



Appendix 8
County Profile

Prepared by
Ohio Department of Health



State Health Resources Plan

1999

State *Ohio*

Department

of

1999

Health

Health

Resources



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Section Eight

County Health Profiles

Summary health profiles for Ohio and each of the state's 88 counties, listed alphabetically, are presented in this section. Selected demographic data, data on lifestyle, data on mortality, and data on access to and use of health services are included. These factors are all interrelated, often reciprocally. They both influence health status and are indicators of it. The information is arranged to give some indication of the relationships among these factors. The profiles are organized into two columns beginning with demographic factors such as population and racial distribution. Maternal and child indicators and behavioral risk factors that can influence health bridge the two columns. Mortality statistics, the indicators of the county's health status, are centered in the second column. Data indicating what is being done - health expenditures, access to, and use of health services - conclude the profiles. The selected indicators provide a snapshot of health in the county that can be compared to the state and to other counties. Such comparisons can be useful, but the information is incomplete and firm conclusions may require more study. Indeed the most important use of the profiles may be to provoke questions and further inquiry.

Population and Projections

The data show the increase or decrease in the total population and the age distribution of the population. In most counties in Ohio the proportion of the population 65 years and older is increasing. Older people tend to use more health care than younger people do. The aging of the population will translate into increased health care utilization.

Racial and ethnic population distribution

The population distribution by racial and ethnic group may be useful to tailor programs for health issues that affect specific racial and ethnic populations

Educational attainment

Educational attainment is intertwined with the socioeconomic conditions in a county. Lower educational attainment is associated with unhealthy behavior, such as cigarette smoking, low income, and increased morbidity and mortality.

Maternal and Child Indicators

Each factor listed expresses a health risk or negative birth outcome. The level of these indicators can be used to prioritize intervention programs. Rank indicates the quartile into which the rate falls. Rank one contains the best results; rank four, the worst.

Behavioral risk factors

Cigarette Smoking, lack of physical activity, and diet (obesity) are the three most prominent contributors to mortality in the United States

Cigarette Smoking Attributable Mortality

The number of deaths that occur each year because of cigarette smoking is based on prevalence of cigarette smoking and the number of deaths by specific underlying causes.

Almost 20 percent of all deaths in Ohio were attributable to cigarette smoking.

Premature Death

Deaths before the age of 65 years were considered to be premature deaths. Years of potential life lost due to premature death is the single best predictor of health status of a community.

Age-adjusted Mortality Rates

The rates displayed cover the major causes of death in Ohio. Counties can compare their rates to other counties and the state to determine if a particular cause of death is more prominent in their communities. Rank indicates the quartile into which the rate falls. Rank one contains the best results; rank four, the worst.

Average expenditures and income

The amounts of money spent for public health and hospital care are put in perspective by comparing them to personal income. Low income can also be a proxy for limited access to medical care services.

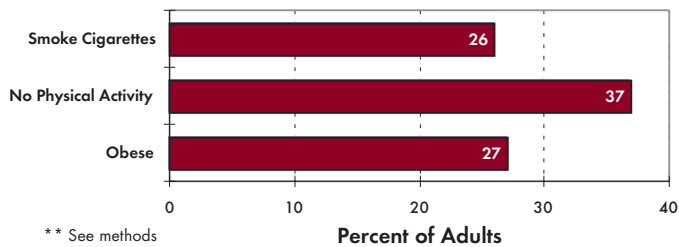
Access to and Utilization of Health Care

The ratio of physicians and dentists to the population shows if there are adequate numbers to serve the population. Uninsured rates are a proxy for impaired access to direct medical care services. Insurance through Medicaid may also indicate a lack of access because many private medical providers will not participate in Medicaid. High avoidable hospitalization rates suggest a lack of primary care and inadequate disease management. Age-adjusted hospital discharge rates show the amount of inpatient care received by a population; higher rates may indicate poor health status, or they may indicate overuse of hospital care.

1999 State Health Resource Plan

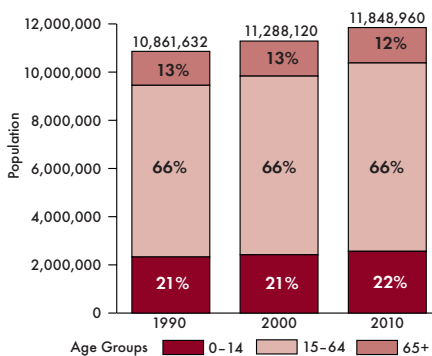


Behavioral Risk Factors 1990-1996 ** (average)



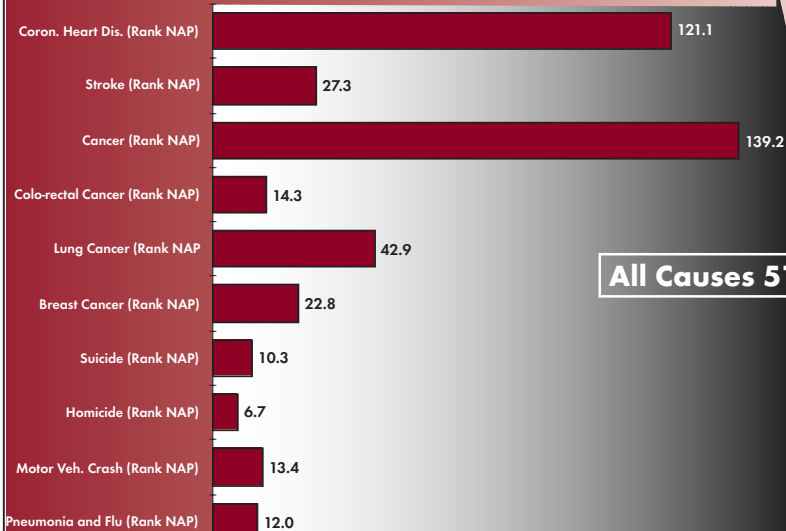
Each year 20,434 deaths were attributable to cigarette smoking (1992-1996).

Populations and Projections



PREMATURE DEATH - Each year 42.1 years of potential life were lost for every 1,000 persons (1992-1996).

1992-1996 Average Annual Age Adjusted Mortality Rates per 100,000*



All Causes 510

*1940 Standard

Racial and ethnic population distribution

| | Percent | Number |
|------------------|---------|------------|
| Total Population | 100.0% | 11,172,782 |
| Black | 11.3% | 1,264,493 |
| White | 87.4% | 9,766,839 |
| Other | 1.3% | 141,450 |
| Hispanic | 1.5% | 168,711 |
| Non-Hispanic | 98.5% | 11,004,071 |

Educational attainment

Percent of persons 18 and over who are High School graduates: 75.7% (1990)
Graduation Rate: 78.77% (FY97)

Maternal and Child Indicators 1992-1996

For every 1,000 births

| | | |
|--|-----|----------|
| Infant mortality | 9 | Rank NAP |
| Low birth weight | 75 | Rank NAP |
| Mother smoked cigarettes during pregnancy | 213 | Rank NAP |
| Mother did not have prenatal care in first trimester | 160 | Rank NAP |
| Mother was 12 to 17 years of age | 51 | Rank NAP |

For each person the average:

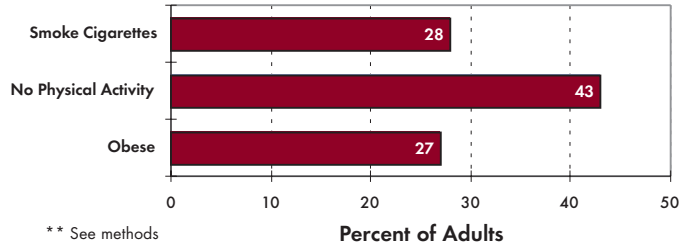
| | |
|--|----------|
| Expenditure by Public Health Departments (1997) | \$26.54 |
| Expenditure for inpatient hospitalization (1996) | \$1,088 |
| Income (1993) | \$19,696 |

Access and Utilization of Health Care

| | Total Number | |
|--|--------------|-----------------|
| Primary care phys. to population ratio | 12,299 | 1:882 |
| Dentist to population ratio | 6,319 | 1:1,768 |
| Uninsured adults | 981,921 | 12.3% |
| Uninsured children | 234,878 | 8.2% |
| Adults insured by Medicaid | 700,239 | 8.4% |
| Children insured by Medicaid | 786,150 | 27.7% |
| Avoidable hospitalizations (20 and over) | 48,143 | 7.5 per 1,000 |
| Avoidable hospitalizations (0-19 years) | 30,999 | 9.7 per 1,000 |
| Hospital discharges (all ages) | 1,399,091 | 126.2 per 1,000 |

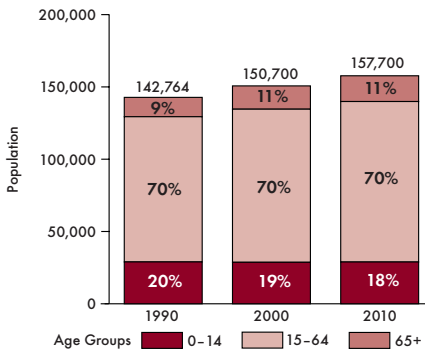


Behavioral Risk Factors 1990 -1996 ** (average)



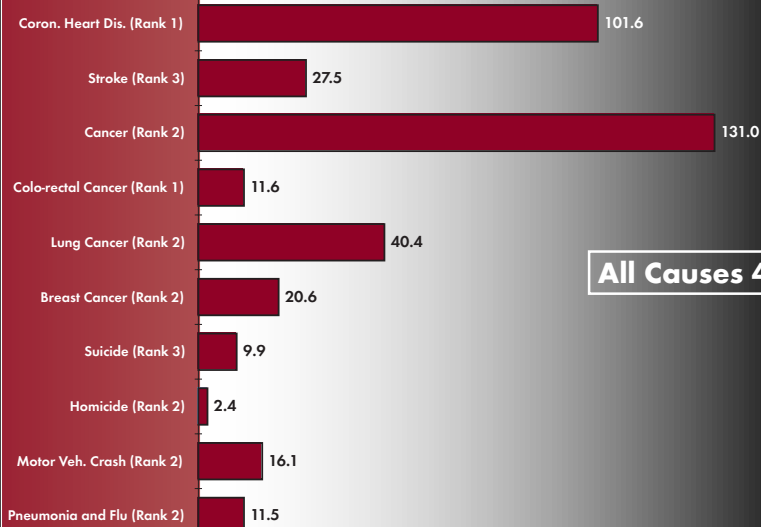
Each year 197 deaths were attributable to cigarette smoking (1992-1996).

Populations and Projections



PREMATURE DEATH - Each year 35.5 years of potential life were lost for every 1,000 persons (1992-1996).

1992-1996 Average Annual Age Adjusted Mortality Rates per 100,000*



*1940 Standard

Racial and ethnic population distribution

| | Percent | Number |
|------------------|---------|---------|
| Total Population | 100.0% | 149,571 |
| Black | 2.9% | 4,366 |
| White | 95.8% | 143,323 |
| Other | 1.3% | 1,882 |
| Hispanic | 0.7% | 1,012 |
| Non-Hispanic | 99.3% | 148,559 |

Educational attainment

Percent of persons 18 and over who are High School graduates: 79.3% (1990)
Graduation Rate: 88.64% (FY97)

Maternal and Child Indicators 1992-1996

For every 1,000 births

| | | |
|--|-----|--------|
| Infant mortality | 7 | Rank 2 |
| Low birth weight | 66 | Rank 2 |
| Mother smoked cigarettes during pregnancy | 246 | Rank 3 |
| Mother did not have prenatal care in first trimester | 106 | Rank 1 |
| Mother was 12 to 17 years of age | 29 | Rank 1 |

For each person the average:

| | |
|--|----------|
| Expenditure by Public Health Departments (1997) | \$13.81 |
| Expenditure for inpatient hospitalization (1996) | \$981 |
| Income (1993) | \$16,847 |

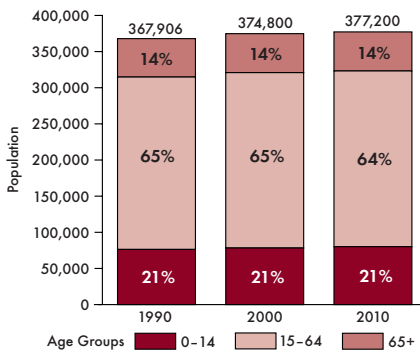
Access and Utilization of Health Care

| | Total Number | |
|--|--------------|-----------------|
| Primary care phys. to population ratio | 69 | 1:2,066 |
| Dentist to population ratio | 50 | 1:2,971 |
| Uninsured adults | 12,827 | 13.9% |
| Uninsured children | 3,198 | 8.3% |
| Adults insured by Medicaid | 5,796 | 5.1% |
| Children insured by Medicaid | 7,090 | 19.3% |
| Avoidable hospitalizations (20 and over) | 576 | 6.5 per 1,000 |
| Avoidable hospitalizations (0-19 years) | 380 | 8.9 per 1,000 |
| Hospital discharges (all ages) | 15,677 | 121.1 per 1,000 |

Rank number means quartile: 4th quartile has the poorest indicators



Populations and Projections



Racial and ethnic population distribution

| | Percent | Number |
|------------------|---------|---------|
| Total Population | 100.0% | 374,406 |
| Black | 7.5% | 28,076 |
| White | 91.7% | 343,334 |
| Other | 0.8% | 2,996 |
| Hispanic | 0.9% | 3,425 |
| Non-Hispanic | 99.1% | 370,981 |

Educational attainment

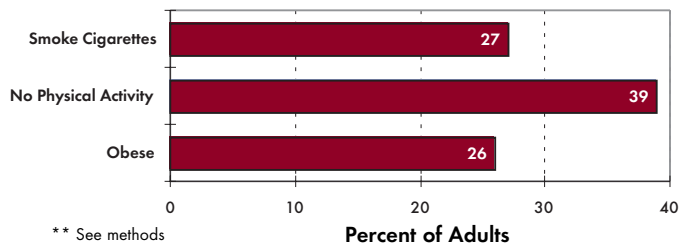
Percent of persons 18 and over who are
 High School graduates: 76.0% (1990)
 Graduation Rate: 85.89% (FY97)

Maternal and Child Indicators 1992-1996

For every 1,000 births

| | | |
|--|-----|--------|
| Infant mortality | 8 | Rank 3 |
| Low birth weight | 75 | Rank 4 |
| Mother smoked cigarettes during pregnancy | 220 | Rank 2 |
| Mother did not have prenatal care in first trimester | 131 | Rank 2 |
| Mother was 12 to 17 years of age | 47 | Rank 2 |

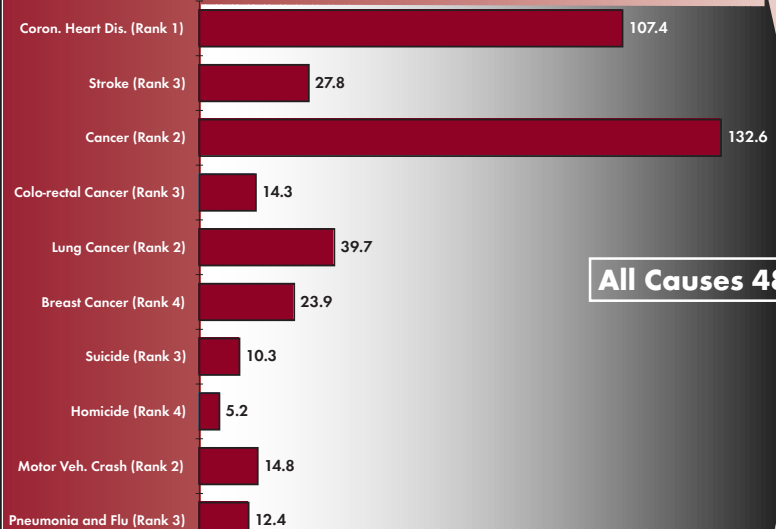
Behavioral Risk Factors 1990-1996 ** (average)



Each year 785 deaths were attributable to cigarette smoking (1992-1996).

PREMATURE DEATH - Each year 38.4 years of potential life were lost for every 1,000 persons (1992-1996).

1992-1996 Average Annual Age Adjusted Mortality Rates per 100,000*



All Causes 487

*1940 Standard

For each person the average:

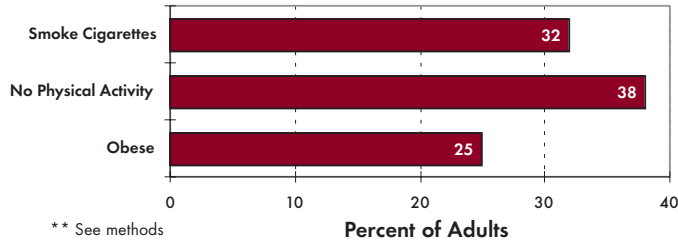
| | |
|--|----------|
| Expenditure by Public Health Departments (1997) | \$22.83 |
| Expenditure for inpatient hospitalization (1996) | \$995 |
| Income (1993) | \$18,712 |

Access and Utilization of Health Care

| | Total Number | |
|--|--------------|-----------------|
| Primary care phys. to population ratio | 399 | 1:921 |
| Dentist to population ratio | 205 | 1:1,826 |
| Uninsured adults | 32,074 | 11.6% |
| Uninsured children | 7,488 | 8.1% |
| Adults insured by Medicaid | 22,663 | 8.0% |
| Children insured by Medicaid | 24,879 | 27.0% |
| Avoidable hospitalizations (20 and over) | 1,761 | 8.2 per 1,000 |
| Avoidable hospitalizations (0-19 years) | 1,496 | 14.3 per 1,000 |
| Hospital discharges (all ages) | 53,536 | 139.3 per 1,000 |

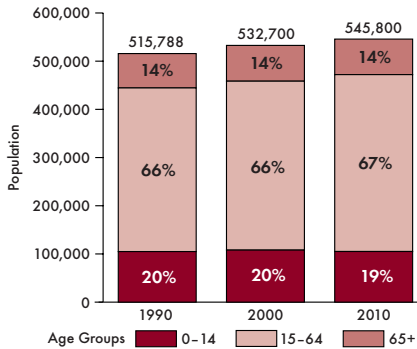


Behavioral Risk Factors 1990 -1996 ** (average)



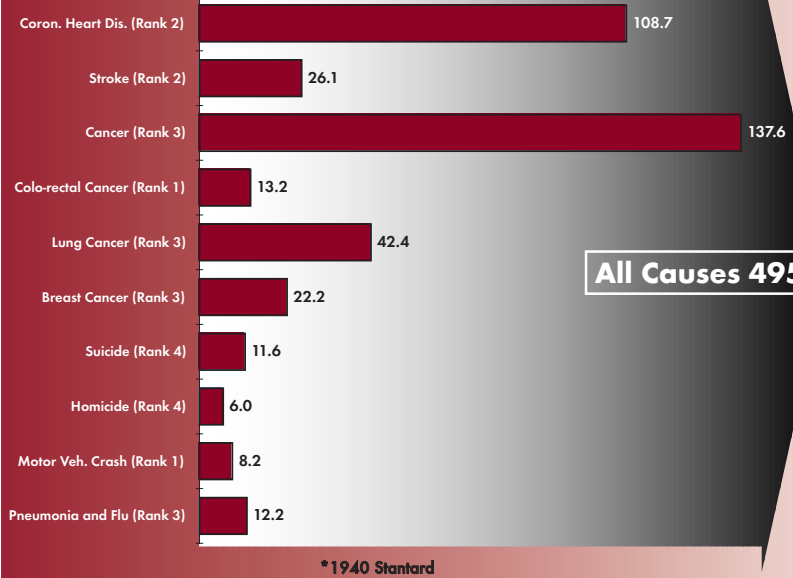
Each year 995 deaths were attributable to cigarette smoking (1992-1996).

Populations and Projections



PREMATURE DEATH - Each year 38.7 years of potential life were lost for every 1,000 persons (1992-1996).

1992-1996 Average Annual Age Adjusted Mortality Rates per 100,000*



Racial and ethnic population distribution

| | Percent | Number |
|------------------|---------|---------|
| Total Population | 100.0% | 530,571 |
| Black | 13.0% | 68,894 |
| White | 85.6% | 454,034 |
| Other | 1.4% | 7,643 |
| Hispanic | 0.7% | 3,786 |
| Non-Hispanic | 99.3% | 526,785 |

Educational attainment

Percent of persons 18 and over who are High School graduates: 78.3% (1990)
Graduation Rate: 81.45% (FY97)

Maternal and Child Indicators 1992-1996

For every 1,000 births

| | | |
|--|-----|--------|
| Infant mortality | 8 | Rank 3 |
| Low birth weight | 81 | Rank 4 |
| Mother smoked cigarettes during pregnancy | 229 | Rank 2 |
| Mother did not have prenatal care in first trimester | 117 | Rank 1 |
| Mother was 12 to 17 years of age | 46 | Rank 2 |

For each person the average:

| | |
|--|----------|
| Expenditure by Public Health Departments (1997) | \$36.71 |
| Expenditure for inpatient hospitalization (1996) | \$1,417 |
| Income (1993) | \$20,685 |

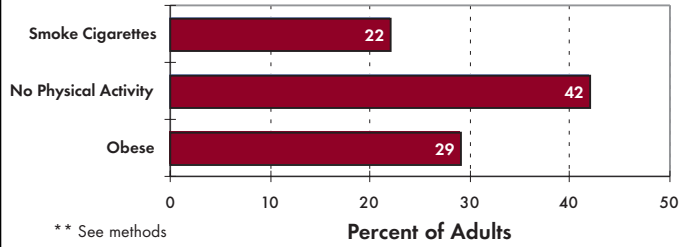
Access and Utilization of Health Care

| | Total Number | |
|--|--------------|-----------------|
| Primary care phys. to population ratio | 662 | 1:778 |
| Dentist to population ratio | 321 | 1:1,653 |
| Uninsured adults | 43,775 | 11.5% |
| Uninsured children | 10,122 | 7.9% |
| Adults insured by Medicaid | 34,556 | 8.6% |
| Children insured by Medicaid | 39,000 | 30.5% |
| Avoidable hospitalizations (20 and over) | 2,647 | 8.6 per 1,000 |
| Avoidable hospitalizations (0-19 years) | 1,520 | 10.5 per 1,000 |
| Hospital discharges (all ages) | 72,011 | 133.8 per 1,000 |

Rank number means quartile: 4th quartile has the poorest indicators

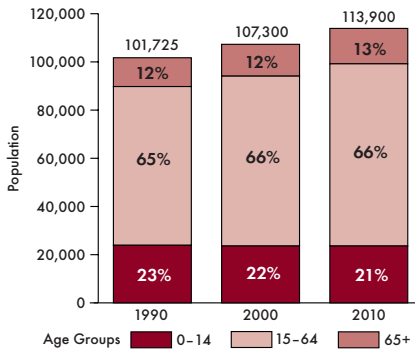


Behavioral Risk Factors 1990 -1996 ** (average)



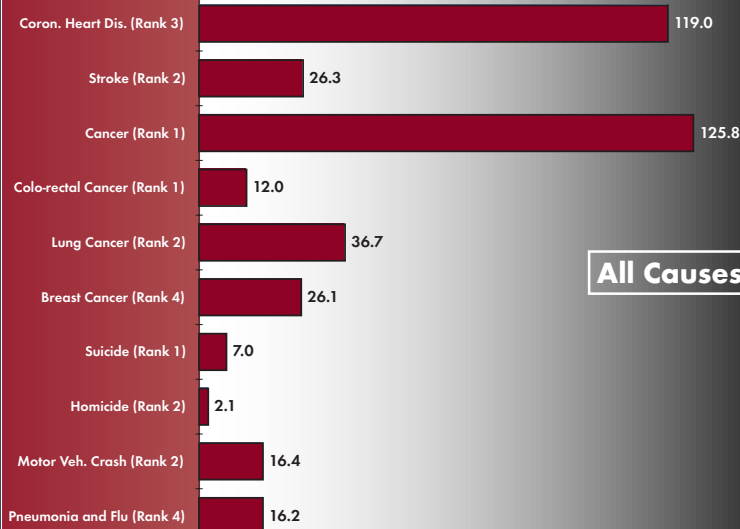
Each year 163 deaths were attributable to cigarette smoking (1992-1996).

Populations and Projections



PREMATURE DEATH - Each year 35.4 years of potential life were lost for every 1,000 persons (1992-1996).

1992-1996 Average Annual Age Adjusted Mortality Rates per 100,000*



All Causes 465

Racial and ethnic population distribution

| | Percent | Number |
|------------------|---------|---------|
| Total Population | 100.0% | 108,556 |
| Black | 1.7% | 1,814 |
| White | 97.5% | 105,861 |
| Other | 0.8% | 881 |
| Hispanic | 0.5% | 558 |
| Non-Hispanic | 99.5% | 107,998 |

Educational attainment

Percent of persons 18 and over who are High School graduates: 73.6% (1990)
Graduation Rate: 83.63% (FY97)

Maternal and Child Indicators 1992-1996

For every 1,000 births

| | | |
|--|-----|--------|
| Infant mortality | 6 | Rank 1 |
| Low birth weight | 55 | Rank 1 |
| Mother smoked cigarettes during pregnancy | 171 | Rank 1 |
| Mother did not have prenatal care in first trimester | 250 | Rank 4 |
| Mother was 12 to 17 years of age | 25 | Rank 1 |

For each person the average:

| | |
|--|----------|
| Expenditure by Public Health Departments (1997) | \$21.79 |
| Expenditure for inpatient hospitalization (1996) | \$831 |
| Income (1993) | \$17,631 |

Access and Utilization of Health Care

| | Total Number | |
|--|--------------|-----------------|
| Primary care phys. to population ratio | 67 | 1:1,514 |
| Dentist to population ratio | 39 | 1:2,784 |
| Uninsured adults | 10,770 | 14.3% |
| Uninsured children | 2,864 | 9.6% |
| Adults insured by Medicaid | 4,700 | 6.0% |
| Children insured by Medicaid | 4,560 | 15.1% |
| Avoidable hospitalizations (20 and over) | 396 | 6.7 per 1,000 |
| Avoidable hospitalizations (0-19 years) | 229 | 7.1 per 1,000 |
| Hospital discharges (all ages) | 12,051 | 117.2 per 1,000 |

Rank number means quartile: 4th quartile has the poorest indicators

Methods for County Profiles

I. Age adjusted rates

All the age-adjusted rates used Ohio Vital Statistics death certificates and US Census Bureau population estimates. The rates are per 100,000 persons and are averaged across 1992-1996. The rates shown are total rates including both males and females (except breast cancer which is females only. Rates were direct adjusted to the US 1940 Standard Population, using 10 age groups (0-4, 5-14, 15-24, ...75-84, 85+). Census estimates of county age/sex/race-specific populations were summed for 1992, 1993, 1994, 1995, and 1996 and used as denominators in the rates.

The causes and associated International Classification of Diseases codes are:

| | | |
|-------------------------|---------------------------------------|---------------------------|
| Coronary Heart Disease | (Healthy People Objective (HPO) #O.1) | 402, 410-414, 429.2 |
| Stroke | (HPO #O.2) | 430-438 |
| Malignant Neoplasms | 140-208 | |
| Colo-rectal Cancer | (HPO #P.4) | 153.0-154.3, 154.8, 159.0 |
| Breast Cancer | (HPO #P.2) | 174 |
| Lung Cancer | (HPO #P.1) | 162.2-162.9 |
| Pneumonia and Influenza | 480-487 | |
| Motor Vehicle Crashes | 810-825 | |
| Suicide | (HPO #F.1) | 950-959 |
| Homicide | (HPO #G.1) | 960-969 |

The quartile ranking cutpoints were:

| | |
|-------------------------|--|
| Coronary Heart Disease: | <108.7 rank 1, 108.8-119.0 rank 2, 119.1-129.0 rank 3, >129.0 rank 4 |
| Stroke: | <25.0 rank 1, 25.1-27.3 rank 2, 27.4-30.1 rank 3, >30.1 rank 4 |
| Malignant Neoplasms | <127.3 rank 1, 127.4-136.2 rank 2, 136.3-144.7 rank 3, >144.7 rank 4 |
| Colo-rectal Cancer | <13.5 rank 1, 13.6-14.3 rank 2, 14.4-15.4 rank 3, >15.4 rank 4 |
| Breast Cancer | <19.9 rank 1, 20.0-22.1 rank 2, 22.2-23.8 rank 3, >23.8 rank 4 |
| Lung Cancer | <36.7 rank 1, 36.8-42.3 rank 2, 42.4-46.3 rank 3, >46.3 rank 4 |
| Pneumonia and Influenza | <10.7 rank 1, 10.8-11.9 rank 2, 12.0-14.0 rank 3, >14.0 rank 4 |
| Motor Vehicle Crashes | <14.0 rank 1, 14.1-17.9 rank 2, 18.0-24.9 rank 3, >24.9 rank 4 |
| Suicide | <8.9 rank 1, 9.0-9.9 rank 2, 10.0-11.6 rank 3, >11.6 rank 4 |
| Homicide | <1.7 rank 1, 1.8-2.7 rank 2, 2.8-4.9 rank 3, >4.9 rank 4 |
| All Cause | <470.8 rank 1, 470.9-503.8 rank 2, 503.9-531.5 rank 3, >531.6 rank 4 |

II. Maternal and Child Indicators

We used Ohio resident 1992-1996 live birth and death certificates data for the rates. All maternal and child indicators are given per 1,000 births.

Infant deaths (HPO #N.1)

Infant mortality is the number of deaths among children aged less than one year divided by the number of births, times 1,000. Quartile ranges: Q1: 3-6 per 1,000 births; Q2: 7; Q3: 8-9; Q4: 10-15.

Low birth weight (HPO #N.3)

Low birth weight is the number of babies who weighed less than 2,500 grams (5.5 lbs) divided by the number of births, times 1,000. Quartile ranges: Q1: 39-59 per 1,000 births; Q2: 60-66; Q3: 67-72; Q4: 73-94.

Mothers who smoked cigarettes during pregnancy (HPO #N.5)

Number of births whose mothers reported smoking cigarettes during pregnancy divided by the total number of births, times 1,000. Quartile ranges: Q1: 66-200 per 1,000 births; Q2: 205-230; Q3: 234-265; Q4: 268-370.

Mothers did not have prenatal care in first trimester (HPO #N.6)

Number of births whose mothers reported no prenatal care visits during the first trimester divided by the total number of births, times 1,000. Quartile ranges: Q1: 64-130 per 1,000 births; Q2: 131-161; Q3: 162-195; Q4: 196-552.

Mother was 12 to 17 years of age

Number of births to mothers not yet 18 years of age divided by the total number of births, times 1,000. Quartile ranges: Q1: 11-40 per 1,000 births; Q2: 41-50; Q3: 51-60; Q4: 61-86.

III. Behavioral Risk Factors

These estimates are based on the Behavioral Risk Factor Surveillance System (BRFSS) data for 1990 through 1996. The BRFSS is a telephone survey of adult Ohioans conducted at the Ohio Department of Health. Current cigarette smoking and obesity used all of the years. 1990, 1991, 1992, 1994, and 1996 were used for the no leisure time physical activity because that question was not part of the survey in 1993 or 1995. Cigarette smoking (HPO #C.1) included current regular or irregular smokers. Obesity (HPO #B.1) was based on Body Mass Index greater than or equal to 27.8 for males and 27.3 for females. No leisure time physical activity ((HPO #A.3) was defined as having no physical activity during the past 30 days outside of work. If the indicator was unknown for a survey respondent, then that person was counted as not having the trait (e.g., cigarette smoking). Data were weighted to reflect the demographic composition of Ohio for age, gender and race and for probability of selection.

There were 7 counties with sufficient respondents (n >= 200) to calculate adult county resident prevalence estimates (Cuyahoga, Franklin, Hamilton, Lucas, Montgomery, Summit, Stark). Other counties were combined into 15 different areas to obtain at least a sample size of 200 for the estimate. The smallest number of adjacent counties where the sum of the respondents was 200 or more was chosen. The largest number of counties that were combined was 8 and the smallest two. The 15 combined

county areas are as follows: 1. Defiance, Fulton, Henry, Paulding, Putnam, Van Wert, Williams; 2. Allen, Auglaize, Hancock, Hardin, Logan, Mercer, Shelby, Union; 3. Butler, Darke, Miami, Preble; 4. Adams, Brown, Clermont, Clinton, Fayette, Highland, Madison, Warren; 5. Gallia, Jackson, Lawrence, Meigs, Pike, Ross, Scioto, Vinton; 6. Athens, Fairfield, Hocking, Morgan, Perry, Pickaway; 7. Belmont, Guernsey, Licking, Monroe, Muskingum, Noble, Washington; 8. Carroll, Columbiana, Coshocton, Harrison, Holmes, Jefferson, Knox, Tuscarawas; 9. Ashland, Medina, Wayne; 10. Mahoning, Portage, Trumbull; 11. Ashtabula, Geauga, Lake; 12. Erie, Lorain; 13. Crawford, Delaware, Huron, Marion, Morrow, Richland, Wyandot; 14. Ottawa, Sandusky, Seneca, Wood; 15. Champaign, Clark, Green.

IV. Racial and ethnic population distribution

These percents and numbers were downloaded from the U.S. Bureau of the Census website (www.census.gov). They are 1996 estimated populations.

V. Populations and projections

These were obtained from Jian He, State Demographer with the Office of Strategic Research, Ohio Department of Development. The projections represent the mathematical outcome of assumptions about the future trends in fertility, mortality and net migration. Five-year age group projections were collapsed into three for the county profiles (under 15, 15-64 and 65 and over).

VI. Educational Attainment

Percent of persons 25 and over who are high school graduates is from 1990 Census (Healthy People Objective H.2). Graduation rate is percent of students who were in ninth grade who later graduated (Ohio Department of Education).

VII. Per capita income and expenditures

Per capita income is from 1993. Public health expenditures are total local health department spending in 1997 divided by the total 1990 population. Expenditures for hospitalizations are total 1996 inpatient hospital charges among county residents divided by the 1996 estimated total population for the county. These data are from OHA: The Association for Hospitals and Health Systems. The charges do not include charges for Ohio residents who received care outside Ohio, and thus per capita charges in border counties are somewhat underestimated.

VIII. Access and Utilization of Health Care

Primary care physician to population ratios are from the Bureau of Community Health Services and Systems Development, ODH. They are based on State Medical Board Licenses. Dentist to population ratios are

from the Bureau of Oral Health Services, ODH. The uninsured estimates are synthetic estimates for 1996 from the Office of Policy and Planning and Health Care Data Center, ODH. Medicaid coverage rates are from the Office of Medicaid, Ohio Department of Human Services. Avoidable hospitalizations among those ages 0-19 are defined as fifteen specific hospitalization conditions taken from a 1987 study conducted by Weissman, Gatsonis, and Epstein in Massachusetts and Maryland. The rates are from OHA The Association for Hospitals and Health Systems and are for 1995. Asthma, pneumonia, and dehydration were the most frequent specific causes of avoidable hospitalizations, accounting for about two thirds of all avoidable hospitalizations. Hospital discharge rates are total 1996 inpatient hospital discharges among county residents divided by the 1996 estimated total population for the county. These data are from OHA The Association for Hospitals and Health Systems. Ohio residents who received care outside Ohio are not included, and thus the discharge rate in border counties is somewhat underestimated.

IX. Cigarette death toll and years of productive life lost.

The annual cigarette death toll is estimated from county smoking prevalence and mortality rates using the CDC's SAMMEC software. Years of potential life lost is an indication of premature mortality, and is defined as the number of years before age 65 a person dies. The years of potential life lost is calculated by subtracting a decedent's age from 65 if the person dies before age 65, then summing that number for all resident deaths. Then divide the sum of years by the number of residents in the county and multiply by 1,000. This yields the years of productive life lost per 1,000 persons per year.