

## 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, decreased 5.6% to 320 deaths per 100,000 persons between 1990 and 1998. After age-adjustment, heart disease affects counties of different sizes similarly. This decreasing trend is observed across all strata. There has been no decline for stroke however, and a similar trend is observed in all county groupings. The rates for chronic obstructive pulmonary disease (COPD) have been increasing across time with the larger counties having a higher mortality. In contrast, death from pneumonia and influenza is showing variability across the county levels. Diabetes has continued to increase with the smaller counties showing the largest increases. In general, atherosclerosis as a primary cause of death has been declining. Infectious and parasitic diseases have been increasing as causes of mortality in the more rural counties, but they are showing a decrease in the more urban counties. Nephritis has only shown a slight decline in the urban counties. In general, chronic liver disease was showing decline in the 1993-95 time period, but is now showing an increase for 1996-98 at all county levels. Increasing rates are observed for congenital anomalies. Deaths due to conditions originating in the perinatal period have in general remained stable or declined slightly, except in the most rural counties which are showing a slight increase for the 1996-98 period.

The source of this information is the cause of death data obtained from death certificates filed at the Iowa Department of Public Health. Analysis was done by the State Health Registry of Iowa at The University of Iowa. Age-adjusted rates were calculated using the Year 2000 US population distribution.

### *TOP TEN CAUSES OF DEATH IN IOWA...*

- Heart disease
- Cancer
- Stroke
- Respiratory disease
- Pneumonia/ influenza
- Unintentional injuries
- Diabetes
- Arteriosclerosis
- Infectious/parasitic diseases
- Alzheimer's Disease

## All Causes Mortality 1990-1998

| TOTAL         | Number  | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|---------|--------------------|-------------------------|
| State of Iowa | 248,047 | 975.3              | 821.9                   |

|  | County              |                    |                         |        | County             |                         |         |                    |                         |       |         |       |
|--|---------------------|--------------------|-------------------------|--------|--------------------|-------------------------|---------|--------------------|-------------------------|-------|---------|-------|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number  | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |       |         |       |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | 1,031              | 1,382.4                 | 774.9  | Lucas              | 1,069                   | 1,311.0 | 835.3              | Monroe                  | 947   | 1,294.3 | 864.6 |
|  | Adams               | 558                | 1,357.0                 | 824.9  | Osceola            | 745                     | 1,160.2 | 731.7              | Pocahontas              | 1,100 | 1,338.8 | 798.0 |
|  | Audubon             | 872                | 1,384.0                 | 753.5  | Ringgold           | 714                     | 1,478.6 | 774.9              | Taylor                  | 910   | 1,422.1 | 791.7 |
|  | Clarke              | 899                | 1,209.3                 | 811.5  | Van Buren          | 903                     | 1,293.0 | 874.5              | Wayne                   | 990   | 1,595.2 | 843.9 |
|  | Davis               | 902                | 1,193.7                 | 824.2  | Worth              | 927                     | 1,310.5 | 802.2              |                         |       |         |       |
|  | Decatur             | 1,021              | 1,386.5                 | 888.5  |                    |                         |         |                    |                         |       |         |       |
|  | Fremont             | 1,070              | 1,478.1                 | 960.6  |                    |                         |         |                    |                         |       |         |       |
|  | Howard              | 1,162              | 1,319.2                 | 768.9  |                    |                         |         |                    |                         |       |         |       |
|  | Ida                 | 984                | 1,334.0                 | 842.8  |                    |                         |         |                    |                         |       |         |       |
|  | <b>Group Totals</b> |                    |                         |        |                    |                         |         |                    |                         |       |         |       |
| Number: 16,804                                     |                     |                    |                         |        |                    |                         |         |                    |                         |       |         |       |
| Crude: 1,341.6                                     |                     |                    |                         |        |                    |                         |         |                    |                         |       |         |       |
| Adjusted: 819.3                                    |                     |                    |                         |        |                    |                         |         |                    |                         |       |         |       |

|  | County      |         |          |        | County     |          |         |       |            |       |         |       |
|--|-------------|---------|----------|--------|------------|----------|---------|-------|------------|-------|---------|-------|
|  | Number      | Crude   | Adjusted | Number | Crude      | Adjusted | Number  | Crude | Adjusted   |       |         |       |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 1,558   | 1,237.1  | 829.3  | Henry      | 1,781    | 1,005.4 | 785.5 | Humboldt   | 1,149 | 1,218.3 | 791.6 |
|  | Appanoose   | 1,665   | 1,353.5  | 863.9  | Iowa       | 1,516    | 1,119.3 | 796.6 | Jefferson  | 1,409 | 936.3   | 837.7 |
|  | Buena Vista | 1,899   | 1,060.7  | 757.1  | Jones      | 1,611    | 896.2   | 733.7 | Keokuk     | 1,253 | 1,203.4 | 773.0 |
|  | Butler      | 1,702   | 1,202.6  | 763.7  | Kossuth    | 1,857    | 1,138.9 | 760.1 | Louisa     | 1,062 | 1,004.3 | 845.0 |
|  | Calhoun     | 1,478   | 1,427.3  | 819.8  | Lyon       | 1,118    | 1,039.8 | 732.6 | Madison    | 1,409 | 1,189.5 | 895.7 |
|  | Cass        | 1,763   | 1,310.9  | 814.0  | Madison    | 1,409    | 1,189.5 | 895.7 | Mills      | 1,152 | 934.2   | 884.4 |
|  | Cedar       | 1,543   | 970.6    | 729.5  | Mitchell   | 1,312    | 1,325.0 | 752.6 | Monona     | 1,415 | 1,562.2 | 866.5 |
|  | Cherokee    | 1,482   | 1,199.8  | 812.7  | Montgomery | 1,582    | 1,472.2 | 870.3 | O'Brien    | 1,736 | 1,265.3 | 772.2 |
|  | Chickasaw   | 1,309   | 1,089.4  | 805.3  | Palo Alto  | 1,266    | 1,362.1 | 814.8 | Page       | 2,066 | 1,356.1 | 846.3 |
|  | Clay        | 1,609   | 1,015.2  | 771.3  | Poweshiek  | 1,817    | 1,067.2 | 784.5 | Plymouth   | 2,114 | 973.5   | 748.9 |
|  | Clayton     | 1,981   | 1,169.7  | 840.4  | Sac        | 1,493    | 1,374.4 | 807.5 | Sioux      | 2,130 | 767.6   | 663.9 |
|  | Crawford    | 1,521   | 1,021.7  | 752.8  | Shelby     | 1,419    | 1,201.3 | 753.6 | Story      | 3,834 | 572.4   | 685.5 |
|  | Delaware    | 1,439   | 872.6    | 768.1  | Tama       | 1,900    | 1,199.1 | 804.6 | Wapello    | 4,054 | 1,261.0 | 927.3 |
|  | Dickinson   | 1,554   | 1,112.2  | 750.3  | Union      | 1,455    | 1,287.4 | 875.1 | Washington | 2,058 | 1,123.2 | 774.9 |
|  | Emmet       | 1,237   | 1,218.8  | 815.2  | Winnebago  | 1,295    | 1,202.6 | 790.9 | Webster    | 4,322 | 1,214.6 | 879.0 |
|  | Floyd       | 1,883   | 1,252.3  | 838.0  | Wright     | 1,699    | 1,328.8 | 778.8 | Winneshiek | 1,636 | 868.1   | 702.0 |
|  | Franklin    | 1,199   | 1,200.1  | 776.4  |            |          |         |       |            |       |         |       |
|  | Greene      | 1,216   | 1,342.3  | 780.3  |            |          |         |       |            |       |         |       |
|  | Grundy      | 1,143   | 1,046.2  | 713.3  |            |          |         |       |            |       |         |       |
|  | Guthrie     | 1,254   | 1,236.8  | 777.8  |            |          |         |       |            |       |         |       |
| Hamilton   | 1,587       | 1,097.3 | 787.5    |        |            |          |         |       |            |       |         |       |
| Hancock  | 1,164       | 1,058.3 | 751.6    |        |            |          |         |       |            |       |         |       |
| Hardin   | 2,236       | 1,328.6 | 806.2    |        |            |          |         |       |            |       |         |       |
| Harrison   | 1,808       | 1,342.0 | 905.8    |        |            |          |         |       |            |       |         |       |

|  | County      |       |          |        | County     |          |         |       |            |       |         |       |
|--|-------------|-------|----------|--------|------------|----------|---------|-------|------------|-------|---------|-------|
|  | Number      | Crude | Adjusted | Number | Crude      | Adjusted | Number  | Crude | Adjusted   |       |         |       |
| <b>Counties with Average Population &gt;20,000</b> | Benton      | 1,894 | 882.3    | 740.2  | Mahaska    | 2,024    | 1,036.9 | 794.9 | Marion     | 2,907 | 1,053.3 | 858.2 |
|  | Boone       | 2,678 | 1,164.1  | 810.5  | Marshall   | 4,518    | 1,308.7 | 998.3 | Muscatine  | 3,349 | 912.1   | 861.3 |
|  | Bremer      | 2,053 | 985.9    | 756.6  | Plymouth   | 2,114    | 973.5   | 748.9 | Sioux      | 2,130 | 767.6   | 663.9 |
|  | Buchanan    | 1,873 | 986.7    | 882.3  | Story      | 3,834    | 572.4   | 685.5 | Wapello    | 4,054 | 1,261.0 | 927.3 |
|  | Carroll     | 2,079 | 1,072.8  | 768.5  | Washington | 2,058    | 1,123.2 | 774.9 | Webster    | 4,322 | 1,214.6 | 879.0 |
|  | Cerro Gordo | 4,548 | 1,085.2  | 823.8  | Winnebago  | 1,295    | 1,202.6 | 790.9 | Winneshiek | 1,636 | 868.1   | 702.0 |
|  | Clinton     | 4,912 | 1,075.5  | 895.4  |            |          |         |       |            |       |         |       |
|  | Des Moines  | 3,965 | 1,035.3  | 829.2  |            |          |         |       |            |       |         |       |
|  | Fayette     | 2,295 | 1,163.0  | 817.8  |            |          |         |       |            |       |         |       |
|  | Jackson     | 2,021 | 1,118.2  | 884.6  |            |          |         |       |            |       |         |       |
|  | Jasper      | 3,159 | 994.9    | 809.4  |            |          |         |       |            |       |         |       |
|  | Lee         | 3,968 | 1,135.8  | 921.6  |            |          |         |       |            |       |         |       |

|                     | County     |        |          |        | County   |          |        |       |               |       |       |       |
|---------------------|------------|--------|----------|--------|----------|----------|--------|-------|---------------|-------|-------|-------|
|                     | Number     | Crude  | Adjusted | Number | Crude    | Adjusted | Number | Crude | Adjusted      |       |       |       |
| <b>MSA Counties</b> | Black Hawk | 10,399 | 938.6    | 893.1  | Polk     | 23,823   | 766.1  | 846.6 | Pottawattamie | 6,963 | 921.4 | 883.2 |
|                     | Dallas     | 2,624  | 886.2    | 811.0  | Scott    | 11,121   | 793.6  | 894.1 | Warren        | 2,621 | 760.8 | 829.4 |
|                     | Dubuque    | 7,543  | 955.3    | 854.8  | Woodbury | 8,700    | 958.8  | 868.0 |               |       |       |       |
|                     | Johnson    | 4,179  | 465.7    | 712.0  |          |          |        |       |               |       |       |       |
|                     | Linn       | 11,877 | 747.8    | 773.2  |          |          |        |       |               |       |       |       |
| <b>Group Totals</b> |            |        |          |        |          |          |        |       |               |       |       |       |
| Number: 89,850      |            |        |          |        |          |          |        |       |               |       |       |       |
| Crude: 802.4        |            |        |          |        |          |          |        |       |               |       |       |       |
| Adjusted: 842.9     |            |        |          |        |          |          |        |       |               |       |       |       |

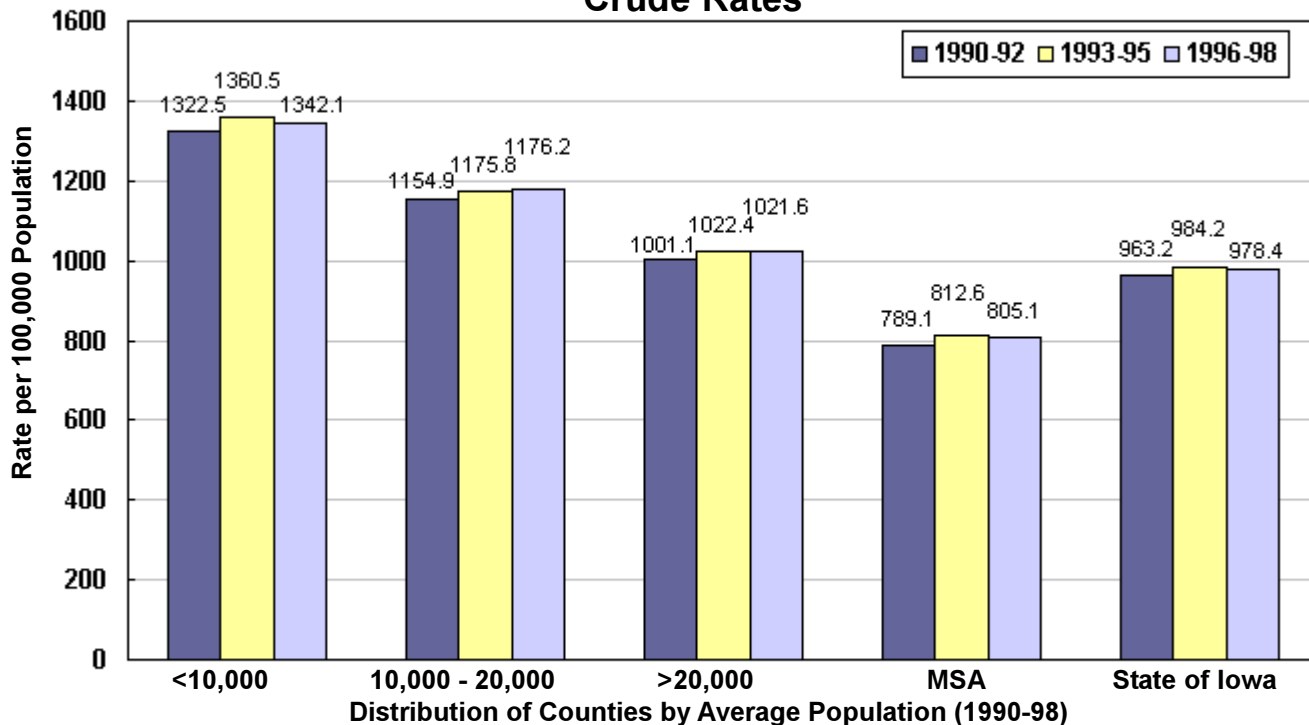
<sup>1</sup>Rates per 100,000 population

<sup>2</sup>Adjusted to Year 2000 US population

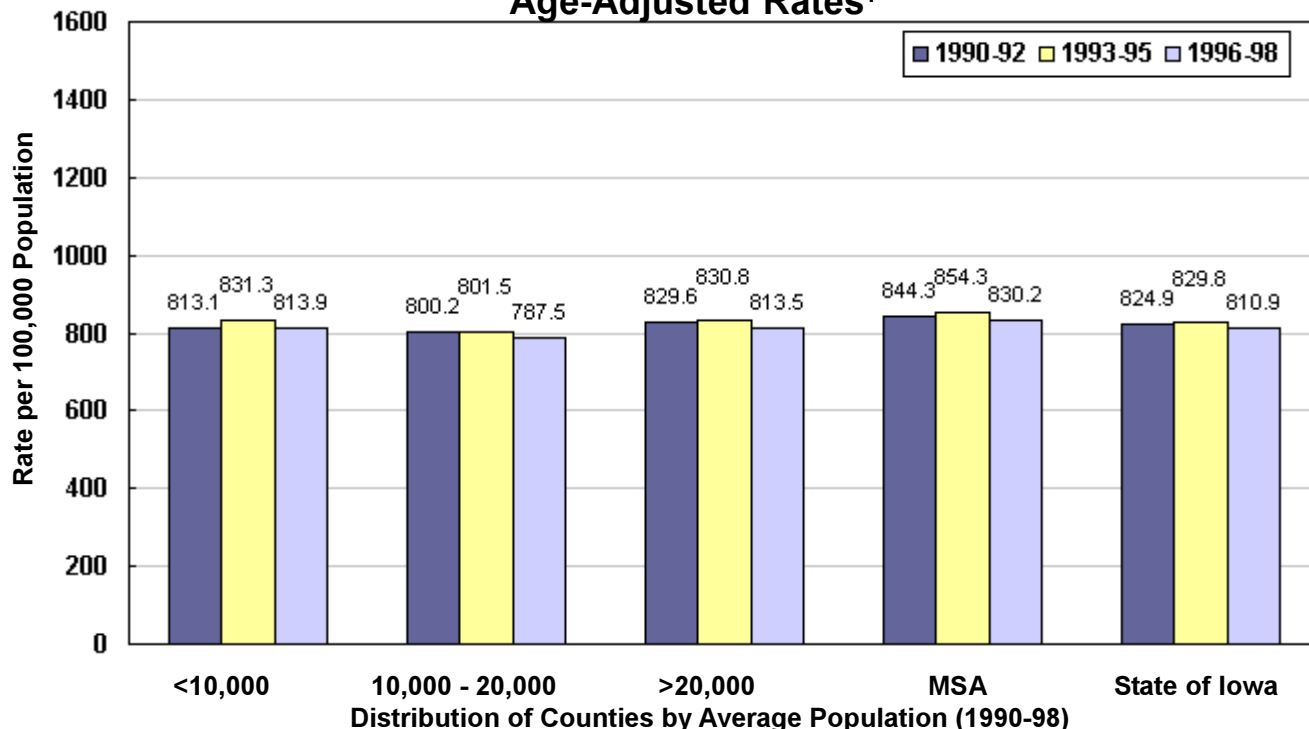
Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## All Causes Mortality by County Group 1990-1998

### Crude Rates



### Age-Adjusted Rates<sup>1</sup>



<sup>1</sup>Adjusted to Year 2000 US population

## Heart Disease Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 84,169 | 330.9              | 272.8                   |

|  | County              |                    |                         |        | County             |                         |        |                    |                         |     |       |       |
|--|---------------------|--------------------|-------------------------|--------|--------------------|-------------------------|--------|--------------------|-------------------------|-----|-------|-------|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |     |       |       |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | 324                | 434.4                   | 231.3  | Lucas              | 459                     | 562.9  | 336.6              | Monroe                  | 337 | 460.6 | 291.8 |
|  | Adams               | 188                | 457.2                   | 261.4  | Osceola            | 361                     | 562.2  | 325.2              | Pocahontas              | 352 | 428.4 | 241.9 |
|  | Audubon             | 268                | 425.4                   | 223.2  | Ringgold           | 315                     | 652.3  | 322.4              | Taylor                  | 300 | 468.8 | 253.8 |
|  | Clarke              | 340                | 457.4                   | 288.2  | Van Buren          | 311                     | 445.3  | 288.2              | Wayne                   | 326 | 525.3 | 261.0 |
|  | Davis               | 368                | 487.0                   | 314.8  | Worth              | 311                     | 439.6  | 254.4              |                         |     |       |       |
|  | Decatur             | 351                | 476.6                   | 282.8  |                    |                         |        |                    |                         |     |       |       |
|  | Fremont             | 368                | 508.4                   | 316.0  |                    |                         |        |                    |                         |     |       |       |
|  | Howard              | 388                | 440.5                   | 251.9  |                    |                         |        |                    |                         |     |       |       |
|  | Ida                 | 408                | 553.1                   | 325.4  |                    |                         |        |                    |                         |     |       |       |
|  | <b>Group Totals</b> |                    |                         |        |                    |                         |        |                    |                         |     |       |       |
| Number:  | 6,075               |                    |                         |        |                    |                         |        |                    |                         |     |       |       |
| Crude:   | 485.0               |                    |                         |        |                    |                         |        |                    |                         |     |       |       |
| Adjusted:  | 280.0               |                    |                         |        |                    |                         |        |                    |                         |     |       |       |

|  | County      |       |          |        | County    |          |        |       |            |     |       |       |
|--|-------------|-------|----------|--------|-----------|----------|--------|-------|------------|-----|-------|-------|
|  | Number      | Crude | Adjusted | Number | Crude     | Adjusted | Number | Crude | Adjusted   |     |       |       |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 470   | 373.2    | 240.2  | Henry     | 633      | 357.3  | 268.7 | Humboldt   | 407 | 431.6 | 268.9 |
|  | Appanoose   | 720   | 585.3    | 355.5  | Iowa      | 435      | 321.2  | 218.7 | Jefferson  | 479 | 318.3 | 277.2 |
|  | Buena Vista | 669   | 373.7    | 257.8  | Jones     | 528      | 293.7  | 235.2 | Keokuk     | 392 | 376.5 | 230.0 |
|  | Butler      | 587   | 414.8    | 250.7  | Kossuth   | 597      | 366.1  | 237.0 | Louisa     | 386 | 365.0 | 298.2 |
|  | Calhoun     | 469   | 452.9    | 247.8  | Lyon      | 415      | 386.0  | 260.1 | Madison    | 425 | 358.8 | 261.2 |
|  | Cass        | 566   | 420.9    | 248.3  | Mills     | 430      | 348.7  | 324.2 | Mitchell   | 464 | 468.6 | 245.0 |
|  | Cedar       | 441   | 277.4    | 204.8  | Monona    | 440      | 485.8  | 248.9 | Montgomery | 499 | 464.4 | 249.4 |
|  | Cherokee    | 549   | 444.5    | 282.7  | O'Brien   | 590      | 430.0  | 246.2 | O'Brien    | 590 | 430.0 | 246.2 |
|  | Chickasaw   | 569   | 473.6    | 338.0  | Page      | 741      | 486.4  | 284.1 | Palo Alto  | 399 | 429.3 | 245.9 |
|  | Clay        | 539   | 340.1    | 252.4  | Poweshiek | 585      | 343.6  | 243.0 | Sac        | 472 | 434.5 | 243.3 |
|  | Clayton     | 564   | 333.0    | 235.5  | Sac       | 472      | 434.5  | 243.3 | Shelby     | 601 | 508.8 | 296.2 |
|  | Crawford    | 573   | 348.9    | 272.5  | Shelby    | 601      | 508.8  | 296.2 | Tama       | 655 | 413.4 | 259.7 |
|  | Delaware    | 443   | 268.6    | 234.1  | Tama      | 655      | 413.4  | 259.7 | Union      | 616 | 545.0 | 346.1 |
|  | Dickinson   | 551   | 394.3    | 256.7  | Union     | 616      | 545.0  | 346.1 | Winnebago  | 479 | 444.8 | 278.0 |
|  | Emmet       | 422   | 415.8    | 267.1  | Winnebago | 479      | 444.8  | 278.0 | Wright     | 557 | 435.6 | 242.6 |
|  | Floyd       | 677   | 450.3    | 290.0  | Wright    | 557      | 435.6  | 242.6 |            |     |       |       |
|  | Franklin    | 440   | 440.4    | 273.1  |           |          |        |       |            |     |       |       |
|  | Greene      | 473   | 522.1    | 288.8  |           |          |        |       |            |     |       |       |
|  | Grundy      | 406   | 371.6    | 242.7  |           |          |        |       |            |     |       |       |
|  | Guthrie     | 298   | 293.9    | 182.8  |           |          |        |       |            |     |       |       |
| Hamilton   | 541         | 374.1 | 258.0    |        |           |          |        |       |            |     |       |       |
| Hancock  | 496         | 450.9 | 307.4    |        |           |          |        |       |            |     |       |       |
| Hardin   | 807         | 479.5 | 274.7    |        |           |          |        |       |            |     |       |       |
| Harrison   | 753         | 559.0 | 349.2    |        |           |          |        |       |            |     |       |       |

|  | County      |       |          |        | County     |          |        |       |            |       |       |       |
|--|-------------|-------|----------|--------|------------|----------|--------|-------|------------|-------|-------|-------|
|  | Number      | Crude | Adjusted | Number | Crude      | Adjusted | Number | Crude | Adjusted   |       |       |       |
| <b>Counties with Average Population &gt;20,000</b> | Benton      | 612   | 285.1    | 234.7  | Mahaska    | 695      | 356.0  | 264.8 | Marion     | 887   | 321.4 | 255.2 |
|  | Boone       | 998   | 433.8    | 283.5  | Marshall   | 1,346    | 389.9  | 289.8 | Muscatine  | 1,053 | 286.8 | 268.8 |
|  | Bremer      | 772   | 370.7    | 276.4  | Plymouth   | 790      | 363.8  | 270.3 | Sioux      | 675   | 243.2 | 206.9 |
|  | Buchanan    | 676   | 356.1    | 315.2  | Sioux      | 675      | 243.2  | 206.9 | Story      | 1,192 | 178.0 | 212.7 |
|  | Carroll     | 718   | 370.5    | 253.2  | Story      | 1,192    | 178.0  | 212.7 | Wapello    | 1,300 | 404.4 | 288.7 |
|  | Cerro Gordo | 1,572 | 375.1    | 275.7  | Wapello    | 1,300    | 404.4  | 288.7 | Washington | 719   | 392.4 | 259.9 |
|  | Clinton     | 1,795 | 393.0    | 321.2  | Washington | 719      | 392.4  | 259.9 | Webster    | 1,611 | 452.7 | 316.5 |
|  | Des Moines  | 1,307 | 341.3    | 265.7  | Webster    | 1,611    | 452.7  | 316.5 | Winneschik | 542   | 287.6 | 227.3 |
|  | Fayette     | 844   | 427.7    | 288.6  | Winneschik | 542      | 287.6  | 227.3 |            |       |       |       |
|  | Jackson     | 666   | 368.5    | 283.4  |            |          |        |       |            |       |       |       |
|  | Jasper      | 1,125 | 354.3    | 283.1  |            |          |        |       |            |       |       |       |
|  | Lee         | 1,479 | 423.4    | 334.9  |            |          |        |       |            |       |       |       |

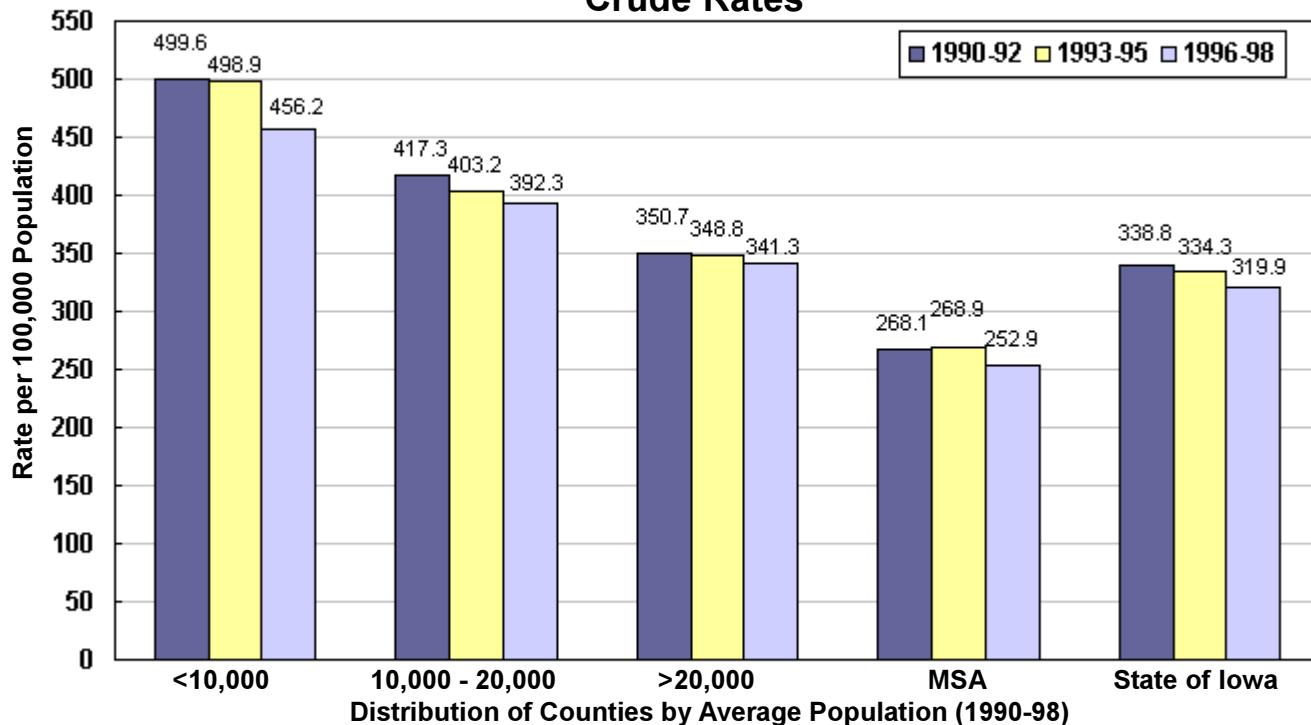
|                     | County              |       |          |        | County   |          |        |       |               |       |       |       |
|---------------------|---------------------|-------|----------|--------|----------|----------|--------|-------|---------------|-------|-------|-------|
|                     | Number              | Crude | Adjusted | Number | Crude    | Adjusted | Number | Crude | Adjusted      |       |       |       |
| <b>MSA Counties</b> | Black Hawk          | 3,392 | 306.2    | 289.3  | Polk     | 8,006    | 257.5  | 287.9 | Pottawattamie | 2,523 | 333.9 | 319.2 |
|                     | Dallas              | 855   | 288.8    | 260.3  | Scott    | 3,657    | 261.0  | 297.4 | Warren        | 853   | 247.6 | 270.1 |
|                     | Dubuque             | 2,559 | 324.1    | 285.9  | Warren   | 853      | 247.6  | 270.1 | Woodbury      | 3,016 | 332.4 | 296.4 |
|                     | Johnson             | 1,142 | 127.3    | 201.2  | Woodbury | 3,016    | 332.4  | 296.4 |               |       |       |       |
|                     | Linn                | 3,469 | 218.4    | 226.3  |          |          |        |       |               |       |       |       |
|                     | <b>Group Totals</b> |       |          |        |          |          |        |       |               |       |       |       |
| Number:             | 29,472              |       |          |        |          |          |        |       |               |       |       |       |
| Crude:              | 263.2               |       |          |        |          |          |        |       |               |       |       |       |
| Adjusted:           | 277.5               |       |          |        |          |          |        |       |               |       |       |       |

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

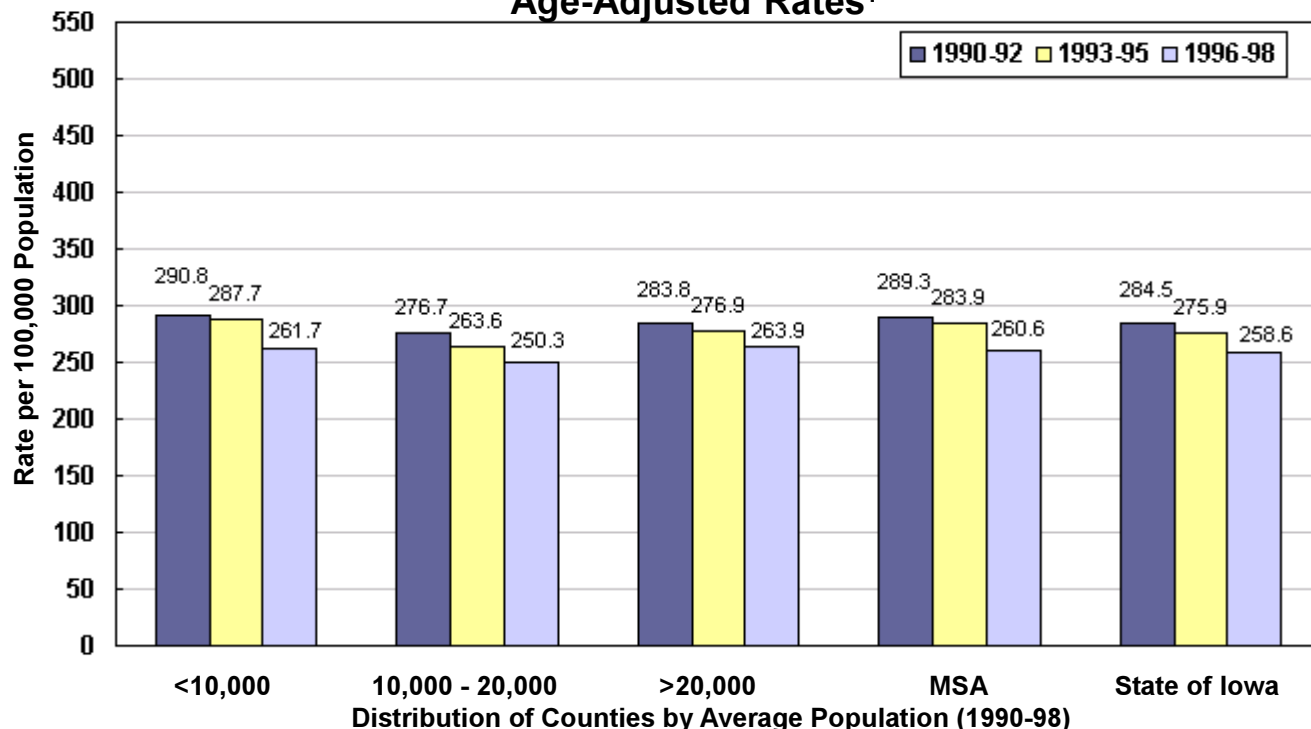
Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Heart Disease Mortality by County Group 1990-1998

### Crude Rates



### Age-Adjusted Rates<sup>1</sup>



<sup>1</sup>Adjusted to Year 2000 US population

## Stroke Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 19,185 | 75.4               | 60.6                    |

|  | County              |                    |                         |        | County             |                         |        |                    |                         |
|--|---------------------|--------------------|-------------------------|--------|--------------------|-------------------------|--------|--------------------|-------------------------|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | 62                 | 83.1                    | 44.3   | Lucas              | 75                      | 92.0   | 54.1               |                         |
|  | Adams               | 49                 | 119.2                   | 66.4   | Monroe             | 75                      | 102.5  | 61.9               |                         |
|  | Audubon             | 69                 | 109.5                   | 51.5   | Osceola            | 45                      | 70.1   | 41.8               |                         |
|  | Clarke              | 74                 | 99.5                    | 60.6   | Pocahontas         | 120                     | 146.0  | 76.0               |                         |
|  | Davis               | 68                 | 90.0                    | 57.5   | Ringgold           | 46                      | 95.3   | 45.4               |                         |
|  | Decatur             | 81                 | 110.0                   | 60.7   | Taylor             | 74                      | 115.6  | 59.2               |                         |
|  | Fremont             | 90                 | 124.3                   | 73.5   | Van Buren          | 78                      | 111.7  | 69.3               |                         |
|  | Howard              | 88                 | 99.9                    | 48.8   | Wayne              | 91                      | 146.6  | 64.8               |                         |
|  | Ida                 | 67                 | 90.8                    | 51.9   | Worth              | 99                      | 140.0  | 77.2               |                         |
|  | <b>Group Totals</b> |                    |                         |        |                    |                         |        |                    |                         |
| Number:  | 1,351               |                    |                         |        |                    |                         |        |                    |                         |
| Crude:   | 107.9               |                    |                         |        |                    |                         |        |                    |                         |
| Adjusted:  | 59.1                |                    |                         |        |                    |                         |        |                    |                         |

|  | County      |       |          |           | County     |          |        |       |
|--|-------------|-------|----------|-----------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number    | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 168   | 133.4    | 82.3      | Henry      | 163      | 92.0   | 67.1  |
|  | Appanoose   | 111   | 90.2     | 53.8      | Humboldt   | 82       | 86.9   | 53.6  |
|  | Buena Vista | 134   | 74.8     | 49.8      | Iowa       | 149      | 110.0  | 71.4  |
|  | Butler      | 161   | 113.8    | 65.9      | Jefferson  | 141      | 93.7   | 78.0  |
|  | Calhoun     | 112   | 108.2    | 55.6      | Jones      | 115      | 64.0   | 49.3  |
|  | Cass        | 167   | 124.2    | 70.1      | Keokuk     | 89       | 85.5   | 46.7  |
|  | Cedar       | 147   | 92.5     | 64.8      | Kossuth    | 177      | 108.6  | 65.1  |
|  | Cherokee    | 115   | 93.1     | 56.9      | Louisa     | 70       | 66.2   | 51.8  |
|  | Chickasaw   | 86    | 71.6     | 49.7      | Lyon       | 83       | 77.2   | 51.4  |
|  | Clay        | 123   | 77.6     | 54.1      | Madison    | 85       | 71.8   | 50.2  |
|  | Clayton     | 191   | 112.8    | 73.9      | Mills      | 62       | 50.3   | 47.3  |
|  | Crawford    | 87    | 58.4     | 41.1      | Mitchell   | 107      | 108.1  | 54.1  |
|  | Delaware    | 140   | 84.9     | 71.6      | Monona     | 84       | 92.7   | 44.3  |
|  | Dickinson   | 136   | 97.3     | 62.8      | Montgomery | 153      | 142.4  | 75.1  |
|  | Emmet       | 74    | 72.9     | 48.5      | O'Brien    | 133      | 96.9   | 52.5  |
|  | Floyd       | 142   | 94.4     | 59.3      | Page       | 172      | 112.9  | 65.3  |
|  | Franklin    | 101   | 101.1    | 59.5      | Palo Alto  | 133      | 143.1  | 75.3  |
|  | Greene      | 127   | 140.2    | 71.4      | Poweshiek  | 194      | 113.9  | 77.6  |
|  | Grundy      | 95    | 87.0     | 55.6      | Sac        | 131      | 120.6  | 62.1  |
|  | Guthrie     | 83    | 81.9     | 48.7      | Shelby     | 105      | 88.9   | 50.4  |
| Hamilton   | 85          | 58.8  | 41.0     | Tama      | 163        | 102.9    | 62.5   |       |
| Hancock  | 108         | 98.2  | 63.4     | Union     | 85         | 75.2     | 46.5   |       |
| Hardin   | 185         | 109.9 | 59.8     | Winnebago | 127        | 117.9    | 68.8   |       |
| Harrison   | 80          | 59.4  | 37.8     | Wright    | 149        | 116.5    | 61.9   |       |

|  | County      |       |          |        | County     |          |        |       |
|--|-------------|-------|----------|--------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population &gt;20,000</b> | Benton      | 134   | 62.4     | 51.1   | Mahaska    | 191      | 97.8   | 69.9  |
|  | Boone       | 193   | 83.9     | 53.3   | Marion     | 244      | 88.4   | 67.7  |
|  | Bremer      | 192   | 92.2     | 65.8   | Marshall   | 373      | 108.0  | 77.1  |
|  | Buchanan    | 124   | 65.3     | 56.8   | Muscatine  | 243      | 66.2   | 60.2  |
|  | Carroll     | 150   | 77.4     | 50.8   | Plymouth   | 197      | 90.7   | 62.9  |
|  | Cerro Gordo | 399   | 95.2     | 67.5   | Sioux      | 153      | 55.1   | 46.0  |
|  | Clinton     | 396   | 86.7     | 69.9   | Story      | 283      | 42.2   | 49.3  |
|  | Des Moines  | 277   | 72.3     | 55.0   | Wapello    | 388      | 120.7  | 82.4  |
|  | Fayette     | 187   | 94.8     | 60.6   | Washington | 135      | 73.7   | 47.1  |
|  | Jackson     | 180   | 99.6     | 73.7   | Webster    | 320      | 89.9   | 60.6  |
|  | Jasper      | 212   | 66.8     | 52.8   | Winneshek  | 127      | 67.4   | 51.5  |
|  | Lee         | 269   | 77.0     | 59.8   |            |          |        |       |

|                     | County              |       |          |        | County        |          |        |       |          |
|---------------------|---------------------|-------|----------|--------|---------------|----------|--------|-------|----------|
|                     | Number              | Crude | Adjusted | Number | Crude         | Adjusted | Number | Crude | Adjusted |
| <b>MSA Counties</b> | Black Hawk          | 921   | 83.1     | 78.2   | Polk          | 1,387    | 44.6   | 50.0  |          |
|                     | Dallas              | 211   | 71.3     | 62.9   | Pottawattamie | 396      | 52.4   | 50.4  |          |
|                     | Dubuque             | 658   | 83.3     | 72.4   | Scott         | 1,032    | 73.6   | 85.7  |          |
|                     | Johnson             | 315   | 35.1     | 55.4   | Warren        | 208      | 60.4   | 66.1  |          |
|                     | Linn                | 853   | 53.7     | 55.6   | Woodbury      | 576      | 63.5   | 55.6  |          |
|                     | <b>Group Totals</b> |       |          |        |               |          |        |       |          |
| Number:             | 6,557               |       |          |        |               |          |        |       |          |
| Crude:              | 58.6                |       |          |        |               |          |        |       |          |
| Adjusted:           | 61.6                |       |          |        |               |          |        |       |          |

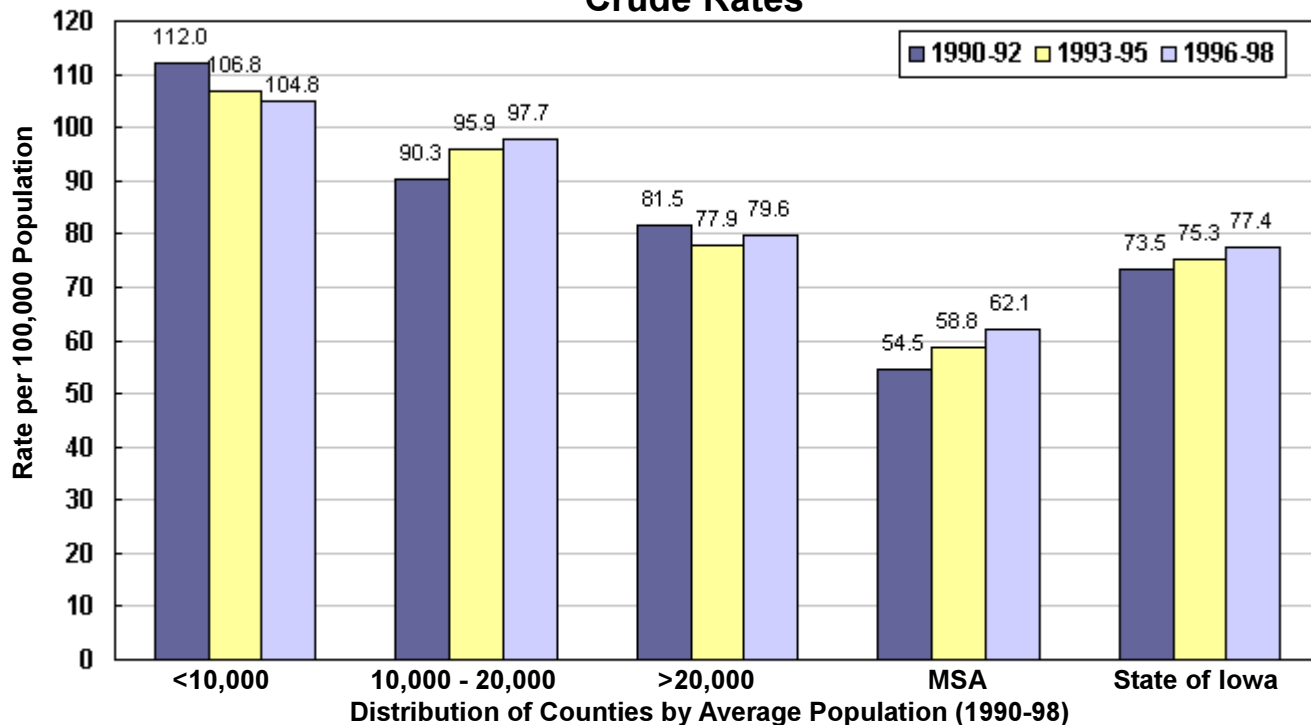
<sup>1</sup>Rates per 100,000 population

<sup>2</sup>Adjusted to Year 2000 US population

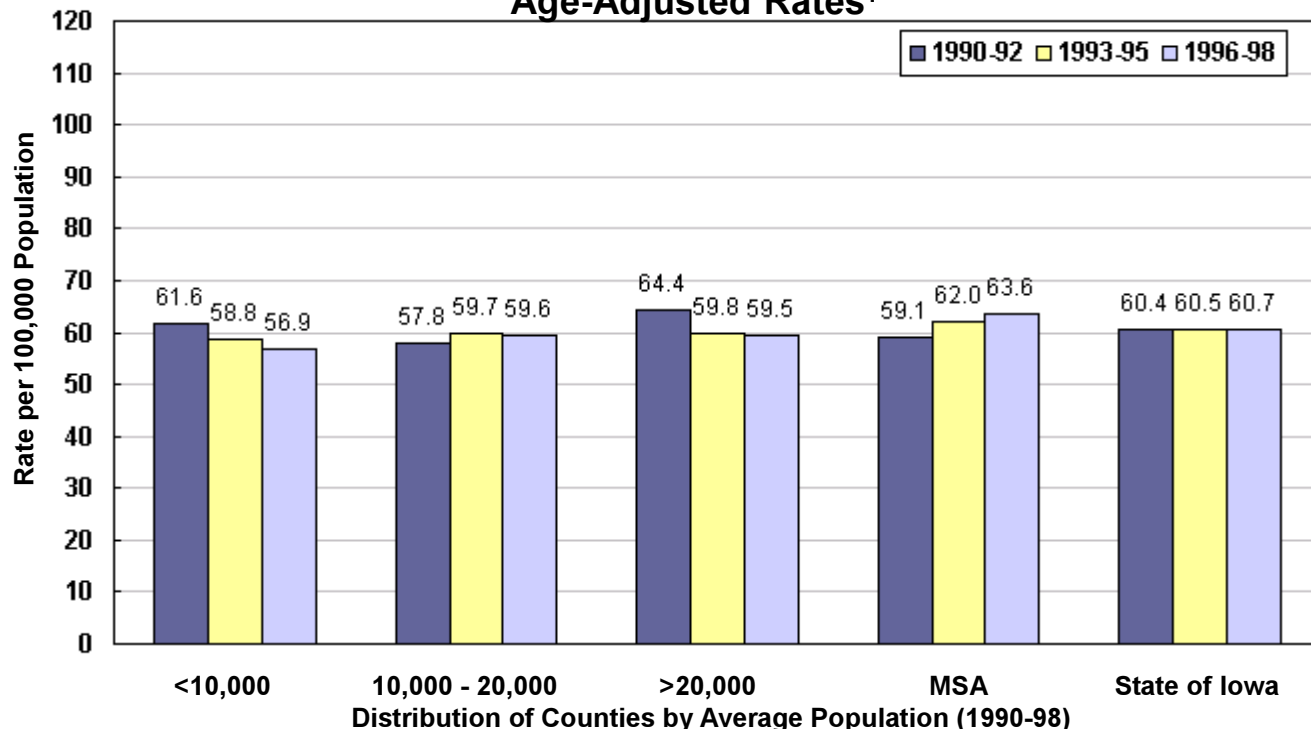
Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Stroke Mortality by County Group 1990-1998

### Crude Rates



### Age-Adjusted Rates<sup>1</sup>



<sup>1</sup>Adjusted to Year 2000 US population

# Chronic Obstructive Pulmonary Disease Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 11,640 | 45.8               | 38.3                    |

|  | County              |                    |                         |        | County             |                         |        |                    |                         |
|--|---------------------|--------------------|-------------------------|--------|--------------------|-------------------------|--------|--------------------|-------------------------|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | 47                 | 63.0                    | 35.2   | Lucas              | 35                      | 42.9   | 27.8               |                         |
|  | Adams               | 20                 | 48.6                    | 28.4   | Monroe             | 46                      | 62.9   | 40.9               |                         |
|  | Audubon             | 56                 | 88.9                    | 45.2   | Osceola            | 25                      | 38.9   | 25.6               |                         |
|  | Clarke              | 34                 | 45.7                    | 29.8   | Pocahontas         | 41                      | 49.9   | 30.1               |                         |
|  | Davis               | 23                 | 30.4                    | 19.9   | Ringgold           | 29                      | 60.1   | 31.3               |                         |
|  | Decatur             | 35                 | 47.5                    | 32.2   | Taylor             | 51                      | 79.7   | 41.2               |                         |
|  | Fremont             | 62                 | 85.6                    | 53.6   | Van Buren          | 36                      | 51.5   | 33.3               |                         |
|  | Howard              | 49                 | 55.6                    | 31.1   | Wayne              | 35                      | 56.4   | 28.5               |                         |
|  | Ida                 | 46                 | 62.4                    | 39.8   | Worth              | 35                      | 49.5   | 29.9               |                         |
|  | <b>Group Totals</b> |                    |                         |        |                    |                         |        |                    |                         |
| Number:  | 705                 |                    |                         |        |                    |                         |        |                    |                         |
| Crude:   | 56.3                |                    |                         |        |                    |                         |        |                    |                         |
| Adjusted:  | 33.6                |                    |                         |        |                    |                         |        |                    |                         |

|  | County      |       |          |           | County     |          |        |       |
|--|-------------|-------|----------|-----------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number    | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 53    | 42.1     | 28.3      | Henry      | 56       | 31.6   | 24.2  |
|  | Appanoose   | 52    | 42.3     | 26.9      | Humboldt   | 46       | 48.8   | 31.5  |
|  | Buena Vista | 87    | 48.6     | 32.9      | Iowa       | 61       | 45.0   | 31.8  |
|  | Butler      | 80    | 56.5     | 35.1      | Jefferson  | 69       | 45.9   | 40.9  |
|  | Calhoun     | 59    | 57.0     | 35.0      | Jones      | 85       | 47.3   | 37.7  |
|  | Cass        | 96    | 71.4     | 43.3      | Keokuk     | 57       | 54.7   | 33.7  |
|  | Cedar       | 80    | 50.3     | 37.7      | Kossuth    | 72       | 44.2   | 28.3  |
|  | Cherokee    | 80    | 64.8     | 42.4      | Louisa     | 36       | 34.0   | 29.3  |
|  | Chickasaw   | 74    | 61.6     | 44.1      | Lyon       | 34       | 31.6   | 21.6  |
|  | Clay        | 76    | 48.0     | 35.9      | Madison    | 61       | 51.5   | 39.8  |
|  | Clayton     | 91    | 53.7     | 37.0      | Mills      | 51       | 41.4   | 39.0  |
|  | Crawford    | 65    | 43.7     | 30.7      | Mitchell   | 39       | 39.4   | 22.5  |
|  | Delaware    | 65    | 39.4     | 33.4      | Monona     | 72       | 79.5   | 43.3  |
|  | Dickinson   | 61    | 43.7     | 27.4      | Montgomery | 92       | 85.6   | 52.7  |
|  | Emmet       | 44    | 43.4     | 29.8      | O'Brien    | 78       | 56.9   | 32.1  |
|  | Floyd       | 74    | 49.2     | 32.6      | Page       | 112      | 73.5   | 45.4  |
|  | Franklin    | 34    | 34.0     | 22.6      | Palo Alto  | 61       | 65.6   | 36.8  |
|  | Greene      | 56    | 61.8     | 33.1      | Poweshiek  | 78       | 45.8   | 34.8  |
|  | Grundy      | 49    | 44.9     | 28.7      | Sac        | 69       | 63.5   | 36.2  |
|  | Guthrie     | 60    | 59.2     | 36.7      | Shelby     | 47       | 39.8   | 25.3  |
| Hamilton   | 61          | 42.2  | 28.9     | Tama      | 78         | 49.2     | 31.7   |       |
| Hancock  | 32          | 29.1  | 20.4     | Union     | 64         | 56.6     | 39.4   |       |
| Hardin   | 78          | 46.3  | 27.1     | Winnebago | 43         | 39.9     | 28.1   |       |
| Harrison   | 85          | 63.1  | 44.2     | Wright    | 56         | 43.8     | 25.2   |       |

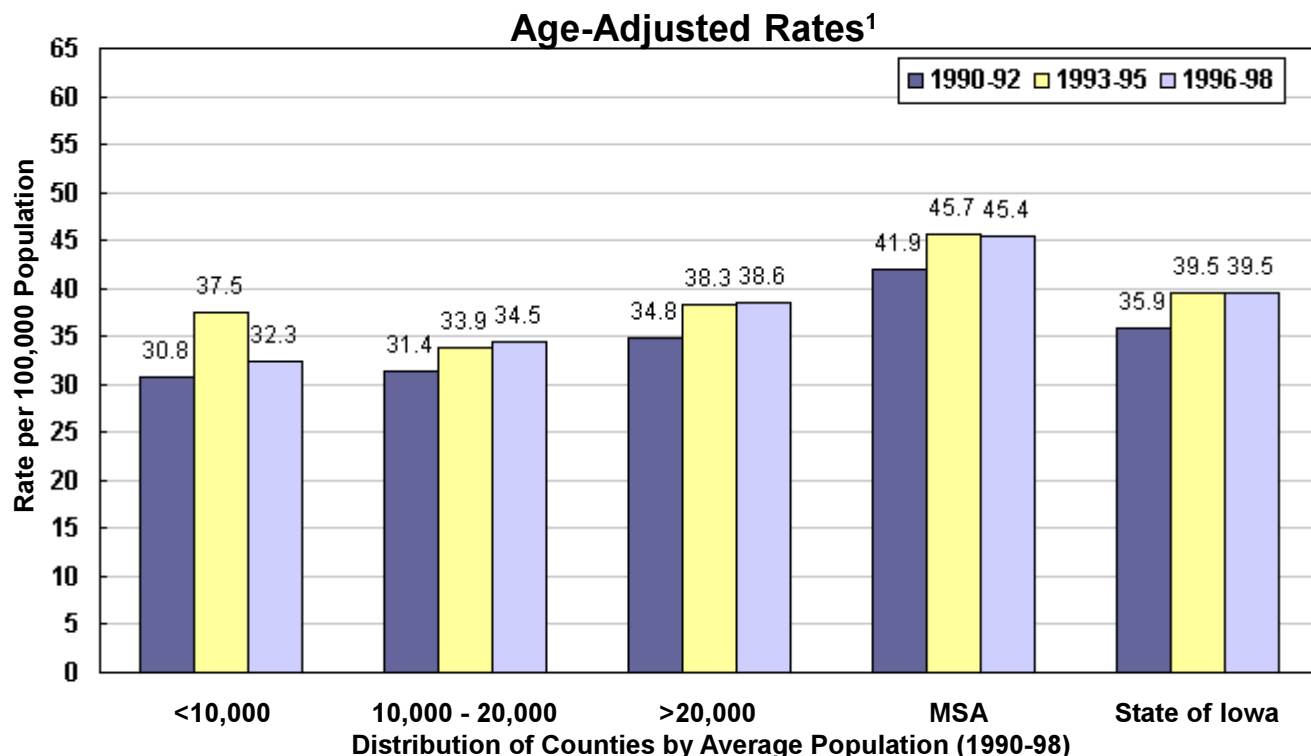
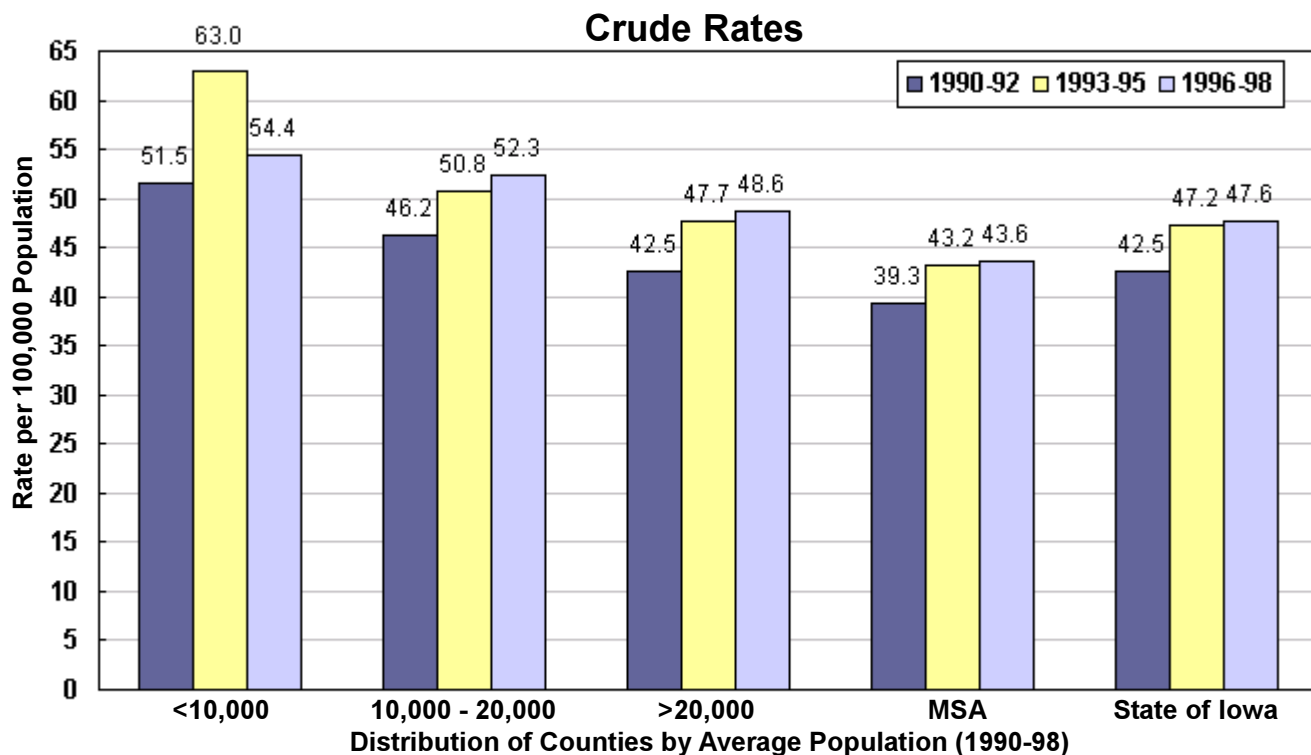
|  | County      |       |          |        | County     |          |        |       |
|--|-------------|-------|----------|--------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population &gt;20,000</b> | Benton      | 103   | 48.0     | 38.3   | Mahaska    | 75       | 38.4   | 28.4  |
|  | Boone       | 107   | 46.5     | 33.1   | Marion     | 134      | 48.6   | 38.9  |
|  | Bremer      | 76    | 36.5     | 27.8   | Marshall   | 245      | 71.0   | 53.9  |
|  | Buchanan    | 91    | 47.9     | 41.4   | Muscatine  | 169      | 46.0   | 44.0  |
|  | Carroll     | 116   | 59.9     | 42.7   | Plymouth   | 85       | 39.1   | 29.5  |
|  | Cerro Gordo | 209   | 49.9     | 37.6   | Sioux      | 82       | 29.5   | 25.3  |
|  | Clinton     | 265   | 58.0     | 47.1   | Story      | 141      | 21.0   | 25.4  |
|  | Des Moines  | 172   | 44.9     | 36.3   | Wapello    | 226      | 70.3   | 50.3  |
|  | Fayette     | 94    | 47.6     | 32.1   | Washington | 117      | 63.9   | 43.1  |
|  | Jackson     | 94    | 52.0     | 40.0   | Webster    | 167      | 46.9   | 34.1  |
|  | Jasper      | 127   | 40.0     | 31.6   | Winneshek  | 57       | 30.2   | 24.1  |
|  | Lee         | 165   | 47.2     | 37.4   |            |          |        |       |

|                     | County              |       |          |        | County        |          |        |       |          |
|---------------------|---------------------|-------|----------|--------|---------------|----------|--------|-------|----------|
|                     | Number              | Crude | Adjusted | Number | Crude         | Adjusted | Number | Crude | Adjusted |
| <b>MSA Counties</b> | Black Hawk          | 532   | 48.0     | 44.9   | Polk          | 1,137    | 36.6   | 41.0  |          |
|                     | Dallas              | 116   | 39.2     | 36.0   | Pottawattamie | 366      | 48.4   | 45.3  |          |
|                     | Dubuque             | 354   | 44.8     | 39.9   | Scott         | 654      | 46.7   | 52.4  |          |
|                     | Johnson             | 202   | 22.5     | 36.5   | Warren        | 135      | 39.2   | 44.7  |          |
|                     | Linn                | 727   | 45.8     | 47.6   | Woodbury      | 486      | 53.6   | 48.5  |          |
|                     | <b>Group Totals</b> |       |          |        |               |          |        |       |          |
| Number:             | 4,709               |       |          |        |               |          |        |       |          |
| Crude:              | 42.1                |       |          |        |               |          |        |       |          |
| Adjusted:           | 44.4                |       |          |        |               |          |        |       |          |

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

Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Chronic Obstructive Pulmonary Disease Mortality by County Group 1990-1998



<sup>1</sup>Adjusted to Year 2000 US population

## Pneumonia/Influenza Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 10,959 | 43.1               | 34.1                    |

|  | County              |                    |                         |        | County             |                         |        |                    |                         |
|--|---------------------|--------------------|-------------------------|--------|--------------------|-------------------------|--------|--------------------|-------------------------|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | 125                | 167.6                   | 76.8   | Lucas              | 43                      | 52.7   | 29.6               |                         |
|  | Adams               | 17                 | 43.1                    | 20.5   | Monroe             | 49                      | 67.0   | 39.6               |                         |
|  | Audubon             | 23                 | 36.5                    | 17.2   | Osceola            | 36                      | 56.1   | 31.3               |                         |
|  | Clarke              | 41                 | 55.2                    | 31.2   | Pocahontas         | 75                      | 91.3   | 47.2               |                         |
|  | Davis               | 38                 | 50.3                    | 30.7   | Ringgold           | 16                      | 33.1   | 17.4               |                         |
|  | Decatur             | 74                 | 100.5                   | 54.9   | Taylor             | 43                      | 67.2   | 32.5               |                         |
|  | Fremont             | 75                 | 103.6                   | 61.0   | Van Buren          | 55                      | 78.8   | 48.8               |                         |
|  | Howard              | 73                 | 82.9                    | 41.7   | Wayne              | 55                      | 88.6   | 38.4               |                         |
|  | Ida                 | 38                 | 51.5                    | 27.9   | Worth              | 36                      | 50.9   | 26.4               |                         |
|  | <b>Group Totals</b> |                    |                         |        |                    |                         |        |                    |                         |
| Number:  | 912                 |                    |                         |        |                    |                         |        |                    |                         |
| Crude:   | 72.8                |                    |                         |        |                    |                         |        |                    |                         |
| Adjusted:  | 38.2                |                    |                         |        |                    |                         |        |                    |                         |

|  | County      |       |          |           | County     |          |        |       |
|--|-------------|-------|----------|-----------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number    | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 71    | 56.4     | 33.4      | Henry      | 110      | 62.1   | 44.0  |
|  | Appanoose   | 86    | 69.9     | 40.2      | Humboldt   | 68       | 72.1   | 42.4  |
|  | Buena Vista | 96    | 53.6     | 35.8      | Iowa       | 87       | 64.2   | 42.3  |
|  | Butler      | 68    | 48.0     | 27.9      | Jefferson  | 44       | 29.2   | 25.6  |
|  | Calhoun     | 80    | 77.3     | 38.1      | Jones      | 59       | 32.8   | 25.2  |
|  | Cass        | 49    | 36.4     | 21.0      | Keokuk     | 49       | 47.1   | 25.6  |
|  | Cedar       | 64    | 40.3     | 27.5      | Kossuth    | 70       | 42.9   | 26.6  |
|  | Cherokee    | 52    | 42.1     | 26.9      | Louisa     | 51       | 48.2   | 37.2  |
|  | Chickasaw   | 39    | 32.5     | 22.5      | Lyon       | 31       | 28.8   | 18.4  |
|  | Clay        | 68    | 42.9     | 29.9      | Madison    | 88       | 74.3   | 51.0  |
|  | Clayton     | 103   | 60.8     | 39.4      | Mills      | 72       | 58.4   | 54.2  |
|  | Crawford    | 35    | 23.5     | 15.6      | Mitchell   | 40       | 40.4   | 18.6  |
|  | Delaware    | 73    | 44.3     | 36.8      | Monona     | 76       | 83.9   | 39.3  |
|  | Dickinson   | 63    | 45.1     | 29.4      | Montgomery | 72       | 67.0   | 35.3  |
|  | Emmet       | 55    | 54.2     | 31.9      | O'Brien    | 87       | 63.4   | 32.6  |
|  | Floyd       | 79    | 52.5     | 31.7      | Page       | 98       | 64.3   | 35.5  |
|  | Franklin    | 44    | 44.0     | 26.3      | Palo Alto  | 53       | 57.0   | 30.6  |
|  | Greene      | 31    | 34.2     | 17.1      | Poweshiek  | 67       | 39.4   | 26.7  |
|  | Grundy      | 54    | 49.4     | 31.8      | Sac        | 69       | 63.5   | 34.4  |
|  | Guthrie     | 42    | 41.4     | 23.5      | Shelby     | 57       | 48.3   | 26.5  |
| Hamilton   | 52          | 36.0  | 24.0     | Tama      | 74         | 46.7     | 27.1   |       |
| Hancock  | 55          | 50.0  | 33.3     | Union     | 46         | 40.7     | 23.3   |       |
| Hardin   | 96          | 57.0  | 31.2     | Winnebago | 77         | 71.5     | 40.2   |       |
| Harrison   | 60          | 44.5  | 27.7     | Wright    | 99         | 77.4     | 40.5   |       |

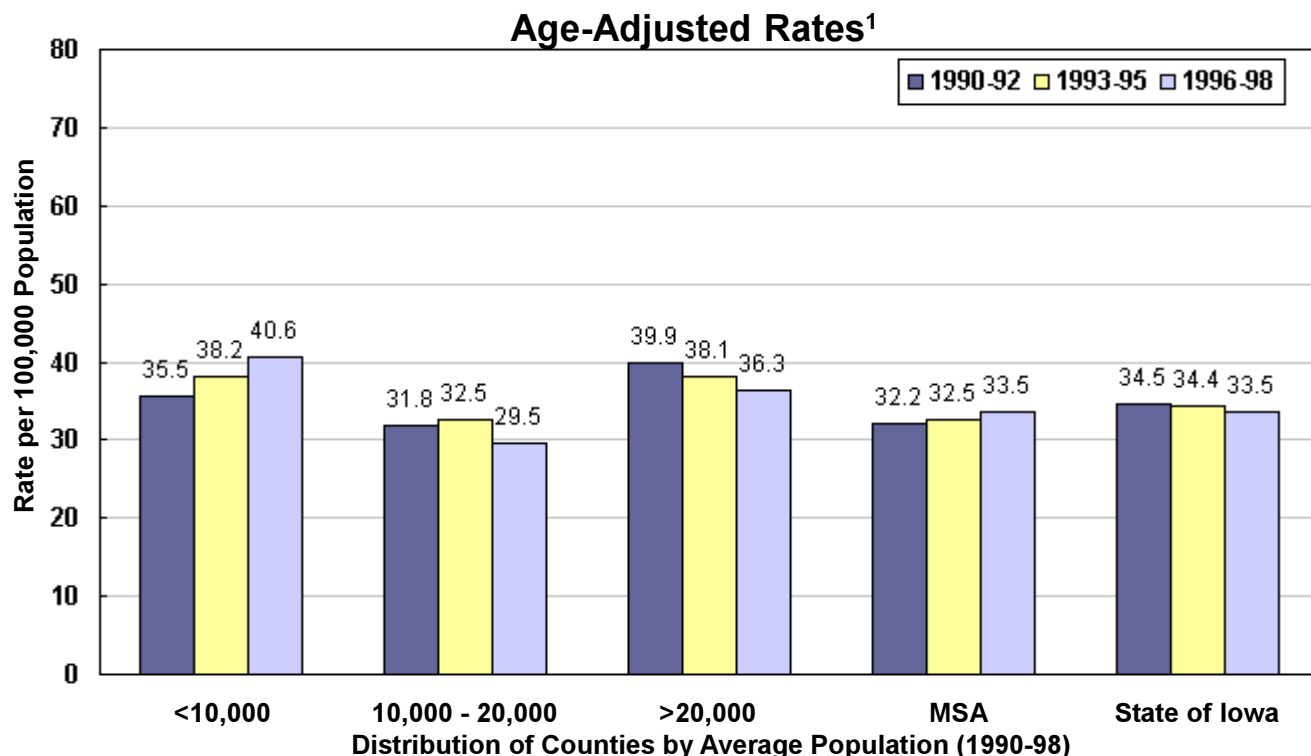
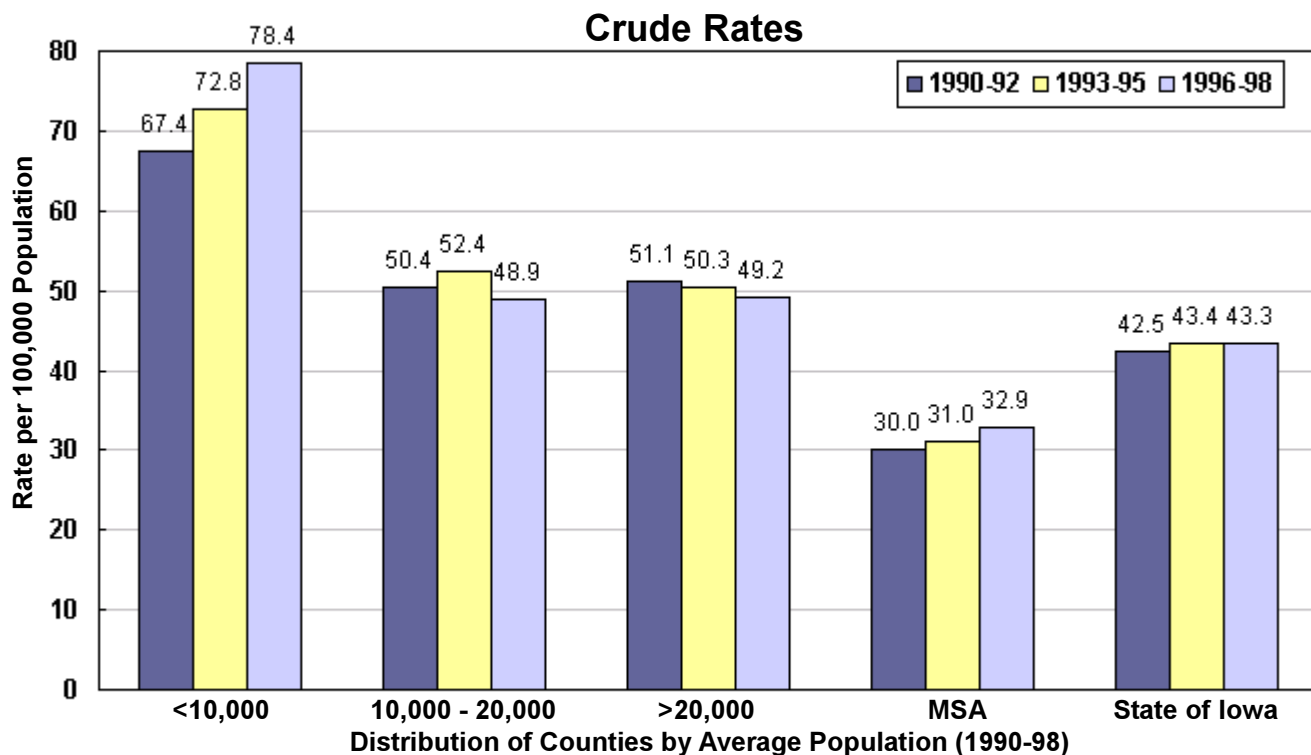
|  | County      |       |          |        | County     |          |        |       |
|--|-------------|-------|----------|--------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population &gt;20,000</b> | Benton      | 90    | 41.9     | 34.1   | Mahaska    | 79       | 40.5   | 29.0  |
|  | Boone       | 126   | 54.8     | 35.3   | Marion     | 215      | 77.9   | 59.8  |
|  | Bremer      | 78    | 37.5     | 25.9   | Marshall   | 202      | 58.5   | 41.1  |
|  | Buchanan    | 60    | 31.6     | 27.6   | Muscatine  | 252      | 68.6   | 60.6  |
|  | Carroll     | 122   | 63.0     | 39.9   | Plymouth   | 70       | 32.2   | 22.6  |
|  | Cerro Gordo | 235   | 56.1     | 39.3   | Sioux      | 107      | 38.6   | 31.7  |
|  | Clinton     | 184   | 40.3     | 32.5   | Story      | 178      | 26.6   | 30.4  |
|  | Des Moines  | 150   | 39.2     | 29.2   | Wapello    | 213      | 66.3   | 45.5  |
|  | Fayette     | 122   | 61.8     | 39.7   | Washington | 114      | 62.2   | 38.5  |
|  | Jackson     | 112   | 62.0     | 45.9   | Webster    | 309      | 86.8   | 55.9  |
|  | Jasper      | 111   | 35.0     | 27.3   | Winneshek  | 81       | 43.0   | 32.8  |
|  | Lee         | 172   | 49.2     | 38.0   |            |          |        |       |

|                     | County              |       |          |        | County        |          |        |       |          |
|---------------------|---------------------|-------|----------|--------|---------------|----------|--------|-------|----------|
|                     | Number              | Crude | Adjusted | Number | Crude         | Adjusted | Number | Crude | Adjusted |
| <b>MSA Counties</b> | Black Hawk          | 260   | 23.5     | 22.0   | Polk          | 1,010    | 32.5   | 36.3  |          |
|                     | Dallas              | 144   | 48.6     | 42.2   | Pottawattamie | 252      | 33.3   | 32.1  |          |
|                     | Dubuque             | 409   | 51.8     | 43.9   | Scott         | 367      | 26.2   | 30.3  |          |
|                     | Johnson             | 152   | 16.9     | 26.5   | Warren        | 152      | 44.1   | 47.1  |          |
|                     | Linn                | 416   | 26.2     | 27.0   | Woodbury      | 344      | 37.9   | 33.0  |          |
|                     | <b>Group Totals</b> |       |          |        |               |          |        |       |          |
| Number:             | 3,506               |       |          |        |               |          |        |       |          |
| Crude:              | 31.3                |       |          |        |               |          |        |       |          |
| Adjusted:           | 32.7                |       |          |        |               |          |        |       |          |

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

Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Pneumonia/Influenza Mortality by County Group 1990-1998



<sup>1</sup>Adjusted to Year 2000 US population

## Diabetes Mellitus Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 5,420  | 21.3               | 18.2                    |

|  | County              |                    |                         |        | County             |                         |        |                    |                         |
|--|---------------------|--------------------|-------------------------|--------|--------------------|-------------------------|--------|--------------------|-------------------------|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | 20                 | 26.8                    | 13.5   | Lucas              | 12                      | 14.7   | 8.6                |                         |
|  | Adams               | 6                  | 14.6                    | 8.9    | Monroe             | 15                      | 20.5   | 14.9               |                         |
|  | Audubon             | 26                 | 41.3                    | 23.0   | Osceola            | 7                       | 10.9   | 7.7                |                         |
|  | Clarke              | 14                 | 18.8                    | 11.1   | Pocahontas         | 16                      | 19.5   | 12.5               |                         |
|  | Davis               | 25                 | 33.1                    | 22.5   | Ringgold           | 21                      | 43.5   | 22.5               |                         |
|  | Decatur             | 15                 | 20.4                    | 13.8   | Taylor             | 29                      | 45.3   | 26.7               |                         |
|  | Fremont             | 22                 | 30.4                    | 18.5   | Van Buren          | 31                      | 44.4   | 30.1               |                         |
|  | Howard              | 24                 | 27.2                    | 16.3   | Wayne              | 34                      | 54.8   | 30.3               |                         |
|  | Ida                 | 35                 | 47.4                    | 29.0   | Worth              | 17                      | 24.0   | 12.8               |                         |
|  | <b>Group Totals</b> |                    |                         |        |                    |                         |        |                    |                         |
| Number:  | 369                 |                    |                         |        |                    |                         |        |                    |                         |
| Crude:   | 29.5                |                    |                         |        |                    |                         |        |                    |                         |
| Adjusted:  | 17.8                |                    |                         |        |                    |                         |        |                    |                         |

|  | County      |       |          |           | County     |          |        |       |
|--|-------------|-------|----------|-----------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number    | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 32    | 25.4     | 17.6      | Henry      | 33       | 18.6   | 15.5  |
|  | Appanoose   | 29    | 23.6     | 14.6      | Humboldt   | 18       | 19.1   | 14.1  |
|  | Buena Vista | 40    | 22.3     | 15.2      | Iowa       | 48       | 35.4   | 25.2  |
|  | Butler      | 27    | 19.1     | 12.3      | Jefferson  | 48       | 31.9   | 29.9  |
|  | Calhoun     | 28    | 27.0     | 15.9      | Jones      | 54       | 30.0   | 23.7  |
|  | Cass        | 53    | 39.4     | 23.8      | Keokuk     | 43       | 41.3   | 26.8  |
|  | Cedar       | 45    | 28.3     | 20.3      | Kossuth    | 32       | 19.6   | 14.6  |
|  | Cherokee    | 29    | 23.5     | 16.7      | Louisa     | 21       | 19.9   | 15.7  |
|  | Chickasaw   | 23    | 19.1     | 14.2      | Lyon       | 21       | 19.5   | 13.1  |
|  | Clay        | 34    | 21.5     | 17.3      | Madison    | 36       | 30.4   | 23.5  |
|  | Clayton     | 49    | 28.9     | 21.1      | Mills      | 16       | 13.0   | 12.1  |
|  | Crawford    | 53    | 35.6     | 25.5      | Mitchell   | 25       | 25.2   | 15.0  |
|  | Delaware    | 37    | 22.4     | 19.3      | Monona     | 48       | 53.0   | 29.8  |
|  | Dickinson   | 41    | 29.3     | 19.1      | Montgomery | 45       | 41.9   | 24.3  |
|  | Emmet       | 48    | 47.3     | 31.0      | O'Brien    | 41       | 29.9   | 18.9  |
|  | Floyd       | 26    | 17.3     | 11.8      | Page       | 57       | 37.4   | 24.5  |
|  | Franklin    | 22    | 22.0     | 15.0      | Palo Alto  | 23       | 24.7   | 14.5  |
|  | Greene      | 20    | 22.1     | 14.4      | Poweshiek  | 43       | 25.3   | 20.0  |
|  | Grundy      | 23    | 21.1     | 15.1      | Sac        | 28       | 25.8   | 15.8  |
|  | Guthrie     | 18    | 17.8     | 11.3      | Shelby     | 20       | 16.9   | 11.1  |
| Hamilton   | 71          | 49.1  | 34.5     | Tama      | 45         | 28.4     | 18.8   |       |
| Hancock  | 21          | 19.1  | 13.4     | Union     | 35         | 31.0     | 21.3   |       |
| Hardin   | 39          | 23.2  | 14.9     | Winnebago | 23         | 21.4     | 15.7   |       |
| Harrison   | 45          | 33.4  | 21.9     | Wright    | 42         | 32.8     | 19.5   |       |

|  | County      |       |          |        | County     |          |        |       |
|--|-------------|-------|----------|--------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population &gt;20,000</b> | Benton      | 46    | 21.4     | 18.0   | Mahaska    | 46       | 23.6   | 18.7  |
|  | Boone       | 67    | 29.1     | 21.6   | Marion     | 63       | 22.8   | 18.9  |
|  | Bremer      | 29    | 13.9     | 11.1   | Marshall   | 103      | 29.8   | 23.6  |
|  | Buchanan    | 62    | 32.7     | 28.2   | Muscatine  | 58       | 15.8   | 15.3  |
|  | Carroll     | 34    | 17.5     | 12.1   | Plymouth   | 49       | 22.6   | 17.3  |
|  | Cerro Gordo | 88    | 21.0     | 16.9   | Sioux      | 75       | 27.0   | 23.4  |
|  | Clinton     | 99    | 21.7     | 18.0   | Story      | 63       | 9.4    | 11.8  |
|  | Des Moines  | 71    | 18.5     | 15.2   | Wapello    | 113      | 35.1   | 26.1  |
|  | Fayette     | 36    | 18.2     | 12.5   | Washington | 59       | 32.2   | 22.7  |
|  | Jackson     | 36    | 19.9     | 15.9   | Webster    | 40       | 11.2   | 8.9   |
|  | Jasper      | 50    | 15.7     | 12.8   | Winneshek  | 41       | 21.8   | 17.4  |
|  | Lee         | 58    | 16.6     | 13.0   |            |          |        |       |

|                     | County              |       |          |        | County        |          |        |       |          |
|---------------------|---------------------|-------|----------|--------|---------------|----------|--------|-------|----------|
|                     | Number              | Crude | Adjusted | Number | Crude         | Adjusted | Number | Crude | Adjusted |
| <b>MSA Counties</b> | Black Hawk          | 239   | 21.6     | 20.4   | Polk          | 483      | 15.5   | 17.2  |          |
|                     | Dallas              | 56    | 18.9     | 17.1   | Pottawattamie | 162      | 21.4   | 20.5  |          |
|                     | Dubuque             | 176   | 22.3     | 20.0   | Scott         | 198      | 14.1   | 15.8  |          |
|                     | Johnson             | 111   | 12.4     | 19.5   | Warren        | 58       | 16.8   | 18.7  |          |
|                     | Linn                | 266   | 16.7     | 17.4   | Woodbury      | 218      | 24.0   | 21.8  |          |
|                     | <b>Group Totals</b> |       |          |        |               |          |        |       |          |
| Number:             | 1,967               |       |          |        |               |          |        |       |          |
| Crude:              | 17.6                |       |          |        |               |          |        |       |          |
| Adjusted:           | 18.5                |       |          |        |               |          |        |       |          |

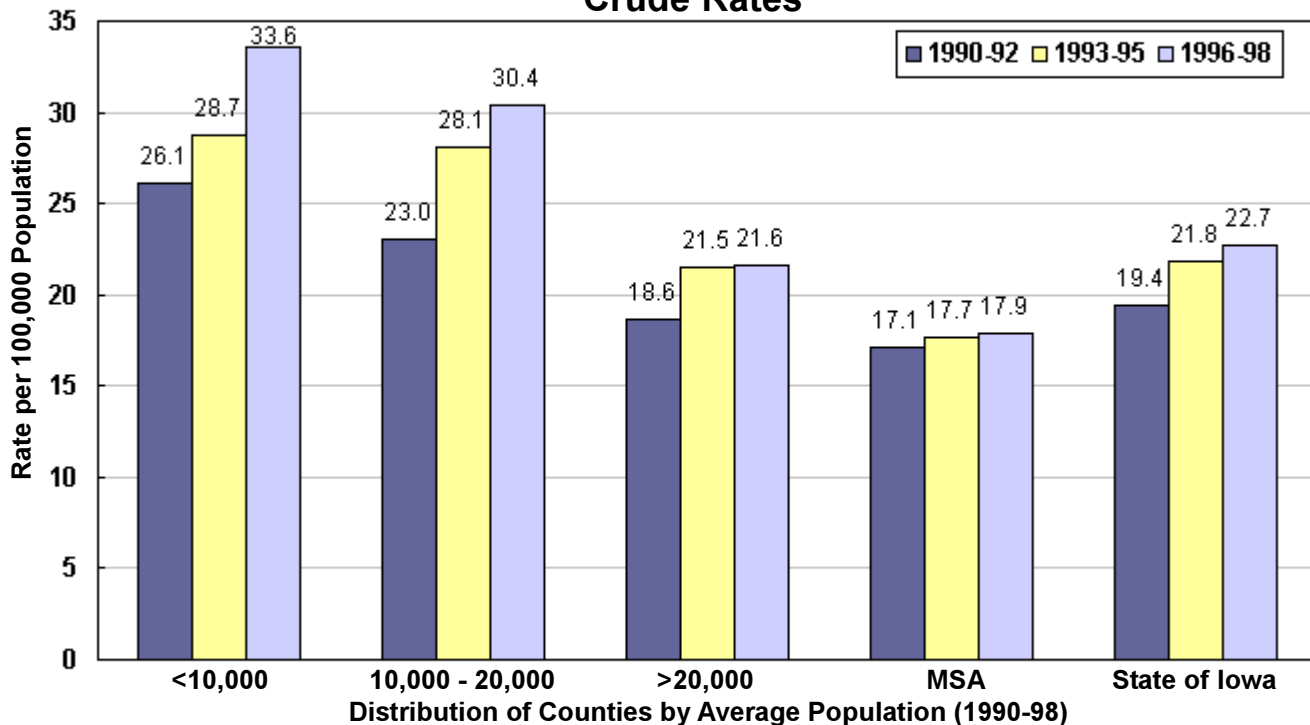
<sup>1</sup>Rates per 100,000 population

<sup>2</sup>Adjusted to Year 2000 US population

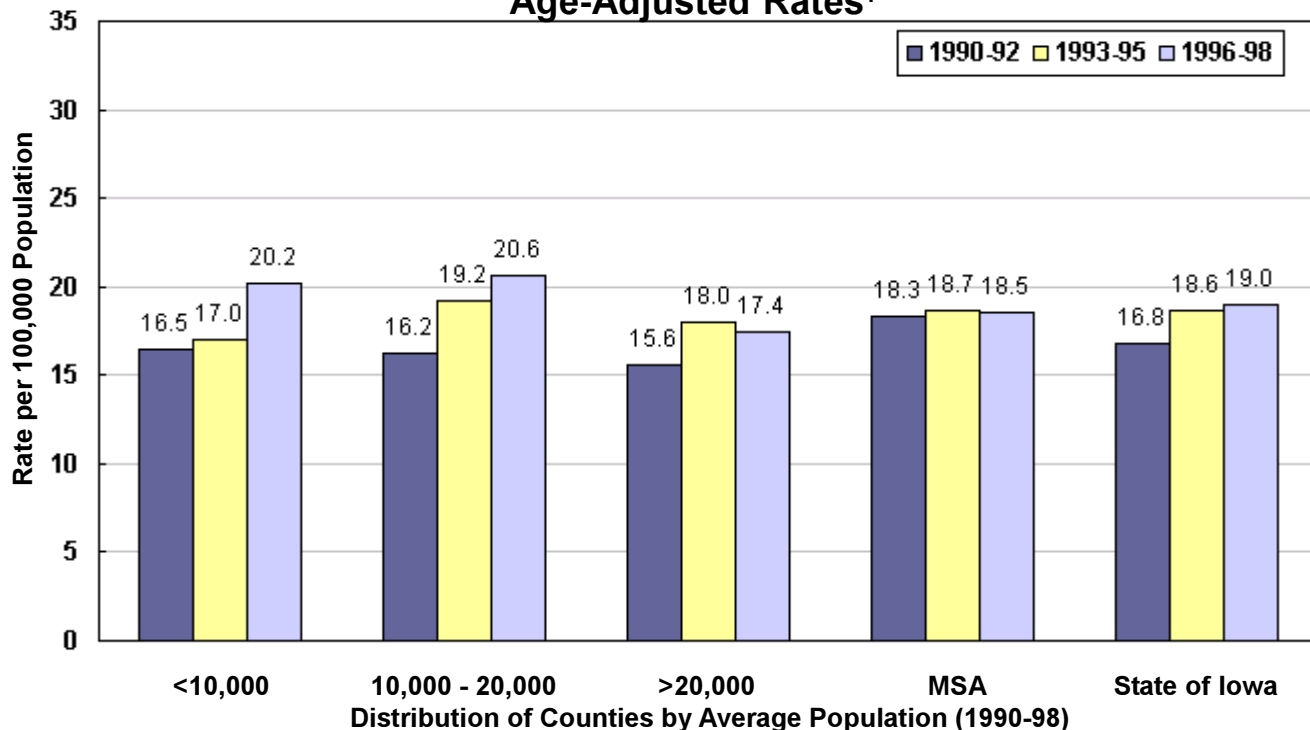
Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Diabetes Mellitus Mortality by County Group 1990-1998

### Crude Rates



### Age-Adjusted Rates<sup>1</sup>



<sup>1</sup>Adjusted to Year 2000 US population

## Atherosclerosis Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 6,688  | 26.3               | 21.1                    |

|  | County              |                    |                         |        | County             |                         |        |                    |                         |
|--|---------------------|--------------------|-------------------------|--------|--------------------|-------------------------|--------|--------------------|-------------------------|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | 34                 | 45.6                    | 24.7   | Lucas              | 29                      | 35.6   | 21.7               |                         |
|  | Adams               | 6                  | 14.6                    | 7.7    | Monroe             | 44                      | 60.1   | 34.2               |                         |
|  | Audubon             | 31                 | 49.2                    | 22.1   | Osceola            | 7                       | 10.9   | 6.7                |                         |
|  | Clarke              | 12                 | 16.1                    | 9.9    | Pocahontas         | 39                      | 47.5   | 24.1               |                         |
|  | Davis               | 30                 | 39.7                    | 24.7   | Ringgold           | 13                      | 26.9   | 13.2               |                         |
|  | Decatur             | 22                 | 29.9                    | 17.1   | Taylor             | 24                      | 37.5   | 18.2               |                         |
|  | Fremont             | 21                 | 29.0                    | 16.9   | Van Buren          | 37                      | 53.0   | 32.8               |                         |
|  | Howard              | 25                 | 28.4                    | 13.8   | Wayne              | 52                      | 83.8   | 37.3               |                         |
|  | Ida                 | 19                 | 25.8                    | 14.7   | Worth              | 22                      | 31.1   | 19.9               |                         |
|  | <b>Group Totals</b> |                    |                         |        |                    |                         |        |                    |                         |
| Number:  | 467                 |                    |                         |        |                    |                         |        |                    |                         |
| Crude:   | 37.3                |                    |                         |        |                    |                         |        |                    |                         |
| Adjusted:  | 20.4                |                    |                         |        |                    |                         |        |                    |                         |

|  | County      |       |          |           | County     |          |        |       |
|--|-------------|-------|----------|-----------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number    | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 68    | 54.0     | 33.4      | Henry      | 29       | 16.4   | 11.6  |
|  | Appanoose   | 47    | 38.2     | 22.6      | Humboldt   | 30       | 31.8   | 19.1  |
|  | Buena Vista | 74    | 41.3     | 26.4      | Iowa       | 41       | 30.3   | 19.9  |
|  | Butler      | 48    | 33.9     | 19.9      | Jefferson  | 39       | 25.9   | 22.2  |
|  | Calhoun     | 94    | 90.8     | 45.7      | Jones      | 37       | 20.6   | 15.8  |
|  | Cass        | 102   | 75.8     | 41.3      | Keokuk     | 21       | 20.2   | 11.6  |
|  | Cedar       | 37    | 23.3     | 16.6      | Kossuth    | 108      | 66.2   | 40.5  |
|  | Cherokee    | 80    | 64.8     | 38.8      | Louisa     | 36       | 34.0   | 28.6  |
|  | Chickasaw   | 28    | 23.3     | 16.5      | Lyon       | 21       | 19.5   | 13.6  |
|  | Clay        | 33    | 20.8     | 14.9      | Madison    | 35       | 29.5   | 20.1  |
|  | Clayton     | 72    | 42.5     | 28.6      | Mills      | 22       | 17.8   | 16.2  |
|  | Crawford    | 30    | 20.2     | 13.7      | Mitchell   | 37       | 37.4   | 19.7  |
|  | Delaware    | 33    | 20.0     | 17.0      | Monona     | 39       | 43.1   | 20.8  |
|  | Dickinson   | 36    | 25.8     | 16.0      | Montgomery | 47       | 43.7   | 21.7  |
|  | Emmet       | 30    | 29.6     | 18.4      | O'Brien    | 64       | 46.6   | 24.8  |
|  | Floyd       | 142   | 94.4     | 56.8      | Page       | 39       | 25.6   | 14.9  |
|  | Franklin    | 90    | 90.1     | 51.4      | Palo Alto  | 46       | 49.5   | 25.1  |
|  | Greene      | 40    | 44.2     | 23.6      | Poweshiek  | 41       | 24.1   | 16.4  |
|  | Grundy      | 29    | 26.5     | 17.7      | Sac        | 118      | 108.6  | 53.0  |
|  | Guthrie     | 286   | 282.1    | 158.0     | Shelby     | 28       | 23.7   | 12.8  |
| Hamilton   | 47          | 32.5  | 21.5     | Tama      | 43         | 27.1     | 16.2   |       |
| Hancock  | 24          | 21.8  | 14.8     | Union     | 32         | 28.3     | 17.3   |       |
| Hardin   | 45          | 26.7  | 15.7     | Winnebago | 22         | 20.4     | 12.4   |       |
| Harrison   | 33          | 24.5  | 15.8     | Wright    | 34         | 26.6     | 14.7   |       |

|  | County      |       |          |        | County     |          |        |       |
|--|-------------|-------|----------|--------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population &gt;20,000</b> | Benton      | 21    | 9.8      | 7.9    | Mahaska    | 77       | 39.4   | 28.3  |
|  | Boone       | 84    | 36.5     | 23.7   | Marion     | 61       | 22.1   | 17.5  |
|  | Bremer      | 39    | 18.7     | 14.0   | Marshall   | 106      | 30.7   | 21.8  |
|  | Buchanan    | 42    | 22.1     | 20.0   | Muscatine  | 66       | 18.0   | 16.4  |
|  | Carroll     | 57    | 29.4     | 18.7   | Plymouth   | 47       | 21.6   | 15.2  |
|  | Cerro Gordo | 96    | 22.9     | 16.5   | Sioux      | 43       | 15.5   | 12.9  |
|  | Clinton     | 122   | 26.7     | 21.6   | Story      | 94       | 14.0   | 16.9  |
|  | Des Moines  | 89    | 23.2     | 17.7   | Wapello    | 71       | 22.1   | 15.4  |
|  | Fayette     | 57    | 28.9     | 19.0   | Washington | 75       | 40.9   | 25.0  |
|  | Jackson     | 97    | 53.7     | 39.6   | Webster    | 77       | 21.6   | 14.7  |
|  | Jasper      | 91    | 28.7     | 22.8   | Winneshek  | 49       | 26.0   | 20.0  |
|  | Lee         | 67    | 19.2     | 14.7   |            |          |        |       |

|                     | County              |       |          |        | County        |          |        |       |          |
|---------------------|---------------------|-------|----------|--------|---------------|----------|--------|-------|----------|
|                     | Number              | Crude | Adjusted | Number | Crude         | Adjusted | Number | Crude | Adjusted |
| <b>MSA Counties</b> | Black Hawk          | 244   | 22.0     | 20.6   | Polk          | 420      | 13.5   | 15.1  |          |
|                     | Dallas              | 72    | 24.3     | 21.4   | Pottawattamie | 142      | 18.8   | 17.9  |          |
|                     | Dubuque             | 181   | 22.9     | 19.8   | Scott         | 271      | 19.3   | 22.2  |          |
|                     | Johnson             | 111   | 12.4     | 19.6   | Warren        | 62       | 18.0   | 19.3  |          |
|                     | Linn                | 328   | 20.7     | 21.2   | Woodbury      | 205      | 22.6   | 19.8  |          |
|                     | <b>Group Totals</b> |       |          |        |               |          |        |       |          |
| Number:             | 2,036               |       |          |        |               |          |        |       |          |
| Crude:              | 18.2                |       |          |        |               |          |        |       |          |
| Adjusted:           | 19.1                |       |          |        |               |          |        |       |          |

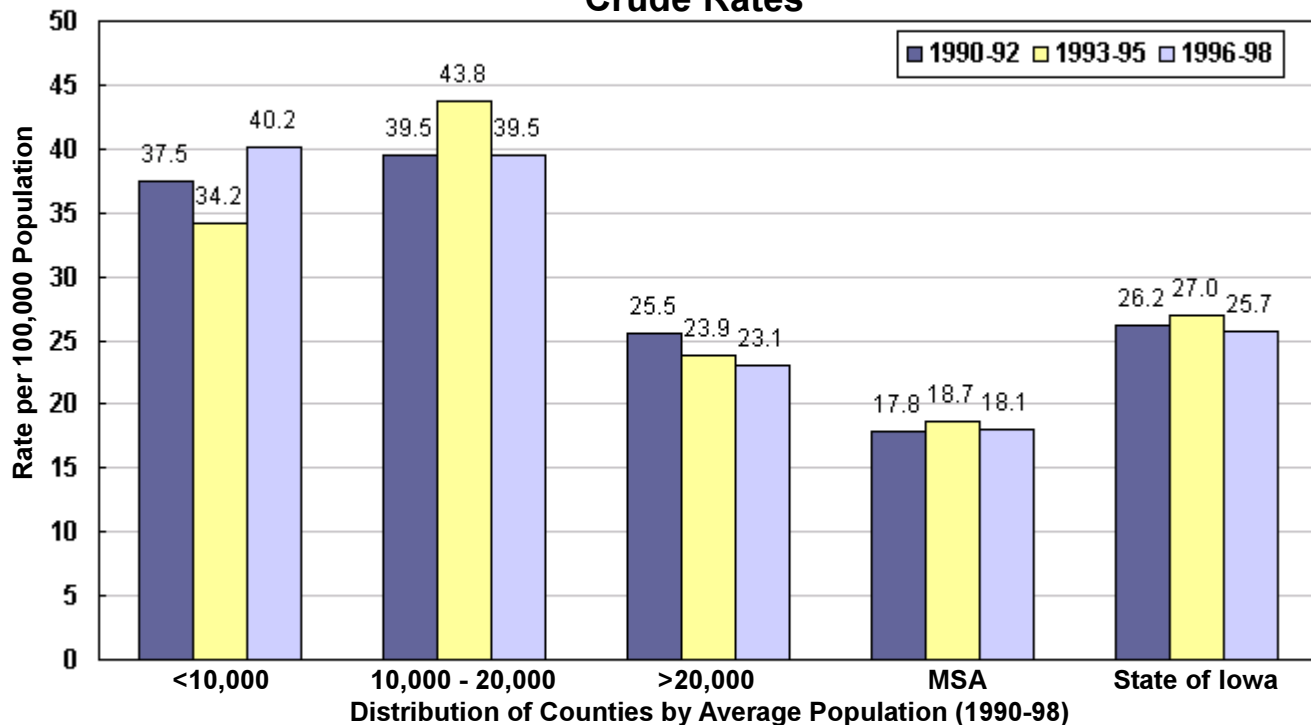
<sup>1</sup>Rates per 100,000 population

<sup>2</sup>Adjusted to Year 2000 US population

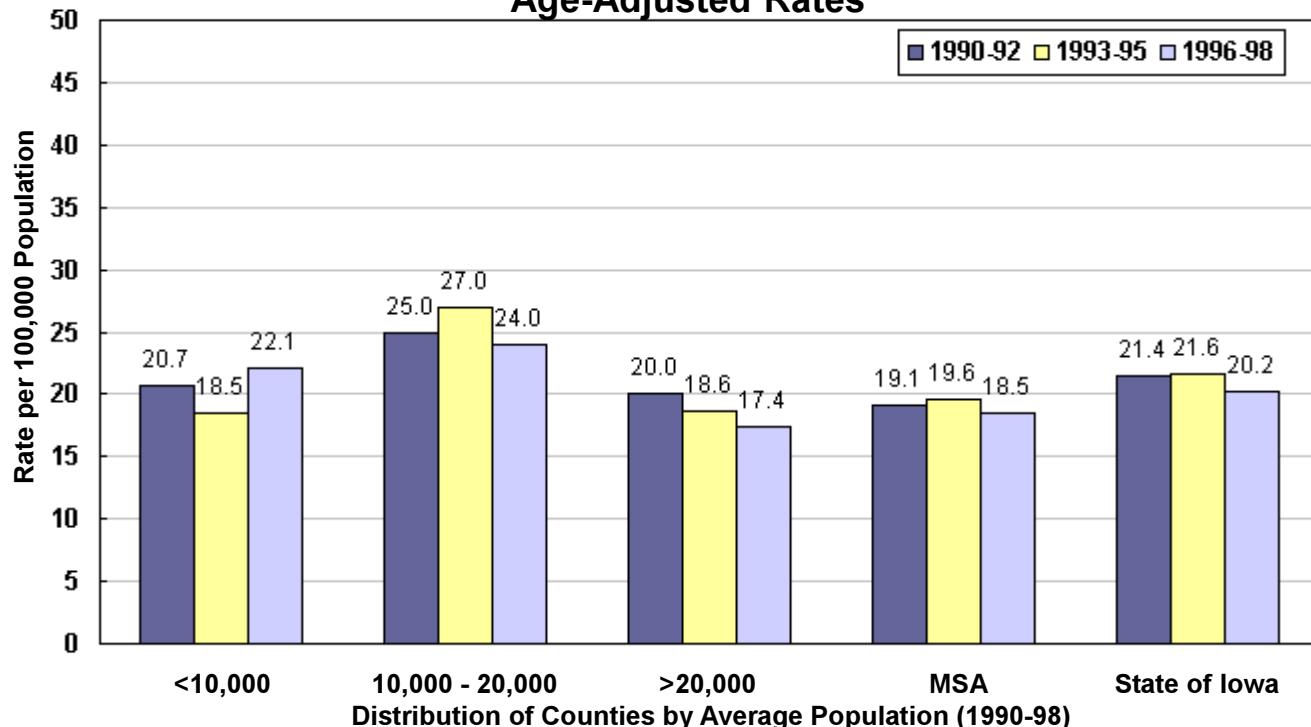
Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Atherosclerosis Mortality by County Group 1990-1998

### Crude Rates



### Age-Adjusted Rates<sup>1</sup>



<sup>1</sup>Adjusted to Year 2000 US population

## Infectious/Parasitic Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 3,129  | 12.3               | 11.0                    |

|  | County              |                    |                         |        | County             |                         |        |                    |                         |
|--|---------------------|--------------------|-------------------------|--------|--------------------|-------------------------|--------|--------------------|-------------------------|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | 11                 | 14.7                    | 9.0    | Lucas              | 10                      | 12.3   | 8.6                |                         |
|  | Adams               | 4                  | 9.7                     | 5.3    | Monroe             | 6                       | 8.2    | 6.2                |                         |
|  | Audubon             | 6                  | 9.5                     | 4.9    | Osceola            | 8                       | 12.5   | 9.4                |                         |
|  | Clarke              | 11                 | 14.8                    | 10.6   | Pocahontas         | 12                      | 14.6   | 9.6                |                         |
|  | Davis               | 9                  | 11.9                    | 10.1   | Ringgold           | 7                       | 14.5   | 8.9                |                         |
|  | Decatur             | 8                  | 10.9                    | 8.6    | Taylor             | 12                      | 18.8   | 11.3               |                         |
|  | Fremont             | 8                  | 11.1                    | 8.1    | Van Buren          | 13                      | 18.6   | 13.1               |                         |
|  | Howard              | 8                  | 9.1                     | 7.1    | Wayne              | 7                       | 11.3   | 6.5                |                         |
|  | Ida                 | 5                  | 6.8                     | 4.5    | Worth              | 9                       | 12.7   | 7.6                |                         |
|  | <b>Group Totals</b> |                    |                         |        |                    |                         |        |                    |                         |
| Number:  | 154                 |                    |                         |        |                    |                         |        |                    |                         |
| Crude:   | 12.3                |                    |                         |        |                    |                         |        |                    |                         |
| Adjusted:  | 8.4                 |                    |                         |        |                    |                         |        |                    |                         |

|  | County      |       |          |           | County     |          |        |       |
|--|-------------|-------|----------|-----------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number    | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 15    | 11.9     | 8.4       | Henry      | 16       | 9.0    | 8.1   |
|  | Appanoose   | 23    | 18.7     | 14.6      | Humboldt   | 10       | 10.6   | 7.4   |
|  | Buena Vista | 18    | 10.1     | 8.6       | Iowa       | 22       | 16.2   | 12.9  |
|  | Butler      | 15    | 10.6     | 7.4       | Jefferson  | 13       | 8.6    | 7.6   |
|  | Calhoun     | 13    | 12.6     | 8.5       | Jones      | 10       | 5.6    | 4.7   |
|  | Cass        | 15    | 11.2     | 9.2       | Keokuk     | 23       | 22.1   | 14.5  |
|  | Cedar       | 15    | 9.4      | 7.1       | Kossuth    | 19       | 11.7   | 7.6   |
|  | Cherokee    | 11    | 8.9      | 6.3       | Louisa     | 12       | 11.3   | 10.3  |
|  | Chickasaw   | 14    | 11.7     | 8.4       | Lyon       | 13       | 12.1   | 10.0  |
|  | Clay        | 11    | 6.9      | 5.9       | Madison    | 15       | 12.7   | 10.3  |
|  | Clayton     | 17    | 10.0     | 7.5       | Mills      | 12       | 9.7    | 9.2   |
|  | Crawford    | 13    | 8.7      | 7.5       | Mitchell   | 10       | 10.1   | 6.0   |
|  | Delaware    | 21    | 12.7     | 12.0      | Monona     | 13       | 14.4   | 8.5   |
|  | Dickinson   | 17    | 12.2     | 8.6       | Montgomery | 18       | 16.8   | 8.9   |
|  | Emmet       | 11    | 10.8     | 8.1       | O'Brien    | 18       | 13.1   | 8.4   |
|  | Floyd       | 19    | 12.6     | 9.4       | Page       | 19       | 12.5   | 7.5   |
|  | Franklin    | 8     | 8.0      | 7.3       | Palo Alto  | 12       | 12.9   | 8.5   |
|  | Greene      | 11    | 12.1     | 9.4       | Poweshiek  | 17       | 10.0   | 7.8   |
|  | Grundy      | 14    | 12.8     | 9.4       | Sac        | 12       | 11.0   | 8.9   |
|  | Guthrie     | 11    | 10.8     | 6.9       | Shelby     | 16       | 13.5   | 10.0  |
| Hamilton   | 27          | 18.7  | 13.9     | Tama      | 18         | 11.4     | 7.6    |       |
| Hancock  | 13          | 11.8  | 8.1      | Union     | 13         | 11.5     | 9.2    |       |
| Hardin   | 33          | 19.6  | 13.1     | Winnebago | 20         | 18.6     | 13.2   |       |
| Harrison   | 13          | 9.7   | 7.3      | Wright    | 12         | 9.4      | 5.9    |       |

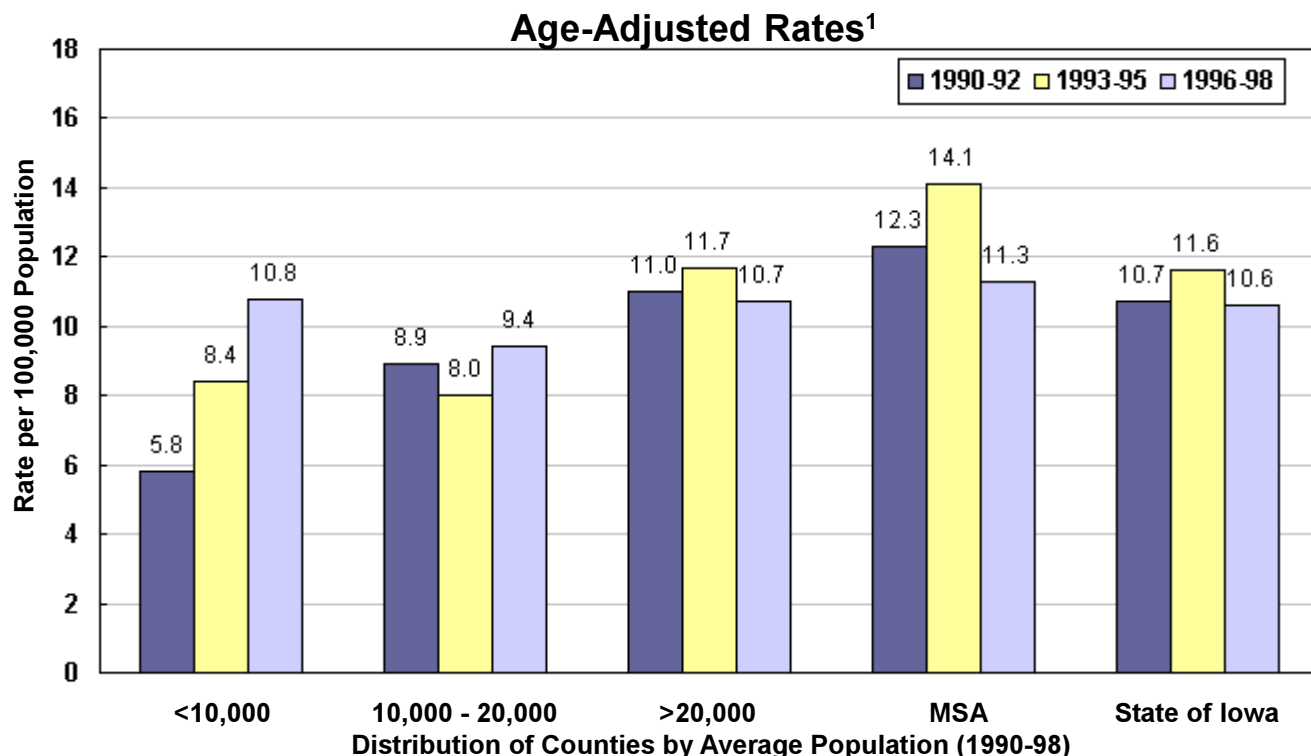
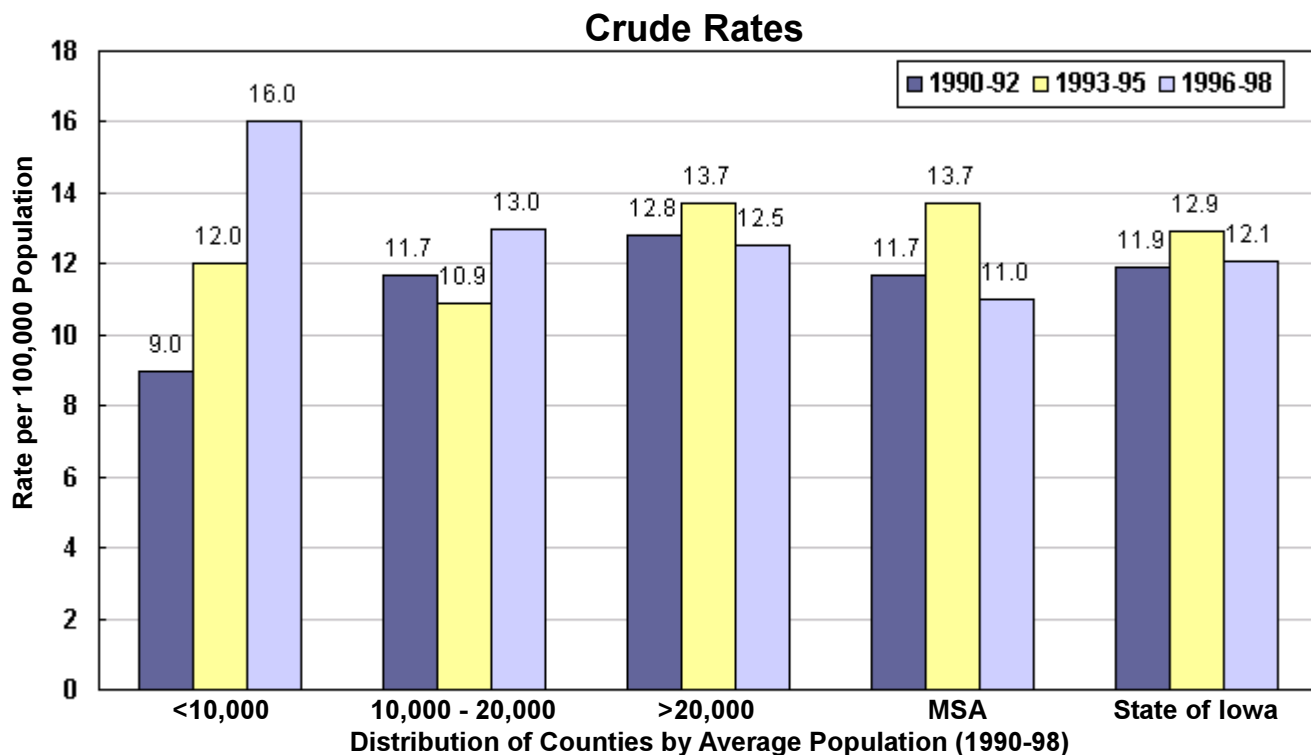
|  | County      |       |          |        | County     |          |        |       |
|--|-------------|-------|----------|--------|------------|----------|--------|-------|
|  | Number      | Crude | Adjusted | Number | Crude      | Adjusted | Number | Crude |
| <b>Counties with Average Population &gt;20,000</b> | Benton      | 18    | 8.4      | 7.7    | Mahaska    | 20       | 10.2   | 7.5   |
|  | Boone       | 30    | 13.0     | 10.2   | Marion     | 42       | 15.2   | 13.1  |
|  | Bremer      | 18    | 8.6      | 7.7    | Marshall   | 70       | 20.3   | 16.5  |
|  | Buchanan    | 21    | 11.1     | 10.0   | Muscatine  | 45       | 12.3   | 11.6  |
|  | Carroll     | 16    | 8.3      | 7.0    | Plymouth   | 30       | 13.8   | 11.0  |
|  | Cerro Gordo | 72    | 17.2     | 14.5   | Sioux      | 29       | 10.5   | 8.9   |
|  | Clinton     | 55    | 12.0     | 10.6   | Story      | 61       | 9.1    | 10.6  |
|  | Des Moines  | 85    | 22.2     | 18.2   | Wapello    | 37       | 11.5   | 9.3   |
|  | Fayette     | 31    | 15.7     | 11.7   | Washington | 16       | 8.7    | 5.5   |
|  | Jackson     | 20    | 11.1     | 9.3    | Webster    | 45       | 12.6   | 10.1  |
|  | Jasper      | 36    | 11.3     | 9.1    | Winneshek  | 12       | 6.4    | 5.7   |
|  | Lee         | 67    | 19.2     | 16.0   |            |          |        |       |

|                     | County              |       |          |        | County        |          |        |       |          |
|---------------------|---------------------|-------|----------|--------|---------------|----------|--------|-------|----------|
|                     | Number              | Crude | Adjusted | Number | Crude         | Adjusted | Number | Crude | Adjusted |
| <b>MSA Counties</b> | Black Hawk          | 141   | 12.7     | 12.6   | Polk          | 446      | 14.3   | 15.1  |          |
|                     | Dallas              | 36    | 12.2     | 11.0   | Pottawattamie | 83       | 11.0   | 10.8  |          |
|                     | Dubuque             | 80    | 10.1     | 9.5    | Scott         | 164      | 11.7   | 12.8  |          |
|                     | Johnson             | 98    | 10.9     | 14.7   | Warren        | 29       | 8.4    | 9.3   |          |
|                     | Linn                | 175   | 11.0     | 11.3   | Woodbury      | 106      | 11.7   | 11.2  |          |
|                     | <b>Group Totals</b> |       |          |        |               |          |        |       |          |
| Number:             | 1,358               |       |          |        |               |          |        |       |          |
| Crude:              | 12.1                |       |          |        |               |          |        |       |          |
| Adjusted:           | 12.6                |       |          |        |               |          |        |       |          |

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

Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Infectious/Parasitic Mortality by County Group 1990-1998



<sup>1</sup>Adjusted to Year 2000 US population

# Nephritis, Nephrotic Syndrome, Nephrosis Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 1,597  | 6.3                | 5.1                     |

| Counties with Average Population <10,000 |        |                    |                         |  | Counties with Average Population 10,000 to 20,000 |        |                    |                         |  |
|--|--------|--------------------|-------------------------|--|---|--------|--------------------|-------------------------|--|
| County                                   | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |  | County  | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |  |
| Adair                                    | 10     | 13.4               | 7.3                     |  | Lucas   | 6      | 7.4                | 4.5                     |  |
| Adams                                    | 5      | 12.2               | 6.4                     |  | Monroe  | 6      | 8.2                | 5.2                     |  |
| Audubon                                  | 10     | 15.9               | 7.3                     |  | Osceola   | 5      | 7.8                | 5.1                     |  |
| Clarke                                   | 6      | 8.1                | 4.7                     |  | Pocahontas  | 8      | 9.7                | 4.7                     |  |
| Davis                                    | 9      | 11.9               | 7.7                     |  | Ringgold  | 7      | 14.5               | 6.6                     |  |
| Decatur                                  | 3      | 4.1                | 2.0                     |  | Taylor  | 4      | 6.3                | 3.1                     |  |
| Fremont                                  | 10     | 13.8               | 8.0                     |  | Van Buren   | 6      | 8.6                | 5.8                     |  |
| Howard                                   | 10     | 11.4               | 5.9                     |  | Wayne   | 3      | 4.8                | 3.4                     |  |
| Ida                                      | 7      | 9.5                | 4.8                     |  | Worth   | 5      | 7.1                | 3.5                     |  |

| Counties with Average Population >20,000 |        |       |          |  | MSA Counties |        |       |          |  |
|--|--------|-------|----------|--|--------------|--------|-------|----------|--|
| County                                   | Number | Crude | Adjusted |  | County       | Number | Crude | Adjusted |  |
| Allamakee                                | 13     | 10.3  | 6.2      |  | Black Hawk   | 71     | 6.4   | 6.1      |  |
| Appanoose                                | 12     | 9.8   | 6.3      |  | Dallas       | 25     | 8.4   | 7.5      |  |
| Buena Vista                              | 9      | 5.0   | 3.1      |  | Dubuque      | 31     | 3.9   | 3.4      |  |
| Butler                                   | 8      | 5.7   | 3.1      |  | Johnson      | 23     | 2.6   | 3.8      |  |
| Calhoun                                  | 6      | 5.8   | 3.0      |  | Linn         | 60     | 3.8   | 3.9      |  |
| Cass                                     | 14     | 10.4  | 5.5      |  |              |        |       |          |  |
| Cedar                                    | 6      | 3.8   | 2.8      |  |              |        |       |          |  |
| Cherokee                                 | 10     | 8.1   | 4.8      |  |              |        |       |          |  |
| Chickasaw                                | 5      | 4.2   | 2.7      |  |              |        |       |          |  |
| Clay                                     | 8      | 5.0   | 3.9      |  |              |        |       |          |  |
| Clayton                                  | 10     | 5.9   | 3.9      |  |              |        |       |          |  |
| Crawford                                 | 15     | 10.1  | 6.9      |  |              |        |       |          |  |
| Delaware                                 | 6      | 3.6   | 2.9      |  |              |        |       |          |  |
| Dickinson                                | 10     | 7.2   | 4.9      |  |              |        |       |          |  |
| Emmet                                    | 16     | 15.8  | 10.0     |  |              |        |       |          |  |
| Floyd                                    | 7      | 4.7   | 2.8      |  |              |        |       |          |  |
| Franklin                                 | 3      | 3.0   | 2.0      |  |              |        |       |          |  |
| Greene                                   | 5      | 5.5   | 3.0      |  |              |        |       |          |  |
| Grundy                                   | 4      | 3.7   | 2.8      |  |              |        |       |          |  |
| Guthrie                                  | 4      | 3.9   | 2.2      |  |              |        |       |          |  |
| Hamilton                                 | 10     | 6.9   | 4.8      |  |              |        |       |          |  |
| Hancock                                  | *      | *     | *        |  |              |        |       |          |  |
| Hardin                                   | 21     | 12.5  | 6.8      |  |              |        |       |          |  |
| Harrison                                 | 6      | 4.5   | 2.9      |  |              |        |       |          |  |

| Counties with Average Population >20,000 |        |       |          |  | Counties with Average Population >20,000 |        |       |          |  |
|--|--------|-------|----------|--|--|--------|-------|----------|--|
| County                                   | Number | Crude | Adjusted |  | County                                   | Number | Crude | Adjusted |  |
| Benton                                   | 6      | 2.8   | 2.2      |  | Mahaska                                  | 9      | 4.6   | 3.5      |  |
| Boone                                    | 23     | 10.0  | 6.7      |  | Marion                                   | 14     | 5.1   | 3.8      |  |
| Bremer                                   | 15     | 7.2   | 5.1      |  | Marshall                                 | 36     | 10.4  | 7.6      |  |
| Buchanan                                 | 13     | 6.8   | 6.1      |  | Muscatine                                | 12     | 3.3   | 3.1      |  |
| Carroll                                  | 8      | 4.1   | 3.4      |  | Plymouth                                 | 6      | 2.8   | 1.9      |  |
| Cerro Gordo                              | 19     | 4.5   | 3.3      |  | Sioux                                    | 22     | 7.9   | 7.1      |  |
| Clinton                                  | 34     | 7.4   | 6.0      |  | Story                                    | 34     | 5.1   | 5.8      |  |
| Des Moines                               | 48     | 12.5  | 9.5      |  | Wapello                                  | 26     | 8.1   | 6.1      |  |
| Fayette                                  | 18     | 9.1   | 6.1      |  | Washington                               | 9      | 4.9   | 3.0      |  |
| Jackson                                  | 15     | 8.3   | 6.4      |  | Webster                                  | 26     | 7.3   | 5.3      |  |
| Jasper                                   | 28     | 8.8   | 7.0      |  | Winneshek                                | 13     | 6.9   | 5.2      |  |
| Lee                                      | 29     | 8.3   | 6.8      |  |  |        |       |          |  |

| MSA Counties |        |       |          |  | MSA Counties  |        |       |          |  |
|--------------|--------|-------|----------|--|---------------|--------|-------|----------|--|
| County       | Number | Crude | Adjusted |  | County        | Number | Crude | Adjusted |  |
| Black Hawk   | 71     | 6.4   | 6.1      |  | Polk          | 168    | 5.4   | 6.1      |  |
| Dallas       | 25     | 8.4   | 7.5      |  | Pottawattamie | 60     | 7.9   | 7.7      |  |
| Dubuque      | 31     | 3.9   | 3.4      |  | Scott         | 49     | 3.5   | 4.0      |  |
| Johnson      | 23     | 2.6   | 3.8      |  | Warren        | 10     | 2.9   | 3.2      |  |
| Linn         | 60     | 3.8   | 3.9      |  | Woodbury      | 56     | 6.2   | 5.4      |  |

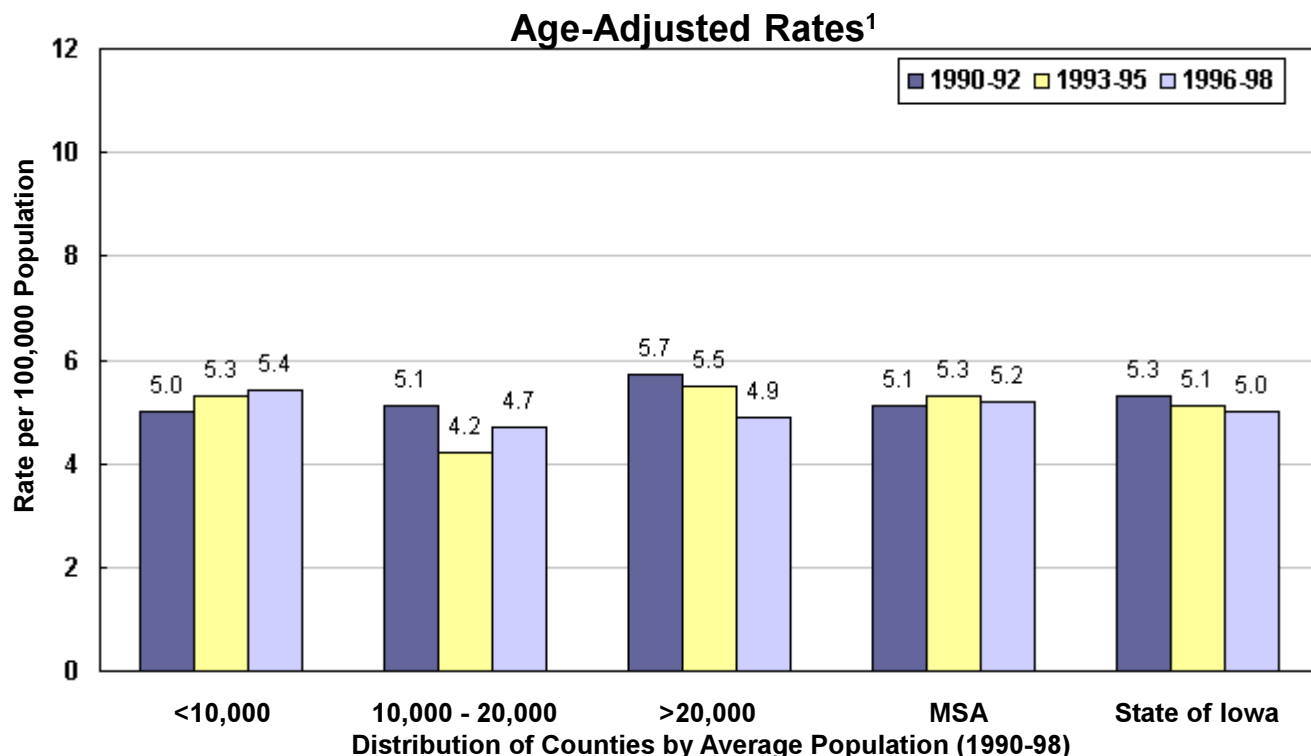
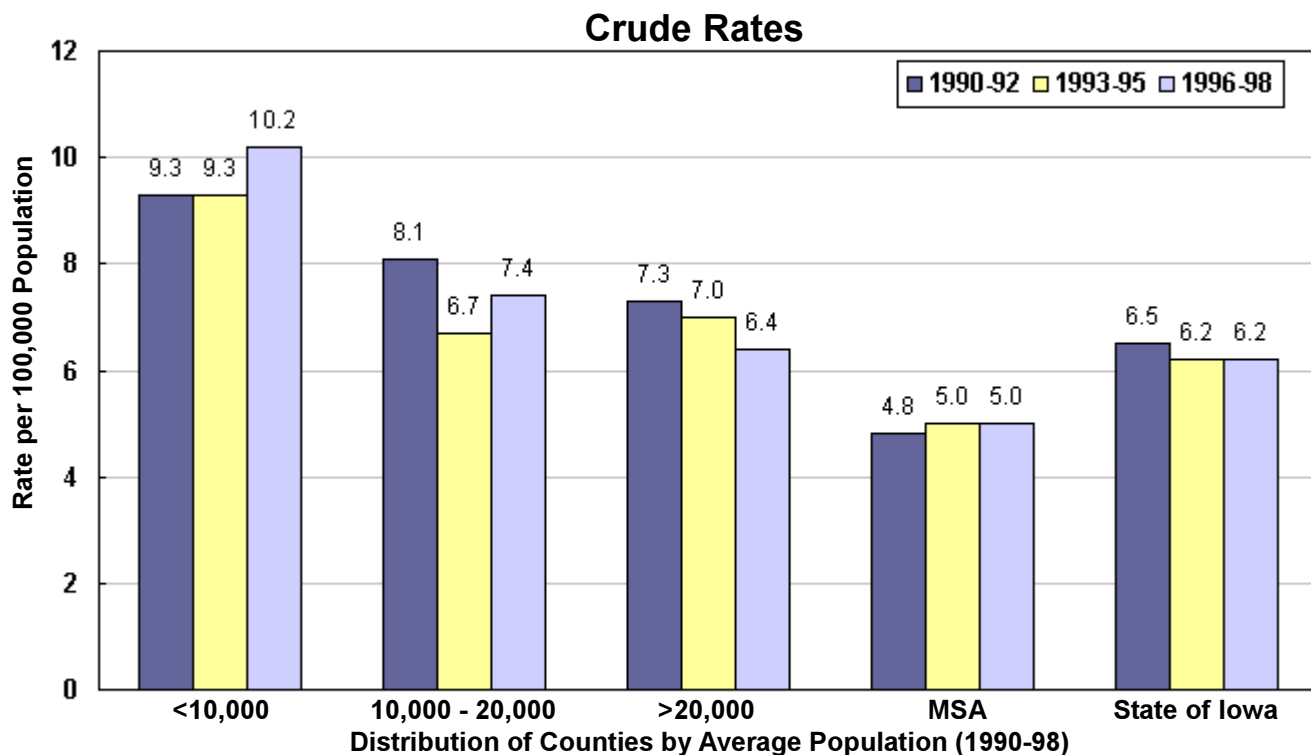
<sup>1</sup>Rates per 100,000 population

\*Number of events is less than 3

<sup>2</sup>Adjusted to Year 2000 US population

Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Nephritis, Nephrotic Syndrome, Nephrosis Mortality by County Group 1990-1998



<sup>1</sup>Adjusted to Year 2000 US population

## Chronic Liver Disease & Cirrhosis Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 1,563  | 6.1                | 5.8                     |

|  | County              |                    |                         |      | County     |                    |                         |     |
|--|---------------------|--------------------|-------------------------|------|------------|--------------------|-------------------------|-----|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |      | Number     | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |     |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | 6                  | 8.0                     | 6.6  | Lucas      | 6                  | 7.4                     | 4.7 |
|  | Adams               | 9                  | 21.9                    | 17.6 | Monroe     | 6                  | 8.2                     | 6.2 |
|  | Audubon             | 5                  | 7.9                     | 5.9  | Osceola    | *                  | *                       | *   |
|  | Clarke              | 4                  | 5.4                     | 4.4  | Pocahontas | 6                  | 7.3                     | 4.9 |
|  | Davis               | 4                  | 5.3                     | 4.1  | Ringgold   | 4                  | 8.3                     | 5.7 |
|  | Decatur             | 3                  | 4.1                     | 3.9  | Taylor     | 5                  | 7.8                     | 4.2 |
|  | Fremont             | *                  | *                       | *    | Van Buren  | 5                  | 7.2                     | 5.4 |
|  | Howard              | 7                  | 7.9                     | 5.5  | Wayne      | *                  | *                       | *   |
|  | Ida                 | 3                  | 4.1                     | 2.3  | Worth      | 7                  | 9.9                     | 8.3 |
|  | <b>Group Totals</b> |                    |                         |      |            |                    |                         |     |
| Number:  | 85                  |                    |                         |      |            |                    |                         |     |
| Crude:   | 6.8                 |                    |                         |      |            |                    |                         |     |
| Adjusted:  | 5.1                 |                    |                         |      |            |                    |                         |     |

|  | County      |       |          |           | County     |       |          |     |
|--|-------------|-------|----------|-----------|------------|-------|----------|-----|
|  | Number      | Crude | Adjusted |           | Number     | Crude | Adjusted |     |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 14    | 11.1     | 8.6       | Henry      | 4     | 2.3      | 2.1 |
|  | Appanoose   | 12    | 9.8      | 7.7       | Humboldt   | 4     | 4.2      | 2.6 |
|  | Buena Vista | 13    | 7.3      | 7.0       | Iowa       | 9     | 6.6      | 5.4 |
|  | Butler      | 10    | 7.1      | 5.0       | Jefferson  | *     | *        | *   |
|  | Calhoun     | 7     | 6.8      | 3.4       | Jones      | 10    | 5.6      | 5.0 |
|  | Cass        | 10    | 7.4      | 6.0       | Keokuk     | 8     | 7.7      | 6.5 |
|  | Cedar       | 14    | 8.8      | 7.2       | Kossuth    | 14    | 8.6      | 6.6 |
|  | Cherokee    | 9     | 7.3      | 5.8       | Louisa     | 9     | 8.5      | 8.2 |
|  | Chickasaw   | 8     | 6.7      | 6.0       | Lyon       | 6     | 5.6      | 4.3 |
|  | Clay        | 7     | 4.4      | 4.2       | Madison    | 4     | 3.4      | 2.8 |
|  | Clayton     | 14    | 8.3      | 6.5       | Mills      | 5     | 4.1      | 4.1 |
|  | Crawford    | 10    | 6.7      | 5.8       | Mitchell   | 7     | 7.1      | 5.4 |
|  | Delaware    | 8     | 4.9      | 4.6       | Monona     | 8     | 8.8      | 5.7 |
|  | Dickinson   | 6     | 4.3      | 3.5       | Montgomery | 12    | 11.2     | 8.4 |
|  | Emmet       | 8     | 7.9      | 6.0       | O'Brien    | 14    | 10.2     | 7.6 |
|  | Floyd       | 9     | 6.0      | 4.4       | Page       | 3     | 2.0      | 2.0 |
|  | Franklin    | 5     | 5.0      | 3.2       | Palo Alto  | 9     | 9.7      | 6.9 |
|  | Greene      | 6     | 6.6      | 3.7       | Poweshiek  | 9     | 5.3      | 5.4 |
|  | Grundy      | 8     | 7.3      | 4.7       | Sac        | 9     | 8.3      | 5.0 |
|  | Guthrie     | 4     | 3.9      | 3.1       | Shelby     | 7     | 5.9      | 4.2 |
| Hamilton   | 8           | 5.5   | 4.5      | Tama      | 11         | 6.9   | 5.9      |     |
| Hancock  | 7           | 6.4   | 5.8      | Union     | 12         | 10.6  | 9.6      |     |
| Hardin   | 13          | 7.7   | 6.2      | Winnebago | 13         | 12.1  | 10.3     |     |
| Harrison   | 7           | 5.2   | 4.3      | Wright    | 11         | 8.6   | 5.1      |     |
| <b>Group Totals</b>                                      |             |       |          |           |            |       |          |     |
| Number:  | 416         |       |          |           |            |       |          |     |
| Crude:   | 6.7         |       |          |           |            |       |          |     |
| Adjusted:  | 5.3         |       |          |           |            |       |          |     |

|  | County              |       |          |     | County     |       |          |     |
|--|---------------------|-------|----------|-----|------------|-------|----------|-----|
|  | Number              | Crude | Adjusted |     | Number     | Crude | Adjusted |     |
| <b>Counties with Average Population &gt;20,000</b> | Benton              | 11    | 5.1      | 4.7 | Mahaska    | 7     | 3.6      | 2.8 |
|  | Boone               | 18    | 7.8      | 6.8 | Marion     | 14    | 5.1      | 5.0 |
|  | Bremer              | 11    | 5.3      | 4.5 | Marshall   | 24    | 7.0      | 5.7 |
|  | Buchanan            | 5     | 2.6      | 2.4 | Muscatine  | 17    | 4.6      | 4.6 |
|  | Carroll             | 10    | 5.2      | 4.4 | Plymouth   | 16    | 7.4      | 6.9 |
|  | Cerro Gordo         | 42    | 10.0     | 8.7 | Sioux      | 11    | 4.0      | 3.8 |
|  | Clinton             | 24    | 5.3      | 4.7 | Story      | 22    | 3.3      | 4.4 |
|  | Des Moines          | 22    | 5.7      | 5.2 | Wapello    | 15    | 4.7      | 3.7 |
|  | Fayette             | 13    | 6.6      | 5.8 | Washington | 6     | 3.3      | 2.5 |
|  | Jackson             | 14    | 7.7      | 6.7 | Webster    | 23    | 6.5      | 6.3 |
|  | Jasper              | 13    | 4.1      | 3.4 | Winneshek  | 7     | 3.7      | 3.8 |
|  | Lee                 | 23    | 6.6      | 5.8 |            |       |          |     |
|  | <b>Group Totals</b> |       |          |     |            |       |          |     |
| Number:  | 368                 |       |          |     |            |       |          |     |
| Crude:   | 5.5                 |       |          |     |            |       |          |     |
| Adjusted:  | 5.0                 |       |          |     |            |       |          |     |

|                     | County              |       |          |     | County        |       |          |     |
|---------------------|---------------------|-------|----------|-----|---------------|-------|----------|-----|
|                     | Number              | Crude | Adjusted |     | Number        | Crude | Adjusted |     |
| <b>MSA Counties</b> | Black Hawk          | 66    | 6.0      | 5.9 | Polk          | 233   | 7.5      | 8.2 |
|                     | Dallas              | 13    | 4.4      | 4.3 | Pottawattamie | 40    | 5.3      | 5.3 |
|                     | Dubuque             | 46    | 5.8      | 5.6 | Scott         | 60    | 4.3      | 4.7 |
|                     | Johnson             | 30    | 3.3      | 4.9 | Warren        | 18    | 5.2      | 5.7 |
|                     | Linn                | 109   | 6.9      | 7.1 | Woodbury      | 79    | 8.7      | 8.6 |
|                     | <b>Group Totals</b> |       |          |     |               |       |          |     |
| Number:             | 694                 |       |          |     |               |       |          |     |
| Crude:              | 6.2                 |       |          |     |               |       |          |     |
| Adjusted:           | 6.6                 |       |          |     |               |       |          |     |

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

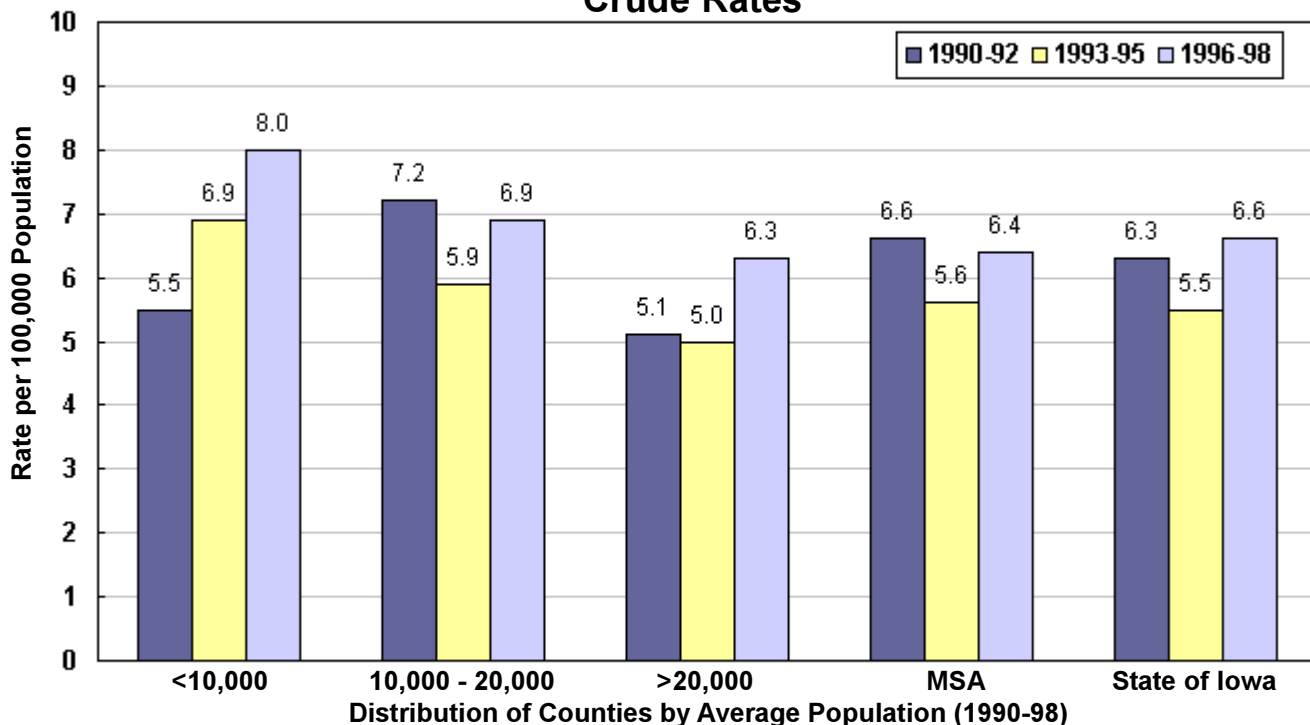
<sup>\*</sup>Number of events is less than 3

<sup>2</sup>Adjusted to Year 2000 US population

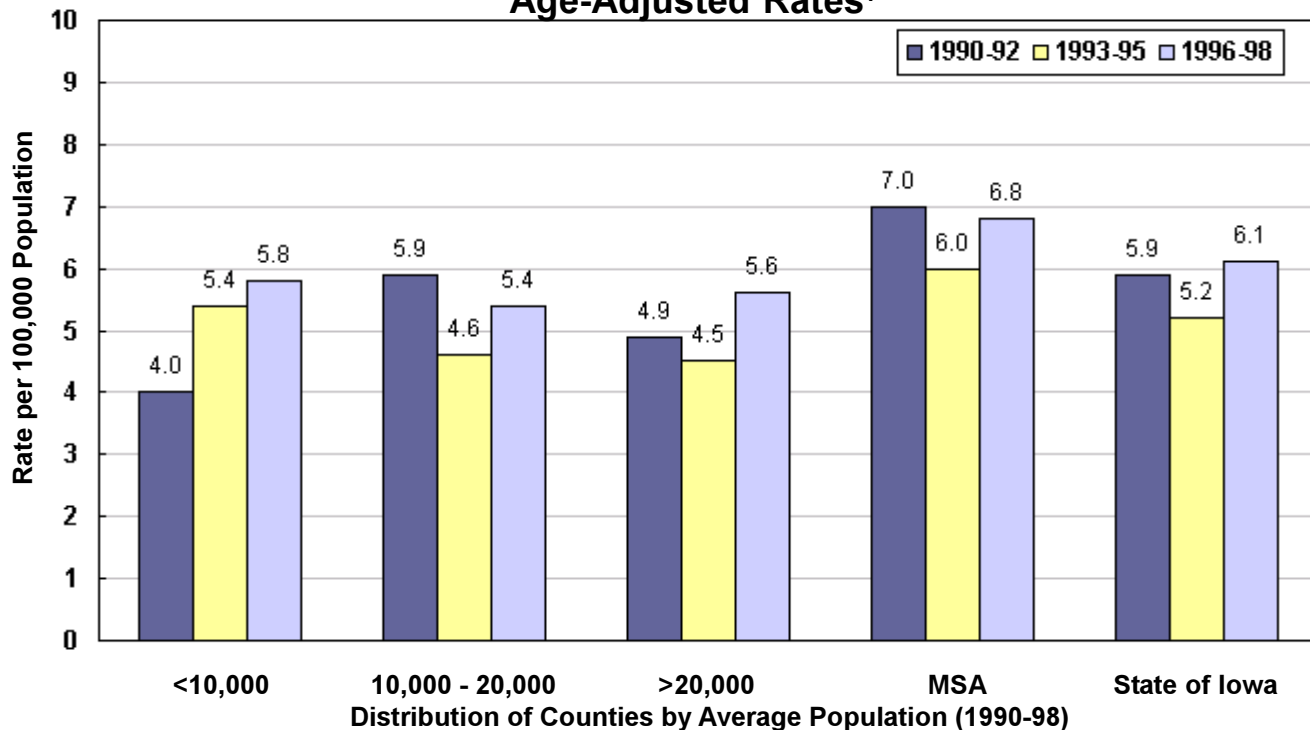
Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Chronic Liver Disease & Cirrhosis Mortality by County Group 1990-1998

### Crude Rates



### Age-Adjusted Rates<sup>1</sup>



<sup>1</sup>Adjusted to Year 2000 US population

## Congenital Anomalies Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 1,168  | 4.6                | 4.6                     |

|  | County              |                    |                         |        | County             |                         |        |                    |                         |   |     |     |
|--|---------------------|--------------------|-------------------------|--------|--------------------|-------------------------|--------|--------------------|-------------------------|---|-----|-----|
|  | Number              | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |   |     |     |
| <b>Counties with Average Population &lt;10,000</b> | Adair               | *                  | *                       | *      | Lucas              | *                       | *      | *                  | Monroe                  | * | *   | *   |
|  | Adams               | *                  | *                       | *      | Osceola            | 4                       | 6.2    | 5.8                | Pocahontas              | * | *   | *   |
|  | Audubon             | 3                  | 4.8                     | 4.3    | Ringgold           | *                       | *      | *                  | Taylor                  | * | *   | *   |
|  | Clarke              | 3                  | 4.0                     | 3.6    | Van Buren          | 3                       | 4.3    | 3.8                | Wayne                   | 4 | 6.4 | 6.1 |
|  | Davis               | *                  | *                       | *      | Worth              | 3                       | 4.2    | 2.9                |                         |   |     |     |
|  | Decatur             | 4                  | 5.4                     | 6.6    |                    |                         |        |                    |                         |   |     |     |
|  | Fremont             | *                  | *                       | *      |                    |                         |        |                    |                         |   |     |     |
|  | Howard              | 3                  | 3.4                     | 3.1    |                    |                         |        |                    |                         |   |     |     |
|  | Ida                 | 5                  | 6.8                     | 8.1    |                    |                         |        |                    |                         |   |     |     |
|  | <b>Group Totals</b> |                    |                         |        |                    |                         |        |                    |                         |   |     |     |
| Number:  | 49                  |                    |                         |        |                    |                         |        |                    |                         |   |     |     |
| Crude:   | 3.9                 |                    |                         |        |                    |                         |        |                    |                         |   |     |     |
| Adjusted:  | 4.0                 |                    |                         |        |                    |                         |        |                    |                         |   |     |     |

|  | County      |       |          |        | County    |          |        |       |            |    |      |      |
|--|-------------|-------|----------|--------|-----------|----------|--------|-------|------------|----|------|------|
|  | Number      | Crude | Adjusted | Number | Crude     | Adjusted | Number | Crude | Adjusted   |    |      |      |
| <b>Counties with Average Population 10,000 to 20,000</b> | Allamakee   | 8     | 6.4      | 5.4    | Henry     | 6        | 3.4    | 3.4   | Humboldt   | *  | *    | *    |
|  | Appanoose   | 4     | 3.3      | 3.3    | Iowa      | 3        | 2.2    | 2.0   | Jefferson  | 8  | 5.3  | 5.7  |
|  | Buena Vista | 5     | 2.8      | 2.3    | Jones     | 3        | 1.7    | 1.5   | Keokuk     | 5  | 4.8  | 4.8  |
|  | Butler      | 6     | 4.2      | 4.7    | Kossuth   | 13       | 8.0    | 7.6   | Louisia    | *  | *    | *    |
|  | Calhoun     | 6     | 5.8      | 4.2    | Lyon      | 9        | 8.4    | 7.6   | Madison    | 4  | 3.4  | 3.3  |
|  | Cass        | 10    | 7.4      | 5.4    | Mills     | 5        | 4.1    | 4.3   | Mitchell   | 11 | 11.1 | 10.1 |
|  | Cedar       | 7     | 4.4      | 4.8    | Monona    | *        | *      | *     | Montgomery | 8  | 7.4  | 6.6  |
|  | Cherokee    | 7     | 5.7      | 5.6    | O'Brien   | 6        | 4.4    | 4.7   | O'Brien    | 6  | 4.4  | 4.7  |
|  | Chickasaw   | *     | *        | *      | Page      | 9        | 5.9    | 7.0   | Palo Alto  | 7  | 7.5  | 7.2  |
|  | Clay        | 6     | 3.8      | 3.6    | Poweshiek | 10       | 5.9    | 5.9   | Sac        | 6  | 5.5  | 6.6  |
|  | Clayton     | 8     | 4.7      | 4.4    | Shelby    | 9        | 7.6    | 8.6   | Shelby     | 9  | 7.6  | 8.6  |
|  | Crawford    | 5     | 3.4      | 3.4    | Tama      | 7        | 4.4    | 4.5   | Union      | 9  | 8.0  | 8.7  |
|  | Delaware    | *     | *        | *      | Winnebago | 3        | 2.8    | 2.5   | Wright     | 11 | 8.6  | 7.1  |
|  | Dickinson   | 7     | 5.0      | 5.8    |           |          |        |       |            |    |      |      |
|  | Emmet       | 3     | 3.0      | 3.4    |           |          |        |       |            |    |      |      |
|  | Floyd       | 3     | 2.0      | 2.3    |           |          |        |       |            |    |      |      |
|  | Franklin    | 6     | 6.0      | 6.4    |           |          |        |       |            |    |      |      |
|  | Greene      | 6     | 6.6      | 5.4    |           |          |        |       |            |    |      |      |
|  | Grundy      | 3     | 2.7      | 3.1    |           |          |        |       |            |    |      |      |
|  | Guthrie     | *     | *        | *      |           |          |        |       |            |    |      |      |
| Hamilton   | 8           | 5.5   | 5.9      |        |           |          |        |       |            |    |      |      |
| Hancock  | *           | *     | *        |        |           |          |        |       |            |    |      |      |
| Hardin   | 8           | 4.8   | 4.7      |        |           |          |        |       |            |    |      |      |
| Harrison   | 3           | 2.2   | 1.9      |        |           |          |        |       |            |    |      |      |

|  | County      |       |          |        | County     |          |        |       |            |    |     |     |
|--|-------------|-------|----------|--------|------------|----------|--------|-------|------------|----|-----|-----|
|  | Number      | Crude | Adjusted | Number | Crude      | Adjusted | Number | Crude | Adjusted   |    |     |     |
| <b>Counties with Average Population &gt;20,000</b> | Benton      | 8     | 3.7      | 3.7    | Mahaska    | 8        | 4.1    | 4.0   | Marion     | 9  | 3.3 | 3.5 |
|  | Boone       | 10    | 4.3      | 4.5    | Marshall   | 29       | 8.4    | 8.7   | Muscatine  | 14 | 3.8 | 3.7 |
|  | Bremer      | 8     | 3.8      | 3.3    | Plymouth   | 13       | 6.0    | 6.1   | Sioux      | 9  | 3.2 | 3.1 |
|  | Buchanan    | 10    | 5.3      | 5.0    | Story      | 31       | 4.6    | 5.5   | Wapello    | 18 | 5.6 | 5.5 |
|  | Carroll     | 13    | 6.7      | 6.4    | Washington | 10       | 5.5    | 4.9   | Washington | 10 | 5.5 | 4.9 |
|  | Cerro Gordo | 23    | 5.5      | 5.6    | Webster    | 15       | 4.2    | 4.1   | Webster    | 15 | 4.2 | 4.1 |
|  | Clinton     | 22    | 4.8      | 4.8    | Winneschik | 5        | 2.7    | 2.7   | Winneschik | 5  | 2.7 | 2.7 |
|  | Des Moines  | 8     | 2.1      | 2.2    |            |          |        |       |            |    |     |     |
|  | Fayette     | 10    | 5.1      | 4.2    |            |          |        |       |            |    |     |     |
|  | Jackson     | 9     | 5.0      | 5.0    |            |          |        |       |            |    |     |     |
|  | Jasper      | 13    | 4.1      | 4.3    |            |          |        |       |            |    |     |     |
|  | Lee         | 9     | 2.6      | 2.7    |            |          |        |       |            |    |     |     |

|                     | County              |       |          |        | County   |          |        |       |               |    |     |     |
|---------------------|---------------------|-------|----------|--------|----------|----------|--------|-------|---------------|----|-----|-----|
|                     | Number              | Crude | Adjusted | Number | Crude    | Adjusted | Number | Crude | Adjusted      |    |     |     |
| <b>MSA Counties</b> | Black Hawk          | 47    | 4.2      | 4.5    | Polk     | 168      | 5.4    | 5.3   | Pottawattamie | 41 | 5.4 | 5.3 |
|                     | Dallas              | 11    | 3.7      | 3.7    | Scott    | 54       | 3.9    | 3.8   | Warren        | 13 | 3.8 | 3.9 |
|                     | Dubuque             | 34    | 4.3      | 4.3    | Woodbury | 74       | 8.2    | 7.8   |               |    |     |     |
|                     | Johnson             | 34    | 3.8      | 4.4    |          |          |        |       |               |    |     |     |
|                     | Linn                | 60    | 3.8      | 3.9    |          |          |        |       |               |    |     |     |
|                     | <b>Group Totals</b> |       |          |        |          |          |        |       |               |    |     |     |
| Number:             | 536                 |       |          |        |          |          |        |       |               |    |     |     |
| Crude:              | 4.8                 |       |          |        |          |          |        |       |               |    |     |     |
| Adjusted:           | 4.8                 |       |          |        |          |          |        |       |               |    |     |     |

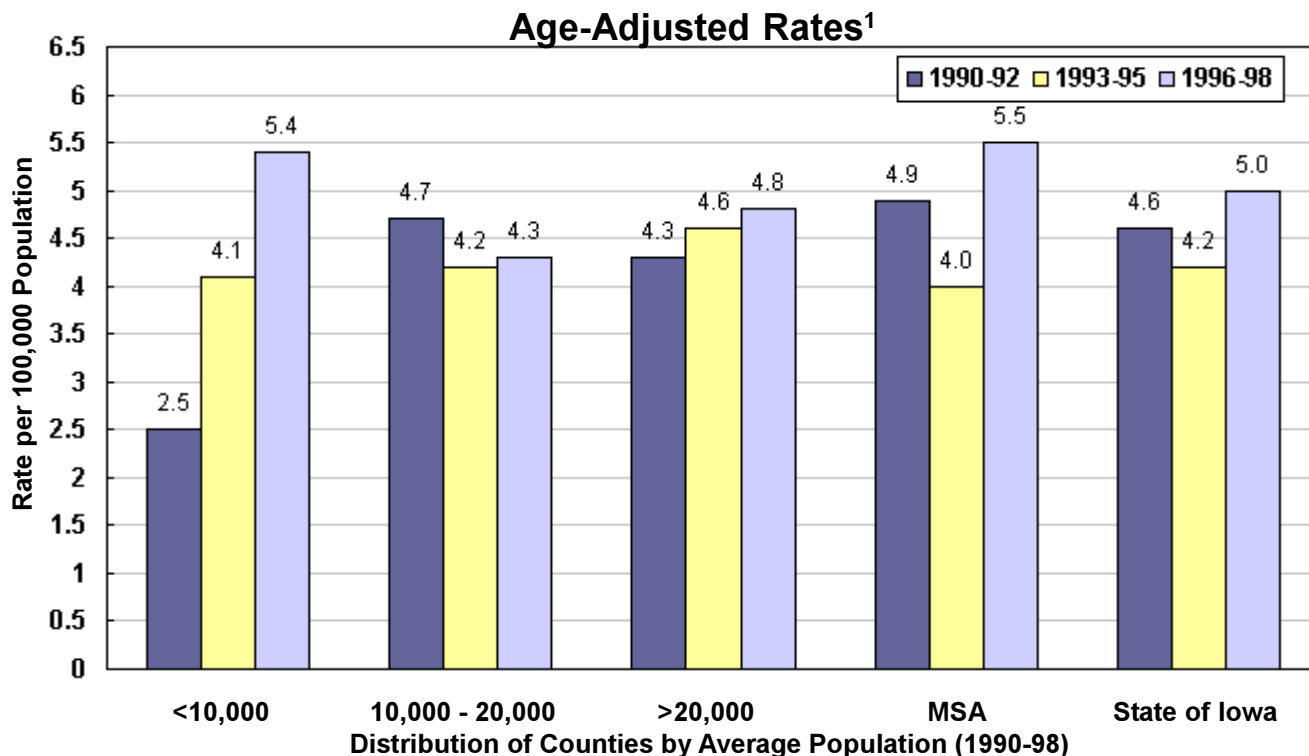
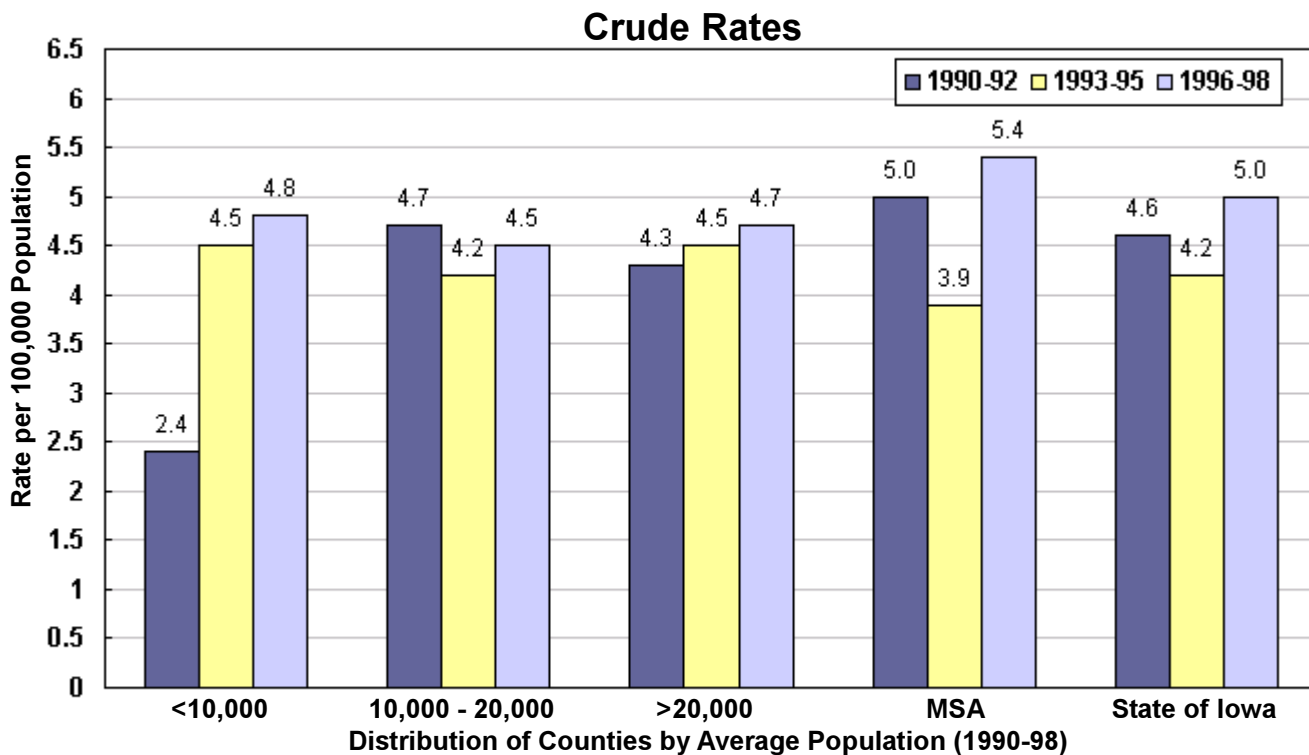
<sup>1</sup>Rates per 100,000 population

\*Number of events is less than 3

<sup>2</sup>Adjusted to Year 2000 US population

Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Congenital Anomalies Mortality by County Group 1990-1998



<sup>1</sup>Adjusted to Year 2000 US population

# Conditions Originating in Perinatal Period Mortality 1990-1998

| TOTAL         | Number | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |
|---------------|--------|--------------------|-------------------------|
| State of Iowa | 1,015  | 4.0                | 4.2                     |

|  |                     | County  | Number  | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> | County     | Number    | Crude <sup>1</sup> | Adjusted <sup>1,2</sup> |     |
|--|---------------------|---------|---------|--------------------|-------------------------|------------|-----------|--------------------|-------------------------|-----|
| <b>Counties with Average Population &lt;10,000</b> |                     | Adair   | *       | *                  | *                       | Lucas      | *         | *                  | *                       |     |
|  |                     | Adams   | *       | *                  | *                       | Monroe     | *         | *                  | *                       |     |
|  |                     | Audubon | *       | *                  | *                       | Osceola    | *         | *                  | *                       |     |
|  |                     | Clarke  | *       | *                  | *                       | Pocahontas | *         | *                  | *                       |     |
|  |                     | Davis   | *       | *                  | *                       | Ringgold   | *         | *                  | *                       |     |
|  | <u>Group Totals</u> |         | Decatur | 5                  | 6.8                     | 8.0        | Taylor    | *                  | *                       | *   |
|  | Number:             | 34      | Fremont | *                  | *                       | *          | Van Buren | 4                  | 5.7                     | 5.8 |
|  | Crude:              | 2.7     | Howard  | *                  | *                       | *          | Wayne     | *                  | *                       | *   |
|  | Adjusted:           | 3.0     | Ida     | 6                  | 8.1                     | 8.0        | Worth     | *                  | *                       | *   |

|  |                     | County      | Number    | Crude | Adjusted  | County     | Number  | Crude | Adjusted |     |
|--|---------------------|-------------|-----------|-------|-----------|------------|---------|-------|----------|-----|
| <b>Counties with Average Population 10,000 to 20,000</b> |                     | Allamakee   | 4         | 3.2   | 3.3       | Henry      | 5       | 2.8   | 3.1      |     |
|  |                     | Appanoose   | 7         | 5.7   | 6.5       | Humboldt   | 3       | 3.2   | 3.6      |     |
|  |                     | Buena Vista | 3         | 1.7   | 1.7       | Iowa       | 3       | 2.2   | 2.2      |     |
|  |                     | Butler      | 3         | 2.1   | 2.5       | Jefferson  | 7       | 4.7   | 5.2      |     |
|  |                     | Calhoun     | *         | *     | *         | Jones      | 10      | 5.6   | 6.3      |     |
|  |                     | Cass        | *         | *     | *         | Keokuk     | *       | *     | *        |     |
|  | <u>Group Totals</u> |             | Cedar     | 5     | 3.1       | 3.6        | Kossuth | 4     | 2.5      | 2.6 |
|  | Number:             | 179         | Cherokee  | 5     | 4.0       | 4.1        | Louisa  | 4     | 3.8      | 4.0 |
|  | Crude:              | 2.9         | Chickasaw | 3     | 2.5       | 2.7        | Lyon    | *     | *        | *   |
|  | Adjusted:           | 3.2         | Clay      | *     | *         | *          | Madison | *     | *        | *   |
|  |                     | Clayton     | *         | *     | *         | Mills      | 5       | 4.1   | 4.4      |     |
|  |                     | Crawford    | 4         | 2.7   | 2.8       | Mitchell   | 4       | 4.0   | 4.5      |     |
|  |                     | Delaware    | 3         | 1.8   | 1.7       | Monona     | *       | *     | *        |     |
|  |                     | Dickinson   | 3         | 2.1   | 2.8       | Montgomery | 5       | 4.7   | 5.5      |     |
|  |                     | Emmet       | *         | *     | *         | O'Brien    | 7       | 5.1   | 5.7      |     |
|  |                     | Floyd       | 3         | 2.0   | 2.3       | Page       | 7       | 4.6   | 5.8      |     |
|  |                     | Franklin    | 3         | 3.0   | 3.4       | Palo Alto  | 7       | 7.5   | 8.7      |     |
|  |                     | Greene      | 3         | 3.3   | 3.9       | Poweshiek  | *       | *     | *        |     |
|  |                     | Grundy      | *         | *     | *         | Sac        | *       | *     | *        |     |
|  |                     | Guthrie     | 4         | 3.9   | 5.1       | Shelby     | 8       | 6.8   | 7.5      |     |
|  | Hamilton            | 6           | 4.1       | 4.6   | Tama      | 3          | 1.9     | 2.1   |          |     |
|  | Hancock             | *           | *         | *     | Union     | 3          | 2.7     | 3.1   |          |     |
|  | Hardin              | 3           | 1.8       | 2.2   | Winnebago | 4          | 3.7     | 4.1   |          |     |
|  | Harrison            | 4           | 3.0       | 3.1   | Wright    | 4          | 3.1     | 3.4   |          |     |

|  |                     | County   | Number      | Crude | Adjusted | County    | Number     | Crude | Adjusted |     |
|--|---------------------|----------|-------------|-------|----------|-----------|------------|-------|----------|-----|
| <b>Counties with Average Population &gt;20,000</b> |                     | Benton   | 11          | 5.1   | 5.0      | Mahaska   | 3          | 1.5   | 1.6      |     |
|  |                     | Boone    | 6           | 2.6   | 2.8      | Marion    | 8          | 2.9   | 3.2      |     |
|  |                     | Bremer   | 6           | 2.9   | 3.5      | Marshall  | 15         | 4.3   | 4.9      |     |
|  |                     | Buchanan | 7           | 3.7   | 3.4      | Muscatine | 19         | 5.2   | 5.0      |     |
|  |                     | Carroll  | 6           | 3.1   | 2.9      | Plymouth  | 5          | 2.3   | 2.3      |     |
|  | <u>Group Totals</u> |          | Cerro Gordo | 8     | 1.9      | 2.1       | Sioux      | 12    | 4.3      | 4.1 |
|  | Number:             | 226      | Clinton     | 11    | 2.4      | 2.5       | Story      | 21    | 3.1      | 3.8 |
|  | Crude:              | 3.4      | Des Moines  | 15    | 3.9      | 4.3       | Wapello    | 8     | 2.5      | 2.8 |
|  | Adjusted:           | 3.6      | Fayette     | 6     | 3.0      | 3.2       | Washington | 11    | 6.0      | 5.9 |
|  |                     | Jackson  | 7           | 3.9   | 4.0      | Webster   | 15         | 4.2   | 4.2      |     |
|  |                     | Jasper   | 11          | 3.5   | 4.0      | Winneshek | *          | *     | *        |     |
|  |                     | Lee      | 14          | 4.0   | 4.4      |           |            |       |          |     |

|                     |                     | County     | Number  | Crude | Adjusted | County        | Number   | Crude | Adjusted |     |
|---------------------|---------------------|------------|---------|-------|----------|---------------|----------|-------|----------|-----|
| <b>MSA Counties</b> |                     | Black Hawk | 53      | 4.8   | 5.2      | Polk          | 177      | 5.7   | 5.4      |     |
|                     |                     | Dallas     | 11      | 3.7   | 3.8      | Pottawattamie | 35       | 4.6   | 4.5      |     |
|                     | <u>Group Totals</u> |            | Dubuque | 29    | 3.7      | 3.8           | Scott    | 72    | 5.1      | 4.8 |
|                     | Number:             | 576        | Johnson | 40    | 4.5      | 5.0           | Warren   | 21    | 6.1      | 6.2 |
|                     | Crude:              | 5.1        | Linn    | 85    | 5.4      | 5.5           | Woodbury | 53    | 5.8      | 5.5 |
|                     | Adjusted:           | 5.1        |         |       |          |               |          |       |          |     |

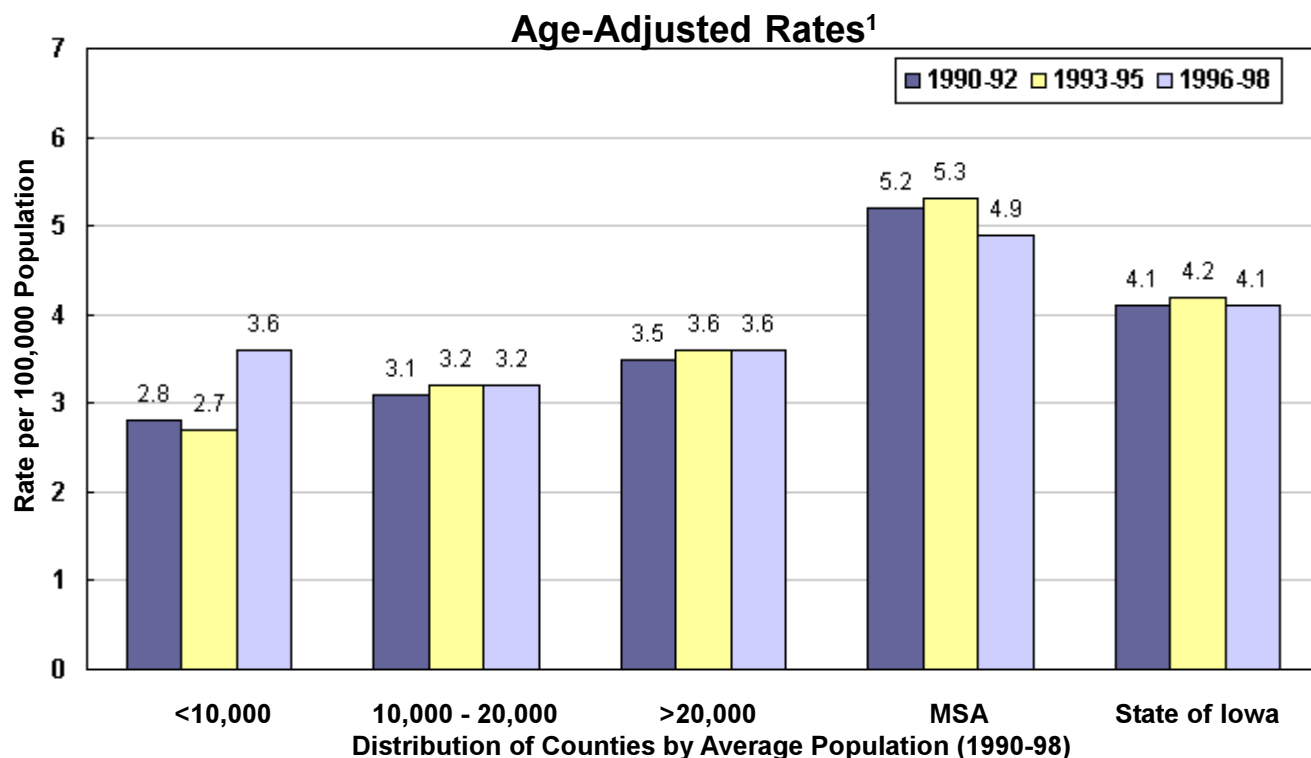
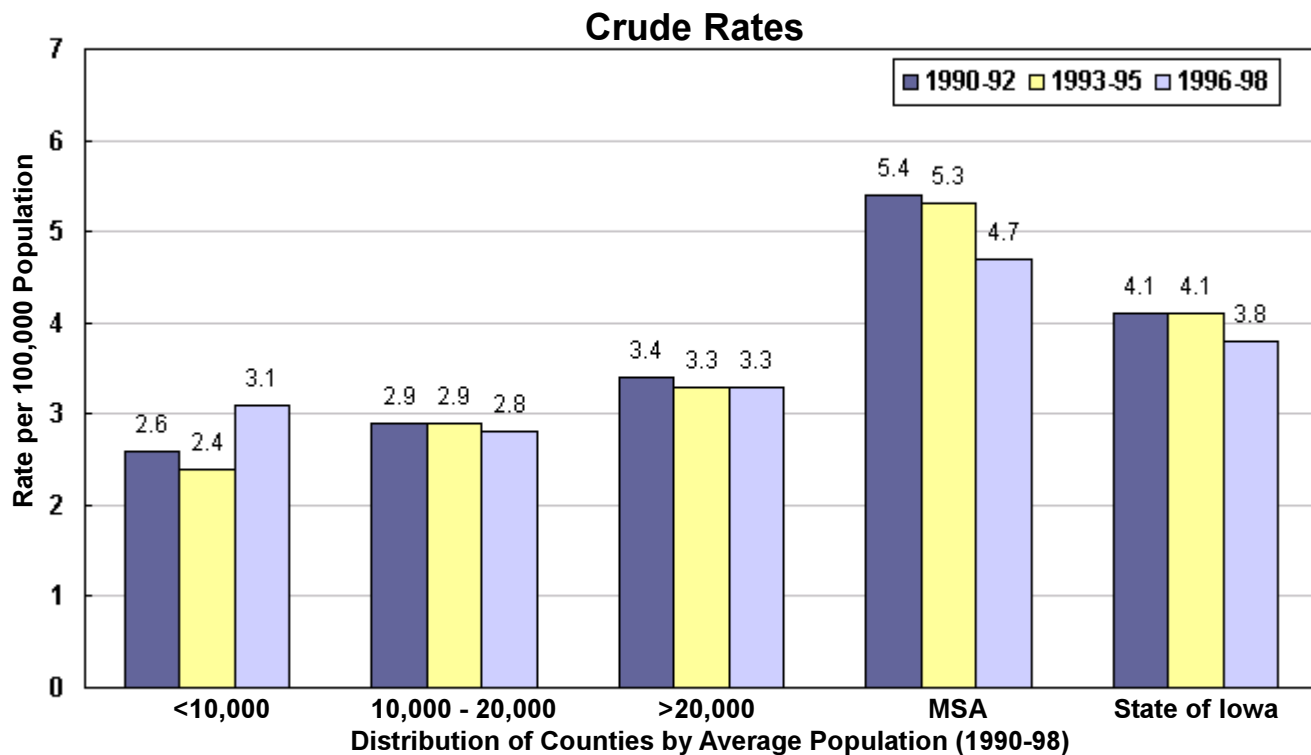
<sup>1</sup>Rates per 100,000 population

<sup>\*</sup>Number of events is less than 3

<sup>2</sup>Adjusted to Year 2000 US population

Source: IDPH Vital Records via Iowa Cancer Registry, The University of Iowa

## Conditions Originating in Perinatal Period Mortality by County Group 1990-1998



<sup>1</sup>Adjusted to Year 2000 US population

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