke	*	*	*	Osceola	*	*	*
Davis	*	*	*	Palo Alto	*	*	*
Decatur	*	*	*	Pocahontas	*	*	*
Fremont	*	*	*	Ringgold	*	*	*
Greene	11	23.3	19.7	Taylor	*	*	*
Howard	*	*	*	Van Buren	*	*	*
Humboldt	*	*	*	Wayne	*	*	*
Ida	*	*	*	Worth	*	*	*
				<b>Total</b>	136	15.9	10.2
Counties with Average Population < 10,000				Hardin	16	18.1	11.8
Allamakee	14	19.5	12.8	Iowa	*	*	*
Appanoose	*	*	*	Jefferson	11	13.2	11.5
Buena Vista	12	16.1	9.4	Keokuk	*	*	*
Butler	11	22.3	10.1	Kossuth	12	15.2	11.3
Calhoun	*	*	*	Louisa	*	*	*
Cass	19	20.6	14.2	Lyon	12	20.8	13.8
Cedar	*	*	*	Mitchell	*	*	*
Cherokee	*	*	*	Montgomery	17	31.2	16.8
Chickasaw	18	21.5	14.3	O'Brien	18	25.0	15.2
Clay	14	15.4	10.1	Page	23	28.6	18.8
Clayton	15	17.7	13.6	Poweshiek	12	12.6	8.7
Crawford	*	*	*	Sac	*	*	*
Delaware	*	*	*	Shelby	12	19.5	10.8
Dickinson	*	*	*	Tama	11	12.3	7.6
Emmet	11	13.4	8.0	Union	*	*	*
Floyd	*	*	*	Winnebago	*	*	*
Franklin	10	12.6	8.1	Wright	*	*	*
Hamilton	*	*	*	<b>Total</b>	387	15.2	9.7
Hancock	14	19.5	12.8	Boone	19	14.4	11.0
Counties with Average Population 10,000 - 20,000				Buchanan	14	13.3	10.3
Carroll	12	12.0	7.5	Clinton	49	22.1	15.7
Cerro Gordo	15	14.4	8.5	Des Moines	41	16.6	13.2
Clinton	49	22.1	15.7	Fayette	24	11.9	9.4
Des Moines	41	16.6	13.2	Henry	15	14.3	9.1
Jackson	12	11.8	8.9	Jackson	12	11.8	8.9
Jasper	11	11.0	8.3	Jasper	*	*	*
Counties with Average Population > 20,000				Lee	45	25.0	19.1
Boone	19	14.4	11.0	Mahaska	*	*	*
Buchanan	14	13.3	10.3	Marion	28	16.8	13.3
Carroll	12	12.0	7.5	Marshall	48	23.9	19.1
Cerro Gordo	15	14.4	8.5	Muscatine	36	16.9	14.8
Clinton	49	22.1	15.7	Plymouth	13	10.4	7.5
Des Moines	41	16.6	13.2	Sioux	21	12.6	9.6
Fayette	24	11.9	9.4	Wapello	44	24.8	19.0
Henry	15	14.3	9.1	Webster	42	21.9	16.3
Jackson	12	11.8	8.9	Winneshiek	10	9.5	6.4
Jasper	11	11.0	8.3	<b>Total</b>	*	*	*
MSA Counties				Benton	18	13.8	10.9
Black Hawk	119	18.4	16.0	Black Hawk	*	*	*
Bremer	19	15.7	10.4	Bremer	*	*	*
Dallas	28	9.1	11.2	Dallas	*	*	*
Dubuque	44	9.5	7.6	Dubuque	*	*	*
Grundy	*	*	*	Grundy	*	*	*
Guthrie	*	*	*	Guthrie	*	*	*
Harrison	13	17.2	12.2	Harrison	*	*	*
Johnson	49	7.7	10.5	Johnson	*	*	*
Jones	20	19.3	14.3	Jones	*	*	*
<b>State Total</b>	*	*	*	<b>Linn</b>	154	14.8	13.7
				<b>Madison</b>	*	*	*
				<b>Mills</b>	16	21.1	18.6
				<b>Polk</b>	292	13.9	14.5
				<b>Pottawattamie</b>	91	19.8	17.5
				<b>Scott</b>	93	11.5	10.5
				<b>Story</b>	26	5.9	6.6
				<b>Warren</b>	21	9.3	8.5
				<b>Washington</b>	11	10.2	6.5
				<b>Woodbury</b>	99	19.6	17.7
				<b>Total</b>	1,133	13.4	12.8

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\*Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Infectious/Parasitic Mortality by County Group 1978-2010



## OTHER MORTALITY

**Nephritis, Nephrotic Syndrome, Nephrosis Mortality 2006-2010**

County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	
Counties with Average Population < 10,000	Adair	13	33.4	13.0	Lucas	*	*	*
	Adams	*	*	*	Monona	10	21.4	8.1
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	0	0.0	0.0
	Greene	*	*	*	Taylor	*	*	*
	Howard	12	25.0	11.9	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	117	13.7	6.8
Counties with Average Population 10,000 – 20,000	Allamakee	14	19.5	11.5	Hardin	13	14.7	6.7
	Appanoose	*	*	*	Iowa	12	14.7	8.4
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	12	24.4	9.9	Keokuk	10	18.8	10.2
	Calhoun	13	18.6	9.8	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	11	13.2	7.1	Montgomery	10	18.3	10.0
	Clay	14	15.4	8.1	O'Brien	*	*	*
	Clayton	*	*	*	Page	13	16.2	8.9
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	13	15.6	8.0	Sac	10	19.1	9.8
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	10	12.2	7.3	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	13	16.4	9.1	Winnebago	10	18.2	10.3
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	14	19.5	11.5	<b>Total</b>	299	11.7	6.5
Counties with Average Population > 20,000	Boone	15	11.4	7.9	Lee	20	11.1	7.9
	Buchanan	*	*	*	Mahaska	17	15.2	10.1
	Carroll	10	10.0	5.3	Marion	20	12.0	8.6
	Cerro Gordo	12	11.5	6.6	Marshall	29	14.5	10.1
	Clinton	16	7.2	5.1	Muscatine	15	7.1	6.4
	Des Moines	41	16.6	11.2	Plymouth	17	13.6	9.1
	Fayette	25	12.4	8.5	Sioux	15	9.0	5.8
	Henry	20	19.1	11.0	Wapello	14	7.9	6.0
	Jackson	*	*	*	Webster	20	10.4	7.7
	Jasper	10	10.0	6.8	Winneshiek	13	12.4	8.1
					<b>Total</b>	373	11.5	8.1
MSA Counties	Benton	*	*	*	Linn	79	7.6	6.9
	Black Hawk	68	10.5	8.2	Madison	*	*	*
	Bremer	12	9.9	5.7	Mills	*	*	*
	Dallas	19	6.2	6.7	Polk	119	5.7	6.2
	Dubuque	31	6.7	5.2	Pottawattamie	50	10.9	9.5
	Grundy	11	17.7	10.0	Scott	59	7.3	6.7
	Guthrie	*	*	*	Story	23	5.3	5.6
	Harrison	13	17.2	11.5	Warren	12	5.3	4.7
	Johnson	27	4.3	5.9	Washington	11	10.2	6.4
	Jones	*	*	*	Woodbury	71	14.0	12.7
					<b>Total</b>	637	7.5	7.0
<b>State Total</b>		1,426	9.5	7.2				

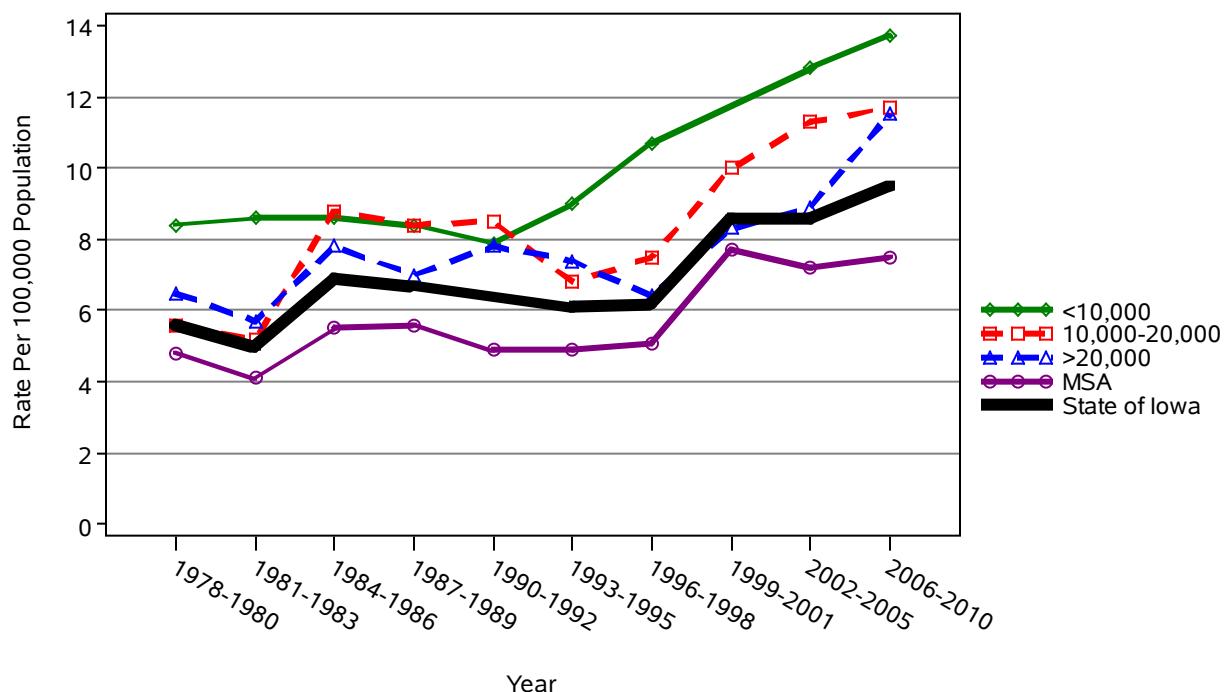
<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

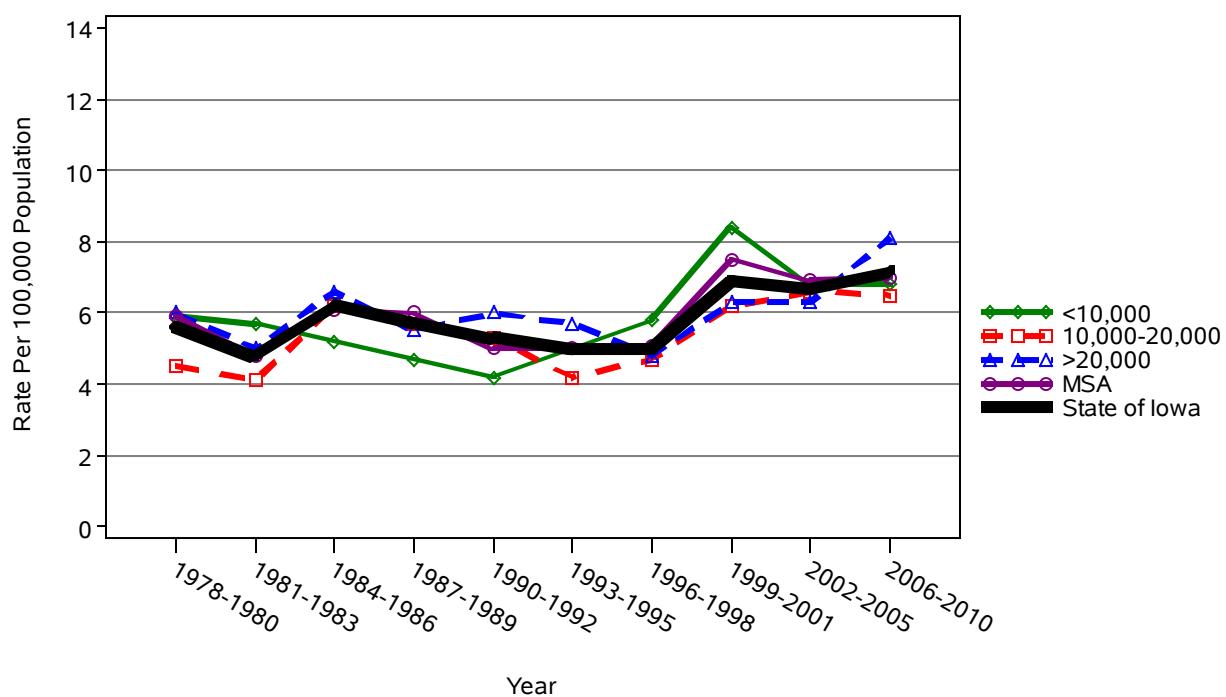
Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Nephritis, Nephrotic Syndrome, Nephrosis Mortality by County Group 1978-2010

Crude Rates



Age-Adjusted Rates



## OTHER MORTALITY

**Chronic Liver Disease and Cirrhosis Mortality 2006-2010**

County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*	*
	Adams	*	*	Monona	*	*	*
	Audubon	*	*	Monroe	*	*	*
	Clarke	*	*	Osceola	*	*	*
	Davis	*	*	Palo Alto	*	*	*
	Decatur	*	*	Pocahontas	*	*	*
	Fremont	*	*	Ringgold	*	*	*
	Greene	*	*	Taylor	*	*	*
	Howard	*	*	Van Buren	*	*	*
	Humboldt	*	*	Wayne	*	*	*
	Ida	*	*	Worth	*	*	*
				<b>Total</b>	82	9.6	7.2
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*	*
	Appanoose	*	*	Iowa	*	*	*
	Buena Vista	*	*	Jefferson	*	*	*
	Butler	*	*	Keokuk	*	*	*
	Calhoun	*	*	Kossuth	*	*	*
	Cass	*	*	Louisa	*	*	*
	Cedar	*	*	Lyon	*	*	*
	Cherokee	*	*	Mitchell	*	*	*
	Chickasaw	*	*	Montgomery	*	*	*
	Clay	*	*	O'Brien	*	*	*
	Clayton	*	*	Page	*	*	*
	Crawford	*	*	Poweshiek	*	*	*
	Delaware	13	15.6 (01)	Sac	*	*	*
	Dickinson	*	*	Shelby	*	*	*
	Emmet	*	*	Tama	*	*	*
	Floyd	*	*	Union	*	*	*
	Franklin	*	*	Winnebago	*	*	*
	Hamilton	*	*	Wright	*	*	*
	Hancock	*	*	<b>Total</b>	174	6.8	5.2
Counties with Average Population > 20,000	Boone	*	*	Lee	13	7.2 (20)	5.4 (21)
	Buchanan	*	*	Mahaska	*	*	*
	Carroll	*	*	Marion	13	7.8 (17)	6.6 (17)
	Cerro Gordo	*	*	Marshall	24	12.0 (04)	10.0 (04)
	Clinton	22	9.9 (09)	Muscatine	13	6.1 (21)	5.2 (22)
	Des Moines	19	7.7 (18)	Plymouth	*	*	*
	Fayette	16	7.9 (16)	Sioux	*	*	*
	Henry	12	11.4 (06)	Wapello	15	8.4 (13)	6.5 (18)
	Jackson	*	*	Webster	19	9.9 (09)	7.7 (14)
	Jasper	*	*	Winneshiek	*	*	*
				<b>Total</b>	241	7.4	6.2
MSA Counties	Benton	*	*	Linn	87	8.4 (13)	7.8 (12)
	Black Hawk	55	8.5 (12)	Madison	11	14.2 (02)	12.5 (02)
	Bremer	14	11.6 (05)	Mills	*	*	*
	Dallas	10	3.2 (25)	Polk	161	7.7 (18)	7.8 (12)
	Dubuque	38	8.2 (15)	Pottawattamie	42	9.1 (11)	7.9 (11)
	Grundy	*	*	Scott	84	10.4 (07)	9.6 (05)
	Guthrie	*	*	Story	24	5.5 (22)	7.0 (15)
	Harrison	*	*	Warren	12	5.3 (23)	4.8 (23)
	Johnson	26	4.1 (24)	Washington	*	*	*
	Jones	*	*	Woodbury	65	12.8 (03)	12.6 (01)
				<b>Total</b>	663	7.9	7.6
<b>State Total</b>		1,160	7.7				

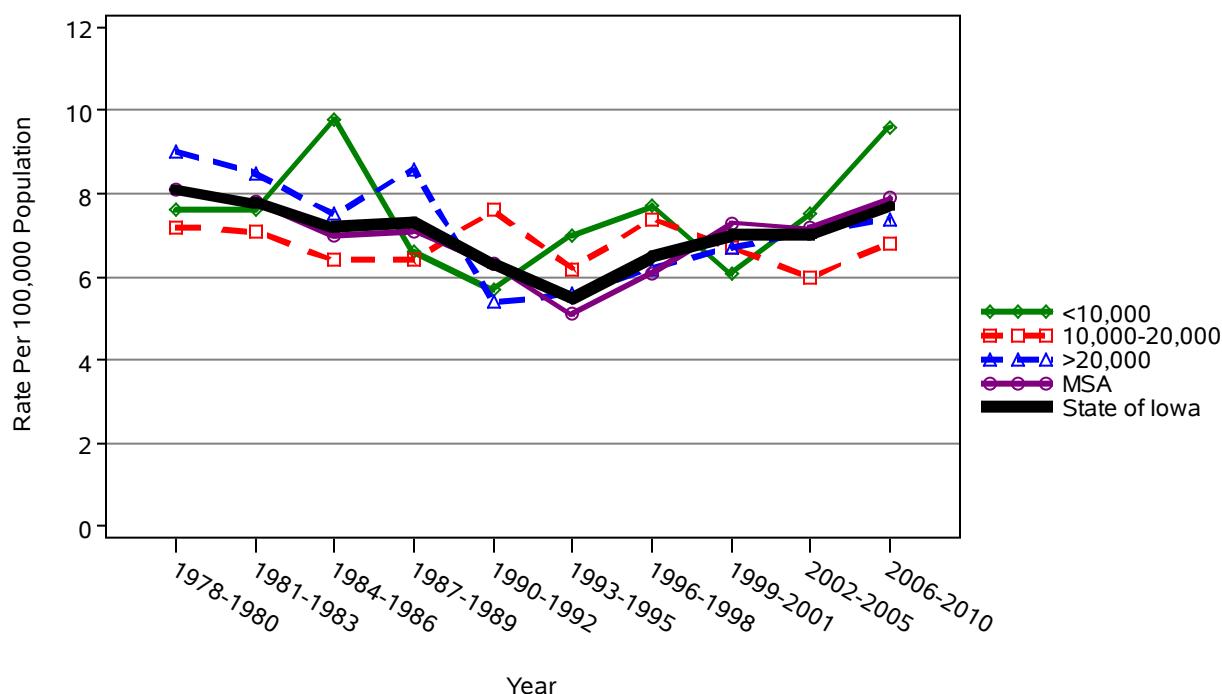
<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

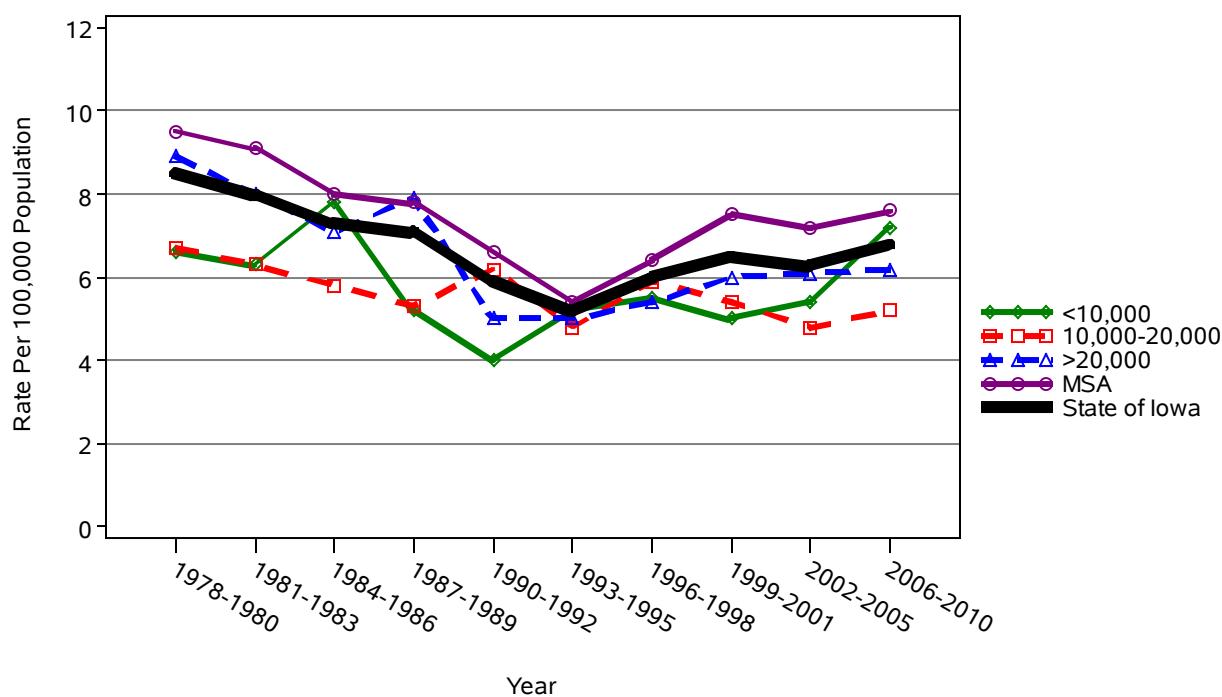
Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Chronic Liver Disease and Cirrhosis Mortality by County Group 1978-2010

**Crude Rates**



**Age-Adjusted Rates**



## Atherosclerosis Mortality 2006-2010

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>		County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
<b>Counties with Average Population &lt; 10,000</b>	Adair	10	25.7	9.8		Lucas	*	*	*
	Adams	*	*	*		Monona	*	*	*
	Audubon	*	*	*		Monroe	18	45.5	25.3
	Clarke	*	*	*		Osceola	*	*	*
	Davis	*	*	*		Palo Alto	*	*	*
	Decatur	*	*	*		Pocahontas	*	*	*
	Fremont	*	*	*		Ringgold	*	*	*
	Greene	*	*	*		Taylor	*	*	*
	Howard	*	*	*		Van Buren	*	*	*
	Humboldt	*	*	*		Wayne	*	*	*
	Ida	*	*	*		Worth	*	*	*
						<b>Total</b>	65	7.6	3.7
<b>Counties with Average Population 10,000 – 20,000</b>	Allamakee	*	*	*		Hardin	*	*	*
	Appanoose	*	*	*		Iowa	*	*	*
	Buena Vista	*	*	*		Jefferson	*	*	*
	Butler	*	*	*		Keokuk	*	*	*
	Calhoun	*	*	*		Kossuth	14	17.8	8.0
	Cass	*	*	*		Louisa	*	*	*
	Cedar	*	*	*		Lyon	*	*	*
	Cherokee	*	*	*		Mitchell	*	*	*
	Chickasaw	*	*	*		Montgomery	*	*	*
	Clay	*	*	*		O'Brien	*	*	*
	Clayton	*	*	*		Page	*	*	*
	Crawford	*	*	*		Poweshiek	*	*	*
	Delaware	*	*	*		Sac	*	*	*
	Dickinson	*	*	*		Shelby	*	*	*
	Emmet	123	150.0	75.8		Tama	*	*	*
	Floyd	28	52.3	28.4		Union	*	*	*
	Franklin	*	*	*		Winnebago	*	*	*
	Hamilton	*	*	*		Wright	*	*	*
	Hancock	*	*	*		<b>Total</b>	248	9.7	5.3
<b>Counties with Average Population &gt; 20,000</b>	Boone	*	*	*		Lee	*	*	*
	Buchanan	*	*	*		Mahaska	32	28.6	20.6
	Carroll	*	*	*		Marion	*	*	*
	Cerro Gordo	*	*	*		Marshall	*	*	*
	Clinton	*	*	*		Muscatine	*	*	*
	Des Moines	*	*	*		Plymouth	52	41.7	28.1
	Fayette	*	*	*		Sioux	*	*	*
	Henry	*	*	*		Wapello	*	*	*
	Jackson	*	*	*		Webster	*	*	*
	Jasper	*	*	*		Winneshiek	*	*	*
						<b>Total</b>	161	5.0	3.4
<b>MSA Counties</b>	Benton	*	*	*		Linn	19	1.8	1.5
	Black Hawk	12	1.9	1.5		Madison	*	*	*
	Bremer	23	19.0	13.0		Mills	*	*	*
	Dallas	*	*	*		Polk	67	3.2	3.4
	Dubuque	39	8.4	6.2		Pottawattamie	20	4.4	3.7
	Grundy	*	*	*		Scott	47	5.8	5.3
	Guthrie	72	130.4	71.5		Story	*	*	*
	Harrison	*	*	*		Warren	54	23.8	22.1
	Johnson	*	*	*		Washington	*	*	*
	Jones	*	*	*		Woodbury	10	2.0	1.7
						<b>Total</b>	387	4.6	4.2
	<b>State Total</b>	861	5.7	4.2					

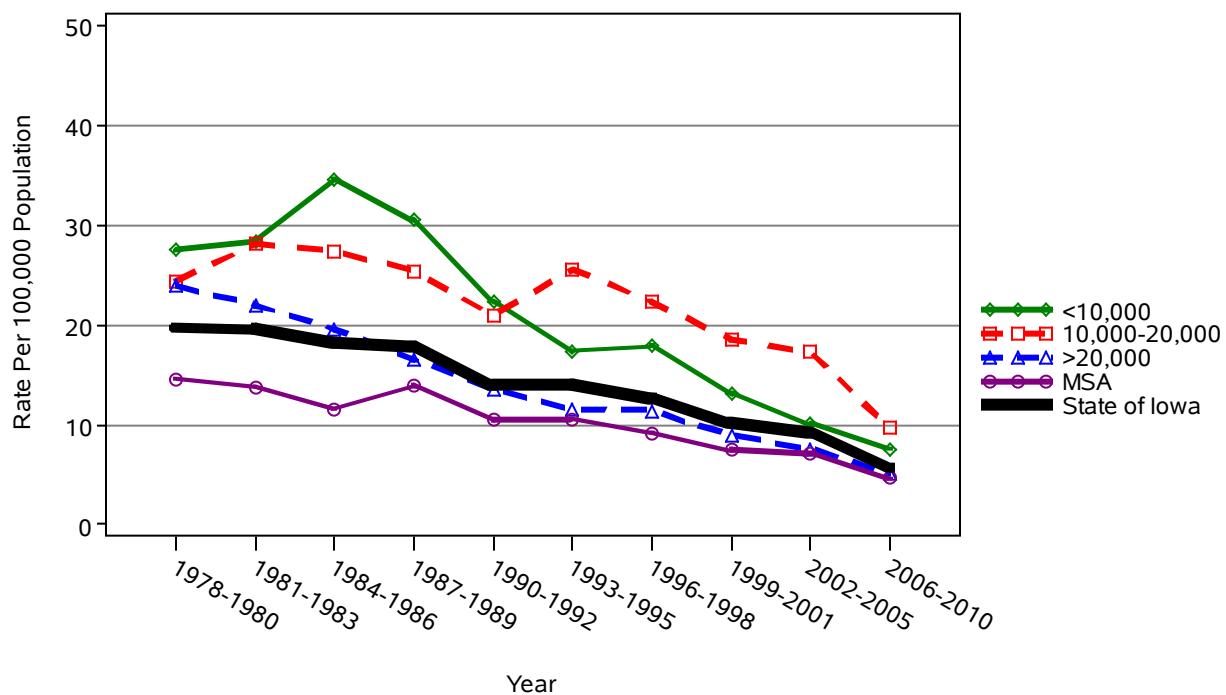
<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

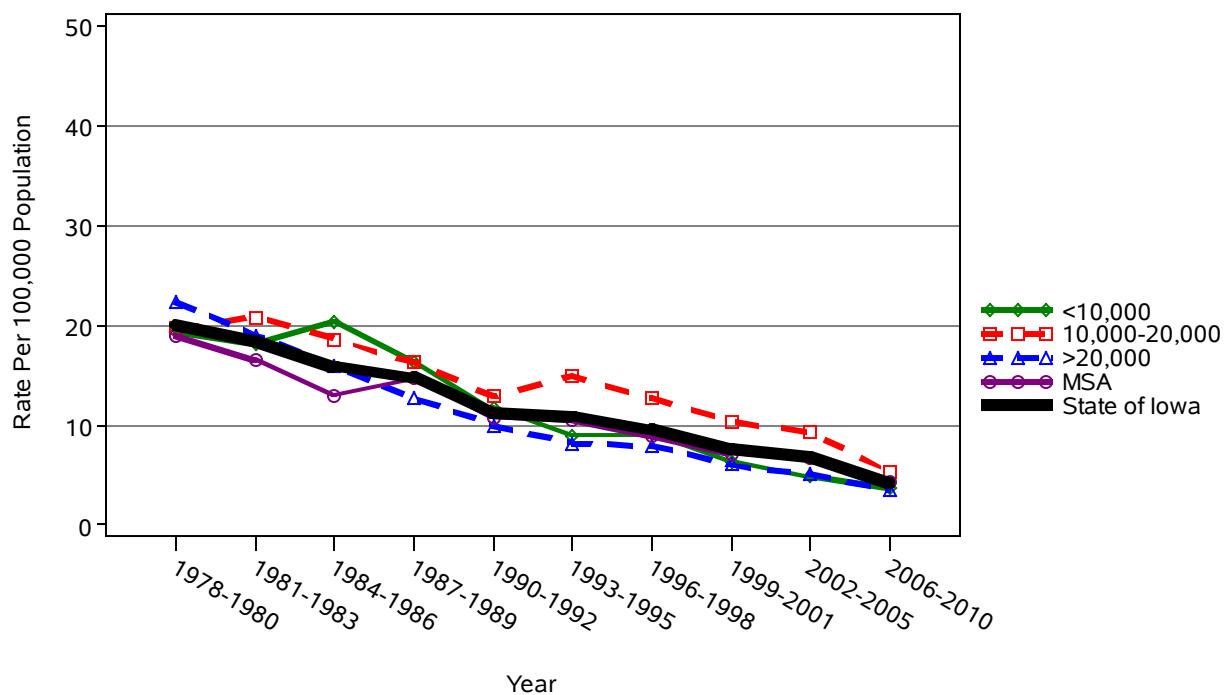
Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Atherosclerosis Mortality by County Group 1978-2010

**Crude Rates**



**Age-Adjusted Rates**



## Congenital Anomalies Mortality 2006-2010

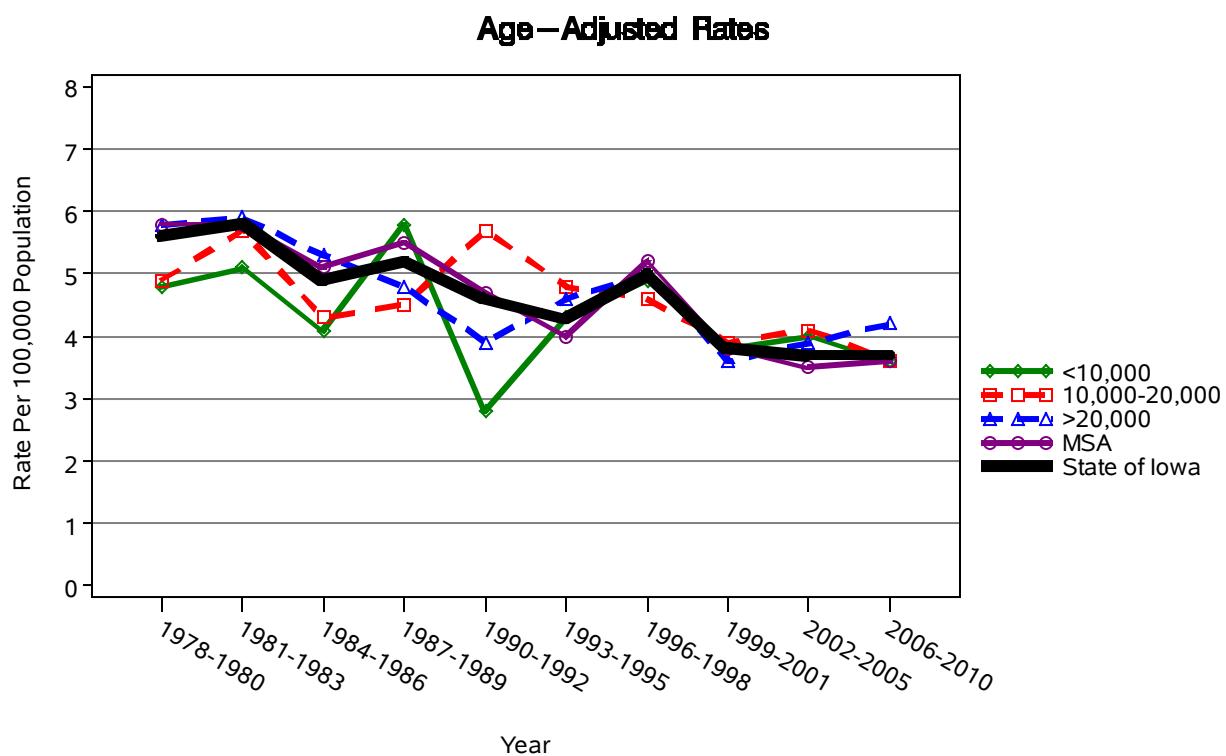
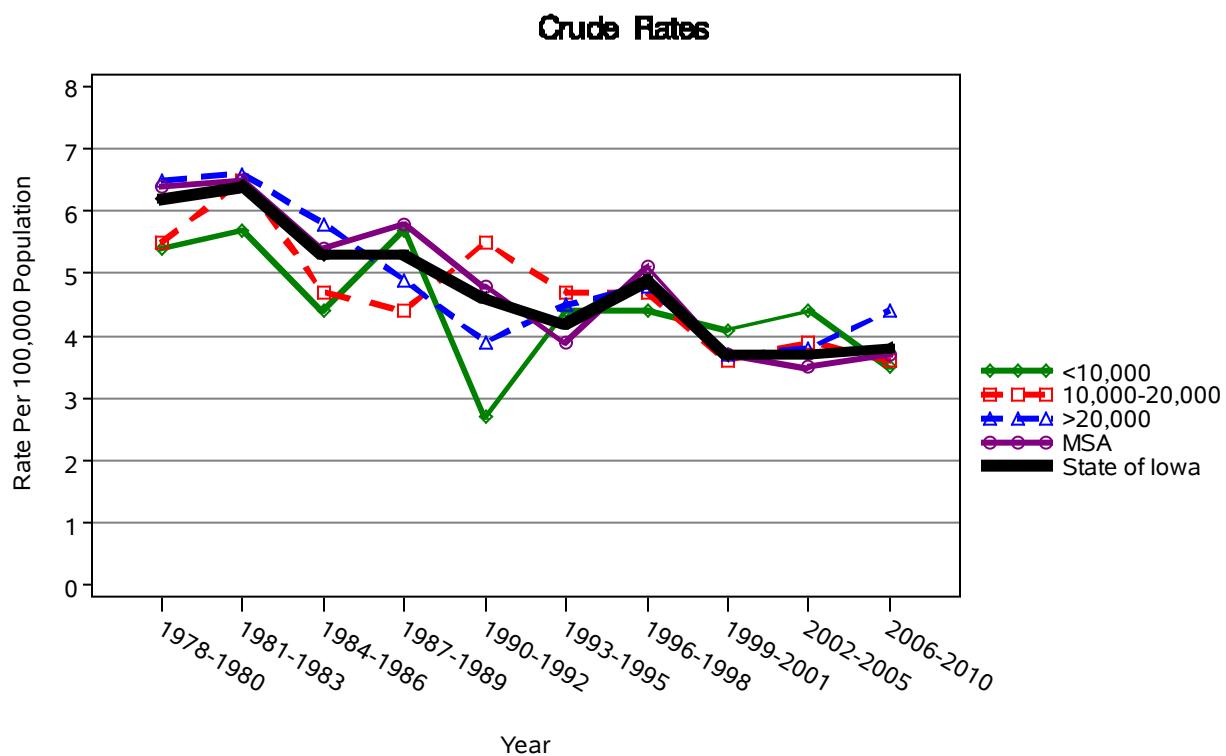
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	30	3.5	3.6
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	92	3.6	3.6
Counties with Average Population > 20,000	Boone	*	*	*	Lee	*	*	*
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	13	7.8 (02)	6.7 (02)
	Cerro Gordo	11	10.6 (01)	8.6 (01)	Marshall	*	*	*
	Clinton	12	5.4 (04)	5.2 (03)	Muscatine	11	5.2 (05)	4.9 (05)
	Des Moines	*	*	*	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	10	6.0 (03)	5.2 (03)
	Henry	*	*	*	Wapello	*	*	*
	Jackson	*	*	*	Webster	*	*	*
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	143	4.4	4.2
MSA Counties	Benton	*	*	*	Linn	39	3.8 (10)	3.7 (10)
	Black Hawk	19	2.9 (13)	2.9 (13)	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	*	*	*	Polk	84	4.0 (08)	3.6 (11)
	Dubuque	19	4.1 (07)	4.2 (06)	Pottawattamie	18	3.9 (09)	3.9 (09)
	Grundy	*	*	*	Scott	30	3.7 (11)	3.6 (11)
	Guthrie	*	*	*	Story	*	*	*
	Harrison	*	*	*	Warren	*	*	*
	Johnson	23	3.6 (12)	4.0 (07)	Washington	*	*	*
	Jones	*	*	*	Woodbury	22	4.3 (06)	4.0 (07)
					<b>Total</b>	311	3.7	3.6
	<b>State Total</b>	576	3.8	3.7				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Congenital Anomalies Mortality by County Group 1978-2010



## OTHER MORTALITY

## Conditions Originating in Perinatal Period Mortality 2006-2010

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	31	3.6	4.0
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	54	2.1	2.5
Counties with Average Population > 20,000	Boone	*	*	*	Lee	*	*	*
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	*	*	*
	Cerro Gordo	*	*	*	Marshall	*	*	*
	Clinton	*	*	*	Muscatine	*	*	*
	Des Moines	12	4.9 (01)	5.3 (01)	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	*	*	*
	Jackson	*	*	*	Webster	*	*	*
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	81	2.5	2.7
MSA Counties	Benton	*	*	*	Linn	28	2.7 (07)	2.7 (08)
	Black Hawk	19	2.9 (06)	3.1 (06)	Madison	.	(.)	(.)
	Bremer	*	*	*	Mills	.	(.)	(.)
	Dallas	*	*	*	Polk	88	4.2 (02)	3.7 (03)
	Dubuque	*	*	*	Pottawattamie	17	3.7 (03)	3.6 (04)
	Grundy	*	*	*	Scott	18	2.2 (09)	2.2 (09)
	Guthrie	*	*	*	Story	10	2.3 (08)	2.9 (07)
	Harrison	*	*	*	Warren	.	(.)	(.)
	Johnson	23	3.6 (04)	3.8 (02)	Washington	.	(.)	(.)
	Jones	*	*	*	Woodbury	18	3.6 (04)	3.2 (05)
					<b>Total</b>	251	3.0	2.9
<b>State Total</b>		417	2.8	2.9				

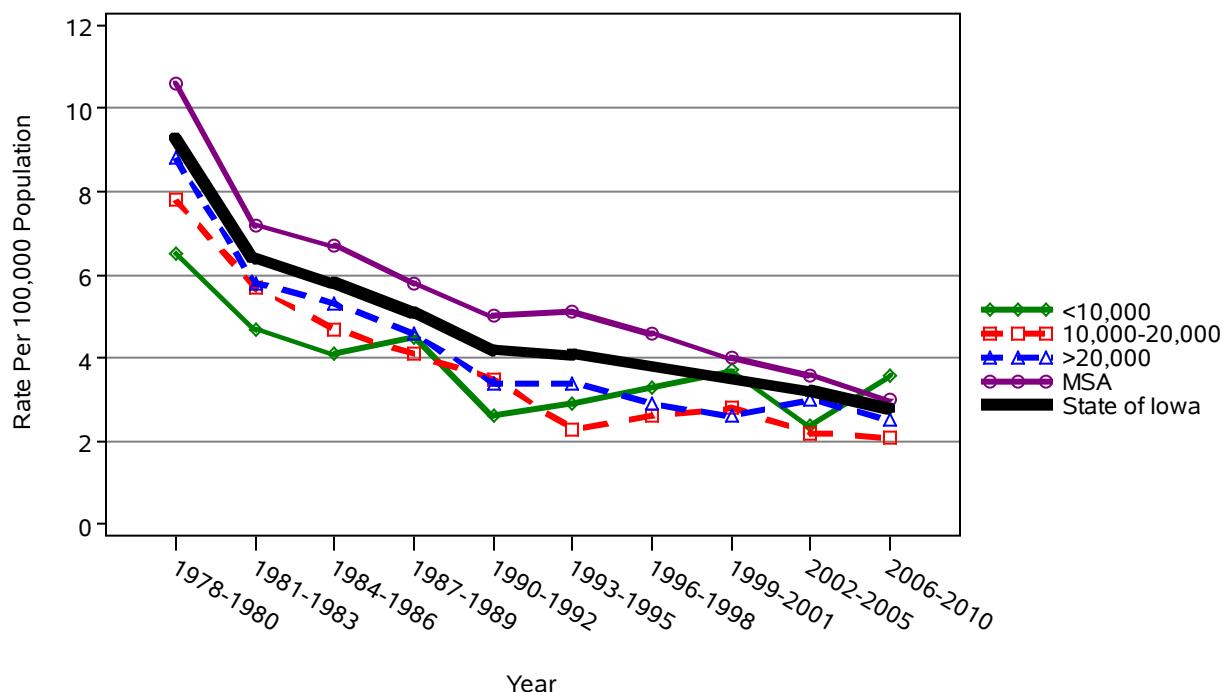
<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

\* Represents a count less than 10

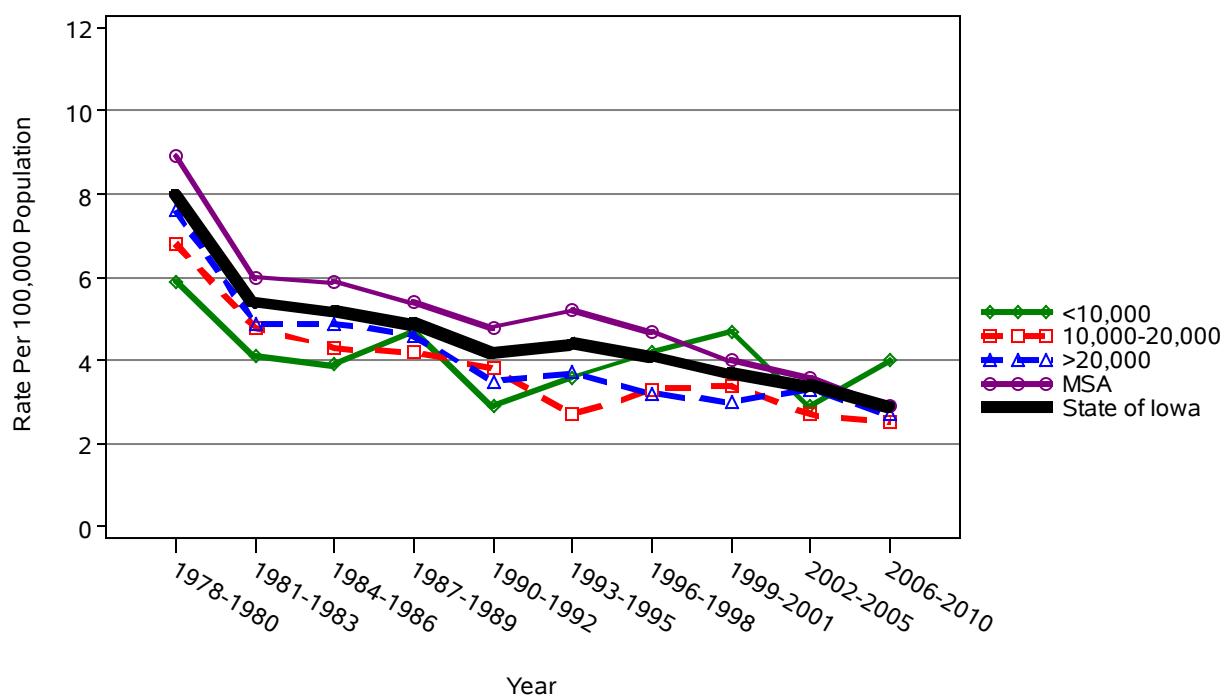
Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

## Conditions Originating in Perinatal Period Mortality by County Group 1978-2010

### Crude Rates



### Age-Adjusted Rates





## Health Care Providers

The Office of Statewide Clinical Education Programs (OSCEP) at the University of Iowa Carver College of Medicine, the Iowa Department of Public Health, Board of Nursing, and the Bureau of Emergency Medical Services collect the health care provider data presented in this Iowa Health Fact Book.

The Iowa Health Professions Tracking Center staffed by OSCEP provides an up-to-date inventory of physicians, physician assistants, advanced registered nurse practitioners, pharmacists, and dentists, which facilitates tracking trends in Iowa health professionals and provides feedback to the health science colleges on the progress of their programs.

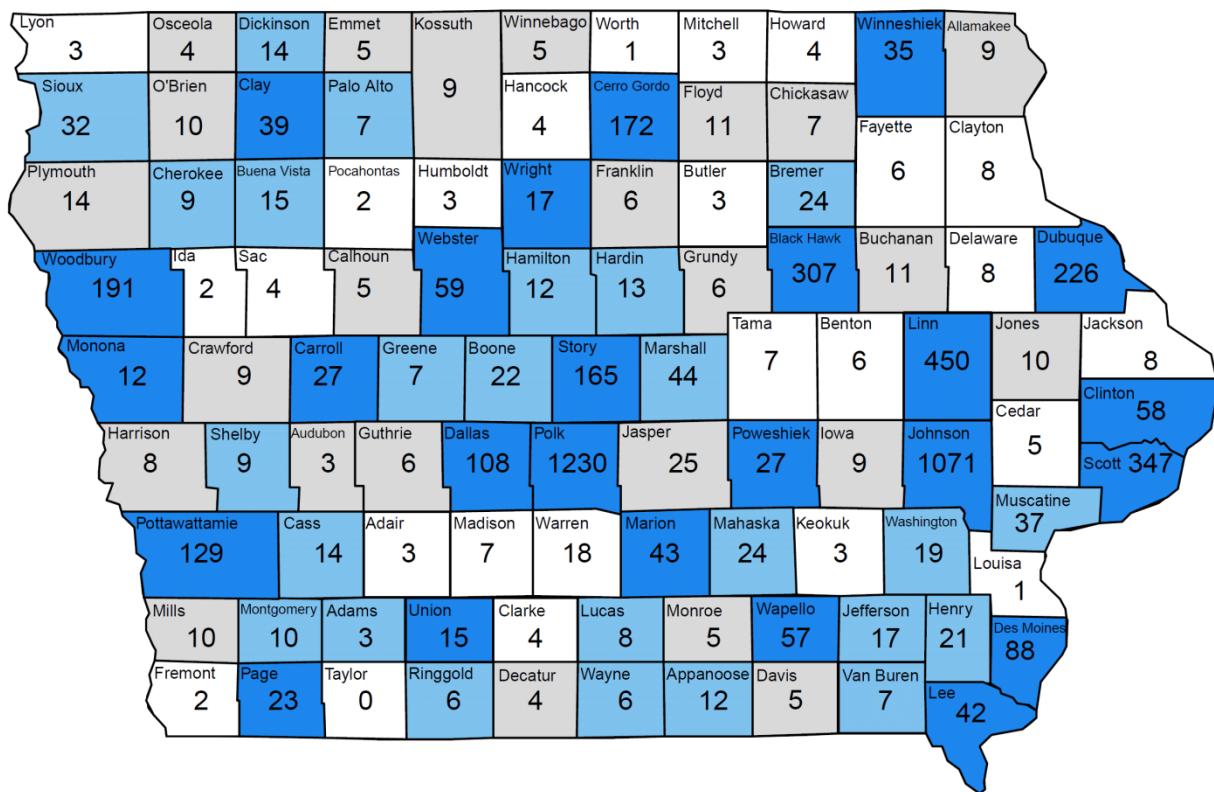
The Board of Nursing enforces and regulates nursing education, nursing practice, and continuing education for nurses. It sets standards, provides evaluation and licensing, and investigates complaints about licensed practical nurses, registered nurses, and advanced registered nurse practitioners. Its mission is “to protect the public health, safety and welfare of Iowans by ensuring that nursing is practiced by competent licensed individuals within their practice field.” Data related to the nursing supply are housed within the Board of Nursing.

The Bureau of Emergency Medical Services (EMS) is a regulatory agency that establishes initial training, continuing education, and renewal requirements leading to certification of emergency medical care providers, including those presented here. The EMS Bureau is also responsible for the authorization and regulation of EMS service programs (levels Emergency Medical Responder through Paramedic), and a statewide trauma system. In addition, the Bureau has statewide programs dealing with system development initiatives, injury prevention, and emergency medical services for children.

Seventeen other licensing boards are housed at the Iowa Department of Public Health, which collect data about practice, licensing/certification, and other supply information.

# Total Physicians

2013 Counts and Crude Rates per 10,000 Population (shaded)



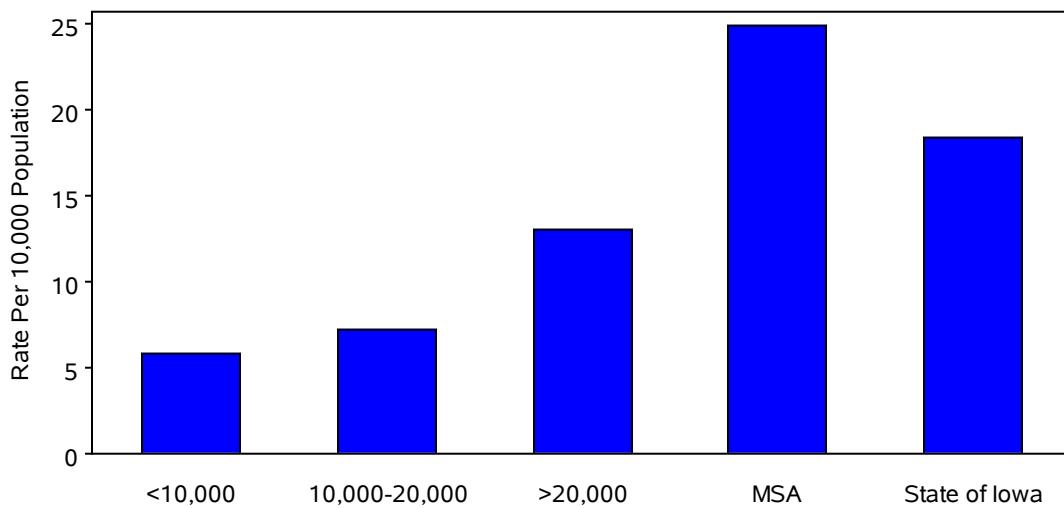
0-4.6

4.7-7.4

7.5-11.8

11.9-80.5

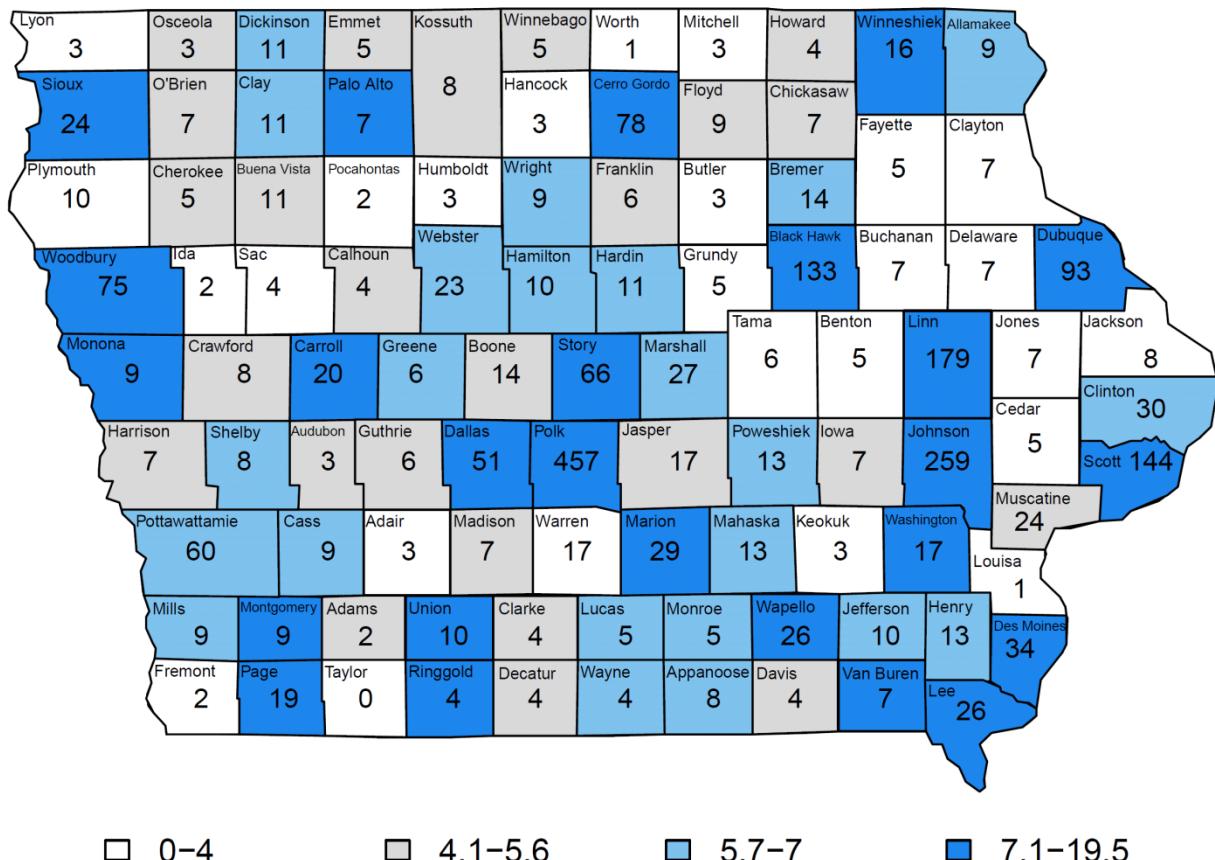
### 2013 Crude Rates by County Group



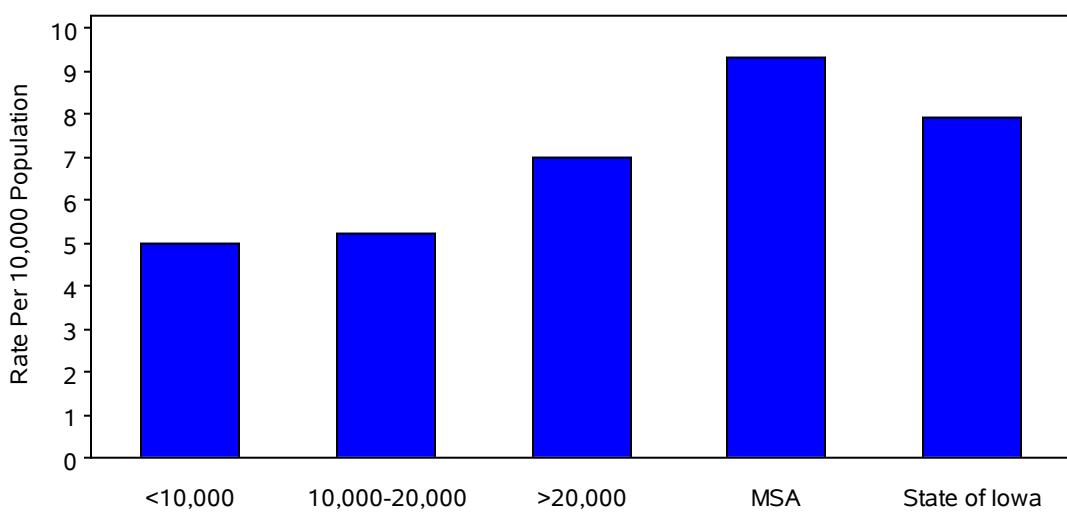
Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

## **Primary Care Physicians<sup>1</sup>**

### 2013 Counts and Crude Rates per 10,000 Population (shaded)



## 2013 Crude Rates by County Group

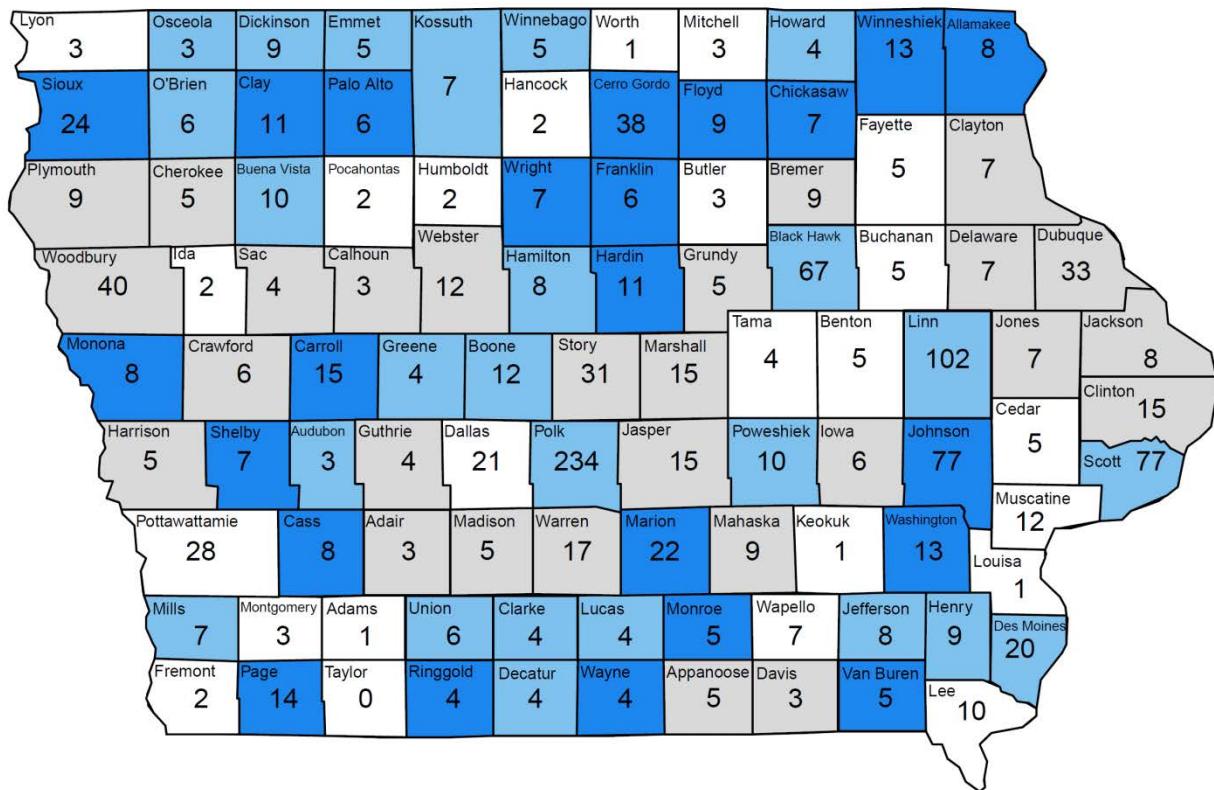


<sup>1</sup>Includes Family Practice, Internal Medicine, Pediatric, and Obstetrics/Gynecology physicians

Source: Office of Statewide Clinical Education Programs  
College of Medicine, University of Iowa

# Family Practice Physicians

2013 Counts and Crude Rates per 10,000 Population (shaded)



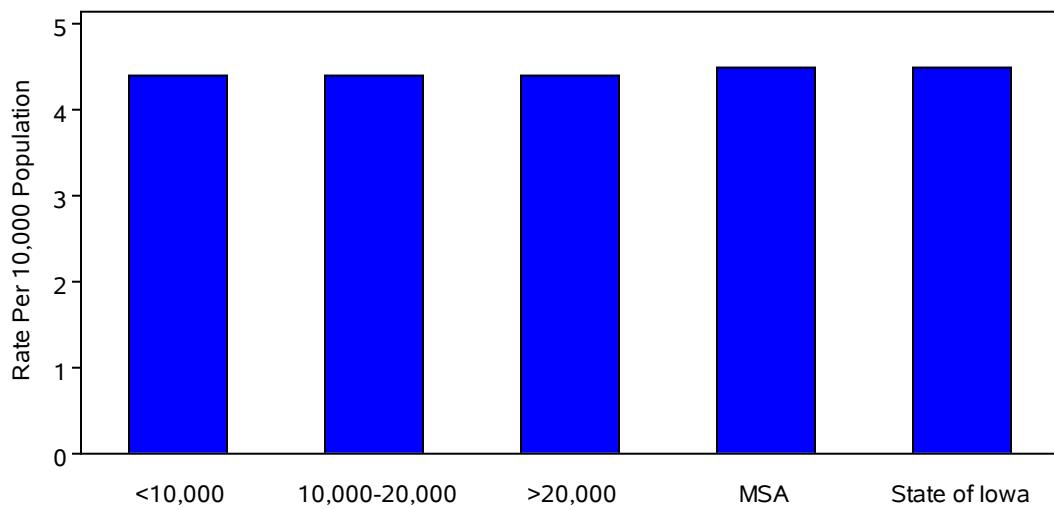
0-3.1

3.2-4.1

4.2-5.3

5.4-8.8

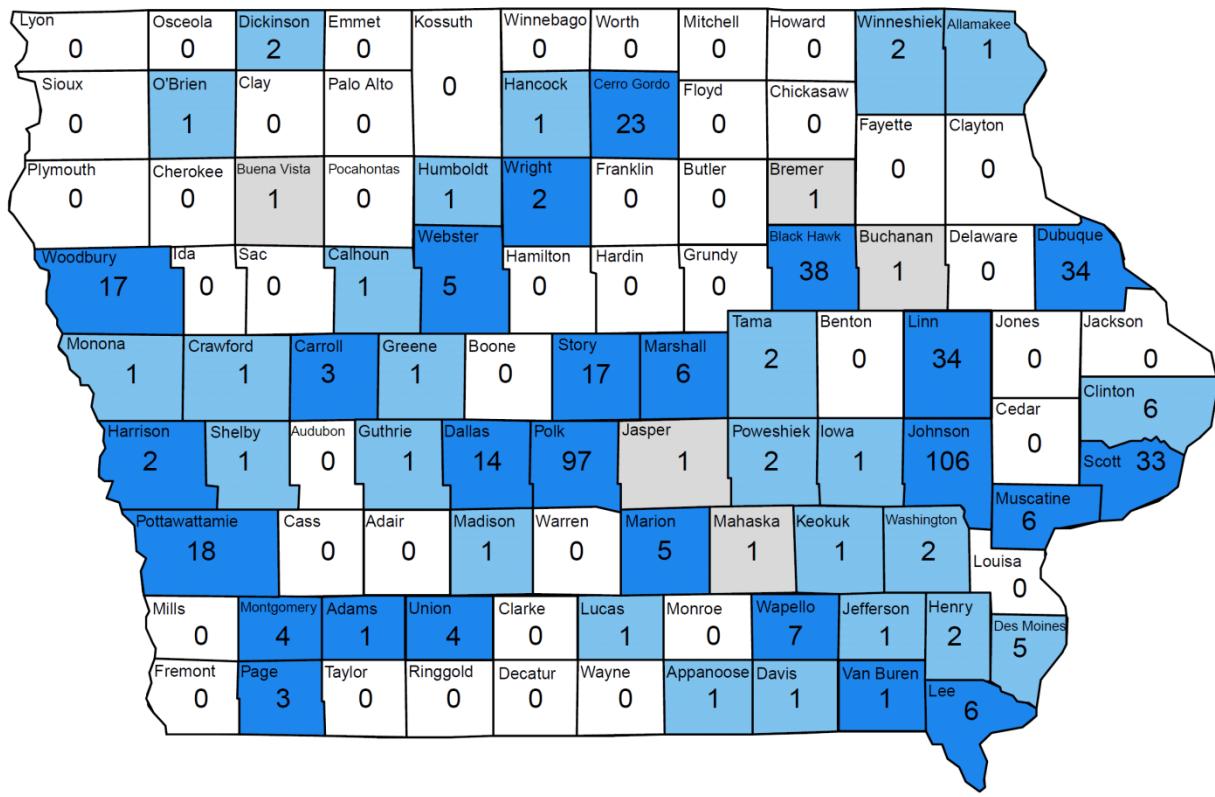
2013 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

# Internal Medicine Physicians

2013 Counts and Crude Rates per 100,000 Population (shaded)



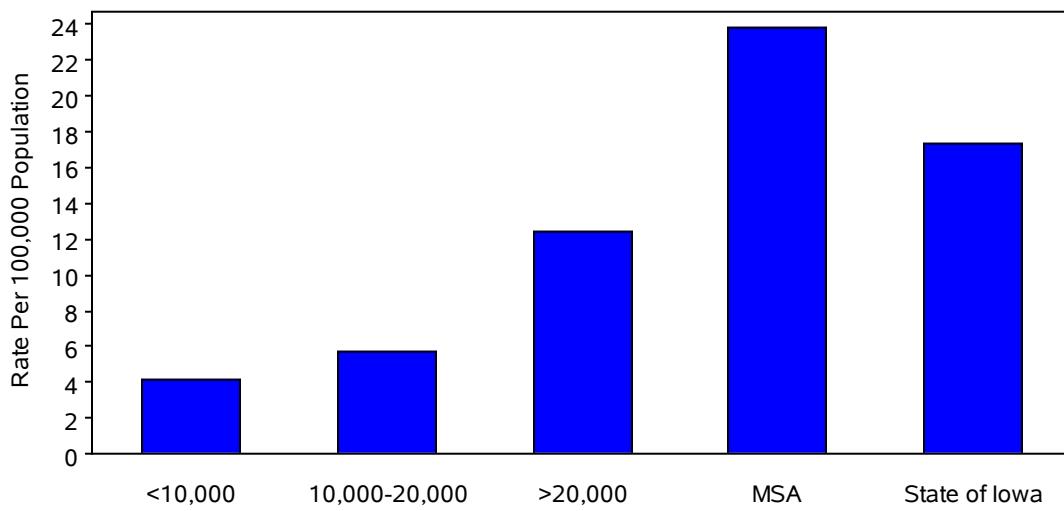
0

0.1-5.8

5.9-12.9

13-79.7

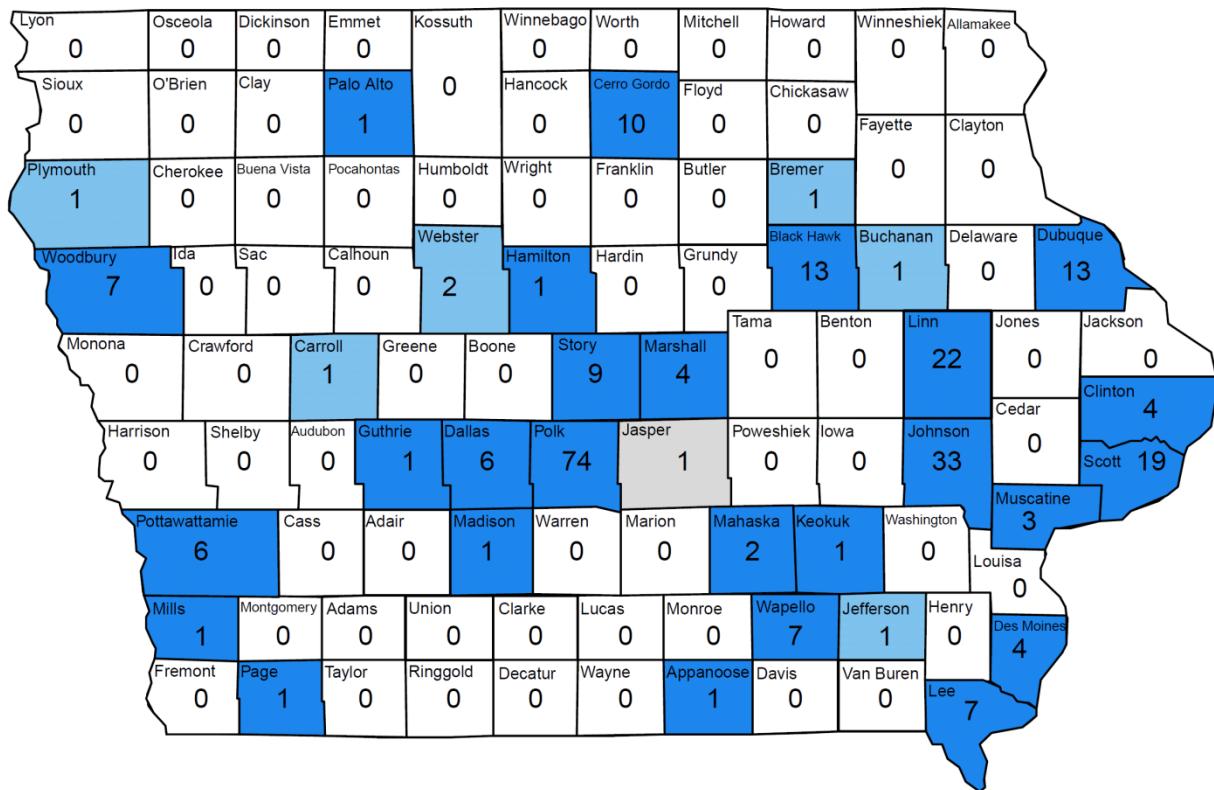
2013 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

# Pediatric Physicians

2013 Counts and Crude Rates per 100,000 Population (shaded)



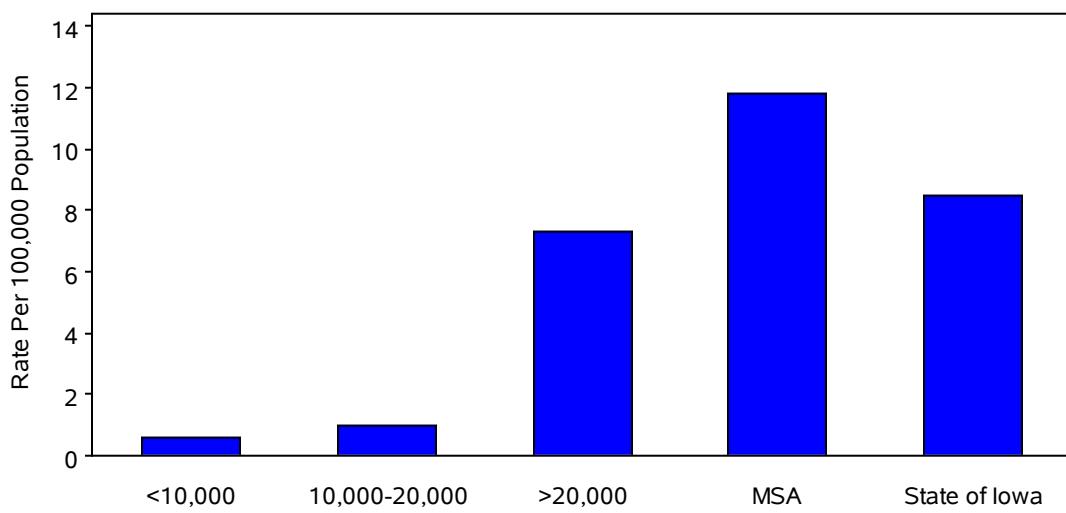
0

0.1-3

3.1-6.3

6.4-24.8

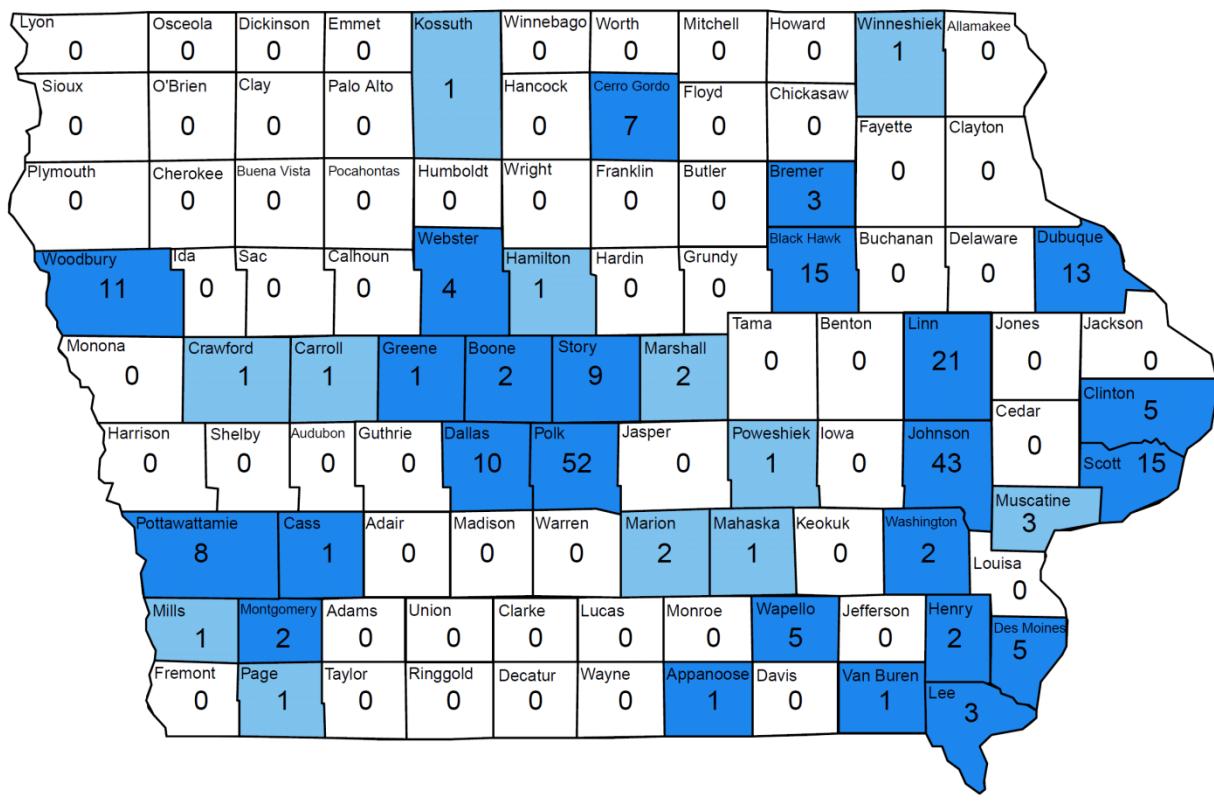
2013 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

# Obstetrics/Gynecology Physicians

2013 Counts and Crude Rates per 100,000 Population (shaded)



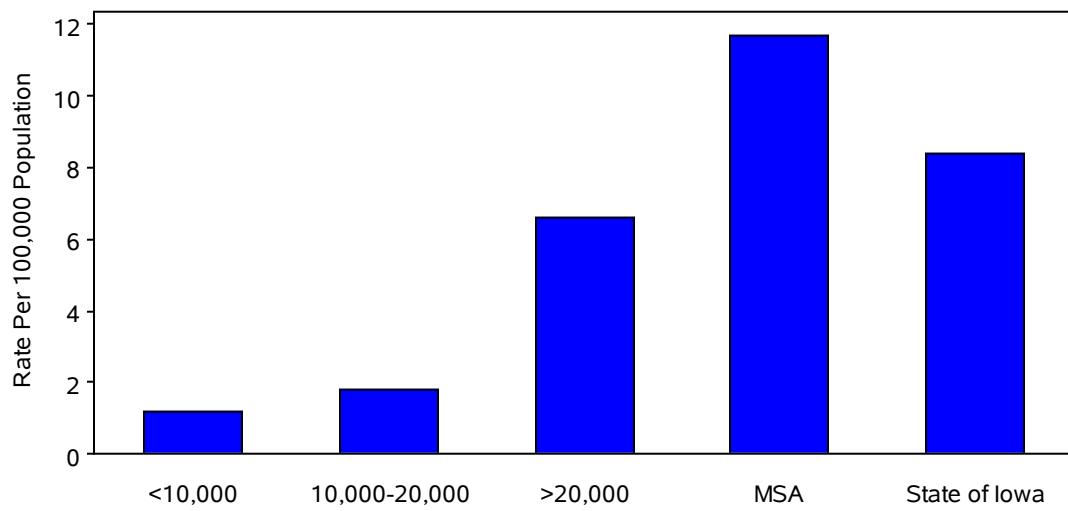
□ 0

□ 0.1-3

□ 3.1-7.1

□ 7.2-32.3

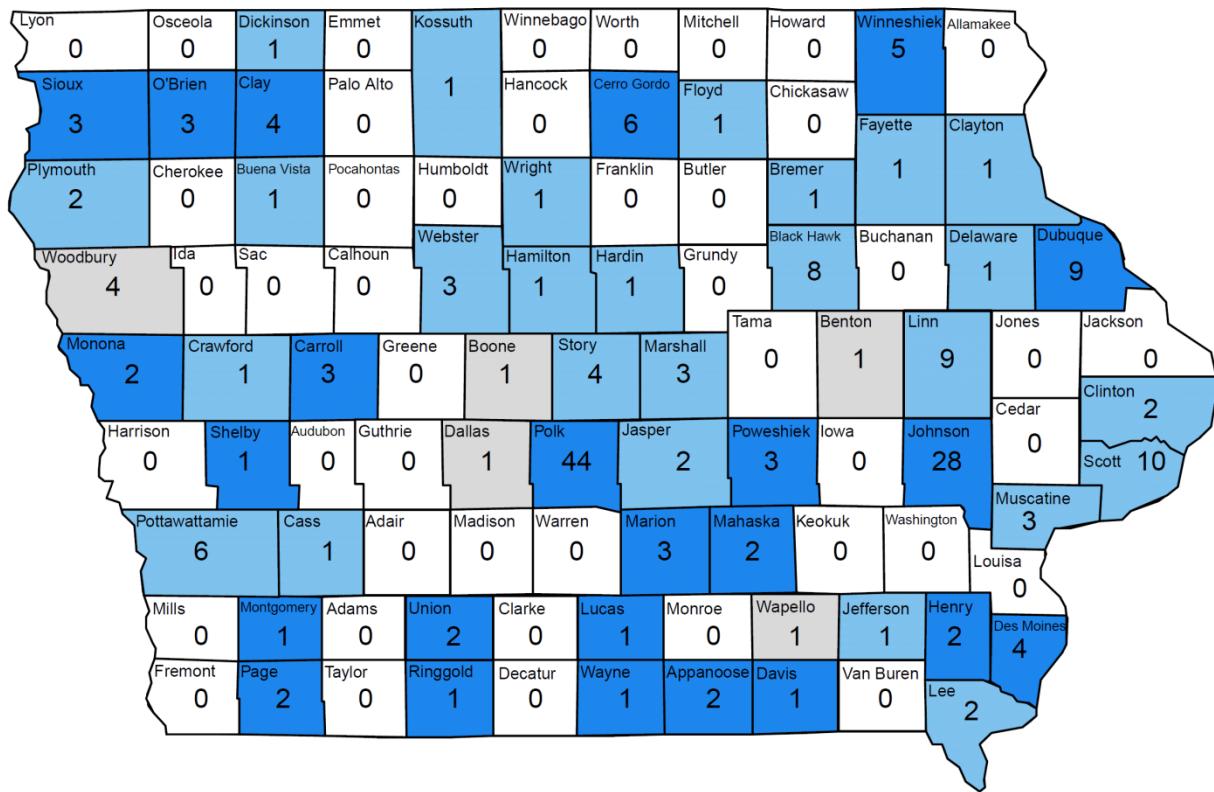
2013 Crude Rates by County Group



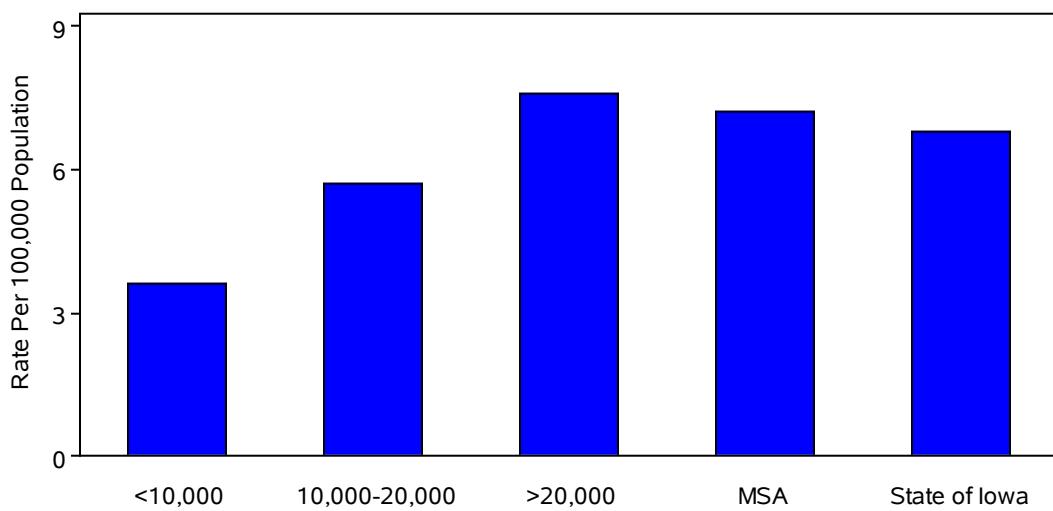
Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

# General Surgeons

2013 Counts and Crude Rates per 100,000 Population (shaded)

 0 0.1-4.1 4.2-8 8.1-24.1

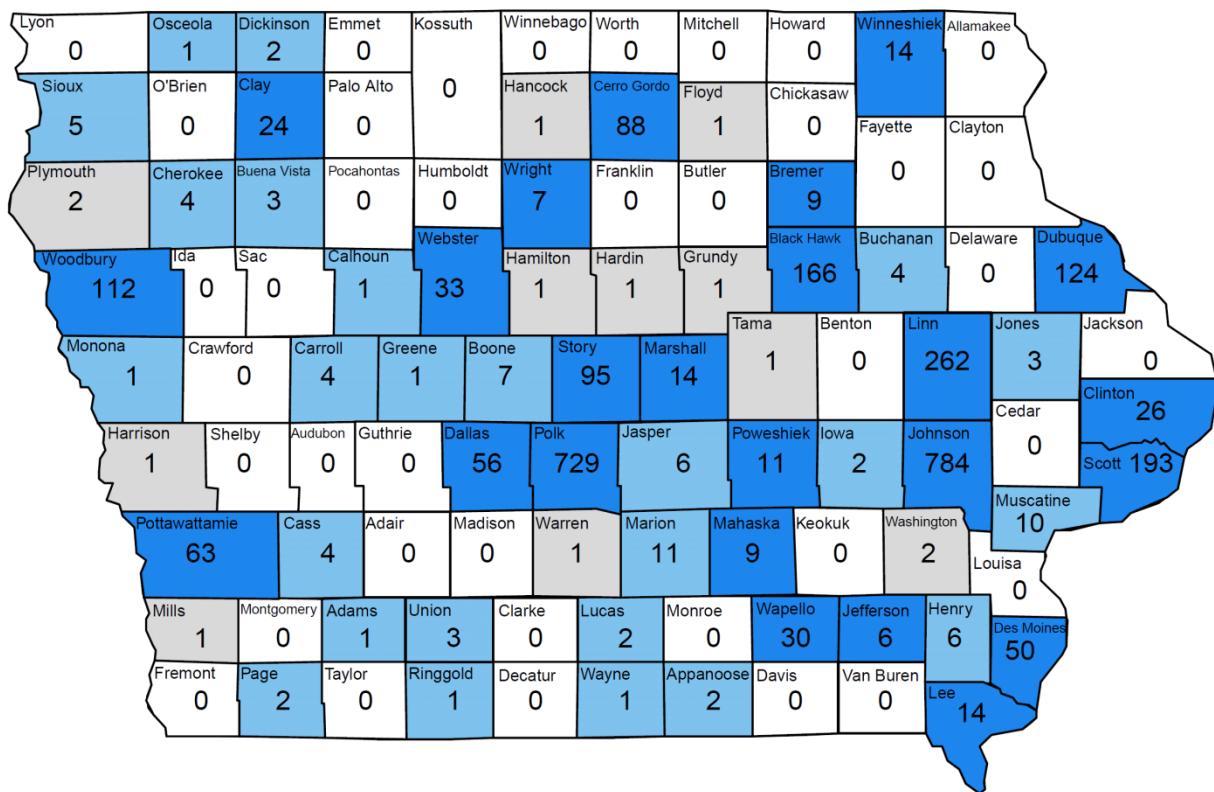
2013 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

## Other Specialty Physicians

2013 Counts and Crude Rates per 10,000 Population (shaded)



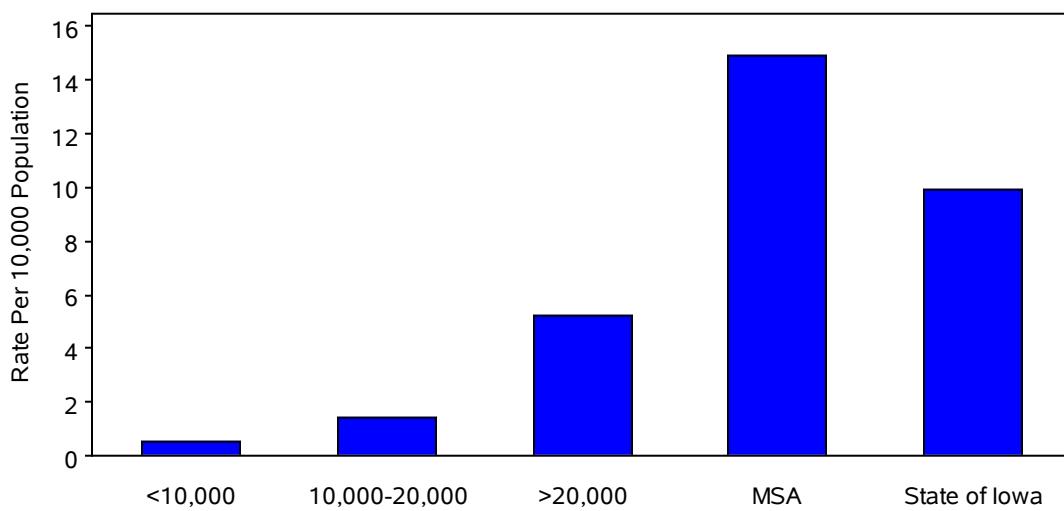
0

0.1-0.9

1-3.3

3.4-58.9

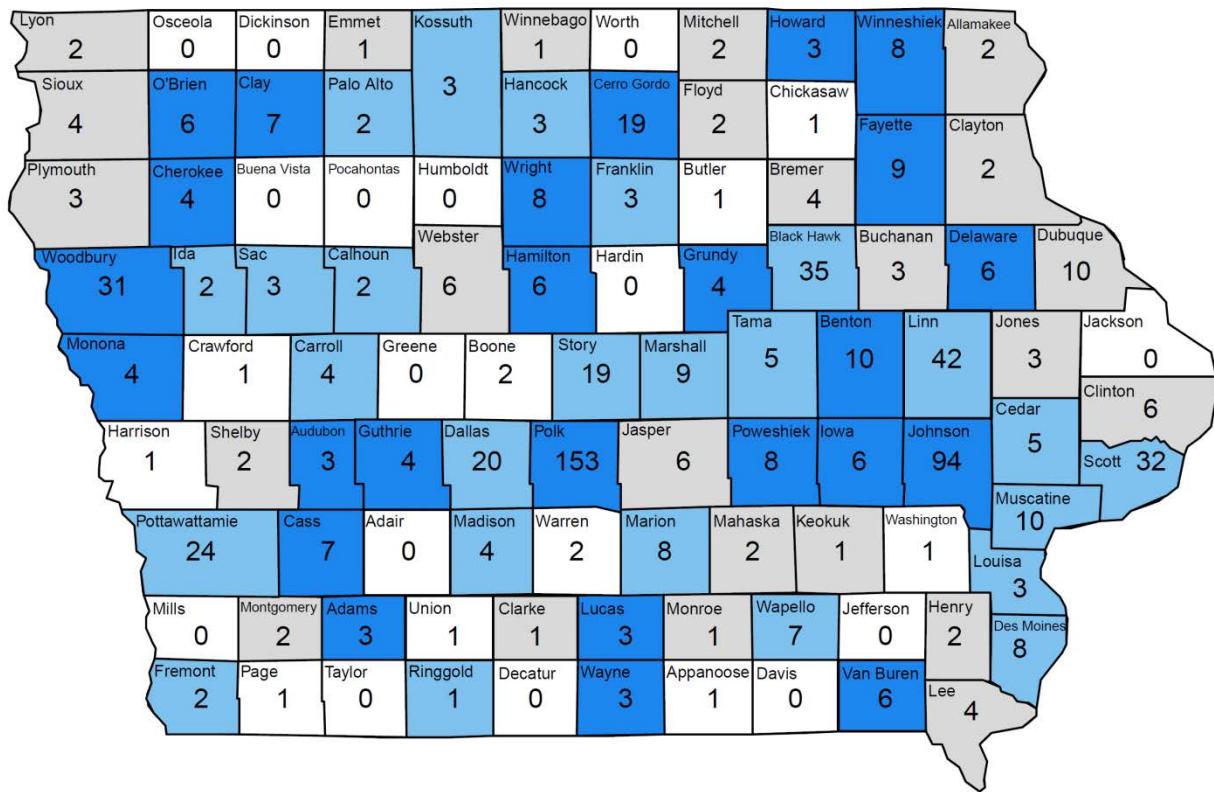
2013 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

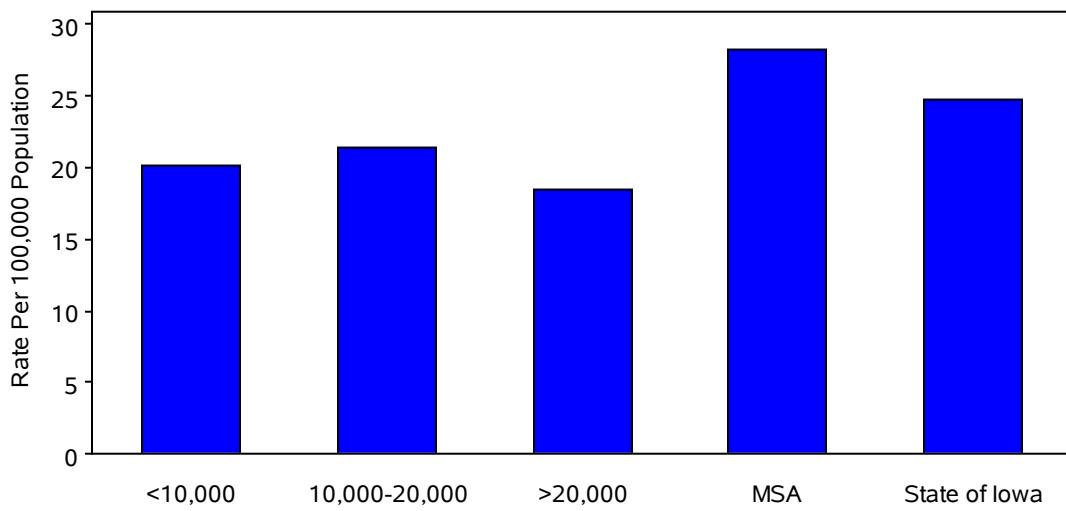
# Physician Assistants

2013 Counts and Crude Rates per 100,000 Population (shaded)



0-8.5       8.6-19.1       19.2-29.8       29.9-79.9

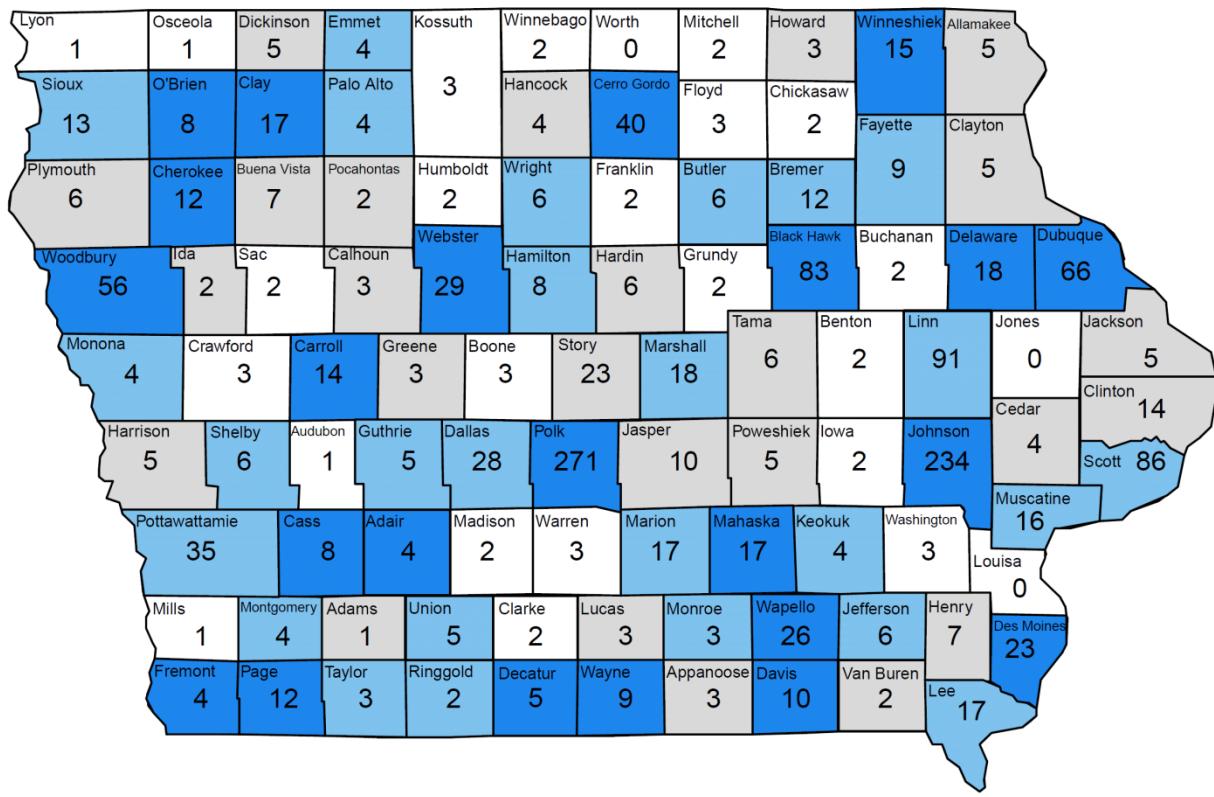
2013 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

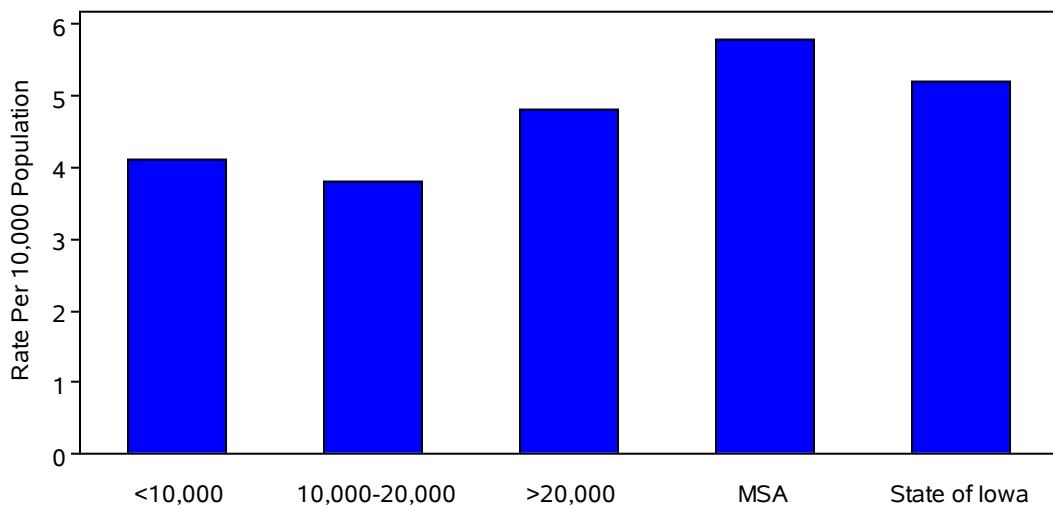
## Advanced Practice Nurses

2013 Counts and Crude Rates per 10,000 Population (shaded)



□ 0-2.2      □ 2.3-3.5      □ 3.6-5.1      □ 5.2-17.6

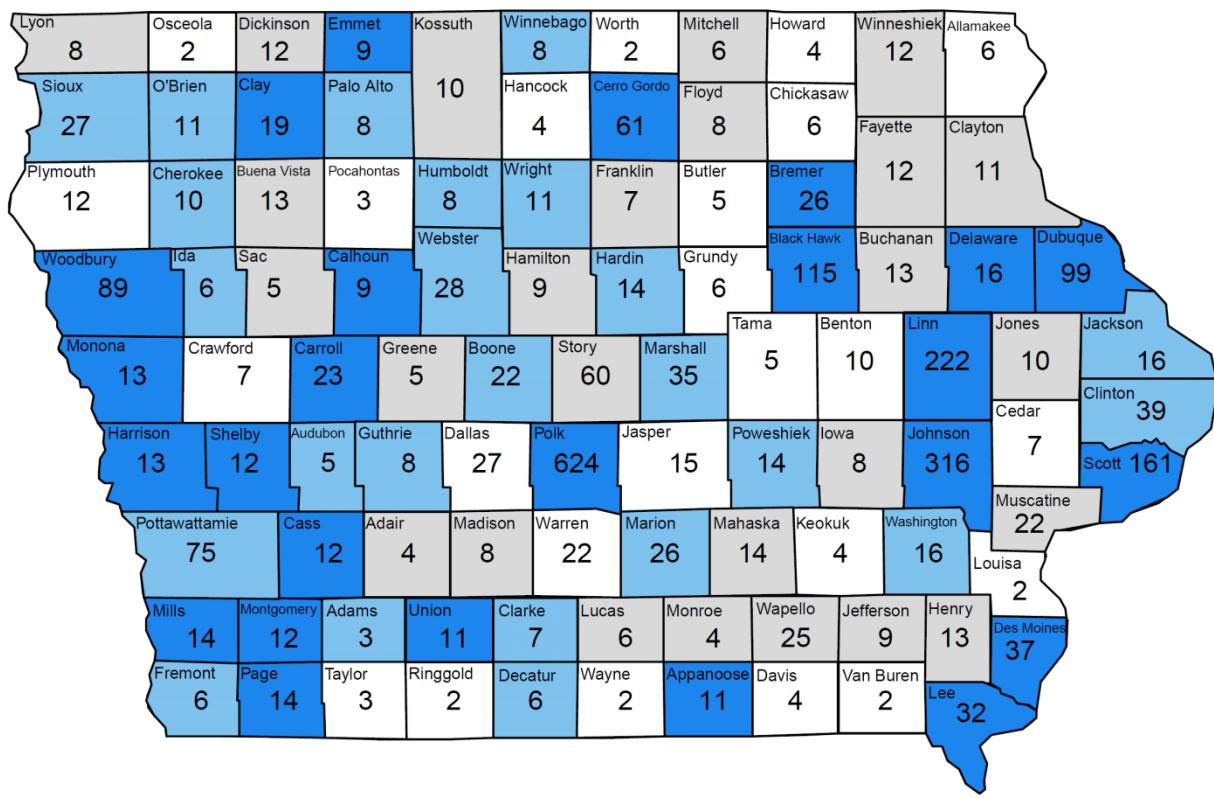
2013 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

# Pharmacists

2013 Counts and Crude Rates per 10,000 Population (shaded)



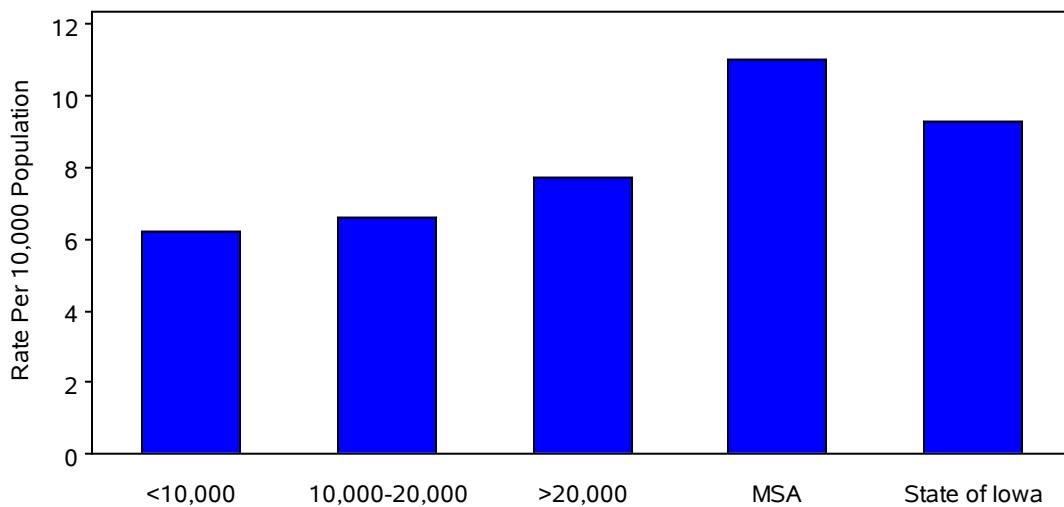
0-4.9

5-7.1

7.2-8.6

8.7-23.8

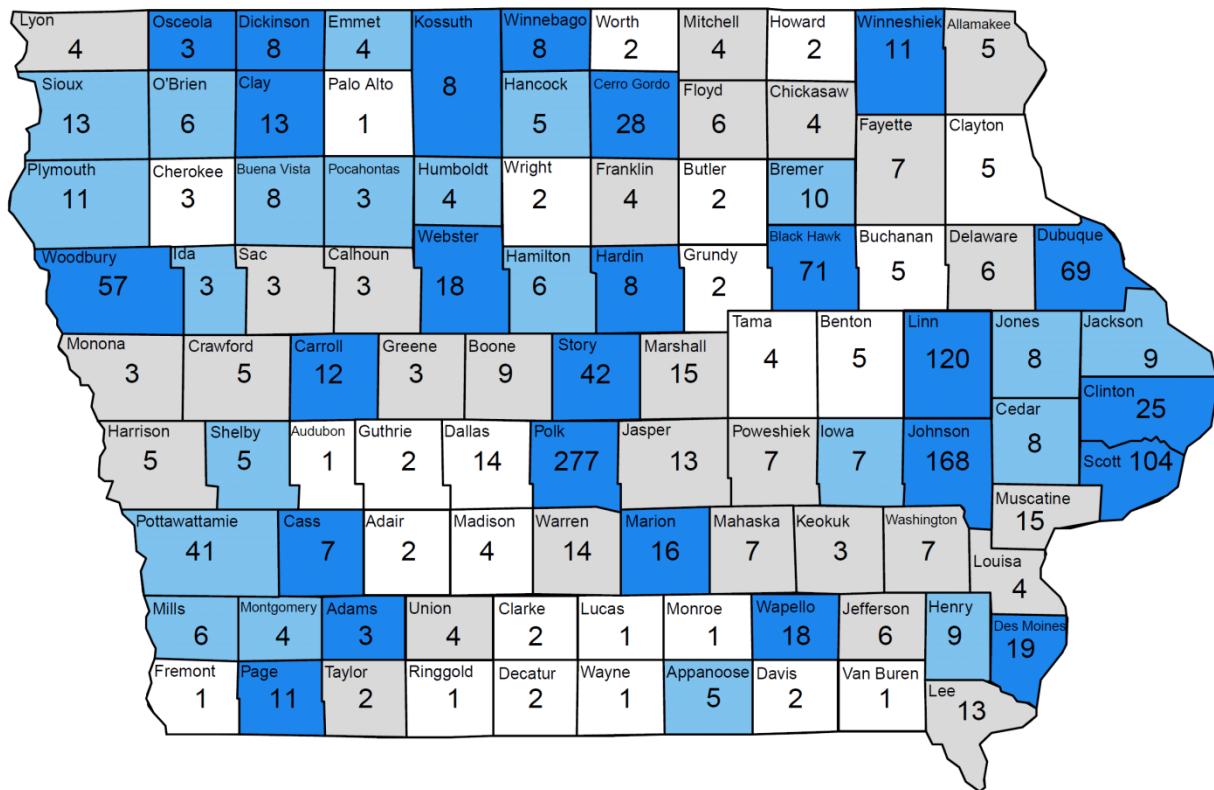
2013 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

# Dentists

2013 Counts and Crude Rates per 10,000 Population (shaded)



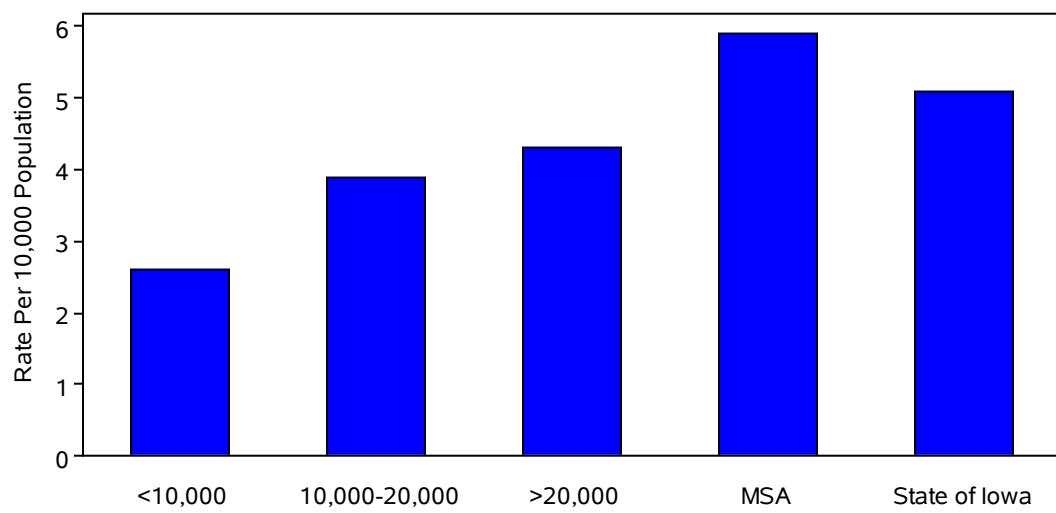
0-2.8

2.9-3.7

3.8-4.6

4.7-12.6

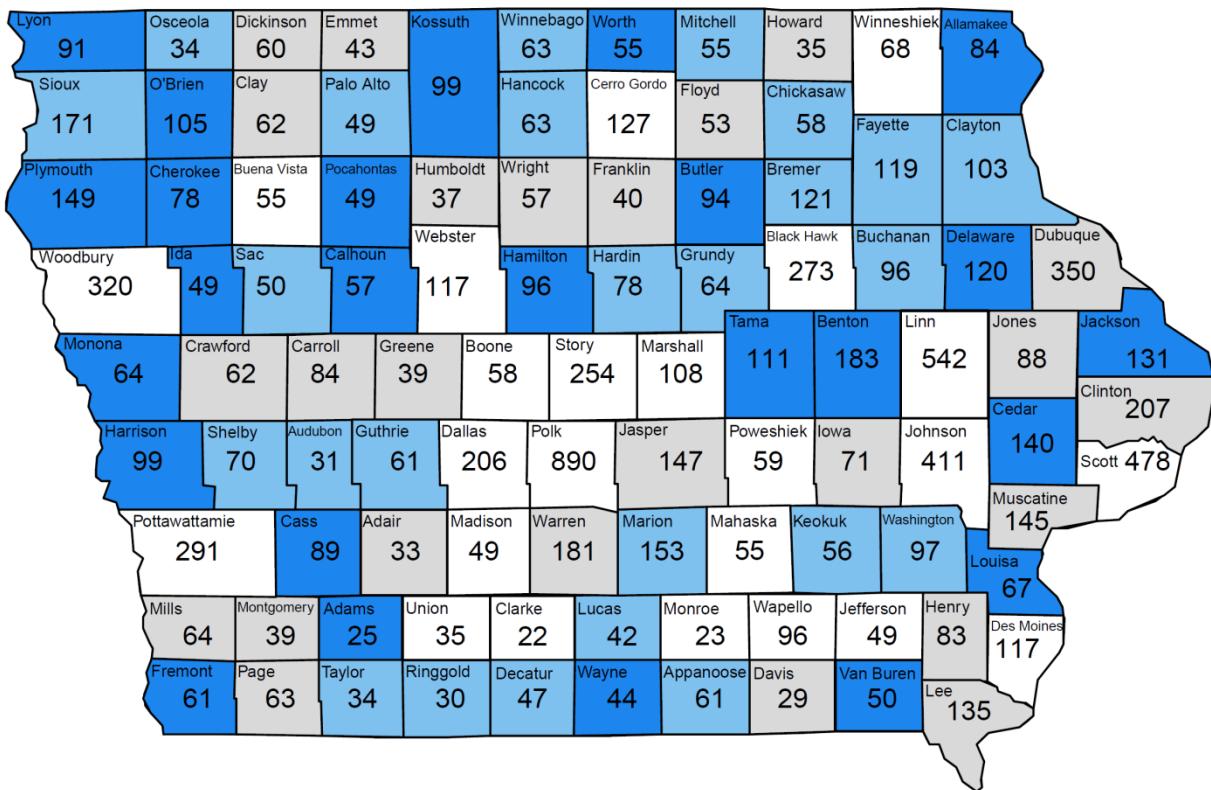
2013 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

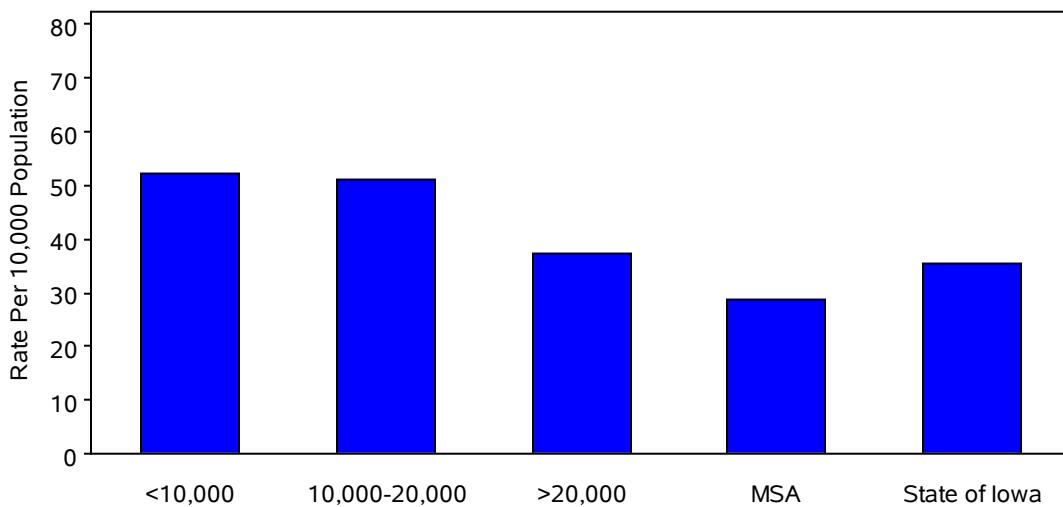
# Emergency Care Providers – Total<sup>1</sup>

2013 Counts and Crude Rates per 10,000 Population (shaded)



0-33       33.1-44.4       44.5-58.7       58.8-82.8

2013 Crude Rates by County Group

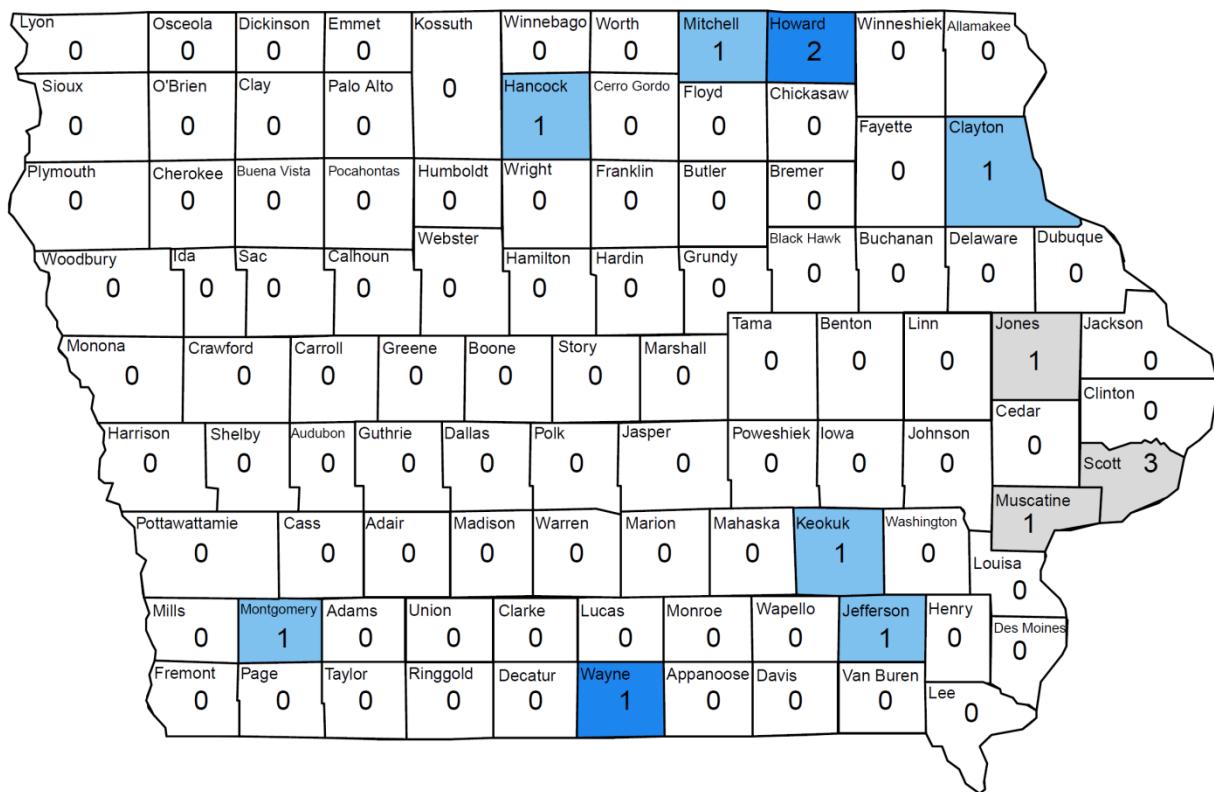


<sup>1</sup>Includes First Responder, Basic, Intermediate, Paramedic, and Paramedic Specialist

Source: Bureau of Emergency Medical Services, Iowa Department of Public Health

# First Responders, EMT - Ambulance, EMT - Defibrillator

2013 Counts and Crude Rates per 100,000 Population (shaded)



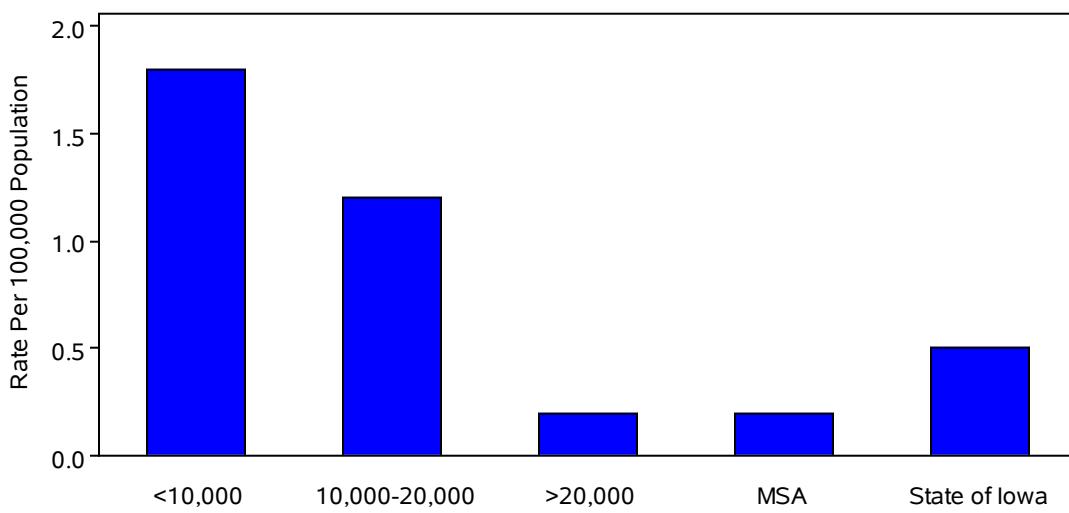
0

0.1-5

5.1-12

12.1-20.9

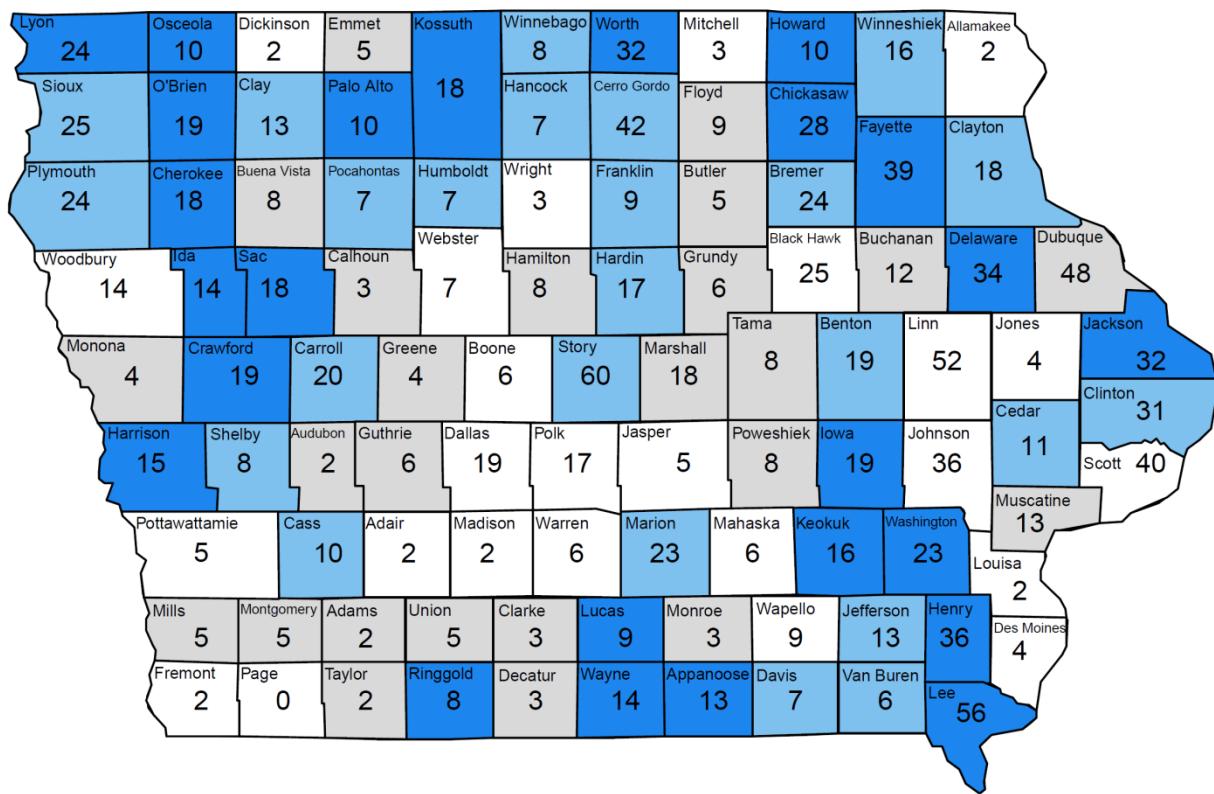
2013 Crude Rates by County Group



Source: Bureau of Emergency Medical Services, Iowa Department of Public Health

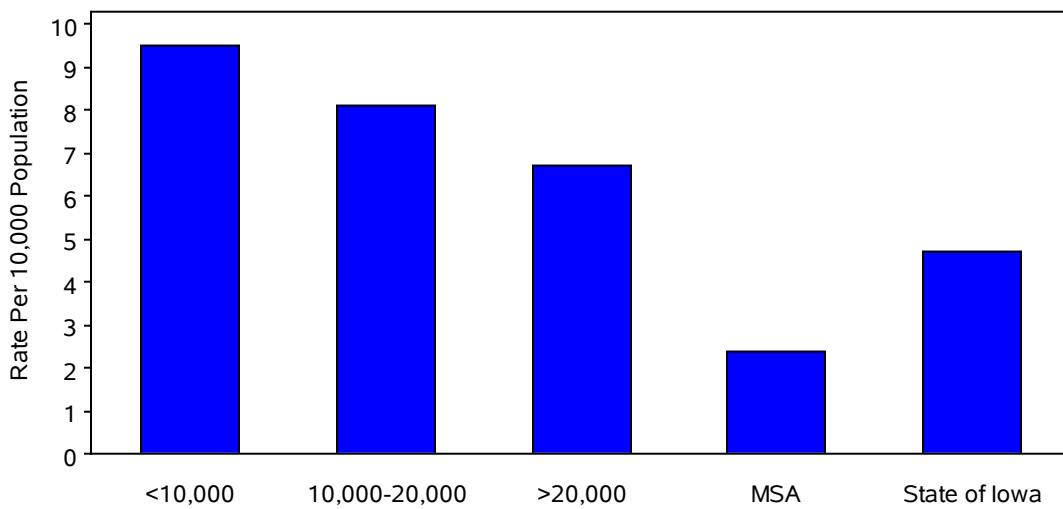
# Emergency Medical Responders<sup>1</sup>

2013 Counts and Crude Rates per 10,000 Population (shaded)



0-2.9       3-5.7       5.8-10.1       10.2-42.4

2013 Crude Rates by County Group

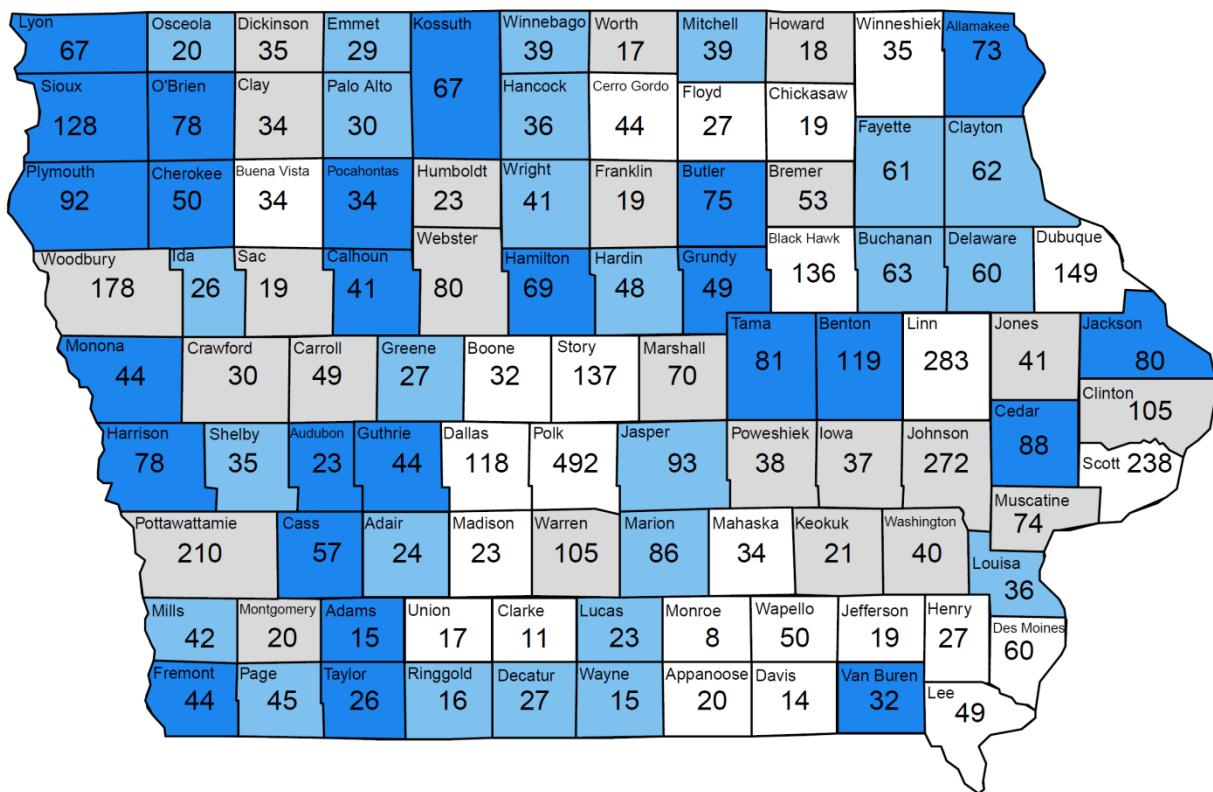


<sup>1</sup>Includes Emergency Medical Responders and First Responders

Source: Bureau of Emergency Medical Services, Iowa Department of Public Health

# Emergency Medical Technicians<sup>1</sup>

2013 Counts and Crude Rates per 100,000 Population (shaded)



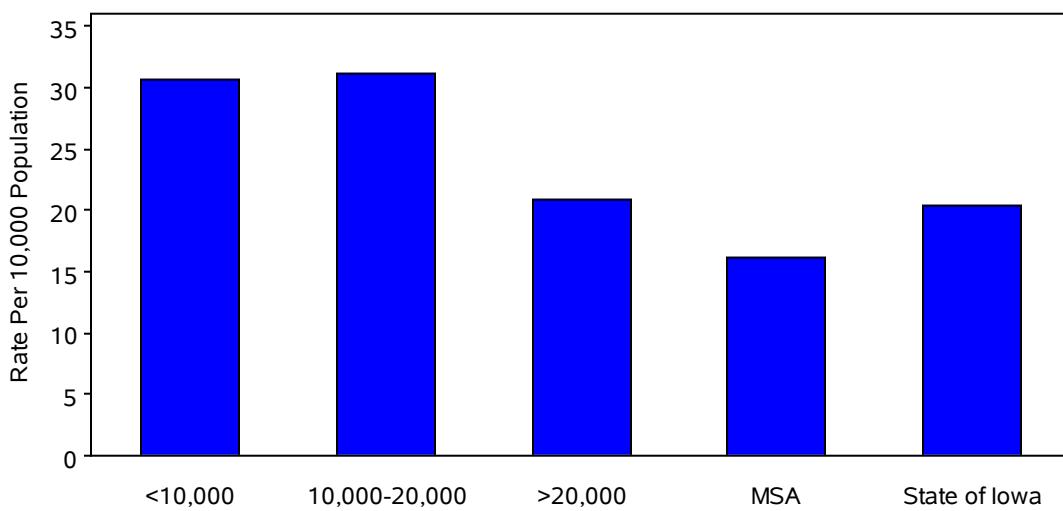
0–17

17.1–23.8

23.9–36.8

36.9–59.7

2013 Crude Rates by County Group

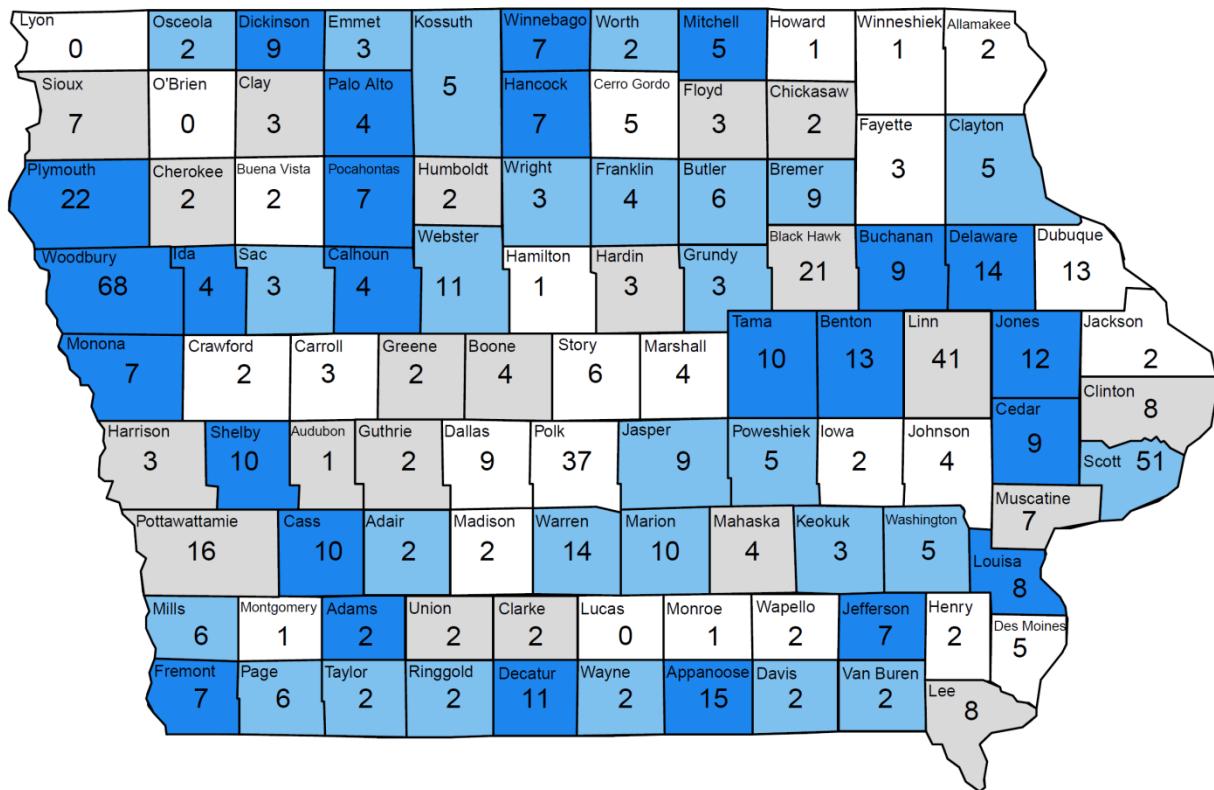


<sup>1</sup>Includes Emergency Medical Technicians and Emergency Medical Technicians – Basic

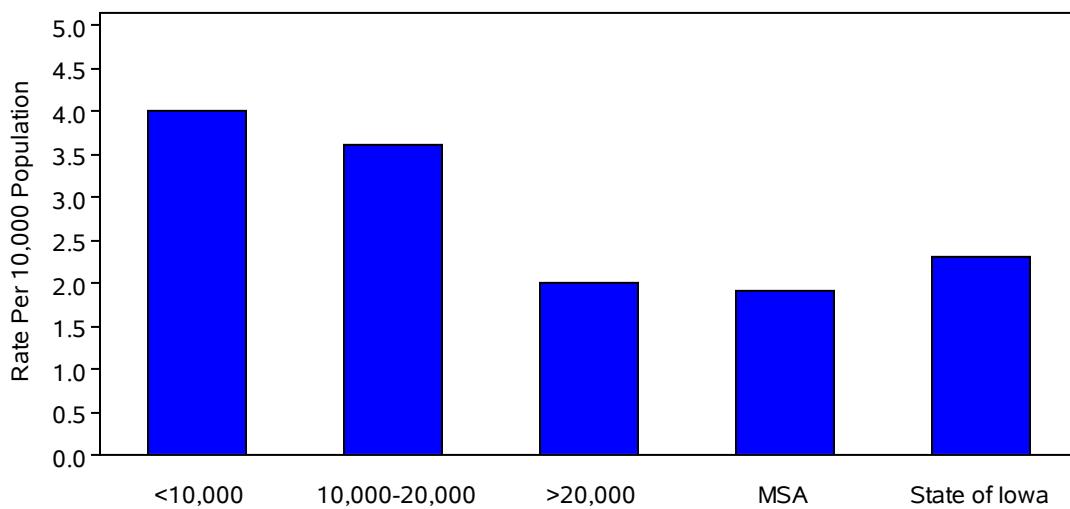
Source: Bureau of Emergency Medical Services, Iowa Department of Public Health

**EMT - Intermediate**

2013 Counts and Crude Rates per 10,000 Population (shaded)

 0-1.4 1.5-2.3 2.4-4.1 4.2-13.3

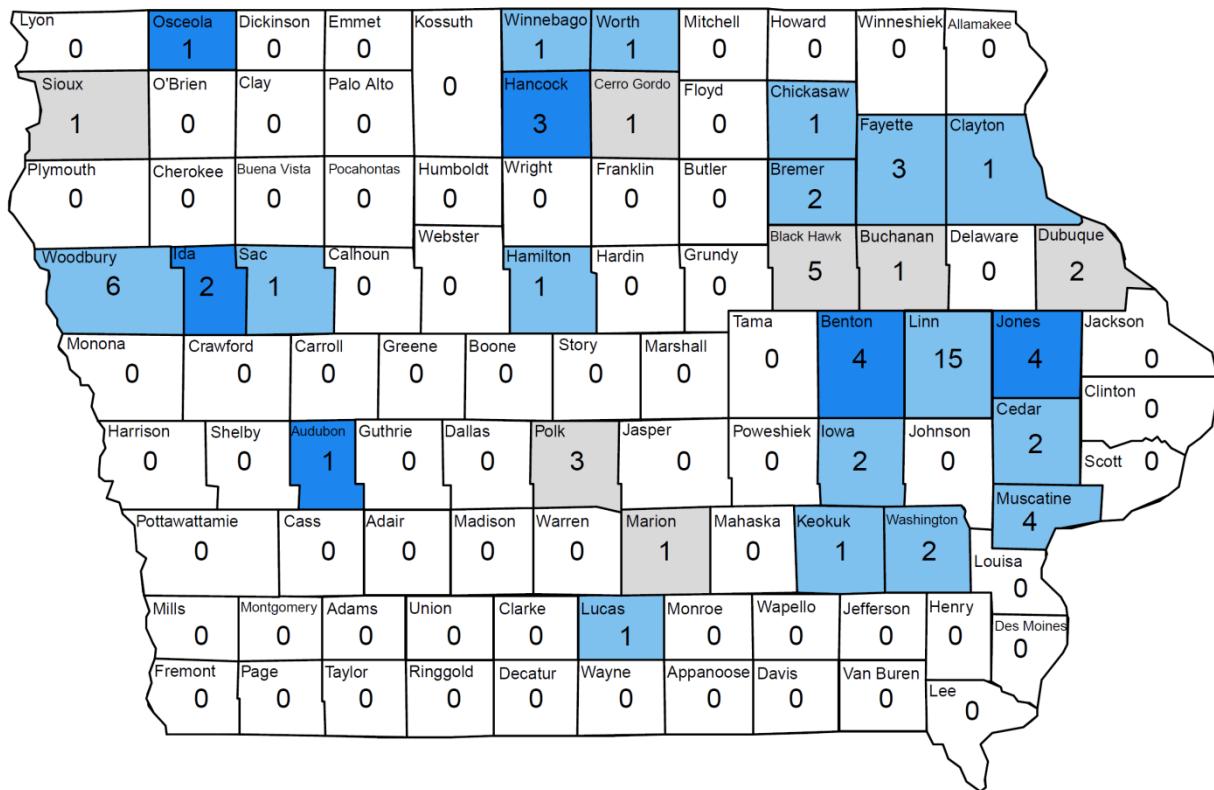
2013 Crude Rates by County Group



Source: Bureau of Emergency Medical Services, Iowa Department of Public Health

## Advanced Emergency Medical Technicians

2013 Counts and Crude Rates per 100,000 Population (shaded)



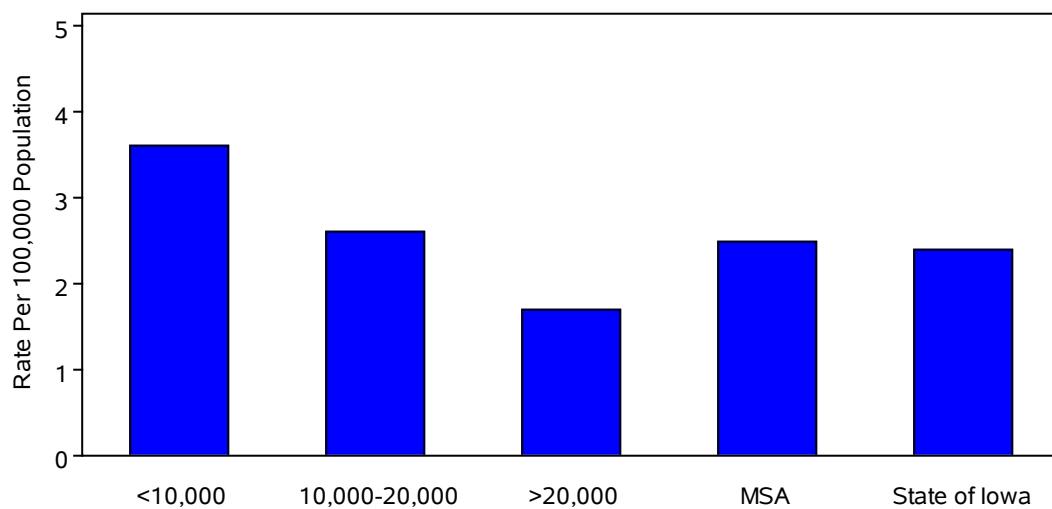
0

0.1–5

5.1–15

15.1–28.2

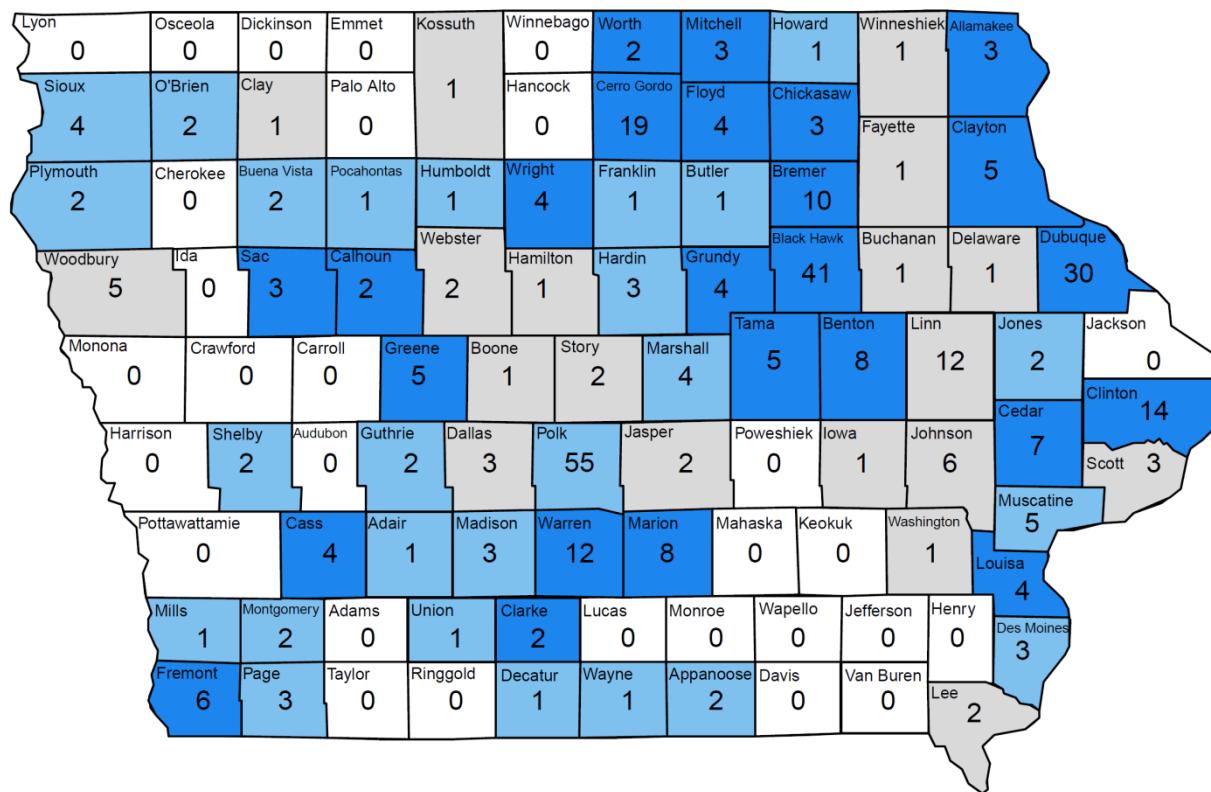
2013 Crude Rates by County Group



Source: Bureau of Emergency Medical Services, Iowa Department of Public Health

## Emergency Medical Technician – Paramedic

2013 Counts and Crude Rates per 100,000 Population (shaded)



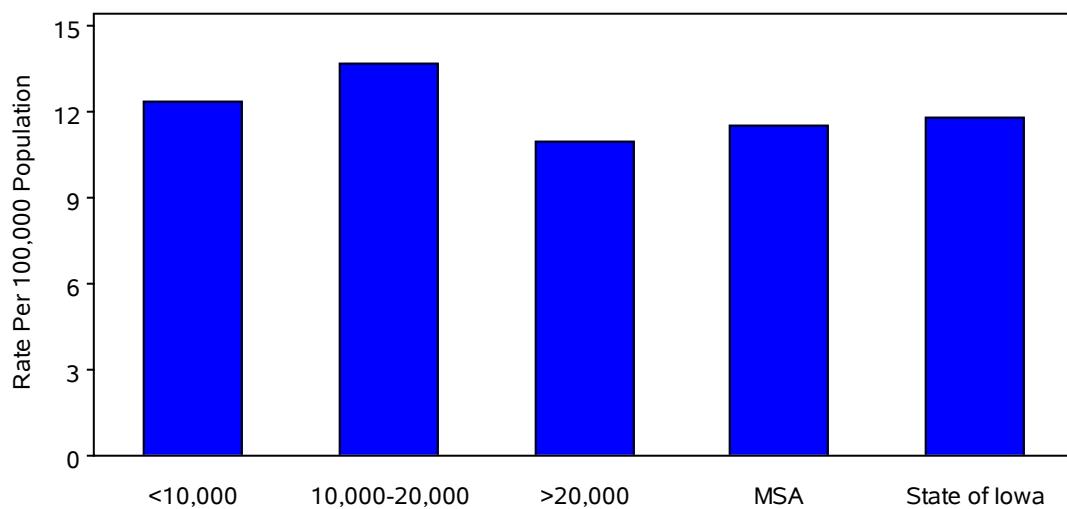
0

0.1–6.7

6.8–19.9

20–81.4

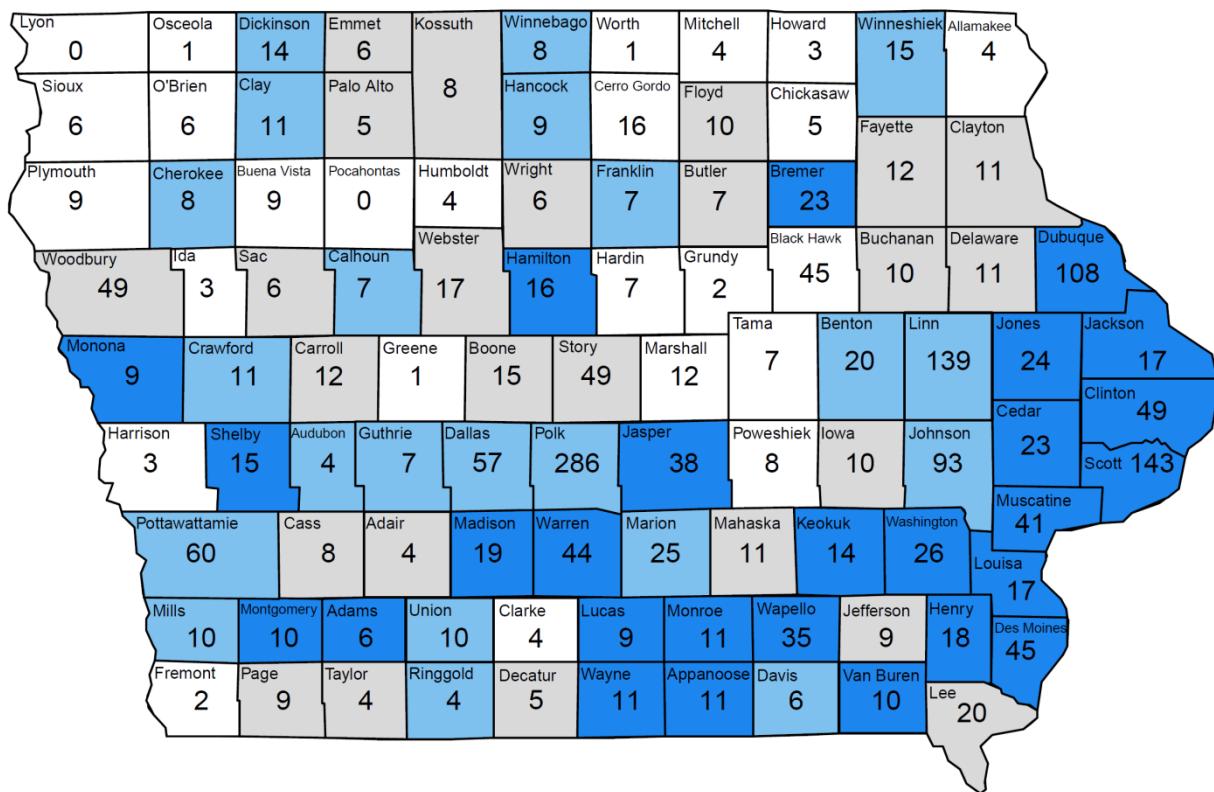
2013 Crude Rates by County Group



Source: Bureau of Emergency Medical Services, Iowa Department of Public Health

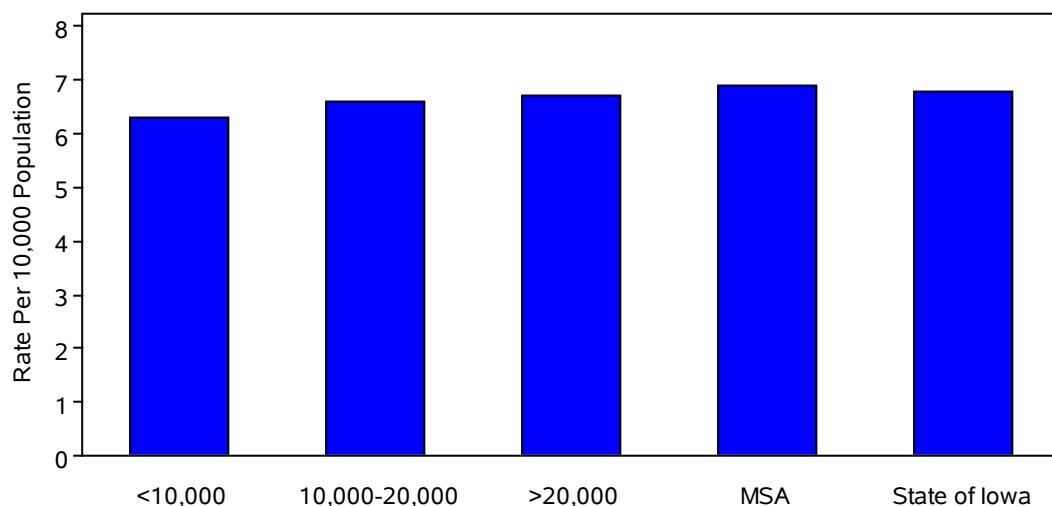
# Paramedics<sup>1</sup>

2013 Counts and Crude Rates per 10,000 Population (shaded)



□ 0-4.5      □ 4.6-6.3      □ 6.4-8.6      ■ 8.7-17.4

2013 Crude Rates by County Group



<sup>1</sup>Includes Paramedic and Paramedic Specialist

Source: Bureau of Emergency Medical Services, Iowa Department of Public Health



## Health Care Facilities

The information presented on health care facilities comes from the Health Facilities Division of the Iowa Department of Inspections and Appeals (DIA). The Department is responsible for inspecting all Chapter 135C licensed health care facilities in Iowa, including those presented in the 2013 Iowa Health Fact Book. Under state law, DIA is responsible for inspecting and licensing or certifying Hospitals (135B), Psychiatric Medical Institutions for Children (135H), Hospice Programs (135J), Elder Group Homes (231B), Assisted Living Programs (231C), and Adult Day Services (231D). The Department also conducts inspections of numerous Medicare and Medicaid-certified entities (skilled nursing facilities, home health agencies, hospitals, hospices, end-stage renal disease units, ambulatory surgical centers, etc.) under a contract with the federal Centers for Medicare & Medicaid Services (CMS), and investigates complaints of substandard care or services in these entities. Additional information about licensed or certified health care providers and suppliers may be accessed through the Health Facilities Division's web site [https://dia-hfd.iowa.gov/DIA\\_HFD/Home.do](https://dia-hfd.iowa.gov/DIA_HFD/Home.do).

There are only two Intermediate Care Facilities for Persons with Mental Illness in Iowa (a 25-bed facility in Davis County and a 57-bed facility in Lee County), so statewide data for this type of entity are not presented.

### FACILITY TYPES REGULATED BY THE STATE OF IOWA DIVISION OF HEALTH FACILITIES...

- Ambulatory Surgical Centers
- Chronic Confusion or Dementing Illness Units
- Community Mental Health Centers
- Comprehensive Out-Patient Rehabilitation Facilities
- Critical Access Hospitals
- End-Stage Renal Disease Units
- Home Health Agencies
- Hospices
- Hospital Based (Distinct-Part) Nursing Facility Units
- Hospital Based (Distinct-Part) Skilled Nursing Facility Units
- Hospital Based (Distinct-Part) Skilled Nursing Facility/Nursing Facility Units
- Hospital Based Intermediate Care Facilities for the Intellectually Disabled
- Hospitals
- Hospitals with Psychiatric Units excluded under the Medicare Prospective Payment System
- Hospitals with Swing-Beds
- Intermediate Care Facilities for Persons with Mental Illness
- Intermediate Care Facilities for the Intellectually Disabled
- Laboratories Covered under the (Federal) Clinical Laboratories Improvement Amendments 1988 (CLIA '88)
- Nursing Facilities
- Organ Procurement Organizations
- Portable X-Ray Service Suppliers
- Psychiatric Medical Institutions for Children
- Rehabilitation Agencies with Out-Patient Physical Therapy/Out-Patient Speech Pathology/Out-Patient Occupational Therapy Providers
- Residential Care Facilities
- Residential Care Facilities for Persons with Mental Illness
- Residential Care Facilities for the Intellectually Disabled
- Rural Health Clinics
- Skilled Nursing Facilities
- Specialized 3-5 Bed Facilities

## Community and Migrant Health Centers

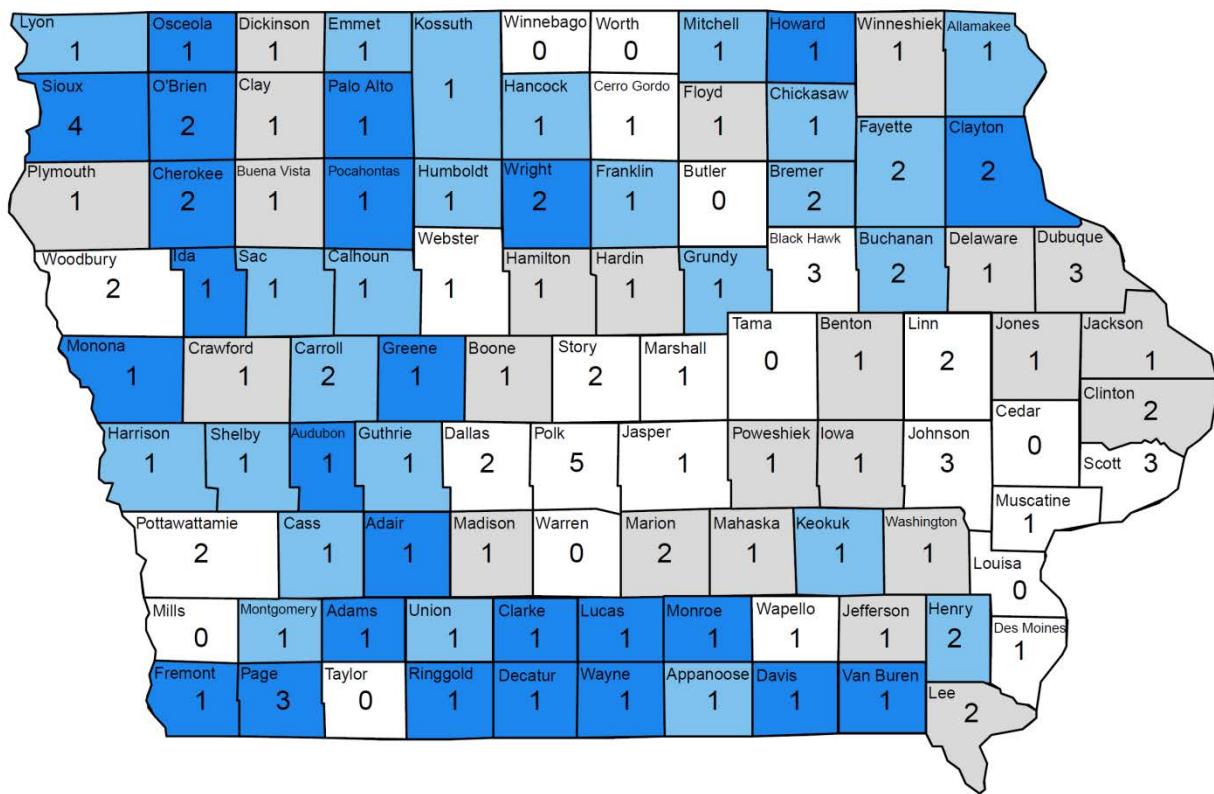
Community and migrant health centers provide affordable, accessible, and acceptable primary health care to Iowans. These centers primarily serve indigent, medically-underserved, and under-insured populations and assist special populations through grants and programs. Community and migrant health centers are the safety net providers. They provide several health services to the community, including comprehensive health services with a variety of physician specialties, general dentistry and community health programs involving oral health education and dental screening, prenatal care, family planning, health screenings, immunizations, case management, and pharmacies. Centers may be affiliated with a regional health system that can provide access to substantial support systems. Community Health Centers (CHCs) are funded by Section 330 funds of the Public Health Service Act. Iowa has 12 such centers with a broad network of satellite centers. Under a state incubator program, another center services patients. CHCs are required to provide primary health services, dental services, mental health services, prevention, education, and case management. Patients cannot be turned away on the basis of ability to pay. A sliding fee scale based on income is mandated. The C/MHC model is a non-profit corporation whose board members must be members of the community and at least one percent of the board must be patients of the health center. Further information on Community Health Centers can be obtained from the Iowa/Nebraska Primary Care Association (IA/NEPCA) at the web site [www.ianepca.com](http://www.ianepca.com).

## Certified Rural Health Clinics

A rural health clinic is a clinic located in a rural area designated as a shortage area for personal health service and/or primary medical care manpower. In 2013, there were 145 certified rural health clinics in small communities (Iowa Department of Inspections and Appeals), located in 57 of our 99 counties. Such a clinic is neither a rehabilitation agency nor a facility primarily for the care and treatment of mental diseases. Patient services are furnished by a physician's assistant or nurse practitioner at least 50 percent of the time the clinic operates. The definition of such is found in Title 42 in the Code of Federal Regulations. Rural Health Clinics receive enhanced reimbursement for Medicare.

# Hospitals

2013 Counts and Crude Rates per 100,000 Population (shaded)



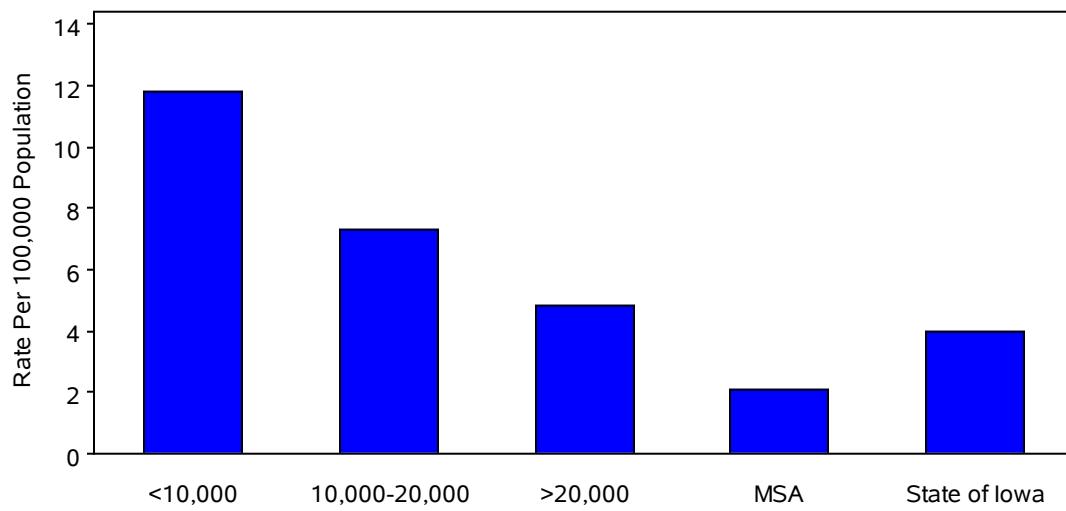
0-3

3.1-6.5

6.6-10.4

10.5-25

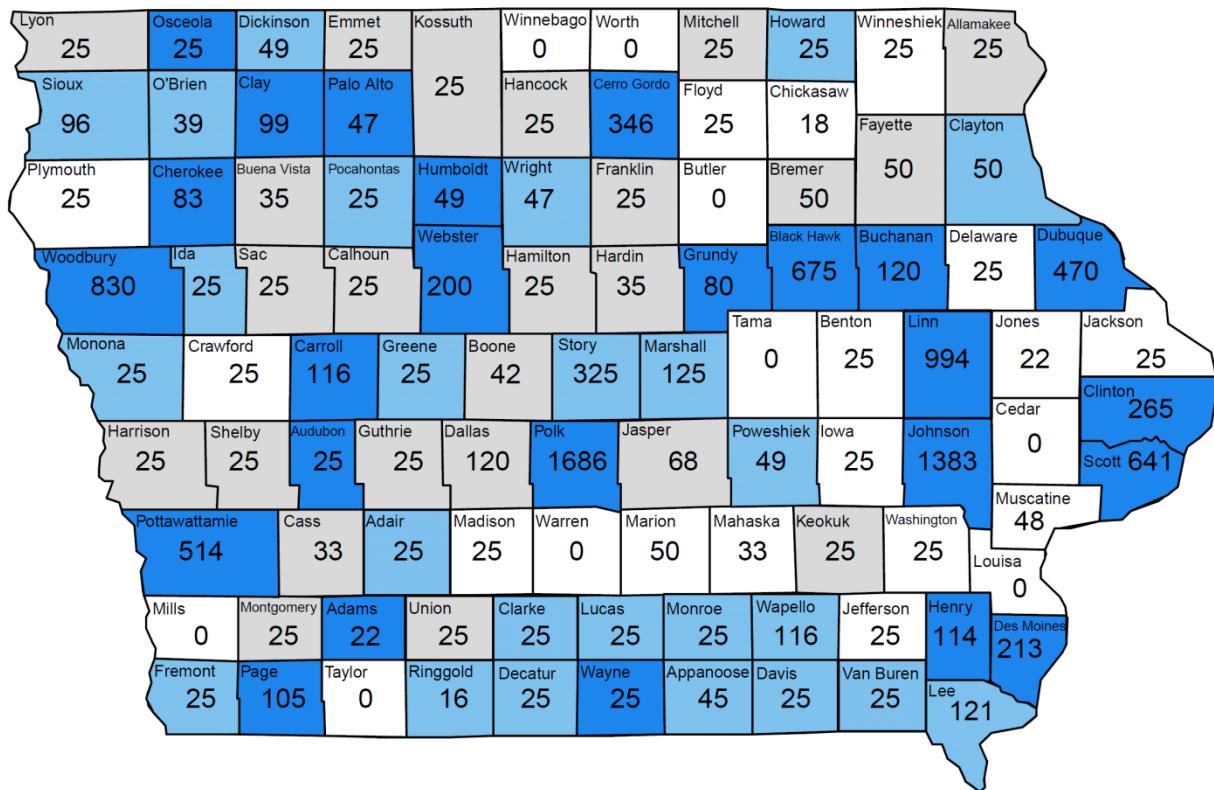
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

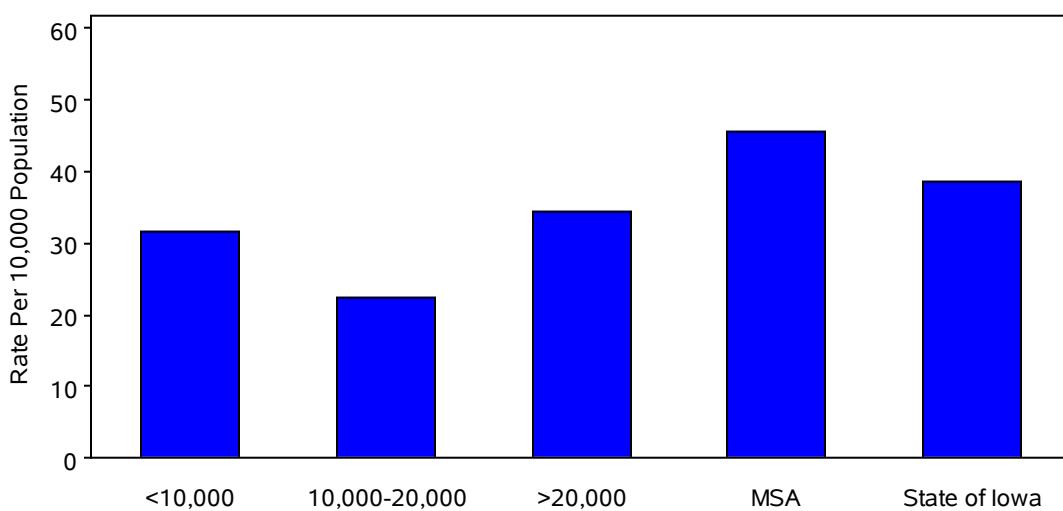
# Hospital Beds

2013 Counts and Crude Rates per 10,000 Population (shaded)



□ 0-15.9      □ 16-26.1      □ 26.2-37.3      □ 37.4-104

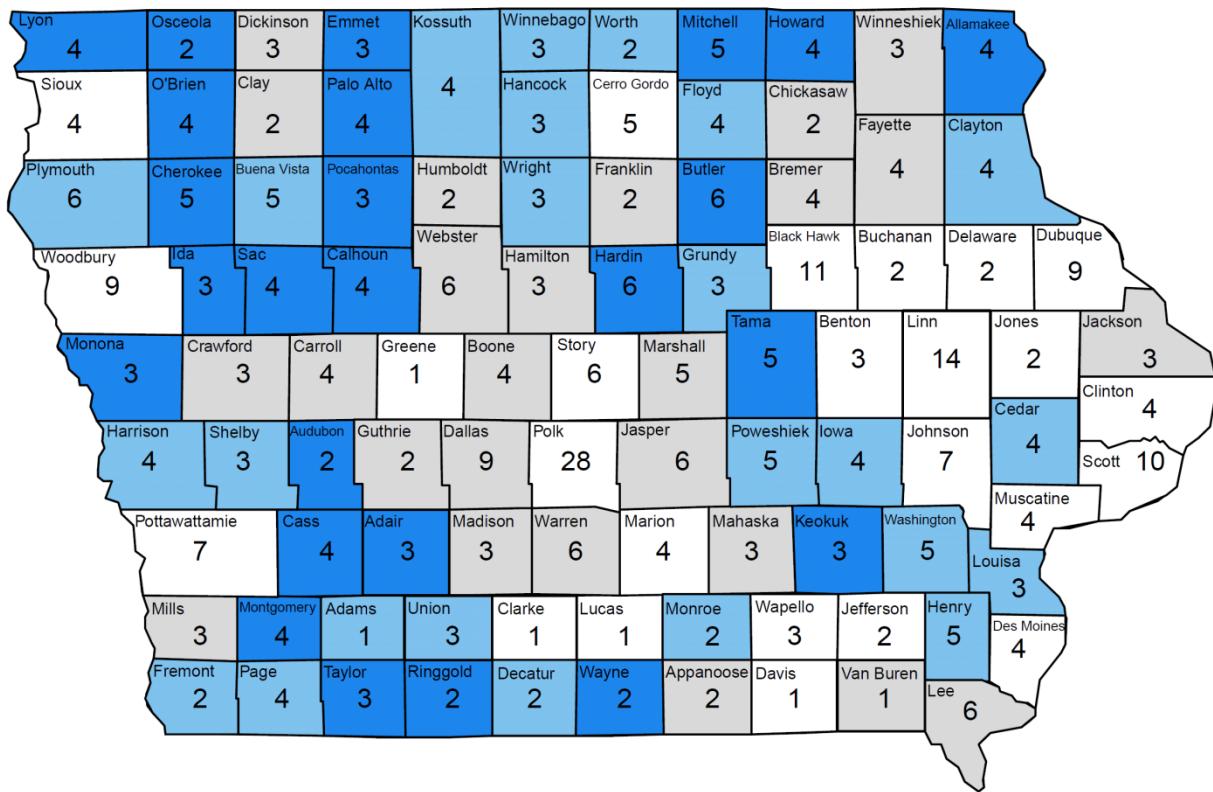
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Nursing Facilities

2013 Counts and Crude Rates per 100,000 Population (shaded)



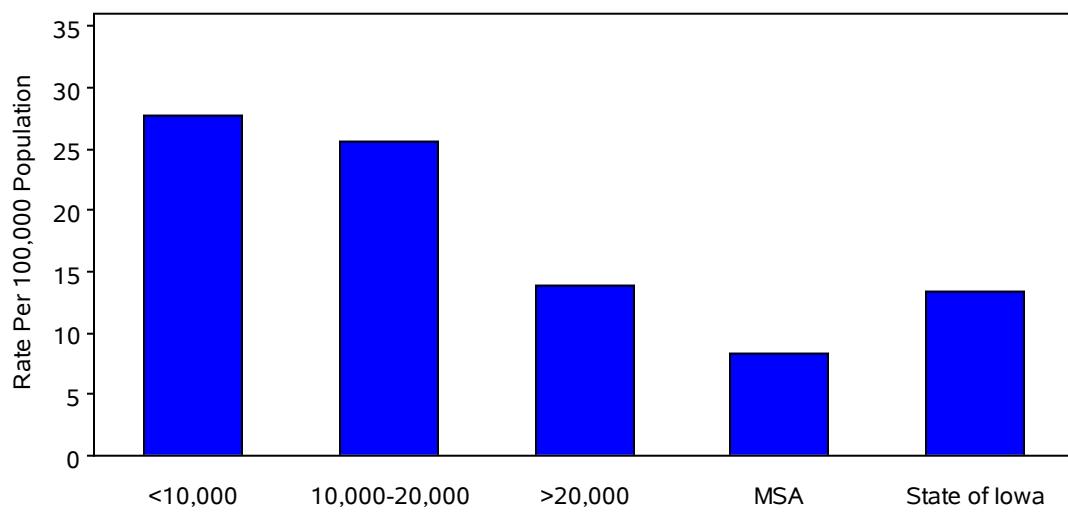
0-12

12.1-20.4

20.5-27.9

28-47.6

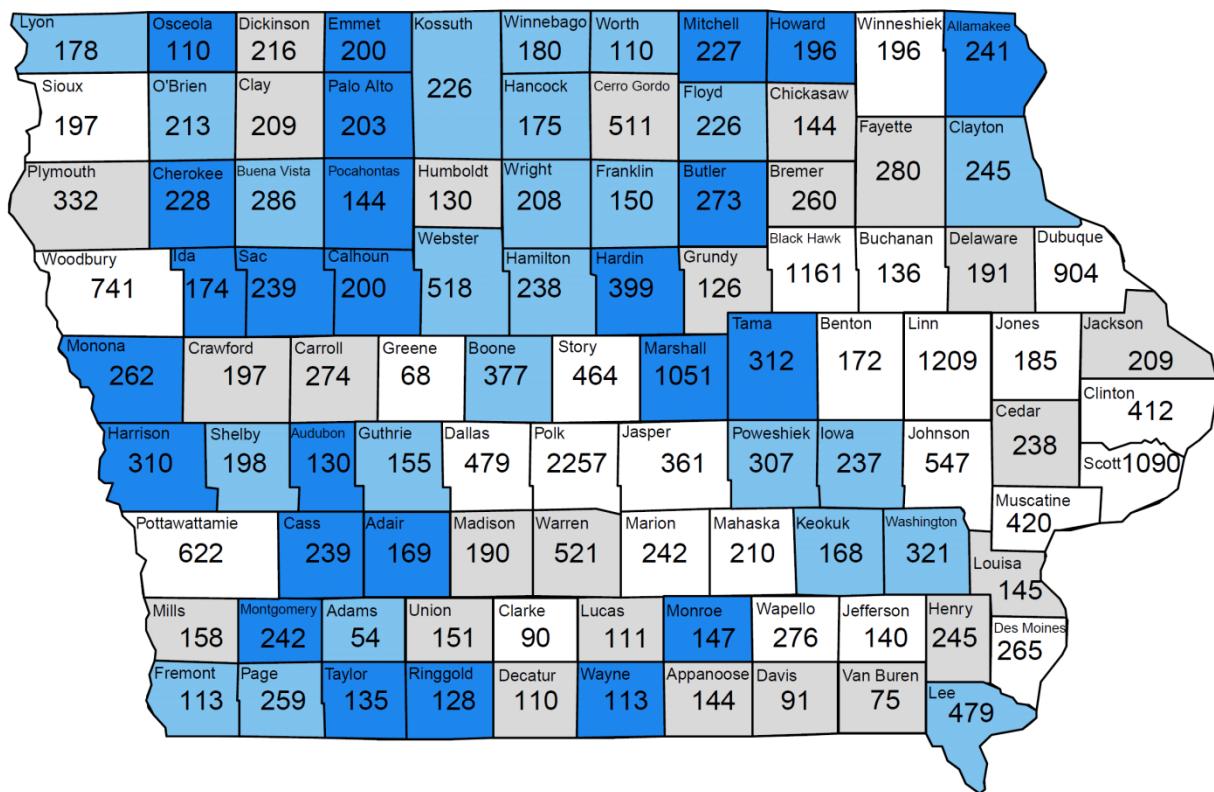
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

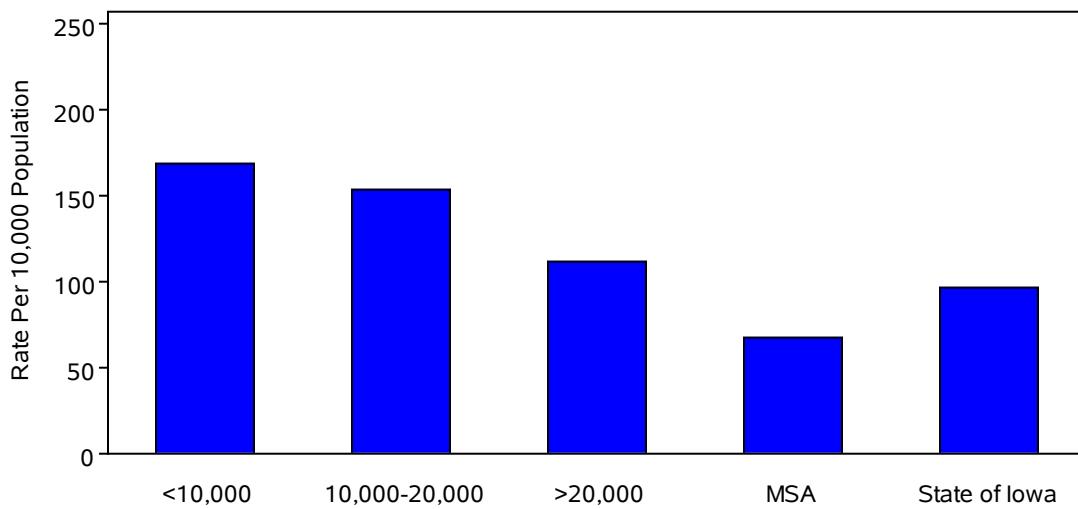
# Nursing Facility Beds

2013 Counts and Crude Rates per 10,000 Population (shaded)



□ 0-99.3      □ 99.4-133.5      □ 133.6-167.8      □ 167.9-283.6

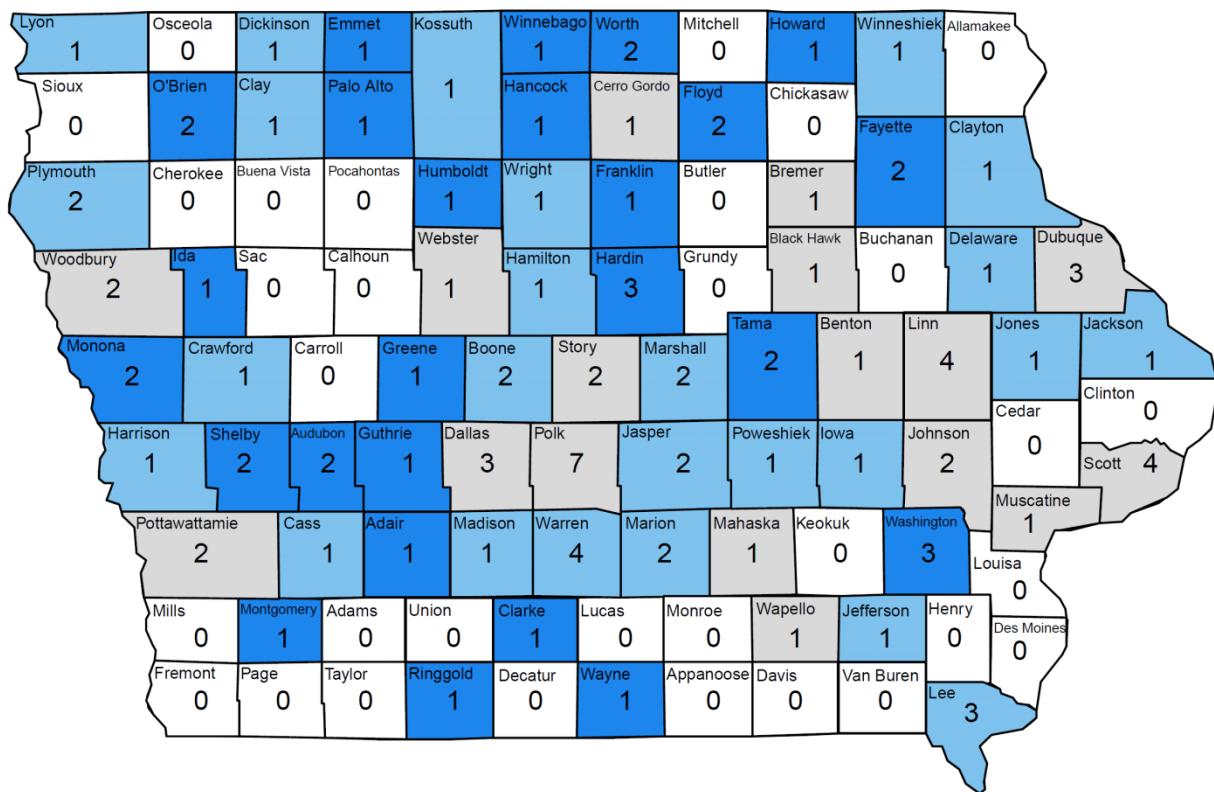
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Chronic Confusion or Dementing Illness Units

2013 Counts and Crude Rates per 100,000 Population (shaded)



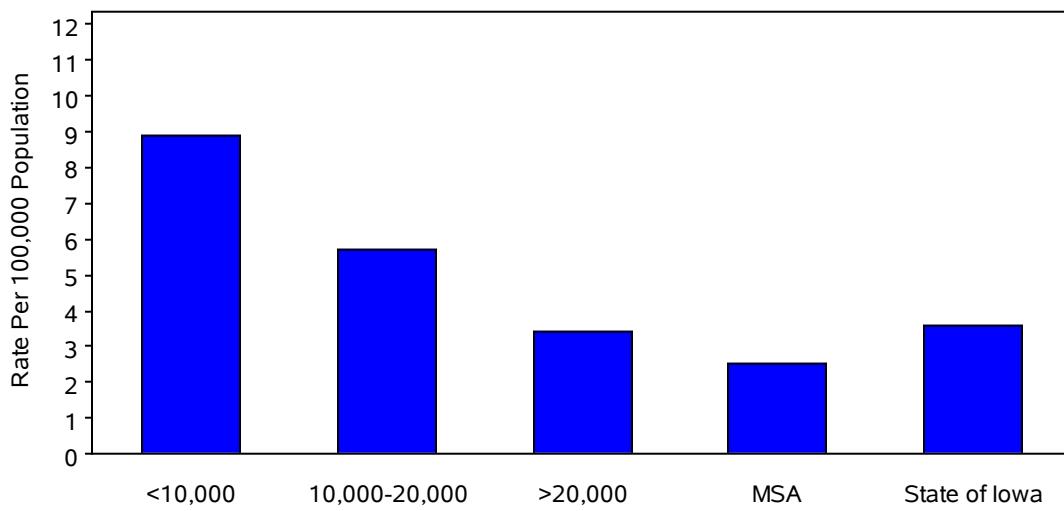
□ 0

□ 0.1-4.8

□ 4.9-8.7

□ 8.8-33.1

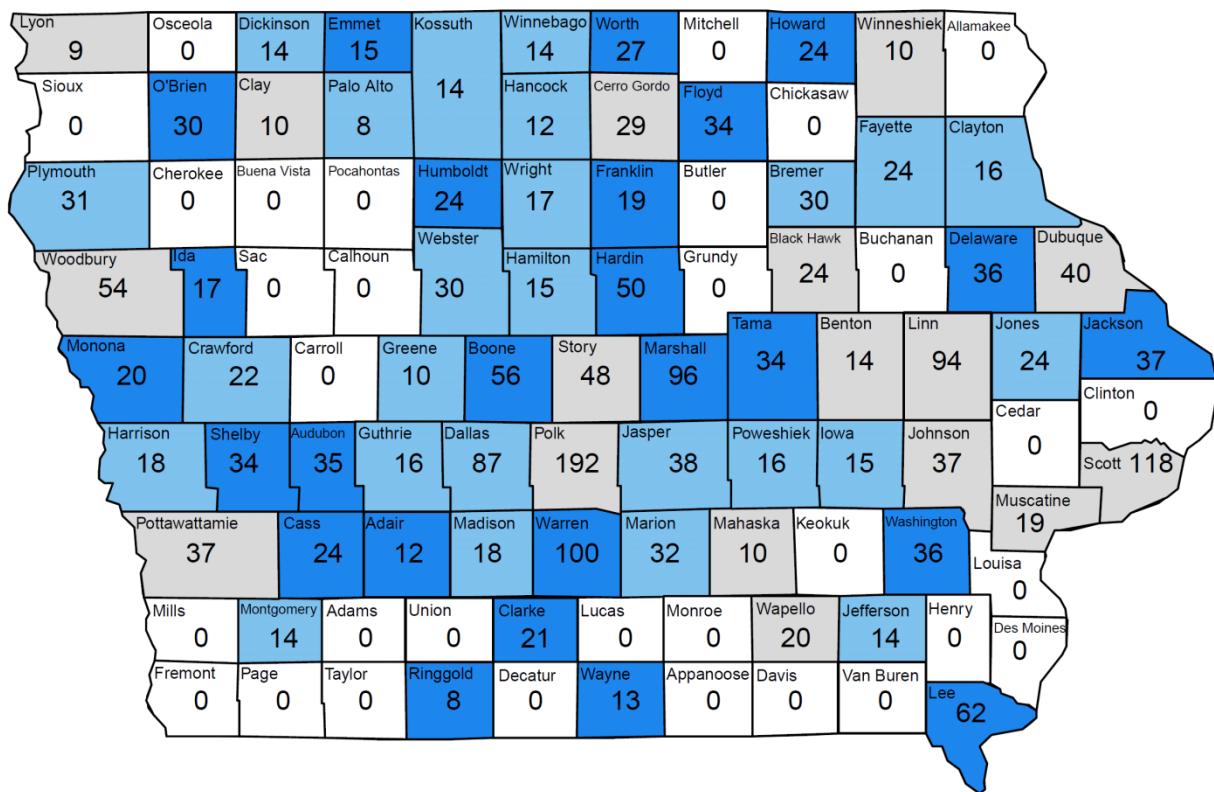
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Beds in Chronic Confusion or Dementing Illness Units

2013 Counts and Crude Rates per 10,000 Population (shaded)



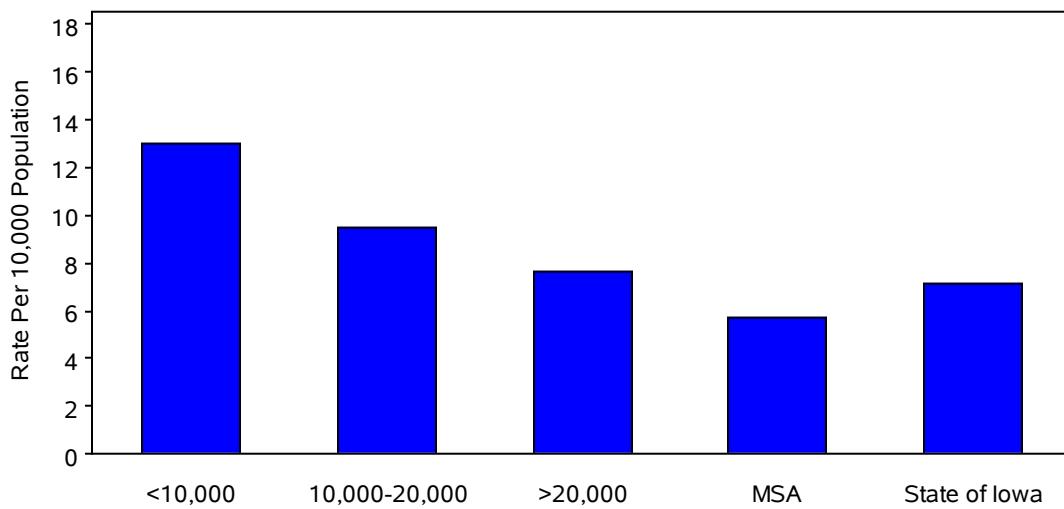
0

0.1-8

8.1-14.8

14.9-58

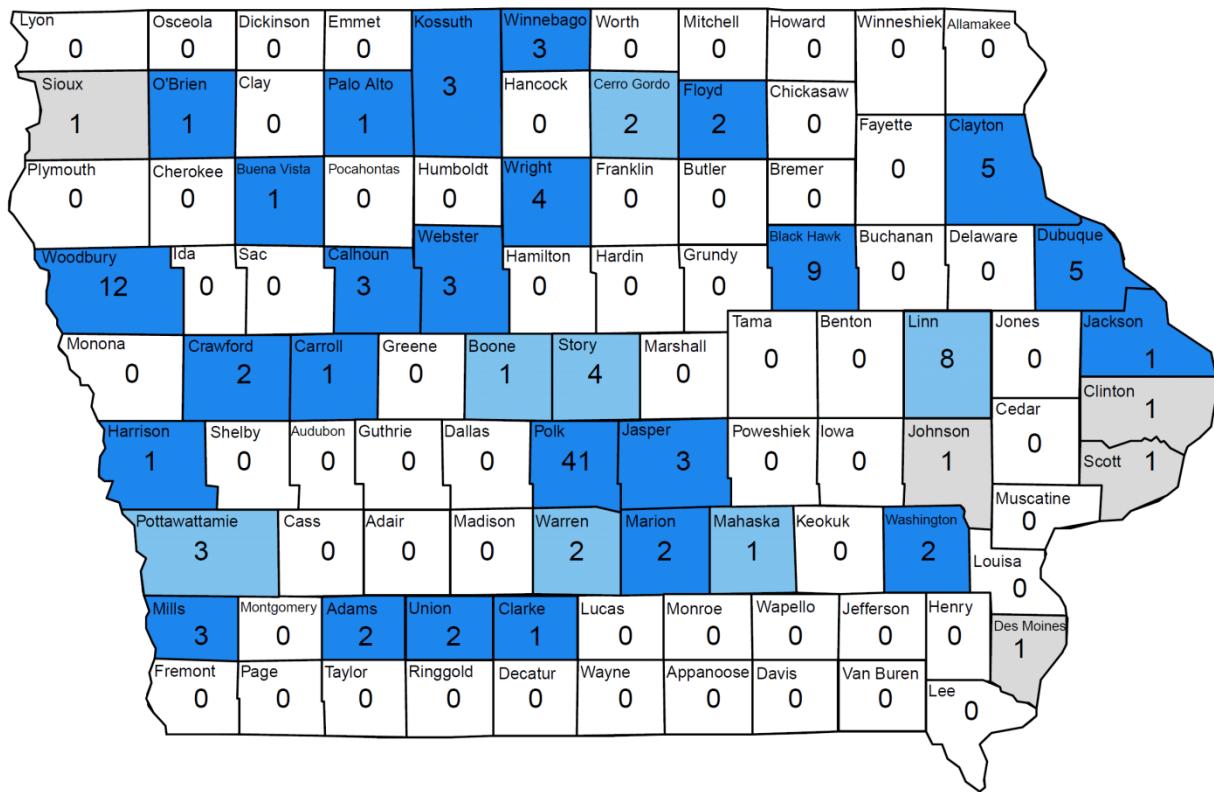
2013 Crude Rates by County Group



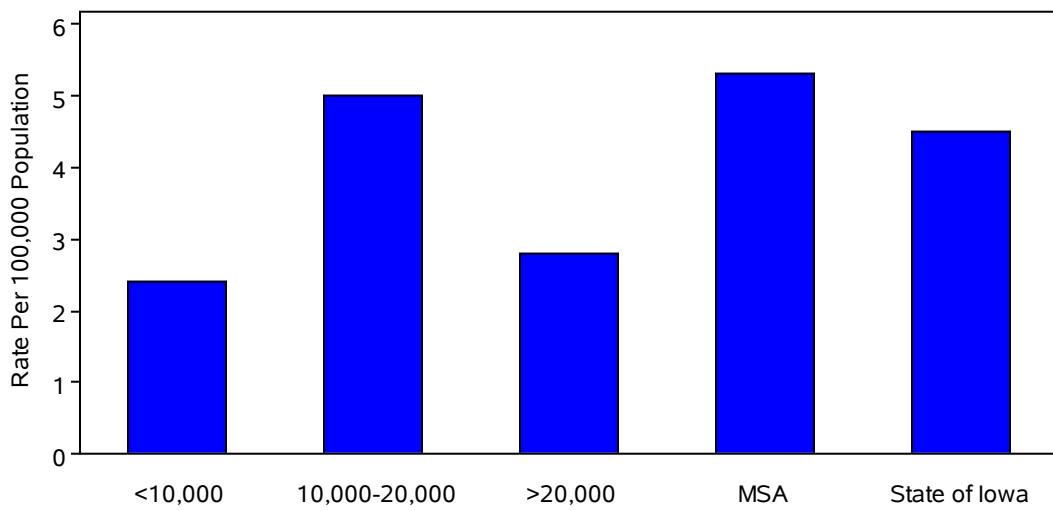
Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Intermediate Care Facilities for the Intellectually Disabled

2013 Counts and Crude Rates per 100,000 Population (shaded)

 0 0.1-3 3.1-4.7 4.8-50

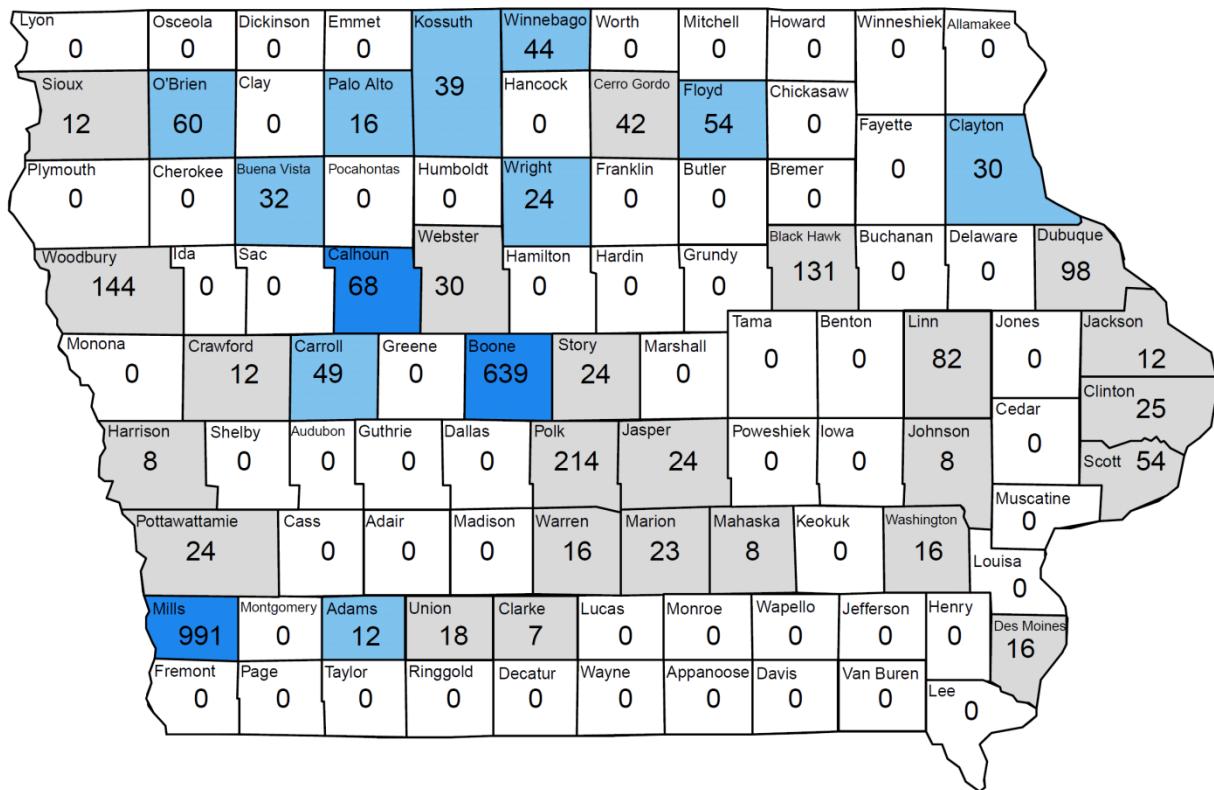
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

## Intermediate Care Beds for the Intellectually Disabled

2013 Counts and Crude Rates per 10,000 Population (shaded)



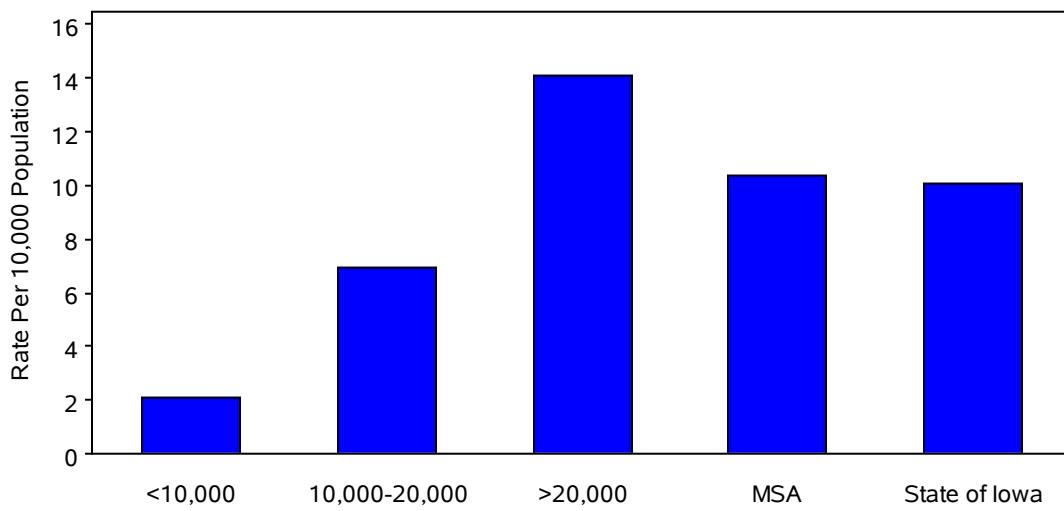
0

0.1-15

15.1-50

50.1-661

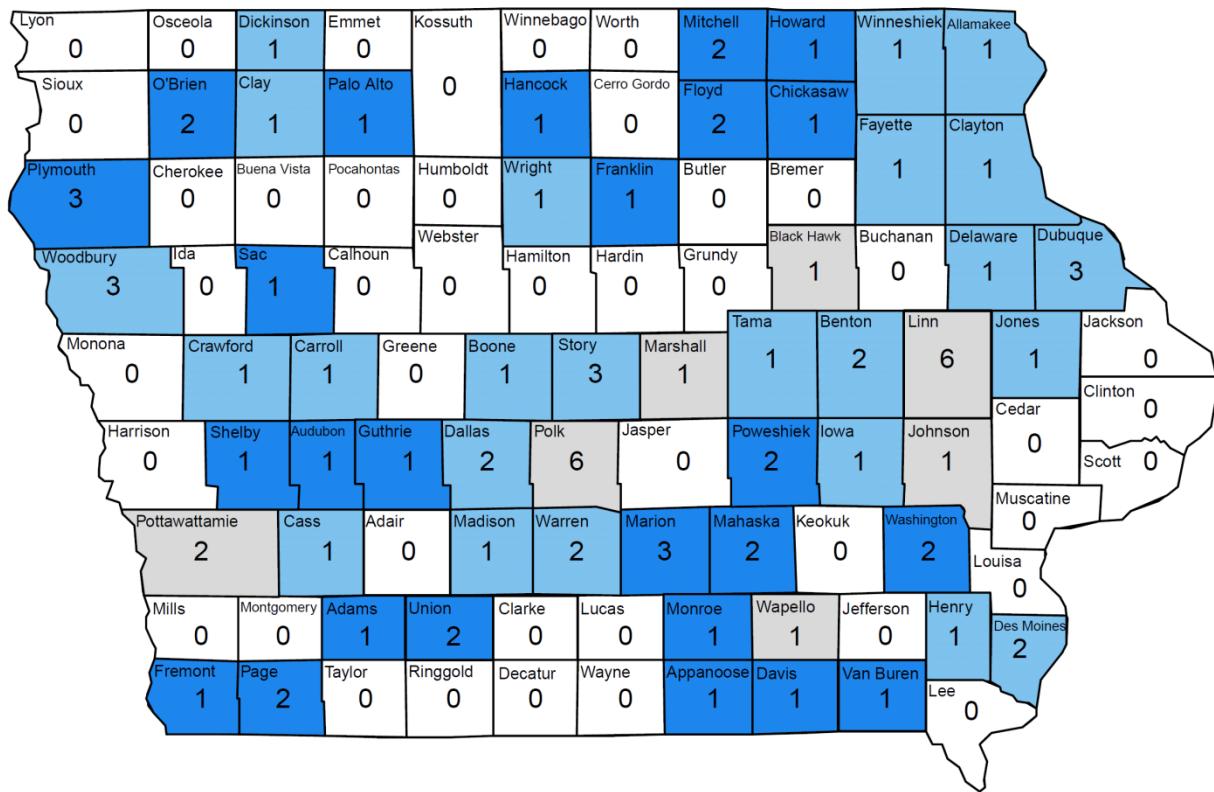
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Residential Care Facilities

2013 Counts and Crude Rates per 100,000 Population (shaded)



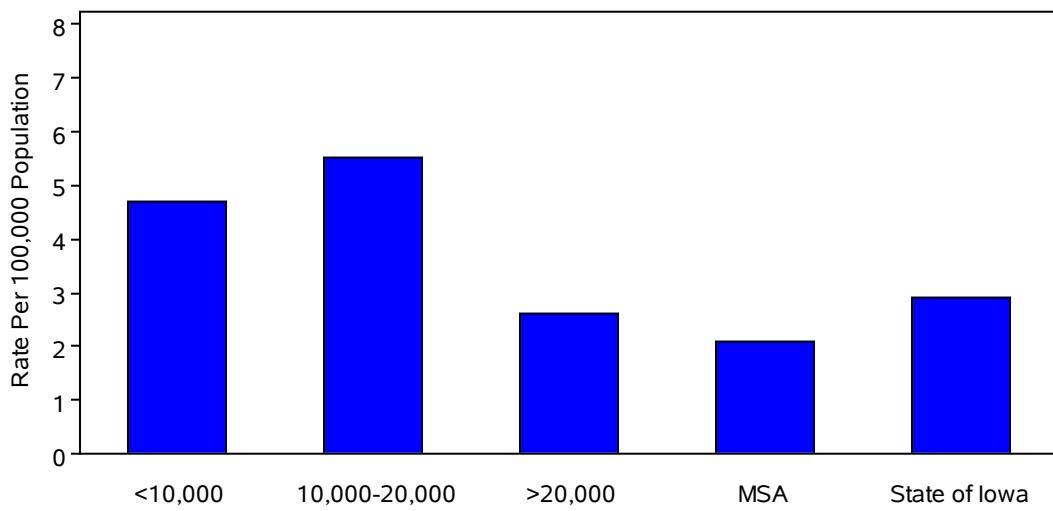
0

0.1-2.8

2.9-7.7

7.8-25

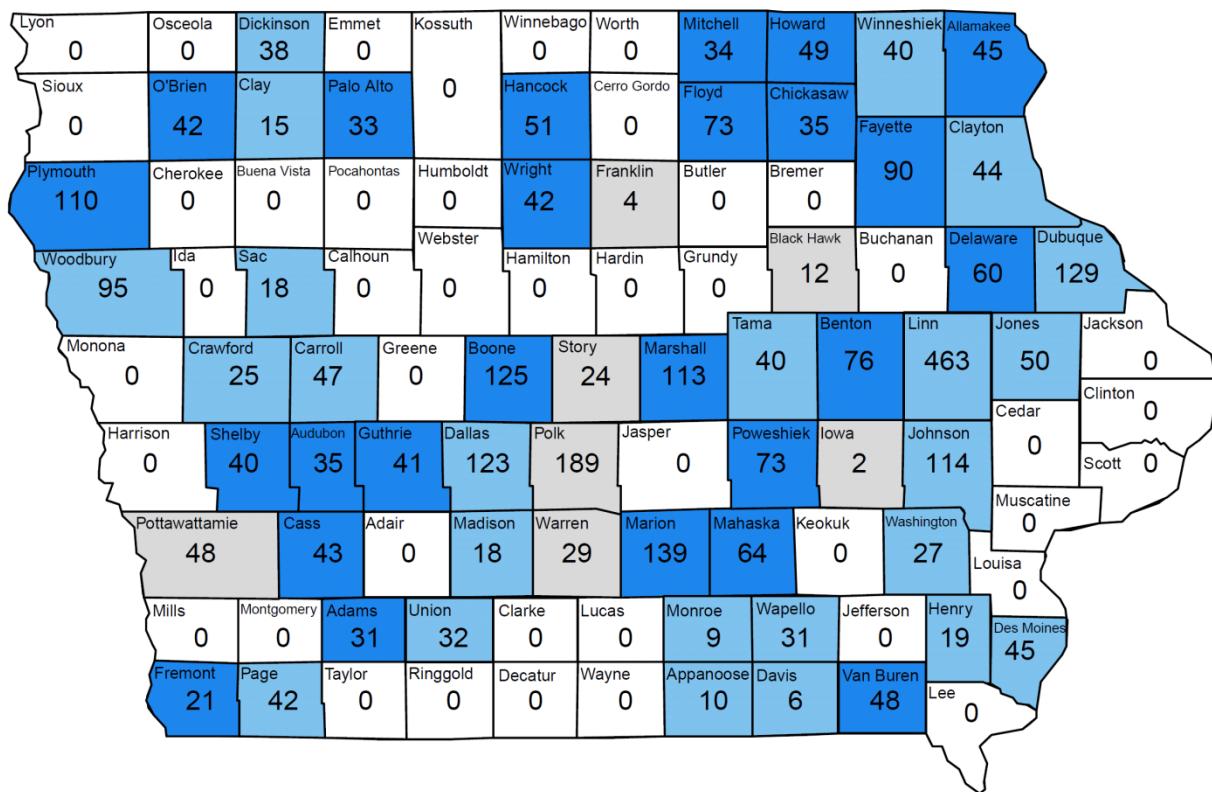
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Beds in Residential Care Facilities

2013 Counts and Crude Rates per 10,000 Population (shaded)



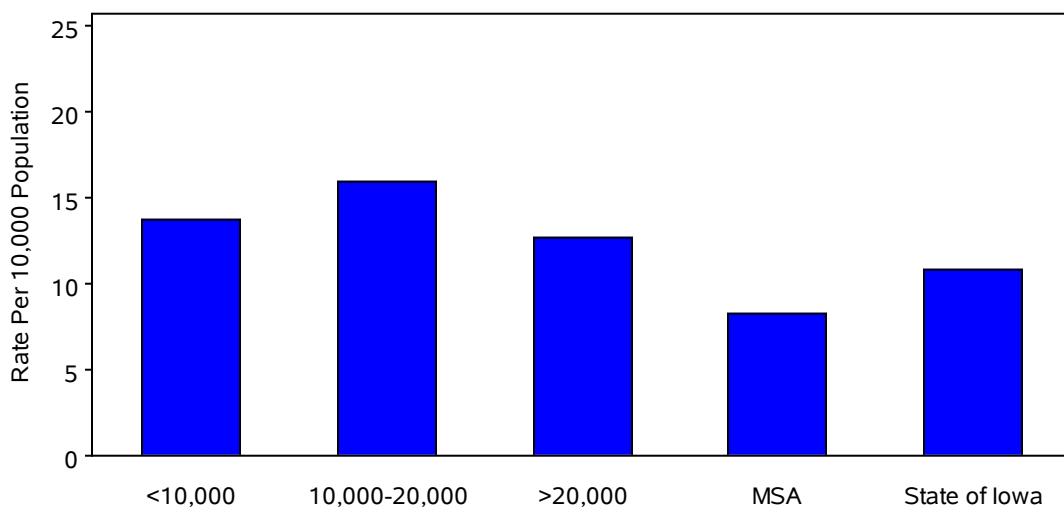
□ 0

□ 0.1–6.2

□ 6.3–26.9

□ 27–77.4

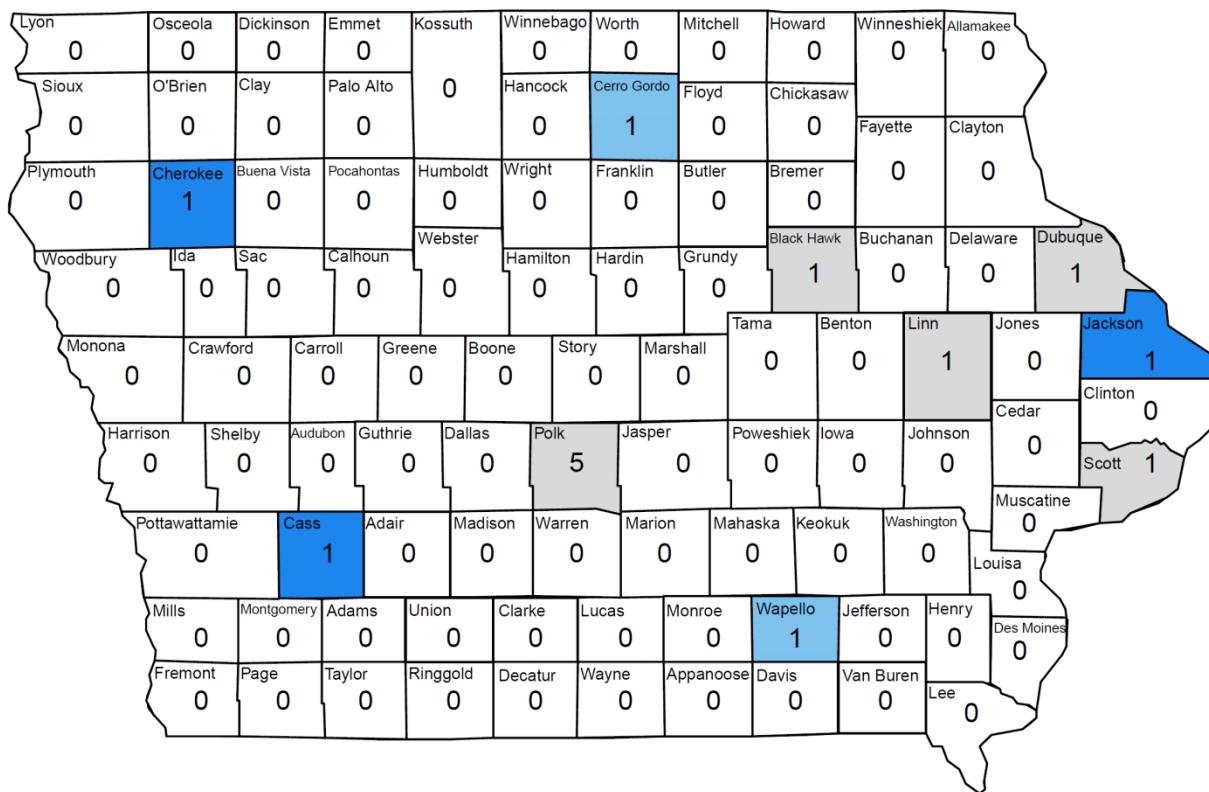
2013 Crude Rates by County Group



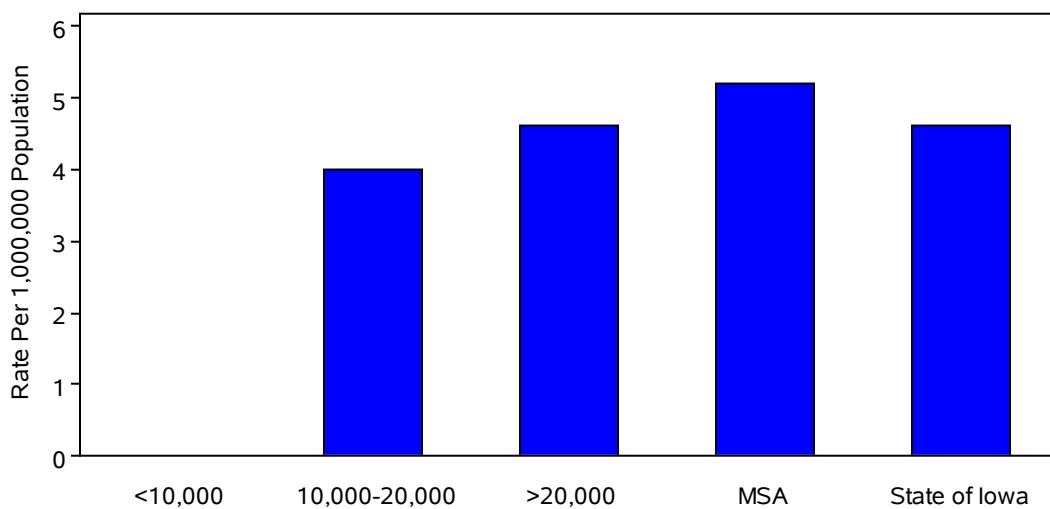
Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Residential Care Facilities for Persons with Mental Illness

2013 Counts and Crude Rates per 1,000,000 Population (shaded)

 0 0.1-15 15.1-40 40.1-82.9

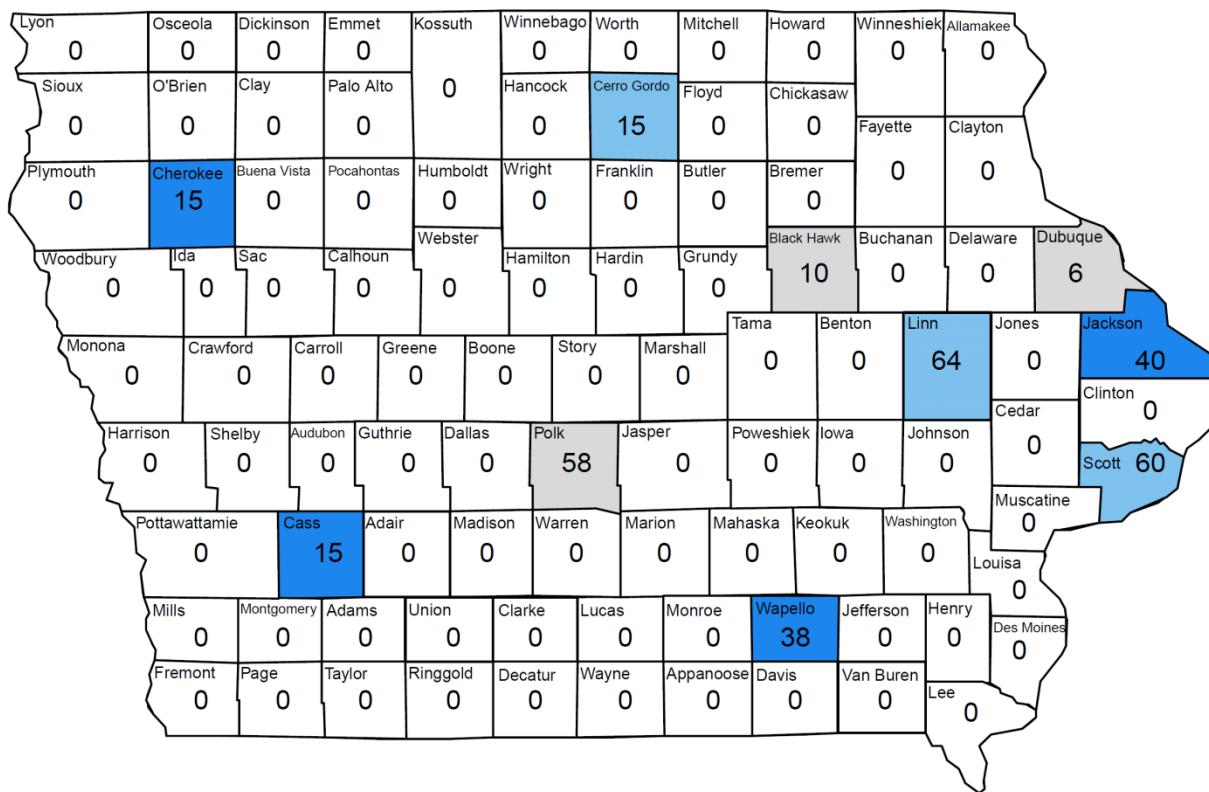
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Beds in Residential Care Facilities for Persons with Mental Illness

2013 Counts and Crude Rates per 100,000 Population (shaded)



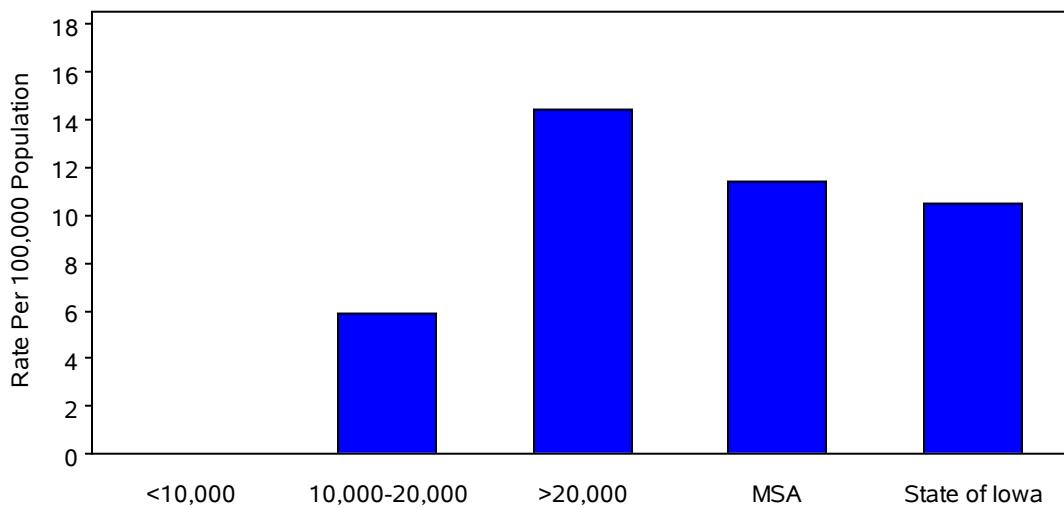
0

0.1-15

15.1-50

50.1-202.1

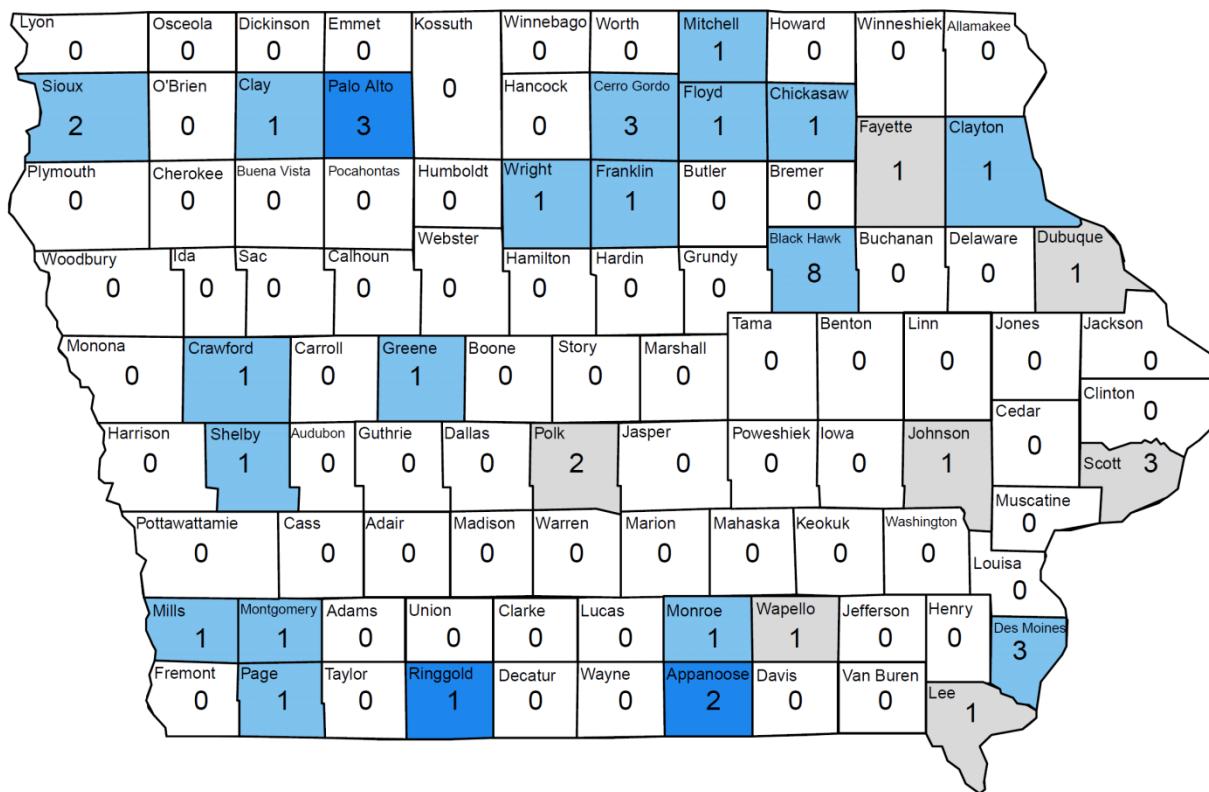
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Residential Care Facilities for the Intellectually Disabled

2013 Counts and Crude Rates per 100,000 Population (shaded)



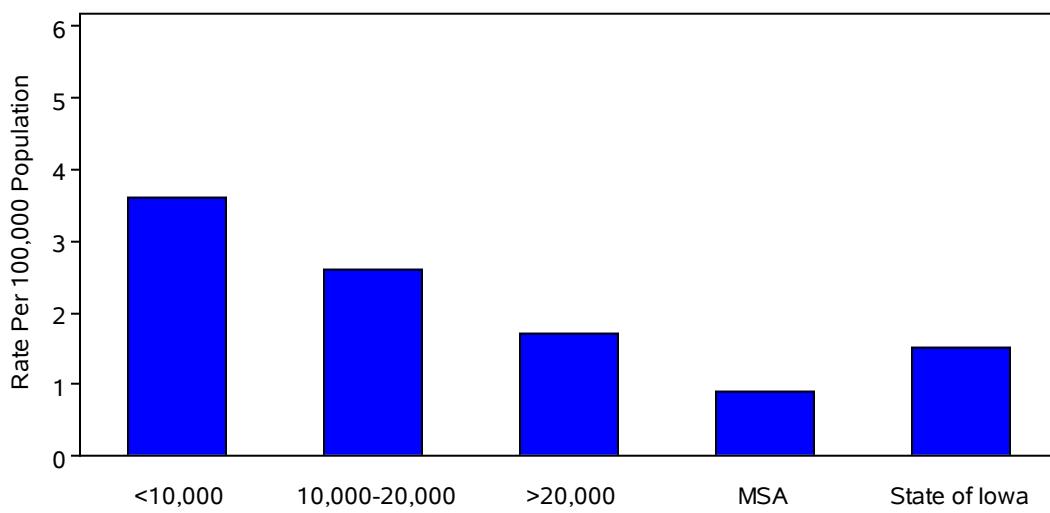
□ 0

□ 0.1-5

□ 5.1-15

□ 15.1-31.9

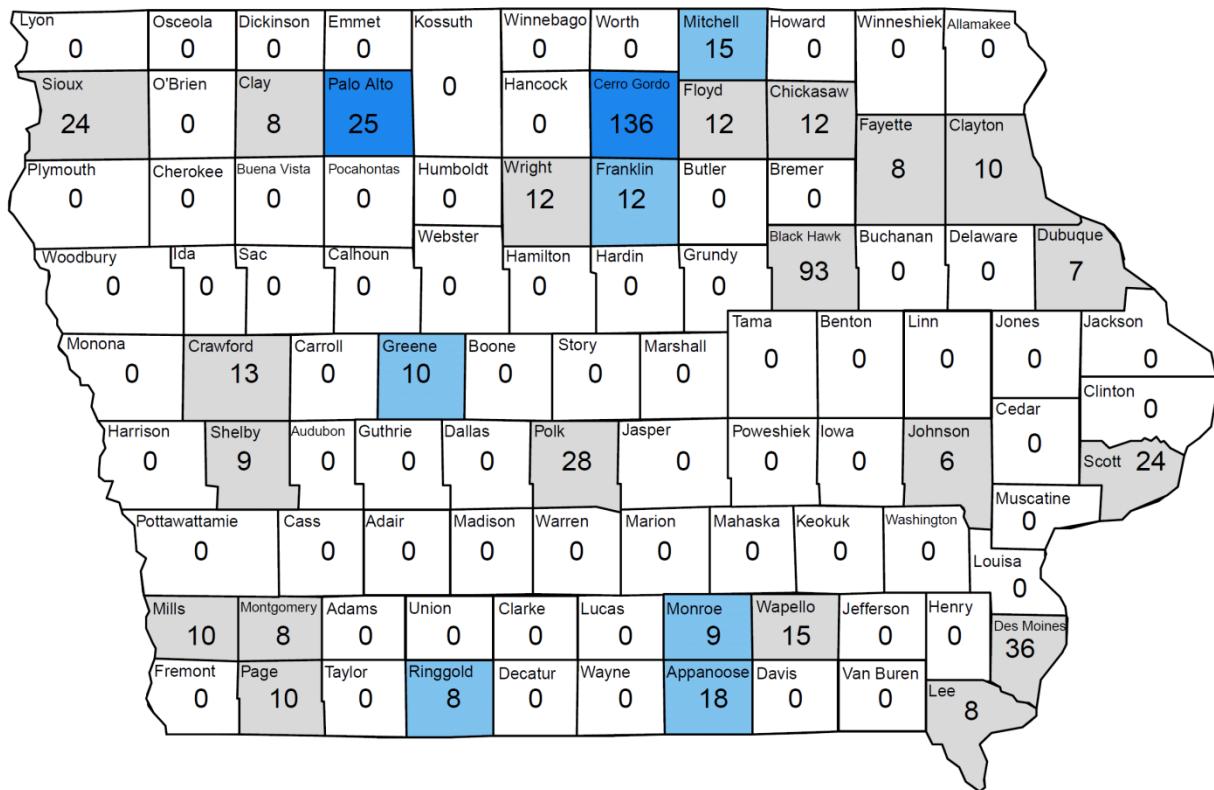
2013 Crude Rates by County Group



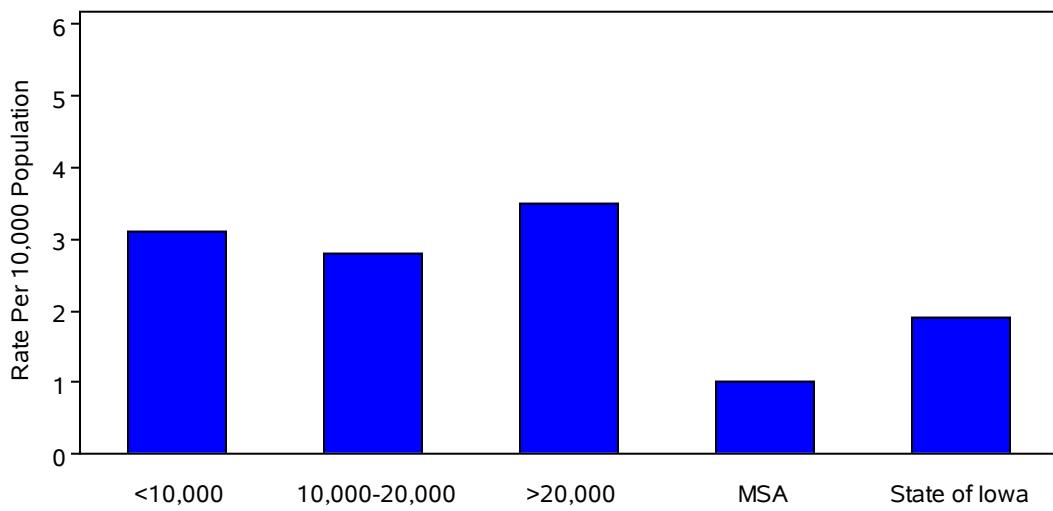
Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Beds in Residential Care Facilities for the Intellectually Disabled

2013 Counts and Crude Rates per 10,000 Population (shaded)

 0 0.1-10 10.1-20 20.1-30.9

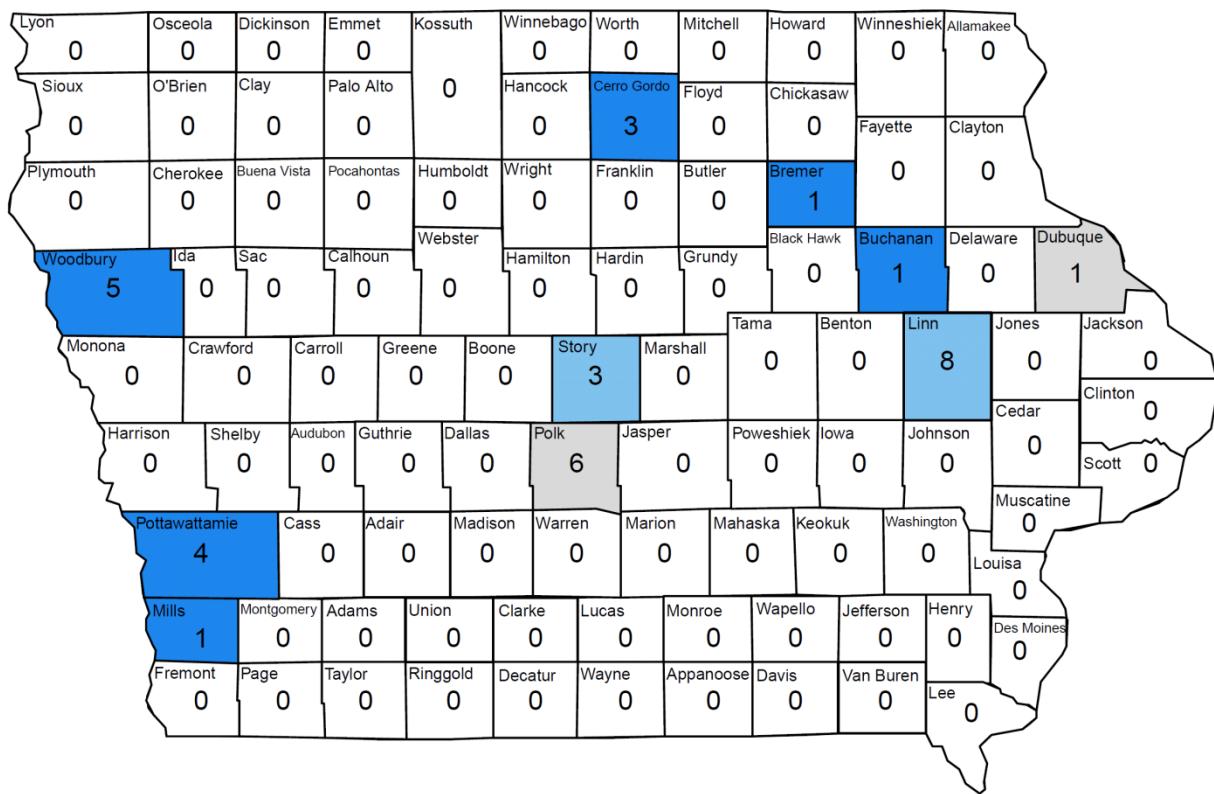
2013 Crude Rates by County Group



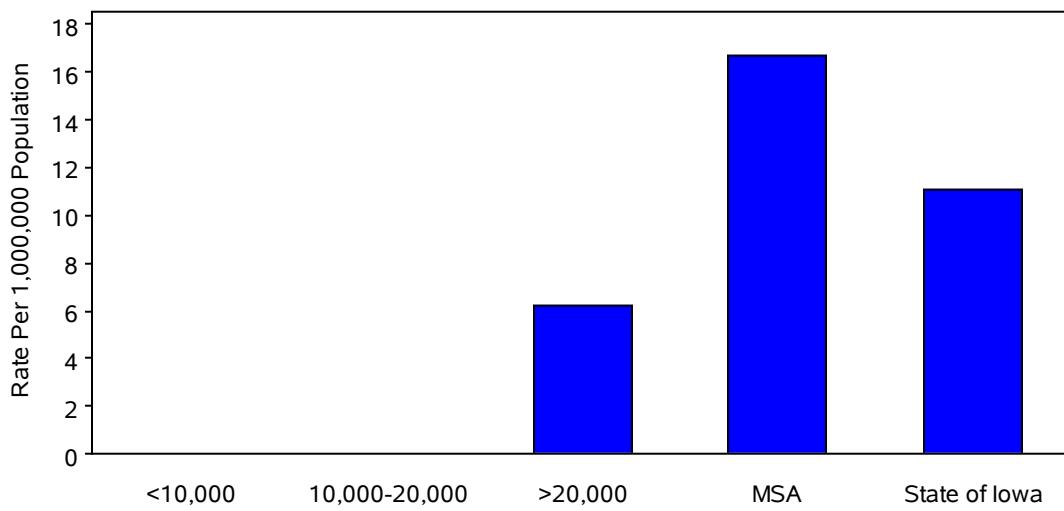
Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Psychiatric Medical Institutions for Children

2013 Counts and Crude Rates per 1,000,000 Population (shaded)

 0 0.1-15 15.1-40 40.1-68.3

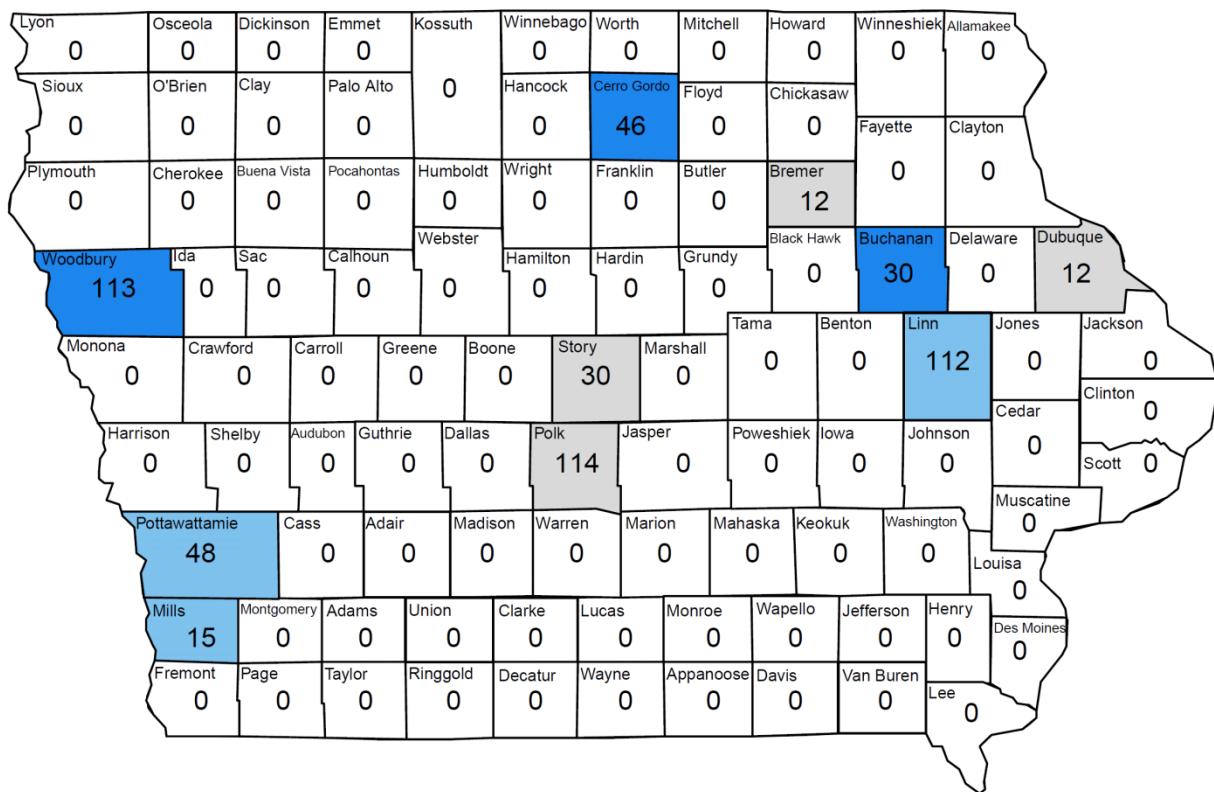
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Beds in Psychiatric Medical Institutions for Children

2013 Counts and Crude Rates per 10,000 Population (shaded)



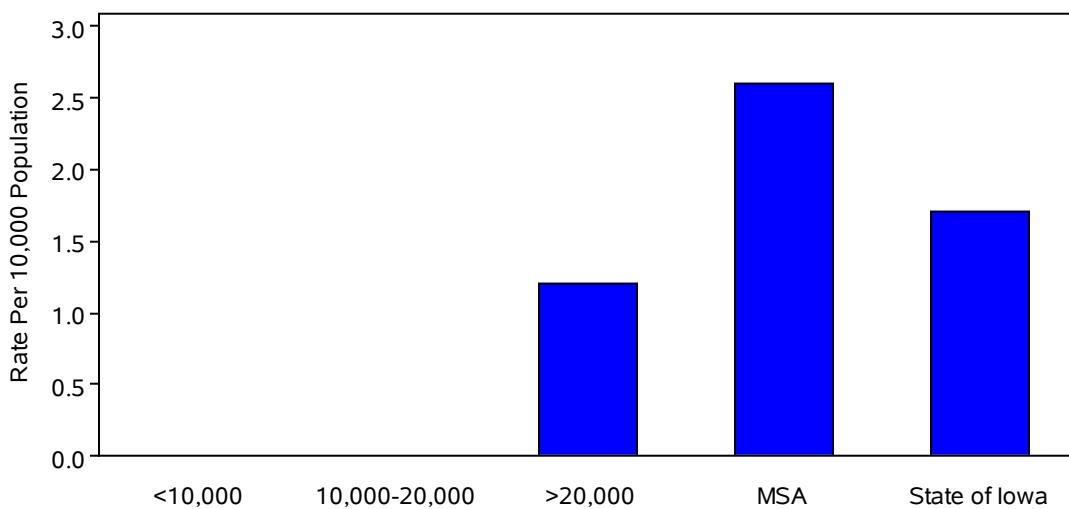
□ 0

□ 0.1-5

□ 5.1-10

□ 10.1-14.3

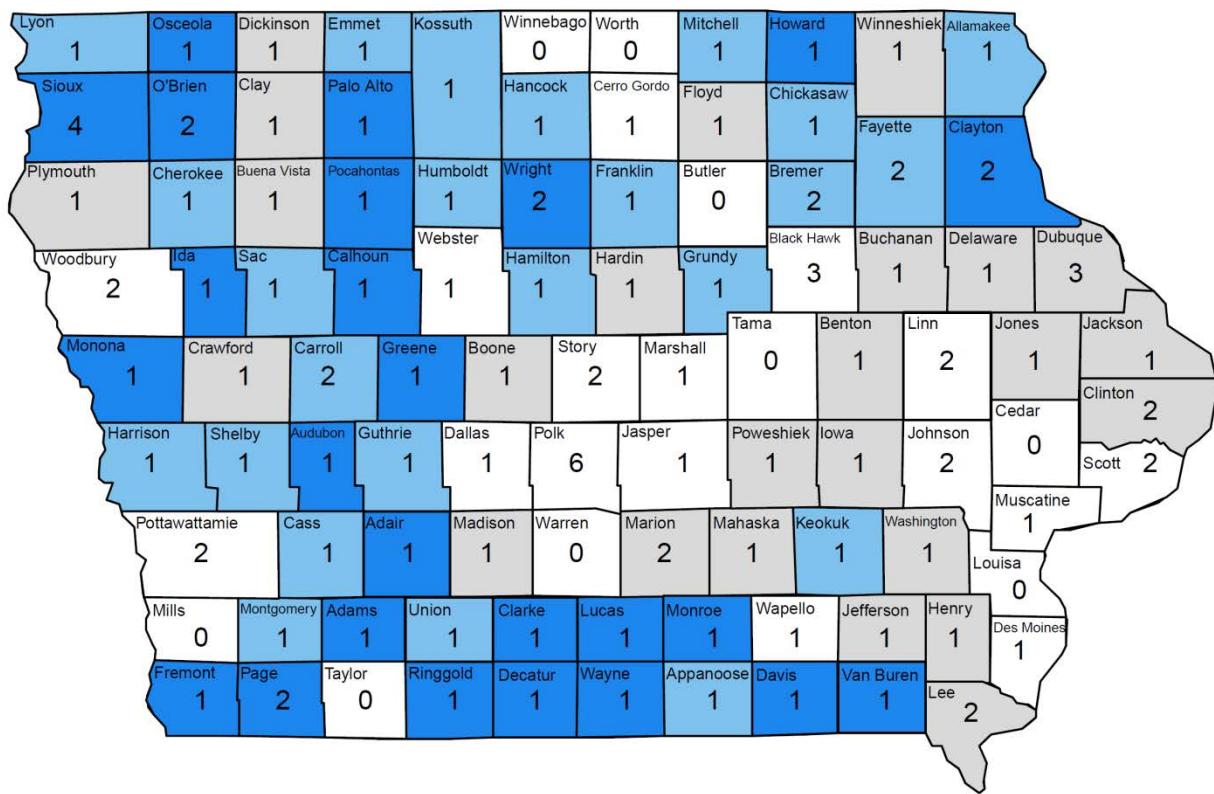
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Total Trauma Care Facilities

2013 Counts and Crude Rates per 100,000 Population (shaded)



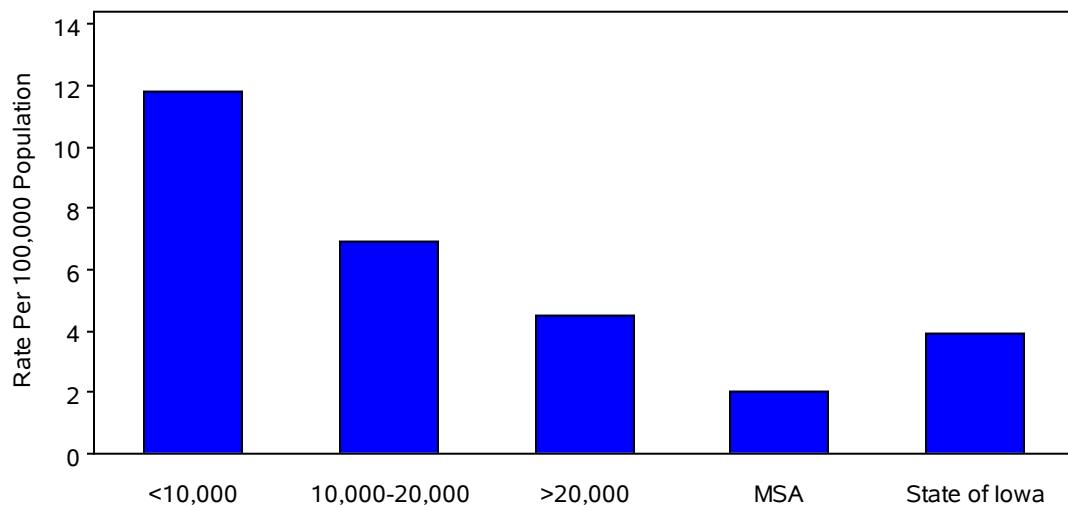
0-3

3.1-6.3

6.4-10.3

10.4-25

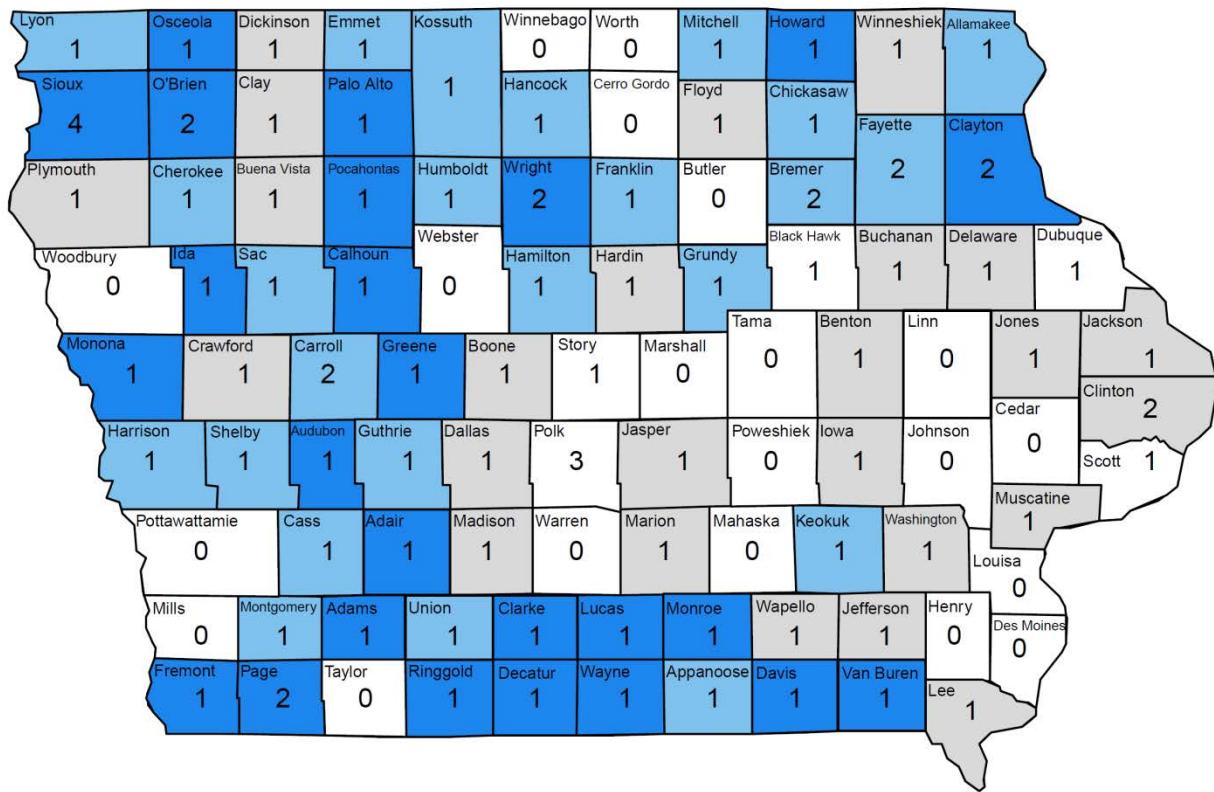
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Community Trauma Care Facilities

2013 Counts and Crude Rates per 100,000 Population (shaded)



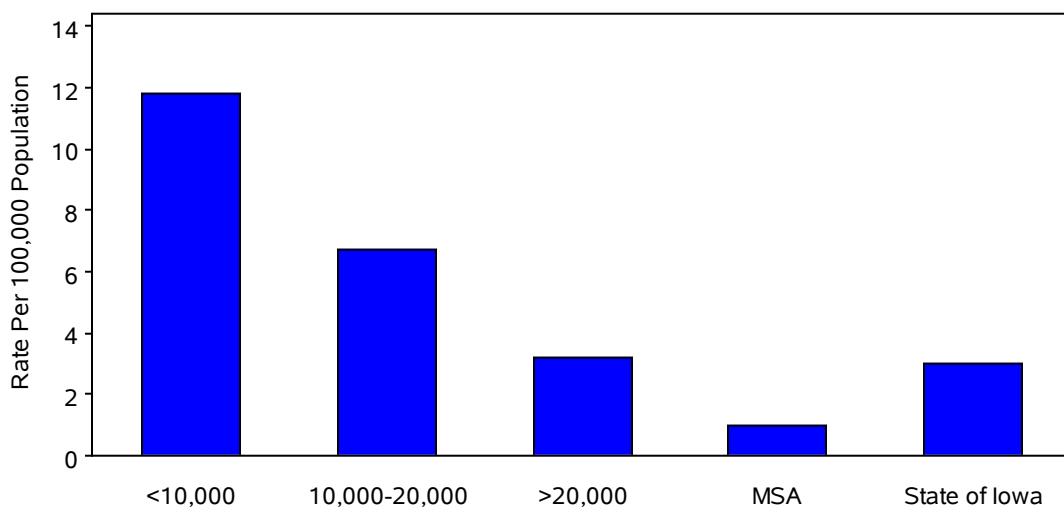
0-1.3

1.4-6.3

6.4-10.3

10.4-25

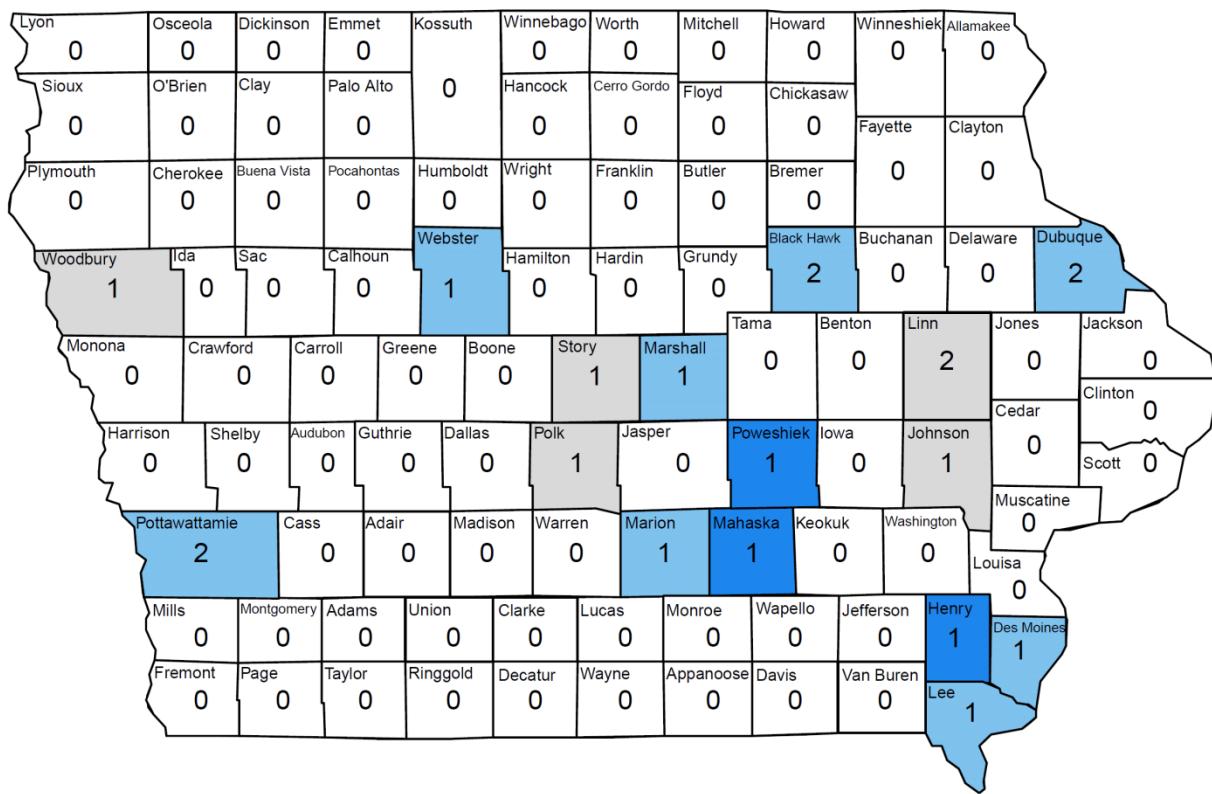
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Area Trauma Care Facilities

2013 Counts and Crude Rates per 1,000,000 Population (shaded)



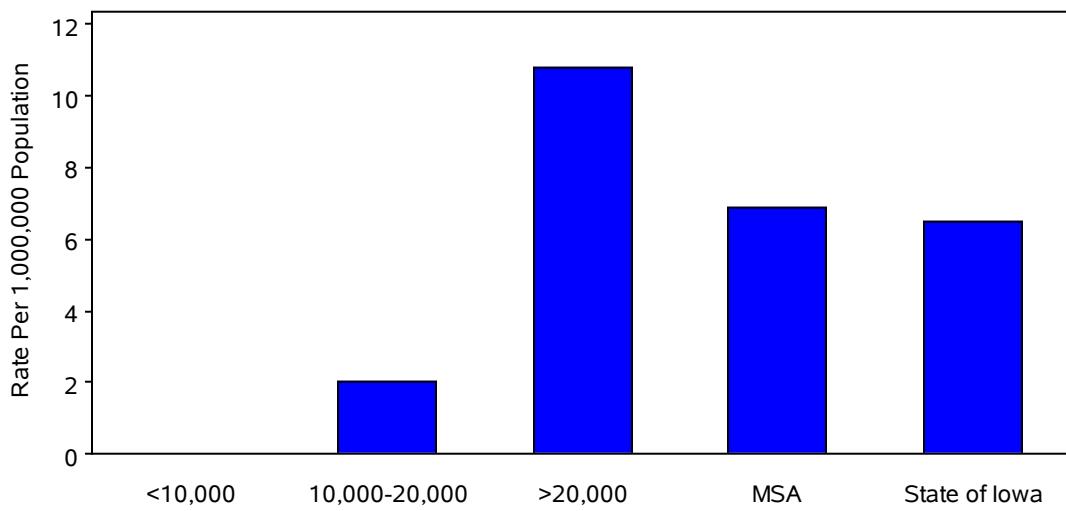
0

0.1-15

15.1-30

30.1-53.2

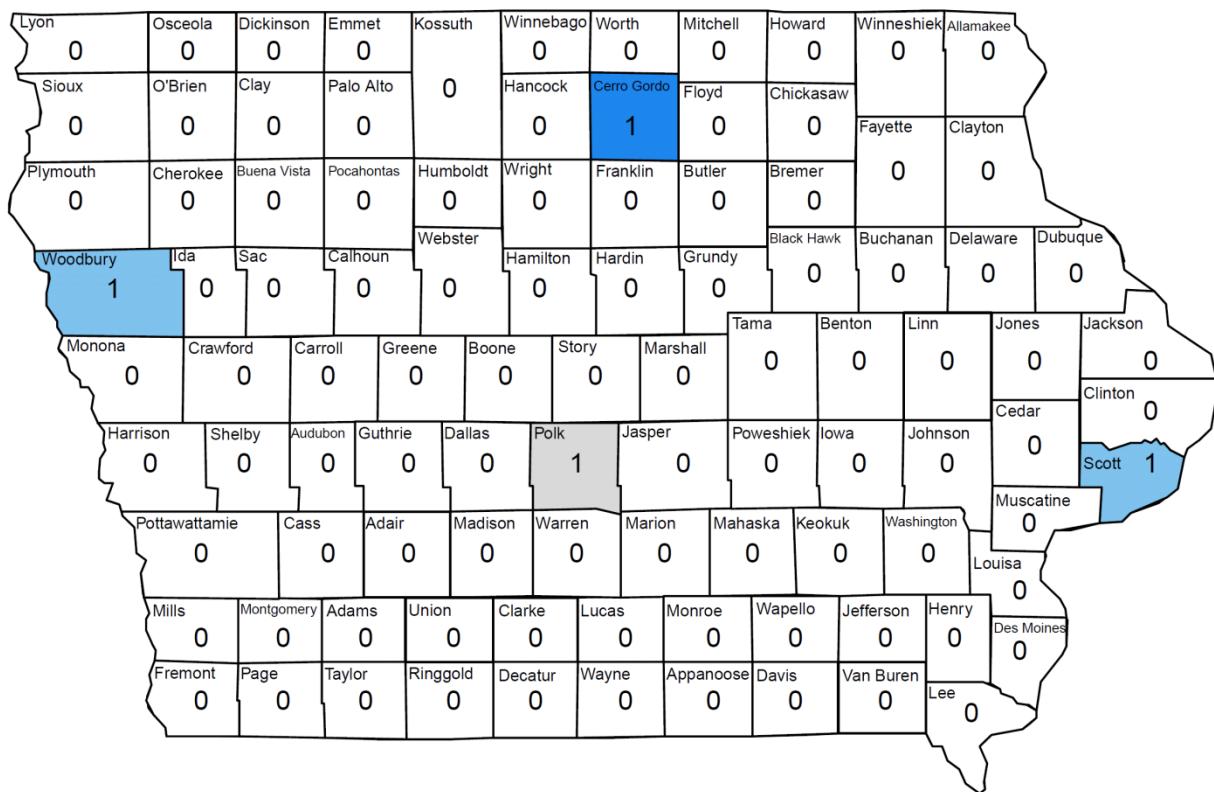
### 2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

## Regional Trauma Care Facilities

2013 Counts and Crude Rates per 1,000,000 Population (shaded)



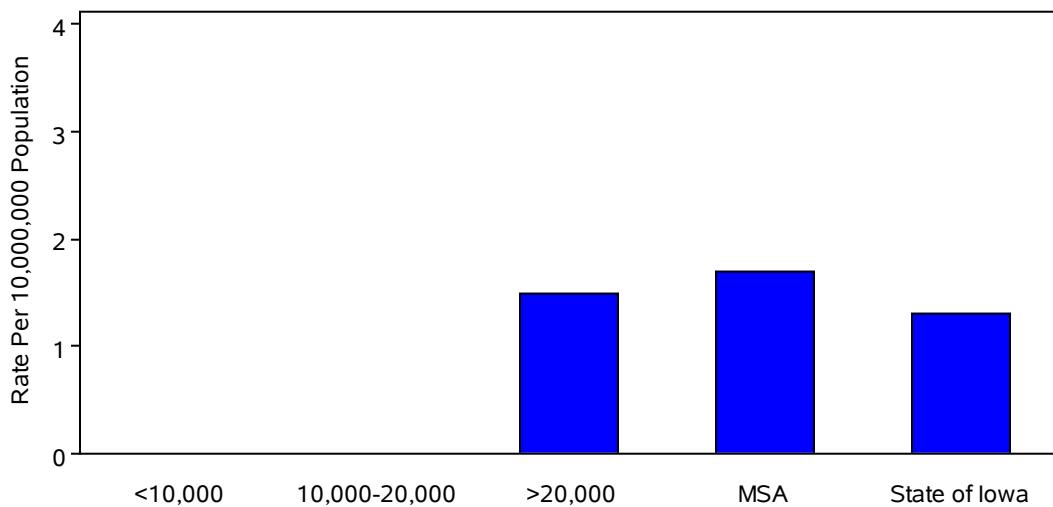
0

0.1-5

5.1-15

15.1-22.8

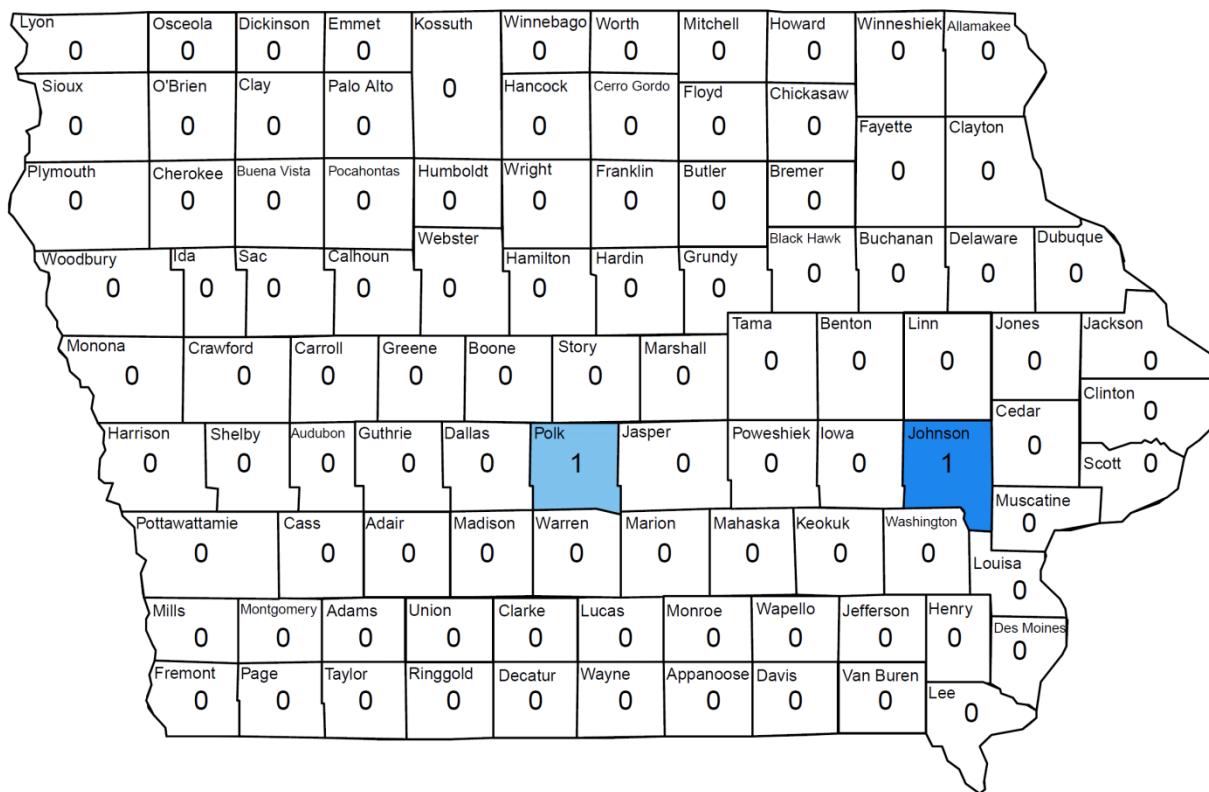
2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Resource Trauma Care Facilities

2013 Counts and Crude Rates per 10,000,000 Population (shaded)



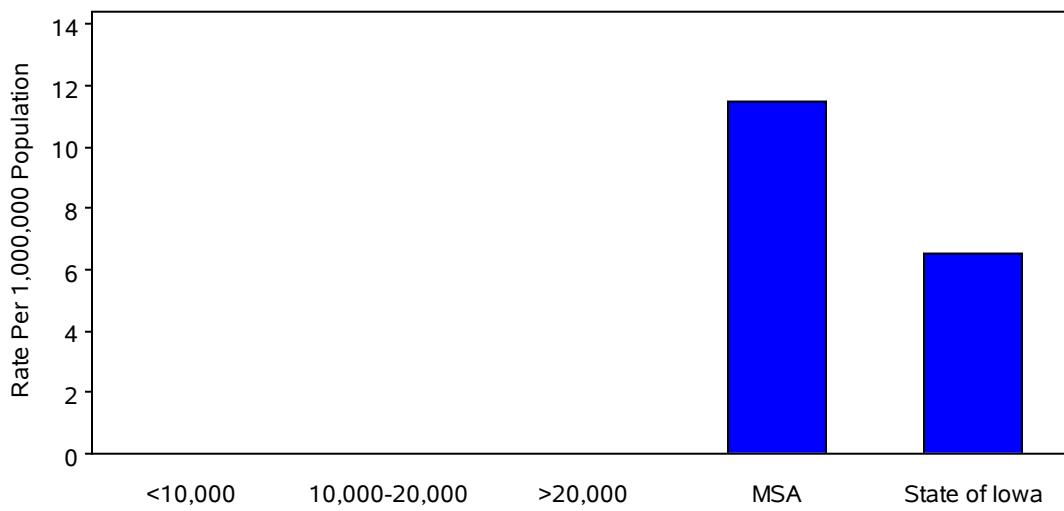
0

0.1-15

15.1-50

50.1-75.2

2013 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health



## Environmental Health Indicators

Whether one considers climate change or water quality, it is clear that the environment affects individuals both directly and indirectly. While some environmental health issues have existed throughout history and prehistory, most have become evident in the last few centuries. These problems have emerged as a result of a growing and changing population. The industrial revolution created air and water pollution problems as well as overcrowding and sanitation issues. It was estimated that the world exceeded 7 billion people on March 12, 2012.

The environment plays a role in many of the health issues discussed previously in this book, including birth defects, cancer, respiratory diseases, and many infectious diseases. Other concerns include allergies, fertility, and exposure to animal and insect vectors for disease spread. In Iowa, public health officials are particularly concerned with the quality of their drinking water, recreational waters, indoor and outdoor air quality, lead poisoning, safe housing, and hazardous and solid waste.

As the global community attempts to provide food, water, and shelter for the world's population, it is important to remain aware of how our actions affect local and global environmental systems. At the same time, public health workers must continue to monitor and attempt to prevent adverse health conditions caused and exacerbated by interactions with the environment.

### ISSUES IN IOWA...

- Drinking water quality
- Recreational water quality
- Indoor and outdoor air quality
- Lead poisoning
- Safe housing
- Hazardous and solid waste

## Childhood Blood Lead Poisoning

Childhood lead poisoning has significant effects on the health of children and on community health. Lead has adverse effects on nearly all organ systems in the body. It is especially harmful to the developing brains and nervous systems of children under the age of six years. At very high blood lead levels, children can suffer severe brain damage or even die. At blood lead levels as low as 10 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ), a child's intelligence, hearing, and growth are affected. In a community, the presence of lead-poisoned children can be associated with an increase in the number of children with developmental deficits and learning disorders. This places an unnecessary and expensive burden on the educational system. The presence of lead-poisoned children also requires substantial community public health resources for medical and environmental case management services.

*High blood lead levels have adverse effects on nearly all organ systems in the body, and are especially harmful to children.*

Most cases of childhood lead poisoning are caused by lead-based paint, which is commonly found in homes built before 1960. Young children who live or visit in pre-1960 homes 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.

Although lead poisoning can cause serious health problems – including death – most lead-poisoned children demonstrate no visible symptoms. This makes it much more important to have an effective program to prevent childhood lead poisoning.

*Most cases of childhood lead poisoning are caused by lead-based paints found in homes built before 1960.*

Since 1992, the Iowa Department of Public Health (IDPH) has recommended that all children in Iowa under the age of six years be tested for lead poisoning. In addition, state and federal laws require that all children under the age of six and covered by Medicaid be tested for lead poisoning. Finally, all Iowa children must now receive at least one blood lead test before the age of mandatory school attendance.

In Iowa, blood lead testing is conducted by the Title V Child's Health Program, local health departments, and by many private physicians. The IDPH childhood blood lead level surveillance system tracks all testing in the state. Thus, blood lead testing results collected as required by Medicaid, as well as those collected from voluntary testing of non-Medicaid children are reported to IDPH.

In the following tables, data are presented for children who were born in calendar year 2005 and 2006 and who received at least one blood lead test before their sixth birthday. Children followed for blood lead poisoning may be tested multiple times. The test results that are presented in the following tables reflect the highest blood lead level for any particular child.

Additionally, for each county, the number of children receiving a blood lead test who were identified with blood levels greater than or equal to 10 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). A blood level of 10  $\mu\text{g}/\text{dL}$  has been identified by the Centers for Disease Control and Prevention as the threshold for lead poisoning in children and is categorized as “high” for the graphs. Additional data, such as the percent of children in each birth cohort who were tested for lead poisoning, are also presented.

Of the children born in Iowa in 2005-2006, 98.9 percent received at least one blood test before their sixth birthday (range by county: 69 to 100 percent), and 3.0 percent of these children had blood levels greater than or equal to 10  $\mu\text{g}/\text{dL}$  (range by county: 0.3 to 13.3 percent).

*For Iowa children born in 2005-2006,  
98.9 percent were tested for lead  
poisoning, and 3.0 percent of these  
children had blood lead levels greater  
than or equal to 10  $\mu\text{g}/\text{dL}$ .*

# Percent of Children Tested for Blood Lead Poisoning, 2005-2006<sup>1</sup>

	County	2005	2006	County	2005	2006
<b>Counties with Average Population &lt; 10,000</b>	Adair	100.0%	100.0%	Lucas	83.3%	95.2%
	Adams	100.0%	96.9%	Monona	100.0%	110.0%
	Audubon	100.0%	100.0%	Monroe	100.0%	108.3%
	Clarke	100.0%	100.0%	Osceola	100.0%	104.3%
	Davis	69.3%	70.3%	Palo Alto	87.6%	88.9%
	Decatur	93.1%	97.9%	Pocahontas	97.7%	104.4%
	Fremont	100.0%	100.0%	Ringgold	86.1%	88.1%
	Greene	100.0%	100.0%	Taylor	100.0%	93.7%
	Howard	100.0%	100.0%	Van Buren	79.6%	77.5%
	Humboldt	95.0%	100.0%	Wayne	100.0%	96.6%
	Ida	90.1%	98.9%	Worth	100.0%	100.0%
				<b>County Grp %</b>	93.7%	96.5%
<b>Counties with Average Population 10,000 – 20,000</b>	Allamakee	100.0%	110.1%	Hardin	100.0%	100.0%
	Appanoose	78.3%	89.6%	Iowa	97.5%	97.6%
	Butler	100.0%	100.0%	Jefferson	95.3%	99.3%
	Calhoun	95.0%	88.9%	Keokuk	88.8%	95.7%
	Cass	96.5%	103.1%	Kossuth	100.0%	100.0%
	Cedar	100.0%	98.0%	Louisa	100.0%	91.2%
	Cherokee	100.0%	100.0%	Lyon	85.2%	71.4%
	Chickasaw	91.1%	100.0%	Mitchell	83.0%	87.4%
	Clay	100.0%	100.0%	Montgomery	100.0%	105.8%
	Clayton	100.0%	100.0%	O'Brien	100.0%	99.4%
	Crawford	100.0%	100.0%	Page	100.0%	95.5%
	Delaware	88.1%	90.7%	Poweshiek	100.0%	85.0%
	Dickinson	100.0%	105.8%	Sac	100.0%	100.0%
	Emmet	90.5%	100.0%	Shelby	100.0%	108.3%
	Floyd	88.1%	91.4%	Tama	100.0%	104.9%
	Franklin	100.0%	100.0%	Union	100.0%	105.3%
	Hamilton	100.0%	100.0%	Winnebago	100.0%	100.0%
	Hancock	100.0%	100.0%	<b>County Grp %</b>	100.0%	100.0%
				<b>County Grp %</b>	96.5%	98.0%
<b>Counties with Average Population &gt; 20,000</b>	Boone	100.0%	100.0%	Lee	100.0%	100.0%
	Buchanan	82.9%	84.4%	Mahaska	100.0%	106.5%
	Buena Vista	100.0%	100.0%	Marion	99.8%	105.0%
	Carroll	100.0%	100.0%	Marshall	100.0%	103.4%
	Cerro Gordo	100.0%	100.0%	Muscatine	100.0%	128.6%
	Clinton	100.0%	100.0%	Plymouth	100.0%	107.2%
	Des Moines	100.0%	100.0%	Sioux	100.0%	100.6%
	Fayette	100.0%	100.0%	Wapello	100.0%	100.0%
	Henry	100.0%	100.0%	Webster	100.0%	100.0%
	Jackson	100.0%	100.0%	Winneshiek	100.0%	100.0%
	Jasper	98.7%	100.0%	<b>County Grp %</b>	99.3%	102.5%
<b>MSA Counties</b>	Benton	100.0%	100.0%	Linn	97.5%	100.0%
	Black Hawk	100.0%	100.0%	Madison	100.0%	117.1%
	Bremer	100.0%	97.0%	Mills	86.8%	92.2%
	Dallas	100.0%	100.0%	Polk	100.0%	100.1%
	Dubuque	93.1%	91.9%	Pottawattamie	80.4%	72.0%
	Grundy	100.0%	97.8%	Scott	100.0%	100.0%
	Guthrie	89.8%	100.0%	Story	100.0%	98.9%
	Harrison	100.0%	93.1%	Warren	100.0%	97.7%
	Johnson	100.0%	100.0%	Washington	94.0%	88.6%
	Jones	100.0%	114.2%	Woodbury	100.0%	100.0%
			<b>County Grp %</b>	98.1%	98.0%	
	<b>State %</b>	97.9%	98.9%			

<sup>1</sup>Children born in years 2005, 2006

Source: Iowa Department of Public Health, Bureau of Lead Poisoning Prevention

## Elevated Levels of Blood Lead: Children Born in 2005<sup>1</sup>

County	# Born	# Tested	≥ 10 µg/dL	Total % High	County	# Born	# Tested	≥ 10 µg/dL	Total % High	
Counties with Average Population < 10,000	Adair	86	86	4	4.7%	Lucas	120	100	3	3.0%
	Adams	42	42	7	16.7%	Monona	95	95	8	8.4%
	Audubon	73	73	5	6.8%	Monroe	76	76	1	1.3%
	Clarke	132	132	2	1.5%	Osceola	73	73	5	6.8%
	Davis	137	95	2	2.1%	Palo Alto	121	106	5	4.7%
	Decatur	101	94	4	4.3%	Pocahontas	88	86	2	2.3%
	Fremont	90	90	5	5.6%	Ringgold	79	68	3	4.4%
	Greene	93	93	5	5.4%	Taylor	79	79	13	16.5%
	Howard	131	131	5	3.8%	Van Buren	98	78	6	7.7%
	Humboldt	121	115	2	1.7%	Wayne	76	76	4	5.3%
	Ida	81	73	8	11.0%	Worth	81	81	6	7.4%
					<b>Total</b>	2,073	1,942	105	5.1%	
Counties with Average Population 10,000 - 20,000	Allamakee	206	206	8	3.9%	Hardin	207	207	12	5.8%
	Appanoose	184	144	5	3.5%	Iowa	200	195	7	3.6%
	Butler	171	171	4	2.3%	Jefferson	171	163	3	1.8%
	Calhoun	100	95	4	4.2%	Keokuk	125	111	9	8.1%
	Cass	170	164	7	4.3%	Kossuth	181	181	4	2.2%
	Cedar	194	194	13	6.7%	Louisa	129	129	3	2.3%
	Cherokee	113	113	6	5.3%	Lyon	169	144	2	1.4%
	Chickasaw	179	163	6	3.7%	Mitchell	147	122	2	1.6%
	Clay	200	200	6	3.0%	Montgomery	142	142	7	4.9%
	Clayton	190	190	6	3.2%	O'Brien	184	184	11	6.0%
	Crawford	212	212	4	1.9%	Page	167	167	18	10.8%
	Delaware	210	185	3	1.6%	Poweshiek	195	195	10	5.1%
	Dickinson	153	153	1	0.7%	Sac	120	120	15	12.5%
	Emmet	158	143	7	4.9%	Shelby	101	101	1	1.0%
	Floyd	218	192	7	3.6%	Tama	256	256	13	5.1%
	Franklin	128	128	10	7.8%	Union	152	152	26	17.1%
	Hamilton	185	185	4	2.2%	Winnebago	120	120	3	2.5%
	Hancock	155	155	3	1.9%	Wright	165	165	7	4.2%
					<b>Total</b>	6,057	5,847	257	4.2%	
Counties with Average Population > 20,000	Boone	310	310	15	4.8%	Lee	407	407	15	3.7%
	Buchanan	298	247	8	3.2%	Mahaska	306	306	10	3.3%
	Buena Vista	292	292	13	4.5%	Marion	424	423	4	0.9%
	Carroll	269	269	17	6.3%	Marshall	612	612	44	7.2%
	Cerro Gordo	471	471	17	3.6%	Muscatine	587	587	13	2.2%
	Clinton	623	623	15	2.4%	Plymouth	313	313	8	2.6%
	Des Moines	500	500	40	8.0%	Sioux	479	479	17	3.5%
	Fayette	250	250	14	5.6%	Wapello	504	504	32	6.3%
	Henry	246	246	14	5.7%	Webster	474	474	17	3.6%
	Jackson	198	198	4	2.0%	Winneshiek	210	210	4	1.9%
	Jasper	474	468	9	1.9%	<b>Total</b>	8,247	8,189	330	4.0%
MSA Counties	Benton	291	291	7	2.4%	Linn	2,783	2,714	69	2.5%
	Black Hawk	1,683	1,683	73	4.3%	Madison	189	189	6	3.2%
	Bremer	273	273	5	1.8%	Mills	197	171	2	1.2%
	Dallas	797	797	14	1.8%	Polk	6,567	6,567	126	1.9%
	Dubuque	1,125	1,047	16	1.5%	Pottawattamie	1,227	987	13	1.3%
	Grundy	123	123	2	1.6%	Scott	2,317	2,317	79	3.4%
	Guthrie	127	114	4	3.5%	Story	945	945	10	1.1%
	Harrison	177	177	3	1.7%	Warren	549	549	3	0.5%
	Johnson	1,457	1,457	12	0.8%	Washington	265	249	10	4.0%
	Jones	228	228	5	2.2%	Woodbury	1,578	1,578	93	5.9%
					<b>Total</b>	22,898	22,456	552	2.4%	
	<b>State Total</b>	39,275	38,434	1,244	3.2%					

<sup>1</sup>Children tested before six years of age

Source: Iowa Department of Public Health Bureau of Lead Poisoning Prevention

**Elevated Levels of Blood Lead: Children Born in 2006<sup>1</sup>**

County	# Born	# Tested	≥ 10 µg/dL	Total % High	County	# Born	# Tested	≥ 10 µg/dL	Total % High
Adair	97	97	4	4.1%	Lucas	125	119	0	0.0%
Adams	64	62	6	9.7%	Monona	120	132	6	4.5%
Audubon	57	57	2	3.5%	Monroe	96	104	2	1.9%
Clarke	126	126	7	5.6%	Osceola	70	73	2	2.7%
Davis	138	97	1	1.0%	Palo Alto	126	112	0	0.0%
Decatur	97	95	1	1.1%	Pocahontas	68	71	3	4.2%
Fremont	81	81	4	4.9%	Ringgold	59	52	2	3.8%
Greene	128	128	5	3.9%	Taylor	79	74	8	10.8%
Howard	127	127	3	2.4%	Van Buren	89	69	2	2.9%
Humboldt	125	125	2	1.6%	Wayne	88	85	4	4.7%
Ida	92	91	4	4.4%	Worth	86	86	2	2.3%
<b>Total</b>					<b>Total</b>	2,138	2,063	70	3.3%
<b>Counties with Average Population &lt; 10,000</b>									
Allamakee	207	228	5	2.2%	Hardin	196	196	8	4.1%
Appanoose	154	138	8	5.8%	Iowa	206	201	3	1.5%
Butler	170	170	3	1.8%	Jefferson	142	141	3	2.1%
Calhoun	108	96	3	3.1%	Keokuk	139	133	7	5.3%
Cass	159	164	10	6.1%	Kossuth	166	166	4	2.4%
Cedar	203	199	6	3.0%	Louisa	147	134	3	2.2%
Cherokee	119	119	3	2.5%	Lyon	175	125	1	0.8%
Chickasaw	156	156	4	2.6%	Mitchell	119	104	2	1.9%
Clay	205	205	4	2.0%	Montgomery	137	145	4	2.8%
Clayton	226	226	15	6.6%	O'Brien	170	169	6	3.6%
Crawford	249	249	7	2.8%	Page	177	169	9	5.3%
Delaware	216	196	2	1.0%	Poweshiek	187	159	6	3.8%
Dickinson	173	183	0	0.0%	Sac	119	119	10	8.4%
Emmet	146	146	8	5.5%	Shelby	121	131	3	2.3%
Floyd	220	201	2	1.0%	Tama	226	237	11	4.6%
Franklin	124	124	12	9.7%	Union	170	179	15	8.4%
Hamilton	184	184	5	2.7%	Winnebago	142	142	0	0.0%
Hancock	131	131	4	3.1%	<b>Total</b>	176	176	8	4.5%
<b>Total</b>					<b>Total</b>	6,065	5,941	204	3.4%
<b>Counties with Average Population 10,000 – 20,000</b>									
Boone	329	329	11	3.3%	Lee	454	454	20	4.4%
Buchanan	340	287	5	1.7%	Mahaska	322	343	11	3.2%
Carroll	260	260	10	3.8%	Marion	422	443	7	1.6%
Cerro Gordo	302	302	10	3.3%	Marshall	624	645	35	5.4%
Clinton	501	501	14	2.8%	Muscatine	633	814	18	2.2%
Des Moines	653	653	26	4.0%	Plymouth	306	328	7	2.1%
Fayette	557	557	30	5.4%	Sioux	522	525	10	1.9%
Henry	230	230	12	5.2%	Wapello	496	496	22	4.4%
Jackson	221	221	4	1.8%	Webster	485	485	16	3.3%
Jasper	229	229	10	4.4%	Winneshiek	190	190	8	4.2%
<b>Total</b>					<b>Total</b>	8,478	8,694	293	3.5%
<b>Counties with Average Population &gt; 20,000</b>									
Benton	310	310	11	3.5%	Linn	2,869	2,869	62	2.2%
Black Hawk	1,776	1,776	72	4.1%	Madison	205	240	3	1.3%
Bremer	297	288	9	3.1%	Mills	179	165	3	1.8%
Dallas	893	893	10	1.1%	Polk	6,911	6,915	114	1.6%
Dubuque	1,208	1,110	11	1.0%	Pottawattamie	1227	884	16	1.8%
Grundy	138	135	2	1.5%	Scott	2,247	2,247	65	2.9%
Guthrie	122	122	7	5.7%	Story	999	988	10	1.0%
Harrison	175	163	1	0.6%	Warren	515	503	5	1.0%
Johnson	1,615	1,615	7	0.4%	Washington	316	280	8	2.9%
Jones	212	242	6	2.5%	Woodbury	1,697	1,697	100	5.9%
<b>Total</b>					<b>Total</b>	23,911	23,442	522	2.2%
<b>MSA Counties</b>									
State Total	40,592	40,140	1,089	2.7%					

<sup>1</sup>Children tested before six years of age

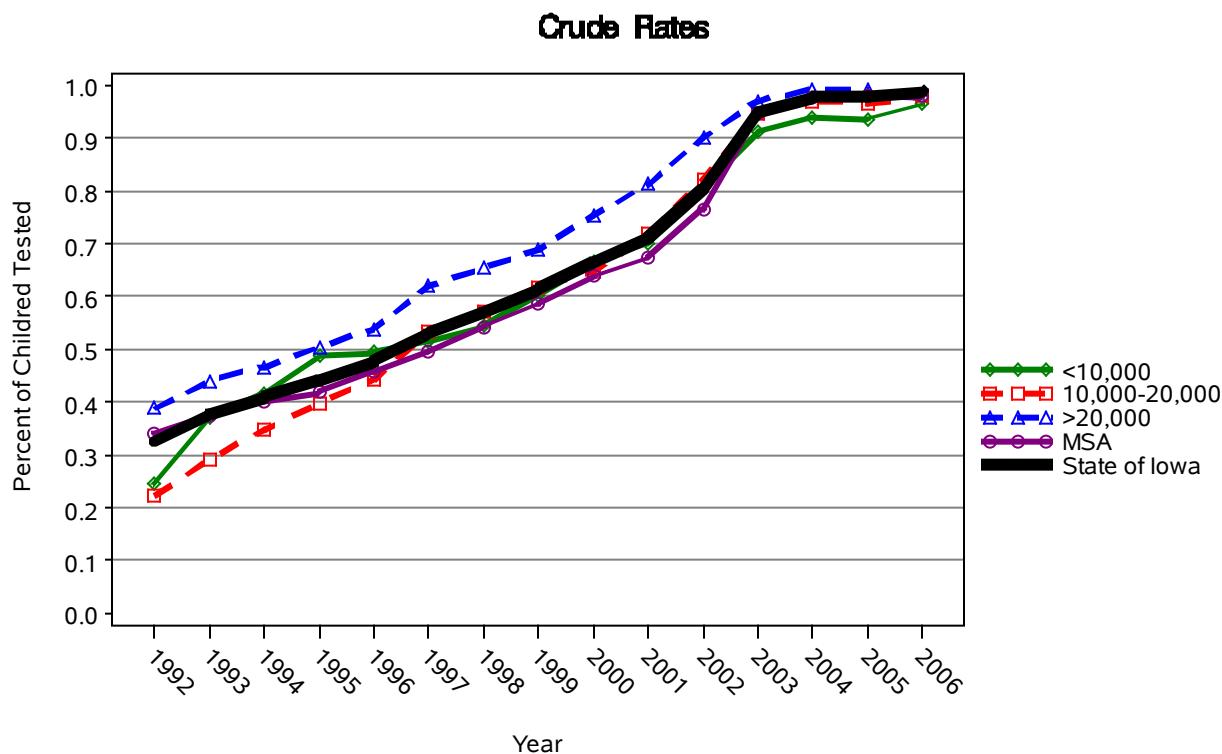
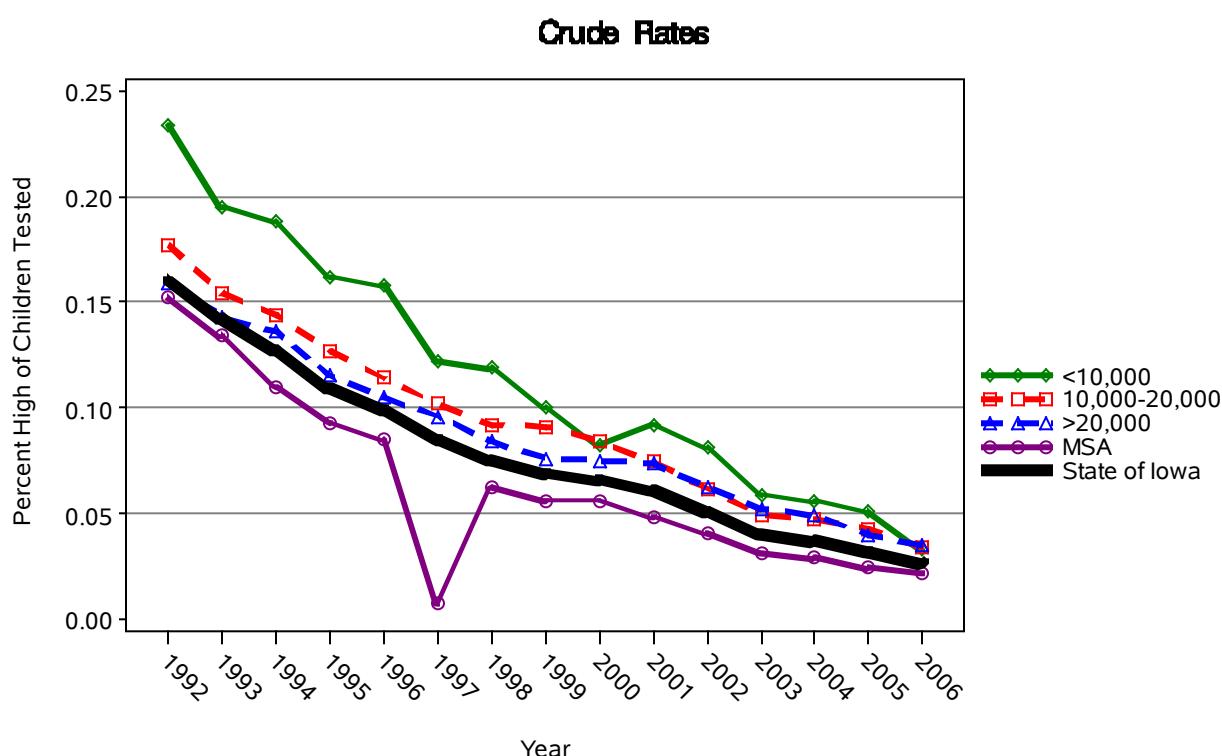
Source: Iowa Department of Public Health Bureau of Lead Poisoning Prevention

# Elevated Levels of Blood Lead: Children Born in 2005-2006<sup>1</sup>

County	Number Tested	% with High Levels	County	Number Tested	% with High Levels	
Counties with Average Population < 10,000	Adair	183	4.4%	Lucas	219	1.2%
	Adams	104	12.3%	Monona	227	6.5%
	Audubon	130	5.4%	Monroe	180	1.7%
	Clarke	258	3.5%	Osceola	146	4.9%
	Davis	192	1.1%	Palo Alto	218	2.0%
	Decatur	189	2.5%	Pocahontas	157	3.2%
	Fremont	171	5.3%	Ringgold	120	3.6%
	Greene	221	4.5%	Taylor	153	13.3%
	Howard	258	3.1%	Van Buren	147	4.3%
	Humboldt	240	1.6%	Wayne	161	4.9%
	Ida	164	6.9%	Worth	167	4.8%
			<b>Total</b>	4,005	4.4%	
Counties with Average Population 10,000 - 20,000	Allamakee	434	3.1%	Hardin	403	5.0%
	Appanoose	282	3.8%	Iowa	396	2.5%
	Butler	341	2.1%	Jefferson	304	1.9%
	Calhoun	191	3.4%	Keokuk	244	6.1%
	Cass	328	5.2%	Kossuth	347	2.3%
	Cedar	393	4.8%	Louisa	263	2.2%
	Cherokee	232	3.9%	Lyon	269	0.9%
	Chickasaw	319	3.0%	Mitchell	226	1.5%
	Clay	405	2.5%	Montgomery	287	3.9%
	Clayton	416	5.0%	O'Brien	353	4.8%
	Crawford	461	2.4%	Page	336	7.8%
	Delaware	381	1.2%	Poweshiek	354	4.2%
	Dickinson	336	0.3%	Sac	239	10.5%
	Emmet	289	4.9%	Shelby	232	1.8%
	Floyd	393	2.1%	Tama	493	5.0%
	Franklin	252	8.7%	Union	331	12.7%
	Hamilton	369	2.4%	Winnebago	262	1.1%
	Hancock	286	2.4%	<b>Total</b>	11,788	3.9%
Counties with Average Population > 20,000	Boone	639	4.1%	Lee	861	4.1%
	Buchanan	534	2.0%	Mahaska	649	3.3%
	Buena Vista	552	4.2%	Marion	866	1.3%
	Carroll	571	4.7%	Marshall	1,257	6.4%
	Cerro Gordo	972	3.2%	Muscatine	1,401	2.5%
	Clinton	1,276	3.2%	Plymouth	641	2.4%
	Des Moines	1,057	6.6%	Sioux	1,004	2.7%
	Fayette	480	5.4%	Wapello	1,000	5.4%
	Henry	467	3.9%	Webster	959	3.4%
	Jackson	427	3.3%	Winneshiek	400	3.0%
	Jasper	870	1.8%	<b>Total</b>	16,883	3.7%
MSA Counties	Benton	601	3.0%	Linn	5,583	2.3%
	Black Hawk	3,459	4.2%	Madison	429	2.3%
	Bremer	561	2.5%	Mills	336	1.3%
	Dallas	1,690	1.4%	Polk	13,482	1.8%
	Dubuque	2,157	1.2%	Pottawattamie	1,871	1.2%
	Grundy	258	1.5%	Scott	4,564	3.2%
	Guthrie	236	4.4%	Story	1,933	1.0%
	Harrison	340	1.1%	Warren	1,052	0.8%
	Johnson	3,072	0.6%	Washington	529	3.1%
	Jones	470	2.5%	Woodbury	3,275	5.9%
			<b>Total</b>	45,898	2.3%	
	<b>State Total</b>	78,574	3.0%			

<sup>1</sup>Children tested before six years of age

Source: Iowa Department of Public Health, Bureau of Lead Poisoning Prevention

**Tested for Blood Lead: Children Born in 1992-2006****Elevated Levels of Blood Lead: Children Born in 1992-2006**

# US Department of Health and Human Services, Agency for Healthcare Research and Quality



The Agency for Healthcare Research and Quality is a national research organization which is part of the U.S. Department of Health and Human Services. AHRQ funds internal and external research projects, and has a large variety of public health data available on its website, <http://www.ahrq.gov/>. The organization periodically releases summary reports of health care quality across states and regions as part of its mission to *“improve the quality, safety, efficiency, and effectiveness of health care for all Americans.”*

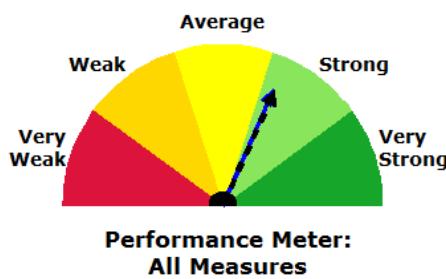
Known as “State Snapshots” and using data from the National Healthcare Quality Report, these reports make comparisons of health care quality measures across states and regions. The measurements on which these aggregate statistics are based are further broken down and compared to previous data. A sample of the summary measures from the 2011 report is presented here, depending on the most recent data availability. More detailed information can be found at the AHRQ websites listed below.

**2011 Report:** <http://statesnapshots.ahrq.gov/snaps11/>

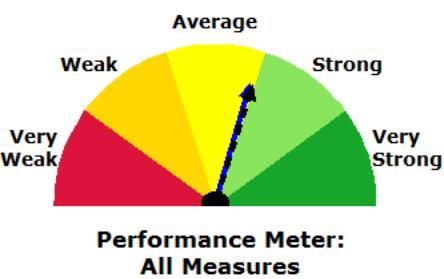
**2010 Report:** <http://statesnapshots.ahrq.gov/snaps10/>

# 2011 State Snapshots – Executive Summary

## All-State Comparison (All Measures)



## Regional Comparison (All Measures)

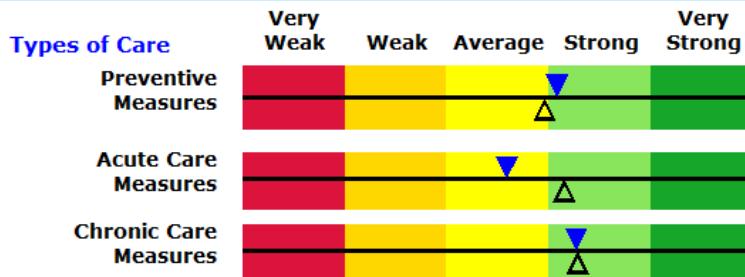


—→ = Most Recent Data Year

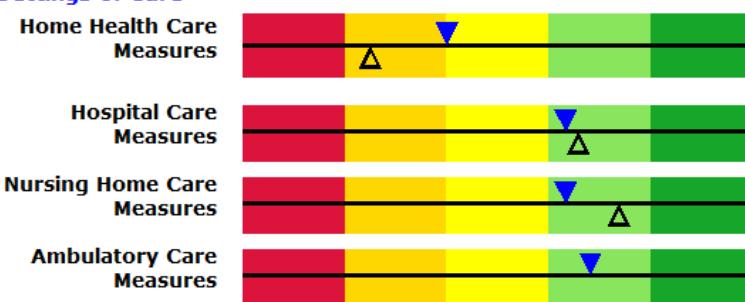
-----Δ = Baseline Year

(Baseline year may vary across measures)

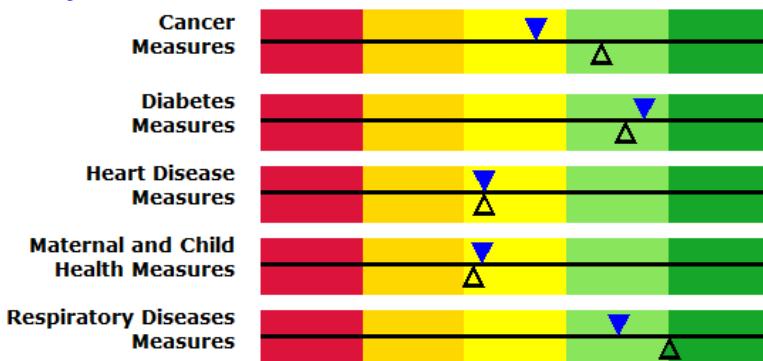
## Health Care Quality by Measure Type – Compared to All States:



### Settings of Care



### Care by Clinical Area

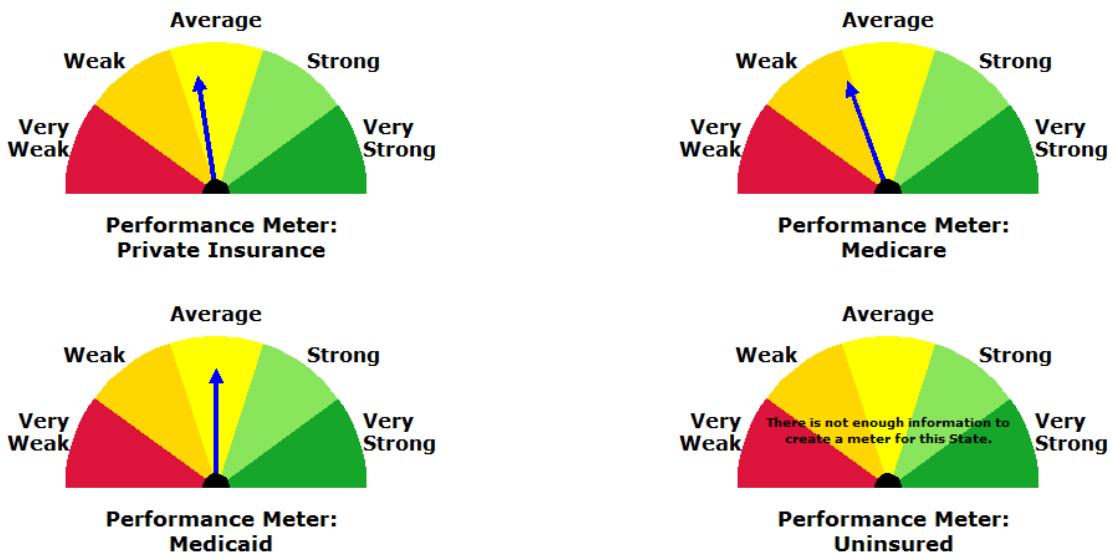


▼ Most Recent Data Year

Δ Baseline Year

Source: Agency for Healthcare Research and Quality

## Quality of Care Ratings by Payer – All State Comparison



## Strongest Measures

- Percent of high-risk persons ages 18-64 who received an influenza vaccination in the past 12 months (higher is better)  
 Adults age 40 and over with diagnosed diabetes who received a dilated eye examination in the calendar year (higher is better)  
 Adults on Medicare who had a doctor's office or clinic visit in the last 12 months whose doctor sometimes or never showed respect for what they had to say (lower is better)  
 Long-stay nursing home residents who lost too much weight (lower is better)  
 Adults on Medicare who had a doctor's office or clinic visit in the last 12 months whose doctor sometimes or never listened carefully to them (lower is better)

## Weakest Measures

- Home health care patients who have less urinary incontinence (higher is better)  
 Admissions with perforated appendix per 1,000 admissions with appendicitis, age 18 and over (lower is better)  
 Admissions for immunization-preventable influenza per 100,000 population, age 65 and over (lower is better)  
 Home health care patients who need urgent, unplanned medical care (lower is better)  
 Short-stay nursing home residents with delirium (lower is better)

Source: Agency for Healthcare Research and Quality



## **Appendix I: Data Sources**

## Public Health Information Websites

### National

Agency for Healthcare Research and Quality	<a href="http://www.ahrq.gov/">http://www.ahrq.gov/</a>
Centers for Disease Control and Prevention	<a href="http://www.cdc.gov/">http://www.cdc.gov/</a>
Healthy People	<a href="http://www.healthypeople.gov/">http://www.healthypeople.gov/</a>
National Center for Health Statistics	<a href="http://www.cdc.gov/nchs/">http://www.cdc.gov/nchs/</a>
National Institutes of Health	<a href="http://www.nih.gov/">http://www.nih.gov/</a>
US Census Bureau	<a href="http://www.census.gov/">http://www.census.gov/</a>
US Department of Health and Human Services	<a href="http://www.hhs.gov/">http://www.hhs.gov/</a>
Surveillance, Epidemiology and End Results Program	<a href="http://www.seer.cancer.gov/">http://www.seer.cancer.gov/</a>

### Iowa

Iowa Department of Education	<a href="http://educateiowa.gov/">http://educateiowa.gov/</a>
Iowa Department of Human Services	<a href="http://www.dhs.state.ia.us/">http://www.dhs.state.ia.us/</a>
Iowa Department of Public Health	<a href="http://www.idph.state.ia.us/">http://www.idph.state.ia.us/</a>
Iowa Kids Count	<a href="http://datacenter.kidscount.org/data#IA/2/0">http://datacenter.kidscount.org/data#IA/2/0</a>
State Health Registry of Iowa	<a href="http://www.public-health.uiowa.edu/shri/">http://www.public-health.uiowa.edu/shri/</a>
University of Iowa College of Public Health	<a href="http://www.public-health.uiowa.edu/">http://www.public-health.uiowa.edu/</a>

Fact Book Item	Data Source
<b>State Snapshot (AHRQ)</b>	
State Snapshot 2011 Reports	Agency for Healthcare Research and Quality Website: <a href="http://www.ahrq.gov/">http://www.ahrq.gov/</a> Reports: <a href="http://statesnapshots.ahrq.gov/snaps11/">http://statesnapshots.ahrq.gov/snaps11/</a>
<b>Demographics</b>	
State Population Age Distributions for 2006-2010	Surveillance, Epidemiology, and End Results (SEER) Program SEER*Stat Database. Website: <a href="http://seer.cancer.gov/seerstat/">http://seer.cancer.gov/seerstat/</a>
State Population Distributions for 1970-2011	US Census Bureau Website: <a href="http://www.census.gov">http://www.census.gov</a>
<b>Social Determinants of Health</b>	
High School Graduation	Iowa Department of Education, Bureau of Information and Analysis, Student Reporting in Iowa (EASIER) Files Website: <a href="http://educateiowa.gov/">http://educateiowa.gov/</a>
Poverty Levels	U.S. Census Bureau, Small Area Income & Poverty Estimates Website: <a href="http://www.census.gov/did/www/saipe/">http://www.census.gov/did/www/saipe/</a>
Uninsured	U.S. Census Bureau, Small Area Health Insurance Estimates Website: <a href="http://www.census.gov/did/www/sahie/">http://www.census.gov/did/www/sahie/</a>
<b>Health Behaviors</b>	
Behavioral Risk Factor Surveillance System (BRFSS)	Iowa Department of Public Health Website: <a href="http://www.idph.state.ia.us/brfss/">http://www.idph.state.ia.us/brfss/</a>
Iowa Youth Survey (IYS)	Iowa Department of Public Health, Bureau of Substance Abuse Website: <a href="http://www.iowayouthsurvey.iowa.gov/">http://www.iowayouthsurvey.iowa.gov/</a>
Substance Abuse Treatment	Iowa Department of Public Health, Bureau of Substance Abuse Website: <a href="http://www.idph.state.ia.us/bh/substance_abuse.asp">http://www.idph.state.ia.us/bh/substance_abuse.asp</a>
Marriages Dissolutions	Iowa Department of Public Health, Bureau of Health Statistics Website: <a href="http://www.idph.state.ia.us/apl/health_statistics.asp">http://www.idph.state.ia.us/apl/health_statistics.asp</a>

## Prenatal and Infant Health

Live Births  
Out-Of-Wedlock Births  
Mothers Under Age 20  
Low Birth Weight  
Mothers Who Began Prenatal Care in the First Trimester  
Mothers Who Smoked During Pregnancy  
Mothers Who Drank During Pregnancy  
Fetal Deaths  
Neonatal Deaths  
Perinatal Deaths  
Infant Deaths  
Congenital and inherited disorders  
Selected Congenital and inherited disorders in Iowa

Iowa Department of Public Health, Bureau of Health Statistics,  
Website:  
[http://www.idph.state.ia.us/apl/health\\_statistics.asp](http://www.idph.state.ia.us/apl/health_statistics.asp)

## Infectious Diseases

Infectious Diseases  
Sexually Transmitted Diseases  
  
HIV/AIDS

Iowa Department of Public Health, Center for Acute Disease Epidemiology  
Website:  
<http://www.idph.state.ia.us/Cade/Default.aspx>

Iowa Department of Public Health, Bureau of HIV, STD, and Hepatitis  
Website:  
<http://www.idph.state.ia.us/HivStdHep/HIV-AIDS.aspx?prog=Hiv&pg=HivHome>

## Cancer Incidence and Mortality

All Sites of Cancer  
Prostate  
Lung  
Female Breast  
Colorectum  
Non-Hodgkin's Lymphoma  
Leukemia  
Skin Melanoma  
Oral Cavity (Excluding Lip)  
Cervical

*All cancer incidence data from:*  
The University of Iowa, State Health Registry of Iowa via NCI's SEER\*Stat Program, version 8.0.4  
Website: <http://seer.cancer.gov/seerstat/>

*All cancer mortality data from:*  
“Cause of Death” codes on death certificates filed with Vital Records, Iowa Department of Public Health via NCHS and NCI's SEER\*Stat Program, version 8.0.4.

## Injury Mortality

All Transportation

Falls

Motor Vehicle Traffic

Suicide

Firearms

Poisoning

Homicide

Burns

Drowning

All Other Unintentional

“Cause of Death” codes on death certificates filed with Vital Records, Iowa Department of Public Health. Analyses conducted by The University of Iowa, State Health Registry of Iowa.

## Youth Injury Mortality

All Transportation Ages 0-14

All Transportation Ages 15-19

Motor Vehicle Traffic Ages 0-14

Motor Vehicle Traffic Ages 15-19

Suicide Ages 0-14

Suicide Ages 15-19

Homicide Ages 0-14

Homicide Ages 15-19

“Cause of Death” codes on death certificates filed with Vital Records, Iowa Department of Public Health. Analyses conducted by the University of Iowa, State Health Registry of Iowa.

## Other Mortality

All Causes

Heart Disease

Chronic Obstructive Pulmonary Disease

Stroke

Alzheimer’s

Accidents and Adverse Effects

Diabetes Mellitus

Pneumonia/Influenza

Infectious/Parasitic

Nephritis, Nephrotic Syndrome, Nephrosis

Chronic Liver Disease and Cirrhosis

Atherosclerosis

Congenital Anomalies

Conditions Originating in the Perinatal Period

“Cause of Death” codes on death certificates filed with Vital Records, Iowa Department of Public Health via NCHS and NCI's SEER\*Stat Program, version 8.0.4.

## Health Care Providers

Total Physicians  
Primary Care Physicians  
Family Practice Physicians  
Internal Medicine Physicians  
Pediatric Physicians  
Obstetrics/Gynecology Physicians  
General Surgeons  
Other Specialty Physicians  
Physician Assistants  
Advanced Practical Nurses  
Pharmacists  
Dentists  
  
Emergency Care Providers: Total  
First Responders, EMT-Ambulance,  
EMT-Defibrillator  
Emergency Medical Responders  
Emergency Medical Technicians  
Emergency Medical Technicians: Intermediate  
Advanced Emergency Medical Technicians  
Emergency Medical Technicians: Paramedic  
Paramedics & Paramedic Specialists

Office of Statewide Clinical Education Programs  
(OSCEP), College of Medicine, The University of  
Iowa

Iowa Department of Public Health,  
Bureau of Emergency Medical Services  
Website: <http://www.idph.state.ia.us/ems/>

## Health Care Facilities

Hospitals	Department of Inspections and Appeals
Hospital Beds	Website: <a href="http://dia.iowa.gov/page11.html">http://dia.iowa.gov/page11.html</a>
Nursing Facilities	
Nursing Facility Beds	
Chronic Confusion or Dementing Illness Units	
Chronic Confusion or Dementing Illness Beds	
Intermediate Care Facilities for the Intellectually Disabled	
Intermediate Care Facilities for the Intellectually Disabled Beds	
Residential Care Facilities	
Residential Care Facilities Beds	
Residential Care Facilities for Persons with Mental Illness	
Residential Care Facilities for Persons with Mental Illness Beds	
Residential Care Facilities for the Intellectually Disabled	
Residential Care Facilities for the Intellectually Disabled Beds	
Psychiatric Medical Institutions for Children	
Psychiatric Medical Institutions for Children Beds	
Total Trauma Facilities	Iowa Department of Public Health,
Community Trauma Care Facilities	Bureau of Emergency Medical Services
Area Trauma Care Facilities	Website: <a href="http://www.idph.state.ia.us/ems/">http://www.idph.state.ia.us/ems/</a>
Regional Trauma Care Facilities	
Resource Trauma Care Facilities	

## Environmental Indicators

Childhood Lead Poisoning	Iowa Department of Public Health, Bureau of Lead Poisoning Prevention Website: <a href="http://www.idph.state.ia.us/LPP/">http://www.idph.state.ia.us/LPP/</a>
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## **Appendix II: Glossary of Terms**

## Glossary of Terms

**Advanced Emergency Medical Technician:** The Advanced Emergency Medical Technician (AEMT) level is a national classification. The Advanced Emergency Medical Technician (AEMT) is a level unlike any of the current certification levels. The skills of the AEMT fall between the current Iowa certification levels of EMT-Intermediate EMT-I) and EMT-Paramedic (EMT-P). The skills of the AEMT include those of the EMT with additional advanced skills. The advanced skills of the AEMT are high impact, lower risk procedures such as insertion of airways other than those intended to be placed in the trachea, initiation of intravenous access, and administration of a limited set of medications (NHTSA 2007).

**Age-Adjusted Rate (Direct Method):** A weighted average of the age-specific incidence or mortality rates from the targeted population(s) where the weights are the proportions of persons in the corresponding age groups of a standard population. In this document, the Year 2000 U.S. population is used as the standard population. Calculating an age-adjusted rate allows for comparisons across targeted populations after accounting or “adjusting” for possible differences in the age-distribution of these populations.

**Area Trauma Care Facility:** Provides initial evaluation and stabilization, including surgical intervention for the severely injured patient. An area trauma care facility provides comprehensive inpatient services to patients who can be maintained in a stable or improving condition without specialized care. Critically injured patients who require specialized care are transferred to a resource or regional trauma care facility. An organized trauma team including a general surgeon, emergency physician, CRNA and/or anesthesiologist, nursing and ancillary personnel are promptly available to meet the patient upon arrival at the emergency department. The general surgeon, emergency physician, and ancillary personnel may be on-call from outside the hospital but with a clear commitment to meet a patient upon arrival at the emergency department when given timely notice by out-of-hospital EMS providers. Some area trauma care facilities elect to provide in-house 24-hour emergency physician coverage. In addition to direct patient care, area trauma care facilities provide community and outreach education and injury prevention programs.

**Chronic Confusion or Dementing Illness Units:** “Chronic Confusion or Dementing Illness” is a special license classification for nursing facilities or a special unit within such a facility providing care to persons who suffer from chronic confusion or dementing illness. Reference to Chronic Confusion or Dementing Illness Units is made in the acts and joint resolutions of the 1990 regular session of the Seventy-Third General Assembly of the State of Iowa.

**Community Trauma Care Facility:** Provides initial evaluation and stabilization of the severely injured patient. Stabilization may include surgical intervention. Most patients needing surgical intervention and/or specialty care are transferred to resource or regional trauma care facilities. Community trauma care facilities have the necessary equipment and diagnostic resources to resuscitate the severely injured patient. An organized team including a physician, nursing and ancillary personnel are promptly available to meet the patient upon arrival at the emergency department if given timely notice by out-of-hospital EMS providers. In addition to patient care, a community trauma care facility provides continuing education and injury prevention programs.

**Confidence Interval:** An interval estimate of a population parameter, often for the mean, calculated from a sample. The width of the interval will increase as the level of confidence increases resulting in a less certain estimate. Narrow confidence intervals indicate a higher level of accuracy.

**Crude Rate:** The number of events or occurrences of disease in a given time period divided by the population at risk for that event or disease over the same time period.

**Emergency Medical Responder:** The Emergency Medical Responder (EMR) level is a national classification. The Emergency Medical Responder (EMR) is similar to the current First Responder (FR). The provider at the EMR level performs lifesaving care to critical patients with minimal equipment. The EMR will deliver on-scene emergency care prior to the arrival of a transporting service, though the EMR may also function as part of a transport service. The skills of the EMR are non-invasive and include the use of oxygen, oropharyngeal airways, automated external defibrillators, bleeding control and manual stabilization.

**Emergency Medical Technician:** The Emergency Medical Technician (EMT) level is a national classification. The Emergency Medical Technician (EMT) is similar to the current EMT-Basic (EMT-B). The EMT provides basic emergency care. EMT care is the minimum for transporting services. The EMT performs the skills of the EMR and uses basic equipment commonly carried by ambulances including, automated transport ventilators, over-the counter medications and use of the pneumatic anti-shock garment. EMTs also assist patients in taking prescription medications (NHTSA 2007).

**Emergency Medical Technician – Basic:** The EMT-B course emphasizes the development of student skills in patient assessment and examination; the recognition of signs and symptoms of illness or injury; proper procedures when rendering emergency medical care including patient assisted medications, automated external defibrillation, maintenance of a non-medicated IV, and the use of an advanced airway device. General topics covered include: human anatomy and physiology, bleeding and shock, bandaging and splinting, medical/behavior emergencies, obstetrics/gynecology, extrication from automobiles, farm, industrial and environmental emergencies, and ambulance operations.

**Emergency Medical Technician – Intermediate:** The EMT-I course involves additional training in patient assessment, intravenous therapy, advanced airway management techniques and automated defibrillation.

**Emergency Medical Technician – Paramedic:** This level covers additional emergency medical care skills including cardiac evaluation and treatment, medication effects and treatment, and advanced airway management techniques.

**Fetal Death:** A birth that fails to show any sign of life after delivery. Reportable fetal deaths in Iowa are those greater than 20 weeks gestation. The responsibility for determining if a birth meets this definition is that of the attending physician. “Fetal death” and “stillbirth” are synonymous terms.

**First Responder:** The First Responder is trained in patient stabilizing techniques and basic emergency medical care prior to the arrival of an ambulance. Skills in this program include patient assessment, vital signs, automated external defibrillation, oxygen delivery, and use of an advanced airway device.

**Hospital:** Any place which is devoted primarily to the maintenance of facilities for the diagnosis, treatment, or care of two or more non-related individuals suffering from illness, injury, or deformity for a period exceeding 24 hours. It is also a place which is devoted primarily to the rendering of obstetrical or other medical/nursing care for two or more non-related individuals for a period exceeding 24 hours. It can be any institution, place, building or agency in which any accommodation is primarily maintained, furnished or offered for the care of two or more non-related aged or infirmed person requiring or receiving chronic or convalescent care for a period exceeding 24 hours. Hospitals shall include sanitariums or other related institutions within the meaning of the federal Hill-Burton Act. A hospital shall include, in any event, any facilities wholly or partially constructed, or constructed with federal assistance pursuant to Public Law 725, 79th Congress, approved August 13, 1946. Definition is found in Title 42 in the Code of Federal Regulations and 135J of the Iowa Administrative Code.

**Infant Death:** Death of a liveborn infant under one year of age. This includes both neonatal and postneonatal deaths.

**Intermediate Care Facilities for the Intellectually Disabled:** Institutions or distinct parts of institutions whose primary purpose is to provide health or rehabilitative services to three or more individuals who primarily have intellectual disabilities or a related condition. Intermediate Care Facilities for the Intellectually Disabled must meet the requirements of Iowa Code Chapter 135C and federal standards codified in 42 United States Code 1936d, which is contained in Title 42 of the Code of Federal Regulations, Part 483, Subpart D, 410-480. Definition is found in Chapter 135C of the Code of Iowa.

**Intermediate Care Facilities for Persons with Mental Illness:** Institutions, places, buildings or agencies whose primary purpose is to provide accommodation, board and nursing care for a period exceeding 24 consecutive hours to three or more individuals who primarily have mental illness. Definition is found in Chapter 135C of the Code of Iowa.

**Live Birth:** A birth that shows any sign of life after delivery. The World Health Organization considers a sign of life as being the breathing or showing of any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. The responsibility for determining if a birth meets this definition is that of the attending physician.

**Margin of Error:** Indicates the accuracy of an estimate and is half the width of a confidence interval. Small margins of error signify more accurate estimates.

**Metropolitan Statistical Area (MSA):** An area with one city of 50,000 or more inhabitants or a Census defined urbanized area and a total metropolitan population of at least 100,000 (75,000 in New England).

**Neonatal Death:** Death of a liveborn infant occurring within the first 27 days of life.

**Nursing Facilities:** Institutions or distinct parts of institutions housing three or more individuals for a period exceeding 24 consecutive hours, whose primary purpose is to provide health-related care and services, including rehabilitation, for individuals who because of mental or physical condition, require nursing care and other services in addition to room and board. Nursing facilities do not engage primarily in providing treatment or care for mental illness or persons with intellectual disabilities. Definition is found in Chapter 135C of the Code of Iowa.

**Paramedic:** The Paramedic level is a national classification. The Paramedic level is similar to the current Iowa Paramedic Specialist certification. Paramedics are the highest level of out-of-hospital care and care is determined based on advanced assessment and the formulation of a field impression. The Paramedic has the largest set of skills, including invasive skills and pharmacological interventions.

**Perinatal Death:** Death of a fetus of greater than 20 weeks gestation or death of a liveborn infant under 28 days of life.

**Primary Care Physicians:** Includes Family Practice, Internal Medicine, Pediatric, and Obstetrics/Gynecology physicians

**Psychiatric Mental Institutions for Children:** Psychiatric Medical Institutions for Children are institutions that provide more than twenty-four hours of continuous care involving long-term psychiatric services to three or more children in residence. The expected periods of stay for diagnosis and evaluation are 14 days or more and for treatment the expected period of stay is 90 days or more.

**Regional Trauma Care Facility:** Provides comprehensive care for the severely injured patient with complex multisystem trauma. An organized trauma team including a general surgeon, emergency physician, anesthesiologist, nursing and ancillary personnel are immediately available to the patient upon arrival at the emergency department. The general surgeon and anesthesiologist are immediately available to the patient upon arrival at the emergency department. The general surgeon and anesthesiologist may take call from outside the hospital, but with a clear commitment to meet the patient upon arrival at the emergency department. A broad range of physician specialists are on-call and promptly available to provide care and/or consultation. In addition to direct patient care, regional trauma care facilities are responsible for community and outreach education and injury prevention.

**Residential Care Facilities:** Institutions, places, buildings, or agencies providing accommodation, board, personal assistance and other essential daily living activities for a period exceeding 24 consecutive hours. Individuals living in a residential care facility are unable to sufficiently or properly care for themselves because of illness, disease, or physical or mental infirmity, but do not require the services of a registered or licensed practical nurse, except for emergencies. Definition is found in Chapter 135C of the Code of Iowa.

**Residential Care Facilities for the Intellectually Disabled:** Facilities that provide accommodations, board, personal assistance, essential activities of daily living and habilitation services to three or more individuals with intellectual disabilities. Residents of a Residential Care Facility for the Intellectually Disabled are unable to sufficiently or properly care for themselves, but do not require the services of a registered or licensed practical nurse. The specialized license is for Residential Care Facilities which serve persons with intellectual disabilities, chronic mental illness and other developmental disabilities having five or fewer residents as specified in Iowa Code Section 225C.26. The facility is exempt from Iowa Code Section 135.63. Definition is found in Chapter 135C of the Code of Iowa.

**Residential Care Facilities for Persons with Mental Illness:** provide accommodation, board, personal assistance and other essential daily living activities to three or more individuals for a period exceeding 24 hours. Clients must be able to sufficiently or properly care for themselves, but do not require the services of a registered or licensed practical nurse. These facilities emphasize individualized program planning in an aggressive effort to assist clients to a more independent way of life. Definition is found in Iowa Code chapter 135C.

**Resource Trauma Care Facility:** Provides the most comprehensive care for the severely injured patient with complex multisystem trauma. An organized trauma team including a general surgeon, emergency physician, anesthesiologist, nursing and ancillary personnel are immediately available to the patient upon arrival at the emergency department. Physician specialists may also respond immediately with the trauma team. A broad range of physician specialists are on-call and promptly available to provide care and/or consultation. In addition to direct patient care, resource trauma care facilities are responsible for resident training, research, community and outreach education and injury prevention.

## **Appendix III: Coding and Classifications**

## Cancer Incidence and Mortality

Type of Cancer	Incidence		Mortality
	ICD-O 3 <sup>1</sup>	ICD-9 <sup>2</sup> (1979-1998)	ICD-10 <sup>3</sup> (1999-Current)
All Sites	C00.0-C80.9	140-208, 238.6	C00-C97
Cervical	C53.0-C53.9	180	C53
Colorectum	C18.0-C18.9, C19.9, C20.9, C26.0	153, 159.0, 154.0-154.1	C18, C26.0, C19-C20
Female Breast	C50.0-C50.9	174-175	C50
Leukemia	M9733, M9742, M9800-M9801, M9805, M9820, M9823 (C42.0, C42.1, C42.4), M9826, M9827 M9831, M9832-M9843, M9835-9837, M9840, M9860, M9861, M9863, M9866, M9867, M9870-M9876, M9891, M9895-M9897, M9910, M9920, M9930, M9931, M9940, M9945, M9946, M9948, M9963, M9964	202.4, 203.1, 204.0-204.2, 204.8-204.9, 205.0-205.3, 205.8-205.9, 206.1-206.2, 206.8-207.2, 207.8, 208.0-208.2, 208.8-208.9	C90.1, C91.0-C91.5, C91.7, C91.9-C92.5, C92.7, C92.9-C93.2, C93.7, C93.9-C94.5, C94.7, C95.0- C95.2, C95.7, C95.9
Lung & Bronchus	C34.0-C34.9	162.2-162.5, 162.8-162.9	C34
Non-Hodgkin's Lymphoma	M9590-M9596, M9670-M9671, M9673, M9675, M9678-M9680, M9689-M9691, M9695, M9698-M9702, M9705, M9708-M9709, M9727-M9729, M9823 (for all sites except C42.0, C42.1, C42.4), M9827 (for all sites except C42.0, C42.1, C42.4)	200, 202.0-202.2, 202.8-202.9	C82-C85, C96.3
Oral Cavity (Excluding Lip)	C01.9-C02.9, C07.9-C08.9, C04.0-C04.9, C03.0-C03.9, C05.0-C05.9, C06.0-C06.9, C11.0-C11.9, C09.0-C09.9, C10.0-C10.9,C12.9,C13.0-C13.9,C14.0,C14.2-C14.8	141-149	C01-C14
Prostate	C61.9	185	C61
Skin Melanoma	C44.0-C44.9	172	C43

<sup>1</sup>International Classification of Diseases for Oncology<sup>2</sup>International Statistical Classification of Diseases and Related Health Problems, Ninth Revision<sup>3</sup>International Statistical Classification of Diseases and Related Health Problems, Tenth Revision\*Source: [http://www.seer.cancer.gov/csr/1975\\_2008/browse\\_csr.php?section=37&page=sect\\_a\\_table.05.html](http://www.seer.cancer.gov/csr/1975_2008/browse_csr.php?section=37&page=sect_a_table.05.html)\*\*Source: [http://www.seer.cancer.gov/csr/1975\\_2008/browse\\_csr.php?section=37&page=sect\\_a\\_table.08.html](http://www.seer.cancer.gov/csr/1975_2008/browse_csr.php?section=37&page=sect_a_table.08.html)

## Injury Mortality

Injury Mortality Classification	ICD-9 <sup>2</sup> (1979-1998)	ICD-10 <sup>3</sup> (1999-Current)
Unintentional Poisoning	E850-E869	X40-X49
Unintentional Burn	E890-E899, E924	X00-X09, X10-X19
Unintentional Transportation	E800-E848, E929.0, E929.1	V01-V99, Y85
Motored Vehicle Traffic	E810-E819	V02-V04 (.1, .9), V09.2, V12-V14 (.3-.9), V19(.4-.6) V20-V28(.3-.9), V29(.4-.9) V30-V79(.4-.9), V80(.3-.5), V81.1, V82.1, V83- V86(.0-.3), V87(.0-.8), V89.2
Unintentional Drowning	E830,E832, E910	V90,V92, W65-W74
Firearm Mortality	E922, E955.0-E955.4, E965.0-E965.4, E970, E985.0-E985.4	W32-W34, X72-X74, X93- X95, Y35.0, Y22-Y24
Homicide and Legal Intervention Mortality	E960-E969, E970- E978	X85-Y09, Y87.1, Y35, Y89.0
Suicide Mortality	E950-E959	X60-X84, Y87.0
Deaths or Injuries from Falls	E880-E886.9, E888	W00-W19
All Other Unintentional Injury	E849, E870-E879, E887, E889, E900- E909, E911-E921, E923, E925-E928, E929.2-E929.9, E930-E949	W20-W31, W35-W45, W49-W60, W64, W75- W81, W83-W94, W99, X20-X39, X50-X54, X57- X59, Y40-Y66, Y69-Y84, Y86, Y88

<sup>2</sup>*International Statistical Classification of Diseases and Related Health Problems, Ninth Revision*

<sup>3</sup>*International Statistical Classification of Diseases and Related Health Problems, Tenth Revision*

**Other Mortality**

Mortality Classification	ICD-8 <sup>4</sup> (1968-1978)	ICD-9 <sup>2</sup> (1979-1998)	ICD-10 <sup>3</sup> (1999-Current)
Heart Disease	390-398, 402, 404, 410-429	390-398, 402, 404, 410-429	I00-I09, I11, I13, I20-I51
Stroke	430-438	430-438	I60-I69
COPD	490-493, 519.3	490-496	J40-J47
Pneumonia/Influenza	470-474, 480-486	480-487	J10-J18
Diabetes	250	250	E10-E14
Infectious/Parasitic	001-009, 020-037, 039-043, 045-065, 067-076, 078-089, 098-130.1, 130.3- 136	001-009, 020- 037, 039-041, 045-088, 098- 139	A00-A09, A20-A33, A35-A39, A42-A49, A54-B19, B25-B99
Chronic Liver Disease and Cirrhosis	571	571	K70, K73-K74
Diseases of Arteries, Arterioles, and Capillaries	442-448	442-448	I72-I78
Nephritis, Nephrotic Syndrome and Nephrosis	580-584, 593.0- 593.3, 593.5	580-589	N00-N07, N17- N19, N25-N27
Congenital Anomalies	740-759	740-759	Q00-Q99
Certain Conditions Originating in Perinatal Period	760-779	760-779	P00-P96

<sup>2</sup>*International Statistical Classification of Diseases and Related Health Problems, Ninth Revision*<sup>3</sup>*International Statistical Classification of Diseases and Related Health Problems, Tenth Revision*<sup>4</sup>*International Statistical Classification of Diseases and Related Health Problems, Eighth Revision*\*Source: [http://www.seer.cancer.gov/csr/1975\\_2008/browse\\_csr.php?section=37&page=sect\\_a\\_table.08.html](http://www.seer.cancer.gov/csr/1975_2008/browse_csr.php?section=37&page=sect_a_table.08.html)

## **Appendix IV: Iowa Health Data Information Resources**

## Iowa Health Data Information Resources

BEHAVIOR RISK FACTOR SURVEILLANCE SYSTEM (BRFSS): Donald Shepherd (BRFSS Coordinator), State Center for Health Statistics, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: (515) 281-7132. Fax: (515) 281-6475. E-mail: [dонаld.shepherd@idph.iowa.gov](mailto:donald.shepherd@idph.iowa.gov).

BIRTHS: Josh Jungling, Bureau of Health Statistics, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: 515-281-4945. Fax: 515-281-0479. Email: [Josh.Jungling@idph.iowa.gov](mailto:Josh.Jungling@idph.iowa.gov).

BOARD DISCIPLINARY ORDERS: Melanie Johnson, Executive Director, Iowa Dental Board, 400 SW 8<sup>th</sup> Street Suite D, Des Moines, IA 50309. Phone (515) 281-5157. Fax: (515) 281-7969. E-mail: [idb@iowa.gov](mailto:idb@iowa.gov).

BOARD OF MEDICAL EXAMINERS ANNUAL REPORTS: Mark Bowden, Iowa Board of Medicine, 400 SW 8<sup>th</sup> Street, Suite C, Des Moines, IA 50309. Phone: (515) 242-3268. Fax: (515) 242-5908. E-mail: [mark.bowden@iowa.gov](mailto:mark.bowden@iowa.gov).

CANCER INFORMATION SERVICE: Contact Joan Felkner, University of Iowa for more details. E-mail: [joan-felkner@uiowa.edu](mailto:joan-felkner@uiowa.edu).

CHILDHOOD LEAD POISONING PROGRAM: Rita Gergely, Division of Environmental Health, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: (515) 242-6340. Fax: (515) 281-4529. E-mail: [rita.gergely@idph.iowa.gov](mailto:rita.gergely@idph.iowa.gov).

DEATHS: Josh Jungling, Bureau of Health Statistics, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: 515-281-4945. Fax: 515-281-0479. Email: [Josh.Jungling@idph.iowa.gov](mailto:Josh.Jungling@idph.iowa.gov).

DENTISTS, DENTAL HYGIENISTS, DENTAL ASSISTANTS: Melanie Johnson, Executive Director, Iowa Dental Board, 400 SW 8<sup>th</sup> Street, Suite D, Des Moines, IA 50309. Phone (515) 281-5157. Fax: (515) 281-7969. E-mail: [idb@iowa.gov](mailto:idb@iowa.gov).

DIVORCES: Josh Jungling, Bureau of Health Statistics, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: 515-281-4945. Fax: 515-281-0479. Email: [Josh.Jungling@idph.iowa.gov](mailto:Josh.Jungling@idph.iowa.gov).

EMERGENCY MEDICAL SERVICES DATABASE: Terry Smith, Bureau of Emergency Medical Services, Iowa Dept. of Public Health, 321 E. 12<sup>th</sup> Street, Des Moines, IA 50319-0075. Phone: (515) 242-6075. Fax: (515) 281. E-mail: [Terry.Smith@idph.iowa.gov](mailto:Terry.Smith@idph.iowa.gov).

FETAL DEATH: Josh Jungling, Bureau of Health Statistics, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: 515-281-4945. Fax: 515-281-0479. Email: [Josh.Jungling@idph.iowa.gov](mailto:Josh.Jungling@idph.iowa.gov).

GENERAL ANESTHESIA AND CONSCIOUS SEDATION PERMITS: Melanie Johnson, Executive Director, Iowa Dental Board, 400 SW 8<sup>th</sup> Street, Suite D, Des Moines, IA 50309. Phone (515) 281-5157. Fax: (515) 281-7969. E-mail: [idb@iowa.gov](mailto:idb@iowa.gov).

HIV/AIDS REPORTING SYSTEM: Jerry Harms, HIV/AIDS/Hepatitis Surveillance Coordinator, Bureau of Disease Prevention & Immunization, Division of Acute Disease Prevention & Emergency Response, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: (515) 242-5141. Fax: (515) 281-4570. E-mail: [jerry.harms@idph.iowa.gov](mailto:jerry.harms@idph.iowa.gov).

IOWA STATEWIDE INPATIENT DATABASE: Joann Muldoon, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: (515) 242-5849. Fax: (515) 281-0479. E-mail: [Joann.Muldoon@idph.iowa.gov](mailto:Joann.Muldoon@idph.iowa.gov).

IOWA DISEASE SURVEILLANCE SYSTEM: John Satre, Center for Acute Disease Epidemiology, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: (515) 229-5849. Fax: (515) 281-5698. E-mail: [John.Satre@idph.iowa.gov](mailto:John.Satre@idph.iowa.gov).

IOWA REGISTRY FOR CONGENITAL AND INHERITED DISORDERS: Paul Romitti, PhD, Director, Iowa Registry for Congenital and Inherited Disorders, The University of Iowa, 100 BVC Room W260, The University of Iowa Research Park, Iowa City, IA 52242. Phone: (319) 335-4107. Fax: (319) 335-4030. Web site: [www.public-health.uiowa.edu/ircid/](http://www.public-health.uiowa.edu/ircid/).

LICENSED PHYSICIANS: Mark Bowden, Iowa Board of Medicine, 400 SW 8<sup>th</sup> Street, Suite C, Des Moines, IA 50309. Phone: (515) 242-3268. Fax: (515) 242-5908. E-mail: [mark.bowden@iowa.gov](mailto:mark.bowden@iowa.gov).

MARRIAGES: Josh Jungling, Bureau of Health Statistics, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: 515-281-4945. Fax: 515-281-0479. Email: [Josh.Jungling@idph.iowa.gov](mailto:Josh.Jungling@idph.iowa.gov).

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