

**MICHIGAN DEPARTMENT OF PUBLIC  
HEALTH**

***MICHIGAN  
HEALTH STATISTICS***



**1993**

### **SYMBOLS USED IN TABLES**

<b>Data not available . . . . .</b>	<b>—</b>
<b>Category not applicable . . . . .</b>	<b>000</b>
<b>Quantity zero . . . . .</b>	<b>-</b>
<b>Quantity more than zero but less than 0.05 . . . . .</b>	<b>0.0</b>
<b>Figure does not meet standards of reliability or precision . . . . .</b>	<b>*</b>
<b>Provisional . . . . .</b>	<b>Pr.</b>

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# **MICHIGAN HEALTH STATISTICS**

**1993**

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Office of the State Registrar and Division of Health Statistics

Michigan Department of Public Health  
Lansing, Michigan      March 1995

**Michigan Department of Public Health**

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## INTRODUCTION

The 1993 edition of Michigan Health Statistics is a statistical summary of vital events for calendar year 1993. Data relative to population, births, deaths, fetal deaths, marriages, divorces and communicable diseases are included. Although most of the data in this report pertain to events occurring in 1993, data for prior years have been included to illustrate trends. Most of the tabulations refer to Michigan residents. Some events, however, such as marriages and divorces are tabulated with respect to where the event occurred rather than the residence of the party or parties involved.

As a certain number of Michigan residents either deliver babies or die out of state each year, it is necessary to include data obtained from the certificates of other states in any tabulations pertaining to Michigan residents. This report includes all such out-of-state certificates received prior to April 30, 1994, and all in-state certificates and records received prior to March 15, 1994. Although a few additional records for the calendar year 1993 were received after these filing dates, their exclusion from this report is statistically insignificant.

This report is composed of county and state vital event profiles as well as the following sections and appendices:

1. County and State Health Statistics Profiles
2. Natality Section
3. Mortality Section
4. Marriage and Divorce Section
5. Reference Appendix

Comments or suggestions concerning the content and format of this report are always welcome. Any additional needs for data or analyses may be directed to the Office. The Office will make every attempt to comply with requests for data within the limitations of staff and resources.

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## TECHNICAL NOTES, DEFINITIONS, RATES AND RATIOS

### DEFINITIONS

**ANCESTRY** - National origin for mother, father or decedent is as stated on certificate. First collected in 1989. If more than one ancestry is reported, the first listed is used. If "American" is given with any other ancestry, the other ancestry is used.

**BIRTH WEIGHT** - Weight of fetus or infant at time of delivery.

**FETAL DEATH** - Death prior to the complete expulsion or extraction from its mother of a product of conception, having passed through at least the 20th week of gestation or weighing at least 400 grams; the fetus shows no signs of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. (Note: This does not include induced terminations.)

**FIRST BIRTH** - A live birth where the maternal medical history indicates there were no prior live births to the mother.

**GESTATIONAL PERIOD** - Number of completed weeks elapsed between the first day of the last menstrual period and the date of delivery.

**HEBDOMADAL DEATH** - Deaths occurring to individuals less than 7 days of age.

**INFANT DEATH** - Deaths occurring to individuals less than 1 year of age.

**INFANT DEATH/LIVE BIRTH MATCHED FILE COMPLETENESS RATIO** - The number of matched records for infant deaths and live births for deceased Michigan resident live births divided by the number of Michigan resident or presumed resident live births known to be deceased  $\times 100$ .

**INTERPREGNANCY TIME PERIOD** - Birth date minus date of last termination, whether a live birth or fetal death, in months. Time periods of zero length are dropped to exclude 2nd or higher births of multiple deliveries.

### KESSNER INDEX -

**Adequate prenatal care** is defined as care which began within the first trimester and which included an average of at least one or two additional prenatal visits per month of gestation, depending on the length of gestation.

**Intermediate prenatal care** is defined as care which began during the second trimester of the pregnancy with correspondingly fewer visits, or which began during the first trimester but with fewer visits than would be appropriate for the length of gestation.

**Inadequate prenatal care** is when no care was received or if care began during the third trimester. It is also inadequate if care began during the first or second trimester but less than five visits occurred, when the length of gestation was 34 weeks or more. When the length of gestation was less than 34 weeks, care is defined as inadequate when care began during the first or second trimester but a number of visits less than four occurred, that number depending on the actual weeks of gestation.

**LEADING CAUSES OF DEATH** - Deaths are grouped into 72 categories dependent upon the underlying cause of death. Ranks are assigned by organizing these categories according to the number of deaths in each category from most frequent to least.

**LIFE EXPECTANCY** - A hypothetical calculation of the average age at death for a cohort of persons subject to the age-specific mortality rates observed over a given time period.

### LIFE TABLE VALUES -

$nq_x$  = The proportion of persons in the cohort alive at the beginning of an age interval ( $x$ ) who will die before reaching the end of that age interval ( $x+n$ ).

$l_x$  = The number of persons living at the beginning of an age interval ( $x$ ) out of an original cohort of 100,000.

$ndx$  = The number of persons who would die during an age interval ( $x$  to  $x+n$ ) out of an original cohort of 100,000.

$nL_x$  = The number of person-years that would be lived within an indicated age interval ( $x$  to  $x+n$ ) out of an original cohort of 100,000 alive for all or part of the interval.

**T<sub>x</sub>** = The number of person-years that would be lived after the beginning of an age interval (x) by an original cohort of 100,000 until all are assumed to have died.

**ex** = The average remaining lifetime (in years) for an individual person who survives to the beginning of an indicated age interval (x).

**LIVE BIRTH** - A live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. Effective on November 9, 1981, the definition of a live birth is established in administrative rule number 325.3201 as follows:

*"Live birth"* means the complete expulsion or extraction from a pregnant woman of a product of human conception which, after such expulsion or extraction, shows any evidence of life, whether or not the umbilical cord has been cut or the placenta is attached.

**LIVE-BIRTH ORDER** - Order number is equal to number of previous live births plus current birth.

**LOW-WEIGHT BIRTH** - Births in 1984 or later wherein the birth weight is less than 2,500 grams (approximately 5 lbs., 8 oz.) or births before 1984 wherein the birth weight is 2,500 grams or less.

**MATERNAL DEATHS** - Those deaths wherein the physician has designated a maternal condition as the underlying cause of death (9th Revision ICD codes 630-676)

**MEAN** - The average of a set of values, equal to the sum of the values divided by the number of values.

**MEDIAN** - The central value of a distribution of values wherein the same percentage of observations are above this point as are below.

**MINOR CIVIL DIVISION** - City, village, or township.

**NEONATAL DEATH** - Deaths occurring to individuals less than 28 days of age.

**OCCURRENCE** - Place where the event actually occurred.

**PERINATAL DEATH** - Fetal deaths plus deaths to individuals less than 7 days of age.

**POSTNEONATAL DEATH** - Deaths occurring to individuals 28-364 days of age.

**PROBABILITY OF EVENTUALLY DYING FROM A GIVEN CAUSE OF DEATH** - The chance of death due to a given cause rather than some competitive cause over the course of a lifetime based on current mortality data and life expectancy techniques.

**RACE** - Race for mother, father, or decedent is as stated on certificate. Race of child is determined from the race of the parents.

**REMAINING YEARS OF LIFE** - A hypothetical calculation of the average number of years a cohort of persons will live given that they have reached a specific age and assuming they are subject to the age-specific mortality rates observed over a given time period.

**RESIDENCE** - Usual place of residence for the person to whom the event occurred. For births and fetal deaths, residence is defined as the mother's usual place of residence.

**TOTAL BIRTHS** - Live births plus fetal deaths.

**UNDERLYING CAUSE OF DEATH** - That condition giving rise to the chain of events leading to death.

**VERY LOW-WEIGHT BIRTH** - Births in 1984 or later wherein the birth weight is less than 1,500 grams (approximately 3 lbs., 4 oz.) or births before 1984 wherein the birth weight is 1,500 grams or less.

**YEARS OF POTENTIAL LIFE LOST** - The number of years between the age at death and 65 years of age for individuals dying before age 65.

## ***RATES AND RATIOS***

**AGE-ADJUSTED DEATH RATE** - A summary rate of death that is developed using a standard population distribution to improve the comparability of rates for areas or population subgroups with differing age distributions. When calculated by the direct method, as in this report, age-specific death rates for a geographic area or population subgroup are multiplied by the standard population by specific age and the products summed and divided by the total standard population. Age-adjusted death rates represent the mortality experience that would have occurred in a standard population had the age-specific rates of the area or population subgroup been experienced by the standard population. These rates are presented as per 100,000 population.

**AGE-SPECIFIC BIRTH RATE** - Number of resident live births to women of a specific age divided by total resident female population of specific age x 1,000.

**AGE-SPECIFIC DEATH RATE** - Number of resident deaths in specific age group divided by total resident population in specific age group x 100,000.

**AGE-SPECIFIC DEATH RATE BY CAUSE OF DEATH** - Number of resident deaths in specific age group and from a specific cause divided by total resident population in specific age group x 100,000.

**AGE-SPECIFIC MARRIAGE RATE** - Number of occurrent marriages in specific age group by sex divided by total resident population in specific age and sex group x 1,000.

**CAUSE-SPECIFIC RATE** - Number of resident deaths due to a specific cause divided by total resident population x 100,000.

**CONGENITAL ANOMALY RATE** - Number of resident live births with a congenital malformation reported divided by the total number of resident live births x 10,000.

**COMMUNICABLE DISEASE CASE RATE** - Number of reported cases (specific communicable diseases) divided by total resident population x 100,000.

**CRUDE BIRTH RATE** - Number of resident live births divided by total resident population x 1,000.

**CRUDE DEATH RATE** - Number of resident deaths divided by total resident population x 1,000.

**DIVORCE RATE** - Number of persons with occurrent divorces and annulments divided by total resident population x 1,000.

**FERTILITY RATE** - Number of resident live births divided by total resident female population ages 15-44 x 1,000.

**FETAL DEATH RATE** - Number of resident fetal deaths divided by total resident live births plus resident fetal deaths x 1,000.

**FETAL DEATH RATIO** - Number of resident fetal deaths divided by total resident live births x 1,000.

**FIRST MARRIAGE RATE** - Number of occurrent marriages to persons not previously married by sex divided by total resident population by sex x 1,000.

**INFANT MORTALITY RATE** - Number of resident infant deaths divided by total resident live births x 1,000.

**LOW-WEIGHT BIRTH RATIO** - Number of resident low-weight births divided by total resident live births x 1,000.

**MARRIAGE RATE** - Number of occurrent marriages divided by total resident population x 1,000.

**MATERNAL DEATH RATE** - Number of resident maternal deaths divided by total resident live births x 100,000.

**NEONATAL DEATH RATE** - Number of resident neonatal deaths divided by total resident live births x 1,000.

**NO PRENATAL CARE RATIO** - Number of resident live births to mothers with no prenatal care divided by total resident live births x 1,000.

**PERINATAL DEATH RATE** - Number of perinatal deaths divided by total resident live births plus resident fetal deaths x 1,000.

## ***RELIABILITY OF RATES***

**POSTNEONATAL DEATH RATE** - Number of resident postneonatal deaths divided by total resident live births x 1,000.

**RATE OF NATURAL INCREASE** - (Total resident live births minus total resident deaths) divided by total resident population x 1,000.

**TOTAL FERTILITY RATE** - Sum of (age-specific birth rates) x (number of years in age group) for each age group from ages 10-14 through 45-49 years.

Care should be taken in drawing specific inferences from comparisons of rates for different areas or different periods of time. Rates based on a small number of events or for a small area tend to exhibit considerable variation from time period to time period or place to place. Excessive variation in rates not only negates their utility as estimators of the probability of an event occurring but also their usefulness for comparative purposes.

Also, one should recognize the limitations of using unadjusted rates in attempting to attribute rate differences to particular factors. For example, one should not attempt to state that there was a significant difference in rates for two geographic areas for atherosclerosis without first adjusting the rates to negate the effects of differing age distributions in the two areas.

Many times there are simply not sufficient data available to adequately adjust rates for all possible confounding factors. For this reason the reader should exercise diligence and caution while attempting to draw substantive conclusions when comparing vital statistics rates.

## QUALIFICATIONS AND LIMITATIONS OF DATA AND CALCULATIONS

### *UNDERREGISTRATION OF EVENTS*

The underregistration of vital events in Michigan is considered to be a minimal problem, particularly for births and deaths. Tests of registration completeness conducted in conjunction with the 1950 Census indicate that the registration of births was 98.5 percent complete, and that death registration was even more complete. The number of certificates received too late for inclusion in annual statistical files is insignificant when examining statewide patterns.

### *GEOGRAPHIC ALLOCATION*

The allocation of events on a residence or occurrence basis is for the most part accurate and complete. However, allocations to minor civil divisions are subject to question in some instances. In those cases where the respondent completes the residence item with a mailing address, geographic allocation is sometimes undeterminable and the record receives an unknown minor civil division code.

### *FETAL DEATHS*

Fetal deaths in Michigan include only those conceptions that have passed through 20 weeks gestation or that weigh 400 grams or more. Prior to the introduction of a new reporting form for fetal deaths on September 30, 1978, Michigan law required only the reporting of deaths of fetuses which had passed through 20 weeks gestation. Inadequacies in determining the gestational age of the fetus may have resulted in some underreporting of fetal deaths. The change in definition has had little impact on the number of fetal deaths reported.

### *COMPARABILITY IN CAUSE OF DEATH STATISTICS*

The reader should bear in mind two major limitations in interpreting changes in cause-of-death statistics. Changes in nomenclature and the classification scheme (International Classification of Diseases) and changes in diagnostic practices may seriously affect the comparability of such statistics over time. The classification scheme (ICD) is modified approximately once every ten years to reflect changing medical opinion and practice. The reader is most accurate when comparing cause-of-death certificates which are coded via one revision of the International Classification of Diseases and utilizing the coding practices and procedures in effect at that time.

In order to compare cause-of-death statistics from one revision to the next it is necessary to apply a comparability ratio. Such ratios are developed by comparing the number of deaths assigned to a certain condition or group of conditions under one revision to the number assigned under another revision of the ICD.

In 1979 the 9th Revision of the International Classification of Diseases, WHO, was introduced for coding causes of death and was employed in categorizing the data for 1979 to date.

### *LIFE EXPECTANCY*

The procedure used to obtain the Michigan life table values is called the iterative method. This is a method which has been developed by Felix Moore formerly of the Department of Biostatistics, School of Public Health, University of Michigan.

For the age group 0-1 the method utilizes the algorithm developed by Greville with no iteration. For all subsequent age groups the method of Greville (Keyfitz) is used with three iterations to improve the estimate of  $ndx$  and  $nqx$ . An iteration procedure is also used for  $nLx$  for age groups 75-80 and 80-85 where the accuracy of mortality information is a factor and for obtaining the separation factor for the age group 1-4.

### **AGE-ADJUSTMENT PROCEDURE AND POPULATION ESTIMATION**

Population data for 1970, 1980 and 1990 were obtained from the April 1, 1970, April 1, 1980 and April 1, 1990 census counts. Data for 1980 and 1990 include revised census data as released by the Census Bureau. The population totals used for 1971-1979 are intercensal estimates prepared by the Census Bureau utilizing the revised 1980 census figures. The breakdowns of these totals by age, race, and sex were prepared by the Office of the State Registrar and Division of Health Statistics. For 1970 and 1980 the proportion of the total population in each age, race, and sex group was computed. Estimates of the proportion of the total population in each age, race, and sex group for the years 1971-1979 were then derived by interpolating between the proportions for 1970 and 1980. These subgroup proportions were then applied to the state totals to obtain population estimates by age, race, and sex for years 1971-1979.

Population estimates for 1985 through 1989 by age and sex were obtained by adding births, removing deaths and aging the remaining population, using Census Bureau-National Cancer Institute 1984 age, race and sex population estimates. Black and other race estimates for 1984 were prepared by projecting the mean annual change in the race proportions of each age-sex group of the non-white population observed between 1970 and 1980. Revised estimates of the proportion of the total population in each age, race and sex group for the years 1981-1983 were derived by interpolating between the populations for 1980 and 1984. Revised population data from the 1990 census were used to calculate the rates presented in this report.

The age-adjusted rates for Michigan presented in this report for years 1970-1993 were calculated using Michigan resident mortality data and the series of population data described above. Death records with the race not stated were first randomly allocated to the white and other than white groups based on the proportion of Michigan resident deaths in each of the racial categories for that year. Records with sex not stated were randomly assigned to male and female (50 percent each). Records with age not stated were allocated to the age group 85 and over.

In the age-adjustment procedure ten age groups were employed including under 1 year, 1-14 years, ten year age groups from 15-24 years to age 75-84, and 85 years and over. Age-specific rates for the total population and for each subgroup were applied to the same standard population distributed by age. The resulting expected deaths were then summed over the ten age groups and divided by the total of the standard population to obtain the age-adjusted rate. The standard population selected was the 1940 United States enumerated population. Comparisons can be made between subgroup rates, between rates in different years, and between rates for Michigan and similarly computed rates for the United States.

### **UNITED STATES DEATH RATES**

Death rates for the United States were taken from publications by the National Center for Health Statistics, U.S. Dept. of Health and Human Services. Rates for the United States shown in the series of tables of death rates for Michigan and the United States have been revised for 1971-1980 based on the 1980 census enumeration, as a result of the large difference between the 1980 census enumeration and the previously estimated population for 1980. The 1980 census enumeration was about 5.5 million higher than the estimated population for April 1, 1980.

The estimated populations used for 1992 and 1993 provisional data are based on the 1990 census enumeration and therefore are comparable to those used for the 1990 and 1991 final data. Rates for 1981-1989 have been recomputed based on populations for those years that are consistent with the 1990 census levels.



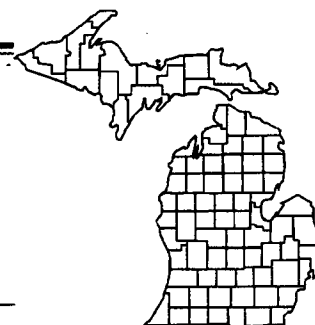


## **COUNTY AND STATE HEALTH STATISTICS PROFILES**

Profiles of county and state vital events statistics are presented in a one page summary form for each county and the state as a whole. The profiles contain those data most often requested of the Division of Health Statistics by health data users.

For further county or state information, please direct your inquiries to the address or phone number printed in the Introduction.

## Profile of Michigan



## POPULATION

As of April 1, 1992: 9,433,666  
 Rank Among Counties: -  
 Per Square Mile: 165.6

## NATALITY

Total Live Births: 139,560  
 Teenage Mothers: 17,569  
 Low Weight Births: 10,700  
 First Births: 54,816

## MORTALITY

Total Deaths: 82,286  
 Infant Deaths: 1,319  
 Neonatal Deaths: 856  
 Postneonatal Deaths: 463  
 Perinatal Deaths: 1,434  
 Fetal Deaths: 726

## MARRIAGE

Marriages: 70,771  
 Marriage Rate: 15.0

## DIVORCE

Divorces: 40,470  
 Divorce Rate: 8.6

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	139,560	14.8	108,329	13.7	28,249	21.1	2,418	13.5
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	17,569	125.9	10,247	94.6	7,013	248.3	309	112.5
Low Weight	10,700	76.7	6,424	59.3	4,073	144.2	203	70.7
Under 1,500 Grams	2,098	15.0	1,154	10.7	908	32.1	36	13.2
< 38 Weeks Gestation	25,196	180.5	16,889	155.9	7,783	275.5	461	190.7
Prenatal Care Began in 1st Trimester	111,443	798.5	91,132	841.3	18,144	642.3	1,819	752.3

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1,319	9.5	770	7.1	530	18.8	19	7.0
Neonatal Deaths	856	6.1	492	4.5	353	12.5	9	3.7
Postneonatal Deaths	463	3.3	278	2.6	177	6.3	10	3.3
Perinatal Deaths	1,434	10.2	913	8.3	483	17.5	16	7.0
Fetal Deaths	726	5.2	509	4.5	185	7.0	12	5.3

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

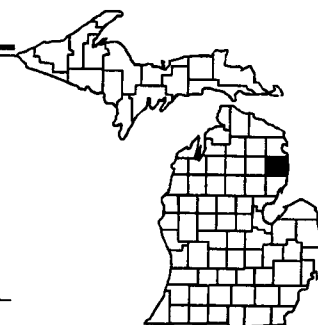
	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	82,286	41,820	40,458	69,044	34,559	34,482	12,515	6,860	5,651	678	370	307	
	Age in Years												
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	1,319	274	161	170	576	741	763	2,574	3,974	6,282	13,695	51,753	4
White Male	458	93	69	61	233	313	360	1,144	1,741	3,017	6,648	20,420	2
White Female	311	74	43	63	127	110	141	524	955	1,849	4,634	25,650	1
Black Male	295	53	19	33	171	241	197	583	737	791	1,281	2,458	1
Black Female	231	46	24	9	32	63	56	282	480	536	975	2,917	-
Other Male	13	3	3	3	9	10	6	25	40	44	79	135	-
Other Female	4	5	3	1	4	4	2	15	21	35	67	146	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	82,286	872.3	69,044	872.0	12,515	935.8	1,181	44.9
Diseases of the Heart	28,512	302.2	24,500	309.4	3,820	285.6	34	1.3
Malignant Neoplasms	19,187	203.4	16,442	207.7	2,579	192.8	92	3.5
Cerebrovascular Diseases	5,299	56.2	4,586	57.9	686	51.3	8	0.3
Accidents and Adverse Effects	2,830	30.0	2,328	29.4	448	33.5	444	16.9
Chronic Obstructive Pulmonary Diseases and Allied Conditions	3,445	36.5	3,100	39.2	314	23.5	22	0.8
Pneumonia and Influenza	2,981	31.6	2,575	32.5	374	28.0	18	0.7
Diabetes Mellitus	2,105	22.3	1,740	22.0	342	25.6	1	0.0
Chronic Liver Disease and Cirrhosis	1,006	10.7	764	9.6	227	17.0	1	0.0
Homicide	1,031	10.9	272	3.4	747	55.9	199	7.6
Suicide	1,078	11.4	949	12.0	115	8.6	82	3.1
Atherosclerosis	753	8.0	705	8.9	43	3.2	-	-
AIDS	691	7.3	346	4.4	341	25.5	10	0.4

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Alcona County



## POPULATION

As of April 1, 1992: 10,254  
 Rank Among Counties: 74  
 Per Square Mile: 15.1

## NATALITY

Total Live Births: 85  
 Teenage Mothers: 10  
 Low Weight Births: 5  
 First Births: 30

## MORTALITY

Total Deaths: 132  
 Infant Deaths: 1  
 Neonatal Deaths: 1  
 Postneonatal Deaths: -  
 Perinatal Deaths: 1  
 Fetal Deaths: -

## MARRIAGE

Marriages: 65  
 Marriage Rate: 12.7

## DIVORCE

Divorces: 55  
 Divorce Rate: 10.7

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	85	8.3	83	8.2	-	-	2	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	10	117.6	10	120.5	-	-	-	-
Low Weight	5	*	4	*	-	-	1	*
Under 1,500 Grams	1	*	1	*	-	-	-	-
< 38 Weeks Gestation	11	129.4	10	120.5	-	-	1	*
Prenatal Care Began in 1st Trimester	73	858.8	71	855.4	-	-	2	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	*	1	*	-	-	-	-
Neonatal Deaths	1	*	1	*	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	1	*	1	*	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

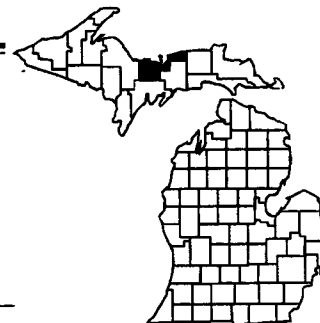
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	132	63	69	131	62	69	-	-	-	1	1	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	-	-	-	1	1	2	3	1	4	24	95
White Male	-	-	-	-	1	-	1	2	-	3	14	41
White Female	1	-	-	-	-	1	1	1	1	1	10	53
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	132	1,287.4	131	1,294.1	-	-	1	*
Diseases of the Heart	42	409.6	42	414.9	-	-	-	-
Malignant Neoplasms	39	380.4	38	375.4	-	-	-	-
Cerebrovascular Diseases	7	68.3	7	69.1	-	-	-	-
Accidents and Adverse Effects	5	*	5	*	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	7	68.3	7	69.1	-	-	-	-
Pneumonia and Influenza	2	*	2	*	-	-	-	-
Diabetes Mellitus	4	*	4	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	*	2	*	-	-	-	-
Atherosclerosis	5	*	5	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Alger County



## POPULATION

As of April 1, 1992: 9,349  
 Rank Among Counties: 76  
 Per Square Mile: 10.3

## NATALITY

Total Live Births: 82  
 Teenage Mothers: 6  
 Low Weight Births: 5  
 First Births: 34

## MORTALITY

Total Deaths: 109  
 Infant Deaths: -  
 Neonatal Deaths: -  
 Postneonatal Deaths: -  
 Perinatal Deaths: 1  
 Fetal Deaths: 1

## MARRIAGE

Marriages: 73  
 Marriage Rate: 15.6

## DIVORCE

Divorces: 36  
 Divorce Rate: 7.7

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	82	8.8	75	8.6	-	-	7	18.9
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	6	73.2	5	*	-	-	1	*
Low Weight	5	*	3	*	-	-	2	*
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	11	134.1	9	120.0	-	-	2	*
Prenatal Care Began in 1st Trimester	70	853.7	64	853.3	-	-	6	857.1

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	-	-	-	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	1	*	1	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	109	53	56	108	52	56	-	-	-	1	1	-	
	Age in Years												
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	-	-	1	-	-	-	-	-	5	7	24	72	-
White Male	-	-	-	-	-	-	-	-	1	5	13	33	-
White Female	-	-	1	-	-	-	-	-	4	2	11	38	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	109	1,165.9	108	1,237.8	-	-	1	*
Diseases of the Heart	43	459.9	43	492.8	-	-	-	-
Malignant Neoplasms	24	256.7	23	263.6	-	-	-	-
Cerebrovascular Diseases	7	74.9	7	80.2	-	-	-	-
Accidents and Adverse Effects	8	85.6	8	91.7	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	3	*	3	*	-	-	-	-
Pneumonia and Influenza	4	*	4	*	-	-	-	-
Diabetes Mellitus	4	*	4	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	2	*	2	*	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Allegan County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	93,078	Total Live Births:	1,389	Total Deaths:	811
Rank Among Counties:	21	Teenage Mothers:	176	Infant Deaths:	11
Per Square Mile:	111.9	Low Weight Births:	83	Neonatal Deaths:	4
		First Births:	535	Postneonatal Deaths:	7
				Perinatal Deaths:	7
				Fetal Deaths:	3
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	715	Divorces:	433		
Marriage Rate:	15.4	Divorce Rate:	9.3		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1389	14.9	1360	15.0	15	10.1	13	12.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	176	126.7	171	125.7	2	*	3	*
Low Weight	83	59.8	80	58.8	1	*	2	*
Under 1,500 Grams	11	7.9	10	7.4	1	*	-	*
< 38 Weeks Gestation	222	159.8	213	156.6	6	400.0	3	*
Prenatal Care Began in 1st Trimester	1,171	843.1	1,147	843.4	12	800.0	11	846.2

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	11	7.9	11	8.1	-	-	-	-
Neonatal Deaths	4	*	4	*	-	-	-	-
Postneonatal Deaths	7	5.0	7	5.1	-	-	-	-
Perinatal Deaths	7	5.0	7	5.1	-	-	-	-
Fetal Deaths	3	*	3	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

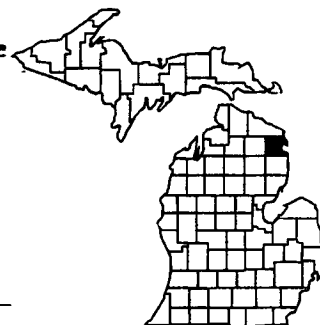
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	811	431	380	787	417	370	17	11	6	6	2	4
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	11	2	2	2	6	8	8	26	33	49	129	535
White Male	5	2	1	1	3	5	4	19	21	23	86	247
White Female	6	-	1	1	3	3	3	6	10	22	37	278
Black Male	-	-	-	-	-	-	1	1	-	2	3	4
Black Female	-	-	-	-	-	-	-	-	-	2	1	3
Other Male	-	-	-	-	-	-	-	-	1	-	1	-
Other Female	-	-	-	-	-	-	-	-	1	-	-	3

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	811	871.3	787	869.4	17	1145.6	12	42.0
Diseases of the Heart	260	279.3	254	280.6	4	*	1	*
Malignant Neoplasms	183	196.6	174	192.2	8	539.1	1	*
Cerebrovascular Diseases	50	53.7	49	54.1	1	*	-	-
Accidents and Adverse Effects	47	50.5	47	51.9	-	-	8	28.0
Chronic Obstructive Pulmonary Diseases and Allied Conditions	31	33.3	31	34.2	-	-	-	-
Pneumonia and Influenza	42	45.1	42	46.4	-	-	-	-
Diabetes Mellitus	24	25.8	24	26.5	-	-	-	-
Chronic Liver Disease and Cirrhosis	10	10.7	8	8.8	1	*	-	-
Homicide	3	*	3	*	-	-	-	-
Suicide	14	15.0	14	15.5	-	-	1	*
Atherosclerosis	13	14.0	13	14.4	-	-	-	-
AIDS	5	*	5	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Alpena County



## POPULATION

As of April 1, 1992: 31,000  
 Rank Among Counties: 46  
 Per Square Mile: 54.6

## NATALITY

Total Live Births: 326  
 Teenage Mothers: 55  
 Low Weight Births: 23  
 First Births: 128

## MORTALITY

Total Deaths: 323  
 Infant Deaths: 4  
 Neonatal Deaths: 3  
 Postneonatal Deaths: 1  
 Perinatal Deaths: 4  
 Fetal Deaths: 2

## MARRIAGE

Marriages: 252  
 Marriage Rate: 16.3

## DIVORCE

Divorces: 138  
 Divorce Rate: 8.9

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	326	10.5	321	10.4	1	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	55	168.7	51	158.9	1	-	2	-
Low Weight	23	70.6	22	68.5	-	-	1	-
Under 1,500 Grams	4	-	4	-	-	-	-	-
< 38 Weeks Gestation	47	144.2	46	143.3	-	-	1	-
Prenatal Care Began in 1st Trimester	295	904.9	291	906.5	-	-	3	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	4	-	4	-	-	-	-	-
Neonatal Deaths	3	-	3	-	-	-	-	-
Postneonatal Deaths	1	-	1	-	-	-	-	-
Perinatal Deaths	4	-	3	-	1	-	-	-
Fetal Deaths	2	-	1	-	1	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	323	158	165	323	158	165	-	-	-	-	-	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	4	2	1	2	4	-	1	4	16	20	62	207
White Male	3	-	1	1	2	-	-	2	12	12	35	90
White Female	1	2	-	1	2	-	1	2	4	8	27	117
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	323	1,041.9	323	1,050.2	-	-	9	106.7
Diseases of the Heart	128	412.9	128	416.2	-	-	-	-
Malignant Neoplasms	81	261.3	81	263.4	-	-	1	-
Cerebrovascular Diseases	19	61.3	19	61.8	-	-	-	-
Accidents and Adverse Effects	14	45.2	14	45.5	-	-	7	83.0
Chronic Obstructive Pulmonary Diseases and Allied Conditions	7	22.6	7	22.8	-	-	-	-
Pneumonia and Influenza	9	29.0	9	29.3	-	-	-	-
Diabetes Mellitus	7	22.6	7	22.8	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	3	-	3	-	-	-	1	-
Suicide	2	-	2	-	-	-	-	-
Atherosclerosis	2	-	2	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Antrim County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	18,897	Total Live Births:	274	Total Deaths:	227
Rank Among Counties:	63	Teenage Mothers:	36	Infant Deaths:	2
Per Square Mile:	39.4	Low Weight Births:	12	Neonatal Deaths:	-
		First Births:	120	Postneonatal Deaths:	2
				Perinatal Deaths:	2
				Fetal Deaths:	2
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	179	Divorces:	95		
Marriage Rate:	18.9	Divorce Rate:	10.1		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	274	14.5	267	14.4	-	-	6	22.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	36	131.4	34	127.3	-	-	2	*
Low Weight	12	43.8	12	44.9	-	-	-	-
Under 1,500 Grams	2	*	2	*	-	-	-	-
< 38 Weeks Gestation	40	146.0	39	146.1	-	-	1	-
Prenatal Care Began in 1st Trimester	204	744.5	201	752.8	-	-	3	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	2	*	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	2	*	2	*	-	-	-	-
Perinatal Deaths	2	*	2	*	-	-	-	-
Fetal Deaths	2	*	2	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

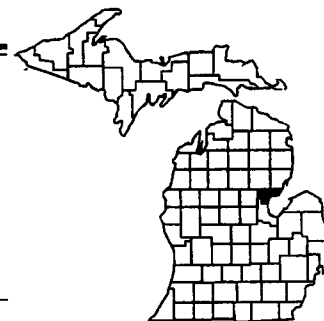
	Total	All Races		Total	White		Total	Black		Total	Other	
		Male	Female		Male	Female		Male	Female		Male	Female
Deaths	227	124	103	224	124	100	-	-	-	3	-	3
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	-	-	-	1	1	1	5	7	5	34	171
White Male	2	-	-	-	1	1	1	4	5	2	20	88
White Female	-	-	-	-	-	-	-	1	2	2	14	81
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	1	-	2

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	227	1,201.2	224	1,204.2	-	-	1	*
Diseases of the Heart	76	402.2	75	403.2	-	-	-	-
Malignant Neoplasms	51	269.9	51	274.2	-	-	-	-
Cerebrovascular Diseases	17	90.0	17	91.4	-	-	-	-
Accidents and Adverse Effects	9	47.6	9	48.4	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	10	52.9	10	53.8	-	-	-	-
Pneumonia and Influenza	12	63.5	12	64.5	-	-	-	-
Diabetes Mellitus	9	47.6	8	43.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	4	*	4	*	-	-	-	-
Atherosclerosis	4	*	4	*	-	-	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Arenac County



## POPULATION

As of April 1, 1992: 15,625  
 Rank Among Counties: 66  
 Per Square Mile: 42.5

## NATIVITY

Total Live Births: 181  
 Teenage Mothers: 27  
 Low Weight Births: 13  
 First Births: 80

## MORTALITY

Total Deaths: 186  
 Infant Deaths: 2  
 Neonatal Deaths: -  
 Postneonatal Deaths: 2  
 Perinatal Deaths: 1  
 Fetal Deaths: 1

## MARRIAGE

Marriages: 121  
 Marriage Rate: 15.5

## DIVORCE

Divorces: 65  
 Divorce Rate: 8.3

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	181	11.6	180	11.7	1	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	27	149.2	27	150.0	-	-	-	-
Low Weight	13	71.8	13	72.2	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	37	204.4	37	205.6	-	-	-	-
Prenatal Care Began in 1st Trimester	149	823.2	149	827.8	-	-	-	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	-	2	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	2	-	2	-	-	-	-	-
Perinatal Deaths	1	-	1	-	-	-	-	-
Fetal Deaths	1	-	1	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
	186	109	77	182	106	76	-	-	-	4	3	1	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	2	-	1	-	2	1	2	4	6	17	35	116	-
White Male	2	-	-	-	1	1	1	4	4	10	20	63	-
White Female	-	-	-	-	1	-	1	-	2	6	13	53	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	1	2	-	-
Other Female	-	-	1	-	-	-	-	-	-	-	-	-	-

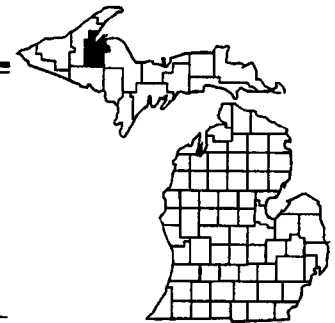
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	186	1,190.4	182	1,181.4	-	-	3	-
Diseases of the Heart	82	524.8	80	519.3	-	-	-	-
Malignant Neoplasms	41	262.4	41	266.1	-	-	-	-
Cerebrovascular Diseases	14	89.6	14	90.9	-	-	-	-
Accidents and Adverse Effects	9	57.6	7	45.4	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	7	44.8	7	45.4	-	-	-	-
Pneumonia and Influenza	3	-	3	-	-	-	-	-
Diabetes Mellitus	3	-	3	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	1	-	1	-	-	-	1	-
Suicide	5	-	5	-	-	-	-	-
Atherosclerosis	3	-	3	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.



## Profile of Baraga County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	7,828	Total Live Births:	85	Total Deaths:	121
Rank Among Counties:	81	Teenage Mothers:	6	Infant Deaths:	-
Per Square Mile:	8.7	Low Weight Births:	4	Neonatal Deaths:	-
		First Births:	35	Postneonatal Deaths:	-
				Perinatal Deaths:	1
				Fetal Deaths:	1
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	50	Divorces:	17		
Marriage Rate:	12.8	Divorce Rate:	4.3		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	85	10.9	67	9.8	-	-	17	17.5
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	6	70.6	4	*	-	-	2	*
Low Weight	4	*	3	*	-	-	1	*
Under 1,500 Grams	1	*	1	*	-	-	-	-
< 38 Weeks Gestation	13	152.9	9	134.3	-	-	4	*
Prenatal Care Began in 1st Trimester	69	811.8	56	835.8	-	-	13	764.7

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	-	-	-	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	1	*	1	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total 121	Male 73	Female 48	Total 116	Male 70	Female 46	Total -	Male -	Female -	Total 5	Male 3	Female 2	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	-	-	-	-	-	1	1	1	1	11	15	91	-
White Male	-	-	-	-	-	1	1	-	-	5	8	55	-
White Female	-	-	-	-	-	-	-	1	-	4	7	34	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	1	-	2	-
Other Female	-	-	-	-	-	-	-	-	1	1	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	121	1,545.7	116	1,705.1	-	-	-	-
Diseases of the Heart	44	562.1	43	632.1	-	-	-	-
Malignant Neoplasms	26	332.1	26	382.2	-	-	-	-
Cerebrovascular Diseases	15	191.6	15	220.5	-	-	-	-
Accidents and Adverse Effects	3	*	2	*	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	4	*	4	*	-	-	-	-
Pneumonia and Influenza	8	102.2	7	102.9	-	-	-	-
Diabetes Mellitus	2	*	1	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	*	1	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	*	3	*	-	-	-	-
Atherosclerosis	1	*	1	*	-	-	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Barry County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	51,196	Total Live Births:	693	Total Deaths:	411
Rank Among Counties:	34	Teenage Mothers:	83	Infant Deaths:	8
Per Square Mile:	91.4	Low Weight Births:	36	Neonatal Deaths:	4
		First Births:	276	Postneonatal Deaths:	4
				Perinatal Deaths:	5
				Fetal Deaths:	1
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	395	Divorces:	257		
Marriage Rate:	15.4	Divorce Rate:	10.0		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	693	13.5	689	13.6	-	-	4	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	83	119.8	82	119.0	-	-	1	*
Low Weight	36	51.9	36	52.2	-	-	-	-
Under 1,500 Grams	8	11.5	8	11.6	-	-	-	-
< 38 Weeks Gestation	104	150.1	102	148.0	-	-	2	*
Prenatal Care Began in 1st Trimester	577	832.6	575	834.5	-	-	2	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	8	11.5	8	11.6	-	-	-	-
Neonatal Deaths	4	*	4	*	-	-	-	-
Postneonatal Deaths	4	*	4	*	-	-	-	-
Perinatal Deaths	5	*	5	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

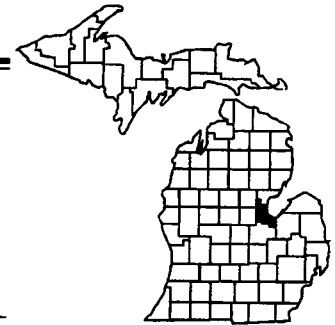
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	411	227	184	407	224	183	2	1	1	2	2	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	8	-	3	-	3	6	5	10	15	31	68	262
White Male	5	-	1	-	2	4	5	7	6	20	43	131
White Female	3	-	2	-	1	2	-	2	8	11	25	129
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	1	-	-	-
Other Male	-	-	-	-	-	-	-	1	-	-	-	1
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	411	802.8	407	802.7	2	*	6	40.3
Diseases of the Heart	147	287.1	146	287.9	1	*	-	-
Malignant Neoplasms	92	179.7	91	179.5	1	*	-	-
Cerebrovascular Diseases	20	39.1	20	39.4	-	-	-	-
Accidents and Adverse Effects	28	54.7	27	53.2	-	-	5	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	25	48.8	24	47.3	-	-	-	-
Pneumonia and Influenza	14	27.3	14	27.6	-	-	-	-
Diabetes Mellitus	5	*	5	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	8	15.6	8	15.8	-	-	-	-
Atherosclerosis	3	*	3	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Bay County



## POPULATION

As of April 1, 1992: 112,131  
 Rank Among Counties: 18  
 Per Square Mile: 250.7

## NATALITY

Total Live Births: 1,451  
 Teenage Mothers: 205  
 Low Weight Births: 108  
 First Births: 591

## MORTALITY

Total Deaths: 1,032  
 Infant Deaths: 16  
 Neonatal Deaths: 12  
 Postneonatal Deaths: 4  
 Perinatal Deaths: 17  
 Fetal Deaths: 7

## MARRIAGE

Marriages: 882  
 Marriage Rate: 15.7

## DIVORCE

Divorces: 573  
 Divorce Rate: 10.2

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,451	12.9	1,422	13.0	23	17.4	5	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	205	141.3	195	137.1	9	391.3	1	*
Low Weight	108	74.4	107	75.2	1	*	-	-
Under 1,500 Grams	19	13.1	18	12.7	1	*	-	-
< 38 Weeks Gestation	229	157.8	225	158.2	1	*	2	-
Prenatal Care Began in 1st Trimester	1,277	880.1	1,254	881.9	19	826.1	3	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	16	11.0	14	9.8	2	*	-	-
Neonatal Deaths	12	8.3	10	7.0	2	*	-	-
Postneonatal Deaths	4	*	4	*	-	-	-	-
Perinatal Deaths	17	11.7	13	9.1	4	*	-	-
Fetal Deaths	7	4.8	5	*	2	*	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	Total	All Races		Total	White		Total	Black		Total	Other	
Deaths	1032	Male	Female	1013	Male	Female	13	Male	Female	612	Male	Female
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	16	6	1	2	6	8	8	19	40	81	155	690
White Male	9	3	-	-	5	3	6	9	25	50	77	312
White Female	5	2	1	2	1	3	2	9	13	26	75	375
Black Male	1	-	-	-	-	1	-	1	1	1	-	1
Black Female	1	-	-	-	-	-	-	-	1	2	2	1
Other Male	-	-	-	-	-	-	-	-	-	1	1	-
Other Female	-	1	-	-	-	1	-	-	-	1	-	1

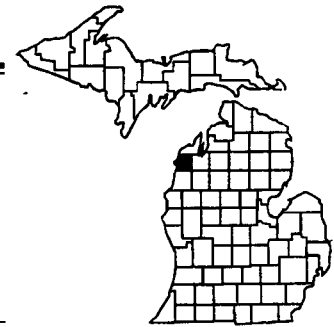
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,032	920.3	1,013	925.2	13	981.9	15	49.1
Diseases of the Heart	403	359.4	399	364.4	3	*	1	*
Malignant Neoplasms	257	229.2	253	231.1	2	*	2	*
Cerebrovascular Diseases	48	42.8	47	42.9	1	*	-	-
Accidents and Adverse Effects	40	35.7	38	34.7	1	*	6	19.7
Chronic Obstructive Pulmonary Diseases and Allied Conditions	26	23.2	26	23.7	-	-	-	-
Pneumonia and Influenza	36	32.1	36	32.9	-	-	1	*
Diabetes Mellitus	40	35.7	39	35.6	1	*	-	-
Chronic Liver Disease and Cirrhosis	7	6.2	7	6.4	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	8	7.1	7	6.4	1	*	-	-
Atherosclerosis	26	23.2	26	23.7	-	-	-	-
AIDS	2	*	2	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Benzie County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1992:	12,616	Total Live Births:	164	Total Deaths:	159
Rank Among Counties:	72	Teenage Mothers:	20	Infant Deaths:	-
Per Square Mile:	39.2	Low Weight Births:	10	Neonatal Deaths:	-
		First Births:	65	Postneonatal Deaths:	-
				Perinatal Deaths:	1
				Fetal Deaths:	1
MARRIAGE		DIVORCE			
Marriages:	113	Divorces:	75		
Marriage Rate:	17.9	Divorce Rate:	11.9		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	164	13.0	156	12.7	2	-	5	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	20	122.0	17	109.0	-	-	2	-
Low Weight	10	61.0	9	57.7	1	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	18	109.8	16	102.6	1	-	1	-
Prenatal Care Began in 1st Trimester	126	768.3	118	756.4	2	-	5	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	-	-	-	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	1	-	1	-	-	-	-	-
Fetal Deaths	1	-	1	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
	159	74	85	158	73	85	-	-	-	1	1	-	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	-	-	-	-	1	1	-	2	3	14	28	110	-
White Male	-	-	-	-	1	1	-	1	3	7	18	42	-
White Female	-	-	-	-	-	-	-	1	-	7	10	67	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	159	1,260.3	158	1,287.7	-	-	1	-
Diseases of the Heart	58	459.7	57	464.5	-	-	-	-
Malignant Neoplasms	40	317.1	40	326.0	-	-	-	-
Cerebrovascular Diseases	11	87.2	11	89.6	-	-	-	-
Accidents and Adverse Effects	3	*	3	*	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	5	*	5	*	-	-	-	-
Pneumonia and Influenza	8	63.4	8	65.2	-	-	-	-
Diabetes Mellitus	5	*	5	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	*	1	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	*	2	*	-	-	1	*
Atherosclerosis	2	*	2	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Berrien County



<b>POPULATION</b>		<b>NATALITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	161,466	Total Live Births:	2,392	Total Deaths:	1,629
Rank Among Counties:	12	Teenage Mothers:	456	Infant Deaths:	21
Per Square Mile:	280.3	Low Weight Births:	187	Neonatal Deaths:	11
		First Births:	945	Postneonatal Deaths:	10
				Perinatal Deaths:	26
				Fetal Deaths:	17
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	1,417	Divorces:	762		
Marriage Rate:	17.6	Divorce Rate:	9.4		

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	2,392	14.8	1,692	12.7	670	26.4	27	11.4
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	456	190.6	210	124.1	245	365.7	-	-
Low Weight	187	78.2	90	53.2	96	143.3	1	*
Under 1,500 Grams	39	16.3	16	9.5	22	32.8	1	*
< 38 Weeks Gestation	456	190.6	272	160.8	176	262.7	7	259.3
Prenatal Care Began in 1st Trimester	1,687	705.3	1,316	777.8	347	517.9	21	777.8

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	21	8.8	10	5.9	11	16.4	-	-
Neonatal Deaths	11	4.6	6	3.5	5	*	-	-
Postneonatal Deaths	10	4.2	4	*	6	9.0	-	-
Perinatal Deaths	26	10.8	13	7.6	13	19.2	-	-
Fetal Deaths	17	7.1	9	5.3	8	11.8	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

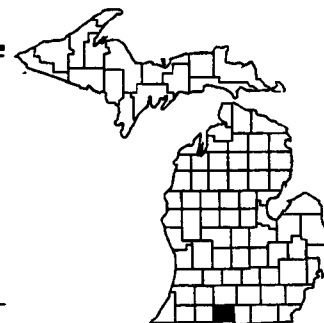
Deaths	All Races			White			Black			Other			
	Total 1,629	Male 835	Female 794	Total 1393	Male 723	Female 670	Total 222	Male 106	Female 116	Total 14	Male 6	Female 8	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	21	3	3	4	12	6	17	48	81	129	270	1,035	-
White Male	7	1	2	3	5	3	8	25	41	52	133	443	-
White Female	3	-	1	-	1	1	2	13	22	42	88	497	-
Black Male	4	2	-	-	3	1	4	4	9	16	19	44	-
Black Female	7	-	-	1	2	1	3	6	8	17	25	46	-
Other Male	-	-	-	-	1	-	-	-	1	-	3	1	-
Other Female	-	-	-	-	-	-	-	-	-	2	2	4	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,629	1,008.9	1,393	1,041.9	222	874.1	22	48.4
Diseases of the Heart	535	331.3	478	357.5	53	208.7	-	-
Malignant Neoplasms	400	247.7	334	249.8	62	244.1	1	*
Cerebrovascular Diseases	121	74.9	101	75.5	19	74.8	-	-
Accidents and Adverse Effects	60	37.2	50	37.4	8	31.5	10	22.0
Chronic Obstructive Pulmonary Diseases and Allied Conditions	65	40.3	59	44.1	6	23.6	-	-
Pneumonia and Influenza	51	31.6	47	35.2	4	*	-	-
Diabetes Mellitus	53	32.8	45	33.7	7	27.6	-	-
Chronic Liver Disease and Cirrhosis	16	9.9	12	9.0	4	*	-	-
Homicide	14	8.7	1	*	13	51.2	5	*
Suicide	16	9.9	15	11.2	1	*	2	*
Atherosclerosis	24	14.9	19	14.2	5	*	-	-
AIDS	11	6.8	7	5.2	4	*	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Branch County



## POPULATION

As of April 1, 1992: 41,871  
 Rank Among Counties: 37  
 Per Square Mile: 82.4

## NATALITY

Total Live Births: 576  
 Teenage Mothers: 89  
 Low Weight Births: 33  
 First Births: 222

## MORTALITY

Total Deaths: 382  
 Infant Deaths: 8  
 Neonatal Deaths: 1  
 Postneonatal Deaths: 7  
 Perinatal Deaths: 5  
 Fetal Deaths: 4

## MARRIAGE

Marriages: 331  
 Marriage Rate: 15.8

## DIVORCE

Divorces: 258  
 Divorce Rate: 12.3

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	576	13.8	567	14.0	5	*	3	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	89	154.5	88	155.2	1	*	-	-
Low Weight	33	57.3	33	58.2	-	-	-	-
Under 1,500 Grams	4	*	4	*	-	-	-	-
< 38 Weeks Gestation	65	112.8	65	114.6	-	-	-	-
Prenatal Care Began in 1st Trimester	416	722.2	410	723.1	3	*	2	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	8	13.9	8	14.1	-	-	-	-
Neonatal Deaths	1	*	1	*	-	-	-	-
Postneonatal Deaths	7	12.2	7	12.3	-	-	-	-
Perinatal Deaths	5	*	5	*	-	-	-	-
Fetal Deaths	4	*	4	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

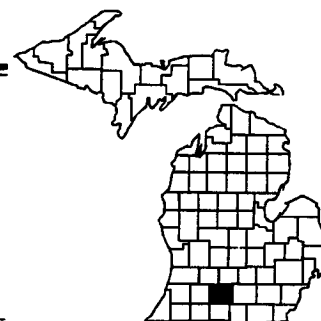
Deaths	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
	382	209	173	372	202	170	5	4	1	5	3	2	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	8	3	-	1	1	2	3	11	16	39	57	241	-
White Male	6	-	-	1	1	2	3	9	11	24	36	109	-
White Female	2	3	-	-	-	-	-	2	4	13	18	128	-
Black Male	-	-	-	-	-	-	-	-	-	1	1	2	-
Black Female	-	-	-	-	-	-	-	-	1	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	1	1	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	382	912.3	372	916.6	5	*	5	*
Diseases of the Heart	139	332.0	135	332.7	2	*	-	-
Malignant Neoplasms	90	215.0	88	216.8	1	*	-	-
Cerebrovascular Diseases	27	64.5	25	61.6	1	*	-	-
Accidents and Adverse Effects	17	40.6	17	41.9	-	-	4	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	20	47.8	20	49.3	-	-	-	-
Pneumonia and Influenza	13	31.0	12	29.6	1	*	-	-
Diabetes Mellitus	14	33.4	14	34.5	-	-	-	-
Chronic Liver Disease and Cirrhosis	8	19.1	8	19.7	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	6	14.3	6	14.8	-	-	1	*
Atherosclerosis	2	*	1	*	-	-	-	-
AIDS	2	*	2	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Calhoun County



<b>POPULATION</b>		<b>NATALITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	138,381	Total Live Births:	1,921	Total Deaths:	1,343
Rank Among Counties:	15	Teenage Mothers:	305	Infant Deaths:	29
Per Square Mile:	194.5	Low Weight Births:	143	Neonatal Deaths:	17
		First Births:	811	Postneonatal Deaths:	12
				Perinatal Deaths:	20
				Fetal Deaths:	10
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	1,171	Divorces:	804		
Marriage Rate:	16.9	Divorce Rate:	11.6		

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,921	13.9	1,585	13.1	301	20.0	32	16.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	305	158.8	216	136.3	85	282.4	4	*
Low Weight	143	74.4	106	66.9	37	122.9	-	-
Under 1,500 Grams	31	16.1	23	14.5	8	26.6	-	-
< 38 Weeks Gestation	341	177.5	257	162.1	78	259.1	5	*
Prenatal Care Began in 1st Trimester	1,495	778.2	1,277	805.7	193	641.2	22	687.5

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	29	15.1	18	11.4	9	29.9	2	*
Neonatal Deaths	17	8.8	10	6.3	5	*	2	*
Postneonatal Deaths	12	6.2	8	5.0	4	*	-	-
Perinatal Deaths	20	10.4	14	8.8	6	19.7	-	-
Fetal Deaths	10	5.2	6	3.8	4	*	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,343	694	649	1,166	600	566	154	81	73	22	12	10
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	29	3	2	3	6	9	17	31	54	119	232	838T-
White Male	13	-	1	2	2	6	9	16	29	66	115	341
White Female	5	-	1	1	1	2	5	7	12	36	85	411
Black Male	5	1	-	-	3	1	2	3	7	11	14	34
Black Female	4	2	-	-	-	-	1	4	5	5	12	40
Other Male	2	-	-	-	-	-	-	1	-	-	5	4
Other Female	-	-	-	-	-	-	-	-	1	-	1	8

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,343	970.5	1,166	960.8	154	1,023.9	14	35.9
Diseases of the Heart	427	308.6	384	316.4	38	252.7	-	-
Malignant Neoplasms	302	218.2	253	208.5	43	285.9	3	*
Cerebrovascular Diseases	96	69.4	91	75.0	4	*	-	-
Accidents and Adverse Effects	54	39.0	50	41.2	4	*	6	15.4
Chronic Obstructive Pulmonary Diseases and Allied Conditions	73	52.8	68	56.0	3	*	-	-
Pneumonia and Influenza	79	57.1	69	56.9	8	53.2	-	-
Diabetes Mellitus	26	18.8	18	14.8	8	53.2	-	-
Chronic Liver Disease and Cirrhosis	15	10.8	12	9.9	2	*	-	-
Homicide	7	5.1	2	*	5	*	2	*
Suicide	15	10.8	13	10.7	1	*	1	*
Atherosclerosis	15	10.8	13	10.7	2	*	-	-
AIDS	5	*	3	*	2	*	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Cass County



## POPULATION

As of April 1, 1992: 49,112  
 Rank Among Counties: 35  
 Per Square Mile: 99.0

## NATALITY

Total Live Births: 572  
 Teenage Mothers: 95  
 Low Weight Births: 37  
 First Births: 224

## MORTALITY

Total Deaths: 463  
 Infant Deaths: 11  
 Neonatal Deaths: 5  
 Postneonatal Deaths: 6  
 Perinatal Deaths: 10  
 Fetal Deaths: 8

## MARRIAGE

Marriages: 378  
 Marriage Rate: 15.4

## DIVORCE

Divorces: 236  
 Divorce Rate: 9.6

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	572	11.6	490	11.0	69	18.9	11	15.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	95	166.1	74	151.0	21	304.3	-	-
Low Weight	37	64.7	32	65.3	5	*	-	-
Under 1,500 Grams	6	10.5	6	12.2	-	-	-	-
< 38 Weeks Gestation	93	162.6	77	157.1	15	217.4	1	*
Prenatal Care Began in 1st Trimester	416	727.3	360	734.7	47	681.2	8	727.3

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	11	19.2	6	12.2	4	*	1	*
Neonatal Deaths	5	*	4	*	1	*	-	-
Postneonatal Deaths	6	10.5	2	*	3	*	1	*
Perinatal Deaths	10	17.2	10	20.1	-	-	-	-
Fetal Deaths	8	13.8	8	16.1	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	463	250	213	397	217	180	60	31	29	5	2	3
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	11	1	1	1	2	2	5	11	18	39	82	290
White Male	5	-	-	1	-	1	4	5	8	20	51	122
White Female	1	1	1	-	1	-	1	4	8	13	21	129
Black Male	2	-	-	-	1	1	-	1	1	4	4	17
Black Female	2	-	-	-	-	-	-	-	1	2	5	19
Other Male	1	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	1	-	-	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	463	942.7	397	887.4	60	1,647.4	5	*
Diseases of the Heart	171	348.2	151	337.5	19	521.7	-	-
Malignant Neoplasms	111	226.0	94	210.1	16	439.3	1	*
Cerebrovascular Diseases	21	42.8	14	31.3	7	192.2	-	-
Accidents and Adverse Effects	19	38.7	17	38.0	1	*	3	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	28	57.0	24	53.6	3	*	-	-
Pneumonia and Influenza	18	36.7	15	33.5	2	*	-	-
Diabetes Mellitus	13	26.5	12	26.8	1	*	-	-
Chronic Liver Disease and Cirrhosis	5	*	5	*	-	-	-	-
Homicide	1	*	-	-	1	*	-	-
Suicide	10	20.4	10	22.4	-	-	-	-
Atherosclerosis	4	*	1	*	2	*	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.



## Profile of Charlevoix County



<b>POPULATION</b>			<b>NATIVITY</b>			<b>MORTALITY</b>		
As of April 1, 1992:	22,225		Total Live Births:	311		Total Deaths:	220	
Rank Among Counties:	56		Teenage Mothers:	34		Infant Deaths:	2	
Per Square Mile:	52.8		Low Weight Births:	16		Neonatal Deaths:	1	
			First Births:	121		Postneonatal Deaths:	1	
						Perinatal Deaths:	5	
						Fetal Deaths:	4	
<b>MARRIAGE</b>			<b>DIVORCE</b>					
Marriages:	228		Divorces:	113				
Marriage Rate:	20.5		Divorce Rate:	10.2				

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	311	14.0	301	13.8	-	-	10	22.2
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	34	109.3	32	106.3	-	-	2	*
Low Weight	16	51.4	16	53.2	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	38	122.2	36	119.6	-	-	2	*
Prenatal Care Began in 1st Trimester	261	839.2	252	837.2	-	-	9	900.0

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	2	*	-	-	-	-
Neonatal Deaths	1	*	1	*	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	5	*	5	*	-	-	-	-
Fetal Deaths	4	*	4	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total 220	Male 97	Female 123	Total 217	Male 96	Female 121	Total -	Male -	Female -	Total 3	Male 1	Female 2	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	2	-	-	1	-	1	1	3	12	17	35	148	-
White Male	1	-	-	1	-	-	1	2	7	10	15	59	-
White Female	1	-	-	-	-	1	-	1	4	7	20	87	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	1	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	2	-

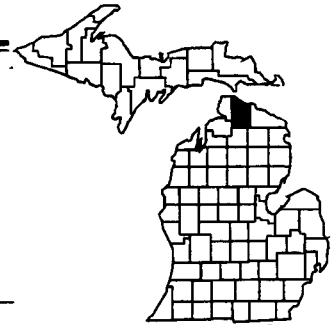
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	220	989.9	217	997.5	-	-	1	*
Diseases of the Heart	73	328.5	72	331.0	-	-	-	-
Malignant Neoplasms	60	270.0	58	266.6	-	-	-	-
Cerebrovascular Diseases	17	76.5	17	78.1	-	-	-	-
Accidents and Adverse Effects	7	31.5	7	32.2	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	6	27.0	6	27.6	-	-	-	-
Pneumonia and Influenza	10	45.0	10	46.0	-	-	-	-
Diabetes Mellitus	7	31.5	7	32.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	-	-	-	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Cheboygan County



## POPULATION

As of April 1, 1992: 21,780  
 Rank Among Counties: 58  
 Per Square Mile: 30.2

## NATALITY

Total Live Births: 283  
 Teenage Mothers: 41  
 Low Weight Births: 23  
 First Births: 101

## MORTALITY

Total Deaths: 239  
 Infant Deaths: 7  
 Neonatal Deaths: 4  
 Postneonatal Deaths: 3  
 Perinatal Deaths: 6  
 Fetal Deaths: 2

## MARRIAGE

Marriages: 204  
 Marriage Rate: 18.7

## DIVORCE

Divorces: 98  
 Divorce Rate: 9.0

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	283	13.0	272	12.9	1	*	7	11.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	41	144.9	40	147.1	-	-	-	-
Low Weight	23	81.3	23	84.6	-	-	-	-
Under 1,500 Grams	4	*	4	*	-	-	-	-
< 38 Weeks Gestation	61	215.5	58	213.2	1	*	2	*
Prenatal Care Began in 1st Trimester	233	823.3	224	823.5	1	*	5	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	7	24.7	7	25.7	-	-	-	-
Neonatal Deaths	4	*	4	*	-	-	-	-
Postneonatal Deaths	3	*	3	*	-	-	-	-
Perinatal Deaths	6	21.1	5	*	-	-	1	*
Fetal Deaths	2	*	1	*	-	-	1	*

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other				
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female		
	239	121	118	231	116	115	-	-	-	8	5	3		
	Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk	
	Total Deaths	7	-	1	-	1	-	1	2	7	14	34	172	-
	White Male	4	-	1	-	1	-	1	2	4	6	16	81	-
	White Female	3	-	-	-	-	-	-	-	2	6	16	88	-
	Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
	Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
	Other Male	-	-	-	-	-	-	-	-	1	2	1	1	-
	Other Female	-	-	-	-	-	-	-	-	-	-	1	2	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	239	1,097.4	231	1,091.8	-	-	2	*
Diseases of the Heart	84	385.7	83	392.3	-	-	-	-
Malignant Neoplasms	55	252.5	53	250.5	-	-	1	*
Cerebrovascular Diseases	17	78.1	17	80.3	-	-	-	-
Accidents and Adverse Effects	3	*	3	*	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	13	59.7	13	61.4	-	-	-	-
Pneumonia and Influenza	9	41.3	8	37.8	-	-	-	-
Diabetes Mellitus	11	50.5	10	47.3	-	-	-	-
Chronic Liver Disease and Cirrhosis	4	*	3	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	2	*	2	*	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Chippewa County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	35,640	Total Live Births:	413	Total Deaths:	302
Rank Among Counties:	44	Teenage Mothers:	62	Infant Deaths:	1
Per Square Mile:	22.4	Low Weight Births:	18	Neonatal Deaths:	-
		First Births:	157	Postneonatal Deaths:	1
				Perinatal Deaths:	3
				Fetal Deaths:	3
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	266	Divorces:	128		
Marriage Rate:	14.9	Divorce Rate:	7.2		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	413	11.6	309	10.8	1	*	99	23.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	62	150.1	40	129.4	-	-	22	222.2
Low Weight	18	43.6	13	42.1	-	-	5	*
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	58	140.4	42	135.9	-	-	16	161.6
Prenatal Care Began in 1st Trimester	321	777.2	247	799.4	1	*	73	737.4

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	*	1	*	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	3	*	3	*	-	-	-	-
Fetal Deaths	3	*	3	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	302	165	137	272	145	127	4	4	-	25	16	9
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	-	1	-	4	6	2	6	12	21	51	198
White Male	-	-	1	-	2	1	1	3	7	16	25	89
White Female	1	-	-	-	1	2	1	1	-	4	21	96
Black Male	-	-	-	-	-	2	-	-	1	-	1	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	1	-	2	3	1	2	7
Other Female	-	-	-	-	1	-	-	-	1	-	2	5

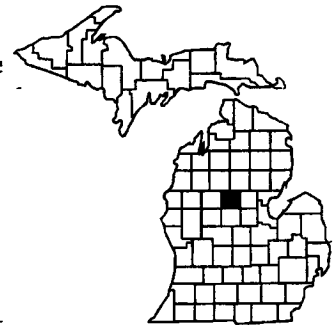
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	302	847.3	272	946.6	4	*	5	*
Diseases of the Heart	98	275.0	92	320.2	1	*	-	-
Malignant Neoplasms	62	174.0	58	201.8	-	-	1	*
Cerebrovascular Diseases	25	70.1	25	87.0	-	-	-	-
Accidents and Adverse Effects	16	44.9	11	38.3	1	*	3	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	21	58.9	18	62.6	-	-	-	-
Pneumonia and Influenza	11	30.9	10	34.8	1	*	-	-
Diabetes Mellitus	10	28.1	8	27.8	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	*	1	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	7	19.6	6	20.9	-	-	1	*
Atherosclerosis	4	*	4	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Clare County



<b>POPULATION</b>		<b>NATALITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	26,384	Total Live Births:	391	Total Deaths:	350
Rank Among Counties:	51	Teenage Mothers:	59	Infant Deaths:	4
Per Square Mile:	46.3	Low Weight Births:	19	Neonatal Deaths:	-
		First Births:	159	Postneonatal Deaths:	4
				Perinatal Deaths:	5
				Fetal Deaths:	5
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	230	Divorces:	154		
Marriage Rate:	17.4	Divorce Rate:	11.7		

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	391	14.8	389	14.9	-	-	1	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	59	150.9	59	151.7	-	-	-	-
Low Weight	19	48.6	18	46.3	-	-	-	-
Under 1,500 Grams	3	*	3	*	-	-	-	-
< 38 Weeks Gestation	52	133.0	52	133.7	-	-	-	-
Prenatal Care Began in 1st Trimester	342	874.7	341	876.6	-	-	1	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	4	*	4	*	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	4	*	4	*	-	-	-	-
Perinatal Deaths	5	*	5	*	-	-	-	-
Fetal Deaths	5	*	5	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
	350	195	155	347	194	153	1	-	1	2	1	1	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	4	2	-	-	-	2	2	12	5	26	73	224	-
White Male	4	2	-	-	-	1	1	7	4	16	44	115	-
White Female	-	-	-	-	-	1	-	5	1	10	28	108	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	1	-
Other Male	-	-	-	-	-	-	1	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	350	1,326.6	347	1,330.1	1	*	2	*
Diseases of the Heart	133	504.1	132	506.0	1	*	-	-
Malignant Neoplasms	85	322.2	85	325.8	-	-	-	-
Cerebrovascular Diseases	22	83.4	22	84.3	-	-	-	-
Accidents and Adverse Effects	17	64.4	16	61.3	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	15	56.9	15	57.5	-	-	-	-
Pneumonia and Influenza	14	53.1	13	49.8	-	-	-	-
Diabetes Mellitus	9	34.1	9	34.5	-	-	-	-
Chronic Liver Disease and Cirrhosis	4	*	4	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	8	30.3	8	30.7	-	-	-	-
Atherosclerosis	1	*	1	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Clinton County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	59,397	Total Live Births:	799	Total Deaths:	385
Rank Among Counties:	28	Teenage Mothers:	51	Infant Deaths:	2
Per Square Mile:	103.6	Low Weight Births:	35	Neonatal Deaths:	1
		First Births:	306	Postneonatal Deaths:	1
				Perinatal Deaths:	6
				Fetal Deaths:	5
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	438	Divorces:	239		
Marriage Rate:	14.7	Divorce Rate:	8.0		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	799	13.5	786	13.4	1	.	9	16.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	51	63.8	50	63.6	-	-	1	.
Low Weight	35	43.8	35	44.5	-	-	-	-
Under 1,500 Grams	6	7.5	6	7.6	-	-	-	-
< 38 Weeks Gestation	131	164.0	129	164.1	-	-	2	.
Prenatal Care Began in 1st Trimester	684	856.1	674	857.5	-	-	7	777.8

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	.	2	.	-	-	-	-
Neonatal Deaths	1	.	1	.	-	-	-	-
Postneonatal Deaths	1	.	1	.	-	-	-	-
Perinatal Deaths	6	7.5	6	7.6	-	-	-	-
Fetal Deaths	5	.	5	.	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	385	195	190	383	194	189	1	-	1	1	1	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	2	1	-	3	1	8	14	20	30	67	237
White Male	1	1	1	-	2	1	6	10	12	14	41	105
White Female	1	-	-	-	1	-	2	4	8	16	25	132
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	1	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-

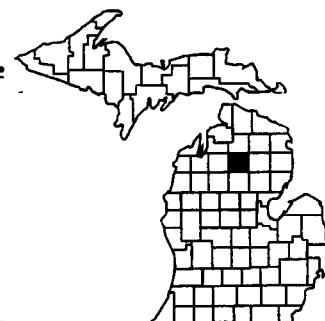
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	385	648.2	383	653.3	1	.	6	34.1
Diseases of the Heart	117	197.0	116	197.9	1	.	1	.
Malignant Neoplasms	98	165.0	97	165.5	-	-	3	.
Cerebrovascular Diseases	39	65.7	39	66.5	-	-	-	-
Accidents and Adverse Effects	16	26.9	16	27.3	-	-	2	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	12	20.2	12	20.5	-	-	-	-
Pneumonia and Influenza	15	25.3	15	25.6	-	-	-	-
Diabetes Mellitus	10	16.8	10	17.1	-	-	-	-
Chronic Liver Disease and Cirrhosis	6	10.1	6	10.2	-	-	-	-
Homicide	1	.	1	.	-	-	-	-
Suicide	5	.	5	.	-	-	-	-
Atherosclerosis	4	.	4	.	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Crawford County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	12,972	Total Live Births:	167	Total Deaths:	145
Rank Among Counties:	70	Teenage Mothers:	29	Infant Deaths:	4
Per Square Mile:	23.2	Low Weight Births:	16	Neonatal Deaths:	4
		First Births:	68	Postneonatal Deaths:	-
				Perinatal Deaths:	5
				Fetal Deaths:	1
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	107	Divorces:	65		
Marriage Rate:	16.5	Divorce Rate:	10.0		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	167	12.9	166	13.3	1	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	29	173.7	28	168.7	1	-	-	-
Low Weight	16	95.8	15	90.4	1	-	-	-
Under 1,500 Grams	7	41.9	7	42.2	-	-	-	-
< 38 Weeks Gestation	33	197.6	32	192.8	1	-	-	-
Prenatal Care Began in 1st Trimester	131	784.4	130	783.1	1	-	-	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	4	-	4	-	-	-	-	-
Neonatal Deaths	4	-	4	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	5	-	5	-	-	-	-	-
Fetal Deaths	1	-	1	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	145	75	70	140	71	69	-	-	-	5	4	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	4	-	-	-	2	1	2	-	7	6	35	88
White Male	2	-	-	-	1	1	-	-	5	4	22	36
White Female	2	-	-	-	1	-	2	-	1	2	12	49
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	1	-	1	2
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	145	1,117.8	140	1,125.4	-	-	2	-
Diseases of the Heart	43	331.5	41	329.6	-	-	-	-
Malignant Neoplasms	30	231.3	30	241.2	-	-	-	-
Cerebrovascular Diseases	9	69.4	9	72.3	-	-	-	-
Accidents and Adverse Effects	3	-	3	-	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	14	107.9	13	104.5	-	-	-	-
Pneumonia and Influenza	4	-	3	-	-	-	-	-
Diabetes Mellitus	3	-	3	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	2	-	2	-	-	-	1	-
Atherosclerosis	3	-	3	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Delta County



## POPULATION

As of April 1, 1992: 38,208  
 Rank Among Counties: 42  
 Per Square Mile: 32.6

## NATALITY

Total Live Births: 445  
 Teenage Mothers: 46  
 Low Weight Births: 19  
 First Births: 172

## MORTALITY

Total Deaths: 387  
 Infant Deaths: 6  
 Neonatal Deaths: 4  
 Postneonatal Deaths: 2  
 Perinatal Deaths: 4  
 Fetal Deaths: 1

## MARRIAGE

Marriages: 334  
 Marriage Rate: 17.5

## DIVORCE

Divorces: 136  
 Divorce Rate: 7.1

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	445	11.6	430	11.6	1	*	14	13.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	46	103.4	43	100.0	-	-	3	*
Low Weight	19	42.7	19	44.2	-	-	-	-
Under 1,500 Grams	4	*	4	*	-	-	-	-
< 38 Weeks Gestation	49	110.1	48	111.6	-	-	1	*
Prenatal Care Began in 1st Trimester	320	719.1	314	730.2	1	*	5	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	6	13.5	5	*	-	-	1	*
Neonatal Deaths	4	*	4	*	-	-	-	-
Postneonatal Deaths	2	*	1	*	-	-	1	*
Perinatal Deaths	4	*	4	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	387	198	189	382	195	187	-	-	-	5	3	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	6	-	-	-	3	1	3	6	12	40	66	250
White Male	3	-	-	-	-	1	2	3	8	21	40	117
White Female	2	-	-	-	3	-	1	1	4	18	26	132
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	1	-	-	-	-	-	-	1	-	-	-	1
Other Female	-	-	-	-	-	-	-	1	-	1	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	387	1,012.9	382	1,027.7	-	-	3	*
Diseases of the Heart	137	358.6	135	363.2	-	-	-	-
Malignant Neoplasms	88	230.3	87	234.1	-	-	-	-
Cerebrovascular Diseases	27	70.7	27	72.6	-	-	-	-
Accidents and Adverse Effects	12	31.4	12	32.3	-	-	2	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	18	47.1	18	48.4	-	-	-	-
Pneumonia and Influenza	14	36.6	14	37.7	-	-	-	-
Diabetes Mellitus	9	23.6	9	24.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	5	*	5	*	-	-	1	*
Atherosclerosis	3	*	3	*	-	-	-	-
AIDS	2	*	2	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Dickinson County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1992:	27,014	Total Live Births:	340	Total Deaths:	309
Rank Among Counties:	49	Teenage Mothers:	29	Infant Deaths:	1
Per Square Mile:	35.1	Low Weight Births:	23	Neonatal Deaths:	1
		First Births:	135	Postneonatal Deaths:	-
				Perinatal Deaths:	1
				Fetal Deaths:	1
MARRIAGE		DIVORCE			
Marriages:	251	Divorces:	132		
Marriage Rate:	18.6	Divorce Rate:	9.8		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	340	12.6	335	12.6	-	-	5	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	29	85.3	28	83.6	-	-	1	-
Low Weight	23	67.6	22	65.7	-	-	1	-
Under 1,500 Grams	4	-	4	-	-	-	-	-
< 38 Weeks Gestation	63	185.3	63	188.1	-	-	-	-
Prenatal Care Began in 1st Trimester	296	870.6	292	871.6	-	-	4	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	-	1	-	-	-	-	-
Neonatal Deaths	1	-	1	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	1	-	1	-	-	-	-	-
Fetal Deaths	1	-	1	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	309	161	148	309	161	148	-	-	-	-	-	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	-	-	-	1	2	2	-	13	16	42	232
White Male	1	-	-	-	-	2	2	-	9	11	27	109
White Female	-	-	-	-	1	-	-	-	4	5	15	123
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	309	1,143.9	309	1,157.7	-	-	1	-
Diseases of the Heart	97	359.1	97	363.4	-	-	-	-
Malignant Neoplasms	79	292.4	79	296.0	-	-	-	-
Cerebrovascular Diseases	28	103.6	28	104.9	-	-	-	-
Accidents and Adverse Effects	12	44.4	12	45.0	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	13	48.1	13	48.7	-	-	-	-
Pneumonia and Influenza	10	37.0	10	37.5	-	-	-	-
Diabetes Mellitus	10	37.0	10	37.5	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	5	-	5	-	-	-	-	-
Atherosclerosis	9	33.3	9	33.7	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.



## Profile of Eaton County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	95,253	Total Live Births:	1,217	Total Deaths:	656
Rank Among Counties:	19	Teenage Mothers:	143	Infant Deaths:	5
Per Square Mile:	164.4	Low Weight Births:	67	Neonatal Deaths:	1
		First Births:	513	Postneonatal Deaths:	4
				Perinatal Deaths:	6
				Fetal Deaths:	5
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	793	Divorces:	424		
Marriage Rate:	16.7	Divorce Rate:	8.9		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,217	12.8	1,156	12.8	49	13.3	10	9.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	143	117.5	132	114.2	10	204.1	1	*
Low Weight	67	55.1	62	53.6	3	*	2	*
Under 1,500 Grams	6	4.9	6	5.2	-	-	-	-
< 38 Weeks Gestation	175	143.8	162	140.1	10	204.1	3	*
Prenatal Care Began in 1st Trimester	1,026	843.1	975	843.4	40	816.3	9	900.0

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	5	*	5	*	-	-	-	-
Neonatal Deaths	1	*	1	*	-	-	-	-
Postneonatal Deaths	4	*	4	*	-	-	-	-
Perinatal Deaths	6	4.9	6	5.2	-	-	-	-
Fetal Deaths	5	*	5	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	656	313	343	637	307	330	14	6	8	5	-	5
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	5	2	2	5	5	5	8	16	32	52	95	429
White Male	3	1	-	1	3	3	5	5	16	32	50	188
White Female	2	1	1	3	2	2	3	9	12	18	42	235
Black Male	-	-	-	-	-	-	-	-	1	2	1	2
Black Female	-	-	1	1	-	-	-	1	2	-	1	2
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	1	1	-	1	2

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	656	688.7	637	704.0	14	381.1	14	50.6
Diseases of the Heart	206	216.3	201	222.2	4	*	-	-
Malignant Neoplasms	145	152.2	139	153.6	3	*	3	*
Cerebrovascular Diseases	43	45.1	41	45.3	2	*	-	-
Accidents and Adverse Effects	45	47.2	43	47.5	2	*	7	25.3
Chronic Obstructive Pulmonary Diseases and Allied Conditions	27	28.3	27	29.8	-	-	-	-
Pneumonia and Influenza	27	28.3	27	29.8	-	-	-	-
Diabetes Mellitus	22	23.1	21	23.2	1	*	-	-
Chronic Liver Disease and Cirrhosis	4	*	4	*	-	-	-	-
Homicide	2	*	2	*	-	-	-	-
Suicide	8	8.4	8	8.8	-	-	1	*
Atherosclerosis	3	*	3	*	-	-	-	-
AIDS	2	*	2	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Emmet County



## POPULATION

As of April 1, 1992: 26,057  
 Rank Among Counties: 52  
 Per Square Mile: 55.7

## NATALITY

Total Live Births: 350  
 Teenage Mothers: 33  
 Low Weight Births: 18  
 First Births: 143

## MORTALITY

Total Deaths: 251  
 Infant Deaths: 4  
 Neonatal Deaths: 3  
 Postneonatal Deaths: 1  
 Perinatal Deaths: 8  
 Fetal Deaths: 5

## MARRIAGE

Marriages: 223  
 Marriage Rate: 17.1

## DIVORCE

Divorces: 133  
 Divorce Rate: 10.2

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	350	13.4	329	13.1	2	*	19	23.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	33	94.3	30	91.2	-	-	3	*
Low Weight	18	51.4	18	54.7	-	-	-	-
Under 1,500 Grams	6	17.1	6	18.2	-	-	-	-
< 38 Weeks Gestation	57	162.9	54	164.1	-	-	3	*
Prenatal Care Began in 1st Trimester	290	828.6	277	841.9	1	*	12	631.6

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	4	*	4	*	-	-	-	-
Neonatal Deaths	3	*	3	*	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	8	22.5	8	24.0	-	-	-	-
Fetal Deaths	5	*	5	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

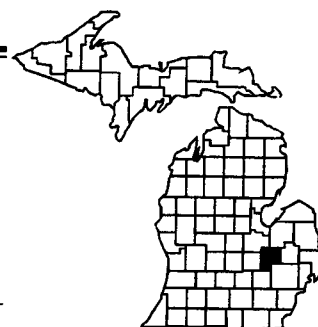
	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	251	116	135	244	110	134	2	2	-	5	4	1	
	Age in Years												
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	4	-	-	1	2	1	2	13	12	12	32	172	-
White Male	2	-	-	-	1	1	1	8	8	7	15	67	-
White Female	2	-	-	1	1	-	1	5	2	5	16	101	-
Black Male	-	-	-	-	-	-	-	-	1	-	-	1	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	1	-	1	2	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	251	963.2	244	971.9	2	*	3	*
Diseases of the Heart	80	307.0	78	310.7	-	-	-	-
Malignant Neoplasms	56	214.9	55	219.1	1	*	-	-
Cerebrovascular Diseases	17	65.2	16	63.7	1	*	-	-
Accidents and Adverse Effects	7	26.9	7	27.9	-	-	2	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	15	57.6	15	59.7	-	-	-	-
Pneumonia and Influenza	14	53.7	12	47.8	-	-	-	-
Diabetes Mellitus	3	*	3	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	7	26.9	7	27.9	-	-	-	-
Atherosclerosis	3	*	3	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Genesee County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	433,508	Total Live Births:	6,995	Total Deaths:	3,644
Rank Among Counties:	5	Teenage Mothers:	1,142	Infant Deaths:	72
Per Square Mile:	675.7	Low Weight Births:	639	Neonatal Deaths:	43
		First Births:	2,690	Postneonatal Deaths:	29
				Perinatal Deaths:	65
				Fetal Deaths:	29
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	3,388	Divorces:	1,709		
Marriage Rate:	15.6	Divorce Rate:	7.9		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	6,995	16.1	4,804	14.1	2,132	24.4	51	7.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	1,142	163.3	561	116.8	574	269.2	6	117.6
Low Weight	639	91.4	316	65.8	319	149.6	3	*
Under 1,500 Grams	144	20.6	64	13.3	79	37.1	1	*
< 38 Weeks Gestation	1346	192.4	765	159.2	572	268.3	7	137.3
Prenatal Care Began in 1st Trimester	5,734	819.7	4,162	866.4	1,524	714.8	43	843.1

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	72	10.3	31	6.5	41	19.2	-	-
Neonatal Deaths	43	6.1	19	4.0	24	11.3	-	-
Postneonatal Deaths	29	4.1	12	2.5	17	8.0	-	-
Perinatal Deaths	65	9.3	32	6.6	33	15.4	-	-
Fetal Deaths	29	4.1	17	3.5	12	5.6	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	3644	1865	1779	2952	1498	1454	671	354	317	20	12	8
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	72	18	9	14	32	32	33	96	189	321	652	2,176
White Male	20	6	2	6	5	12	18	35	90	159	298	847
White Female	11	3	1	4	8	6	4	25	38	82	203	1,069
Black Male	21	6	4	2	12	11	8	19	27	47	81	116
Black Female	20	3	2	2	6	3	3	15	33	30	63	137
Other Male	-	-	-	-	-	-	-	2	1	2	4	3
Other Female	-	-	-	-	1	-	-	-	-	-	3	4

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	3,644	840.6	2,952	869.0	671	769.2	73	57.9
Diseases of the Heart	1,330	306.8	1,123	330.6	199	228.1	3	*
Malignant Neoplasms	837	193.1	682	200.8	153	175.4	5	*
Cerebrovascular Diseases	241	55.6	198	58.3	43	49.3	1	*
Accidents and Adverse Effects	128	29.5	88	25.9	40	45.9	23	18.2
Chronic Obstructive Pulmonary Diseases and Allied Conditions	174	40.1	150	44.2	21	24.1	2	*
Pneumonia and Influenza	91	21.0	81	23.8	10	11.5	-	-
Diabetes Mellitus	109	25.1	94	27.7	15	17.2	-	-
Chronic Liver Disease and Cirrhosis	34	7.8	30	8.8	4	-	-	-
Homicide	54	12.5	11	3.2	40	45.9	15	11.9
Suicide	34	7.8	30	8.8	4	*	4	*
Atherosclerosis	30	6.9	30	8.8	-	-	-	-
AIDS	18	4.2	11	3.2	7	8.0	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Gladwin County



## POPULATION NATALITY MORTALITY

As of April 1, 1992:	23,007	Total Live Births:	285	Total Deaths:	244
Rank Among Counties:	54	Teenage Mothers:	38	Infant Deaths:	-
Per Square Mile:	45.5	Low Weight Births:	19	Neonatal Deaths:	-
		First Births:	101	Postneonatal Deaths:	-
				Perinatal Deaths:	-
				Fetal Deaths:	-

## MARRIAGE

Marriages:	170
Marriage Rate:	14.8

## DIVORCE

Divorces:	118
Divorce Rate:	10.3

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	285	12.4	285	12.5	-	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	38	133.3	38	133.3	-	-	-	-
Low Weight	19	66.7	19	66.7	-	-	-	-
Under 1,500 Grams	2	-	2	-	-	-	-	-
< 38 Weeks Gestation	35	122.8	35	122.8	-	-	-	-
Prenatal Care Began in 1st Trimester	240	842.1	240	842.1	-	-	-	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	-	-	-	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	244	131	113	244	131	113	-	-	-	-	-	-	
	Age in Years												
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
	Total Deaths	-	-	-	-	1	3	10	2	17	48	163	-
	White Male	-	-	-	-	1	1	9	2	8	32	78	-
	White Female	-	-	-	-	-	2	1	-	9	16	85	-
	Black Male	-	-	-	-	-	-	-	-	-	-	-	-
	Black Female	-	-	-	-	-	-	-	-	-	-	-	-
	Other Male	-	-	-	-	-	-	-	-	-	-	-	-
	Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	244	1,060.5	244	1,069.9	-	-	-	-
Diseases of the Heart	73	317.3	73	320.1	-	-	-	-
Malignant Neoplasms	67	291.2	67	293.8	-	-	-	-
Cerebrovascular Diseases	16	69.5	16	70.2	-	-	-	-
Accidents and Adverse Effects	17	73.9	17	74.5	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	9	39.1	9	39.5	-	-	-	-
Pneumonia and Influenza	9	39.1	9	39.5	-	-	-	-
Diabetes Mellitus	12	52.2	12	52.6	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	2	-	2	-	-	-	-	-
Suicide	4	-	4	-	-	-	-	-
Atherosclerosis	5	-	5	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Gogebic County



## POPULATION NATALITY MORTALITY

As of April 1, 1992:	17,891	Total Live Births:	165	Total Deaths:	252
Rank Among Counties:	64	Teenage Mothers:	23	Infant Deaths:	1
Per Square Mile:	16.2	Low Weight Births:	10	Neonatal Deaths:	-
		First Births:	62	Postneonatal Deaths:	1
				Perinatal Deaths:	1
				Fetal Deaths:	1

## MARRIAGE

Marriages:	131
Marriage Rate:	14.6

## DIVORCE

Divorces:	70
Divorce Rate:	7.8

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	165	9.2	160	9.3	-	-	5	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	23	139.4	21	131.3	-	-	2	*
Low Weight	10	60.6	9	56.3	-	-	1	*
Under 1,500 Grams	1	*	1	*	-	-	-	-
< 38 Weeks Gestation	23	139.4	23	143.8	-	-	-	-
Prenatal Care Began in 1st Trimester	141	854.5	137	856.3	-	-	4	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	*	1	*	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	1	*	1	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	252	130	122	248	128	120	-	-	-	4	2	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	2	-	-	1	1	1	4	6	11	37	188
White Male	-	1	-	-	1	-	1	4	4	7	17	93
White Female	1	-	-	-	-	1	-	-	2	4	19	93
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	2
Other Female	-	1	-	-	-	-	-	-	-	-	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	252	1,408.5	248	1,434.4	-	-	3	*
Diseases of the Heart	95	531.0	94	543.7	-	-	-	-
Malignant Neoplasms	58	324.2	56	323.9	-	-	-	-
Cerebrovascular Diseases	21	117.4	21	121.5	-	-	-	-
Accidents and Adverse Effects	9	50.3	9	52.1	-	-	2	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	13	72.7	13	75.2	-	-	-	-
Pneumonia and Influenza	12	67.1	12	69.4	-	-	-	-
Diabetes Mellitus	3	*	3	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	*	1	*	-	-	-	-
Atherosclerosis	1	*	1	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Grand Traverse County



<b>POPULATION</b>		<b>NATALITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	67,290	Total Live Births:	886	Total Deaths:	502
Rank Among Counties:	27	Teenage Mothers:	72	Infant Deaths:	8
Per Square Mile:	144.3	Low Weight Births:	40	Neonatal Deaths:	6
		First Births:	340	Postneonatal Deaths:	2
				Perinatal Deaths:	7
				Fetal Deaths:	3
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	682	Divorces:	429		
Marriage Rate:	20.3	Divorce Rate:	12.8		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	886	13.2	862	13.1	1	-	21	21.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	72	81.3	66	76.6	-	-	6	285.7
Low Weight	40	45.1	38	44.1	1	-	1	-
Under 1,500 Grams	6	6.8	6	7.0	-	-	-	-
< 38 Weeks Gestation	137	154.6	132	153.1	-	-	5	-
Prenatal Care Began in 1st Trimester	697	786.7	681	790.0	-	-	14	666.7

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	8	9.0	8	9.3	-	-	-	-
Neonatal Deaths	6	6.8	6	7.0	-	-	-	-
Postneonatal Deaths	2	-	2	-	-	-	-	-
Perinatal Deaths	7	7.9	6	6.9	-	-	-	-
Fetal Deaths	3	-	2	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total 502	Male 239	Female 263	Total 497	Male 236	Female 261	Total 1	Male -	Female 1	Total 3	Male 2	Female 1	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	8	-	1	-	6	-	1	6	17	29	77	357	-
White Male	5	-	1	-	2	-	1	5	9	16	46	151	-
White Female	3	-	-	-	3	-	-	1	8	13	29	204	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	1	-
Other Male	-	-	-	-	1	-	-	-	-	-	1	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	502	746.0	497	752.6	1	-	7	36.3
Diseases of the Heart	158	234.8	156	236.2	1	-	-	-
Malignant Neoplasms	119	176.8	118	178.7	-	-	-	-
Cerebrovascular Diseases	45	66.9	45	68.1	-	-	-	-
Accidents and Adverse Effects	22	32.7	21	31.8	-	-	6	31.1
Chronic Obstructive Pulmonary Diseases and Allied Conditions	20	29.7	20	30.3	-	-	-	-
Pneumonia and Influenza	22	32.7	22	33.3	-	-	-	-
Diabetes Mellitus	7	10.4	7	10.6	-	-	-	-
Chronic Liver Disease and Cirrhosis	6	8.9	6	9.1	-	-	-	-
Homicide	1	-	1	-	-	-	1	-
Suicide	5	-	5	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Gratiot County



<b>POPULATION</b>		<b>NATALITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	39,450	Total Live Births:	547	Total Deaths:	395
Rank Among Counties:	40	Teenage Mothers:	78	Infant Deaths:	6
Per Square Mile:	69.2	Low Weight Births:	30	Neonatal Deaths:	5
		First Births:	223	Postneonatal Deaths:	1
				Perinatal Deaths:	8
				Fetal Deaths:	4
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	260	Divorces:	146		
Marriage Rate:	13.2	Divorce Rate:	7.4		

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	547	13.9	544	14.0	1	*	2	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	78	142.6	76	139.7	-	-	2	*
Low Weight	30	54.8	29	53.3	-	-	1	*
Under 1,500 Grams	6	11.0	6	11.0	-	-	-	-
< 38 Weeks Gestation	91	166.4	91	167.3	-	-	-	-
Prenatal Care Began in 1st Trimester	442	808.0	439	807.0	1	*	2	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	6	11.0	6	11.0	-	-	-	-
Neonatal Deaths	5	*	5	*	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	8	14.5	7	12.8	-	-	-	-
Fetal Deaths	4	*	3	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	395	206	189	392	204	188	-	-	-	3	2	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	6	1	2	1	3	1	2	5	11	17	61	285
White Male	4	1	1	-	2	1	2	4	6	11	40	132
White Female	2	-	1	1	1	-	-	1	5	5	20	152
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	1	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	395	1,001.3	392	1,011.3	-	-	7	61.1
Diseases of the Heart	157	398.0	157	405.0	-	-	-	-
Malignant Neoplasms	91	230.7	90	232.2	-	-	-	-
Cerebrovascular Diseases	22	55.8	22	56.8	-	-	-	-
Accidents and Adverse Effects	14	35.5	14	36.1	-	-	3	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	15	38.0	14	36.1	-	-	-	-
Pneumonia and Influenza	20	50.7	20	51.6	-	-	-	-
Diabetes Mellitus	13	33.0	12	31.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	*	2	*	-	-	1	*
Atherosclerosis	3	*	3	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Hillsdale County



## POPULATION

As of April 1, 1992: 44,407  
 Rank Among Counties: 36  
 Per Square Mile: 73.7

## NATALITY

Total Live Births: 607  
 Teenage Mothers: 112  
 Low Weight Births: 35  
 First Births: 248

## MORTALITY

Total Deaths: 392  
 Infant Deaths: 2  
 Neonatal Deaths: 1  
 Postneonatal Deaths: 1  
 Perinatal Deaths: 7  
 Fetal Deaths: 6

## MARRIAGE

Marriages: 319  
 Marriage Rate: 14.4

## DIVORCE

Divorces: 241  
 Divorce Rate: 10.9

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	607	13.7	601	13.7	-	-	5	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	112	184.5	111	184.7	-	-	1	*
Low Weight	35	57.7	34	56.6	-	-	1	*
Under 1,500 Grams	4	*	4	*	-	-	-	-
< 38 Weeks Gestation	90	148.3	87	144.8	-	-	3	*
Prenatal Care Began in 1st Trimester	431	710.0	427	710.5	-	-	3	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	2	*	-	-	-	-
Neonatal Deaths	1	*	1	*	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	7	11.4	7	11.5	-	-	-	-
Fetal Deaths	6	9.8	6	9.9	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	392	209	183	390	207	183	1	1	-	1	1	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	5	-	3	3	2	3	14	14	31	61	254
White Male	-	2	-	3	-	2	2	7	8	22	39	122
White Female	2	3	-	-	3	-	1	7	6	8	21	132
Black Male	-	-	-	-	-	-	-	-	-	-	1	-
Black Female	-	-	-	-	-	-	-	-	-	1	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	392	882.7	390	886.6	1	*	11	81.9
Diseases of the Heart	133	299.5	132	300.1	1	*	1	*
Malignant Neoplasms	102	229.7	101	229.6	-	-	1	*
Cerebrovascular Diseases	13	29.3	13	29.6	-	-	-	-
Accidents and Adverse Effects	23	51.8	23	52.3	-	-	8	59.6
Chronic Obstructive Pulmonary Diseases and Allied Conditions	17	38.3	17	38.6	-	-	-	-
Pneumonia and Influenza	19	42.8	19	43.2	-	-	-	-
Diabetes Mellitus	11	24.8	11	25.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	3	*	3	*	-	-	-	-
Suicide	6	13.5	6	13.6	-	-	-	-
Atherosclerosis	1	*	1	*	-	-	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.



## Profile of Houghton County



## POPULATION

As of April 1, 1992: 35,831  
 Rank Among Counties: 43  
 Per Square Mile: 35.4

## NATALITY

Total Live Births: 367  
 Teenage Mothers: 29  
 Low Weight Births: 12  
 First Births: 132

## MORTALITY

Total Deaths: 404  
 Infant Deaths: 2  
 Neonatal Deaths: 1  
 Postneonatal Deaths: 1  
 Perinatal Deaths: -  
 Fetal Deaths: -

## MARRIAGE

Marriages: 259  
 Marriage Rate: 14.5

## DIVORCE

Divorces: 98  
 Divorce Rate: 5.5

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	367	10.2	349	10.0	3	*	15	17.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	29	79.0	27	77.4	1	*	1	*
Low Weight	12	32.7	12	34.4	-	-	-	-
Under 1,500 Grams	3	*	3	*	-	-	-	-
< 38 Weeks Gestation	43	117.2	40	114.6	-	-	3	*
Prenatal Care Began in 1st Trimester	281	765.7	265	759.3	2	*	14	933.3

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	1	*	1	*	-	-
Neonatal Deaths	1	*	-	-	1	*	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	404	201	203	403	200	203	1	1	-	-	-	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	-	1	1	1	-	4	6	7	28	54	300
White Male	1	-	1	-	1	-	2	5	6	20	33	131
White Female	-	-	-	1	-	-	2	1	1	8	21	169
Black Male	1	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	404	1,127.5	403	1,158.7	1	*	3	*
Diseases of the Heart	146	407.5	146	419.8	-	-	1	*
Malignant Neoplasms	90	251.2	90	258.8	-	-	-	-
Cerebrovascular Diseases	41	114.4	41	117.9	-	-	-	-
Accidents and Adverse Effects	20	55.8	19	54.6	1	*	2	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	10	27.9	10	28.8	-	-	-	-
Pneumonia and Influenza	21	58.6	21	60.4	-	-	-	-
Diabetes Mellitus	8	22.3	8	23.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	5	*	5	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	*	1	*	-	-	-	-
Atherosclerosis	3	*	3	*	-	-	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Huron County



## POPULATION

As of April 1, 1992: 34,977  
 Rank Among Counties: 45  
 Per Square Mile: 42.2

## NATALITY

Total Live Births: 384  
 Teenage Mothers: 24  
 Low Weight Births: 27  
 First Births: 125

## MORTALITY

Total Deaths: 433  
 Infant Deaths: 3  
 Neonatal Deaths: 2  
 Postneonatal Deaths: 1  
 Perinatal Deaths: 4  
 Fetal Deaths: 2

## MARRIAGE

Marriages: 223  
 Marriage Rate: 12.8

## DIVORCE

Divorces: 106  
 Divorce Rate: 6.1

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	384	11.0	380	10.9	1	*	3	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	24	62.5	24	63.2	-	-	-	-
Low Weight	27	70.3	27	71.1	-	-	-	-
Under 1,500 Grams	6	15.6	6	15.8	-	-	-	-
< 38 Weeks Gestation	54	140.6	53	139.5	-	-	1	*
Prenatal Care Began in 1st Trimester	314	817.7	312	821.1	-	-	2	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	3	*	3	*	-	-	-	-
Neonatal Deaths	2	*	2	*	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	4	*	4	*	-	-	-	-
Fetal Deaths	2	*	2	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	433	228	205	432	227	205	-	-	-	-	-	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	3	-	-	-	1	3	3	4	11	30	68	310
White Male	-	-	-	-	-	3	3	3	4	18	42	154
White Female	3	-	-	-	1	-	-	1	7	12	26	155
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	433	1,238.0	432	1,242.2	-	-	1	*
Diseases of the Heart	179	511.8	179	514.7	-	-	-	-
Malignant Neoplasms	94	268.7	94	270.3	-	-	-	-
Cerebrovascular Diseases	47	134.4	47	135.1	-	-	-	-
Accidents and Adverse Effects	10	28.6	10	28.8	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	14	40.0	14	40.3	-	-	-	-
Pneumonia and Influenza	16	45.7	16	46.0	-	-	-	-
Diabetes Mellitus	8	22.9	8	23.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	8	22.9	8	23.0	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	*	3	*	-	-	-	-
Atherosclerosis	2	*	2	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Ingham County



## POPULATION

As of April 1, 1992: 281,798  
 Rank Among Counties: 7  
 Per Square Mile: 503.5

## NATALITY

Total Live Births: 4,056  
 Teenage Mothers: 565  
 Low Weight Births: 288  
 First Births: 1,708

## MORTALITY

Total Deaths: 1,854  
 Infant Deaths: 33  
 Neonatal Deaths: 21  
 Postneonatal Deaths: 12  
 Perinatal Deaths: 45  
 Fetal Deaths: 28

## MARRIAGE

Marriages: 2,362  
 Marriage Rate: 16.8

## DIVORCE

Divorces: 1,205  
 Divorce Rate: 8.6

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	4,056	14.4	3,276	13.6	648	21.8	121	11.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	565	139.3	381	116.3	164	253.1	17	140.5
Low Weight	288	71.0	205	62.6	76	117.3	5	-
Under 1,500 Grams	49	12.1	35	10.7	14	21.6	-	-
< 38 Weeks Gestation	716	176.5	540	164.8	150	231.5	24	198.3
Prenatal Care Began in 1st Trimester	3,186	785.5	2,681	818.4	410	632.7	88	727.3

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	33	8.1	22	6.7	11	17.0	-	-
Neonatal Deaths	21	5.2	15	4.6	6	9.3	-	-
Postneonatal Deaths	12	3.0	7	2.1	5	-	-	-
Perinatal Deaths	45	11.0	33	10.0	11	16.8	1	-
Fetal Deaths	28	6.9	21	6.4	6	9.2	1	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

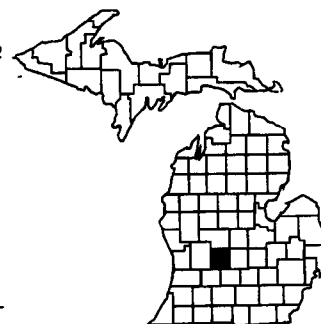
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,854	920	934	1,686	823	863	156	93	63	12	4	8
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	33	8	3	6	14	8	21	66	100	122	264	1,209
White Male	10	3	1	3	9	4	16	32	55	54	140	496
White Female	12	4	1	2	3	1	3	16	30	55	95	641
Black Male	7	-	-	1	2	3	1	11	10	9	16	33
Black Female	4	1	1	-	-	-	1	5	4	4	10	33
Other Male	-	-	-	-	-	-	-	1	1	-	1	1
Other Female	-	-	-	-	-	-	-	1	-	-	2	5

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,854	657.9	1,686	699.2	156	524.6	31	38.4
Diseases of the Heart	575	204.0	533	221.0	39	131.2	-	-
Malignant Neoplasms	449	159.3	404	167.5	43	144.6	-	-
Cerebrovascular Diseases	119	42.2	113	46.9	4	-	-	-
Accidents and Adverse Effects	72	25.6	65	27.0	6	20.2	16	19.8
Chronic Obstructive Pulmonary Diseases and Allied Conditions	82	29.1	78	32.3	4	-	-	-
Pneumonia and Influenza	68	24.1	62	25.7	6	20.2	-	-
Diabetes Mellitus	46	16.3	38	15.8	7	23.5	-	-
Chronic Liver Disease and Cirrhosis	12	4.3	12	5.0	-	-	-	-
Homicide	19	6.7	7	2.9	12	40.4	4	-
Suicide	38	13.5	37	15.3	1	-	3	-
Atherosclerosis	12	4.3	12	5.0	-	-	-	-
AIDS	16	5.7	14	5.8	2	-	1	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Ionia County



## POPULATION

As of April 1, 1992: 57,986  
 Rank Among Counties: 30  
 Per Square Mile: 100.5

## NATALITY

Total Live Births: 806  
 Teenage Mothers: 109  
 Low Weight Births: 55  
 First Births: 290

## MORTALITY

Total Deaths: 446  
 Infant Deaths: 8  
 Neonatal Deaths: 4  
 Postneonatal Deaths: 4  
 Perinatal Deaths: 5  
 Fetal Deaths: 3

## MARRIAGE

Marriages: 480  
 Marriage Rate: 16.6

## DIVORCE

Divorces: 248  
 Divorce Rate: 8.6

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	806	13.9	792	14.6	5	*	8	21.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	109	135.2	104	131.3	4	*	1	*
Low Weight	55	68.2	55	69.4	-	-	-	-
Under 1,500 Grams	12	14.9	12	15.2	-	-	-	-
< 38 Weeks Gestation	126	156.3	124	156.6	-	-	2	*
Prenatal Care Began in 1st Trimester	646	801.5	640	808.1	2	*	4	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	8	9.9	8	10.1	-	-	-	-
Neonatal Deaths	4	*	4	*	-	-	-	-
Postneonatal Deaths	4	*	4	*	-	-	-	-
Perinatal Deaths	5	*	5	*	-	-	-	-
Fetal Deaths	3	*	3	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	446	214	232	441	212	229	2	1	1	3	1	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	8	4	-	-	2	2	3	12	21	38	66	290
White Male	5	4	-	-	1	1	3	9	13	23	36	117
White Female	3	-	-	-	1	1	-	3	8	13	30	170
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	1	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	1	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	446	769.2	441	812.0	2	*	6	34.2
Diseases of the Heart	147	253.5	145	267.0	1	*	-	-
Malignant Neoplasms	117	201.8	116	213.6	-	-	-	-
Cerebrovascular Diseases	27	46.6	27	49.7	-	-	-	-
Accidents and Adverse Effects	16	27.6	16	29.5	-	-	3	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	23	39.7	23	42.4	-	-	-	-
Pneumonia and Influenza	18	31.0	18	33.1	-	-	-	-
Diabetes Mellitus	8	13.8	7	12.9	1	*	-	-
Chronic Liver Disease and Cirrhosis	5	*	5	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	9	15.5	9	16.6	-	-	1	*
Atherosclerosis	4	*	4	*	-	-	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Iosco County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	30,211	Total Live Births:	291	Total Deaths:	337
Rank Among Counties:	47	Teenage Mothers:	40	Infant Deaths:	2
Per Square Mile:	55.3	Low Weight Births:	13	Neonatal Deaths:	1
		First Births:	112	Postneonatal Deaths:	1
				Perinatal Deaths:	4
				Fetal Deaths:	3
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	199	Divorces:	155		
Marriage Rate:	13.2	Divorce Rate:	10.3		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	291	9.6	287	9.9	2	*	2	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	40	137.5	39	135.9	1	*	-	-
Low Weight	13	44.7	12	41.8	-	-	1	*
Under 1,500 Grams	2	*	2	*	-	-	-	-
< 38 Weeks Gestation	36	123.7	35	122.0	-	-	1	*
Prenatal Care Began in 1st Trimester	216	742.3	213	742.2	2	*	1	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	1	*	1	*	-	-
Neonatal Deaths	1	*	1	*	-	-	-	-
Postneonatal Deaths	1	*	-	-	1	*	-	-
Perinatal Deaths	4	*	4	*	-	-	-	-
Fetal Deaths	3	*	3	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	337	153	184	335	152	183	1	-	1	1	1	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+ Unk
Total Deaths	2	-	-	-	3	-	2	5	5	25	61	234
White Male	-	-	-	-	2	-	2	3	3	13	41	88
White Female	1	-	-	-	1	-	-	2	1	12	20	146
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	1	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	1	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

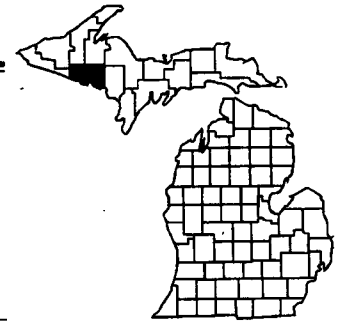
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	337	1,115.5	335	1,153.4	1	*	3	*
Diseases of the Heart	126	417.1	125	430.4	-	-	1	*
Malignant Neoplasms	84	278.0	84	289.2	-	-	-	-
Cerebrovascular Diseases	20	66.2	20	68.9	-	-	-	-
Accidents and Adverse Effects	9	29.8	9	31.0	-	-	2	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	13	43.0	13	44.8	-	-	-	-
Pneumonia and Influenza	15	49.7	15	51.6	-	-	-	-
Diabetes Mellitus	5	*	5	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	*	3	*	-	-	-	-
Atherosclerosis	10	33.1	10	34.4	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Iron County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	13,136	Total Live Births:	125	Total Deaths:	210
Rank Among Counties:	69	Teenage Mothers:	23	Infant Deaths:	-
Per Square Mile:	11.3	Low Weight Births:	4	Neonatal Deaths:	-
		First Births:	50	Postneonatal Deaths:	-
				Perinatal Deaths:	-
				Fetal Deaths:	-
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	99	Divorces:	52		
Marriage Rate:	15.1	Divorce Rate:	7.9		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	125	9.5	122	9.4	-	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	23	184.0	21	172.1	-	-	2	-
Low Weight	4	-	4	-	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	17	136.0	17	139.3	-	-	-	-
Prenatal Care Began in 1st Trimester	109	872.0	107	877.0	-	-	2	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	-	-	-	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	210	109	101	210	109	101	-	-	-	-	-	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	-	1	-	-	-	1	-	1	5	10	24	168
White Male	-	-	-	-	-	1	-	1	4	7	14	82
White Female	-	1	-	-	-	-	-	-	1	3	10	86
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	210	1,598.7	210	1,618.5	-	-	1	-
Diseases of the Heart	72	548.1	72	554.9	-	-	-	-
Malignant Neoplasms	51	388.2	51	393.1	-	-	1	-
Cerebrovascular Diseases	15	114.2	15	115.6	-	-	-	-
Accidents and Adverse Effects	8	60.9	8	61.7	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	20	152.3	20	154.1	-	-	-	-
Pneumonia and Influenza	10	76.1	10	77.1	-	-	-	-
Diabetes Mellitus	5	-	5	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	-	-	-	-	-	-	-	-
Atherosclerosis	4	-	4	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Isabella County



## POPULATION

As of April 1, 1992: 56,212  
 Rank Among Counties: 31  
 Per Square Mile: 97.5

## NATALITY

Total Live Births: 657  
 Teenage Mothers: 73  
 Low Weight Births: 32  
 First Births: 270

## MORTALITY

Total Deaths: 340  
 Infant Deaths: 5  
 Neonatal Deaths: 3  
 Postneonatal Deaths: 2  
 Perinatal Deaths: 6  
 Fetal Deaths: 3

## MARRIAGE

Marriages: 435  
 Marriage Rate: 15.5

## DIVORCE

Divorces: 239  
 Divorce Rate: 8.5

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	657	11.7	629	11.7	6	8.7	22	13.2
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	73	111.1	64	101.7	-	-	9	409.1
Low Weight	32	48.7	31	49.3	-	-	1	-
Under 1,500 Grams	6	9.1	5	-	-	-	1	-
< 38 Weeks Gestation	87	132.4	82	130.4	1	-	4	-
Prenatal Care Began in 1st Trimester	539	820.4	523	831.5	3	-	13	590.9

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	5	-	5	-	-	-	-	-
Neonatal Deaths	3	-	3	-	-	-	-	-
Postneonatal Deaths	2	-	2	-	-	-	-	-
Perinatal Deaths	6	9.1	6	9.5	-	-	-	-
Fetal Deaths	3	-	3	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

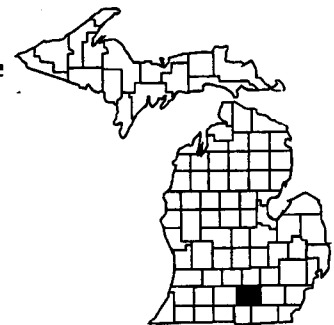
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	340	182	158	324	173	151	3	1	2	13	8	5
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	5	1	1	1	1	5	3	13	11	23	53	223
White Male	1	-	1	-	1	2	2	8	9	12	32	105
White Female	4	1	-	1	-	2	-	3	2	6	20	112
Black Male	-	-	-	-	-	-	-	-	-	1	-	-
Black Female	-	-	-	-	-	-	-	-	-	1	-	1
Other Male	-	-	-	-	-	1	1	2	-	1	-	3
Other Female	-	-	-	-	-	-	-	-	-	2	1	2

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	340	604.9	324	601.6	3	-	4	-
Diseases of the Heart	116	206.4	113	209.8	1	-	-	-
Malignant Neoplasms	70	124.5	69	128.1	1	-	-	-
Cerebrovascular Diseases	37	65.8	36	66.8	1	-	-	-
Accidents and Adverse Effects	16	28.5	12	22.3	1	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	13	23.1	13	24.1	-	-	-	-
Pneumonia and Influenza	24	42.7	23	42.7	-	-	-	-
Diabetes Mellitus	7	12.5	5	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	2	-	2	-	-	-	1	-
Suicide	6	10.7	5	-	-	-	1	-
Atherosclerosis	5	-	5	-	-	-	-	-
AIDS	2	-	2	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Jackson County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	151,740	Total Live Births:	2,106	Total Deaths:	1,376
Rank Among Counties:	13	Teenage Mothers:	296	Infant Deaths:	19
Per Square Mile:	215.3	Low Weight Births:	138	Neonatal Deaths:	13
		First Births:	820	Postneonatal Deaths:	6
				Perinatal Deaths:	29
				Fetal Deaths:	19
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	1,257	Divorces:	889		
Marriage Rate:	16.6	Divorce Rate:	11.7		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	2,106	13.9	1,899	13.8	185	14.9	17	12.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	296	140.6	243	128.0	52	281.1	1	*
Low Weight	138	65.5	109	57.4	28	151.4	1	*
Under 1,500 Grams	29	13.8	23	12.1	6	32.4	-	*
< 38 Weeks Gestation	280	133.0	237	124.8	42	227.0	1	*
Prenatal Care Began in 1st Trimester	1,604	761.6	1,504	792.0	89	481.1	9	529.4

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	19	9.0	16	8.4	3	*	-	-
Neonatal Deaths	13	6.2	11	5.8	2	*	-	-
Postneonatal Deaths	6	2.8	5	*	1	*	-	-
Perinatal Deaths	29	13.6	24	12.5	4	*	1	*
Fetal Deaths	19	8.9	16	8.4	2	*	1	*

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,376	717	659	1,281	652	629	83	57	26T12	8	4	
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	19	7	-	1	7	7	10	36	56	102	265	866T-
White Male	7	1	-	-	3	3	7	23	31	56	156	365
White Female	9	4	-	1	3	3	2	7	15	29	93	463
Black Male	3	1	-	-	1	1	-	6	7	12	10	16
Black Female	-	1	-	-	-	-	-	-	2	2	4	17
Other Male	-	-	-	-	-	-	1	-	1	2	1	3
Other Female	-	-	-	-	-	-	-	-	-	1	1	2

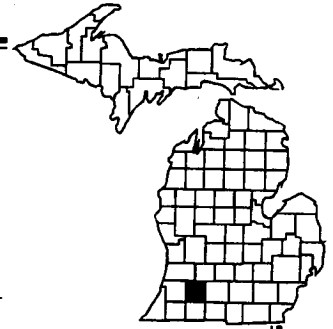
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,376	906.8	1,281	928.8	83	668.7	15	36.9
Diseases of the Heart	418	275.5	395	286.4	20	161.1	-	-
Malignant Neoplasms	333	219.5	308	223.3	21	169.2	-	-
Cerebrovascular Diseases	82	54.0	79	57.3	3	*	-	-
Accidents and Adverse Effects	53	34.9	46	33.4	5	*	4	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	98	64.6	96	69.6	1	*	1	*
Pneumonia and Influenza	72	47.4	70	50.8	2	*	-	-
Diabetes Mellitus	36	23.7	31	22.5	5	*	-	-
Chronic Liver Disease and Cirrhosis	19	12.5	16	11.6	3	*	-	-
Homicide	7	4.6	6	4.4	1	*	1	*
Suicide	18	11.9	17	12.3	-	-	2	*
Atherosclerosis	13	8.6	12	8.7	-	-	-	-
AIDS	16	10.5	9	6.5	7	56.4	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.



## Profile of Kalamazoo County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	225,648	Total Live Births:	3,155	Total Deaths:	1,724
Rank Among Counties:	8	Teenage Mothers:	397	Infant Deaths:	27
Per Square Mile:	401.5	Low Weight Births:	212	Neonatal Deaths:	14
		First Births:	1,285	Postneonatal Deaths:	13
				Perinatal Deaths:	29
				Fetal Deaths:	16
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	1,990	Divorces:	1,022		
Marriage Rate:	17.6	Divorce Rate:	9.1		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	3,155	14.0	2,561	12.8	535	25.5	56	11.9
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	397	125.8	245	95.7	148	276.6	4	*
Low Weight	212	67.2	141	55.1	66	123.4	5	*
Under 1,500 Grams	44	13.9	21	8.2	21	39.3	2	*
< 38 Weeks Gestation	555	175.9	411	160.5	132	246.7	11	196.4
Prenatal Care Began in 1st Trimester	2,584	819.0	2,192	855.9	347	648.6	43	767.9

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	27	8.6	17	6.6	10	18.7	-	-
Neonatal Deaths	14	4.4	7	2.7	7	13.1	-	-
Postneonatal Deaths	13	4.1	10	3.9	3	*	-	-
Perinatal Deaths	29	9.1	19	7.4	10	18.6	-	-
Fetal Deaths	16	5.0	12	4.7	4	*	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,724	851	873	1,578	767	811	132	77	55	14	7	7
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	27	3	6	6	10	16	18	37	63	125	276	1,137
White Male	8	1	2	3	3	8	9	23	32	57	152	469
White Female	9	1	1	2	1	5	4	9	22	48	94	615
Black Male	4	-	-	-	5	2	2	3	6	12	19	24
Black Female	6	1	2	-	1	-	2	2	3	8	9	21
Other Male	-	-	1	1	-	1	-	-	-	-	2	2
Other Female	-	-	-	-	-	-	1	-	-	-	-	6

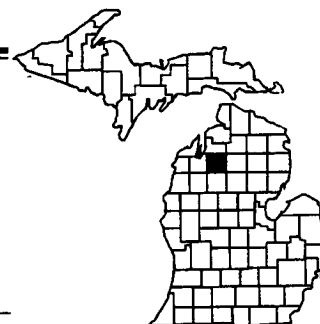
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,724	764.0	1,578	789.1	132	628.7	25	40.4
Diseases of the Heart	522	231.3	487	243.5	32	152.4	-	-
Malignant Neoplasms	431	191.0	398	199.0	31	147.7	2	*
Cerebrovascular Diseases	113	50.1	104	52.0	7	33.3	-	-
Accidents and Adverse Effects	87	38.6	76	38.0	6	28.6	11	17.8
Chronic Obstructive Pulmonary Diseases and Allied Conditions	74	32.8	72	36.0	2	*	-	-
Pneumonia and Influenza	73	32.4	70	35.0	3	*	-	-
Diabetes Mellitus	39	17.3	35	17.5	3	*	1	*
Chronic Liver Disease and Cirrhosis	21	9.3	20	10.0	1	*	-	-
Homicide	10	4.4	4	*	6	28.6	3	*
Suicide	28	12.4	25	12.5	3	*	4	*
Atherosclerosis	11	4.9	11	5.5	-	-	-	-
AIDS	10	4.4	8	4.0	2	*	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Kalkaska County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	14,038	Total Live Births:	198	Total Deaths:	130
Rank Among Counties:	67	Teenage Mothers:	37	Infant Deaths:	2
Per Square Mile:	24.9	Low Weight Births:	9	Neonatal Deaths:	2
		First Births:	79	Postneonatal Deaths:	-
				Perinatal Deaths:	2
				Fetal Deaths:	-
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	122	Divorces:	85		
Marriage Rate:	17.4	Divorce Rate:	12.1		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	198	14.1	194	14.0	-	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	37	186.9	36	185.6	-	-	1	-
Low Weight	9	45.5	8	41.2	-	-	1	-
Under 1,500 Grams	3	-	3	-	-	-	-	-
< 38 Weeks Gestation	34	171.7	32	164.9	-	-	1	-
Prenatal Care Began in 1st Trimester	143	722.2	139	716.5	-	-	3	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	2	*	-	-	-	-
Neonatal Deaths	2	*	2	*	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	2	*	2	*	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

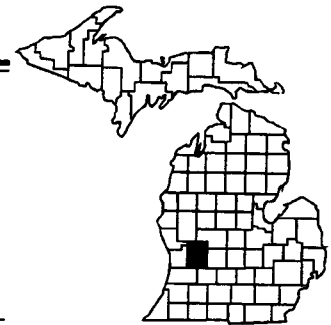
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	130	70	60	128	69	59	-	-	-	2	1	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	-	3	-	2	1	4	3	4	11	23	77
White Male	1	-	1	-	2	1	3	2	2	6	14	37
White Female	1	-	2	-	-	-	1	1	2	5	9	38
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	130	926.1	128	923.5	-	-	5	-
Diseases of the Heart	29	206.6	28	202.0	-	-	-	-
Malignant Neoplasms	32	228.0	32	230.9	-	-	-	-
Cerebrovascular Diseases	8	57.0	8	57.7	-	-	-	-
Accidents and Adverse Effects	9	64.1	9	64.9	-	-	4	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	8	57.0	8	57.7	-	-	-	-
Pneumonia and Influenza	2	*	2	*	-	-	-	-
Diabetes Mellitus	6	42.7	5	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	*	2	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	2	*	2	*	-	-	-	-
Atherosclerosis	5	*	5	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Kent County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	511,997	Total Live Births:	8,811	Total Deaths:	3,784
Rank Among Counties:	4	Teenage Mothers:	987	Infant Deaths:	91
Per Square Mile:	594.1	Low Weight Births:	603	Neonatal Deaths:	53
		First Births:	3,319	Postneonatal Deaths:	38
				Perinatal Deaths:	86
				Fetal Deaths:	43
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	4,649	Divorces:	2,252		
Marriage Rate:	18.2	Divorce Rate:	8.8		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	8,811	17.2	7,573	16.5	1,075	24.7	156	16.4
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	987	112.0	642	84.8	322	299.5	21	134.6
Low Weight	603	68.4	436	57.6	156	145.1	10	64.1
Under 1,500 Grams	121	13.7	88	11.6	29	27.0	3	*
< 38 Weeks Gestation	1,399	158.8	1,088	143.7	278	258.6	33	211.5
Prenatal Care Began in 1st Trimester	6,935	787.1	6,222	821.6	597	555.3	111	711.5

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	91	10.3	67	8.8	23	21.4	1	*
Neonatal Deaths	53	6.0	39	5.1	14	13.0	-	-
Postneonatal Deaths	38	4.3	28	3.7	9	8.4	1	*
Perinatal Deaths	86	9.7	61	8.0	20	18.5	3	*
Fetal Deaths	43	4.9	30	3.9	8	7.4	3	*

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	3,784	1,870	1,914	3,480	1,701	1,779	279	156	123	23	12	11
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	91	16	7	12	18	21	22	120	173	262	570	2,472
White Male	46	7	4	5	7	12	11	73	83	148	299	1,006
White Female	21	3	1	6	7	7	5	21	59	78	213	1,358
Black Male	12	2	-	1	3	2	2	15	19	24	35	41
Black Female	11	4	2	-	1	-	4	7	9	8	21	56
Other Male	-	-	-	-	-	-	-	3	2	2	-	5
Other Female	1	-	-	-	-	-	-	1	1	2	1	5

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	3,784	739.1	3,480	758.2	279	641.7	53	35.2
Diseases of the Heart	1,186	231.6	1,109	241.6	74	170.2	1	*
Malignant Neoplasms	890	173.8	822	179.1	61	140.3	5	*
Cerebrovascular Diseases	257	50.2	241	52.5	13	29.9	1	*
Accidents and Adverse Effects	116	22.7	106	23.1	9	20.7	19	12.6
Chronic Obstructive Pulmonary Diseases and Allied Conditions	174	34.0	163	35.5	8	18.4	3	*
Pneumonia and Influenza	161	31.4	153	33.3	8	18.4	1	*
Diabetes Mellitus	94	18.4	85	18.5	9	20.7	-	-
Chronic Liver Disease and Cirrhosis	41	8.0	34	7.4	7	16.1	-	-
Homicide	35	6.8	18	3.9	16	36.8	6	4.0
Suicide	48	9.4	45	9.8	3	*	2	*
Atherosclerosis	29	5.7	26	5.7	2	*	-	-
AIDS	40	7.8	31	6.8	8	18.4	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Keweenaw County



## POPULATION

As of April 1, 1992: 1,706  
 Rank Among Counties: 83  
 Per Square Mile: 3.1

## NATALITY

Total Live Births: 17  
 Teenage Mothers: 1  
 Low Weight Births: 1  
 First Births: 6

## MORTALITY

Total Deaths: 27  
 Infant Deaths: 2  
 Neonatal Deaths: 2  
 Postneonatal Deaths: -  
 Perinatal Deaths: 1  
 Fetal Deaths: -

## MARRIAGE

Marriages: 15  
 Marriage Rate: 17.6

## DIVORCE

Divorces: 5  
 Divorce Rate: \*

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	17	10.0	17	10.0	-	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	1	*	1	*	-	-	-	-
Low Weight	1	*	1	*	-	-	-	-
Under 1,500 Grams	1	*	1	*	-	-	-	-
< 38 Weeks Gestation	4	*	4	*	-	-	-	-
Prenatal Care Began in 1st Trimester	11	647.1	11	647.1	-	-	-	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	2	*	-	-	-	-
Neonatal Deaths	2	*	2	*	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	1	*	1	*	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	27	17	10	27	17	10	-	-	-	-	-	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	-	-	1	-	-	-	-	2	-	4	18
White Male	2	-	-	-	-	-	-	-	2	-	3	10
White Female	-	-	-	1	-	-	-	-	-	-	1	8
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	27	1,582.6	27	1,594.8	-	-	1	*
Diseases of the Heart	8	468.9	8	472.5	-	-	-	-
Malignant Neoplasms	8	468.9	8	472.5	-	-	-	-
Cerebrovascular Diseases	3	*	3	*	-	-	-	-
Accidents and Adverse Effects	1	*	1	*	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	-	-	-	-	-	-	-	-
Pneumonia and Influenza	-	-	-	-	-	-	-	-
Diabetes Mellitus	1	*	1	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	*	1	*	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Lake County



<b>POPULATION</b>		<b>NATALITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	9,029	Total Live Births:	120	Total Deaths:	129
Rank Among Counties:	77	Teenage Mothers:	29	Infant Deaths:	1
Per Square Mile:	15.9	Low Weight Births:	6	Neonatal Deaths:	-
		First Births:	44	Postneonatal Deaths:	1
				Perinatal Deaths:	-
				Fetal Deaths:	-
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	76	Divorces:	40		
Marriage Rate:	16.8	Divorce Rate:	8.9		

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	120	13.3	99	12.7	20	17.3	1	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	29	241.7	22	222.2	7	350.0	-	-
Low Weight	6	50.0	5	-	1	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	13	108.3	11	111.1	2	-	-	-
Prenatal Care Began in 1st Trimester	82	683.3	68	686.9	13	650.0	1	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	-	1	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	1	-	1	-	-	-	-	-
Perinatal Deaths	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

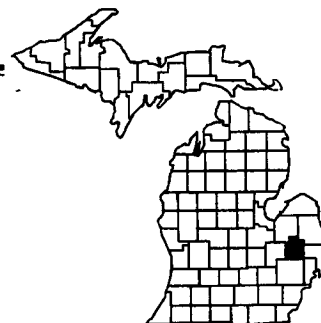
Deaths	All Races			White			Black			Other			
	Total 129	Male 79	Female 50	Total 89	Male 59	Female 30	Total 34	Male 17	Female 17	Total 6	Male 3	Female 3	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	1	-	-	1	1	1	1	3	6	14	27	74	-
White Male	1	-	-	-	1	1	1	1	2	7	12	33	-
White Female	-	-	-	1	-	-	-	2	3	3	7	14	-
Black Male	-	-	-	-	-	-	-	-	-	1	3	13	-
Black Female	-	-	-	-	-	-	-	-	1	-	2	14	-
Other Male	-	-	-	-	-	-	-	-	-	1	2	-	-
Other Female	-	-	-	-	-	-	-	-	-	2	1	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	129	1,428.7	89	1,145.9	34	2,943.7	2	-
Diseases of the Heart	44	487.3	30	386.2	12	1,039.0	-	-
Malignant Neoplasms	34	376.6	23	296.1	9	779.2	-	-
Cerebrovascular Diseases	7	77.5	5	-	2	-	-	-
Accidents and Adverse Effects	5	-	3	-	2	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	7	77.5	5	-	1	-	-	-
Pneumonia and Influenza	6	66.5	4	-	2	-	-	-
Diabetes Mellitus	2	-	1	-	1	-	-	-
Chronic Liver Disease and Cirrhosis	4	-	2	-	1	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	-	3	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	1	-	-	-	1	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Lapeer County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	78,526	Total Live Births:	1,137	Total Deaths:	532
Rank Among Counties:	22	Teenage Mothers:	116	Infant Deaths:	5
Per Square Mile:	119.3	Low Weight Births:	58	Neonatal Deaths:	4
		First Births:	421	Postneonatal Deaths:	1
				Perinatal Deaths:	10
				Fetal Deaths:	7
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	638	Divorces:	366		
Marriage Rate:	16.2	Divorce Rate:	9.3		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,137	14.5	1,129	14.6	-	-	5	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	116	102.0	114	101.0	-	-	2	*
Low Weight	58	51.0	57	50.5	-	-	1	*
Under 1,500 Grams	11	9.7	10	8.9	-	-	1	*
< 38 Weeks Gestation	183	160.9	181	160.3	-	-	2	*
Prenatal Care Began in 1st Trimester	914	803.9	912	807.8	-	-	2	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	5	*	5	*	-	-	-	-
Neonatal Deaths	4	*	4	*	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	10	8.7	9	7.9	-	-	1	*
Fetal Deaths	7	6.1	6	5.3	-	-	1	*

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

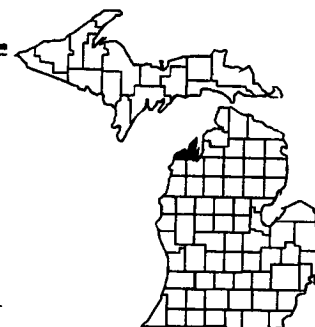
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	532	274	258	526	270	256	1	1	-	5	3	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	5	5	1	3	4	6	3	14	36	42	79	334
White Male	3	4	1	1	3	5	2	10	22	25	45	149
White Female	2	-	-	2	1	-	1	4	13	15	34	184
Black Male	-	-	-	-	-	-	-	-	-	1	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	1	-	-	1	-	-	1
Other Female	-	1	-	-	-	-	-	-	-	1	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	532	677.5	526	680.7	1	*	13	53.7
Diseases of the Heart	188	239.4	188	243.3	-	-	1	*
Malignant Neoplasms	132	168.1	131	169.5	1	*	-	-
Cerebrovascular Diseases	33	42.0	33	42.7	-	-	-	-
Accidents and Adverse Effects	23	29.3	22	28.5	-	-	3	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	28	35.7	27	34.9	-	-	-	-
Pneumonia and Influenza	20	25.5	19	24.6	-	-	1	*
Diabetes Mellitus	22	28.0	22	28.5	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	*	2	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	8	10.2	8	10.4	-	-	1	*
Atherosclerosis	2	*	2	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Leelanau County



## POPULATION

As of April 1, 1992: 17,292  
 Rank Among Counties: 65  
 Per Square Mile: 50.7

## NATALITY

Total Live Births: 231  
 Teenage Mothers: 17  
 Low Weight Births: 14  
 First Births: 81

## MORTALITY

Total Deaths: 166  
 Infant Deaths: 4  
 Neonatal Deaths: 2  
 Postneonatal Deaths: 2  
 Perinatal Deaths: 1  
 Fetal Deaths: -

## MARRIAGE

Marriages: 129  
 Marriage Rate: 14.9

## DIVORCE

Divorces: 76  
 Divorce Rate: 8.8

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	231	13.4	214	12.8	1	*	16	27.5
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	17	73.6	14	65.4	-	-	3	*
Low Weight	14	60.6	13	60.7	-	-	1	*
Under 1,500 Grams	6	26.0	6	28.0	-	-	-	-
< 38 Weeks Gestation	40	173.2	38	177.6	-	-	2	*
Prenatal Care Began in 1st Trimester	183	792.2	173	808.4	-	-	10	625.0

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	4	*	3	*	-	-	1	*
Neonatal Deaths	2	*	2	*	-	-	-	-
Postneonatal Deaths	2	*	1	*	-	-	1	*
Perinatal Deaths	1	*	1	*	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	166	90	76	163	87	76	-	-	-	3	3	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	4	1	-	1	-	1	-	1	6	6	25	121
White Male	3	-	-	1	-	1	-	1	4	5	18	54
White Female	-	1	-	-	-	-	-	-	1	1	6	67
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	1	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	1	-	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	166	960.0	163	976.7	-	-	2	*
Diseases of the Heart	60	347.0	60	359.5	-	-	-	-
Malignant Neoplasms	36	208.2	35	209.7	-	-	-	-
Cerebrovascular Diseases	13	75.2	13	77.9	-	-	-	-
Accidents and Adverse Effects	6	34.7	5	*	-	-	2	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	7	40.5	7	41.9	-	-	-	-
Pneumonia and Influenza	4	*	4	*	-	-	-	-
Diabetes Mellitus	6	34.7	6	36.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	*	1	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	*	3	*	-	-	-	-
Atherosclerosis	2	*	2	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Lenawee County



## POPULATION

As of April 1, 1992: 94,132  
 Rank Among Counties: 20  
 Per Square Mile: 125.1

## NATALITY

Total Live Births: 1,185  
 Teenage Mothers: 172  
 Low Weight Births: 81  
 First Births: 476

## MORTALITY

Total Deaths: 827  
 Infant Deaths: 14  
 Neonatal Deaths: 10  
 Postneonatal Deaths: 4  
 Perinatal Deaths: 14  
 Fetal Deaths: 6

## MARRIAGE

Marriages: 561  
 Marriage Rate: 11.9

## DIVORCE

Divorces: 459  
 Divorce Rate: 9.8

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,185	12.6	1,163	12.7	10	6.0	9	9.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	172	145.1	165	141.9	6	600.0	1	*
Low Weight	81	68.4	79	67.9	1	*	1	*
Under 1,500 Grams	18	15.2	18	15.5	-	-	-	-
< 38 Weeks Gestation	185	156.1	180	154.8	3	*	2	*
Prenatal Care Began in 1st Trimester	956	806.8	940	808.3	8	800.0	7	777.8

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	14	11.8	14	12.0	-	-	-	-
Neonatal Deaths	10	8.4	10	8.6	-	-	-	-
Postneonatal Deaths	4	*	4	*	-	-	-	-
Perinatal Deaths	14	11.8	14	12.0	-	-	-	-
Fetal Deaths	6	5.0	6	5.1	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	827	403	424	813	396	417	7	3	4	7	4	3
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	14	3	3	-	10	9	5	17	33	57	134	542
White Male	7	1	2	-	5	5	3	9	23	36	75	230
White Female	7	2	1	-	5	4	2	6	10	17	56	307
Black Male	-	-	-	-	-	-	-	-	-	2	1	-
Black Female	-	-	-	-	-	-	-	1	-	-	1	2
Other Male	-	-	-	-	-	-	-	1	-	1	1	1
Other Female	-	-	-	-	-	-	-	-	-	1	-	2

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	827	878.6	813	888.1	7	423.0	16	56.7
Diseases of the Heart	287	304.9	285	311.3	-	-	2	*
Malignant Neoplasms	186	197.6	181	197.7	1	*	4	*
Cerebrovascular Diseases	65	69.1	63	68.8	1	*	-	-
Accidents and Adverse Effects	37	39.3	36	39.3	1	*	6	21.3
Chronic Obstructive Pulmonary Diseases and Allied Conditions	35	37.2	34	37.1	1	*	-	-
Pneumonia and Influenza	29	30.8	29	31.7	-	-	-	-
Diabetes Mellitus	27	28.7	26	28.4	1	*	-	-
Chronic Liver Disease and Cirrhosis	10	10.6	10	10.9	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	10	10.6	10	10.9	-	-	2	*
Atherosclerosis	14	14.9	14	15.3	-	-	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



## Profile of Livingston County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	122,658	Total Live Births:	1,688	Total Deaths:	705
Rank Among Counties:	17	Teenage Mothers:	87	Infant Deaths:	17
Per Square Mile:	213.6	Low Weight Births:	79	Neonatal Deaths:	14
		First Births:	689	Postneonatal Deaths:	3
				Perinatal Deaths:	22
				Fetal Deaths:	11
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	956	Divorces:	566		
Marriage Rate:	15.6	Divorce Rate:	9.2		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,688	13.8	1,654	13.7	1	*	20	15.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	87	51.5	84	50.8	-	-	2	*
Low Weight	79	46.8	78	47.2	-	-	1	*
Under 1,500 Grams	23	13.6	23	13.9	-	-	-	-
< 38 Weeks Gestation	245	145.1	241	145.7	-	-	4	-
Prenatal Care Began in 1st Trimester	1,398	828.2	1,377	832.5	1	*	13	650.0

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	17	10.1	17	10.3	-	-	-	-
Neonatal Deaths	14	8.3	14	8.5	-	-	-	-
Postneonatal Deaths	3	*	3	*	-	-	-	-
Perinatal Deaths	22	12.9	22	13.2	-	-	-	-
Fetal Deaths	11	6.5	11	6.6	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total 705	Male 344	Female 361	Total 696	Male 340	Female 356	Total 2	Male 2	Female -	Total 6	Male 2	Female 4	
	Age in Years												
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	17	2	1	-	8	4	6	26	34	49	105	453	-
White Male	10	-	-	-	4	2	3	14	21	30	63	193	-
White Female	7	2	-	-	4	1	3	12	12	19	41	255	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	2	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	1	-	-	1	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	1	-	1	2	-

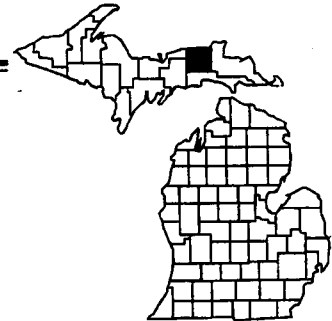
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	705	574.8	696	577.2	2	*	11	30.2
Diseases of the Heart	229	186.7	228	189.1	-	-	1	*
Malignant Neoplasms	183	149.2	180	149.3	2	*	-	-
Cerebrovascular Diseases	40	32.6	39	32.3	-	-	-	-
Accidents and Adverse Effects	27	22.0	26	21.6	-	-	6	16.5
Chronic Obstructive Pulmonary Diseases and Allied Conditions	38	31.0	38	31.5	-	-	-	-
Pneumonia and Influenza	26	21.2	26	21.6	-	-	-	-
Diabetes Mellitus	13	10.6	12	10.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	2	*	2	*	-	-	-	-
Suicide	12	9.8	12	10.0	-	-	1	*
Atherosclerosis	5	*	5	*	-	-	-	-
AIDS	3	*	3	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Luce County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	5,604	Total Live Births:	76	Total Deaths:	54
Rank Among Counties:	82	Teenage Mothers:	19	Infant Deaths:	-
Per Square Mile:	6.2	Low Weight Births:	6	Neonatal Deaths:	-
		First Births:	37	Postneonatal Deaths:	-
				Perinatal Deaths:	-
				Fetal Deaths:	-
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	57	Divorces:	28		
Marriage Rate:	20.3	Divorce Rate:	10.0		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	76	13.6	74	14.1	-	-	2	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	19	250.0	18	243.2	-	-	1	*
Low Weight	6	78.9	6	81.1	-	-	-	-
Under 1,500 Grams	1	*	1	*	-	-	-	-
< 38 Weeks Gestation	12	157.9	11	148.6	-	-	1	*
Prenatal Care Began in 1st Trimester	62	815.8	60	810.8	-	-	2	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	-	-	-	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

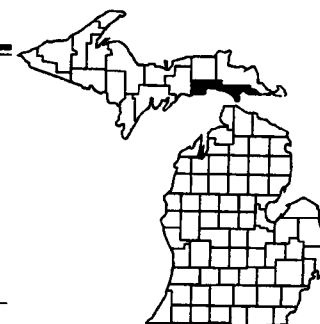
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	54	29	25	50	26	24	-	-	-	3	2	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	-	-	-	-	-	-	-	1	3	5	13	32
White Male	-	-	-	-	-	-	-	1	2	3	6	14
White Female	-	-	-	-	-	-	-	-	1	2	5	16
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	2	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	54	963.8	50	955.1	-	-	-	-
Diseases of the Heart	17	303.4	16	305.6	-	-	-	-
Malignant Neoplasms	12	214.2	11	210.1	-	-	-	-
Cerebrovascular Diseases	2	*	2	*	-	-	-	-
Accidents and Adverse Effects	2	*	2	*	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	2	*	2	*	-	-	-	-
Pneumonia and Influenza	4	*	4	*	-	-	-	-
Diabetes Mellitus	1	*	1	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	*	2	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	-	-	-	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Mackinac County



<b>POPULATION</b>		<b>NATALITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	10,752	Total Live Births:	130	Total Deaths:	126
Rank Among Counties:	73	Teenage Mothers:	18	Infant Deaths:	1
Per Square Mile:	10.5	Low Weight Births:	5	Neonatal Deaths:	-
		First Births:	51	Postneonatal Deaths:	1
				Perinatal Deaths:	-
				Fetal Deaths:	-
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	183	Divorces:	57		
Marriage Rate:	34.0	Divorce Rate:	10.6		

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	130	12.1	95	10.7	1	-	34	18.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	18	138.5	8	84.2	1	-	9	264.7
Low Weight	5	-	2	-	-	-	3	-
Under 1,500 Grams	3	-	1	-	-	-	2	-
< 38 Weeks Gestation	13	100.0	7	73.7	-	-	6	176.5
Prenatal Care Began in 1st Trimester	95	730.8	75	789.5	-	-	20	588.2

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	-	1	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	1	-	1	-	-	-	-	-
Perinatal Deaths	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

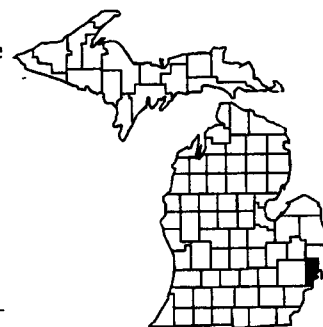
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	126	69	57	103	52	51	-	-	-	22	17	5
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	-	-	-	-	2	-	5	2	6	25	85
White Male	-	-	-	-	-	1	-	1	1	1	16	32
White Female	1	-	-	-	-	-	-	1	-	3	7	39
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	1	-	3	1	2	2	8
Other Female	-	-	-	-	-	-	-	-	-	-	-	5

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	126	1,171.9	103	1,162.4	-	-	-	-
Diseases of the Heart	44	409.2	36	406.3	-	-	-	-
Malignant Neoplasms	29	269.7	25	282.1	-	-	-	-
Cerebrovascular Diseases	4	-	4	-	-	-	-	-
Accidents and Adverse Effects	6	55.8	3	-	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	11	102.3	11	124.1	-	-	-	-
Pneumonia and Influenza	3	-	3	-	-	-	-	-
Diabetes Mellitus	3	-	3	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	-	1	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Macomb County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	728,220	Total Live Births:	9,643	Total Deaths:	6,188
Rank Among Counties:	3	Teenage Mothers:	561	Infant Deaths:	63
Per Square Mile:	1,509.5	Low Weight Births:	579	Neonatal Deaths:	44
		First Births:	3,939	Postneonatal Deaths:	19
				Perinatal Deaths:	86
				Fetal Deaths:	46
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	6,102	Divorces:	2,981		
Marriage Rate:	16.8	Divorce Rate:	8.2		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	9,643	13.2	9,238	13.1	202	18.7	135	10.7
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	561	58.2	503	54.4	38	188.1	16	118.5
Low Weight	579	60.0	531	57.5	35	173.3	10	74.1
Under 1,500 Grams	101	10.5	91	9.9	6	29.7	3	*
< 38 Weeks Gestation	1478	153.3	1,384	149.8	60	297.0	24	177.8
Prenatal Care Began in 1st Trimester	8,646	896.6	8,348	903.7	136	673.3	103	763.0

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	63	6.5	54	5.8	8	39.6	1	*
Neonatal Deaths	44	4.6	40	4.3	3	*	1	*
Postneonatal Deaths	19	2.0	14	1.5	5	*	-	-
Perinatal Deaths	86	8.9	76	8.2	7	34.0	1	*
Fetal Deaths	46	4.7	39	4.2	4	*	1	*

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
	6,188	3,037	3,150	6,046	2,963	3,082	95	53	42	46	20	26	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	63	16	10	5	29	40	41	145	238	467	1,088	4,046	-
White Male	33	7	9	3	20	24	25	95	154	276	623	1,694	-
White Female	21	8	1	2	9	10	13	43	73	176	436	2,290	-
Black Male	5	-	-	-	-	3	3	3	6	6	13	14	-
Black Female	3	-	-	-	-	-	-	-	2	3	10	24	-
Other Male	1	-	-	-	-	1	-	2	2	2	3	9	-
Other Female	-	1	-	-	-	2	-	2	1	4	3	13	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	6,188	849.7	6,046	857.9	95	880.1	60	33.7
Diseases of the Heart	2,233	306.6	2,192	311.0	24	222.3	1	*
Malignant Neoplasms	1,580	217.0	1,547	219.5	24	222.3	12	6.7
Cerebrovascular Diseases	392	53.8	387	54.9	4	*	-	-
Accidents and Adverse Effects	150	20.6	146	20.7	4	*	17	9.6
Chronic Obstructive Pulmonary Diseases and Allied Conditions	235	32.3	231	32.8	2	*	-	-
Pneumonia and Influenza	219	30.1	212	30.1	3	*	3	*
Diabetes Mellitus	148	20.3	146	20.7	2	*	-	-
Chronic Liver Disease and Cirrhosis	80	11.0	77	10.9	2	*	-	-
Homicide	25	3.4	20	2.8	3	*	1	*
Suicide	77	10.6	74	10.5	2	*	7	3.9
Atherosclerosis	95	13.0	94	13.3	1	*	-	-
AIDS	35	4.8	29	4.1	6	55.6	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Manistee County



## POPULATION

As of April 1, 1992: 21,925  
 Rank Among Counties: 57  
 Per Square Mile: 40.4

## NATALITY

Total Live Births: 232  
 Teenage Mothers: 34  
 Low Weight Births: 12  
 First Births: 85

## MORTALITY

Total Deaths: 274  
 Infant Deaths: 1  
 Neonatal Deaths: -  
 Postneonatal Deaths: 1  
 Perinatal Deaths: 4  
 Fetal Deaths: 4

## MARRIAGE

Marriages: 202  
 Marriage Rate: 18.4

## DIVORCE

Divorces: 129  
 Divorce Rate: 11.8

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	232	10.6	225	10.4	1	-	5	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	34	146.6	34	151.1	-	-	-	-
Low Weight	12	51.7	12	53.3	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	35	150.9	33	146.7	-	-	2	-
Prenatal Care Began in 1st Trimester	185	797.4	182	808.9	-	-	3	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	-	1	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	1	-	1	-	-	-	-	-
Perinatal Deaths	4	-	4	-	-	-	-	-
Fetal Deaths	4	-	4	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	274	150	124	271	150	121	-	-	-	3	-	3
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	1	-	-	1	2	4	7	5	15	47	191
White Male	1	-	-	-	1	2	2	6	-	9	32	97
White Female	-	1	-	-	-	-	2	1	5	6	12	94
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	274	1,249.7	271	1,254.9	-	-	2	-
Diseases of the Heart	101	460.7	101	467.7	-	-	-	-
Malignant Neoplasms	61	278.2	60	277.8	-	-	-	-
Cerebrovascular Diseases	28	127.7	28	129.7	-	-	-	-
Accidents and Adverse Effects	11	50.2	11	50.9	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	10	45.6	10	46.3	-	-	-	-
Pneumonia and Influenza	5	-	5	-	-	-	-	-
Diabetes Mellitus	9	41.0	9	41.7	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	4	-	4	-	-	-	-	-
Atherosclerosis	4	-	4	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Marquette County



## POPULATION

As of April 1, 1992: 71,428  
 Rank Among Counties: 25  
 Per Square Mile: 39.2

## NATALITY

Total Live Births: 933  
 Teenage Mothers: 77  
 Low Weight Births: 38  
 First Births: 385

## MORTALITY

Total Deaths: 598  
 Infant Deaths: 7  
 Neonatal Deaths: 3  
 Postneonatal Deaths: 4  
 Perinatal Deaths: 6  
 Fetal Deaths: 3

## MARRIAGE

Marriages: 622  
 Marriage Rate: 17.4

## DIVORCE

Divorces: 266  
 Divorce Rate: 7.4

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	933	13.1	889	13.0	6	5.1	38	23.3
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	77	82.5	73	82.1	-	-	4	*
Low Weight	38	40.7	35	39.4	-	-	3	*
Under 1,500 Grams	5	*	5	*	-	-	-	-
< 38 Weeks Gestation	116	124.3	108	121.5	-	-	8	210.5
Prenatal Care Began in 1st Trimester	792	848.9	756	850.4	4	*	32	842.1

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	7	7.5	6	6.7	-	-	1	*
Neonatal Deaths	3	*	3	*	-	-	-	-
Postneonatal Deaths	4	*	3	*	-	-	1	*
Perinatal Deaths	6	6.4	6	6.7	-	-	-	-
Fetal Deaths	3	*	3	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	598	310	288	592	307	285	1	-	1	5	3	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	7	1	1	2	3	5	1	15	15	43	83	422
White Male	3	1	1	2	3	4	-	13	10	27	53	190
White Female	3	-	-	-	-	1	1	1	5	16	28	230
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	1	-	-	-	-
Other Male	1	-	-	-	-	-	-	-	-	-	1	1
Other Female	-	-	-	-	-	-	-	-	-	-	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	598	837.2	592	862.6	1	*	7	34.2
Diseases of the Heart	201	281.4	199	290.0	1	*	1	*
Malignant Neoplasms	129	180.6	128	186.5	-	-	1	*
Cerebrovascular Diseases	54	75.6	53	77.2	-	-	-	-
Accidents and Adverse Effects	20	28.0	20	29.1	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	17	23.8	17	24.8	-	-	-	-
Pneumonia and Influenza	22	30.8	22	32.1	-	-	-	-
Diabetes Mellitus	18	25.2	18	26.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	9	12.6	9	13.1	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	15	21.0	15	21.9	-	-	4	*
Atherosclerosis	6	8.4	5	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Mason County



## POPULATION

As of April 1, 1992: 26,420  
 Rank Among Counties: 50  
 Per Square Mile: 53.4

## NATALITY

Total Live Births: 325  
 Teenage Mothers: 34  
 Low Weight Births: 18  
 First Births: 112

## MORTALITY

Total Deaths: 271  
 Infant Deaths: 3  
 Neonatal Deaths: 2  
 Postneonatal Deaths: 1  
 Perinatal Deaths: 2  
 Fetal Deaths: 1

## MARRIAGE

Marriages: 236  
 Marriage Rate: 17.9

## DIVORCE

Divorces: 149  
 Divorce Rate: 11.3

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	325	12.3	311	12.0	4	*	9	29.4
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	34	104.6	32	102.9	1	*	1	*
Low Weight	18	55.4	17	54.7	1	*	-	-
Under 1,500 Grams	2	*	2	*	-	-	-	-
< 38 Weeks Gestation	40	123.1	37	119.0	2	*	1	*
Prenatal Care Began in 1st Trimester	254	781.5	245	787.8	3	*	6	666.7

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	3	*	3	*	-	-	-	-
Neonatal Deaths	2	*	2	*	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	2	*	2	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	271	131	140	265	128	137	3	2	1	3	1	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	3	5	1	2	4	2	2	4	10	12	41	185
White Male	2	4	-	-	2	1	2	2	6	10	21	78
White Female	1	1	1	1	2	1	-	2	2	2	18	106
Black Male	-	-	-	-	-	-	-	-	1	-	-	1
Black Female	-	-	-	-	-	-	-	-	1	-	-	-
Other Male	-	-	-	1	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	2	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	271	1,025.8	265	1,021.5	3	*	12	164.9
Diseases of the Heart	101	382.3	100	385.5	1	*	-	-
Malignant Neoplasms	43	162.8	40	154.2	1	*	-	-
Cerebrovascular Diseases	29	109.8	29	111.8	-	-	-	-
Accidents and Adverse Effects	18	68.1	18	69.4	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	8	30.3	8	30.8	-	-	9	123.7
Pneumonia and Influenza	8	30.3	8	30.8	-	-	-	-
Diabetes Mellitus	4	*	4	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	2	*	2	*	-	-	1	*
Suicide	7	26.5	6	23.1	-	-	2	*
Atherosclerosis	4	*	4	*	-	-	-	-
AIDS	1	*	-	-	1	*	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Mecosta County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	38,553	Total Live Births:	470	Total Deaths:	301
Rank Among Counties:	41	Teenage Mothers:	65	Infant Deaths:	2
Per Square Mile:	68.8	Low Weight Births:	25	Neonatal Deaths:	2
		First Births:	187	Postneonatal Deaths:	-
				Perinatal Deaths:	5
				Fetal Deaths:	3
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	279	Divorces:	146		
Marriage Rate:	14.5	Divorce Rate:	7.6		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	470	12.2	441	11.9	21	19.9	7	13.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	65	138.3	59	133.8	3	*	3	*
Low Weight	25	53.2	23	52.2	1	*	1	*
Under 1,500 Grams	3	*	2	*	1	*	-	-
< 38 Weeks Gestation	58	123.4	55	124.7	2	*	1	*
Prenatal Care Began in 1st Trimester	311	661.7	301	682.5	9	428.6	1	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	2	*	-	-	-	-
Neonatal Deaths	2	*	2	*	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	5	*	5	*	-	-	-	-
Fetal Deaths	3	*	3	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	301	162	139	290	156	134	4	3	1	6	2	4
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	3	2	-	2	1	1	5	13	28	46	198
White Male	1	2	1	-	2	-	-	3	7	14	29	97
White Female	1	1	1	-	-	-	-	2	4	13	15	97
Black Male	-	-	-	-	-	1	1	-	1	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	1
Other Male	-	-	-	-	-	-	-	-	-	-	1	1
Other Female	-	-	-	-	-	-	-	-	1	-	1	2

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	301	780.7	290	783.9	4	*	7	60.3
Diseases of the Heart	113	293.1	107	289.2	2	*	-	-
Malignant Neoplasms	67	173.8	66	178.4	-	-	1	*
Cerebrovascular Diseases	16	41.5	15	40.5	-	-	-	-
Accidents and Adverse Effects	14	36.3	13	35.1	1	*	6	51.7
Chronic Obstructive Pulmonary Diseases and Allied Conditions	9	23.3	9	24.3	-	-	-	-
Pneumonia and Influenza	18	46.7	18	48.7	-	-	-	-
Diabetes Mellitus	5	*	5	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	4	*	4	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	3	*	3	*	-	-	-	-
Atherosclerosis	1	*	1	*	-	-	-	-
AIDS	1	*	-	-	1	*	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.



## Profile of Menominee County



## POPULATION

As of April 1, 1992: 24,593  
 Rank Among Counties: 53  
 Per Square Mile: 23.5

## NATALITY

Total Live Births: 266  
 Teenage Mothers: 31  
 Low Weight Births: 17  
 First Births: 109

## MORTALITY

Total Deaths: 293  
 Infant Deaths: 2  
 Neonatal Deaths: 2  
 Postneonatal Deaths: -  
 Perinatal Deaths: 3  
 Fetal Deaths: 1

## MARRIAGE

Marriages: 202  
 Marriage Rate: 16.4

## DIVORCE

Divorces: 98  
 Divorce Rate: 8.0

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	266	10.8	257	10.7	-	-	8	16.9
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	31	116.5	30	116.7	-	-	1	*
Low Weight	17	63.9	15	58.4	-	-	2	*
Under 1,500 Grams	4	*	4	*	-	-	-	-
< 38 Weeks Gestation	39	146.6	38	147.9	-	-	1	*
Prenatal Care Began in 1st Trimester	190	714.3	186	723.7	-	-	3	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	2	*	-	-	-	-
Neonatal Deaths	2	*	2	*	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	3	*	3	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	293	170	123	287	165	122	1	1	-	5	4	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	1	1	1	2	4	1	2	8	12	32	227
White Male	1	-	1	-	2	3	-	2	5	9	21	121
White Female	1	1	-	1	-	1	1	-	3	3	11	100
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	4
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

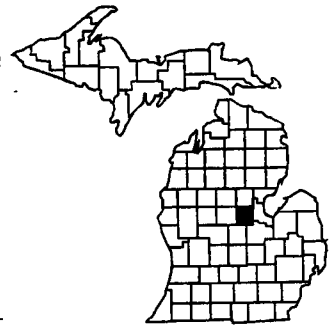
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	293	1,191.4	287	1,190.3	1	*	5	*
Diseases of the Heart	110	447.3	107	443.8	-	-	1	*
Malignant Neoplasms	72	292.8	71	294.5	-	-	-	-
Cerebrovascular Diseases	19	77.3	19	78.8	-	-	1	*
Accidents and Adverse Effects	9	36.6	9	37.3	-	-	2	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	65.1	16	66.4	-	-	-	-
Pneumonia and Influenza	12	48.8	11	45.6	1	*	-	-
Diabetes Mellitus	4	*	4	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	4	*	4	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	*	1	*	-	-	-	-
Atherosclerosis	15	61.0	15	62.2	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Midland County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	77,950	Total Live Births:	1,131	Total Deaths:	532
Rank Among Counties:	23	Teenage Mothers:	90	Infant Deaths:	7
Per Square Mile:	148.5	Low Weight Births:	74	Neonatal Deaths:	3
		First Births:	447	Postneonatal Deaths:	4
				Perinatal Deaths:	4
				Fetal Deaths:	2
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	757	Divorces:	371		
Marriage Rate:	19.4	Divorce Rate:	9.5		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,131	14.5	1,108	14.6	10	13.0	12	9.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	90	79.6	83	74.9	4	*	2	*
Low Weight	74	65.4	69	62.3	2	*	2	*
Under 1,500 Grams	15	13.3	14	12.6	-	-	1	*
< 38 Weeks Gestation	194	171.5	187	168.8	4	*	2	*
Prenatal Care Began in 1st Trimester	1,014	896.6	1,000	902.5	6	600.0	7	583.3

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	7	6.2	6	5.4	1	*	-	-
Neonatal Deaths	3	*	3	*	-	-	-	-
Postneonatal Deaths	4	*	3	*	1	*	-	-
Perinatal Deaths	4	*	4	*	-	-	-	-
Fetal Deaths	2	*	2	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	532	259	273	525	256	269	2	-	2	4	2	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	7	-	2	1	3	2	7	15	22	40	95	338
White Male	4	-	1	-	-	2	6	11	12	27	51	142
White Female	2	-	1	1	2	-	1	4	10	12	43	193
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	1	-	-	-	-	-	-	-	-	-	-	1
Other Male	-	-	-	-	1	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	-	-	-	1	1

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	532	682.5	525	691.4	2	*	6	27.1
Diseases of the Heart	168	215.5	167	219.9	-	-	-	*
Malignant Neoplasms	141	180.9	140	184.4	-	-	1	*
Cerebrovascular Diseases	25	32.1	25	32.9	-	-	-	*
Accidents and Adverse Effects	18	23.1	17	22.4	-	-	4	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	31	39.8	31	40.8	-	-	-	-
Pneumonia and Influenza	25	32.1	25	32.9	-	-	-	-
Diabetes Mellitus	12	15.4	11	14.5	-	-	-	-
Chronic Liver Disease and Cirrhosis	5	*	5	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	12	15.4	12	15.8	-	-	-	-
Atherosclerosis	10	12.8	10	13.2	-	-	-	-
AIDS	3	*	3	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Missaukee County



## POPULATION

As of April 1, 1992: 12,739  
 Rank Among Counties: 71  
 Per Square Mile: 22.6

## NATALITY

Total Live Births: 164  
 Teenage Mothers: 22  
 Low Weight Births: 8  
 First Births: 66

## MORTALITY

Total Deaths: 126  
 Infant Deaths: 2  
 Neonatal Deaths: 1  
 Postneonatal Deaths: 1  
 Perinatal Deaths: -  
 Fetal Deaths: -

## MARRIAGE

Marriages: 163  
 Marriage Rate: 25.6

## DIVORCE

Divorces: 48  
 Divorce Rate: 7.5

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	164	12.9	161	12.8	-	-	2	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	22	134.1	22	136.6	-	-	-	-
Low Weight	8	48.8	8	49.7	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	28	170.7	28	173.9	-	-	-	-
Prenatal Care Began in 1st Trimester	125	762.2	123	764.0	-	-	1	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	-	1	-	-	-	1	-
Neonatal Deaths	1	-	1	-	-	-	-	-
Postneonatal Deaths	1	-	-	-	-	-	1	-
Perinatal Deaths	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	126	76	50	123	74	49	-	-	-	3	2	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	1	-	1	-	-	-	2	5	5	25	85
White Male	1	-	-	-	-	-	-	2	3	5	17	45
White Female	-	1	-	-	-	-	-	-	1	-	8	39
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	1	-	-	-	-	-	-	-	1	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-

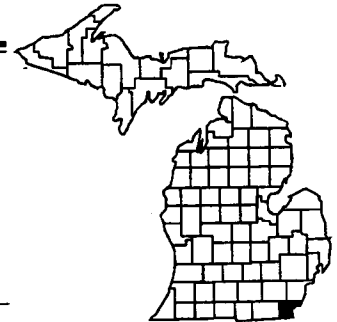
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	126	989.1	123	975.3	-	-	2	-
Diseases of the Heart	55	431.7	54	428.2	-	-	-	-
Malignant Neoplasms	26	204.1	26	206.2	-	-	-	-
Cerebrovascular Diseases	10	78.5	9	71.4	-	-	-	-
Accidents and Adverse Effects	6	47.1	5	-	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	4	-	4	-	-	-	1	-
Pneumonia and Influenza	1	-	1	-	-	-	-	-
Diabetes Mellitus	5	-	5	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	-	-	-	-	-	-	-	-
Atherosclerosis	2	-	2	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Monroe County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	135,962	Total Live Births:	1,608	Total Deaths:	934
Rank Among Counties:	16	Teenage Mothers:	212	Infant Deaths:	10
Per Square Mile:	244.2	Low Weight Births:	99	Neonatal Deaths:	7
		First Births:	641	Postneonatal Deaths:	3
				Perinatal Deaths:	8
				Fetal Deaths:	2
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	843	Divorces:	591		
Marriage Rate:	12.4	Divorce Rate:	8.7		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,608	11.8	1,568	11.8	33	13.7	5	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	212	131.8	201	128.2	8	242.4	2	*
Low Weight	99	61.6	98	62.5	1	-	-	-
Under 1,500 Grams	16	10.0	16	10.2	-	-	-	-
< 38 Weeks Gestation	228	141.8	222	141.6	4	-	2	*
Prenatal Care Began in 1st Trimester	1,337	831.5	1308	834.2	24	727.3	5	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	10	6.2	10	6.4	-	-	-	-
Neonatal Deaths	7	4.4	7	4.5	-	-	-	-
Postneonatal Deaths	3	*	3	*	-	-	-	-
Perinatal Deaths	8	5.0	8	5.1	-	-	-	-
Fetal Deaths	2	*	2	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	934	451	483	912	438	474	18	12	6	3	1	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	10	-	2	-	7	14	5	23	43	81	168	581
White Male	5	-	2	-	5	9	5	17	20	52	88	235
White Female	5	-	-	-	2	5	-	6	21	24	78	333
Black Male	-	-	-	-	-	-	-	-	1	3	1	7
Black Female	-	-	-	-	-	-	-	-	1	1	-	4
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	-	-	-	1	1

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	934	687.0	912	689.0	18	745.0	9	22.2
Diseases of the Heart	312	229.5	304	229.7	8	331.1	1	*
Malignant Neoplasms	244	179.5	239	180.6	3	-	-	-
Cerebrovascular Diseases	47	34.6	47	35.5	-	-	-	-
Accidents and Adverse Effects	41	30.2	41	31.0	-	-	6	14.8
Chronic Obstructive Pulmonary Diseases and Allied Conditions	46	33.8	46	34.8	-	-	-	-
Pneumonia and Influenza	21	15.4	21	15.9	-	-	-	-
Diabetes Mellitus	30	22.1	29	21.9	1	-	-	-
Chronic Liver Disease and Cirrhosis	10	7.4	9	6.8	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	17	12.5	17	12.8	-	-	-	-
Atherosclerosis	7	5.1	7	5.3	-	-	-	-
AIDS	6	4.4	6	4.5	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Montcalm County



## POPULATION

As of April 1, 1992: 55,445  
 Rank Among Counties: 33  
 Per Square Mile: 77.8

## NATALITY

Total Live Births: 807  
 Teenage Mothers: 129  
 Low Weight Births: 47  
 First Births: 313

## MORTALITY

Total Deaths: 472  
 Infant Deaths: 6  
 Neonatal Deaths: 2  
 Postneonatal Deaths: 4  
 Perinatal Deaths: 7  
 Fetal Deaths: 5

## MARRIAGE

Marriages: 471  
 Marriage Rate: 17.0

## DIVORCE

Divorces: 289  
 Divorce Rate: 10.4

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	807	14.6	797	14.9	2	*	6	9.5
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	129	159.9	125	156.8	1	*	1	*
Low Weight	47	58.2	47	59.0	-	-	-	-
Under 1,500 Grams	4	*	4	*	-	-	-	-
< 38 Weeks Gestation	127	157.4	126	158.1	1	*	-	-
Prenatal Care Began in 1st Trimester	596	738.5	592	742.8	1	*	3	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	6	7.4	6	7.5	-	-	-	-
Neonatal Deaths	2	*	2	*	-	-	-	-
Postneonatal Deaths	4	*	4	*	-	-	-	-
Perinatal Deaths	7	8.6	7	8.7	-	-	-	-
Fetal Deaths	5	*	5	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

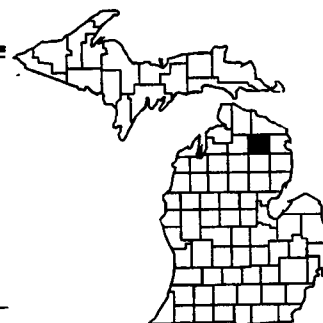
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	472	245	226	470	245	224	-	-	-	2	-	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	6	2	1	-	2	5	3	10	21	34	92	296
White Male	3	1	1	-	-	3	2	8	11	22	56	138
White Female	3	1	-	-	2	2	1	2	10	12	35	156
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	1

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	472	851.3	470	876.1	-	-	5	*
Diseases of the Heart	163	294.0	162	302.0	-	-	1	*
Malignant Neoplasms	114	205.6	114	212.5	-	-	1	*
Cerebrovascular Diseases	29	52.3	29	54.1	-	-	-	-
Accidents and Adverse Effects	23	41.5	23	42.9	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	22	39.7	21	39.1	-	-	-	-
Pneumonia and Influenza	8	14.4	8	14.9	-	-	-	-
Diabetes Mellitus	14	25.3	14	26.1	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	2	*	2	*	-	-	-	-
Suicide	7	12.6	7	13.0	-	-	-	-
Atherosclerosis	5	*	5	*	-	-	-	-
AIDS	2	*	2	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Montmorency County



## POPULATION

As of April 1, 1992: 9,355  
 Rank Among Counties: 75  
 Per Square Mile: 17.0

## NATALITY

Total Live Births: 85  
 Teenage Mothers: 11  
 Low Weight Births: -  
 First Births: 20

## MORTALITY

Total Deaths: 140  
 Infant Deaths: 1  
 Neonatal Deaths: -  
 Postneonatal Deaths: 1  
 Perinatal Deaths: -  
 Fetal Deaths: -

## MARRIAGE

Marriages: 63  
 Marriage Rate: 13.5

## DIVORCE

Divorces: 27  
 Divorce Rate: 5.8

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	85	9.1	85	9.2	-	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	11	129.4	11	129.4	-	-	-	-
Low Weight	-	-	-	-	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	9	105.9	9	105.9	-	-	-	-
Prenatal Care Began in 1st Trimester	65	764.7	65	764.7	-	-	-	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	*	1	*	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

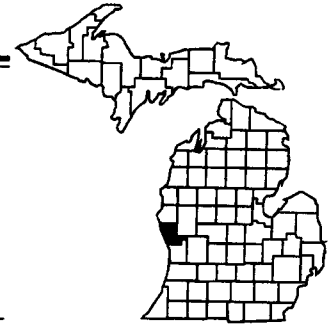
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	140	80	60	140	80	60	-	-	-	-	-	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	-	-	1	-	-	1	2	2	16	28	89
White Male	1	-	-	-	-	-	-	1	1	13	17	47
White Female	-	-	-	1	-	-	1	1	1	3	11	42
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	140	1,496.7	140	1,508.0	-	-	1	*
Diseases of the Heart	55	588.0	55	592.4	-	-	-	-
Malignant Neoplasms	37	395.6	37	398.5	-	-	-	-
Cerebrovascular Diseases	13	139.0	13	140.0	-	-	-	-
Accidents and Adverse Effects	6	64.1	6	64.6	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	2	*	2	*	-	-	-	-
Pneumonia and Influenza	1	*	1	*	-	-	-	-
Diabetes Mellitus	1	*	1	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	*	2	*	-	-	-	-
Atherosclerosis	4	*	4	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Muskegon County



## POPULATION

As of April 1, 1992: 161,980  
 Rank Among Counties: 11  
 Per Square Mile: 319.5

## NATALITY

Total Live Births: 2,389  
 Teenage Mothers: 417  
 Low Weight Births: 165  
 First Births: 903

## MORTALITY

Total Deaths: 1,537  
 Infant Deaths: 13  
 Neonatal Deaths: 4  
 Postneonatal Deaths: 9  
 Perinatal Deaths: 15  
 Fetal Deaths: 11

## MARRIAGE

Marriages: 1,357  
 Marriage Rate: 16.8

## DIVORCE

Divorces: 895  
 Divorce Rate: 11.1

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	2,389	14.7	1,822	13.3	526	23.2	39	18.9
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	417	174.6	247	135.6	165	313.7	5	*
Low Weight	165	69.1	90	49.4	75	142.6	-	-
Under 1,500 Grams	26	10.9	15	8.2	11	20.9	-	-
< 38 Weeks Gestation	458	191.7	294	161.4	158	300.4	6	153.8
Prenatal Care Began in 1st Trimester	1,702	712.4	1,406	771.7	272	517.1	23	589.7

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	13	5.4	4	*	9	17.1	-	-
Neonatal Deaths	4	*	2	*	2	*	-	-
Postneonatal Deaths	9	3.8	2	*	7	13.3	-	-
Perinatal Deaths	15	6.3	10	5.5	4	*	1	*
Fetal Deaths	11	4.6	8	4.4	2	*	1	*

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1537	785	752	1334	668	666	191	112	79	5	7	
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	13	9	1	4	7	14	7	37	61	117	240	1,027
White Male	2	2	1	1	3	7	4	15	30	63	120	420
White Female	2	3	-	1	1	4	3	8	13	30	85	516
Black Male	6	3	-	2	3	2	-	9	7	12	27	41
Black Female	3	1	-	-	-	1	-	4	10	10	5	45
Other Male	-	-	-	-	-	-	-	1	1	-	1	2
Other Female	-	-	-	-	-	-	-	-	-	2	2	3

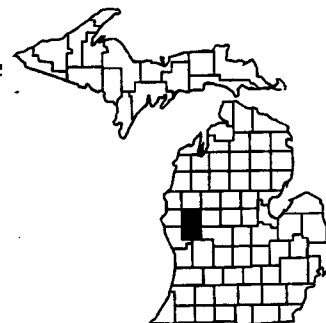
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1537	948.9	1334	972.0	191	842.5	21	44.5
Diseases of the Heart	538	332.1	485	353.4	51	225.0	1	*
Malignant Neoplasms	378	233.4	329	239.7	46	202.9	1	*
Cerebrovascular Diseases	102	63.0	85	61.9	17	75.0	-	-
Accidents and Adverse Effects	49	30.3	39	28.4	9	39.7	12	25.4
Chronic Obstructive Pulmonary Diseases and Allied Conditions	80	49.4	71	51.7	8	35.3	1	*
Pneumonia and Influenza	41	25.3	40	29.1	1	*	-	-
Diabetes Mellitus	49	30.3	43	31.3	6	26.5	-	-
Chronic Liver Disease and Cirrhosis	12	7.4	9	6.6	2	*	-	-
Homicide	10	6.2	4	*	6	26.5	-	-
Suicide	17	10.5	16	11.7	1	*	1	*
Atherosclerosis	14	8.6	14	10.2	-	-	-	-
AIDS	5	*	3	*	2	*	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Newaygo County



## POPULATION

As of April 1, 1992: 40,756  
 Rank Among Counties: 39  
 Per Square Mile: 48.1

## NATALITY

Total Live Births: 613  
 Teenage Mothers: 86  
 Low Weight Births: 22  
 First Births: 219

## MORTALITY

Total Deaths: 386  
 Infant Deaths: 7  
 Neonatal Deaths: 5  
 Postneonatal Deaths: 2  
 Perinatal Deaths: 4  
 Fetal Deaths: 2

## MARRIAGE

Marriages: 367  
 Marriage Rate: 18.0

## DIVORCE

Divorces: 240  
 Divorce Rate: 11.8

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	613	15.0	599	15.0	8	16.3	6	13.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	86	140.3	85	141.9	1	*	-	-
Low Weight	22	35.9	22	36.7	-	-	-	-
Under 1,500 Grams	2	*	2	*	-	-	-	-
< 38 Weeks Gestation	99	161.5	96	160.3	3	*	-	-
Prenatal Care Began in 1st Trimester	449	732.5	442	737.9	3	*	4	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	7	11.4	7	11.7	-	-	-	-
Neonatal Deaths	5	*	5	*	-	-	-	-
Postneonatal Deaths	2	*	2	*	-	-	-	-
Perinatal Deaths	4	*	4	*	-	-	-	-
Fetal Deaths	2	*	2	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	386	218	168	377	212	165	8	5	3	1	1	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	7	-	-	3	4	4	5	6	13	30	79	235
White Male	4	-	-	2	3	4	5	2	8	16	52	116
White Female	3	-	-	1	1	-	-	3	4	13	25	115
Black Male	-	-	-	-	-	-	-	1	1	-	1	2
Black Female	-	-	-	-	-	-	-	-	-	1	-	2
Other Male	-	-	-	-	-	-	-	-	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

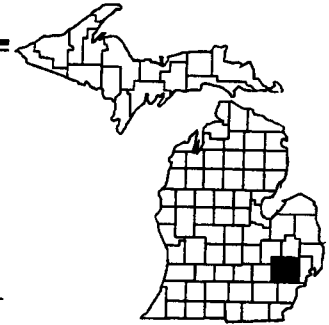
	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	386	947.1	377	946.5	8	1,632.7	7	56.9
Diseases of the Heart	129	316.5	127	318.8	2	*	-	-
Malignant Neoplasms	95	233.1	90	225.9	4	*	1	*
Cerebrovascular Diseases	28	68.7	28	70.3	-	-	-	-
Accidents and Adverse Effects	19	46.6	18	45.2	1	*	4	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	25	61.3	24	60.3	1	*	-	-
Pneumonia and Influenza	24	58.9	24	60.3	-	-	-	-
Diabetes Mellitus	6	14.7	6	15.1	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	*	2	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	4	*	4	*	-	-	-	-
Atherosclerosis	2	*	2	*	-	-	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



## Profile of Oakland County



## POPULATION

As of April 1, 1992: 1,118,611  
 Rank Among Counties: 2  
 Per Square Mile: 1,278.6

## NATALITY

Total Live Births: 16,160  
 Teenage Mothers: 1,015  
 Low Weight Births: 1,069  
 First Births: 6,873

## MORTALITY

Total Deaths: 8,316  
 Infant Deaths: 115  
 Neonatal Deaths: 87  
 Postneonatal Deaths: 28  
 Perinatal Deaths: 152  
 Fetal Deaths: 81

## MARRIAGE

Marriages: 8,704  
 Marriage Rate: 15.6

## DIVORCE

Divorces: 4,919  
 Divorce Rate: 8.8

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	16,160	14.4	14,072	14.1	1,543	18.1	335	10.3
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	1,015	62.8	699	49.7	297	192.5	16	47.8
Low Weight	1,069	66.2	816	58.0	214	138.7	27	80.6
Under 1,500 Grams	198	12.3	145	10.3	51	33.1	1	*
< 38 Weeks Gestation	2,878	178.1	2,353	167.2	433	280.6	69	206.0
Prenatal Care Began in 1st Trimester	14,303	885.1	12,734	904.9	1,120	725.9	283	844.8

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	115	7.1	86	6.1	26	16.9	3	*
Neonatal Deaths	87	5.4	66	4.7	19	12.3	2	*
Postneonatal Deaths	28	1.7	20	1.4	7	4.5	1	*
Perinatal Deaths	152	9.4	122	8.6	23	14.8	3	*
Fetal Deaths	81	5.0	69	4.9	7	4.5	1	*

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Total 85	Other		
	Total 8,316	Male 4,018	Female 4,298	Total 7,670	Male 3,664	Female 4,006	Total 553	Male 305	Female 248		Male 45	Female 40	
	Age in Years												
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	115	15	11	12	42	58	74	248	393	601	1336	5410	1
White Male	50	4	6	3	20	30	45	130	188	345	686	2156	1
White Female	36	8	5	7	13	10	14	62	137	189	534	2991	-
Black Male	15	-	-	1	3	15	11	39	34	31	60	96	-
Black Female	11	2	-	-	6	3	3	15	23	25	37	123	-
Other Male	1	1	-	-	-	-	-	1	5	7	10	20	-
Other Female	2	-	-	1	-	-	-	1	6	3	7	20	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	8,316	743.4	7,670	766.6	553	647.4	80	28.1
Diseases of the Heart	2,921	261.1	2,732	273.1	166	194.3	5	*
Malignant Neoplasms	2,021	180.7	1,862	186.1	129	151.0	8	2.8
Cerebrovascular Diseases	592	52.9	561	56.1	26	30.4	2	*
Accidents and Adverse Effects	199	17.8	172	17.2	25	29.3	24	8.4
Chronic Obstructive Pulmonary Diseases and Allied Conditions	333	29.8	318	31.8	11	12.9	1	*
Pneumonia and Influenza	271	24.2	257	25.7	11	12.9	1	*
Diabetes Mellitus	209	18.7	185	18.5	21	24.6	-	-
Chronic Liver Disease and Cirrhosis	127	11.4	116	11.6	10	11.7	-	-
Homicide	56	5.0	28	2.8	28	32.8	10	3.5
Suicide	128	11.4	120	12.0	7	8.2	7	2.5
Atherosclerosis	59	5.3	58	5.8	1	*	-	-
AIDS	60	5.4	47	4.7	13	15.2	1	*

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Oceana County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	22,954	Total Live Births:	343	Total Deaths:	220
Rank Among Counties:	55	Teenage Mothers:	52	Infant Deaths:	5
Per Square Mile:	42.4	Low Weight Births:	28	Neonatal Deaths:	3
		First Births:	120	Postneonatal Deaths:	2
				Perinatal Deaths:	7
				Fetal Deaths:	4
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	209	Divorces:	115		
Marriage Rate:	18.2	Divorce Rate:	10.0		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	343	14.9	334	14.8	-	-	9	25.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	52	151.6	51	152.7	-	-	1	*
Low Weight	28	81.6	28	83.8	-	-	-	-
Under 1,500 Grams	4	*	4	*	-	-	-	-
< 38 Weeks Gestation	55	160.3	54	161.7	-	-	1	*
Prenatal Care Began in 1st Trimester	238	693.9	232	694.6	-	-	6	666.7

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	5	*	5	*	-	-	-	-
Neonatal Deaths	3	*	3	*	-	-	-	-
Postneonatal Deaths	2	*	2	*	-	-	-	-
Perinatal Deaths	7	20.2	7	20.7	-	-	-	-
Fetal Deaths	4	*	4	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	220	121	99	215	116	99	1	1	-	4	4	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	5	-	-	3	2	1	1	6	6	20	40	136
White Male	5	-	-	2	2	1	1	4	5	9	26	61
White Female	-	-	-	1	-	-	-	1	1	10	12	74
Black Male	-	-	-	-	-	-	-	-	-	-	1	-
Black Female	-	-	-	-	-	-	-	1	-	1	1	1
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	220	958.4	215	954.7	1	*	5	*
Diseases of the Heart	79	344.2	76	337.5	1	*	-	-
Malignant Neoplasms	51	222.2	50	222.0	-	-	-	-
Cerebrovascular Diseases	14	61.0	14	62.2	-	-	-	-
Accidents and Adverse Effects	5	*	5	*	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	5	*	5	*	-	-	-	-
Pneumonia and Influenza	6	26.1	6	26.6	-	-	-	-
Diabetes Mellitus	4	*	4	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	*	2	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	6	26.1	6	26.6	-	-	2	*
Atherosclerosis	5	*	5	*	-	-	-	-
AIDS	1	*	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Ogemaw County



## POPULATION

As of April 1, 1992: 19,640  
 Rank Among Counties: 61  
 Per Square Mile: 34.5

## NATALITY

Total Live Births: 259  
 Teenage Mothers: 28  
 Low Weight Births: 23  
 First Births: 85

## MORTALITY

Total Deaths: 274  
 Infant Deaths: -  
 Neonatal Deaths: -  
 Postneonatal Deaths: -  
 Perinatal Deaths: 1  
 Fetal Deaths: 1

## MARRIAGE

Marriages: 163  
 Marriage Rate: 16.6

## DIVORCE

Divorces: 90  
 Divorce Rate: 9.2

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	259	13.2	252	13.0	-	-	7	37.2
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	28	108.1	25	99.2	-	-	3	*
Low Weight	23	88.8	21	83.3	-	-	2	*
Under 1,500 Grams	9	34.7	8	31.7	-	-	1	*
< 38 Weeks Gestation	50	193.1	48	190.5	-	-	2	*
Prenatal Care Began in 1st Trimester	212	818.5	205	813.5	-	-	7	1000.0

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	-	-	-	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	1	*	1	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	274	154	120	270	150	120	1	1	-	3	3	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+ Unk
Total Deaths	-	-	-	2	2	2	1	6	12	19	53	177
White Male	-	-	-	-	-	1	-	6	10	11	34	88
White Female	-	-	-	2	2	1	-	-	2	8	17	88
Black Male	-	-	-	-	-	-	-	-	-	-	1	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	1	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	274	1,395.1	270	1,389.6	1	*	4	*
Diseases of the Heart	85	432.8	83	427.2	-	-	-	-
Malignant Neoplasms	70	356.4	69	355.1	-	-	-	-
Cerebrovascular Diseases	21	106.9	21	108.1	-	-	-	-
Accidents and Adverse Effects	17	86.6	17	87.5	-	-	4	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	18	91.6	18	92.6	-	-	-	-
Pneumonia and Influenza	3	*	3	*	-	-	-	-
Diabetes Mellitus	6	30.5	5	*	1	*	-	-
Chronic Liver Disease and Cirrhosis	2	*	2	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	*	3	*	-	-	-	-
Atherosclerosis	15	76.4	15	77.2	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Ontonagon County



## POPULATION

As of April 1, 1992: 8,761  
 Rank Among Counties: 78  
 Per Square Mile: 6.7

## NATALITY

Total Live Births: 85  
 Teenage Mothers: 12  
 Low Weight Births: 7  
 First Births: 30

## MORTALITY

Total Deaths: 107  
 Infant Deaths: 1  
 Neonatal Deaths: -  
 Postneonatal Deaths: 1  
 Perinatal Deaths: 1  
 Fetal Deaths: 1

## MARRIAGE

Marriages: 64  
 Marriage Rate: 14.6

## DIVORCE

Divorces: 30  
 Divorce Rate: 6.8

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	85	9.7	83	9.6	-	-	2	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	12	141.2	12	144.6	-	-	-	-
Low Weight	7	82.4	7	84.3	-	-	-	-
Under 1,500 Grams	1	*	1	*	-	-	-	-
< 38 Weeks Gestation	12	141.2	12	144.6	-	-	-	-
Prenatal Care Began in 1st Trimester	73	858.8	71	855.4	-	-	2	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	*	1	*	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	1	*	1	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	107	51	56	107	51	56	-	-	-	-	-	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	-	1	1	-	-	-	4	4	3	13	80
White Male	-	-	1	1	-	-	-	2	4	2	9	32
White Female	1	-	-	-	-	-	-	2	-	1	4	48
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	107	1,221.2	107	1,242.5	-	-	2	*
Diseases of the Heart	45	513.6	45	522.5	-	-	-	-
Malignant Neoplasms	22	251.1	22	255.5	-	-	-	-
Cerebrovascular Diseases	6	68.5	6	69.7	-	-	-	-
Accidents and Adverse Effects	5	*	5	*	-	-	2	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	2	*	2	*	-	-	-	-
Pneumonia and Influenza	1	*	1	*	-	-	-	-
Diabetes Mellitus	4	*	4	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	*	1	*	-	-	-	-
Atherosclerosis	3	*	3	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Osceola County

## POPULATION

As of April 1, 1992: 20,638  
 Rank Among Counties: 60  
 Per Square Mile: 36.3

## NATALITY

Total Live Births: 290  
 Teenage Mothers: 33  
 Low Weight Births: 16  
 First Births: 95

## MORTALITY

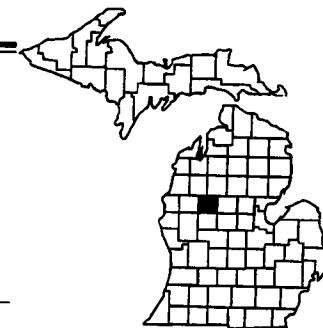
Total Deaths: 194  
 Infant Deaths: 1  
 Neonatal Deaths: -  
 Postneonatal Deaths: 1  
 Perinatal Deaths: 2  
 Fetal Deaths: 2

## MARRIAGE

Marriages: 172  
 Marriage Rate: 16.7

## DIVORCE

Divorces: 105  
 Divorce Rate: 10.2



## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	290	14.1	288	14.1	-	-	2	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	33	113.8	32	111.1	-	-	1	*
Low Weight	16	55.2	16	55.6	-	-	-	-
Under 1,500 Grams	6	20.7	6	20.8	-	-	-	-
< 38 Weeks Gestation	43	148.3	43	149.3	-	-	-	-
Prenatal Care Began in 1st Trimester	210	724.1	208	722.2	-	-	2	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	*	1	*	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	2	*	2	*	-	-	-	-
Fetal Deaths	2	*	2	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

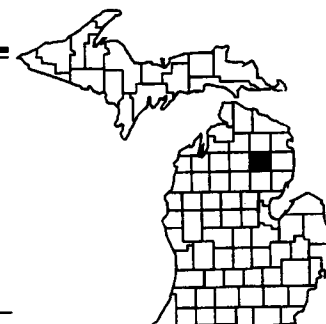
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	194	94	100	193	93	100	-	-	-	-	-	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	-	-	-	1	2	3	2	5	13	34	133
White Male	-	-	-	-	1	1	3	2	3	7	19	57
White Female	1	-	-	-	-	1	-	-	-	6	14	76
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	194	940.0	193	946.8	-	-	1	*
Diseases of the Heart	72	348.9	71	348.3	-	-	-	-
Malignant Neoplasms	54	261.7	54	264.9	-	-	-	-
Cerebrovascular Diseases	8	38.8	8	39.2	-	-	-	-
Accidents and Adverse Effects	9	43.6	9	44.2	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	6	29.1	6	29.4	-	-	-	-
Pneumonia and Influenza	8	38.8	8	39.2	-	-	-	-
Diabetes Mellitus	4	*	4	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	*	1	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	*	2	*	-	-	-	-
Atherosclerosis	2	*	2	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Oscoda County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	8,222	Total Live Births:	83	Total Deaths:	142
Rank Among Counties:	80	Teenage Mothers:	12	Infant Deaths:	1
Per Square Mile:	14.5	Low Weight Births:	5	Neonatal Deaths:	1
		First Births:	24	Postneonatal Deaths:	-
				Perinatal Deaths:	2
				Fetal Deaths:	2
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	72	Divorces:	51		
Marriage Rate:	17.5	Divorce Rate:	12.4		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	83	10.1	81	9.9	-	-	1	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	12	144.6	12	148.1	-	-	-	-
Low Weight	5	*	5	*	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	11	132.5	11	135.8	-	-	-	-
Prenatal Care Began in 1st Trimester	65	783.1	64	790.1	-	-	1	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	*	1	*	-	-	-	-
Neonatal Deaths	1	*	1	*	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	2	*	2	*	-	-	-	-
Fetal Deaths	2	*	2	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	142	88	54	141	88	53	-	-	-	1	-	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	-	-	-	1	2	1	6	5	9	23	94
White Male	1	-	-	-	1	2	-	1	5	7	15	56
White Female	-	-	-	-	-	-	1	4	-	2	8	38
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	1	-	-	-	-

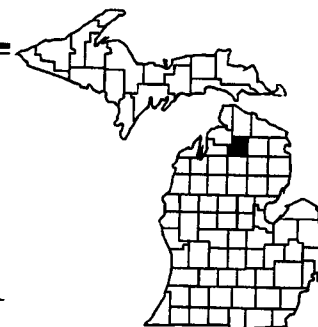
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	142	1,726.9	141	1,726.9	-	-	1	-
Diseases of the Heart	59	717.5	58	710.3	-	-	-	-
Malignant Neoplasms	36	437.8	36	440.9	-	-	-	-
Cerebrovascular Diseases	12	145.9	12	147.0	-	-	-	-
Accidents and Adverse Effects	7	85.1	7	85.7	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	5	*	5	*	-	-	-	-
Pneumonia and Influenza	3	*	3	*	-	-	-	-
Diabetes Mellitus	2	*	2	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	*	2	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	4	*	4	*	-	-	-	-
Atherosclerosis	1	*	1	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Otsego County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	19,096	Total Live Births:	289	Total Deaths:	175
Rank Among Counties:	62	Teenage Mothers:	25	Infant Deaths:	1
Per Square Mile:	37.0	Low Weight Births:	21	Neonatal Deaths:	-
		First Births:	95	Postneonatal Deaths:	1
				Perinatal Deaths:	1
				Fetal Deaths:	1
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	164	Divorces:	85		
Marriage Rate:	17.2	Divorce Rate:	8.9		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	289	15.1	282	15.0	1	*	6	27.3
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	25	86.5	24	85.1	1	*	-	-
Low Weight	21	72.7	21	74.5	-	-	-	-
Under 1,500 Grams	2	*	2	*	-	-	-	-
< 38 Weeks Gestation	50	173.0	48	170.2	-	-	2	-
Prenatal Care Began in 1st Trimester	241	833.9	235	833.3	1	*	5	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	*	1	*	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	1	*	1	*	-	-	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	175	79	96	174	79	95	-	-	-	1	-	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	1	-	-	-	1	2	2	4	4	15	32	114
White Male	-	-	-	-	1	1	2	1	-	10	21	43
White Female	1	-	-	-	-	1	-	2	4	5	11	71
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	1	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	175	916.4	174	922.9	-	-	1	-
Diseases of the Heart	60	314.2	60	318.2	-	-	-	-
Malignant Neoplasms	39	204.2	39	206.9	-	-	-	-
Cerebrovascular Diseases	13	68.1	13	69.0	-	-	-	-
Accidents and Adverse Effects	3	*	2	*	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	6	31.4	6	31.8	-	-	-	-
Pneumonia and Influenza	5	*	5	*	-	-	-	-
Diabetes Mellitus	3	*	3	*	-	-	-	-
Chronic Liver Disease and Cirrhosis	5	*	5	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	2	*	2	*	-	-	-	-
Atherosclerosis	3	*	3	*	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Ottawa County



## POPULATION

As of April 1, 1992: 197,297  
 Rank Among Counties: 10  
 Per Square Mile: 347.9

## NATALITY

Total Live Births: 3,152  
 Teenage Mothers: 251  
 Low Weight Births: 176  
 First Births: 1,237

## MORTALITY

Total Deaths: 1,229  
 Infant Deaths: 19  
 Neonatal Deaths: 12  
 Postneonatal Deaths: 7  
 Perinatal Deaths: 24  
 Fetal Deaths: 13

## MARRIAGE

Marriages: 1,572  
 Marriage Rate: 15.9

## DIVORCE

Divorces: 730  
 Divorce Rate: 7.4

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	3,152	16.0	3,061	15.9	15	13.0	75	20.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	251	79.6	240	78.4	2	.	9	120.0
Low Weight	176	55.8	169	55.2	2	.	5	.
Under 1,500 Grams	31	9.8	29	9.5	1	.	1	.
< 38 Weeks Gestation	423	134.2	399	130.3	4	.	20	266.7
Prenatal Care Began in 1st Trimester	2,709	859.5	2,639	862.1	11	733.3	59	786.7

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	19	6.0	17	5.6	1	.	1	.
Neonatal Deaths	12	3.8	10	3.3	1	.	1	.
Postneonatal Deaths	7	2.2	7	2.3	-	-	-	-
Perinatal Deaths	24	7.6	20	6.5	2	.	1	.
Fetal Deaths	13	4.1	10	3.3	1	.	1	.

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,229	624	605	1,211	616	595	5	2	3	10	5	5
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	19	5	1	3	13	12	8	24	48	63	169	864
White Male	13	3	-	1	8	10	6	15	26	41	96	397
White Female	4	2	-	2	4	1	2	7	19	22	69	463
Black Male	1	-	-	-	-	-	-	-	1	-	-	-
Black Female	-	-	1	-	-	-	-	-	1	-	-	1
Other Male	1	-	-	-	-	-	-	1	1	-	-	2
Other Female	-	-	-	-	1	1	-	1	-	-	1	1

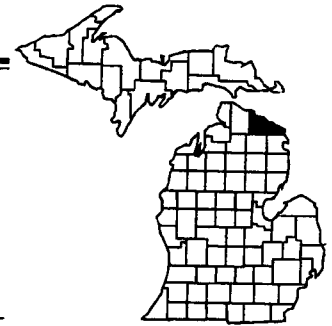
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,229	622.9	1,211	629.1	5	.	22	35.5
Diseases of the Heart	379	192.1	376	195.3	-	-	-	-
Malignant Neoplasms	297	150.5	293	152.2	-	-	4	.
Cerebrovascular Diseases	72	36.5	71	36.9	1	.	-	-
Accidents and Adverse Effects	54	27.4	53	27.5	1	.	7	11.3
Chronic Obstructive Pulmonary Diseases and Allied Conditions	50	25.3	50	26.0	-	-	-	-
Pneumonia and Influenza	71	36.0	71	36.9	-	-	1	.
Diabetes Mellitus	23	11.7	23	11.9	-	-	-	-
Chronic Liver Disease and Cirrhosis	5	.	5	.	-	-	-	-
Homicide	4	.	2	.	2	.	3	.
Suicide	14	7.1	13	6.8	-	-	2	.
Atherosclerosis	17	8.6	17	8.8	-	-	-	-
AIDS	6	3.0	6	3.1	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.



## Profile of Presque Isle County



<b>POPULATION</b>		<b>NATALITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	13,865	Total Live Births:	129	Total Deaths:	172
Rank Among Counties:	68	Teenage Mothers:	12	Infant Deaths:	1
Per Square Mile:	21.1	Low Weight Births:	3	Neonatal Deaths:	1
		First Births:	48	Postneonatal Deaths:	-
				Perinatal Deaths:	1
				Fetal Deaths:	-
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	96	Divorces:	49		
Marriage Rate:	13.8	Divorce Rate:	7.1		

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	129	9.3	128	9.3	-	-	1	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	12	93.0	12	93.8	-	-	-	-
Low Weight	3	-	3	-	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	14	108.5	14	109.4	-	-	-	-
Prenatal Care Began in 1st Trimester	115	891.5	115	898.4	-	-	-	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1	-	1	-	-	-	-	-
Neonatal Deaths	1	-	1	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	1	-	1	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total 172	Male 96	Female 76	Total 172	Male 96	Female 76	Total -	Black Male -	Female -	Total -	Other Male -	Female -	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	1	-	-	-	1	-	2	1	3	10	32	122	-
White Male	-	-	-	-	1	-	-	1	2	8	21	63	-
White Female	1	-	-	-	-	-	2	-	1	2	11	59	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	172	1,240.6	172	1,249.5	-	-	1	-
Diseases of the Heart	64	461.6	64	464.9	-	-	-	-
Malignant Neoplasms	43	310.2	43	312.4	-	-	-	-
Cerebrovascular Diseases	11	79.3	11	79.9	-	-	-	-
Accidents and Adverse Effects	11	79.3	11	79.9	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	10	72.1	10	72.6	-	-	-	-
Pneumonia and Influenza	7	50.5	7	50.8	-	-	-	-
Diabetes Mellitus	4	-	4	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	-	-	-	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Roscommon County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	20,861	Total Live Births:	210	Total Deaths:	333
Rank Among Counties:	59	Teenage Mothers:	32	Infant Deaths:	4
Per Square Mile:	39.5	Low Weight Births:	16	Neonatal Deaths:	3
		First Births:	79	Postneonatal Deaths:	1
				Perinatal Deaths:	4
				Fetal Deaths:	2
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	163	Divorces:	102		
Marriage Rate:	15.6	Divorce Rate:	9.8		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	210	10.1	208	10.1	-	-	2	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	32	152.4	32	153.8	-	-	-	-
Low Weight	16	76.2	16	76.9	-	-	-	-
Under 1,500 Grams	2	-	2	-	-	-	-	-
< 38 Weeks Gestation	40	190.5	40	192.3	-	-	-	-
Prenatal Care Began in 1st Trimester	167	795.2	165	793.3	-	-	2	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	4	*	4	*	-	-	-	-
Neonatal Deaths	3	*	3	*	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	4	*	4	*	-	-	-	-
Fetal Deaths	2	*	2	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	333	194	139	331	193	138	-	-	-	2	1	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	4	1	1	1	1	-	2	4	8	12	79	220
White Male	3	1	1	1	1	-	2	4	6	6	50	118
White Female	1	-	-	-	-	-	-	-	2	6	28	101
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	1	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	333	1,596.2	331	1,601.4	-	-	4	-
Diseases of the Heart	121	580.0	120	580.6	-	-	-	-
Malignant Neoplasms	81	388.3	81	391.9	-	-	-	-
Cerebrovascular Diseases	25	119.8	25	120.9	-	-	1	-
Accidents and Adverse Effects	4	*	4	*	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	76.7	16	77.4	-	-	-	-
Pneumonia and Influenza	6	28.8	6	29.0	-	-	-	-
Diabetes Mellitus	6	28.8	6	29.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	5	*	4	*	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	5	*	5	*	-	-	-	-
Atherosclerosis	5	*	5	*	-	-	-	-
AIDS	2	*	2	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Saginaw County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	212,477	Total Live Births:	3,221	Total Deaths:	1,998
Rank Among Counties:	9	Teenage Mothers:	529	Infant Deaths:	38
Per Square Mile:	260.6	Low Weight Births:	309	Neonatal Deaths:	27
		First Births:	1,218	Postneonatal Deaths:	11
				Perinatal Deaths:	22
				Fetal Deaths:	1
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	1,730	Divorces:	889		
Marriage Rate:	16.3	Divorce Rate:	8.4		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	3,221	15.2	2,260	13.2	909	23.7	41	16.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	529	164.2	261	115.5	258	283.8	7	170.7
Low Weight	309	95.9	154	68.1	148	162.8	7	170.7
Under 1,500 Grams	67	20.8	31	13.7	34	37.4	2	292.7
< 38 Weeks Gestation	711	220.7	408	180.5	291	320.1	12	292.7
Prenatal Care Began in 1st Trimester	2627	815.6	1939	858.0	649	714.0	33	804.9

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	38	11.8	15	6.6	22	24.2	1	*
Neonatal Deaths	27	8.4	10	4.4	16	17.6	1	*
Postneonatal Deaths	11	3.4	5	*	6	6.6	-	-
Perinatal Deaths	22	6.8	8	3.5	14	15.4	-	-
Fetal Deaths	1	*	1	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

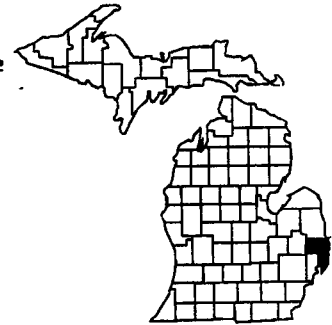
Deaths	All Races			White			Black			Other		
	Total 1998	Male	Female	Total 1653	Male 838	Female 815	Total 336	Male 192	Female 144	Total 8	Male 5	Female 3
Age in Years												
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	38	2	2	3	18	17	18	66	100	146	358	Unk
White Male	9	1	1	-	6	7	8	33	37	72	168	1,230
White Female	6	-	-	1	2	1	6	10	23	49	117	496
Black Male	12	-	-	1	6	7	2	20	18	13	49	600
Black Female	10	1	1	1	4	2	2	3	20	11	23	64
Other Male	1	-	-	-	-	-	-	-	1	-	1	66
Other Female	-	-	-	-	-	-	-	-	1	1	-	2
												1

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,998	940.3	1,653	963.5	336	876.0	25	40.2
Diseases of the Heart	667	313.9	562	327.6	102	265.9	-	-
Malignant Neoplasms	493	232.0	419	244.2	73	190.3	2	*
Cerebrovascular Diseases	130	61.2	110	64.1	19	49.5	-	-
Accidents and Adverse Effects	82	38.6	67	39.1	15	39.1	9	14.5
Chronic Obstructive Pulmonary Diseases and Allied Conditions	86	40.5	79	46.0	6	15.6	1	*
Pneumonia and Influenza	47	22.1	43	25.1	4	*	-	-
Diabetes Mellitus	56	26.4	49	28.6	7	18.2	-	-
Chronic Liver Disease and Cirrhosis	21	9.9	15	8.7	6	15.6	-	-
Homicide	34	16.0	6	3.5	28	73.0	10	16.1
Suicide	21	9.9	16	9.3	5	*	-	-
Atherosclerosis	24	11.3	23	13.4	1	*	-	-
AIDS	13	6.1	10	5.8	3	*	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of St. Clair County



<b>POPULATION</b>		<b>NATIVITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	150,085	Total Live Births:	2,112	Total Deaths:	1,361
Rank Among Counties:	14	Teenage Mothers:	251	Infant Deaths:	19
Per Square Mile:	204.4	Low Weight Births:	145	Neonatal Deaths:	13
		First Births:	830	Postneonatal Deaths:	6
				Perinatal Deaths:	19
				Fetal Deaths:	8
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	1,055	Divorces:	702		
Marriage Rate:	14.1	Divorce Rate:	9.4		

## NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	2,112	14.1	2,049	14.1	47	15.0	12	8.7
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	251	118.8	236	115.2	14	297.9	1	*
Low Weight	145	68.7	140	68.3	5	*	-	-
Under 1,500 Grams	29	13.7	28	13.7	1	*	-	-
< 38 Weeks Gestation	372	176.1	357	174.2	15	319.1	-	-
Prenatal Care Began in 1st Trimester	1,743	825.3	1,700	829.7	32	680.9	10	833.3

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	19	9.0	19	9.3	-	-	-	-
Neonatal Deaths	13	6.2	13	6.3	-	-	-	-
Postneonatal Deaths	6	2.8	6	2.9	-	-	-	-
Perinatal Deaths	19	9.0	18	8.8	-	-	-	-
Fetal Deaths	8	3.8	7	3.4	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

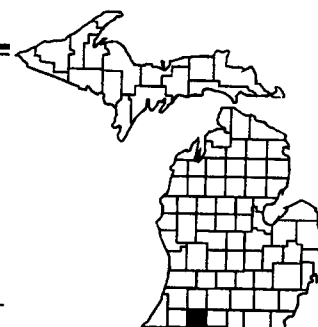
Deaths	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
	1,361	669	692	1,320	649	671	33	16	17	6	2	4	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	19	6	-	1	11	16	15	34	61	84	242	872	-
White Male	12	4	-	-	9	13	10	20	34	57	116	374	-
White Female	7	2	-	1	2	2	4	11	22	24	118	478	-
Black Male	-	-	-	-	-	1	1	1	2	2	3	6	-
Black Female	-	-	-	-	-	-	-	1	1	1	3	11	-
Other Male	-	-	-	-	-	-	-	-	1	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	1	-	2	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,361	906.8	1,320	906.7	33	1,055.3	18	41.5
Diseases of the Heart	473	315.2	464	318.7	9	287.8	1	*
Malignant Neoplasms	320	213.2	309	212.2	10	319.8	3	*
Cerebrovascular Diseases	99	66.0	98	67.3	1	*	-	-
Accidents and Adverse Effects	55	36.6	55	37.8	-	-	7	16.2
Chronic Obstructive Pulmonary Diseases and Allied Conditions	73	48.6	71	48.8	2	*	-	-
Pneumonia and Influenza	60	40.0	56	38.5	3	*	-	-
Diabetes Mellitus	33	22.0	30	20.6	1	*	-	-
Chronic Liver Disease and Cirrhosis	17	11.3	17	11.7	-	-	-	-
Homicide	10	6.7	8	5.5	2	*	1	*
Suicide	35	23.3	34	23.4	1	*	1	*
Atherosclerosis	3	*	3	*	-	-	-	-
AIDS	5	*	4	*	1	*	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of St. Joseph County



**POPULATION**  
As of April 1, 1992: 59,388  
Rank Among Counties: 29  
Per Square Mile: 118.2

**NATALITY**  
Total Live Births: 866  
Teenage Mothers: 155  
Low Weight Births: 59  
First Births: 309

**MORTALITY**  
Total Deaths: 559  
Infant Deaths: 6  
Neonatal Deaths: 4  
Postneonatal Deaths: 2  
Perinatal Deaths: 12  
Fetal Deaths: 8

**MARRIAGE**  
Marriages: 494  
Marriage Rate: 16.6

**DIVORCE**  
Divorces: 380  
Divorce Rate: 12.8

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	866	14.6	811	14.2	40	24.0	12	22.3
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	155	179.0	138	170.2	14	350.0	3	*
Low Weight	59	68.1	52	64.1	6	150.0	1	*
Under 1,500 Grams	10	11.5	9	11.1	1	*	-	*
< 38 Weeks Gestation	120	138.6	109	134.4	8	200.0	2	*
Prenatal Care Began in 1st Trimester	662	764.4	633	780.5	17	425.0	9	750.0

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	6	6.9	5	*	1	*	-	-
Neonatal Deaths	4	*	3	*	1	*	-	-
Postneonatal Deaths	2	*	2	*	-	-	-	-
Perinatal Deaths	12	13.7	11	13.4	1	*	-	-
Fetal Deaths	8	9.2	8	9.8	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	559	280	279	532	269	263	24	10	14	3	1	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	6	4	1	-	1	5	3	11	25	44	74	385
White Male	3	4	1	-	1	4	2	7	16	25	41	165
White Female	2	-	-	-	-	-	-	2	7	19	29	204
Black Male	-	-	-	-	-	1	1	1	-	-	-	7
Black Female	1	-	-	-	-	-	-	1	2	-	1	9
Other Male	-	-	-	-	-	-	-	-	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	2	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	559	941.3	532	930.3	24	1,441.4	6	33.6
Diseases of the Heart	197	331.7	187	327.0	10	600.6	-	-
Malignant Neoplasms	129	217.2	123	215.1	5	*	-	-
Cerebrovascular Diseases	39	65.7	37	64.7	2	*	-	-
Accidents and Adverse Effects	25	42.1	24	42.0	1	*	2	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	29	48.8	29	50.7	-	-	-	-
Pneumonia and Influenza	19	32.0	18	31.5	1	*	-	-
Diabetes Mellitus	17	28.6	17	29.7	-	-	-	-
Chronic Liver Disease and Cirrhosis	8	13.5	7	12.2	-	-	-	-
Homicide	1	*	-	-	1	*	-	-
Suicide	3	*	3	*	-	-	-	-
Atherosclerosis	2	*	2	*	-	-	-	-
AIDS	2	*	2	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Sanilac County



## POPULATION

As of April 1, 1992: 40,810  
 Rank Among Counties: 38  
 Per Square Mile: 42.3

## NATALITY

Total Live Births: 557  
 Teenage Mothers: 53  
 Low Weight Births: 32  
 First Births: 178

## MORTALITY

Total Deaths: 432  
 Infant Deaths: 2  
 Neonatal Deaths: 2  
 Postneonatal Deaths: -  
 Perinatal Deaths: 3  
 Fetal Deaths: 1

## MARRIAGE

Marriages: 289  
 Marriage Rate: 14.2

## DIVORCE

Divorces: 151  
 Divorce Rate: 7.4

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	557	13.6	552	13.6	-	-	4	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	53	95.2	53	96.0	-	-	-	-
Low Weight	32	57.5	30	54.3	-	-	1	-
Under 1,500 Grams	5	-	5	-	-	-	-	-
< 38 Weeks Gestation	95	170.6	93	168.5	-	-	1	-
Prenatal Care Began in 1st Trimester	425	763.0	423	766.3	-	-	2	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	-	2	-	-	-	-	-
Neonatal Deaths	2	-	2	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	3	-	3	-	-	-	-	-
Fetal Deaths	1	-	1	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	432	232	200	428	228	200	-	-	-	3	3	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	1	-	-	2	5	2	4	13	24	57	322
White Male	2	-	-	-	1	4	2	1	9	13	30	166
White Female	-	-	-	-	1	1	-	3	4	10	27	154
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	1	-	1
Other Male	-	1	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	432	1,058.5	428	1,058.2	-	-	3	-
Diseases of the Heart	173	423.9	172	425.3	-	-	-	-
Malignant Neoplasms	88	215.6	86	212.6	-	-	-	-
Cerebrovascular Diseases	24	58.8	24	59.3	-	-	-	-
Accidents and Adverse Effects	15	36.8	14	34.6	-	-	3	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	39.2	16	39.6	-	-	-	-
Pneumonia and Influenza	13	31.9	13	32.1	-	-	-	-
Diabetes Mellitus	13	31.9	13	32.1	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	8	19.6	8	19.8	-	-	-	-
Atherosclerosis	4	-	4	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Schoolcraft County



<b>POPULATION</b>		<b>NATALITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	8,478	Total Live Births:	108	Total Deaths:	118
Rank Among Counties:	79	Teenage Mothers:	19	Infant Deaths:	-
Per Square Mile:	7.2	Low Weight Births:	5	Neonatal Deaths:	-
		First Births:	49	Postneonatal Deaths:	-
				Perinatal Deaths:	-
				Fetal Deaths:	-
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	74	Divorces:	27		
Marriage Rate:	17.5	Divorce Rate:	6.4		

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	108	12.7	104	13.2	-	-	4	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	19	175.9	17	163.5	-	-	2	-
Low Weight	5	-	4	-	-	-	1	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	19	175.9	18	173.1	-	-	1	-
Prenatal Care Began in 1st Trimester	90	833.3	87	836.5	-	-	3	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	-	-	-	-	-	-	-	-
Neonatal Deaths	-	-	-	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	Total	All Races		Total	White		Total	Black		Total	Other	
		Male	Female		Male	Female		Male	Female		Male	Female
Deaths	118	61	57	109	54	55	-	-	-	9	7	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	-	-	-	-	1	1	2	2	2	9	21	80
White Male	-	-	-	-	1	1	1	2	-	2	7	40
White Female	-	-	-	-	-	-	-	-	-	-	-	-
Black Male	-	-	-	-	-	-	-	-	1	5	13	36
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	1	-	1	2	1	2
Other Female	-	-	-	-	-	-	-	-	-	-	-	2

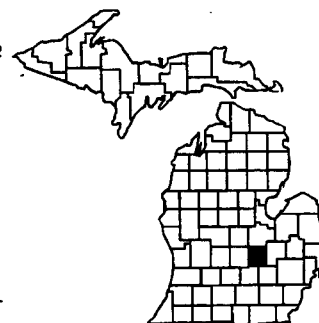
## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	118	1,392.0	109	1,382.9	-	-	1	-
Diseases of the Heart	45	530.8	42	532.9	-	-	-	-
Malignant Neoplasms	22	259.5	21	266.4	-	-	-	-
Cerebrovascular Diseases	8	94.4	8	101.5	-	-	-	-
Accidents and Adverse Effects	6	70.8	5	-	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	3	-	2	-	-	-	-	-
Pneumonia and Influenza	10	118.0	9	114.2	-	-	-	-
Diabetes Mellitus	4	-	4	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Shiawassee County



## POPULATION

As of April 1, 1992: 70,832  
 Rank Among Counties: 26  
 Per Square Mile: 131.1

## NATALITY

Total Live Births: 1,026  
 Teenage Mothers: 128  
 Low Weight Births: 67  
 First Births: 408

## MORTALITY

Total Deaths: 519  
 Infant Deaths: 5  
 Neonatal Deaths: 3  
 Postneonatal Deaths: 2  
 Perinatal Deaths: 7  
 Fetal Deaths: 6

## MARRIAGE

Marriages: 570  
 Marriage Rate: 16.1

## DIVORCE

Divorces: 293  
 Divorce Rate: 8.3

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,026	14.5	1,020	14.6	1	*	4	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	128	124.8	127	124.5	-	-	1	*
Low Weight	67	65.3	67	65.7	-	-	-	-
Under 1,500 Grams	11	10.7	11	10.8	-	-	-	-
< 38 Weeks Gestation	168	163.7	168	164.7	-	-	-	-
Prenatal Care Began in 1st Trimester	870	848.0	865	848.0	1	*	3	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	5	*	5	*	-	-	-	-
Neonatal Deaths	3	*	3	*	-	-	-	-
Postneonatal Deaths	2	*	2	*	-	-	-	-
Perinatal Deaths	7	6.8	7	6.8	-	-	-	-
Fetal Deaths	6	5.8	6	5.8	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	519	276	243	516	273	243	1	1	-	1	1	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	5	1	2	2	5	1	3	13	31	46	96	314
White Male	1	-	-	1	4	1	2	8	21	27	57	151
White Female	4	1	2	1	1	-	1	5	10	19	37	162
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	519	732.7	516	736.9	1	*	10	47.0
Diseases of the Heart	185	261.2	184	262.8	-	-	-	-
Malignant Neoplasms	127	179.3	126	179.9	1	*	-	-
Cerebrovascular Diseases	32	45.2	32	45.7	-	-	-	-
Accidents and Adverse Effects	27	38.1	27	38.6	-	-	7	32.9
Chronic Obstructive Pulmonary Diseases and Allied Conditions	20	28.2	20	28.6	-	-	-	-
Pneumonia and Influenza	19	26.8	19	27.1	-	-	-	-
Diabetes Mellitus	9	12.7	9	12.9	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	7	9.9	7	10.0	-	-	1	*
Atherosclerosis	7	9.9	7	10.0	-	-	-	-
AIDS	2	*	2	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.



## Profile of Tuscola County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	56,130	Total Live Births:	759	Total Deaths:	528
Rank Among Counties:	32	Teenage Mothers:	67	Infant Deaths:	11
Per Square Mile:	69.1	Low Weight Births:	55	Neonatal Deaths:	6
		First Births:	279	Postneonatal Deaths:	5
				Perinatal Deaths:	6
				Fetal Deaths:	-
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	378	Divorces:	219		
Marriage Rate:	13.5	Divorce Rate:	7.8		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	759	13.5	745	13.6	5	-	8	12.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	67	88.3	63	84.6	1	-	3	-
Low Weight	55	72.5	52	69.8	1	-	2	-
Under 1,500 Grams	13	17.1	12	16.1	-	-	1	-
< 38 Weeks Gestation	133	175.2	130	174.5	-	-	3	-
Prenatal Care Began in 1st Trimester	641	844.5	631	847.0	4	-	5	-

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	11	14.5	11	14.8	-	-	-	-
Neonatal Deaths	6	7.9	6	8.1	-	-	-	-
Postneonatal Deaths	5	-	5	-	-	-	-	-
Perinatal Deaths	6	7.9	6	8.1	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

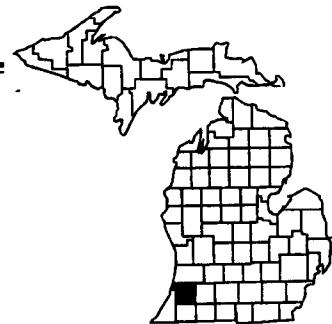
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	528	274	254	522	270	252	2	2	-	4	2	2
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	11	-	3	-	10	4	3	24	28	38	82	325
White Male	4	-	1	-	5	4	2	13	19	21	43	158
White Female	7	-	2	-	3	-	1	11	9	17	39	163
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	1	-	-	-	-	-	-	-
Other Female	-	-	-	-	1	-	-	-	-	-	-	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	528	940.7	522	949.7	2	-	13	77.5
Diseases of the Heart	179	318.9	178	323.8	-	-	1	-
Malignant Neoplasms	112	199.5	109	198.3	2	-	-	-
Cerebrovascular Diseases	34	60.6	34	61.9	-	-	-	-
Accidents and Adverse Effects	32	57.0	32	58.2	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	30	53.4	30	54.6	-	-	10	59.6
Pneumonia and Influenza	23	41.0	23	41.8	-	-	-	-
Diabetes Mellitus	18	32.1	18	32.7	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	9	16.0	8	14.6	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	1	-
AIDS	2	-	2	-	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Van Buren County



<b>POPULATION</b>		<b>NATILITY</b>		<b>MORTALITY</b>	
As of April 1, 1992:	72,331	Total Live Births:	1,118	Total Deaths:	647
Rank Among Counties:	24	Teenage Mothers:	186	Infant Deaths:	8
Per Square Mile:	118.3	Low Weight Births:	78	Neonatal Deaths:	3
		First Births:	403	Postneonatal Deaths:	5
				Perinatal Deaths:	4
				Fetal Deaths:	3
<b>MARRIAGE</b>		<b>DIVORCE</b>			
Marriages:	566	Divorces:	438		
Marriage Rate:	15.7	Divorce Rate:	12.1		

## NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,118	15.5	1,016	15.3	91	19.0	11	10.9
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	186	166.4	151	148.6	35	384.6	-	-
Low Weight	78	69.8	64	63.0	13	142.9	1	-
Under 1,500 Grams	8	7.2	5	*	3	*	-	-
< 38 Weeks Gestation	184	164.6	160	157.5	23	252.7	1	*
Prenatal Care Began in 1st Trimester	765	684.3	722	710.6	36	395.6	7	636.4

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	8	7.2	8	7.9	-	-	-	-
Neonatal Deaths	3	*	3	*	-	-	-	-
Postneonatal Deaths	5	*	5	*	-	-	-	-
Perinatal Deaths	4	*	3	*	1	*	-	-
Fetal Deaths	3	*	2	*	1	*	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

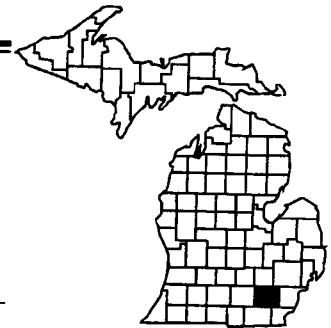
	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	647	328	319	560	291	269	84	35	49	3	2	1
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	8	3	3	3	3	8	6	18	29	38	93	435
White Male	6	1	3	1	2	5	3	11	13	18	46	182
White Female	2	1	-	2	-	2	2	5	11	14	33	197
Black Male	-	1	-	-	1	-	-	2	2	5	4	20
Black Female	-	-	-	-	-	1	1	-	2	1	9	35
Other Male	-	-	-	-	-	-	-	-	1	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	647	894.5	560	841.7	84	1,755.9	12	54.7
Diseases of the Heart	213	294.5	186	279.6	25	522.6	-	-
Malignant Neoplasms	147	203.2	124	186.4	23	480.8	-	-
Cerebrovascular Diseases	37	51.2	30	45.1	7	146.3	-	-
Accidents and Adverse Effects	43	59.4	37	55.6	6	125.4	8	36.5
Chronic Obstructive Pulmonary Diseases and Allied Conditions	31	42.9	29	43.6	2	*	-	-
Pneumonia and Influenza	18	24.9	16	24.0	2	*	-	-
Diabetes Mellitus	17	23.5	15	22.5	2	*	1	-
Chronic Liver Disease and Cirrhosis	6	8.3	4	*	1	*	-	-
Homicide	3	*	1	*	2	*	2	*
Suicide	10	13.8	10	15.0	-	-	-	-
Atherosclerosis	21	29.0	16	24.0	5	*	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Washtenaw County



## POPULATION

As of April 1, 1992: 288,025  
 Rank Among Counties: 6  
 Per Square Mile: 405.5

## NATALITY

Total Live Births: 3,944  
 Teenage Mothers: 320  
 Low Weight Births: 239  
 First Births: 1,737

## MORTALITY

Total Deaths: 1,591  
 Infant Deaths: 23  
 Neonatal Deaths: 18  
 Postneonatal Deaths: 5  
 Perinatal Deaths: 40  
 Fetal Deaths: 27

## MARRIAGE

Marriages: 2,088  
 Marriage Rate: 14.5

## DIVORCE

Divorces: 1,190  
 Divorce Rate: 8.3

## NATALITY BY RACE OF MOTHER

Live Births	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	3,944	13.7	2,986	12.4	645	19.7	229	16.0
Teenage Mothers	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
	320	81.1	169	56.6	140	217.1	5	-
Low Weight	239	60.6	160	53.6	61	94.6	13	56.8
Under 1,500 Grams	35	8.9	24	8.0	7	10.9	4	-
< 38 Weeks Gestation	612	155.2	441	147.7	133	206.2	31	135.4
Prenatal Care Began in 1st Trimester	3,107	787.8	2,517	842.9	395	612.4	177	772.9

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	23	5.8	15	5.0	8	12.4	-	-
Neonatal Deaths	18	4.6	12	4.0	6	9.3	-	-
Postneonatal Deaths	5	*	3	*	2	*	-	-
Perinatal Deaths	40	10.1	26	8.7	14	21.4	-	-
Fetal Deaths	27	6.8	17	5.7	10	15.3	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	1,591	775	815	1,380	659	720	198	109	89	12	7	5
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	23	8	5	1	10	9	14	56	82	143	236	1,004
White Male	5	5	2	-	4	5	6	27	40	69	116	380
White Female	9	-	3	1	2	-	4	19	24	46	82	530
Black Male	4	2	-	-	2	4	3	7	12	10	19	46
Black Female	4	-	-	-	1	-	-	3	6	13	18	44
Other Male	-	-	-	-	1	-	1	-	-	4	-	1
Other Female	-	1	-	-	-	-	-	-	-	1	1	2

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,591	552.4	1,380	572.8	198	603.4	24	32.6
Diseases of the Heart	496	172.2	433	179.7	58	176.8	1	*
Malignant Neoplasms	378	131.2	331	137.4	45	137.1	2	*
Cerebrovascular Diseases	108	37.5	99	41.1	9	27.4	-	-
Accidents and Adverse Effects	65	22.6	54	22.4	8	24.4	10	13.6
Chronic Obstructive Pulmonary Diseases and Allied Conditions	74	25.7	66	27.4	8	24.4	-	-
Pneumonia and Influenza	61	21.2	59	24.5	1	*	1	*
Diabetes Mellitus	31	10.8	23	9.5	8	24.4	-	-
Chronic Liver Disease and Cirrhosis	21	7.3	16	6.6	5	*	-	-
Homicide	14	4.9	5	*	9	27.4	1	*
Suicide	17	5.9	16	6.6	1	*	1	*
Atherosclerosis	7	2.4	7	2.9	-	-	-	-
AIDS	15	5.2	14	5.8	1	*	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

## Profile of Wayne County



## POPULATION

As of April 1, 1992: 2,096,179  
 Rank Among Counties: 1  
 Per Square Mile: 3,407.9

## NATALITY

Total Live Births: 35,802  
 Teenage Mothers: 5,953  
 Low Weight Births: 3,845  
 First Births: 13,486

## MORTALITY

Total Deaths: 21,455  
 Infant Deaths: 459  
 Neonatal Deaths: 319  
 Postneonatal Deaths: 140  
 Perinatal Deaths: 483  
 Fetal Deaths: 209

## MARRIAGE

Marriages: 11,356  
 Marriage Rate: 10.8

## DIVORCE

Divorces: 7,460  
 Divorce Rate: 7.1

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	35,802	17.1	16,864	14.1	18,369	21.1	489	15.4
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	5,953	166.3	1,532	90.8	4,375	238.2	40	81.8
Low Weight	3,845	107.4	1,088	64.5	2,715	147.8	37	75.7
Under 1,500 Grams	811	22.7	192	11.4	611	33.3	7	14.3
< 38 Weeks Gestation	8,070	225.4	2,790	165.4	5,173	281.6	96	196.3
Prenatal Care Began in 1st Trimester	26,305	734.7	14,143	838.7	11,753	639.8	373	762.8

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	459	12.8	116	6.9	338	18.4	3	*
Neonatal Deaths	319	8.9	77	4.6	238	13.0	2	*
Postneonatal Deaths	140	3.9	39	2.3	100	5.4	1	*
Perinatal Deaths	483	13.4	140	8.3	329	17.8	4	*
Fetal Deaths	209	5.8	72	4.3	127	6.9	2	*

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

Deaths	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
	21,455	11,122	10,328	12,226	6,061	6,165	9,084	4,981	4,099	131	71	59	
Age in Years													
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
Total Deaths	459	86	52	43	192	311	273	1,010	1,406	1,852	3,707	12,061	3
White Male	69	12	10	8	36	59	58	248	345	538	1,215	3,462	1
White Female	47	9	10	5	15	16	23	108	148	344	850	4,589	1
Black Male	192	35	15	25	126	182	155	435	561	563	893	1,798	1
Black Female	142	29	14	4	11	52	36	213	340	389	713	2,156	-
Other Male	2	1	1	1	4	2	-	2	8	6	17	27	-
Other Female	1	-	2	-	-	-	1	4	4	8	17	22	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	21,455	1,023.5	12,226	1,022.8	9,084	1,045.4	373	62.9
Diseases of the Heart	7,672	366.0	4,782	400.0	2,853	328.3	6	1.0
Malignant Neoplasms	4,583	218.6	2,798	234.1	1,754	201.9	19	3.2
Cerebrovascular Diseases	1,193	56.9	698	58.4	490	56.4	3	*
Accidents and Adverse Effects	583	27.8	283	23.7	289	33.3	82	13.8
Chronic Obstructive Pulmonary Diseases and Allied Conditions	744	35.5	517	43.2	224	25.8	13	2.2
Pneumonia and Influenza	742	35.4	431	36.1	300	34.5	8	1.3
Diabetes Mellitus	533	25.4	296	24.8	233	26.8	-	-
Chronic Liver Disease and Cirrhosis	352	16.8	172	14.4	178	20.5	1	-
Homicide	685	32.7	107	9.0	572	65.8	130	21.9
Suicide	239	11.4	152	12.7	84	9.7	21	3.5
Atherosclerosis	102	4.9	78	6.5	24	2.8	-	-
AIDS	380	18.1	98	8.2	280	32.2	8	1.3

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## Profile of Wexford County



## POPULATION

As of April 1, 1992: 27,099  
 Rank Among Counties: 48  
 Per Square Mile: 47.9

## NATALITY

Total Live Births: 436  
 Teenage Mothers: 65  
 Low Weight Births: 27  
 First Births: 171

## MORTALITY

Total Deaths: 254  
 Infant Deaths: 2  
 Neonatal Deaths: 1  
 Postneonatal Deaths: 1  
 Perinatal Deaths: 3  
 Fetal Deaths: 2

## MARRIAGE

Marriages: 272  
 Marriage Rate: 20.1

## DIVORCE

Divorces: 128  
 Divorce Rate: 9.4

## NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	436	16.1	430	16.1	-	-	5	*
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	65	149.1	63	146.5	-	-	2	*
Low Weight	27	61.9	26	60.5	-	-	1	*
Under 1,500 Grams	5	*	5	*	-	-	-	-
< 38 Weeks Gestation	54	123.9	54	125.6	-	-	-	-
Prenatal Care Began in 1st Trimester	330	756.9	329	765.1	-	-	1	*

Note: Rate is per 1,000 estimated population in 1992 and ratio per 1,000 live births in 1993 in specified group.

## INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	2	*	2	*	-	-	-	-
Neonatal Deaths	1	*	1	*	-	-	-	-
Postneonatal Deaths	1	*	1	*	-	-	-	-
Perinatal Deaths	3	*	3	*	-	-	-	-
Fetal Deaths	2	*	2	*	-	-	-	-

Note: Rate is per 1,000 live births or total births in 1993 in specified group.

## MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	254	128	126	251	125	126	-	-	-	2	2	-
	Age in Years											
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+
Total Deaths	2	-	-	2	2	2	3	5	8	13	35	182
White Male	2	-	-	1	2	-	1	5	7	6	18	83
White Female	-	-	-	1	-	1	2	-	1	7	17	97
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	1	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-

## LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	254	937.3	251	938.3	-	-	4	*
Diseases of the Heart	83	306.3	82	306.5	-	-	-	-
Malignant Neoplasms	56	206.7	55	205.6	-	-	1	*
Cerebrovascular Diseases	21	77.5	21	78.5	-	-	-	-
Accidents and Adverse Effects	9	33.2	9	33.6	-	-	1	*
Chronic Obstructive Pulmonary Diseases and Allied Conditions	13	48.0	13	48.6	-	-	-	-
Pneumonia and Influenza	11	40.6	11	41.1	-	-	-	-
Diabetes Mellitus	9	33.2	9	33.6	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	*	3	*	-	-	-	-
Homicide	1	*	1	*	-	-	-	-
Suicide	3	*	3	*	-	-	-	-
Atherosclerosis	5	*	5	*	-	-	-	-
AIDS	1	*	1	*	-	-	-	-

Note: Rate is per 100,000 estimated population in 1992 in specified group.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



# NATALITY

## SECTION I







# NATALITY

## KEY TRENDS

**Demographic** Between 1900 and 1993, the number of total births (live births and fetal deaths) has varied considerably. The general trend has been increasing numbers of total births from 1900 through 1957, declining numbers through 1976 and fairly stable numbers until 1989. During 1989 through 1992 there were more total births each year in Michigan than had been born to Michigan residents since 1972. There was a 3.0 percent drop in the number of total births between 1992 and 1993.

In the last twenty years fertility rates for white and black women decreased with the fertility rates for white women reaching a low level by about 1975 and for black women by about 1985. Fertility rates for white women have remained fairly stable since 1975 while rates for black women have risen since 1985. During this time period there has been an increase in the percent of births to minority race populations from 18.7 percent to 22.3 percent of the births.

Since 1980 birth rates have fluctuated from a low in 1983 of 31.3 births per 1,000 white women 15 to 19 years of age to a high of 43.2 in 1990. Rates for black teenage women have fluctuated from a low of 80.5 in 1983 to a high of 135.6 in 1989.

**Prenatal Care** A national goal is to increase to at least 90 percent the proportion of pregnant women who initiate prenatal care in the first trimester of pregnancy by the year 2000. In Michigan, the percentage of mothers who initiated care early increased from 69 percent in 1970 to a peak of 81 percent in 1985 and was about 80 percent in 1993. The highest percentages of mothers who initiated care early occurred among white and Asian and Pacific Islander mothers and mothers of Arab ancestry (78 to 84 percent). The lowest percentages occurred among black, American Indian and mothers of Hispanic ancestry (64 to 71 percent).

**Birth Outcome** A national goal is to have the percent of infants with low birth weight be no more than 5 percent overall and 9 percent among infants born to black mothers by the year 2000. The low

## An Overview, 1993

Total Resident Births (live births & fetal deaths)	140,286
Total Resident Live Births	139,560
Resident Live Births per Day	382.4
Total Resident Fetal Deaths	726
Resident Fetal Deaths per Day	2
Crude Birth Rate	14.8
Fertility Rate	63.2
Fetal Death Ratio	5.2
First Births (Percent of Total Live Births)	39.3
Median Birth Weight in Grams (Live Births)	3,374
Median Birth Weight in Grams (Fetal Deaths)	946
Low Weight Live Births	10,700
Low Weight Birth Ratio	76.7
Median Age of Mother (Live Births)	27
Median Age of Mother (Fetal Deaths)	27
Live Births with Congenital Anomalies	1,589
Congenital Anomalies per 10,000 Live Births	113.9
Live Births with No Prenatal Care	1,975
No Prenatal Care Ratio	14.2
Home Births	860
Live Born Sets of Twins	1,726
Live Born Sets of Triplets	59
Live Born Multiple Births of Four or More	2
Male Live Births per 100 Female Live Births	104.8

Source: Office of the State Registrar and Division of Health Statistics, MDPH

birth weight percentage in Michigan declined from 8.0 percent in 1966 to a low of 6.8 percent in 1985. It increased to 7.7 percent in 1993. The percent for white mothers decreased from 6.6 in 1970 to 5.9 in 1993, while the percent for black mothers rose from 14.3 in 1970 to 14.4 in 1993. Of more concern is the percent of births with extremely low birth weight under 750 grams where about 3/4 of the live births will die within one year, usually in the first day of life. While 0.2 to 0.6 percent of the infants born to

white, American Indian, Asian and Pacific Islander mothers and mothers of Arab and Hispanic ancestry had extremely low birth weight in 1993, 1.2 percent of the live births to black mothers had extremely low birth weight.

**Tobacco Use** A national goal is to reduce tobacco use by pregnant women to less than 10 percent of the births by the year 2000. In 1993 19.4 percent of the pregnant Michigan women used tobacco during their pregnancy.

Tobacco use during pregnancy was highest among American Indian mothers (41.0 percent). Less than 5 percent of the Asian and Pacific Islander mothers and about 8 percent of the mothers of Arab ancestry smoked. About 11 percent of the mothers of Hispanic ancestry smoked, while 17 and 20 percent of the black and white mothers smoked, respectively.

### LIVE BIRTHS

**Michigan Trend** The smallest number of live births officially recorded in this century was 43,221 in 1901. The actual number of live births was undoubtedly higher. Because of the method of recording, many live births were probably not recorded.

Live births generally increased from 43,699 in 1900, to 208,488 in the peak year of 1957 with major declines occurring during the first years of the Great Depression and the Second World War (Figure 1.1). Between 1957 and 1976, live births decreased by 37.0 percent to 131,378, the lowest total since 1945. Between 1977 and 1988 the number of births fluctuated between a high of 145,162 live births in 1980 and a low of 133,026 in 1983. There was a sharp increase in the number of live births in 1989 and 1990. The number of births declined in 1993 to 139,560.

**United States** The national pattern was similar to that observed in Michigan. For 1993, the provisional figure was 4,039,000, a decrease of 0.6 percent from 1992.

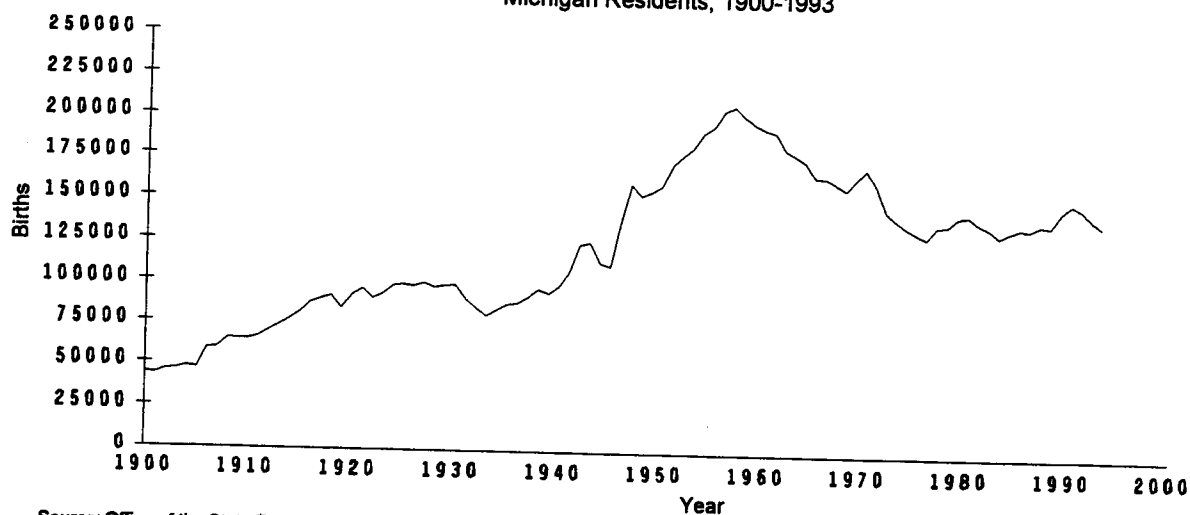
**Crude Birth Rates** Another view of the historic pattern in live births may be obtained through examination of changes in the crude birth rate. In this century the crude birth rate in Michigan has ranged from a low of 14.4 per 1,000 residents in 1976 to a high of 27.4 in 1956 (Figure 1.2). Between 1976 and 1988, the rate fluctuated between the high of 15.7 in 1980 and a low of 14.5 in 1983. From 1989 through 1991 the crude birth rate was about 16 live births per 1,000 residents. In 1993 the rate declined to 14.8.

Table 1.1  
Live Births and Crude Birth Rates  
Michigan and United States Residents  
Selected Years, 1900 - 1993

United States		Year	Michigan	
Number	Rate		Number	Rate
—	—	1900	43,699	18.1
2,618,000	21.3	1930	98,882	20.4
4,257,850	23.7	1960	195,056	24.9
3,731,386	18.4	1970	171,667	19.3
3,612,258	15.9	1980	145,162	15.7
3,629,238	15.8	1981	140,579	15.2
3,680,537	15.9	1982	137,950	15.0
3,638,933	15.5	1983	133,026	14.5
3,669,141	15.5	1984	135,782	15.0
3,760,561	15.8	1985	138,052	15.2
3,756,547	15.6	1986	137,626	15.1
3,809,394	15.7	1987	140,466	15.3
3,909,510	15.9	1988	139,635	15.2
4,040,958	16.3	1989	148,164	16.0
4,158,212	16.7	1990	153,080	16.5
4,110,907	16.3	1991	149,478	15.9
4,065,014	15.9	1992	143,827	15.2
4,039,000Pr.	15.7Pr.	1993	139,560	14.8

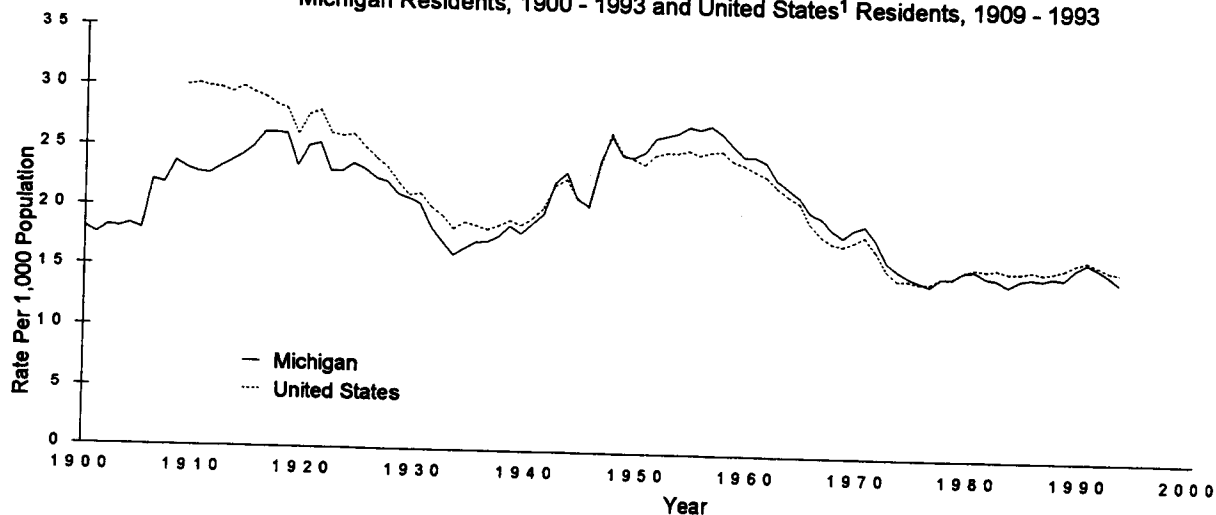
Source: Office of the State Registrar and Division of Health Statistics, MDPH

Figure 1.1  
Live Births  
Michigan Residents, 1900-1993



Source: Office of the State Registrar and Division of Health Statistics, MDPH

Figure 1.2  
Live Birth Rates  
Michigan Residents, 1900 - 1993 and United States<sup>1</sup> Residents, 1909 - 1993



<sup>1</sup> United States rates prior to 1909 are not available.  
<sup>2</sup> United States rate for 1993 is provisional.

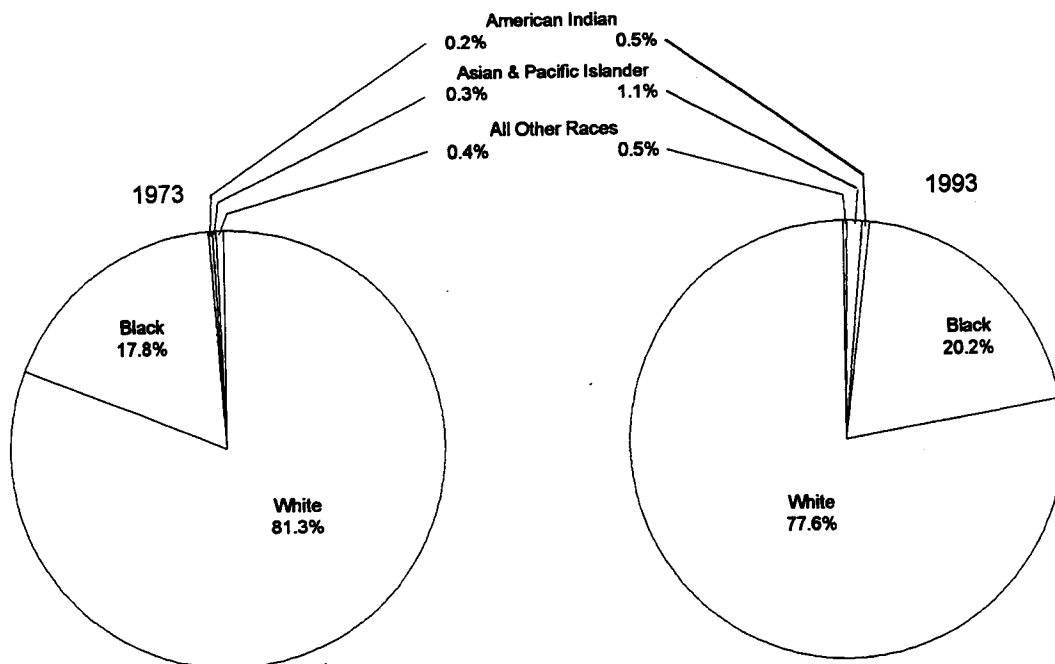
Source: Office of the State Registrar and Division of Health Statistics, MDPH

### AGE, RACE AND ANCESTRY

**Racial Composition** As part of the changing demographics in Michigan, the racial composition of women having live births in Michigan changed over the period 1973 through 1993 (Figure 1.3). Live births to white women declined from 81.3 percent of

all live births in 1973 to 77.6 percent in 1993. The percentages of live births born to mothers of minority race groups increased from 18.7 to 22.3 percent during the twenty year interval.

Figure 1.3  
Live Births by Mother's Race or National Origin  
Michigan Residents, 1973 and 1993



Note: In 1973 Korean race was included in all other races and Asian Indian race was included in white.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Mother's Age** In 1993, 38.2 percent of all live births were to women less than 25 years of age (Table 1.2). Only 1.2 percent occurred to women over 39 years of age. The median age of Michigan mothers was 27 years. Black, American Indian and Hispanic mothers were younger (median: 23 or 24 years), while white, Asian and Pacific Islander and Arab mothers were older (median: 27 to 28 years).

**Teenage Mothers** Differences are reflected in the proportion of teenage births in each race or ancestry group. Although over half of the births to teenage women are to white mothers, only about 1 in 10 births to white mothers were born to a teenage women. Even lower proportions of Asian and Pacific Islander mothers and mothers of Arab ancestry were under age 20, about 1 in 17 and 1 in 14 respectively. About 1 in 4 births to black and American Indian mothers were born to teenage mothers and 1 in 5 births to mothers of Hispanic ancestry.

Table 1.2  
Live Births and Percent Distribution by Age, Race and Ancestry of Mother  
Michigan Residents, 1993

Age of Mother in Years	Race <sup>1</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
< 15	371	0.3	124	0.1	244	0.9	2	0.3	1	0.1	-	-	1	0.0	25	0.6
15 - 19	17,198	12.3	10,123	9.3	6,769	24.0	169	22.3	92	5.8	8	11.4	190	6.9	881	20.2
20 - 24	35,732	25.6	25,531	23.6	9,517	33.7	265	34.9	279	17.6	21	30.0	687	24.9	1384	31.7
25 - 29	40,975	29.4	34,120	31.5	5,946	21.0	184	24.2	548	34.5	23	32.9	836	30.3	1069	24.5
30 - 34	31,833	22.8	27,258	25.2	3,826	13.5	107	14.1	466	29.3	13	18.6	681	24.7	711	16.3
35 - 39	11,682	8.4	9,739	9.0	1,665	5.9	29	3.8	173	10.9	4	5.7	282	10.2	241	5.5
40 +	1,707	1.2	1,392	1.3	264	0.9	2	0.3	30	1.9	1	1.4	75	2.7	45	1.0
Not Stated	62	0.0	42	0.0	18	0.1	1	0.1	-	-	-	-	3	0.1	5	0.1
Total	139,560	100.0	108,329	100.0	28,249	100.0	759	100.0	1,589	100.0	70	100.0	2,755	100.0	4,361	100.0
Median Age at Last Birthday	27		27		23		23		28		26		27		24	

<sup>1</sup> Live births with race unknown are in the "Total" column only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## FERTILITY

The fertility rate relates the number of live births to the female population of childbearing age, 15 through 44 years. Similarly, age-specific rates which relate the number of live births to the females in a specific age group provide more detail on the fertility of women in the age group.

**Trends** A comparison of fertility rates since 1900 for Michigan with those for the United States since 1930 is presented in Table 1.3. The crude birth rate changes discussed above understate the recent decline in fecundity for both regions. The fertility rate for Michigan in 1993 was 48.7 percent below the 1960 rate.

**Total Fertility** Figure 1.4 displays the changes in the total fertility rate between 1920 and 1993 for Michigan and the United States. (See also Table 4.4) The total fertility rate is a hypothetical measure of the number of live births that would occur to each 1,000 women during their reproductive life, if these women experienced the age-specific birth rates observed in a given year.

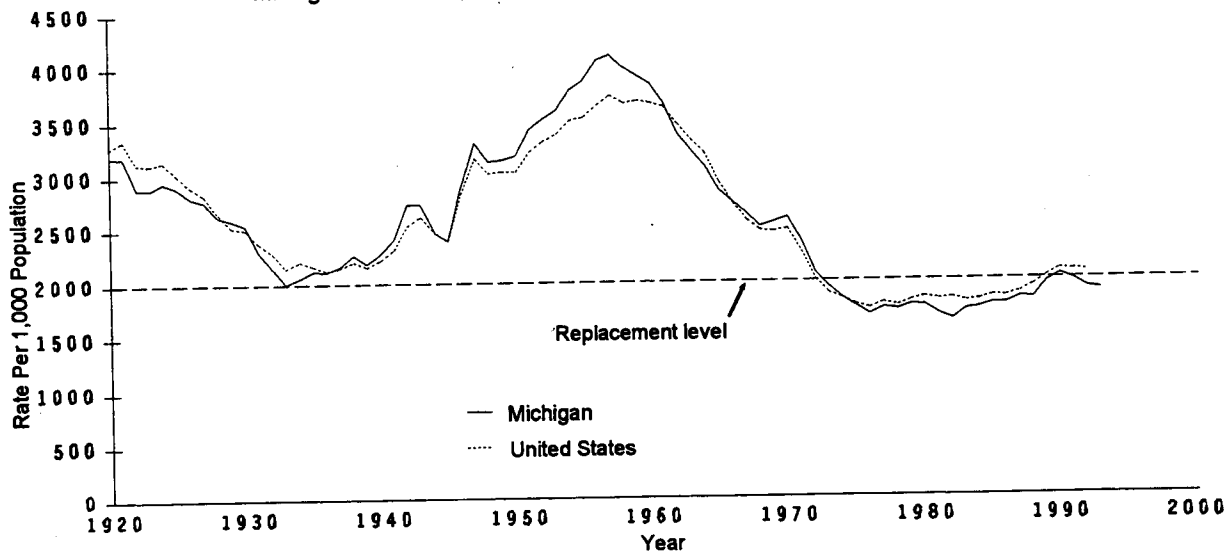
Michigan's total fertility rate has generally paralleled that of the nation. The Michigan rate dropped

Table 1.3  
**Fertility Rates**  
Michigan and United States Residents  
Selected Years, 1900 - 1993

United States	Year	Michigan
—	1900	78.5
89.2	1930	87.6
118.0	1960	123.1
87.9	1970	91.7
68.4	1980	66.3
67.4	1981	63.2
67.3	1982	61.7
65.8	1983	59.3
65.4	1984	63.1
66.2	1985	63.8
65.4	1986	63.2
65.7	1987	64.3
67.2	1988	63.9
69.2	1989	67.9
70.9	1990	69.1
69.6	1991	62.7
68.9	1992	65.1
68.3Pr.	1993	63.2

Source: Office of the State Registrar and Division of Health Statistics,  
MDPH

Figure 1.4  
**Total Fertility Rates<sup>1</sup>**  
Michigan Residents, 1920 - 1993 and United States Residents, 1920 - 1992



<sup>1</sup> Total fertility rate is total children to 1,000 women in their lifetime assuming constant live birth rates.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

from 3,195.5 in 1920 to 2,006.5 in 1933 and then increased between 1933 and 1957, reaching 4,100.0 in the latter year. Between 1957 and 1993 the total fertility rate in Michigan declined to a low of 1,632.5 in 1982 and increased to 1,892.5 in 1993. The rate was 2,065.0 in 1992 for the United States. The national rates have been higher than the Michigan rates since 1975.

In 1990, for the first time since 1973, both Michigan and national total fertility rates were above 2,000. In 1991 through 1993 the Michigan total fertility rate was again below 2,000. A total fertility rate of over 2,000 is necessary for replacement of the parents, since not all women survive the reproductive years nor would all children survive to adulthood. If the total fertility rate falls below 2,000 for a long period, a natural decrease in population will eventually occur. It should be noted that although the total fertility rate has almost always been below 2,000 since 1973, the rate of natural increase for Michigan

remains positive. Over the period 1973 through 1993, there were 1,324,871 persons added to the population of Michigan through the excess of live births over deaths.

Table 1.4 provides a comparison between fertility rates for white and black women in Michigan for the period since 1970.

The fertility rate for black women was 40.5 percent above the rate for white women in 1970, fell sharply to 10.8 percent higher in 1985 and increased to 34.8 percent higher in 1993. Since 1970 the fertility rate for black women has declined 34.7 percent compared with a 32.0 percent drop for white women.

The fertility rates for white women declined to its lowest level of 60.7 in 1976, then rose to a high of 65.3 in 1990. Similarly, rates for black women declined to 68.2 in 1983 and then increased to a high of 93.5 in 1990.

Table 1.4  
Fertility Rates by Race of Mother  
Michigan Residents, Selected Years, 1970 - 1993

Year	Fertility Rate	
	White	Black
1970	87.9	123.5
1975	62.6	89.5
1980	64.2	78.3
1985	62.8	69.6
1990	65.3	93.5
1991	59.2	81.2
1992	61.5	84.6
1993	59.8	80.6
% Change 1970-1993	-32.0	-34.7

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## AGE-SPECIFIC LIVE BIRTH RATES

**All Women** Figure 1.5 displays age-specific live birth rates for the period 1970-1993. Live birth rates in all age groups dropped between 1970 and 1976. For women under 20 years of age the rate continued to decline throughout the years 1976-1983 reaching a low of 38.6 in 1983. The rate increased after 1983 to a high of 60.0 in 1990 then declined to 54.1 in 1993.

After declining between 1970 and 1976, live birth rates for women between 20-24 and 25-29 years of age remained stable until 1980. The rates decreased to low levels in 1983 and increased to relatively high levels in 1990. These rates are decreasing again.

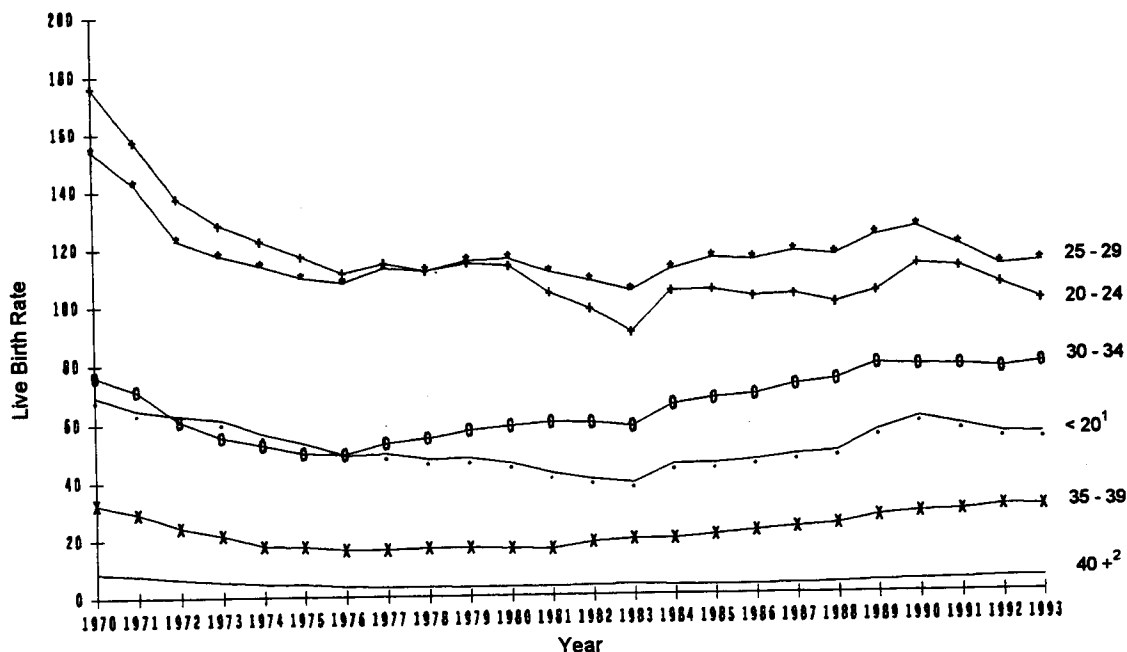
For women in the age groups 30-34 and 35-39 live birth rates decreased between 1970 and 1976, then increased by 58.9 and 80.4 percent, respectively, by 1993.

**Black and White Women** Figures 1.6 and 1.7 present the trends in age-specific rates for white and black women respectively for the period 1980-1993. Rates for black women under age 25 were above those for white women during these years. The live birth rates for white and black women aged 25 and over were similar.

Between 1980 and 1993 rates for white and black females increased for all age groups, except for white females ages 20 to 29.

For women under age 20, birth rates decreased for both race groups through 1983, increased from 1984 through 1989 for black teenagers and from 1984 through 1990 for white teenage women. The rates decreased in 1991 and 1992 for white teens, but increased slightly in 1993. The rates decreased for black teens from 1990 through 1993.

Figure 1.5  
Age-Specific Live Birth Rates  
Michigan Residents, 1970 - 1993



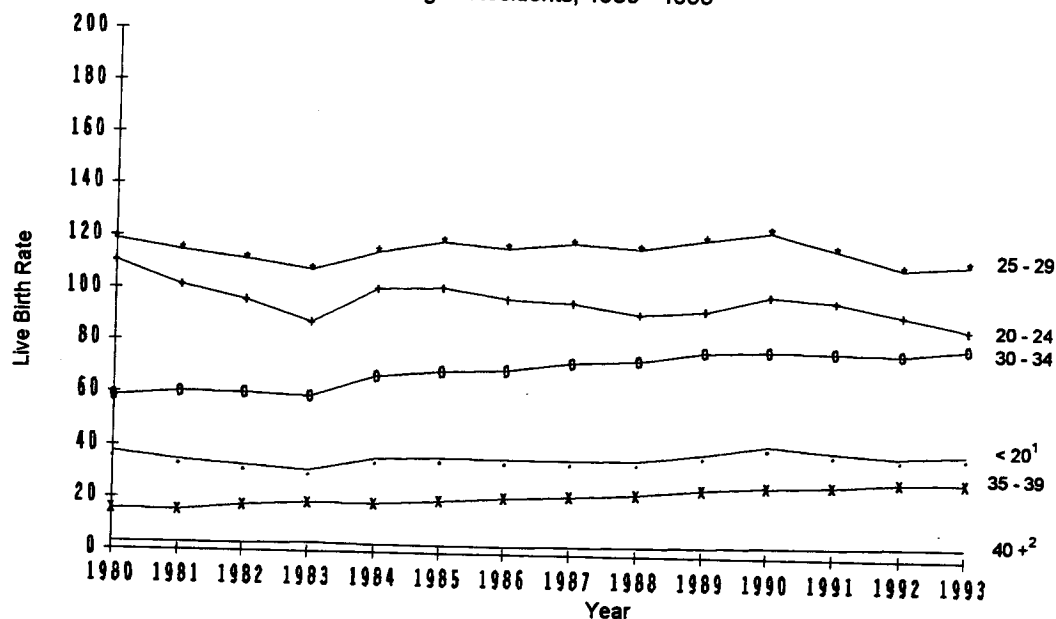
<sup>1</sup> Based on live births to women under 20 and population of females 15-19.

<sup>2</sup> Based on live births to women 40 and over and population of females 40-44.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



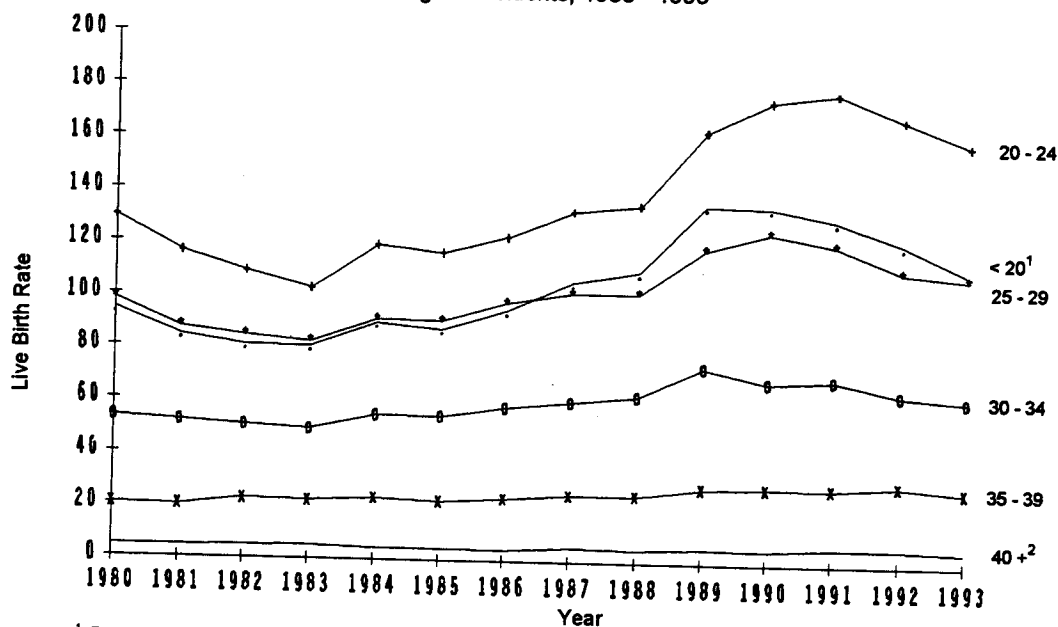
Figure 1.6  
Age-Specific Live Birth Rates to White Mothers  
Michigan Residents, 1980 - 1993



<sup>1</sup> Based on live births to women under 20 and population of females 15-19.  
<sup>2</sup> Based on live births to women 40 and over and population of females 40-44.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Figure 1.7  
Age-Specific Live Birth Rates to Black Mothers  
Michigan Residents, 1980 - 1993

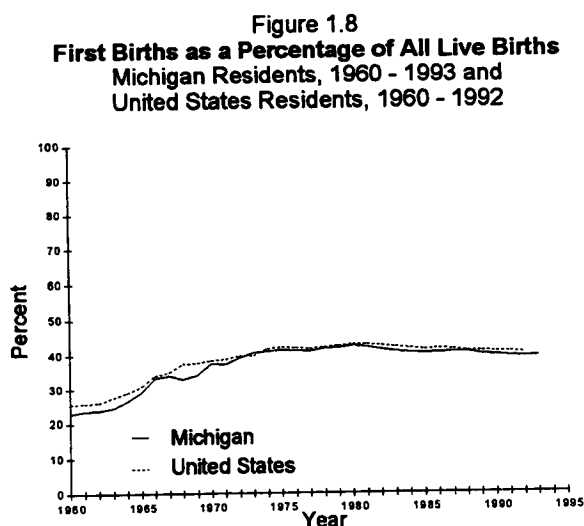


<sup>1</sup> Based on live births to women under 20 and population of females 15-19.  
<sup>2</sup> Based on live births to women 40 and over and population of females 40-44.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## BIRTH ORDER

The percent of live births which were first-order births is displayed in Figure 1.8 for Michigan and the United States for the period 1960 to 1993. Between 1960 and 1980, the percent of first-order births increased from 22.9 to 42.4 in Michigan. Then the percentage generally decreased to 39.3 in 1993.



Source: Office of the State Registrar and Division of Health Statistics, MDPH

## INTERPREGNANCY TIME PERIOD

In 1993 women having live births whose most recent prior termination was a fetal death had a median time span of 1 year and 10 months between their previous termination and a live birth (Table 1.5). This compares to a median of 2 years 7 months for women having prior live births. A spacing of less than one year was observed for 11.9 percent of all women reporting their most recent prior pregnancy was a fetal death, but only 2.1 percent of all women reporting their most recent prior pregnancy was a live birth.

Table 1.5  
Live Births to Women Reporting Prior  
Pregnancy Terminations<sup>1</sup> by Time Span  
Between Last and Current Termination and  
by Whether Prior Termination Resulted  
in a Live Birth or a Fetal Death<sup>2</sup>  
Michigan Residents, 1993<sup>3</sup>

Time Span In Years	Total		Prior Fetal Death		Prior Live Birth	
	Number	%	Number	%	Number	%
Total	92,813	100.0	22,764	100.0	70,049	100.0
< 1	4,192	4.5	2,700	11.9	1,492	2.1
1 < 2	29,824	32.1	9,403	41.3	20,421	29.2
2 < 3	22,148	23.9	3,523	15.5	18,625	26.6
3 < 5	20,584	22.2	3,307	14.5	17,277	24.7
5 +	16,065	17.3	3,831	16.8	12,234	17.5
Median Time Span	2yrs., 6mos.		1yr., 10mos.		2yrs., 7mos.	

<sup>1</sup> Terminations with time spans of zero years (i.e., second or later births in plural deliveries) and terminations with unknown time spans are excluded.

<sup>2</sup> Fetal death as defined for the pregnancy history on the birth record is a fetal death of any gestational age.

<sup>3</sup> The methodology for calculating interpregnancy time span was altered slightly in 1984. Hence, median time spans and percentages are not comparable to statistics published in prior years.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

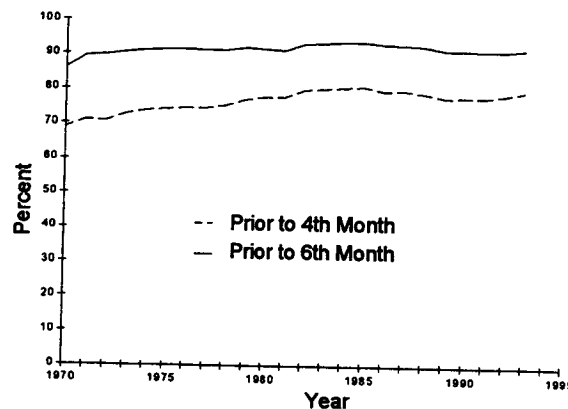
## PRENATAL CARE

**Trend** Pregnant women are encouraged to initiate prenatal care during the first trimester and to receive care on a regular, prescribed basis until delivery occurs. The percentage of women delivering live born infants who initially obtained prenatal care in the first trimester of pregnancy increased steadily between 1970, when the figure was 69.0, and 1985 when it peaked at 81.0 (Figure 1.9). Since then it has fluctuated between 78.0 and 80.0. It was 79.9 percent in 1993.

**Race, Ancestry and Age** The proportion of live births to women receiving early prenatal care varied considerably by race, ancestry and age of mother (Table 1.6). In 1993, 84.1 percent of infants born to white women were born to mothers who began their prenatal care in the first trimester. Similar percentages of Asian and Pacific Islander mothers and mothers of Arab ancestry initiated care early, 77.5 and 82.9 percent respectively. Lower percentages of black and American Indian mothers and mothers of Hispanic ancestry initiated care early, 64.2 to 70.8 percent.

Over 80 percent of live births to women aged 25 or over were to women who sought care promptly. The proportion fell to 39.9 percent for women under 15 years. About six in ten (61.9 percent) infants born to mothers 15-19 years of age were to mothers who received care early.

Figure 1.9  
Percent of Women Having Live Births Who Received Care Prior to the 4th Month and 6th Month of Pregnancy  
Michigan Residents, 1970 - 1993



Source: Office of the State Registrar and Division of Health Statistics, MDPH

Similar patterns in the proportion of mothers initiating care early by age of mother are evident for the race and ancestry groups. However, the proportions were generally highest in each age group for white mothers and mothers of Arab ancestry, next highest for Asian and Pacific Islander mothers. Lower proportions of American Indian mothers, mothers of Hispanic ancestry and black mothers initiated care early in each age group.

Table 1.6  
Numbers and Percents<sup>1</sup> of Live Births with Prenatal Care Beginning in the First Trimester by Age, Race and Ancestry of Mother  
Michigan Residents, 1993

Age of Mother in Years	Race <sup>2</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
< 15	148	39.9	60	48.4	86	35.2	1	50.0	1	100.0	-	-	1	100.0	11	44.0
15 - 19	10,639	61.9	6,714	66.3	3,737	55.2	110	65.1	55	59.8	5	62.5	131	68.9	533	60.5
20 - 24	26,424	74.0	19,866	77.8	6,109	64.2	176	66.4	196	70.3	12	57.1	542	78.9	892	64.5
25 - 29	34,976	85.4	30,109	88.2	4,160	70.0	148	80.4	431	78.6	19	82.6	705	84.3	805	75.3
30 - 34	27,874	87.6	24,550	90.1	2,743	71.7	79	73.8	388	83.3	11	84.6	587	86.2	569	80.0
35 - 39	9,961	85.3	8,630	88.6	1,131	67.9	20	69.0	137	79.2	3	75.0	253	89.7	179	74.3
40 +	1,378	80.7	1,170	84.1	169	64.0	2	100.0	23	76.7	1	100.0	63	84.0	34	75.6
Not Stated	43	69.4	33	78.6	9	50.0	1	100.0	-	-	-	-	2	66.7	5	100.0
Total	111,443	79.9	91,132	84.1	18,144	64.2	537	70.8	1,231	77.5	51	72.9	2,284	82.9	3,028	69.4

<sup>1</sup> Percent denominators obtained from column numbers in Table 1.2

<sup>2</sup> Live births with race unknown are in the "Total" column only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**No Care** In 1993, 1,975 resident live births, or 14.2 of every 1,000, occurred with the mother having had no prenatal care (Table 1.7). This figure includes only those where it was specified on the birth record that the mother received no prenatal care. The comparative statistics were 6.3 in 1985 and 22.6 in 1970.

Those who received no prenatal care were for the most part younger mothers (median age of 23). Also, the lack of prenatal care was disproportionately high among black mothers (42.0 per 1,000 live births).

**Adequacy of Care** A measure of the quality of care has been developed by Dr. D. W. Kessner which combines information on the month prenatal care began, the gestational age at birth and the number of

prenatal visits (see Technical Notes). Adequate prenatal care was obtained by mothers of 73.6 percent of the live births (Table 1.8). The proportions of live births to white mothers and mothers of Arab ancestry who received adequate care (78.5 and 77.2 percent) were higher than the corresponding proportions for black and American Indian mothers (55.3 and 62.8 percent) and mothers of Hispanic ancestry (62.8 percent).

Inadequate care was received by the mothers of 9.4 percent of all live births. The proportions of live births to mothers who received inadequate care were 6.4 percent for white mothers, 9.2 to 12.5 percent for Asian and Pacific Islander mothers, American Indian mothers and mothers of Arab and Hispanic ancestry and 20.2 percent for black mothers.

Table 1.7  
Live Births and Birth Ratios with No Prenatal Care by Age and Race of Mother  
Michigan Residents, 1993

Age of Mother in Years	Race of Mother									
	Total		White		Black		All Other		Not Stated	
	Number	Ratio <sup>1</sup>	Number	Ratio <sup>1</sup>	Number	Ratio <sup>1</sup>	Number	Ratio <sup>1</sup>	Number	Ratio <sup>1</sup>
< 15	23	62.0	4	*	19	77.9	-	-	-	-
15-19	468	27.2	172	17.0	294	43.4	2	*	-	-
20-24	603	16.9	238	9.3	356	37.4	8	14.2	1	*
25-29	406	9.9	166	4.9	238	40.0	2	*	-	-
30-34	288	9.0	116	4.3	162	42.3	9	15.4	1	*
35-39	153	13.1	52	5.3	100	60.1	1	*	-	-
40 +	31	18.2	14	10.1	15	56.8	2	*	-	-
Not Stated	3	*	1	*	2	*	-	-	-	-
Total	1,975	14.2	763	7.0	1,186	42.0	24	9.9	2	*
Median Age at Last Birthday	23		24		23		29		27	

<sup>1</sup> Ratio denominators obtained from column numbers in Table 1.2.

Although the mothers of 79.9 percent of all live births received prenatal care during the first trimester, only 73.6 percent received adequate care as defined by the Kessner Index. Overall, this means that of the mothers who initiated prenatal care most promptly, 7.9 percent (8,776 women) did not receive the minimum number of visits they should have received (Tables 1.6 and 1.8).

Considered as a proportion of the live births to mothers who did not receive adequate care (36,893 women), 23.8 percent of the live births to mothers not receiving adequate care were to mothers who initiated care within the recommended first trimester, but did not continue to receive the appropriate minimum number of prenatal care visits.

Table 1.8  
Numbers and Percents of Live Births by Level of Prenatal Care, Race and Ancestry of Mother  
Michigan Residents, 1993

Level of Prenatal Care (Kessner Index <sup>1</sup> )	Race <sup>2</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Adequate	102,667	73.6	85,075	78.5	15,617	55.3	477	62.8	1,130	71.1	46	65.7	2,126	77.2	2,739	62.8
Intermediate	23,357	16.7	16,012	14.8	6,775	24.0	198	26.1	303	19.1	14	20.0	366	13.3	1,058	24.3
Inadequate	13,080	9.4	6,932	6.4	5,719	20.2	84	11.1	155	9.8	10	14.3	253	9.2	547	12.5
Unknown	456	0.3	310	0.3	138	0.5	-	-	1	0.1	-	-	10	0.3	17	0.4
Total	139,560	100.0	108,329	100.0	28,249	100.0	759	100.0	1,589	100.0	70	100.0	2,755	100.0	4,361	100.0

<sup>1</sup> The Kessner Index is a classification of prenatal care based on the month of pregnancy in which prenatal care began, the number of prenatal visits and the length of pregnancy (i.e., for shorter pregnancies, fewer prenatal visits constitute adequate care.)

<sup>2</sup> Live births with race unknown are in the "Total" column only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## BIRTH WEIGHT

The mean weight for all live births was 3,337 grams or approximately 7 pounds 6 ounces (Table 1.9). The median weight was 3,374 grams or about 7 pounds 7 ounces. The median birth weight was lowest for infants born to black mothers, highest for white and American Indian mothers. The medians were somewhat lower for mothers of Arab and Hispanic ancestry. The median birth weight for infants born to Asian and Pacific Islander mothers was about 190 and 180 grams lower than the medians for infants born to white and American Indian

mothers and 93 grams higher than the median for infants born to black mothers.

Infants born to black mothers had a higher proportion of birth weights with extremely low birth weight below 750 grams (1.2 percent). Other race and ancestry groups had from 0.2 to 0.6 percent of the births below 750 grams. Infants born with this extremely low birth weight have very high mortality rates (over 75 percent mortality).

Table 1.9  
Numbers and Percents of Live Births by Birth Weight, Race and Ancestry of Mother  
Michigan Residents, 1993

Weight at Birth in Grams	Race <sup>1</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
< 750	699	0.5	349	0.3	337	1.2	2	0.3	9	0.6	-	-	6	0.2	13	0.3
750 - 1,499	1,399	1.0	805	0.7	571	2.0	9	1.2	11	0.7	1	1.4	16	0.6	33	0.8
1,500 - 2,499 <sup>2</sup>	8,602	6.2	5,270	4.9	3,165	11.2	44	5.8	90	5.7	5	7.1	130	4.7	230	5.3
2,500 +	128,638	92.2	101,750	93.9	24,117	85.4	704	92.8	1,477	93.0	64	91.4	2,600	94.4	4,077	93.5
Not Stated	222	0.2	155	0.1	59	0.2	-	-	2	0.1	-	-	3	0.1	8	0.2
Total	139,560	100.0	108,329	100.0	28,249	100.0	759	100.0	1,589	100.0	70	100.0	2,755	100.0	4,361	100.0
Mean Weight	3,337		3,406		3,075		3,375		3,223		3,269		3,323		3,343	
Median Weight	3,374		3,430		3,147		3,420		3,240		3,248		3,345		3,365	

<sup>1</sup> Live births with race unknown are in the "Total" column only.

<sup>2</sup> In order to conform to national standards, the definition of low birthweight was changed in 1984 to less than 2,500 grams.

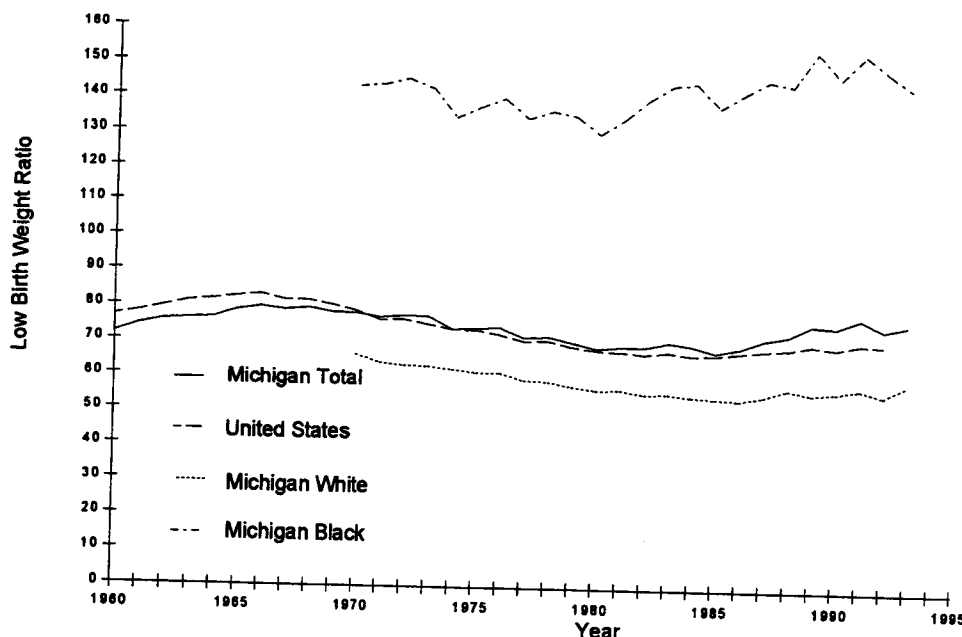
Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Low Birth Weight** A subgroup of major importance when analyzing historical birth weight trends is the category of infants weighing less than 2,500 grams (approximately 5 pounds 8 ounces or less) at birth. Such infants have historically experienced higher mortality in their first year of life than heavier infants.

Figure 1.10 displays the percent of low birth weight infants born to Michigan and the United

States residents over the last thirty-four years. In 1960 7.2 percent of the live births in Michigan had low birth weight. Between 1960 and 1966 the percentage increased, reaching a high for the 33 year period (8.0). The percentage generally declined until 1985 when the percent was 6.8, the lowest rate since 1960. It rose to 7.7 in 1993. The pattern for the United States was similar between 1970 and 1985. By 1993 the low birth weight percentage for the nation had increased to 7.1 percent.

Figure 1.10  
Low Birth Weight<sup>1</sup> Ratios  
Michigan Residents by Race, 1960 - 1993 and United States Residents, 1960 - 1992



<sup>1</sup> Prior to 1984, low birth weight was defined as 2,500 grams or less. Starting with year 1984, low birth weight is defined as less than 2,500 grams in order to conform to national standards.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

The low birth weight percentage for infants of black mothers was 12.4 percent compared with 5.2 to 6.5 percent for infants born to mothers of other races and ancestry groups (Table 1.10).

The low birth weight percent varied by adequacy of prenatal care as indicated by the Kessner Index. For the race and ancestry groups, the low birth weight percentages were between 1.7 and 3.1 times higher for infants born to mothers with inadequate care than to mothers with adequate prenatal care. The ratios were generally 1.1 and 1.6 times higher for infants born to women with intermediate care than for women with adequate care.

At birth, 14.4 percent of the infants born to black women weighed less than 2,500 grams. Of infants born to black women with adequate care, a lower percentage (12.4) weighed less than 2,500 grams. The low weight ratio for infants born to black women with adequate care was higher than the ratio for infants born to women of other race and ancestry groups at any level of prenatal care. The low birth weight ratio was 1.9 to 2.7 times higher for infants born to black women with adequate care than for corresponding women of other race and ancestry groups.

Table 1.10  
Low Weight<sup>1</sup> Live Births and Low Birth Weight Percentages<sup>2</sup>  
by Level of Prenatal Care, Race and Ancestry of Mother  
Michigan Residents, 1993

Level of Prenatal Care (Kessner Index <sup>3</sup> )	Race <sup>4</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Adequate	6,495	6.3	4,450	5.2	1,931	12.4	27	5.7	67	5.9	3	6.5	98	4.6	142	5.2
Intermediate	2,222	9.5	1,237	7.7	939	13.9	18	9.1	25	8.3	1	7.1	22	6.0	70	6.6
Inadequate	1,925	14.7	706	10.2	1,177	20.6	10	11.9	18	11.6	2	20.0	29	11.5	63	11.5
Unknown	58	12.7	31	10.0	26	18.8	-	-	-	-	-	-	1	10.0	1	5.9
Total	10,700	7.7	6,424	5.9	4,073	14.4	55	7.2	110	6.9	6	8.6	150	5.4	276	6.3

<sup>1</sup> Less than 2,500 grams.

<sup>2</sup> Percent denominators obtained from column numbers in Table 1.8.

<sup>3</sup> The Kessner Index is a classification of prenatal care based on the month of pregnancy in which prenatal care began, the number of prenatal visits and the length of pregnancy (i.e., for shorter pregnancies, fewer prenatal visits constitute adequate care).

<sup>4</sup> Live births with race unknown are in the "Total" column only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



# CONGENITAL ANOMALIES

One or more congenital anomalies were reported on the birth certificate for 1,589 of the 139,560 resident live births in 1993 (Table 1.11). This translates to a rate of 113.9 per 10,000 live births.

The method of reporting congenital anomalies on the birth record was altered with the 1989 birth certificate. The 1989 and later rates based on check-box format reporting are not comparable to rates obtained in previous years by literal entries. Any increase in the overall congenital anomalies rate or the rate of specific types of anomalies compared to previous years can not automatically be considered an increase in the occurrence of congenital anomalies. It is most likely that such an increase is a consequence of more complete reporting of congenital anomalies.

While the check-box reporting format may help reduce the level of underreporting of congenital anomalies, the frequency of reporting of specific anomalies is affected by the reporting schedule. Many conditions may not be apparent at the time the birth certificate is completed and filed. A more complete reporting of congenital anomalies is provided by the Birth Defects Registry in the Office of the State Registrar and Division for Health Statistics.

The congenital anomaly rate of 121.6 per 10,000 live births to white mothers was 44.9 percent higher than the rate of 83.9 for live births to black mothers and 4.8 percent higher than the rate of 115.8 for live births to mothers of races other than black or white.

The rates for all races combined varied with the age of the mother. The lowest rates were usually experienced by mothers 20 - 24 years of age. Rates rose with mother's age.

Table 1.11  
Live Births with Congenital Anomalies Reported and Congenital Anomaly Rates<sup>1</sup>  
by Age and Race of Mother  
Michigan Residents, 1993

Age of Mother in Years	Race of Mother									
	Total		White		Black		All Other		Unknown	
	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>
<15	8	215.6	3	*	5	*	-	-	-	-
15 - 19	219	127.3	151	149.2	65	96.0	3	*	-	-
20 - 24	401	112.2	323	126.5	71	74.6	7	123.9	-	*
25 - 29	485	118.4	420	123.1	56	94.2	6	79.5	3	*
30 - 34	307	96.4	272	99.8	24	62.7	9	153.6	2	*
35 - 39	139	119.0	122	125.3	12	72.1	3	*	2	*
40+	29	169.9	25	179.6	4	*	-	-	-	-
Not Stated	1	*	1	*	-	-	-	-	-	-
Total	1,589	113.9	1,317	121.6	237	83.9	28	115.8	7	124.1
Median Age at Last Birthday	26		27		23		29		31	

<sup>1</sup> Number of live births with congenital anomalies reported per 10,000 live births.

<sup>2</sup> Rate denominator obtained from column numbers in Table 1.2.

## MEDICAL FACTORS ASSOCIATED WITH DELIVERY AND/OR LABOR

**Complications of Pregnancy** There were 37,082 deliveries (26.6 percent) reported with one or more complications of labor and/or delivery in 1993 (Table 1.12). Among the most commonly reported complications were moderate/heavy meconium (8,095 cases), fetal distress (6,323 cases), breech/malpresentation of fetus (6,114 cases), dysfunctional labor (5,392) and premature rupture of membranes (5,256 cases).

The proportions of live births for which there was at least one complication were relatively similar for women of different races and ancestry groups (Table 1.12). The types of complications which were most common were also very similar among mothers of different race and ancestry groups, although the exact ordering by frequency of occurrence varied.

Table 1.12  
Numbers and Percents of Live Births by  
Complications of Labor/Delivery, Race and Ancestry of Mother  
Michigan Residents, 1993

Complications of Labor/Delivery	Race <sup>1</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Meconium, moderate/heavy	8,095	5.8	5,629	5.2	2,303	8.2	40	5.3	72	4.5	6	8.6	131	4.8	239	5.5
Fetal distress	6,323	4.5	4,844	4.5	1,332	4.7	26	3.4	65	4.1	7	10.0	112	4.1	166	3.8
Breech/malpresentation	6,114	4.4	5,135	4.7	848	3.0	37	4.9	65	4.1	3	4.3	106	3.8	167	3.8
Dysfunctional labor	5,392	3.9	4,487	4.1	769	2.7	36	4.7	66	4.2	3	4.3	76	2.8	171	3.9
Premature rupture of membranes (>12 hours)	5,256	3.8	4,178	3.9	925	3.3	41	5.4	81	5.1	6	8.6	78	2.8	144	3.3
Cephalopelvic disproportion	3,630	2.6	3,234	3.0	313	1.1	18	2.4	47	3.0	3	4.3	49	1.8	117	2.7
Precipitate labor (< 3 hours)	2,816	2.0	2,190	2.0	561	2.0	23	3.0	33	2.1	1	1.4	46	1.7	91	2.1
At least one complication	37,082	26.6	29,550	27.3	6,692	23.7	217	28.6	420	26.4	23	32.9	629	22.8	1,125	25.8
Total Live Births	139,560	100.0	108,329	100.0	28,249	100.0	759	100.0	1,589	100.0	70	100.0	2,755	100.0	4,361	100.0

<sup>1</sup> Live births with race unknown are in the "Total" column only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Behavioral Risk Factors** Mothers who smoked while pregnant accounted for 19.4 percent (27,015) of the live births in 1993 (Table 1.13). These data are consistent with statewide sample survey data. The reported percentage of live births to mothers who smoked while pregnant was highest for American Indian mothers (41.0 percent), was lower and relatively similar for white and black mothers (20.0 and 17.4 percent, respectively). Fewer mothers of Hispanic ancestry reported smoking during pregnancy than white or black mothers (11.3 percent). Asian and Pacific Islander mothers and mothers of Arab ancestry had the lowest percentages of reported smoking during their pregnancy.

Only 2,861 (2.1 percent) of the birth certificates indicated the mother drank alcohol while pregnant.

Based on other studies it is generally believed that reported numbers of mothers who drank while pregnant as obtained from certificates of live birth underreport the frequency of this risk factor.

A weight gain during pregnancy of less than sixteen pounds was reported for mothers of 9.4 percent (13,063) of the live births. The percentage was higher for black mothers.

Table 1.13  
Numbers and Percents of Live Births by Maternal Risk Factors, Race and Ancestry of Mother  
Michigan Residents, 1993

Maternal Risk Factors	Race <sup>1</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Mother smoked while pregnant	27,015	19.4	21,650	20.0	4,924	17.4	311	41.0	65	4.1	5	7.1	222	8.1	494	11.3
Weight gain less than 16 pounds while pregnant	13,063	9.4	8,936	8.2	3,865	13.7	75	9.9	129	8.1	5	7.1	183	6.6	465	10.7
Mother drank alcohol while pregnant	2,861	2.1	1,917	1.8	894	3.2	35	4.6	7	0.4	2	2.9	15	0.5	69	1.6
Total Live Births	139,560	100.0	108,329	100.0	28,249	100.0	759	100.0	1,589	100.0	70	100.0	2,755	100.0	4,361	100.0

<sup>1</sup> Live births with race unknown are in the "Total" column only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Medical Risk Factors** For 18.9 percent (26,315) of the 139,560 resident live births occurring in 1993, the mother had at least one medically relevant risk factor (Table 1.14). The most commonly specified medical risk factor was pregnancy-related hypertension which occurred in mothers of 3.5 percent (4,948) of the live births. The next most common maternal medical risk factors were diabetes and anemia which occurred in mothers of 2.8 percent (3,943) and 1.9 percent (2,602) of the live births. Drug use was reported on 1.0 percent of all live birth records.

The most common maternal medical risk factors varied among race and ancestry groups. Pregnancy-related hypertension and diabetes were the most common risk factors for white, American Indian and Hispanic mothers; drug use, pregnancy-related hypertension and anemia were the most common for black mothers; and diabetes was most common for Asian and Pacific Islander mothers and mothers of Arab ancestry.

Table 1.14  
Numbers and Percents of Live Births by Medical Risk Factors, Race and Ancestry of Mother  
Michigan Residents, 1993

Risk Factors	Race <sup>1</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Hypertension, pregnancy-associated	4,948	3.5	4,035	3.7	821	2.9	26	3.4	38	2.4	7	10.0	38	1.4	142	3.3
Diabetes	3,943	2.8	3,312	3.1	508	1.8	25	3.3	63	4.0	2	2.9	89	3.2	142	3.3
Anemia (Hct. 30/Hgb. 10)	2,602	1.9	1,724	1.6	820	2.9	12	1.6	26	1.6	3	4.3	54	2.0	113	2.6
Previous infant 4000+ grams	2,012	1.4	1,895	1.7	85	0.3	15	2.0	10	0.6	-	-	31	1.1	34	0.8
Previous preterm or small-for-gestational age infant	1,802	1.3	1,436	1.3	338	1.2	10	1.3	10	0.6	2	2.9	16	0.6	47	1.1
Rh sensitive	1,802	1.3	1,690	1.6	86	0.3	3	0.4	7	0.4	1	1.4	49	1.8	28	0.6
Drug use	1,370	1.0	470	0.4	885	3.1	12	1.6	1	0.1	-	-	9	0.3	35	0.8
At least one medical risk <sup>2</sup>	26,315	18.9	20,534	19.0	5,264	18.6	153	20.2	223	14.0	18	25.7	373	13.5	772	17.7
Total Live Births	139,560	100.0	108,329	100.0	28,249	100.0	759	100.0	1,589	100.0	70	100.0	2,755	100.0	4,361	100.0

<sup>1</sup> Live births with race unknown are in the "Total" column only.

<sup>2</sup> Does not equal the sum of risk factors specified because mothers may have multiple risk factors.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Method of Delivery** Vaginal delivery was the most common method of delivery in 1993, accounting for 81.0 percent of the live births (Table 1.15). A national goal is to have a vaginal delivery for at least 35 percent of the mothers with a previous C-section by the year 2000. In 1993 about 25.0 percent of the mothers with a previous C-section had a vaginal delivery.

Primary C-sections were performed in 12.9 percent of the live births and repeat C-sections were performed in 7.9 percent of the live births. Lowering

C-section rates to no more than 15 per 100 deliveries including no more than 12 primary C-sections is a national goal for the year 2000.

Black mothers and mothers of Arab and Hispanic ancestry had lower proportions of live births delivered by primary C-section. These groups either have achieved or are close to achieving the national goal for primary C-sections. White, American Indian and Asian and Pacific Islander mothers had somewhat higher proportions of live births delivered by primary C-section.

Table 1.15  
Numbers and Percents of Live Births by Method of Delivery, Race and Ancestry of Mother  
Michigan Residents, 1993

Procedures During and Method of Delivery	Race <sup>1</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Procedures</b>																
Vacuum	4,531	3.2	3,910	3.6	525	1.9	13	1.7	57	3.6	5	7.1	57	2.1	135	3.1
Forceps	3,703	2.7	3,211	3.0	383	1.4	10	1.3	57	3.6	1	1.4	75	2.7	113	2.6
<b>Method</b>																
Vaginal	109,428	78.4	84,211	77.7	22,870	81.0	583	76.8	1,274	80.2	58	82.9	2,235	81.1	3,464	79.4
Primary C-section	17,988	12.9	14,156	13.1	3,446	12.2	104	13.7	206	13.0	9	12.9	298	10.8	530	12.2
Repeat C-section	11,054	7.9	9,022	8.3	1,832	6.5	63	8.3	93	5.9	3	4.3	198	7.2	342	7.8
Vaginal birth after previous C-section	3,690	2.6	3,015	2.8	611	2.2	21	2.8	37	2.3	1	1.4	53	1.9	100	2.3
Unknown	1,090	0.8	940	0.9	101	0.4	9	1.2	16	1.0	-	0.0	24	0.9	25	0.6
<b>Total Live Births</b>	<b>139,560</b>	<b>100.0</b>	<b>108,329</b>	<b>100.0</b>	<b>28,249</b>	<b>100.0</b>	<b>759</b>	<b>100.0</b>	<b>1,589</b>	<b>100.0</b>	<b>70</b>	<b>100.0</b>	<b>2,755</b>	<b>100.0</b>	<b>4,361</b>	<b>100.0</b>

<sup>1</sup> Live births with race unknown are in the "Total" column only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Abnormal Conditions at Birth** In 1993, 13,888 babies were born with at least one recorded abnormal condition at birth (Table 1.16). The highest percentage for a specified abnormal condition was associated with live born infants who received assisted ventilation for less than 30 minutes (2.1 percent). The next two most frequent abnormal conditions were a five minute Apgar under 7 and hyaline membrane disease/RDS (Respiratory Distress Syndrome), respectively.

For infants born to black women, assisted ventilation <30 minutes (2.5 percent) and a low Apgar score at five minutes (2.1 percent) were reported most frequently.

Table 1.16  
Numbers and Percents of Live Births With Abnormal Conditions by Race  
and Ancestry of Mother  
Michigan Residents, 1993

Abnormal Conditions	Race <sup>1</sup>												Ancestry			
	Total		White		Black		Amer. Indian		Asian & P.I.		Other		Arab		Hispanic	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Assisted ventilation < 30 minutes	2,955	2.1	2,192	2.0	712	2.5	11	1.4	34	2.1	-	-	51	1.9	76	1.7
5 minute Apgar < 7	1,901	1.4	1,268	1.2	599	2.1	11	1.4	15	0.9	-	-	27	1.0	56	1.3
Hyaline membrane disease/RDS	1,743	1.2	1,312	1.2	391	1.4	7	0.9	16	1.0	4	5.7	41	1.5	52	1.2
Assisted ventilation > 30 minutes	1,113	0.8	788	0.7	305	1.1	9	1.2	8	0.5	2	2.9	19	0.7	39	0.9
Birth Injury	489	0.4	440	0.4	41	0.1	2	0.3	4	0.3	-	-	6	0.2	13	0.3
At least one condition	13,888	10.0	10,633	9.8	3,001	10.6	57	7.5	129	8.1	8	11.4	240	8.7	414	9.5
Total Live Births	139,560		108,329		28,249		759		1,589		70		2,755		4,361	

<sup>1</sup> Live births with race unknown are in the "Total" column only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

# PLACE OF OCCURRENCE

Of some confusion to persons not familiar with vital records data is the difference between occurrence and residence figures. Information on events to residents of Michigan that occur throughout the country and, in some instances, outside United States boundaries, is collected in order to obtain the full scope of activity for the state population.

**Resident Births** In 1993 1,582 Michigan resident live births occurred outside the state. Information on these events was forwarded to the state of Michigan for statistical purposes only. While only 1.1 percent of the total for the state was involved, statistics for the counties on Michigan's southern and northwestern borders would be strongly affected were this information not available.

Table 1.17 shows that births in the four border states and Canada comprise 90.2 percent of all resident live births that occurred out of state. Live births to Michigan residents occurred in 39 of the 50 states and in Canada in 1993.

**Non-resident Births** The number of nonresident live births that occurred in Michigan in 1993 was 448. Information about those events was shared with the appropriate states by the State of Michigan under specific confidentiality guidelines so they might have a complete statistical file on their residents. Infants born in Michigan to mothers from the four border states and Canada comprised 75.0 percent of these events, as shown in Table 1.17. There were live births in Michigan to residents of 32 states, Puerto Rico and at least 3 foreign countries.

Table 1.17  
**Michigan Live Births**  
Occurring Outside Michigan to Michigan Residents by Place of Occurrence  
and Occurring in Michigan to Non-Michigan Residents by Place of Residence, 1993

Geographic Area	Live Births to Residents Occurring Outside Michigan		Live Births to Non-residents Occurring in Michigan	
	Number	Percent	Number	Percent
Total	1,582	100.0	448	100.0
Ohio	627	39.6	40	8.9
Indiana	521	32.9	63	14.1
Wisconsin	242	15.3	179	40.0
Illinois	24	1.5	17	3.8
Georgia	16	1.0	4	0.9
Florida	15	0.9	16	3.6
Minnesota	12	0.8	4	0.9
New Jersey	11	0.7	4	0.9
Louisiana	10	0.6	1	0.2
Tennessee	9	0.6	4	0.9
California	8	0.5	5	1.1
Texas	6	0.4	19	4.2
Missouri	6	0.4	4	0.9
Virginia	6	0.4	4	0.9
Kentucky	5	0.3	5	1.1
Pennsylvania	5	0.3	4	0.9
Washington D.C.	5	0.3	-	-
Arkansas	4	0.3	1	0.2
New York	2	0.1	8	1.8
Other States	35	2.2	22	4.9
Canada	13	0.8	37	8.3
Unknown	-	-	7	1.6

Source: Office of the State Registrar and Division of Health Statistics, MDPH

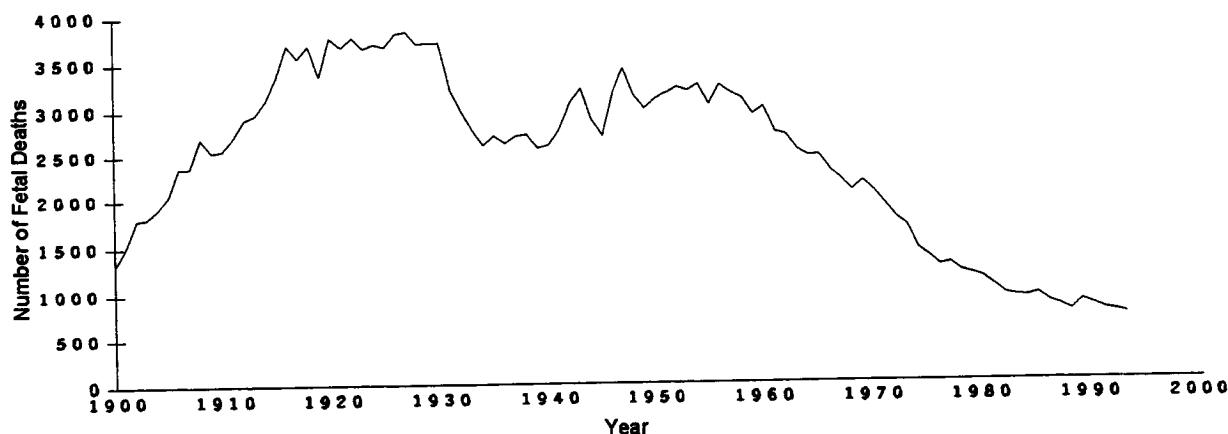
## FETAL DEATHS

There were 1,325 fetal deaths reported in Michigan in 1900. The number of reported fetal deaths increased from 1900 through 1927, the peak year in this century, with 3,834 fetal deaths. The reported number of fetal deaths generally decreased in the 1930's, increased in the 1940's and decreased after 1950 (Figure 1.11 and Table 1.18).

In 1993 the number of resident fetal deaths was 726, the lowest number in the century.

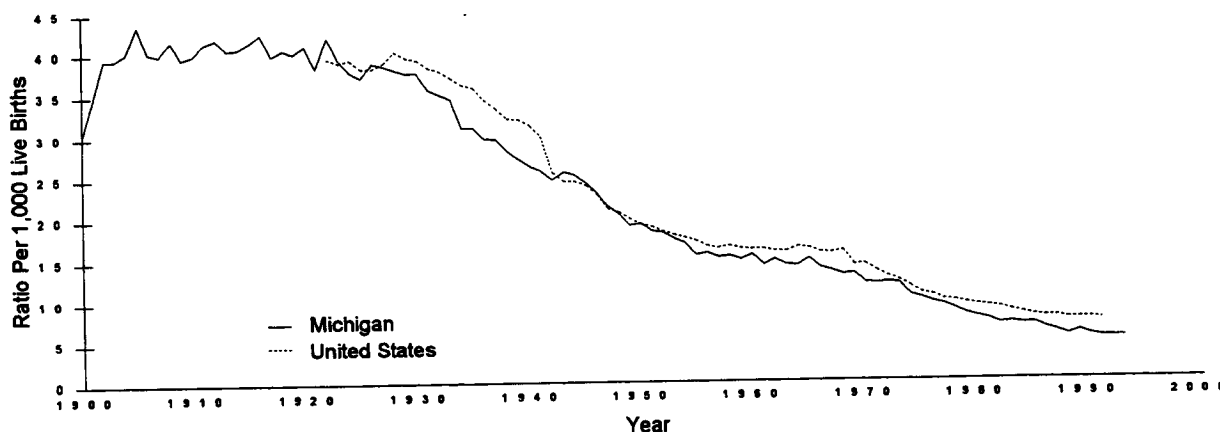
The fetal death ratio for Michigan has declined through most of the twentieth century (Figure 1.12 and Table 4.2). The ratio rose from 30.3 in 1900 to its peak of 43.5 fetal deaths per 1,000 live births in 1905. In 1922, Michigan's fetal death ratio was 42.0, marking a turning point, as fetal death ratios have generally declined since that year. The ratios in 1991 through 1993 were 5.2.

Figure 1.11  
Fetal Deaths  
Michigan Residents, 1900 - 1993



Source: Office of the State Registrar and Division of Health Statistics, MDPH

Figure 1.12  
Fetal Death Ratios  
Michigan Residents, 1900 - 1993 and United States<sup>1</sup> Residents, 1922 - 1991



<sup>1</sup> United States ratios prior to 1933 are for registration areas only. United States ratios are based on three different definitions of fetal death:  
 1) Prior to 1942 - all reported fetal deaths regardless of period of gestation  
 2) 1942 to 1968 - fetal deaths with gestation age 20 weeks or more or not stated  
 3) 1969 to current - fetal deaths of stated or presumed period of gestation of 20 or more weeks

Source: Office of the State Registrar and Division of Health Statistics, MDPH



Table 1.18  
**Fetal Deaths and Fetal Death Ratios**  
 Michigan and United States Residents  
 Selected Years, 1900 - 1993

United States		Year	Michigan	
Fetal Deaths	Fetal Death Ratios		Fetal Deaths	Fetal Death Ratios
—	—	1900	1,325	30.3
86,466	39.2	1930	3,714	37.6
68,480	16.1	1960	3,008	15.4
52,961	14.2	1970	2,060	12.0
33,796	10.7	1975	1,356	10.1
33,353	9.2	1980	1,135	7.8
32,596	9.0	1981	1,040	7.4
32,694	8.9	1982	954	6.9
30,752	8.5	1983	933	7.0
30,099	8.2	1984	929	6.8
29,661	7.9	1985	953	6.9
28,972	7.7	1986	865	6.3
29,349	7.7	1987	824	5.9
29,442	7.5	1988	761	5.4
30,469	7.5	1989	881	5.9
31,386	7.5	1990	830	5.4
N.A.	7.3	1991	775	5.2
N.A.	N.A.	1992	755	5.2
N.A.	N.A.	1993	726	5.2

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Michigan's fetal death ratios have been below the national ratios 61 of the 70 years for which national data are available. The last time the United States ratio was below the Michigan ratio was in 1950. In 1991, the Michigan ratio of 5.2 was 26.0 percent below the national ratio of 7.3. It should be noted that since 1978 fetal deaths in Michigan are comprised of infants born dead who had passed through 20 weeks gestation or weighed 400 grams or more. This definition is different from that of most states. This difference should result in Michigan having slightly higher fetal death rates than would be observed if Michigan had adopted the definition used in most states.

### CAUSES OF FETAL DEATH

A classification of fetal deaths by underlying cause of death is contained in Table 1.19. In 1993, 258 of the total 726 deaths were assigned to the category of "other and ill-defined conditions originating in the perinatal period". Nearly half (43.6 percent) of the remaining fetal deaths for which a specific cause was stated were attributed to complications of placenta, cord, and membranes (ICD 762). This is a group of maternal conditions which includes placenta previa, premature separation of the placenta, placental hemorrhage, and compression of the umbilical cord.

Third in frequency was the category maternal complications of pregnancy (ICD 761), which was listed as the cause of 68 fetal deaths. This includes such complications as premature rupture of membranes, multiple pregnancy, and incompetent cervix.

Table 1.19  
**Fetal Deaths and Fetal Death Ratios by Underlying Cause of Death**  
 Michigan Residents, 1993

ICD. No. <sup>1</sup>	Cause of Death	Frequency	Ratio <sup>2</sup>
779	Other and ill-defined conditions originating in the perinatal period . . . . .	258	184.9
762	Fetus or newborn affected by complications of placenta, cord and . . . . . membranes	204	146.2
761	Fetus or newborn affected by maternal complications of pregnancy . . . . .	68	48.7
760	Fetus or newborn affected by maternal conditions which may be unrelated . . to present pregnancy	32	22.9
740-759	All congenital anomalies combined . . . . .	92	65.9
	All other causes . . . . .	72	51.6
740-779	All Causes . . . . .	726	520.2

<sup>1</sup> Ninth Revision of the International Classification of Diseases, WHO.  
<sup>2</sup> Ratios per 100,000 resident live births.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**AGE, RACE AND ANCESTRY**

The overall fetal death rate per 1,000 total births (live births plus fetal deaths) was 5.2 in 1993. In Table 1.20, information is presented by the race of the mother for fetal deaths and live births. It appears that mothers under age 20 and over age 39 plus black

and Asian and Pacific Islander mothers have a greater risk of delivering a stillborn fetus.

Mothers of Hispanic and Arab ancestry had lower fetal death rates than the state overall rate.

Table 1.20  
Fetal Deaths, Total Births and Fetal Death  
Rates by Age, Race and Ancestry of Mother  
Michigan Residents, 1993

Age and Race of Mother	Fetal Deaths	Total Births	Rate Per 1,000 Total Births
<b>Age</b>			
<15 Years . . . . .	6	377	15.9
15-19 Years . . . . .	94	17,292	5.4
20-24 Years . . . . .	184	35,916	5.1
25-29 Years . . . . .	162	41,137	3.9
30-39 Years . . . . .	235	43,750	5.4
40 + . . . . .	20	1,727	11.6
Not Stated . . . . .	25	87	287.4
<b>Race</b>			
White . . . . .	509	108,838	4.7
Black . . . . .	185	28,434	6.5
American Indian . . . . .	-	759	-
Asian & P.I. . . . .	12	1,601	7.5
All Other Races . . . . .	-	70	-
Not Stated . . . . .	20	584	34.3
<b>Ancestry</b>			
Arab . . . . .	10	2,755	3.6
Hispanic . . . . .	13	4,374	3.0
<b>Total . . . . .</b>	<b>726</b>	<b>140,286</b>	<b>5.2</b>

Source: Office of the State Registrar and Division of Health Statistics, MDPH

# **MEDICAL AND OTHER RISK FACTORS FOR FETAL DEATHS**

In 1993, 259 fetal deaths, or 35.7 percent of all fetal deaths, occurred to women who were reported to have at least one medical or other birth-related risk factor (Table 1.21). The category "All Other Risk Factors" was reported for 235 fetal deaths. The most frequent specific risk factor mentioned was tobacco use during pregnancy; 155 or 21.4% of all fetal deaths. The next most common risk factor associated

with fetal deaths was uterine bleeding (37 fetal deaths).

The highest fetal death rate associated with risk factors occurred among women giving birth with reported uterine bleeding (24.9). The next highest fetal death rate occurred to women with reported hydramnios or oligohydramnios (22.4).

Table 1.21  
Numbers and Percents of Fetal Deaths, and Fetal Death Rates  
by Medical and Other Risk Factors  
Michigan Residents, 1993

Risk Factors of Mother	Number of Fetal Deaths	Percent of Fetal Deaths	Fetal Death Rate
Tobacco use during pregnancy . . . . .	155	21.3	5.7
Uterine Bleeding . . . . .	37	5.1	24.9
Hydramnios/Oligohydramnios . . . . .	36	5.0	22.4
Alcohol use during pregnancy . . . . .	27	3.7	9.4
Diabetes . . . . .	26	3.6	6.6
All other risk factors . . . . .	235	32.4	6.3
At least one risk factor . . . . .	259	35.7	9.8

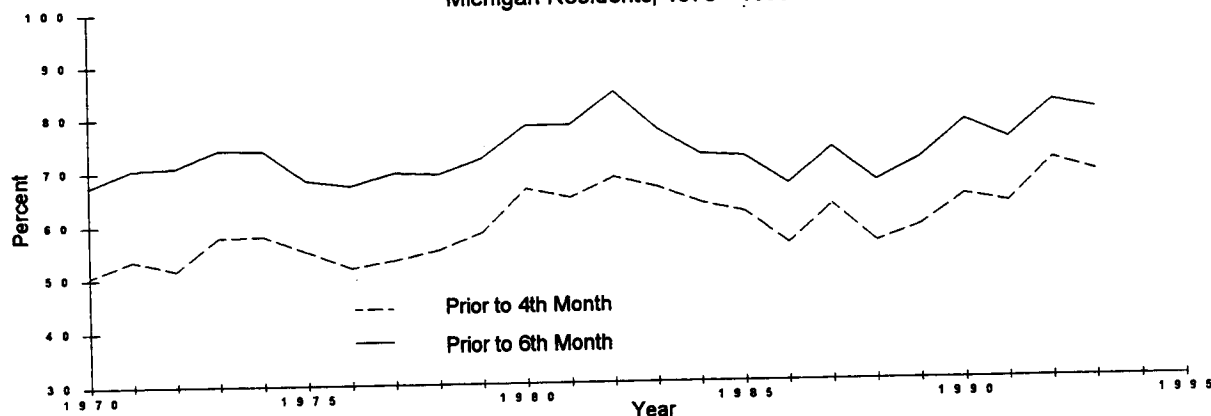
Source: Office of the State Registrar and Division of Health Statistics, MDPH

## PRENATAL CARE

The proportion of all fetal deaths in 1993 that were to women who reported receiving care prior to the fourth month of pregnancy was 68.2 with 79.9 percent receiving care prior to the sixth month (Figure 1.13). The percentage of fetal deaths in where the mother received care prior to the fourth and sixth month generally increased until 1982 (Figure 1.13) and declined between 1983 and 1986 to the lowest level in the decade. The percentages have generally increased since 1987.

The relationship between the fetal death rates and the Kessner Index of adequacy of care is displayed in Table 1.22. Since the Kessner Index adjusts for gestational age at birth, a bias towards inadequate care should not result because of the short gestational age for most fetal deaths. The fetal death rate increased as the quality of prenatal care measured by the Kessner Index decreased. The rate was 3.4 per 1,000 total births (fetal deaths and live births) born to women receiving adequate prenatal care. The rate increased to 7.0 and 10.7 for births to women receiving intermediate and inadequate levels of care respectively.

Figure 1.13  
Percent of Women Having Fetal Deaths who Received Care Prior to the 4th Month  
and the 6th Month of Pregnancy  
Michigan Residents, 1970 - 1993



Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 1.22  
Fetal Deaths, Total Births and Fetal Death Rates by Level of Prenatal Care and Race<sup>1</sup> of Mother  
Michigan Residents, 1993

Level of Care (Kessner Index <sup>2</sup> )	Race of Mother											
	All Races			White			Black			All Other		
	Fetal Deaths	Total Births	Fetal Death Rates	Fetal Deaths	Total Births	Fetal Death Rates	Fetal Deaths	Total Births	Fetal Death Rates	Fetal Deaths	Total Births	Fetal Death Rates
Adequate	346	103,013	3.4	276	85,351	3.2	58	15,675	3.7	7	1,660	4.2
Intermediate	164	23,521	7.0	115	16,127	7.1	41	6,816	6.0	4	519	*
Inadequate	141	13,221	10.7	75	7,007	10.7	63	5,782	10.9	1	250	*
Unknown	75	531	141.2	43	353	121.8	23	161	142.9	-	1	-
Total	726	140,286	5.2	509	108,838	4.7	185	28,434	6.5	12	2,430	4.9

<sup>1</sup> Race not stated included in total columns only.

<sup>2</sup> The Kessner Index is a classification of prenatal care based on the month of pregnancy prenatal care began, the number of prenatal visits, and the length of pregnancy (i.e., for shorter pregnancies, fewer prenatal visits constitute adequate care).

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**FETAL WEIGHT**

Among live births, the percentage of infants weighing less than 2,500 grams at birth was 7.7 percent. The comparable percent among fetal deaths was 79.5 (Table 1.23). The percentage of live born

infants weighing less than 750 grams was 0.5 percent, while 44.8 percent of the fetal deaths weighed less than 750 grams.

Table 1.23  
**Fetal Deaths by Fetal Weight**  
Michigan Residents, 1993

Weight in Grams	Fetal Deaths	Cum. Percent
<750	325	44.8
750-1,499	113	60.3
1,500-2,499	139	79.5
2,500 +	132	97.7
Unknown	17	100.0
Total	726	100.0

Source: Office of the State Registrar and Division of Health Statistics, MDPH



# MORTALITY

## SECTION II







# MORTALITY

## OVERVIEW

In 1993 there were 82,286 deaths recorded for Michigan residents, 3,370 more than in the previous year. The crude death rate per 1,000 population was 8.7, 2.4 percent higher than the rate of 8.5 observed in 1992 (Table 2.1). The age-adjusted death rate increased in 1993, being 0.1 percent higher than the age-adjusted rate for 1992. The age-adjusted rate serves as a better measure of mortality than a crude death rate as age-adjusted death rates control for most of the differences or variations in the age composition of the populations.

There were 1,319 infant deaths in 1993, fewer than in 1992. The 1993 infant death rate of 9.5 was 6.9 percent lower than the 1992 rate of 10.2, while the neonatal death rate dropped from 6.7 to 6.1 in 1993 (9.0% decrease).

### An Overview, 1993

Resident Deaths	82,286
Crude Death Rate	8.7
Infant Deaths	1,319
Infant Death Rate	9.5
Neonatal Deaths	856
Neonatal Death Rate	6.1
Perinatal Deaths	1,434
Perinatal Death Rate	10.2
Maternal Deaths	8
Maternal Death Rate	5.7
Deaths from Heart Disease per Day	78.1
Deaths from Cancer per Day	52.6
Deaths from Stroke per Day	14.5
Deaths from C.O.P.D. per Day	9.4
Median Age at Death	75
Median Age at Death for Males	71
Median Age at Death for Females	78

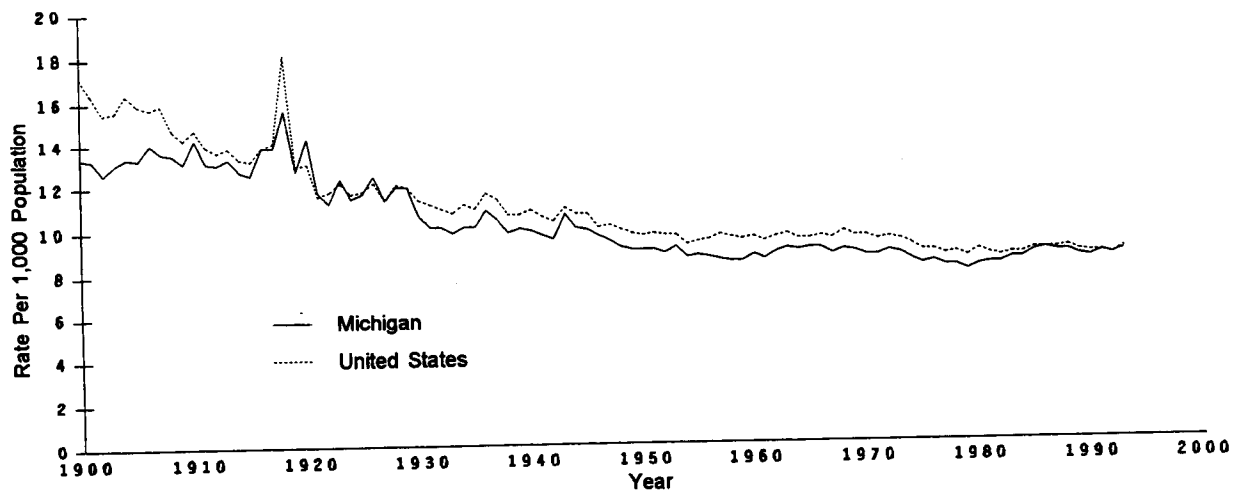
Source: Office of the State Registrar and Division of Health Statistics, MDPH

### TRENDS IN MICHIGAN

Between 1900 and 1993 the number of deaths occurring to Michigan residents increased from 32,453 to 82,286. The 31,472 deaths recorded in 1902 was the lowest number of resident deaths in this century, while the number of resident deaths recorded in 1993 was the greatest number of resident deaths ever recorded in Michigan (Table 4.1).

Although the total number of deaths increased between 1900 and 1993, the increase is due to an increasing population. The crude death rate decreased from 13.4 (per 1,000 population) in 1900 to 8.7 in 1993. The 1979 death rate of 7.9 was the lowest crude death rate ever recorded for Michigan. The highest death rate (15.6) was observed in 1918 (Figure 2.1).

Figure 2.1  
Crude Death Rates<sup>1</sup>  
Michigan and United States<sup>2</sup> Residents, 1900 - 1993



<sup>1</sup> 1992 estimated population is being used to calculate 1992-1993 rates.

<sup>2</sup> United States rates for 1971-1979 have been revised using population estimates based on the 1980 Census enumeration. United States rate for 1993 is provisional.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

# **MICHIGAN AND UNITED STATES MORTALITY**

A comparison of the number of deaths and crude death rates for Michigan and the United States for the period 1970 - 1993 is presented in Table 2.1. Between 1970 and 1984, the Michigan rates were below the United States rates. Since 1985 Michigan and United States rates have been equal or close. The Michigan rates increased slightly between 1970 and 1993, while national rates decreased 7.4 percent in the same time period

Table 2.1  
Number of Deaths and Crude Death Rates<sup>1</sup>  
Michigan and United States Residents, 1970 - 1993

United States		Year	Michigan	
Number	Rate <sup>1</sup>		Number	Rate
1,921,031	9.5	1970	76,321	8.6
1,927,542	9.3	1971	77,395	8.6
1,963,944	9.4	1972	79,210	8.8
1,973,003	9.3	1973	78,522	8.7
1,934,388	9.1	1974	76,143	8.4
1,892,879	8.8	1975	74,522	8.2
1,909,440	8.8	1976	75,801	8.3
1,899,597	8.6	1977	74,144	8.1
1,927,788	8.7	1978	74,773	8.1
1,913,841	8.5	1979	73,480	7.9
1,989,841	8.8	1980	74,991	8.1
1,977,981	8.6	1991	75,818	8.2
1,974,797	8.5	1982	75,536	8.2
2,019,201	8.6	1983	76,639	8.4
2,039,369	8.6	1984	76,401	8.4
2,086,440	8.7	1985	78,635	8.7
2,105,361	8.7	1986	80,177	8.8
2,123,323	8.7	1987	79,795	8.7
2,167,999	8.8	1988	80,075	8.7
2,150,466	8.7	1989	78,566	8.5
2,148,463	8.6	1990	78,501	8.4
2,169,518	8.6	1991	79,738	8.5
2,175,613	8.5	1992	78,916	8.5
2,268,000Pr.	8.8Pr.	1993	82,286	8.7

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## MORTALITY DIFFERENCES BY SEX AND RACE

Over the period 1970-1993 the age-adjusted death rates for Michigan males and females were usually slightly higher than the national rates. During the last ten years Michigan female rates were 3.2 to 6.6 percent higher than the national rates, while Michigan male rates fluctuated from 1.1 percent lower to 3.4 percent higher than the national rates (Figure 2.2).

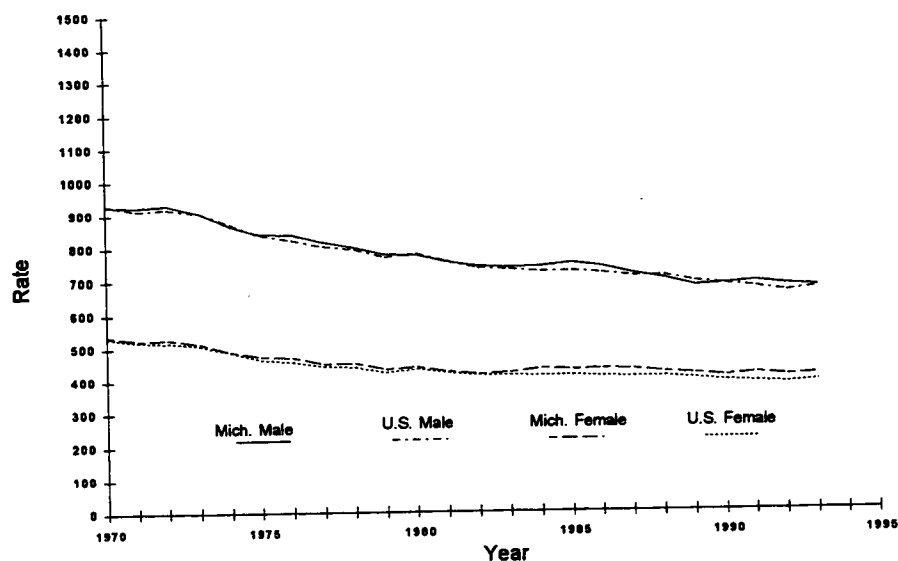
The national and Michigan age-adjusted death rates displayed in Figure 2.3 were similar for white males, while the Michigan white female rates were from 0.3 to 4.6 percent higher than the national white female rates.

Michigan age-adjusted death rates for black males and females were similar to national rates before 1981 (Figure 2.4). After 1980 the Michigan black male rates were 0.6 to 9.0 percent higher and Michigan black female rates were 0.6 to 11.0 percent higher than rates for their national counterparts.

Health status disparities between the black and white population increased during the last twenty-four years. Michigan age-adjusted rates for black males and females were 43.3 and 54.2 percent higher than their white counterparts in 1970. By 1993 black male and female rates were 75.4 and 61.2 percent higher than rates for their white counterparts.

Steady declines have generally occurred since 1970 both in Michigan and the United States in age-adjusted death rates in each race-sex group. For Michigan black persons, male and female age-adjusted rates declined 15.4 and 22.9 percent, respectively. The United States rates for these groups declined by 20.3 and 28.4 percent, respectively, during this period. The Michigan rates for white males and females declined 30.9 and 26.3 percent, while national rates dropped 29.3 and 27.0 percent, respectively.

Figure 2.2  
Total Age-Adjusted Death Rates<sup>1</sup> by Sex  
Michigan<sup>2</sup> and United States<sup>3</sup> Residents, 1970 - 1993



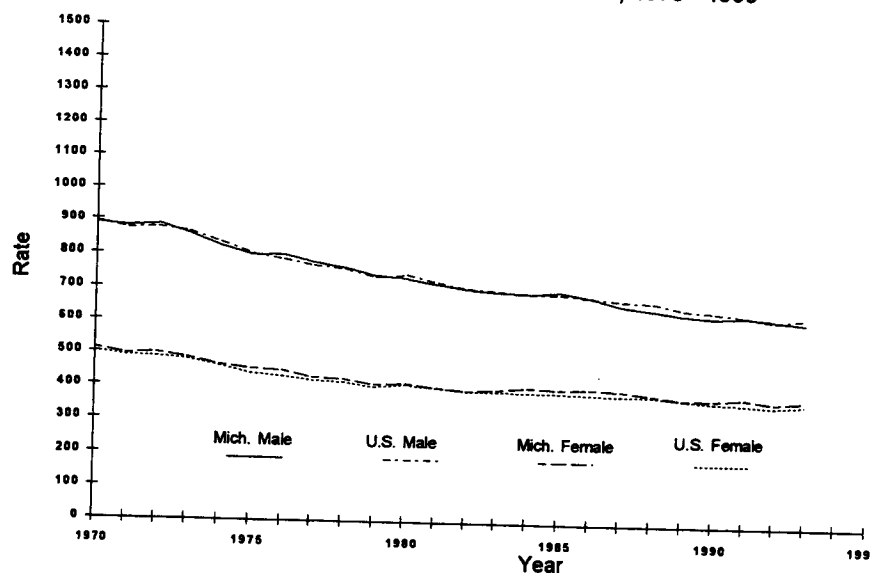
<sup>1</sup> 1992 estimated population is used to calculate 1993 rates. Based on age-specific death rates per 100,000 population in specified group. Computed by the direct method, using as the standard population the age distribution of the total population of the United States as enumerated in 1940; see Technical Notes.

<sup>2</sup> Michigan rates for 1981-1985 have been revised based upon revisions to population estimates; see Technical Notes.

<sup>3</sup> United States data for 1993 is provisional.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

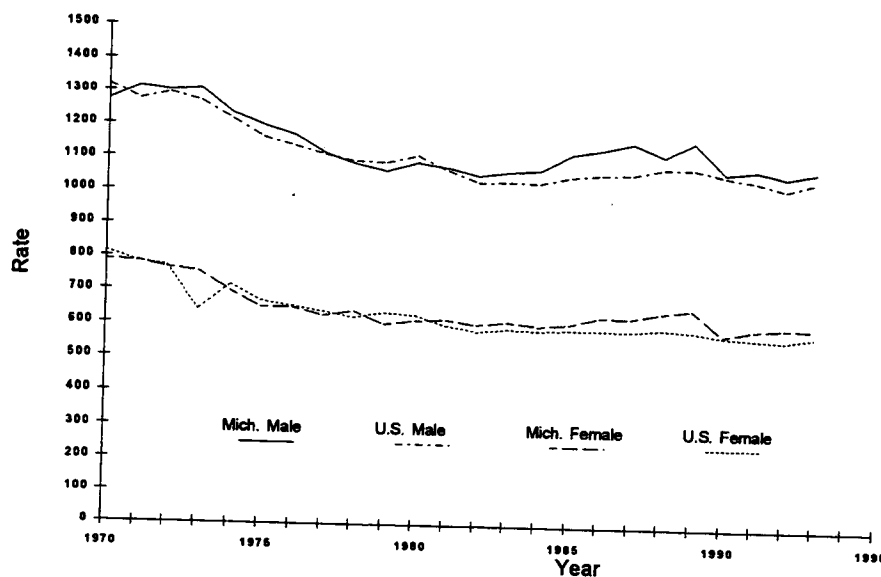
Figure 2.3  
**White Age-Adjusted Death Rates<sup>1</sup> by Sex**  
 Michigan<sup>2</sup> and United States<sup>3</sup> Residents, 1970 - 1993



- <sup>1</sup> 1992 estimated population is used to calculate 1993 rates. Based on age-specific death rates per 100,000 population in specified group. Computed by the direct method, using as the standard population the age distribution of the total population of the United States as enumerated in 1940; see Technical Notes.
- <sup>2</sup> Michigan rates for 1981-1985 have been revised based upon revisions to population estimates; see Technical Notes.
- <sup>3</sup> United States data for 1993 is provisional.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Figure 2.4  
**Black Age-Adjusted Death Rates<sup>1</sup> by Sex**  
 Michigan<sup>2</sup> and United States<sup>3</sup> Residents, 1970 - 1993



- <sup>1</sup> 1992 estimated population is used to calculate 1993 rates. Based on age-specific death rates per 100,000 population in specified group. Computed by the direct method, using as the standard population the age distribution of the total population of the United States as enumerated in 1940; see Technical Notes.
- <sup>2</sup> Michigan rates for 1981-1985 have been revised based upon revisions to population estimates; see Technical Notes.
- <sup>3</sup> United States data for 1993 is provisional.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## MORTALITY BY RACE AND ANCESTRY

Table 2.2 presents data on the number of deaths by race for the period 1980-1993 and ancestry since 1989. In 1993 deaths of white persons (69,044) accounted for 83.9 percent of all deaths, while deaths of black persons constituted 15.2 percent of the state total. For less than one percent of the deaths, the race was reported as American Indian or Asian and Pacific Islander. For 0.7 percent and 0.8 percent of the deaths, the ancestry was listed as Arab or Hispanic, respectively. It should be noted that data on race and ancestry are derived from the death certificates filed by funeral directors. Data from

sources where race is self-enumerated, when matched with death data, indicate that there are larger numbers of American Indians and persons of races other than white and black dying than are reported as members of those groups on the death certificate<sup>1</sup>. However, the major increase in 1989 in the number of American Indian deaths listed as the decedent's race may be due to the inclusion of ancestry on the death certificate that year. By requesting information about ancestry, certifiers may be identifying American Indian decedents who might otherwise be identified as white.

Table 2.2  
Number of Deaths by Race<sup>1</sup> and Ancestry  
Michigan Residents, Selected Years, 1980 - 1993

Year	Race						Ancestry	
	Total	White	Black	Amer. Indian	Asian & P.I.	Other	Arab	Hispanic
1980	74,991	64,897	9,704	137	92	1	N.A.	N.A.
1985	78,635	67,426	10,903	130	115	1	N.A.	N.A.
1986	80,177	68,602	11,283	139	132	2	N.A.	N.A.
1987	79,795	67,831	11,614	137	144	2	N.A.	N.A.
1988	80,075	68,191	11,569	132	149	3	N.A.	N.A.
1989	78,566	66,031	11,939	335	183	2	486	612
1990	78,501	66,156	11,739	352	215	5	471	603
1991	79,738	67,182	11,980	324	208	2	547	627
1992	78,916	66,377	11,868	389	233	2	508	635
1993	82,286	69,044	12,515	433	240	5	605	694

<sup>1</sup> Deaths with race unknown are in the "Total" column only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

<sup>1</sup> National Center for Health Statistics, *Comparability of Marital Status, Race, Nationality and Country of Origin in the Death Certificate and Matching Census Record: United States, May - August, 1986* (Washington, D.C., 1989).

# **NUMBER OF DEATHS BY AGE, RACE AND SEX**

The numbers of deaths increased with age through age 75-79. Half of all deaths occurred at or below age 75. For males half the deaths occurred at or below 71, while for females, half occurred at or below age 78. Males represented over half the deaths

(50.8 percent) in 1993. Among black persons a higher percentage of deaths (54.8 percent) were to males.

Until age 79 more males than females died in each age group. After age 79 more females died.

Table 2.3  
Number of Deaths by Age, Race and Sex<sup>1</sup>  
Michigan Residents, 1993

Age in Years	All Races			White			Black			All Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
< 1	1,319	766	548	770	458	311	530	295	231	17	13	4
1-4	274	149	125	167	93	74	99	53	46	8	3	5
5-9	161	91	70	112	69	43	43	19	24	6	3	3
10-14	170	97	73	124	61	63	42	33	9	4	3	1
15-19	576	413	163	360	233	127	203	171	32	13	9	4
20-24	741	564	177	423	313	110	304	241	63	14	10	4
25-29	763	564	199	501	360	141	253	197	56	8	6	2
30-34	1,108	776	332	729	513	216	360	252	108	18	10	8
35-39	1,466	977	489	939	631	308	505	331	174	22	15	7
40-44	1,900	1,242	658	1,253	827	426	618	395	223	29	20	9
45-49	2,074	1,276	798	1,443	914	529	599	342	257	32	20	12
50-54	2,734	1,705	1,029	2,080	1,308	772	613	368	245	36	25	11
55-59	3,548	2,155	1,393	2,786	1,709	1,077	714	423	291	43	19	24
60-64	5,519	3,264	2,255	4,479	2,662	1,817	967	565	402	67	33	34
65-69	8,176	4,751	3,425	6,803	3,986	2,817	1,289	716	573	79	46	33
70-74	10,197	5,626	4,571	8,679	4,792	3,887	1,442	792	650	69	36	33
75-79	11,576	5,965	5,609	10,238	5,308	4,929	1,257	619	638	77	36	40
80-84	11,481	5,315	6,166	10,280	4,785	5,495	1,138	497	641	59	32	27
85-89	9,690	3,701	5,988	8,810	3,355	5,454	835	320	515	42	23	19
90+	8,809	2,420	6,389	8,065	2,180	5,885	703	230	473	35	8	27
Not Stated	4	3	1	3	2	1	1	1	-	-	-	-
All Ages	82,286	41,820	40,458	69,044	34,559	34,482	12,515	6,860	5,651	678	370	307

<sup>1</sup> Deaths with race and/or sex not stated are included only in the total column.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## AGE-SPECIFIC MORTALITY BY RACE

The race and age-specific mortality rates were lowest in Asian and Pacific Islanders and next lowest for the white population below age 85 years (Table 2.4). Age-specific rates were highest for the black population below age 55 years and highest for American Indians at 55 years of age and over.

Similarly, for both males and females the age-specific mortality rates are generally lowest for the white and Asian and Pacific Islander populations (Tables 2.5 and 2.6). Below 55 years of age these rates are highest for black males and females and between 55 and 84 they are highest for American Indian males and females. The age-adjusted rates indicate the

same pattern of differences between the race and ancestry groups.

Caution must be exercised when interpreting the low age-adjusted rates for Asian and Pacific Islanders. They may be low due to improper identification of the race. Also since this population has increased by 68.9 percent between 1980 and 1990, predominately through in-migration, the low mortality rates for people over 45 years of age may be due in part to selective migration. Healthier older people may be more willing to migrate to another state or country than the less healthy people.

Table 2.4  
Death Rates<sup>1</sup> and Age-Adjusted Death Rates<sup>2</sup> by Age and Race  
Michigan Residents, 1993

Age in Years	Race				
	Total <sup>3</sup>	White	Black	Amer. Indian	Asian & P.I
Crude Rate	872.3	871.9	935.9	700.3	210.7
< 1	945.1	710.8	1,876.2	922.3	629.3
1-14	30.8	25.4	55.8	12.2	52.8
15-24	95.8	71.1	211.8	121.3	57.7
25-34	123.3	96.5	290.6	140.3	51.7
35-44	226.6	174.6	558.6	379.5	78.8
45-54	469.1	395.9	1,032.8	722.6	218.0
55-64	1,167.2	1,072.6	1,852.8	2,272.7	542.7
65-74	2,745.0	2,612.1	3,796.2	5,278.3	1,453.7
75-84	6,253.8	6,189.0	6,801.1	9,239.8	5,196.0
85+	16,417.6	16,611.5	14,415.6	25,698.3	12,704.9
Age-Adjusted Rate <sup>3</sup>	525.8	482.1	814.7	862.8	171.2

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates. 1993 live births are used to calculate rates for less than one year of age.

<sup>2</sup> Based on age-specific death rates per 100,000 population in specified group. Computed by the direct method, using as the standard population the age distribution of the total population of the United States as enumerated in 1940.

<sup>3</sup> Deaths with sex or race not stated were randomly allocated prior to computation of age-specific death rates. Deaths with age not stated were included in the category 85 and over. Deaths to all other races are included only in the total column.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



Table 2.5  
**Death Rates<sup>1</sup> Age-Adjusted Death Rates<sup>2</sup> by Age and Race**  
 Michigan Male Residents, 1993

Age in Years	Race				
	Total <sup>3</sup>	White	Black	Amer. Indian	Asian & P.I.
Crude Rate	912.2	892.3	1,099.9	805.7	216.0
< 1	1,072.6	823.0	2,068.6	1,851.9	741.7
1-14	33.5	27.3	63.1	11.8	53.0
15-24	141.4	98.0	355.3	171.4	77.0
25-34	179.6	137.4	474.0	207.4	46.4
35-44	303.5	232.3	804.0	620.3	80.9
45-54	593.5	505.0	1,330.5	1,108.7	230.3
55-64	1,459.1	1,335.1	2,473.9	2,147.4	639.9
65-74	3,513.2	3,344.9	4,870.0	7,276.7	1,491.1
75-84	8,090.1	8,053.3	8,409.3	11,538.5	5,870.4
85+	19,311.6	19,742.5	15,754.8	28,070.2	13,392.9
Age-Adjusted Rate <sup>3</sup>	671.6	614.3	1,077.6	1,102.3	185.9

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates. 1993 live births are used to calculate rates for less than one year of age.

<sup>2</sup> Based on age-specific death rates per 100,000 population in specified group. Computed by the direct method, using as the standard population the age distribution of the total population of the United States as enumerated in 1940.

<sup>3</sup> Deaths with sex or race not stated were randomly allocated prior to computation of age-specific death rates. Deaths with age not stated were included in the category 85 and over. Deaths to all other races are included only in the total column.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 2.6  
**Death Rates<sup>1</sup> Age-Adjusted Death Rates<sup>2</sup> by Age and Race**  
 Michigan Female Residents, 1993

Age in Years	Race				
	Total <sup>3</sup>	White	Black	Amer. Indian	Asian & P.I.
Crude Rate	834.3	852.3	792.0	597.4	203.9
< 1	804.3	590.4	1,651.9	0.0	512.8
1-14	27.9	23.3	48.4	12.6	52.7
15-24	49.7	43.6	77.0	70.1	36.9
25-34	68.8	55.8	141.1	74.2	57.1
35-44	152.1	116.9	358.5	160.9	77.1
45-54	349.6	289.3	784.5	364.7	205.3
55-64	899.8	827.0	1,364.4	2,387.3	461.8
65-74	2,138.2	2,029.8	2,984.7	3,738.3	1,427.6
75-84	5,136.1	5,055.4	5,828.5	7,736.9	4,477.6
85+	15,283.6	15,416.7	13,764.3	24,590.2	12,121.2
Age-Adjusted Rate <sup>3</sup>	408.1	376.6	607.1	667.3	158.2

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates. 1993 live births are used to calculate rates for less than one year of age.

<sup>2</sup> Based on age-specific death rates per 100,000 population in specified group. Computed by the direct method, using as the standard population the age distribution of the total population of the United States as enumerated in 1940.

<sup>3</sup> Deaths with sex or race not stated were randomly allocated prior to computation of age-specific death rates. Deaths with age not stated were included in the category 85 and over. Deaths to all other races are included only in the total column.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## LIFE EXPECTANCY

In 1993 the life expectancy at birth was 72.0 years for males and 78.2 years for females based on 1993 mortality and 1992 population data. Females demonstrated a significantly greater longevity than males, due to the higher mortality rates of males at all ages.

### TREND IN LIFE EXPECTANCY

Life expectancies by sex in selected years for Michigan and United States residents are presented in Table 2.7. It can be seen that longevity has increased greatly in Michigan since 1901, by 18.6 years for males and by 23.1 years for females. Females born in Michigan in 1901 could expect to live 1.7 years longer than their male counterparts. By 1950 the differential in life expectancy between the sexes was 5.5 years. This disparity increased to 7.4 years by 1970. Since 1970 male life expectancy has risen faster than female life expectancy and the disparity has decreased to 6.2 years.

The life expectancy of Michigan residents was well above that for the nation in 1901, but this differential had virtually disappeared by 1950. Between 1981 and 1992 both males and females in Michigan had lower life expectancy than corresponding sex groups in the nation. By 1992 the life expectancies of males and females in Michigan were 0.4 and 0.9 years, respectively, below the national provisional life expectancy.

### LIFE EXPECTANCY BY RACE

White persons have had a greater life expectancy than black persons of the same sex since 1950 (Table 2.8). The life expectancy of white males was 9.6 years greater than black males in 1993 compared to a differential of 5.8 years in 1950. While life expectancy for white males increased slowly after 1980, life expectancy of black males decreased in the mid 1980's. The 1993 black male life expectancy was still slightly lower than it had been in 1983. The life expectancy for white males rose from 68.2 in 1970 to 73.4 years in 1993.

Table 2.7  
Life Expectancy<sup>1</sup> at Birth by Sex  
Michigan<sup>2</sup> and United States Residents  
Selected Years, 1901 - 1993

United States		Year	Michigan	
Male	Female		Male	Female
47.6	50.6	1901	53.4	55.1
48.4	51.8	1910	53.9	56.2
53.6	54.6	1920	55.1	56.0
58.1	61.6	1930	59.8	62.8
60.8	65.2	1940	63.4	64.4
65.6	71.1	1950	65.7	71.2
66.6	73.1	1960	67.1	73.3
67.1	74.7	1970	67.2	74.6
68.8	76.6	1975	68.5	75.7
70.0	77.4	1980	70.0	76.9
70.4	77.8	1981	70.3	77.1
70.9	78.1	1982	70.6	77.4
71.0	78.1	1983	70.7	77.4
71.2	78.2	1984	70.8	77.2
71.2	78.2	1985	70.6	77.4
71.3	78.3	1986	70.7	77.4
71.5	78.4	1987	71.1	77.4
71.5	78.3	1988	71.3	77.6
72.2	79.1	1989	71.6	77.7
71.8	78.8	1990	71.7	78.1
72.0	78.9	1991	71.7	78.0
72.3	79.1	1992	71.9	78.2
N.A.	N.A.	1993	72.0	78.2

<sup>1</sup> 1992 estimated population is used to calculate 1993 figures.

<sup>2</sup> Michigan data for years 1920, 1930 and 1940 are for white persons only.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

In 1950, Michigan resident white females had an average longevity 8.5 years greater than black females. This disparity declined to 5.4 years by 1980 and increased to 6.2 years by 1993. Life expectancy generally increased for white females between 1950 and 1993, but it rose until 1982 for black females and generally declined through 1989. By 1993 their life expectancy increased to 72.9, slightly higher than the average longevity achieved eleven years before, in 1982.

## YEARS OF LIFE REMAINING

The expected number of years of life remaining are presented graphically by age, race, and sex in Figure 2.5. The number of years of life remaining for females was greater than that for males throughout life. The average number of years remaining for white males and females surpassed or equaled that

of their black counterparts for all age groups. However, with advancing age the race disparity in years of life remaining diminished, so that black persons displayed similar expected years of life remaining with their white counterparts in age intervals over 69 years.

Table 2.8  
Life Expectancy<sup>1</sup> at Birth by Sex and Race<sup>2</sup>  
Michigan Residents, Selected Years, 1950 - 1993

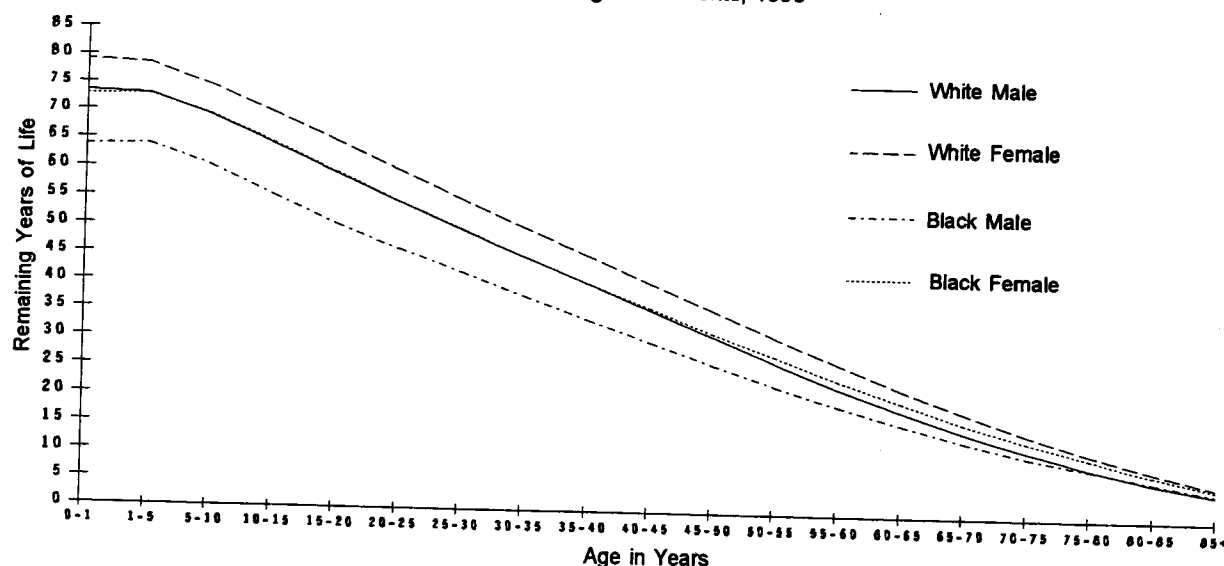
Population Subgroup	Year															
	1950	1960	1970	1980	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
White																
Male	66.2	67.5	68.2	71.0	71.5	71.6	71.8	71.7	71.9	72.4	72.6	73.1	73.1	73.1	73.3	73.4
Female	71.9	74.0	75.3	77.6	78.0	78.1	78.0	78.1	78.2	78.2	78.5	78.8	79.0	78.8	79.2	79.1
Black																
Male	60.4	63.6	59.9	63.5	64.1	64.2	63.9	62.9	62.7	62.4	63.1	62.3	63.8	63.4	64.0	63.8
Female	63.4	67.7	68.3	72.2	72.7	72.5	72.5	72.5	72.0	72.0	71.8	71.4	73.2	72.8	72.7	72.9

<sup>1</sup> 1992 estimated population is used to calculate 1993 figures.

<sup>2</sup> Data for 1950 and 1960 are for persons of white and other than white race.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Figure 2.5  
Remaining Years of Life by Age, Sex and Race  
Michigan Residents, 1993



<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

### MARITAL STATUS

The numbers of deaths by marital status for men and women are displayed in Table 2.9. The majority of men were married at the time of death while the majority of women were widows. Men were more than twice as likely as women to be married at the time of death (55.7 percent compared to 26.0 percent). Conversely, women were over three times as likely to be widows at the time of death as men were to be widowers (55.8 percent compared to 18.4 percent).

### PLACE OF OCCURRENCE

There were 1,998 Michigan resident deaths in 1993 that occurred outside the state (Table 2.10). This represents 2.4 percent of all resident deaths. The states with the highest number of Michigan resident deaths were Florida and Indiana. The border areas of Illinois, Indiana, Ohio, Wisconsin and Canada accounted for 49.6 percent of all resident deaths occurring outside Michigan.

Of the 1,088 non-residents who died in Michigan in 1993, 43.0 percent were from the border areas while 25.5 percent were Floridians.

Table 2.9  
Deaths by Sex and Marital Status  
Michigan Residents, 1993

Marital Status <sup>1</sup>	Males		Females	
	Number	Percent	Number	Percent
Total	41,820	100.0	40,458	100.0
Never Married	6,274	15.0	3,752	9.3
Divorced	4,413	10.6	3,528	8.7
Widowed	7,677	18.4	22,586	55.8
Married	23,300	55.7	10,520	26.0
Unknown	156	0.4	72	0.2

<sup>1</sup> Divorced includes legally separated.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 2.10  
Michigan Deaths  
Occurring Outside Michigan to Michigan  
Residents by Place of Occurrence and  
Occurring in Michigan to Non-Michigan  
Residents by Place of Residence, 1993

Geographic Area	Residents Occurring Outside Michigan		Non-Residents Occurring In Michigan	
	Number	Percent	Number	Percent
Total	1,998	100.0	1,088	100.0
Florida	438	21.9	277	25.5
Indiana	318	15.9	80	7.4
Ohio	304	15.2	153	14.1
Wisconsin	273	13.7	117	10.8
Arizona	92	4.6	20	1.8
Illinois	74	3.7	86	7.9
Texas	68	3.4	21	1.9
Minnesota	60	3.0	11	1.0
Georgia	37	1.9	10	0.9
Tennessee	32	1.6	15	1.4
Pennsylvania	28	1.4	17	1.6
California	26	1.3	34	3.1
Kentucky	26	1.3	18	1.7
Alabama	19	1.0	13	1.2
Colorado	18	0.9	3	0.3
All Other States	161	8.1	153	14.1
Canada	23	1.2	32	2.9
All Other Areas	1	0.1	25	2.3
Unknown	-	0.0	3	0.3

Source: Office of the State Registrar and Division of Health Statistics, MDPH

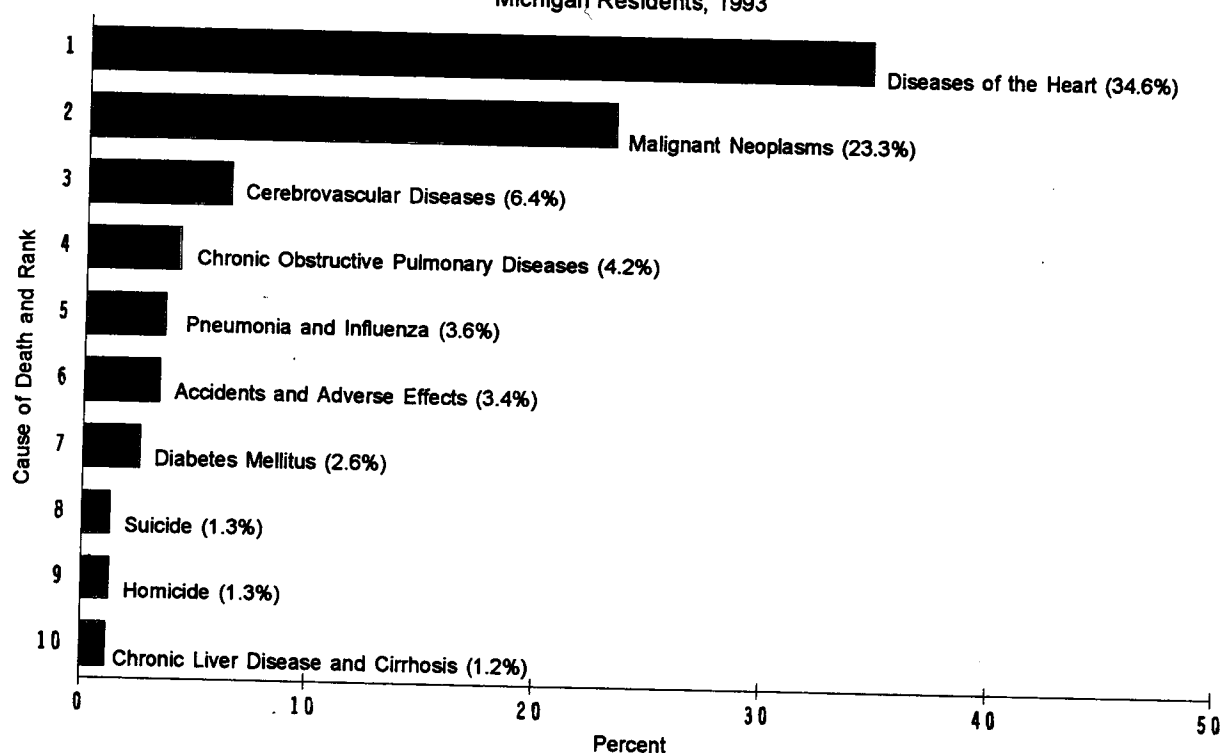
## LEADING CAUSES OF DEATH

**Ten Leading Causes of Death** Deaths due to the 10 leading causes accounted for 82.0 percent of all deaths in 1993. Diseases of the heart was the leading cause of death with 34.6 percent of all deaths. Another 23.3 percent of the deaths were due to cancer. Together these two causes of death were responsible for 57.9 percent of all Michigan resident deaths. The third leading cause of death was cerebrovascular diseases with 6.4 percent of all deaths. The percentage of total deaths resulting from

each of the 10 leading causes of death in 1993 is illustrated in Figure 2.6.

The numbers of deaths and the death rates for the 10 leading causes in 1993 are shown in Table 2.11. The ranking changed from 1992 with pneumonia and influenza moving from the sixth to the fifth leading cause of death. In 1991 accidents dropped from fourth to fifth leading cause of deaths in Michigan for the first time since 1930. This same change occurred nationally in 1992.

Figure 2.6  
Leading Causes of Death  
Michigan Residents, 1993



Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Cause-Specific Crude Death Rates** These rates in Michigan were higher in 1993 than in 1992 for five of the ten leading causes: diseases of the heart, cerebrovascular diseases, chronic obstructive pulmonary diseases and allied conditions, pneumonia and influenza, and chronic liver disease and cirrhosis. The rates were lower for malignant neoplasms, diabetes mellitus, accidents and adverse effects, and homicide.

The order of the leading causes of death for Michigan and the United States were different somewhat in 1993 (Table 2.11). In the United States, accidents and adverse effects ranked fifth and pneu-

monia and influenza ranked sixth. Human immunodeficiency virus infection (AIDS) was the eighth leading cause of death in the United States, but ranked as the thirteenth leading cause of death in Michigan. The overall Michigan death rate was slightly lower than the national rate (0.8 percent). Michigan's mortality rates for diabetes mellitus and homicide were 4.2 and 10.1 percent higher, respectively, than the comparable national rates. The Michigan death rates for accidents and chronic obstructive pulmonary disease were about 12.8 and 6.9 percent lower, respectively, than the national rates.

Table 2.11  
Leading Causes of Death and Cause-Specific Rates<sup>1</sup>  
Michigan and United States<sup>2</sup> Residents, 1993

Rank	Cause of Death	Number of Deaths		Rate	
		Michigan	U.S.	Michigan	U.S.
1	Diseases of the Heart	28,512	739,860	302.2	286.9
2	Malignant Neoplasms	19,187	530,870	203.4	205.8
3	Cerebrovascular Diseases	5,299	149,740	56.2	58.1
4	Chronic Obstructive Pulmonary Disease and Allied Conditions	3,445	101,090	36.5	39.2
5	Pneumonia and Influenza	2,981	81,730	31.6	31.7
6	Accidents and Adverse Effects	2,830	88,630	30.0	34.4
7	Diabetes Mellitus	2,105	55,110	22.3	21.4
8	Suicide	1,078	31,230	11.4	12.1
9	Homicide	1,031	25,470	10.9	9.9
10	Chronic Liver Disease and Cirrhosis	1,006	24,730	10.7	9.6
Sub Total		67,474	1,828,460	715.2	709.1
All Other Causes		14,812	439,540	157.0	170.2
Total		82,286	2,268,000	872.3	879.3

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> United States data are estimates based on a 10 percent sample of deaths.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Leading Causes of Death by Race and Sex** The numbers of deaths and crude death rates are presented by race and sex for the 10 leading causes of death in Tables 2.12 and 2.13. The order of the leading causes for each group was similar with some notable exceptions. Suicide, the overall eighth leading cause of death, was the seventh leading cause for white males. Accidents, the sixth leading cause of death, was the seventh leading cause for white females. Homicide, the ninth leading cause of death, was the

third and sixth leading cause of death for black males and females, respectively. Finally, diabetes, the seventh leading cause, was the fourth leading cause for black females. Most of these differences were also observed in 1992.

It is noteworthy that the homicide rate for black males has increased from 95.3 deaths per 100,000 in 1992 to 98.4 deaths 1993.

Table 2.12  
Leading Causes of Death by Race and Sex<sup>1</sup>  
Michigan Residents, 1993

Cause of Death	All Races			White			Black			All Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Diseases of the Heart	28,512	14,095	14,417	24,500	12,106	12,394	3,820	1,893	1,927	188	93	95
Malignant Neoplasms	19,187	10,066	9,120	16,442	8,527	7,914	2,579	1,442	1,137	159	93	66
Cerebrovascular Diseases	5,299	2,156	3,141	4,586	1,825	2,760	686	324	362	27	7	19
Chronic Obstructive Pulmonary Diseases and Allied Conditions	3,445	1,874	1,571	3,100	1,663	1,437	314	190	124	31	21	10
Pneumonia/Influenza	2,981	1,422	1,559	2,575	1,199	1,376	374	209	165	32	14	18
Accidents and Adverse Effects	2,830	1,782	1,048	2,328	1,441	887	448	304	144	54	37	17
Diabetes Mellitus	2,105	924	1,181	1,740	771	969	342	143	199	23	10	13
Suicide	1,078	899	179	949	784	165	115	103	12	14	12	2
Homicide	1,031	789	242	272	168	104	747	614	133	12	7	5
Chronic Liver Disease and Cirrhosis	1,006	642	364	764	478	286	227	156	71	14	8	6
All Other Causes	14,812	7,171	7,636	11,788	5,597	6,190	2,863	1,482	1,377	124	68	56
Total	82,286	41,820	40,458	69,044	34,559	34,482	12,515	6,860	5,651	678	370	307

<sup>1</sup> Deaths with race/sex not stated are included only in the "Total" column.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 2.13  
Leading Causes of Death and Crude Death Rates<sup>1</sup> by Race and Sex<sup>2</sup>  
Michigan Residents, 1993

Cause of Death	All Races			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Diseases of the Heart	302.2	307.4	297.3	309.5	312.7	306.4	285.7	303.5	270.1
Malignant Neoplasms	203.4	219.6	188.1	207.7	220.3	306.4	192.9	231.2	159.4
Cerebrovascular Diseases	56.2	47.0	64.8	57.9	47.1	68.2	51.3	51.9	50.7
Chronic Obstructive Pulmonary Diseases and Allied Conditions	36.5	40.9	32.4	39.1	42.9	35.5	23.5	30.5	17.4
Accidents and Adverse Effects	30.0	38.9	21.6	29.4	37.2	21.9	33.5	48.7	20.2
Pneumonia/Influenza	31.6	31.0	32.1	32.5	31.0	34.0	28.0	33.5	23.1
Diabetes Mellitus	22.3	20.2	24.4	22.0	19.9	24.0	25.6	22.9	27.9
Suicide	11.4	19.6	3.7	12.0	20.2	4.1	8.6	16.5	1.7
Homicide	10.9	17.2	5.0	3.4	4.3	2.6	55.9	98.4	18.6
Chronic Liver Disease and Cirrhosis	10.7	14.0	7.5	9.7	12.3	7.1	17.0	25.0	10.0
All Other Causes	157.0	156.5	157.5	149.1	144.9	153.2	214.2	238.1	193.3
Total	872.3	912.3	834.4	872.3	892.9	852.7	936.0	1,100.4	792.3

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Death with race/sex not stated are included only in the "Total" column.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Age-adjusted Rates by Race and Sex** These rates are presented for the ten leading causes of death in Table 2.14. These rates adjust for the differences in age distributions among the race/sex groups. When comparing the crude rates of heart disease between white males and females, the rate for males is slightly higher, but when adjusted for age the male rate is nearly double that of females. Crude rates for white females are higher for cancer and stroke, but after age-adjusting, the rates are higher in males.

The age-adjusted death rates for white females were lower than the rates for the other three groups for nine of the ten leading causes of death. The greatest differentials between black and white female rates occurred for diabetes, chronic liver disease and cirrhosis, and homicide where the black female rates

were 1.9, 2.1 and 7.3 times higher, respectively, than rates for white females.

Rates for black males were lower for suicides than white males and the rates for black females were lower for both chronic obstructive pulmonary diseases and allied conditions and suicides than their white counterparts. Black male rates were higher than white male rates, for the remaining nine leading causes of death. The greatest differentials between black and white male rates occurred for cerebrovascular disease, chronic liver disease and cirrhosis, and homicide where black males rates were 1.9, 2.7 and 22.9 times higher. For the remaining conditions the black male and female rates were 1.1 to 1.8 times higher than rates for their white counterparts.

Table 2.14  
Leading Causes of Death and Age-Adjusted Death Rates<sup>1</sup> by Race and Sex<sup>2</sup>  
Michigan Residents, 1993

Cause of Death	All Races			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Diseases of the Heart	160.5	213.0	118.5	150.6	203.0	108.7	234.7	295.8	187.7
Malignant Neoplasms	135.3	163.4	115.5	129.8	155.0	112.5	177.3	231.8	138.3
Cerebrovascular Diseases	27.1	30.5	24.3	25.0	28.0	22.6	42.9	51.9	35.7
Chronic Obstructive Pulmonary Diseases and Allied Conditions	20.8	27.3	16.5	20.8	27.0	16.8	19.7	28.2	13.7
Accidents and Adverse Effects	26.1	36.5	16.2	25.0	34.5	15.8	32.4	49.4	17.9
Pneumonia/Influenza	14.3	19.1	10.9	13.1	17.5	10.1	21.6	30.9	14.8
Diabetes Mellitus	13.6	14.7	12.8	12.4	13.6	11.5	22.5	22.9	22.2
Suicide	10.7	18.6	3.4	11.0	18.8	3.6	8.7	16.9	*
Homicide	11.6	18.2	5.1	3.5	4.4	2.6	57.1	100.9	18.9
Chronic Liver Disease and Cirrhosis	8.9	12.4	5.7	7.5	10.4	4.9	18.1	28.3	9.9
All Other Causes	96.9	117.7	79.2	83.5	102.2	67.7	179.9	221.1	146.2
Total	525.8	671.6	408.1	482.1	614.3	376.6	814.7	1,077.6	607.1

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Deaths with race/sex not stated are included only in the "Total" column.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



**Five Leading Causes by Age, Race and Sex**  
Age-specific mortality rates for the leading causes of death among residents of different ages, sexes and races are more varied than age-adjusted rates for the race-sex groups (Tables 2.15 through 2.19).

Leading causes of death for infants are generally different than the causes observed for other age groups. The leading cause for all four race-sex groups of infants is certain conditions originating in the perinatal period. Congenital anomalies and sudden infant death syndrome were the second or third leading cause for infants in each group.

Accidents were the leading cause of death for white males and females from ages 1 through 34 years. Accidents were among the top leading causes of death for black males and females ages 1 to 34 years and were the leading cause for ages 1 to 14 years.

Homicide was the second leading cause of death overall for ages 15 through 34 years, but was the leading cause of death for black males ages 15 through 34 years, black females ages 25 through 34 years, and the second leading cause of death for black males ages 1 through 14 years. In fact, over half of the homicides among Michigan residents occurred among black males 15 to 49 years of age. Compared to homicide rates in 1992, the rates for black males ages 5-14, 15-24 and 25-34 increased 33.8, 14.1 and 4.5 percent, respectively.

Suicide was the third leading cause of death overall for ages 15-24 and second among white males 15-34. Suicide was the third or fourth leading cause among black males 15-24 and white females ages 15 through 34 years.

Among persons 35 years and over, chronic conditions are responsible for the majority of deaths. Malignant neoplasms was the leading cause of death for white females ages 35 to 64 years and black females ages 35-49 years.

Diseases of the heart was the leading cause of death for black and white males ages 35 years or over, black females ages 50 years or over, and white females 65 years of age or over.

**AIDS** Overall, AIDS was the third or fourth leading cause of death for people 25 to 49 years of age. Among white males it was the third leading cause of death for ages 25-34 years of age and fifth for ages 35-49 years of age. It was the second leading cause for black males ages 25-49 years of age. For black females, AIDS was a third, fourth or fifth leading cause for ages 15-49. AIDS was not one of the top five causes of death for any white female age group in 1993. The first year that AIDS was among the five leading causes in a race-sex-age group was 1987 but that was also the first year that AIDS deaths could be tabulated separately from pneumonia, cancer and other causes of death.

Table 2.15  
**Leading Causes of Death and Cause-Specific Rates by Age**  
 Michigan Residents, 1993

Age	Rank and Cause of Death	Number <sup>1</sup>	Rate <sup>2,3,4</sup>
All Ages	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Chronic obstructive pulmonary diseases 5. Pneumonia and influenza All Causes	28,512 19,187 5,299 3,445 2,981 82,286	302.2 203.4 56.2 36.5 31.6 872.3
<1	1. Certain conditions originating in the perinatal period 2. Congenital anomalies 3. Sudden infant death syndrome [SIDS] 4. Accidents and adverse effects 5. Diseases of the heart All Causes	656 213 210 45 29 1,319	473.0 153.6 151.4 32.4 20.9 951.1
1-4	1. Accidents and adverse effects 2. Congenital anomalies 3-4. Malignant neoplasms - Homicide 5. Diseases of the heart All Causes	92 38 24 12 274	16.0 6.6 4.2 2.1 47.6
5-14	1. Accidents and adverse effects 2. Malignant neoplasms 3. Homicide 4. Congenital anomalies 5. Suicide All Causes	143 37 20 15 11 331	10.3 2.7 1.4 1.1 0.8 23.8
15-24	1. Accidents and adverse effects 3. Homicide 3. Suicide 4. Malignant neoplasms 5. Diseases of the heart All Causes	459 361 175 78 41 1,317	33.4 26.3 12.7 5.7 3.0 95.8
25-34	1. Accidents and adverse effects 2. Homicide 3. AIDS 4. Suicide 5. Malignant neoplasms All Causes	399 278 216 214 173 1,871	26.3 18.3 14.2 14.1 11.4 123.3
35-49	1. Malignant neoplasms 2. Diseases of the heart 3. Accidents and adverse effects 4. AIDS 5. Suicide All Causes	1,215 1,073 513 373 312 5,440	59.0 52.1 24.9 18.1 15.2 264.3
50-64	1. Malignant neoplasms 2. Diseases of the heart 3. Cerebrovascular diseases 4. Chronic obstructive pulmonary diseases 5. Diabetes mellitus All Causes	4,318 3,708 466 451 372 11,801	351.4 301.7 37.9 36.7 30.3 960.3
65+	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Chronic obstructive pulmonary diseases 5. Pneumonia and influenza All Causes	23,483 13,340 4,599 2,889 2,620 59,929	2,040.8 1,159.3 399.7 251.1 227.7 5,208.0

<sup>1</sup> Subtotals by sex and race do not add to the grand total as the race was not stated on records for 31 males and 18 females. In addition, the cause was not stated on 3 white females, 4 black females and 1 other race female. Age groups do not add to respective totals because records with age not stated are included only in the total.

<sup>2</sup> Rates may not agree with those shown elsewhere in this section since records of unknown sex and race were randomly allocated prior to rate calculation for the other tables, and were not included in calculations for this table.

<sup>3</sup> Rate per 100,000 population.

<sup>4</sup> 1992 estimated population is used to calculate 1993 rates.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 2.16  
Leading Causes of Death and Cause-Specific Rates by Age,  
Michigan Resident White Males, 1993

Age	Rank and Cause of Death	Number <sup>1</sup>	Rate <sup>2,3,4</sup>
All Ages	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Chronic obstructive pulmonary diseases 5. Accidents and adverse effects All Causes	12,106 8,527 1,825 1,663 1,441 34,559	312.6 220.2 47.1 42.9 37.2 892.3
<1	1. Certain conditions originating in the perinatal period 2. Congenital anomalies 3. Sudden infant death syndrome [SIDS] 4. Accidents and adverse effects 5. Disease of the heart All Causes	209 86 77 15 14 458	388.8 160.0 143.2 27.9 26.0 851.9
1-4	1. Accidents and adverse effects 2. Congenital anomalies 3. Malignant neoplasms 4-5. Diseases of the heart - Homicide All Causes	38 14 10 3 93	16.1 5.9 4.2 * 39.4
5-14	1. Accidents and adverse effects 2. Malignant neoplasms 3. Suicide 4. Congenital anomalies 5-6. Pneumonia and influenza - Diseases of the heart All Causes	58 12 6 5 4 130	10.0 2.1 1.0 * * 22.4
15-24	1. Accidents and adverse effects 2. Suicide 3. Homicide 4. Malignant neoplasms 5. Diseases of the heart All Causes	276 117 32 30 14 546	49.5 21.0 5.7 5.4 2.5 98.0
25-34	1. Accidents and adverse effects 2. Suicide 3. AIDS 4. Malignant neoplasms 5. Diseases of the heart All Causes	250 158 103 78 62 873	39.4 24.9 16.2 12.3 9.8 137.4
35-49	1. Diseases of the heart 2. Malignant neoplasms 3. Accidents and adverse effects 4. Suicide 5. AIDS All Causes	574 406 288 227 165 2,372	65.7 46.5 33.0 26.0 18.9 271.5
50-64	1. Diseases of the heart 2. Malignant neoplasms 3. Chronic obstructive pulmonary diseases 4. Cerebrovascular diseases 5. Accidents and adverse effects All Causes	2,036 1,890 214 191 159 5,679	390.5 362.5 41.0 36.6 30.5 1,089.2
65+	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Chronic obstructive pulmonary diseases 5. Pneumonia and influenza All Causes	9,398 6,099 1,559 1,422 1,052 24,406	2,260.3 1,466.8 374.9 342.0 253.0 5,869.8

<sup>1</sup> Subtotals by sex and race do not add to the grand total as the race was not stated on records for 31 males and 18 females. In addition, the cause was not stated on 3 white females, 4 black females and 1 other race female. Age groups do not add to respective totals because records with age not stated are included only in the total.

<sup>2</sup> Rates may not agree with those shown elsewhere in this section since records of unknown sex and race were randomly allocated prior to rate calculation for the other tables, and were not included in calculations for this table.

<sup>3</sup> Rate per 100,000 population.

<sup>4</sup> 1992 estimated population is used to calculate 1993 rates.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 2.17  
**Leading Causes of Death and Cause-Specific Rates by Age**  
 Michigan Resident Black Males, 1993

Age	Rank and Cause of Death	Number <sup>1</sup>	Rate <sup>2,3,4</sup>
All Ages	1. Diseases of the heart 2. Malignant neoplasms 3. Homicide 4. Cerebrovascular diseases 5. Accidents and adverse effects All Causes	1,893 1,442 614 324 304 6,860	303.5 231.2 98.4 51.9 48.7 1,099.9
<1	1. Certain conditions originating in the perinatal period 2. Sudden infant death syndrome [SIDS] 3. Congenital anomalies 4. Accidents and adverse effects 5-6. Pneumonia and influenza - Meningococcal infection All Causes	162 50 27 15 5 295	1,058.5 326.7 176.4 98.0 * 1,927.5
1-4	1. Accidents and adverse effects 2. Homicide 3. Congenital anomalies 4-6. Chronic obstructive pulmonary diseases - AIDS - Diseases of the heart All Causes	18 8 6 3 53	35.2 15.6 11.7 * 103.6
5-14	1. Accidents and adverse effects 2. Homicide 3. Chronic obstructive pulmonary diseases 4-6. Malignant neoplasms - Suicide - Congenital anomalies All Causes	19 11 4 2 52	16.5 9.5 * * 45.1
15-24	1. Homicide 2. Accidents and adverse effects 3. Suicide 4. Diseases of the heart 5. Malignant neoplasms All Causes	273 46 37 11 9 412	235.4 39.7 31.9 9.5 7.8 355.3
25-34	1. Homicide 2. AIDS 3. Accidents and adverse effects 4. Diseases of the heart 5. Suicide All Causes	167 89 42 30 22 449	176.3 94.0 44.3 31.7 23.2 474.0
35-49	1. Diseases of the heart 2. AIDS 3. Malignant neoplasms 4. Homicide 5. Accidents and adverse effects All Causes	192 150 135 108 79 1,068	158.4 123.7 111.4 89.1 65.2 881.1
50-64	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Chronic liver disease and cirrhosis 5. Accidents and adverse effects All Causes	479 371 91 53 40 1,356	767.8 594.7 145.9 85.0 64.1 21,73.5
65+	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Chronic obstructive pulmonary diseases 5. Pneumonia and influenza All Causes	1,175 908 183 138 128 3,174	2,462.0 1,902.6 383.4 289.2 268.2 6,650.6

<sup>1</sup> Subtotals by sex and race do not add to the grand total as the race was not stated on records for 31 males and 18 females. In addition, the cause was not stated on 3 white females, 4 black females and 1 other race female. Age groups do not add to respective totals because records with age not stated are included only in the total.

<sup>2</sup> Rates may not agree with those shown elsewhere in this section since records of unknown sex and race were randomly allocated prior to rate calculation for the other tables, and were not included in calculations for this table.

<sup>3</sup> Rate per 100,000 population.

<sup>4</sup> 1992 estimated population is used to calculate 1993 rates.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 2.18  
Leading Causes of Death and Cause-Specific Rates by Age  
Michigan Resident White Females, 1993

Age	Rank and Cause of Death	Number <sup>1</sup>	Rate <sup>2,3,4</sup>
All Ages	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Chronic obstructive pulmonary diseases 5. Pneumonia and influenza All Causes	12,394 7,914 2,760 1,437 1,376 34,482	306.4 195.6 68.2 35.5 34.0 852.3
<1	1. Certain conditions originating in the perinatal period 2. Congenital anomalies 3. Sudden infant death syndrome [SIDS] 4. Accidents and adverse effects 5. Diseases of the heart All Causes	136 68 53 9 6 311	263.8 131.9 102.8 17.5 11.6 603.3
1-4	1. Accidents and adverse effects 2-3 Malignant neoplasms - Congenital anomalies 4. Homicide 5. Diseases of the heart All Causes	25 10 5 3 74	11.1 4.5 * * 33.0
5-14	1. Accidents and adverse effects 2. Malignant neoplasms 3. Congenital anomalies 4. Diseases of the heart 5-7. Homicide - Pneumonia and influenza - Chronic obstructive pulmonary diseases All Causes	44 22 6 4 3 106	8.0 4.0 1.1 * * 19.3
15-24	1. Accidents and adverse effects 2. Malignant neoplasms 3. Suicide 4. Homicide 5. Diseases of the heart All Causes	106 29 18 15 10 237	19.5 5.3 3.3 2.8 1.8 43.6
25-34	1. Accidents and adverse effects 2. Malignant neoplasms 3. Diseases of the heart 4. Suicide 5. Homicide All Causes	85 62 37 25 24 357	13.3 9.7 5.8 3.9 3.8 55.8
35-49	1. Malignant neoplasms 2. Diseases of the heart 3. Accidents and adverse effects 4-5. Suicide - Cerebrovascular diseases All Causes	491 178 112 51 1,263	55.9 20.3 12.8 5.8 143.9
50-64	1. Malignant neoplasms 2. Diseases of the heart 3. Chronic obstructive pulmonary diseases 4. Diabetes mellitus 5. Cerebrovascular diseases All Causes	1,705 832 184 135 126 3,666	309.9 151.2 33.4 24.5 22.9 666.4
65+	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Pneumonia and influenza 5. Chronic obstructive pulmonary diseases All Causes	11,323 5,595 2,567 1,294 1,224 28,467	1,856.2 917.2 420.8 212.1 200.6 4,666.6

<sup>1</sup> Subtotals by sex and race do not add to the grand total as the race was not stated on records for 31 males and 18 females. In addition, the cause was not stated on 3 white females, 4 black females and 1 other race female. Age groups do not add to respective totals because records with age not stated are included only in the total.

<sup>2</sup> Rates may not agree with those shown elsewhere in this section since records of unknown sex and race were randomly allocated prior to rate calculation for the other tables, and were not included in calculations for this table.

<sup>3</sup> Rate per 100,000 population.

<sup>4</sup> 1992 estimated population is used to calculate 1993 rates.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 2.19  
**Leading Causes of Death and Cause-Specific Rates by Age**  
 Michigan Resident Black Females, 1993

Age	Rank and Cause of Death	Number <sup>1</sup>	Rate <sup>2,3,4</sup>
All Ages	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular disease 4. Diabetes mellitus 5. Pneumonia and influenza All Causes	1,927 1,137 362 199 165 5,651	270.1 159.4 50.7 27.9 23.1 792.0
<1	1. Certain conditions originating in the perinatal period 2. Sudden infant death syndrome [SIDS] 3. Congenital anomalies 4. Diseases of the heart 5-6. Pneumonia and influenza - Accident All Causes	138 29 28 7 4 231	931.5 195.7 189.0 47.2 * 1,559.2
1-4	1. Accidents and adverse effects 2-3. Homicide - Congenital anomalies 4. Certain conditions originating in the perinatal period 5-6. Pneumonia and influenza - Diseases of the heart All Causes	9 8 4 2 46	17.9 15.9 * * 91.7
5-14	1. Accidents and adverse effects 2. Homicide 3-4. Congenital anomalies - AIDS 5-7. Chronic obstructive pulmonary diseases - Diseases of the heart - Malignant neoplasms All Causes	15 4 2 1 33	13.2 * * * 29.1
15-24	1. Chronic obstructive pulmonary diseases 2. Accidents and adverse effects 3. Malignant neoplasms 4. Diseases of the heart 5. AIDS All Causes	36 19 9 6 3 95	29.2 15.4 7.3 4.9 * 77.0
25-34	1. Homicide 2. Diseases of the heart 3-4. AIDS - Malignant neoplasms 5. Accidents and adverse effects All Causes	36 20 13 12 164	31.0 17.2 11.2 10.3 141.1
35-49	1. Malignant neoplasms 2. Diseases of the heart 3. AIDS 4. Chronic liver disease and cirrhosis 5. Homicide All Causes	162 114 45 32 29 654	110.4 77.7 30.7 21.8 19.8 445.6
50-64	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Diabetes mellitus 5. Nephritis and Nephrosis All Causes	314 299 55 41 23 938	398.7 379.7 69.8 52.1 29.2 1,191.1
65+	1. Diseases of the heart 2. Malignant neoplasms 3. Cerebrovascular diseases 4. Diabetes mellitus 5. Pneumonia and influenza All Causes	1,463 652 270 141 123 3,490	2,087.2 930.2 385.2 201.2 175.5 4,979.0

<sup>1</sup> Subtotals by sex and race do not add to the grand total as the race was not stated on records for 31 males and 18 females. In addition, the cause was not stated on 3 white females, 4 black females and 1 other race female. Age groups do not add to respective totals because records with age not stated are included only in the total.

<sup>2</sup> Rates may not agree with those shown elsewhere in this section since records of unknown sex and race were randomly allocated prior to rate calculation for the other tables, and were not included in calculations for this table.

<sup>3</sup> Rate per 100,000 population.

<sup>4</sup> 1992 estimated population is used to calculate 1993 rates.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## COMMUNICABLE DISEASE DEATHS

Although comprising a smaller proportion of deaths than they have in the past, communicable disease deaths continue to be a public health concern. In 1993, deaths from all infectious and parasitic diseases numbered 1,741 (Table 2.20). The number of deaths due to septicemia increased from 622 deaths in 1992 to 743 deaths in 1993.

There were 691 deaths (39.7 percent) attributable to AIDS. This was a 20.6 percent increase in the

number of deaths due to AIDS since 1992 when there were 573 deaths. There were 465 and 373 deaths due to AIDS reported in 1991 and 1990, respectively.

Deaths due to such diseases as diphtheria, scarlet fever, streptococcal sore throat, small pox, typhoid fever, measles, poliomyelitis and others have been virtually eliminated not only in Michigan, but across the nation. Table 4.7 illustrates trends in deaths from the major communicable diseases.

Table 2.20  
Deaths from Selected Infectious and  
Parasitic Diseases  
Michigan Residents, 1993

ICD List <sup>1</sup> Number	Cause of Death	Frequency
038	Septicemia	743
042-044	HTLV-III/LAV infection (AIDS)	691
110-118	Mycoses	57
070	Viral hepatitis	52
010-018	Tuberculosis	38
135	Sarcoidosis	25
136.3	Pneumocystosis	12
036	Meningococcal infection	8
040.0	Gas Gangrene	8
046	Slow virus infection of central nervous system	7
054	Herpes simplex	7
053	Herpes zoster	3
052	Chickenpox	2
137	Late effects of tuberculosis	1
Residual 000-139	All other infectious and parasitic diseases	87
Total		1,741

<sup>1</sup> Detailed list of the 9th revision of the International Classification of Diseases, WHO.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## YEARS OF POTENTIAL LIFE LOST BELOW AGE 65

Another measure of the impact that causes of death have on a population, the years of potential life lost below age 65, is used by the National Centers for Disease Control. The number of years of potential life lost is calculated as the number of years between the age at death and 65 years of age for persons dying before their 65th year.

Table 2.21 includes the years of potential life lost to the Michigan population in 1993 for the ten leading causes of death and selected other causes, as well as the rankings of these causes based on years of potential life lost for the United States.

The ranking of the leading causes of years of potential life lost was different from the ranking of numbers of deaths presented in Table 2.14. Diseases of the heart was the leading cause of death but was

the fourth leading cause of years of potential life lost below age 65. Malignant neoplasms, with 68,953 total years lost, was the leading cause of years of potential life lost below age 65 in Michigan but was the second leading cause of death. Accidents and adverse effects, which was the sixth leading cause of death, was the second leading cause of years of potential life lost. Chronic obstructive pulmonary disease, diabetes mellitus and pneumonia and influenza which were among the ten leading causes of death, were not among the ten leading causes of years of potential life lost below age 65.

Rankings of the leading causes of potential life lost were reasonably similar for Michigan and the United States with the exception of AIDS. For Michigan, AIDS was the seventh leading cause of years of potential life lost and sixth in the United States.

Table 2.21  
Years of Potential Life Lost Below Age 65  
Due to the Ten Leading Causes of Death and Selected Other Causes  
Michigan Residents, 1993

Rank	Cause of Death	Years of Potential Life Lost			U.S. <sup>2</sup> Rank
		Total <sup>1</sup>	Male	Female	
1	Malignant Neoplasms	68,953	34,243	34,710	2
2	Accidents and Adverse Effects	67,347	47,208	20,139	1
3	Homicide/Suicide	60,225	49,023	11,202	3
4	Diseases of the Heart	59,537	40,984	18,553	4
5	Prematurity <sup>3</sup>	23,657	13,860	9,603	7
6	Congenital Anomalies	20,879	11,084	9,666	5
7	HTLV-III/LAV Infection(AIDS)	18,419	15,817	2,603	6
8	Sudden Infant Death Syndrome	13,610	8,321	5,289	8
9	Chronic Liver Disease and Cirrhosis	9,814	7,154	3,080	10
10	Cerebrovascular Diseases	9,226	5,276	4,116	9
11	Chronic Obstructive Pulmonary Diseases and Allied Conditions	6,275	3,157	3,118	13
12	Pneumonia and Influenza	6,252	4,635	2,787	11
13	Diabetes Mellitus	6,192	3,252	2,940	12
All Other		81,723	48,027	33,696	

<sup>1</sup> Total includes data for individuals with sex unspecified.

<sup>2</sup> U.S. rankings based on a 10 percent sample of provisional data.

<sup>3</sup> Codes 765 and 769, detailed list of the 9th revision of the International Classification of Diseases, WHO.



## INFANT DEATHS

**Trends** Of the 82,286 deaths occurring to Michigan residents in 1993, 1,319 occurred to individuals less than one year of age. The rate of death for infants under the age of one year has dropped considerably since 1900. In that year there were 157.1 infant deaths for every 1,000 live births. This means that about 16 of every 100 infants did not survive their first year (Figure 2.7). This rate fell below 100 by 1914 (96.8), to less than 70 by 1927 (67.7), and to less than 50 by 1935 (47.7). During the 1940's the Michigan infant death rate declined from 40.6 in 1940 to 28.9 in 1949.

Relative declines in the infant death rate slowed considerably in the 1950's and 1960's. It was not until 1971 that the rate dropped below 20 to 19.5. The rate of decline between 1970 and 1980 compares favorably with the rate of decline observed before 1950. Between 1980 and 1993 the rate fluctuated, slowly declining from 12.8 to 9.5 in 1993 (Table 2.22).

**Michigan and United States Comparison** During the period 1915-1928, the rate for Michigan was above that for the United States 9 of 14 years. From 1929 through 1969, Michigan's infant death rate was consistently below the national statistic. From 1970 through 1975 the infant mortality rate in Michigan

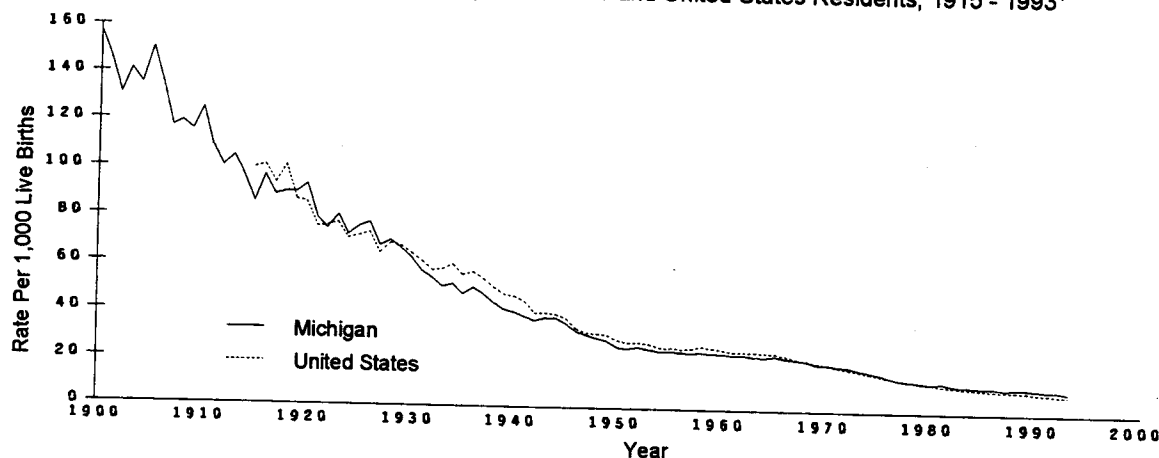
Table 2.22  
Infant Deaths and Infant Death Rates  
Michigan and United States Residents  
Selected Years, 1950 - 1993

United States		Year	Michigan	
Number	Rate		Number	Rate
103,825	28.6	1950	4,230	26.4
110,873	26.0	1960	4,704	24.1
74,667	20.0	1970	3,492	20.3
45,526	12.6	1980	1,851	12.8
40,030	10.6	1985	1,575	11.4
38,891	10.4	1986	1,565	11.4
38,408	10.1	1987	1,538	10.9
38,910	10.0	1988	1,542	11.0
39,655	9.8	1989	1,645	11.1
38,351	9.2	1990	1,638	10.7
36,766	8.9	1991	1,554	10.4
34,628	8.5	1992	1,460	10.2
33,300Pr.	8.3Pr.	1993	1,319	9.5

Source: Office of the State Registrar and Division of Health Statistics, MDPH

was slightly higher than the rate for the nation. From 1976 through 1980 the rates for the state and nation were similar. Since 1980 the rate for Michigan has been 5 to 20 percent above the national rate. The provisional rate for the United States in 1993 was 8.3 infant deaths per 1,000 live births. The Michigan rate of 9.5 was 14.5 percent higher than the national provisional rate in 1993 (Table 2.22).

Figure 2.7  
Infant Mortality Rates  
Michigan Residents, 1900 - 1993 and United States Residents, 1915 - 1993<sup>1</sup>



<sup>1</sup> United States rate for 1993 is provisional.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Early Infant Deaths** Table 2.23 shows the numbers of infant deaths and infant death rates by age at death for the period 1970-1993. The number of infants who died during the first week of life in 1993 (708) is greater than the number of deaths of infants aged 7-364 days (611). In 1993, 64.9 percent of all infant deaths occurred within the first four

weeks of life and 41.8 percent occurred in the first day.

A review of Table 2.23 reveals that the 25.8 percent decline in the infant mortality rate since 1980 stems largely from reductions in the rate of death for those under 1 day and between 1 and 6 days of age.

Table 2.23  
Infant Deaths and Infant Death Rates by Age at Death  
Michigan Residents, Selected Years, 1970 - 1993

Year	Age at Death									
	Total Infant Death		<1 Day		1- 6 Days		7 - 27 Days		28 - 364 Days	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1970	3,492	20.3	1,367	8.0	1,095	6.4	221	1.3	809	4.7
1975	2,205	16.5	856	6.4	461	3.4	246	1.8	642	4.8
1980	1,851	12.8	790	5.4	310	2.1	184	1.3	567	3.9
1985	1,575	11.4	697	5.1	217	1.6	157	1.1	504	3.7
1986	1,565	11.4	680	4.9	237	1.7	162	1.2	486	3.5
1987	1,538	10.9	660	4.7	217	1.5	152	1.1	509	3.6
1988	1,542	11.0	685	4.9	213	1.5	170	1.2	474	3.4
1989	1,645	11.1	703	4.7	208	1.4	159	1.1	575	3.9
1990	1,638	10.7	673	4.4	219	1.4	181	1.2	565	3.7
1991	1,554	10.4	663	4.4	182	1.2	158	1.1	551	3.7
1992	1,460	10.2	648	4.5	173	1.2	141	1.0	498	3.5
1993	1,319	9.5	551	3.9	157	1.1	148	1.1	463	3.3

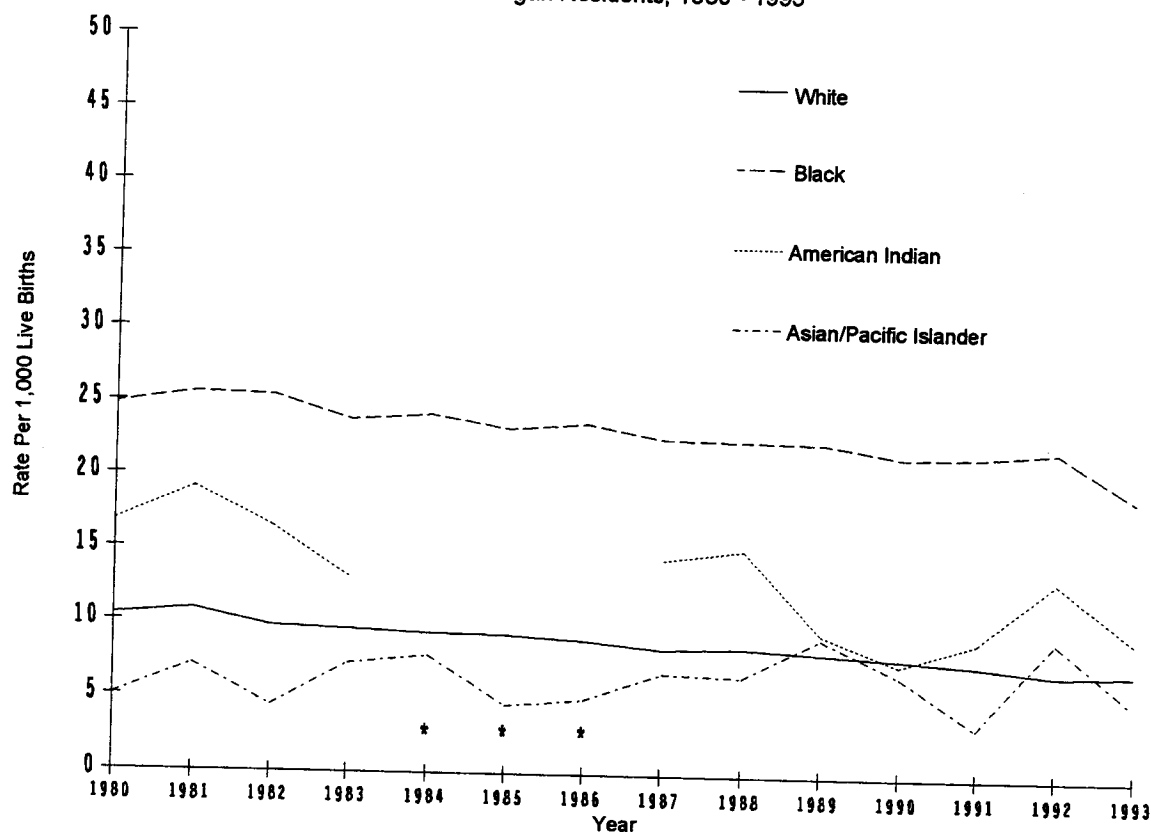
Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Trends in Infant Deaths by Race** Infant death rates for white, black, American Indians and Asian and Pacific Islanders are graphically displayed in Figure 2.8. The rates used in this graph were calculated using the race of the mother for live births.

Black infant death rates were higher than rates for the other racial groups throughout the period. Where American Indian infant death rates could be calculated, they were usually higher than rates for white infants. Asian and Pacific Islander infant mortality rates were usually lower than rates for white infants.

The white infant mortality rate dropped 31.7 percent between 1980 and 1993, while for black infants the decline was 24.2 percent. The rate for black infants of 24.8 in 1980 was 2.4 times higher than that for white infants (10.4). By 1993 the mortality rate for black infants (18.8) was 2.6 times higher than the rate for white infants (7.1) due to the slower decline in the mortality rates experienced by black infants than white infants during the fourteen years.

Figure 2.8  
Infant Death Rates by Race  
Michigan Residents, 1980 - 1993



Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Infant Death Rates** In Table 2.24 infant, hebdomadal, fetal and perinatal deaths are presented by race and ancestry. The infant mortality rates for Asian/Pacific Islander infants and infants of Arab ancestry were 29.6 and 23.9 percent lower than the rate for white infants. Rates for black and American Indian infants were higher than the white rate.

**Hebdomadal Death Rates** The death rate during the first week of life was 2.8 times higher for black infants than white infants. It was somewhat lower for Hispanic and Arab infants than white infants.

**Fetal Death Rates** The fetal death rates were higher for births to black and Asian/Pacific Islander mothers than white mothers. Fetal death rates were lowest for births to Arab and Hispanic mothers.

**Perinatal Death Rates** Perinatal deaths are fetal deaths plus hebdomadal deaths. Perinatal death rates were 2.0 times higher for fetuses and infants born to black mothers than white mothers. Perinatal death rates were lowest for fetuses and infants born to Hispanic mothers.

Table 2.24  
Infant, Hebdomadal, Fetal and Perinatal Death Rates<sup>1</sup> by Specified Race and Ancestry  
Michigan Residents, 1993

Race/Ancestry	Live <sup>2</sup> Births	Infant Deaths		Hebdomadal Deaths <sup>3</sup>		Fetal Deaths		Perinatal Deaths	
		Number <sup>4</sup>	Rate	Number <sup>4</sup>	Rate	Number <sup>5</sup>	Rate	Number <sup>6</sup>	Rate
All Races	139,560	1,319	9.5	708	5.1	726	5.2	1,434	10.2
White	108,329	770	7.1	404	3.7	509	4.7	913	8.4
Black	28,249	530	18.8	298	10.5	185	6.5	483	17.0
American Indian	759	7	9.2	-	-	-	-	-	-
Asian/Pacific Islander	1,589	8	5.0	2	*	12	7.5	14	8.7
Other Non-White	70	2	*	2	*	-	-	2	*
Unknown	564	2	*	2	*	20	34.2	22	37.7
Arab	2,755	15	5.4	9	3.3	10	3.6	19	6.9
Hispanic	4,361	31	7.1	14	3.2	13	3.0	27	6.2

<sup>1</sup> Rates calculated using live births by race/ancestry of mother as denominator.

<sup>2</sup> Mother's race/ancestry on birth certificate.

<sup>3</sup> Death at age zero to six days.

<sup>4</sup> Infants race/ancestry on death certificate.

<sup>5</sup> Mother's race/ancestry on fetal death certificate.

<sup>6</sup> Mother's race/ancestry on fetal death certificate, infant's race/ancestry on death certificate.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Causes of Infant Deaths** Michigan resident infant deaths in 1993 are listed by cause of death classification and age at death in Table 2.25. Disorders relating to short gestation and unspecified low birth weight was listed as the cause of 270 deaths and was the specific disease category most frequently reported. Congenital anomalies caused the death of 213 infants, while sudden infant death syndrome was responsible for 210 infant deaths in 1993. Over half of all infant deaths were attributed to these three conditions in 1993.

**Causes of Death in First Day of Life** For those infant deaths which occurred during the first day of life, over half were attributed to disorders relating to short gestation and unspecified low birthweight, respiratory distress syndrome or other respiratory conditions of newborn. About 1 in 6 deaths in the first day of life were due to congenital anomalies.

**Causes of Neonatal Deaths** The leading causes of death between 1 to 27 days of life were congenital anomalies and respiratory distress syndrome.

**Causes of Postneonatal Deaths** Sudden infant death syndrome was reported as the cause of one half of the deaths to infants from 1-5 months of age and was the second leading cause from 6-11 months of age.

**Causes of Death by Race** Disorders related to short gestation, respiratory distress syndrome and other respiratory conditions of the newborn were the causes of death for 41.3 percent of the black infants but only 29.2 percent of the white infants (Table 2.26). The rate of infant deaths due to congenital anomalies and sudden infant death syndrome for black infants was 41.9 and 133.1 percent higher (respectively) than the rate for white infants.

**Causes of Death for Male and Female Infants** The death rate for male infants was 33.9 percent greater than that for female infants (Table 2.27). The death rate for males due to sudden infant death syndrome was 49.6 percent greater than rates for females. Deaths due to all other tabulated causes were higher for male infants.

Table 2.25  
Infant Deaths by Age at Death and Underlying Cause  
Michigan Residents, 1993

ICD - 9 CODE	Cause of Death	Age at Death					
		Total <1 Year	<1 Day	1-6 Days	7-27 Days	1-5 Months	6-11 Months
765	Disorders relating to short gestation and unspecified low birthweight . . . . .	270	250	10	3	6	1
740-759	Congenital anomalies . . . . .	213	89	33	35	42	14
798.0	Sudden infant death syndrome . . . . .	210	-	-	13	186	11
769	Respiratory distress syndrome . . . . .	92	39	37	11	4	1
770	Other respiratory conditions of newborn . . . . .	85	38	15	15	11	6
E800-949	Accidents and adverse effects . . . . .	45	-	-	6	25	14
E960-969	Homicide . . . . .	11	2	-	1	1	7
Residual	All other causes . . . . .	393	133	62	64	99	35
Total . . . . .		1,319	551	157	148	374	89

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Table 2.26**  
**Infant Deaths and Infant Death Rates<sup>1</sup> by Race<sup>2,3</sup> and Underlying Cause**  
**Michigan Residents, 1993**

ICD - 9 Code	Cause of Death	Race							
		Total		White		Black		Other	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate
765	Disorders relating to short gestation and unspecified low birthweight . . . . .	270	193.5	128	118.2	140	495.6	1	*
740-759	Congenital anomalies . . . . .	213	152.6	154	142.2	57	201.8	2	*
798.0	Sudden infant death syndrome . . . . .	210	150.5	130	120.0	79	279.7	1	*
769	Respiratory distress syndrome . . . . .	92	65.9	47	43.4	45	159.3	-	-
770	Other respiratory conditions of newborn . . . . .	85	60.9	50	46.2	34	120.4	1	*
E800-949	Accidents and adverse effects . . . . .	45	32.2	24	22.2	19	67.3	2	*
E960-969	Homicide . . . . .	11	7.9	6	5.5	5	*	-	-
Residual	All other causes . . . . .	393	281.6	231	213.2	151	534.5	10	413.6
Total . . . . .		1,319	945.1	770	710.8	530	1,876.2	17	703.1

<sup>1</sup> Rates per 100,000 live births.

<sup>2</sup> Numbers of infant deaths are by race of infant; rates are calculated using live births by race of mother as denominator.

<sup>3</sup> Records with race not stated are included only in total columns.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Table 2.27**  
**Infant Deaths and Infant Death Rates<sup>1</sup> by Sex<sup>2</sup> of Infant and Underlying Cause**  
**Michigan Residents, 1993**

ICD - 9 CODE	Cause of Death	Sex of Infant					
		Total		Male		Female	
		Number	Rate	Number	Rate	Number	Rate
765	Disorders relating to short gestation and unspecified low birthweight . . . . .	270	187.7	151	197.8	116	158.6
740-759	Congenital anomalies . . . . .	213	148.1	114	149.3	97	132.6
798.0	Sudden infant death syndrome . . . . .	210	146.0	128	167.7	82	112.1
769	Respiratory distress syndrome . . . . .	92	64.0	60	78.6	32	43.8
770	Other respiratory conditions of newborn . . . . .	85	59.1	54	70.7	31	42.4
E800-949	Accidents and adverse effects . . . . .	45	31.3	32	41.9	13	17.8
E960-969	Homicide . . . . .	11	7.6	6	7.9	5	*
Residual	All other causes . . . . .	393	273.2	221	289.5	172	235.2
Total . . . . .		1,319	917.1	766	1,003.4	548	749.3

<sup>1</sup> Rates per 100,000 live births.

<sup>2</sup> Records with sex not stated are included only in total columns.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Infant Deaths by Birth Characteristics** In previous years infant deaths were characterized for infants born in a particular year. However, since infants born in a particular year, such as 1992, may experience death in either 1992 or 1993, data reported this way were reported a year later than other data in this publication series. For example, the infant deaths for the 1990 birth cohort appeared in the 1991 Michigan Health Statistics report. This year infant deaths will be characterized for infants dying in 1993. They may have been born in 1992 or 1993. The birth information is obtained from their birth certificate. The rates are calculated using birth characteristics of 1993 live births and 1993 infant deaths.

**Infant Deaths by Mother's Age** In 1993, the mortality rates were lower for infants born to white mothers 20 to 39 years of age, than for infants born to white mothers under 20 and over 39 years of age. The mortality rates for infants born to black mothers between 15 and 39 years of age were lower than the rates for infants born to black mothers less than 15 or over 39 years of age. Rates for infants born to black mothers age 15 to 19 were slightly lower than the rates for infants born to black mothers age 20-24. Rates for black infants were significantly above those for the white group in all categories with a sufficient number of events to calculate rates.

Table 2.28  
Infant Deaths, Live Births and Infant Death Rates by Age and Race<sup>1,2</sup> of Mother  
Michigan Residents, 1993

Age of Mother in Years	All Races			White			Black			All Other Races		
	Infant Deaths	Live Births	Infant Death Rate	Infant Deaths	Live Births	Infant Death Rate	Infant Deaths	Live Births	Infant Death Rate	Infant Deaths	Live Births	Infant Death Rate
All Ages	1,319	139,560	9.5	770	108,329	7.1	530	28,249	18.8	17	2,418	7.0
< 15	8	371	21.6	2	124	*	6	244	24.6	-	3	-
15-19	227	17,198	13.2	103	10,123	10.2	119	6,769	17.6	4	269	*
20-24	398	35,732	11.1	211	25,531	8.3	182	9,517	19.1	5	565	*
25-29	303	40,975	7.4	187	34,120	5.5	114	5,946	19.2	1	755	*
30-39	351	43,515	8.1	248	36,997	6.7	97	5,491	17.7	6	792	7.6
40 +	16	1,707	9.4	13	1,392	9.3	3	264	*	-	33	-
Not Stated	16	62	258.1	6	42	142.9	9	18	500.0	1	1	*

<sup>1</sup> Race not stated included in total columns only.

<sup>2</sup> Numbers of infant deaths are by race of infant; rates are calculated using live births by race of mother as denominator.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Infant Deaths by Adequacy of Prenatal Care**  
 Infant death rates increased when the mother received less adequate prenatal care as measured by the Kessner Index (Table 2.29). The infant death rate was 3.2 times greater for mothers with inadequate care (22.6 deaths per 1,000 live births) than for mothers with adequate care (7.1 deaths per 1,000 live births) in 1993.

The pattern was similar for both white and black infants. When the mother received adequate care based on the number of visits, the month prenatal care began and the length of gestation, the infant death rate for black infants (14.6) was still 2.6 times greater than for infants born to white mothers (5.7 deaths per 1,000 live births).

Table 2.29  
**Infant Deaths, Live Births and Infant Death Rates by Level of Prenatal Care and Race<sup>1,2</sup>**  
 Michigan Residents, 1993

Level of Care (Kessner Index <sup>3</sup> )	All Races			White			Black			All Other Races		
	Infant Deaths	Live Births	Infant Death Rate	Infant Deaths	Live Births	Infant Death Rate	Infant Deaths	Live Births	Infant Death Rate	Infant Deaths	Live Births	Infant Death Rate
Total	1,319	139,560	9.5	770	108,329	7.1	530	28,249	18.8	17	2,418	7.0
Adequate	727	102,667	7.1	489	85,075	5.7	228	15,617	14.6	10	1,653	6.0
Intermediate	276	23,357	11.8	150	16,012	9.4	123	6,775	18.2	3	515	*
Inadequate	295	13,080	22.6	122	6,932	17.6	169	5,719	29.6	2	249	*
Unknown	21	456	46.1	9	310	29.0	10	138	72.5	2	1	*

<sup>1</sup> Race not stated included in total columns only.

<sup>2</sup> Numbers of infant deaths are by race of infant; rates are calculated using live births by race of mother as denominator.

<sup>3</sup> The Kessner Index is a classification of prenatal care based on the month of pregnancy in which prenatal care began, the number of prenatal visits and the length of pregnancy (i.e., for shorter pregnancies, fewer prenatal visits constitute adequate care).

Source: Office of the State Registrar and Division of Health Statistics, MDPH



**Infant Deaths by Birth Weight** Infant death rates by race, birth weight and age at death are displayed in Table 2.30. While the overall infant death rate for black infants was 2.6 times that of white infants, the rates for black and white infants born weighing less than 750 grams were the same, (about 7 deaths out of every 10 births). The rates for black infants weighing 1,500 to 2,499 grams were lower than the rate for their white counterparts. For infants weighing 2,500 grams or more the rate for black infants was 2.0 times the rate for white infants. A large part of the difference between infant death rates for white and black infants was due to the fact that a greater proportion of the infants born to black mothers were born at weights below 2,500 grams (14.4 percent for infants born to black mothers compared to 5.9 percent for infants born to white mothers).

Differentials in death rates by race for deaths under 28 days (neonatal deaths) and from 28-364 days (postneonatal deaths) departed somewhat from the pattern noted for all infant deaths. For infants weighing 750-1,499 grams, the neonatal rates for black infants were lower than for white infants. The postneonatal rate for these black infants was higher than the comparable rate for white infants. The neonatal rate for white infants weighing 1,500-2,499 grams was 31.7 percent greater than the comparable rate for black infants while the postneonatal death rate for black infants in this birth weight category exceeded the comparable rate for white infants by 26.8 percent. For infants weighing 2,500 grams or more at birth, the neonatal and postneonatal rates were about twice as high for black infants than white infants.

Table 2.30  
Live Births, Infant Deaths and Infant Death Rates by Birth Weight, Age at Death and Race<sup>1,2</sup>  
Michigan Residents, 1993

Birth Weight	Race of Infant	Live Births	Age at Death					
			Under 1 Year		Under 28 Days		28-364 Days	
			Number	Rate	Number	Rate	Number	Rate
Total	All Races	139,560	1,319	9.5	856	6.1	463	3.3
	White	108,329	770	7.1	492	4.5	278	2.6
	Black	28,249	530	18.8	353	12.5	177	6.3
	All Other	2,418	17	7.0	9	3.7	8	3.3
Less Than 750 Grams	All Races	699	501	716.7	472	675.3	29	41.5
	White	349	256	733.5	247	707.7	9	25.8
	Black	337	241	715.1	221	655.8	20	59.3
	All Other	11	2	*	2	*	-	-
750-1,499 Grams	All Races	1,399	158	112.9	112	80.1	46	32.9
	White	805	87	108.1	67	83.2	20	24.8
	Black	571	67	117.3	42	73.6	25	43.8
	All Other	21	4	*	3	*	1	*
1,500-2,499 Grams	All Races	8,602	195	22.7	103	12.0	92	10.7
	White	5,270	121	23.0	70	13.3	51	9.7
	Black	3,165	71	22.4	32	10.1	39	12.3
	All Other	139	3	*	1	*	2	*
2,500 Grams Or Greater	All Races	128,638	438	3.4	144	1.1	294	2.3
	White	101,750	293	2.9	97	1.0	196	1.9
	Black	24,117	138	5.7	45	1.9	93	3.9
	All Other	2,245	7	3.1	2	*	5	*
Unknown Birthweight	All Races	222	27	121.6	25	112.6	2	*
	White	155	13	83.9	11	71.0	2	*
	Black	59	13	220.3	13	220.3	-	-
	All Other	2	1	*	1	*	-	-

<sup>1</sup> Race not stated included in total rows only.

<sup>2</sup> Numbers of infant deaths are by race of infant; rates are calculated using live births by race of mother as denominator.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Causes of Death by Maternal Smoking Status and Race** The infant mortality rate for infants born to white mothers who reportedly smoked or used tobacco products during their pregnancy was 56.7 percent higher than the rate for infants born to white mothers who reportedly did not smoke during their pregnancy. Similarly, the rate for infants born to black mothers who reportedly smoked was 85.9 percent higher.

Death rates are almost always higher for each cause if the mother smoked during her pregnancy. The rate of death due to disorders related to short gestation were 20.0 percent higher if the white mother smoked and SIDS rates were 3.1 times higher. Infants born to black mothers who smoked, had death rates 52.3 percent higher for deaths due to disorders related to short gestation and 3.1 times higher for deaths due to SIDS than rates for infants born to non-smoking black mothers.

Table 2.31  
**Infant Deaths and Infant Death Rates<sup>1</sup> by Race<sup>2</sup> of Mother,  
 Smoking Status<sup>3</sup> During Pregnancy and Underlying Cause of Death<sup>4</sup>**  
 Michigan Residents, 1993

ICD - 9 Code	Cause of Death	All Races <sup>5</sup>				White				Black			
		Smokers		Non-smokers		Smokers		Non-smokers		Smokers		Non-smokers	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
765	Disorders relating to short gestation and unspecified low birthweight . . .	60	2.2	194	1.7	29	1.2	90	1.0	33	6.7	103	4.4
740-759	Congenital anomalies . . . . .	46	1.7	157	1.4	35	1.6	111	1.3	11	2.2	45	1.9
798.0	Sudden infant death syndrome . . . .	84	3.1	115	1.0	55	2.5	70	0.8	29	5.9	44	1.9
769	Respiratory distress syndrome . . . .	13	0.5	76	0.7	6	0.3	38	0.4	7	1.4	38	1.6
770	Other respiratory conditions of newborn . . . . .	23	0.9	60	0.5	16	0.7	32	0.4	7	1.4	27	1.2
E800-949	Accidents and adverse effects . . . .	18	0.7	27	0.2	8	0.4	16	0.2	9	1.8	10	0.4
E960-969	Homicide . . . . .	5	*	4	*	3	*	2	*	2	*	2	*
Residual	All other causes . . . . .	101	3.7	269	2.4	53	2.4	165	1.9	45	9.1	96	4.1
Total . . . . .		350	13.0	902	8.0	203	9.4	524	6.0	143	29.0	365	15.6

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

<sup>2</sup> Numbers of infant deaths are by race of infant; rates are calculated using live births by race of mother as denominator.

<sup>3</sup> Records with smoking status not stated are included in non-smoker columns.

<sup>4</sup> Records with cause of death pending are included only in the total row.

<sup>5</sup> Records with race not stated are included only in total columns.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Perinatal Deaths by Maternal Age and Race**  
Perinatal deaths are fetal deaths plus deaths to individuals less than seven days of age. For total births in 1993, Michigan resident perinatal deaths numbered 1,434 and the perinatal death rate was 10.2 (Table 2.32). As with infant death rates, perinatal death rates vary considerably with race and age of mother. The overall perinatal mortality rate for black fetuses and infants was 2.0 times the rate for white fetuses and infants.

There was an increased risk of a perinatal death for white mothers under 20 years of age and over 39 years.

**Perinatal Deaths by Adequacy of Prenatal Care**  
The perinatal death rates increased for mothers with less than adequate prenatal care (Table 2.33). The death rate was 3.4 times higher for mothers with inadequate care than for mothers with adequate care (23.9 vs. 7.1 deaths per 1,000 total births). The perinatal death rate for fetuses and infants born to black women with adequate care was nearly double

Table 2.32  
Perinatal Deaths, Total Births and Perinatal Death Rates by Age and Race<sup>1,2</sup> of Mother  
Michigan Residents, 1993

Age of Mother in Years	All Races			White			Black			All Other Infants		
	Perinatal Deaths	Total Births	Perinatal Death Rate	Perinatal Deaths	Total Births	Perinatal Death Rate	Perinatal Deaths	Total Births	Perinatal Death Rate	Perinatal Deaths	Total Births	Perinatal Death Rate
All Ages	1,434	140,286	10.2	913	108,838	8.4	483	28,434	17.0	16	2,430	6.6
< 15	12	377	31.8	4	127	*	8	247	32.4	-	3	-
15-19	211	17,292	12.2	101	10,176	9.9	105	6,807	15.4	1	269	*
20-24	372	35,916	10.4	216	25,657	8.4	153	9,572	16.0	1	566	*
25-29	322	41,137	7.8	219	34,241	6.4	90	5,975	15.1	6	761	7.9
30-39	449	43,750	10.3	336	37,179	9.0	102	5,535	18.4	7	797	8.8
40 +	30	1,727	17.4	23	1,407	16.3	6	268	22.4	-	33	-
Not Stated	38	87	436.8	14	51	274.5	19	30	633.3	1	1	*

<sup>1</sup> Race not stated included in total columns only.

<sup>2</sup> Numbers of infant deaths are by race of infant; rates are calculated using live births by race of mother as denominator.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 2.33  
Perinatal Deaths, Total Births and Perinatal Death Rates by Level of Prenatal Care and Race<sup>1,2</sup> of Mother  
Michigan Residents, 1993

Level of Care (Kessner Index <sup>3</sup> )	All Races			White			Black			All Other Races		
	Perinatal Deaths	Total Births	Perinatal Death Rate	Perinatal Deaths	Total Births	Perinatal Death Rate	Perinatal Deaths	Total Births	Perinatal Death Rate	Perinatal Deaths	Total Births	Perinatal Death Rate
Total	1,434	140,286	10.2	913	108,838	8.4	483	28,434	17.0	16	2,430	6.6
Adequate	734	103,013	7.1	532	85,351	6.2	189	15,675	12.1	8	1,660	4.8
Intermediate	297	23,521	12.6	186	16,127	11.5	101	6,816	14.8	6	519	11.6
Inadequate	316	13,221	23.9	147	7,007	21.0	164	5,782	28.4	1	250	*
Unknown	87	531	163.8	48	353	136.0	29	161	180.1	1	1	*

<sup>1</sup> Race not stated included in total columns only.

<sup>2</sup> Numbers of infant deaths are by race of infant; rates are calculated using live births by race of mother as denominator.

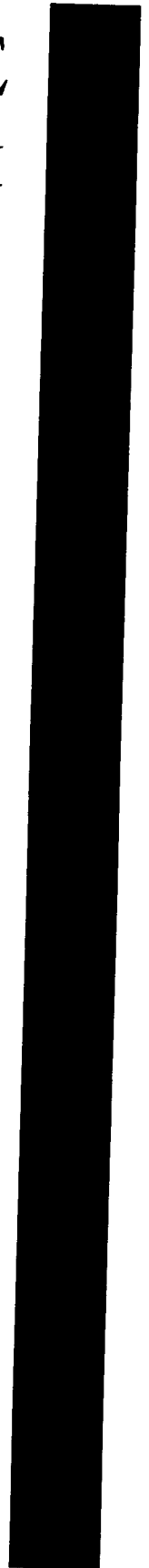
<sup>3</sup> The Kessner Index is a classification of prenatal care based on the month of pregnancy in which prenatal care began, the number of prenatal visits and the length of pregnancy (i.e., for shorter pregnancies, fewer prenatal visits constitute adequate care).

Source: Office of the State Registrar and Division of Health Statistics, MDPH



# MARRIAGE & DIVORCE

## SECTION III





# MARRIAGE AND DIVORCE

## An Overview, 1993

Total Marriages	70,771
Total Divorces and Annulments	40,470
Marriage Rate <sup>1</sup>	15.0
Divorce Rate <sup>1</sup>	8.6
Median Age of the Bride	26
Median Age of the Groom	28
Median Age of Wife at Divorce Decree	34
Median Age of Husband at Divorce Decree	36
Median Duration of Marriage at Divorce Decree	7 Years

<sup>1</sup> Number of persons married or divorced per 1,000 population.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 3.1  
Marriages and Marriage Rates<sup>1</sup>  
Michigan and United States<sup>2</sup> Occurrences  
Selected Years, 1900 - 1993

United States		Year	Michigan	
Number	Rate		Number	Rate
709,000	18.6	1900	23,295	19.2
948,000	20.5	1910	29,039	20.7
1,274,476	23.9	1920	50,805	27.7
1,126,856	18.3	1930	29,482	12.2
1,595,879	24.2	1940	46,342	17.6
1,667,231	22.1	1950	58,180	18.3
1,523,000	17.0	1960	61,090	15.6
2,158,802	21.2	1970	91,933	20.7
2,390,252	21.2	1980	86,898	18.8
2,425,000	20.4	1985	79,022	17.4
2,407,099	20.0	1986	77,815	17.0
2,403,378	19.8	1987	74,418	16.2
2,395,926	19.6	1988	75,386	16.3
2,404,000	19.4	1989	76,210	16.4
2,448,000	19.6	1990	76,099	16.4
2,371,000Pr	18.8Pr	1991	72,747	15.5
2,362,000Pr	18.6Pr	1992	71,322	15.1
2,334,000Pr	18.0Pr	1993	70,771	15.0

<sup>1</sup> Number of persons married per 1,000 population.

<sup>2</sup> Beginning with 1978, marriage data for the United States include nonlicensed marriages registered in California. If nonlicensed marriages were included in the 1977 total, the marriage rate would increase from 19.8 to 20.1.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

## KEY TRENDS

The number of marriages and divorces occurring in Michigan has increased considerably since 1900. While the frequency of marriage has generally followed the growth of Michigan's population, the rate of persons dissolving their marriages has increased over fourfold since 1900.

The smallest number of marriages in this century was 23,295 in 1900, while the largest number was 94,486 in 1973. In 1993 there were 70,771 marriages, the smallest number since 1963. The marriage rate was 15.0 per 1,000 population, the lowest rate since 1959.

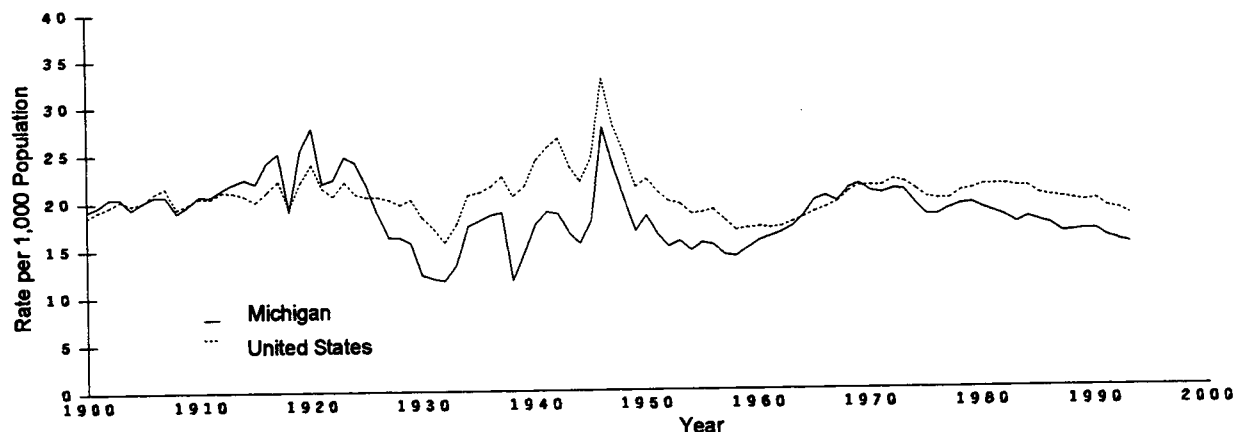
The number of divorces and annulments increased from a low of 2,435 in 1900 to a high of 45,047 in 1980. In 1993 the number of divorces and annulments was 40,470. The divorce rate was 8.6 per 1,000 population, an 11.3 percent decrease since 1980.

## MARRIAGES

Since 1900 there have been noticeable changes in the marriage rates both nationally and in Michigan (Table 3.1 and Figure 3.1). Both nationally and in Michigan strong historic shifts in rates have been related most notably to the factors of war and the economy. The highest rates observed during this century were for the years immediately following the end of the two World Wars (27.7 in 1920 and 27.6 in 1946). The lowest rates occurred during the Great Depression of the 1930's.

The number of persons married each year per 1,000 population was higher in Michigan than in the country for 19 of the 26 years from 1900 through 1925. Since 1926, Michigan's marriage rate has been lower than the national rate, except during 1964 through 1969.

Figure 3.1  
Marriage Rates  
Michigan and United States Occurrences, 1900-1993<sup>1</sup>



<sup>1</sup> United States rates for 1991 through 1993 are provisional.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

### RESIDENCE OF COUPLES MARRYING IN MICHIGAN

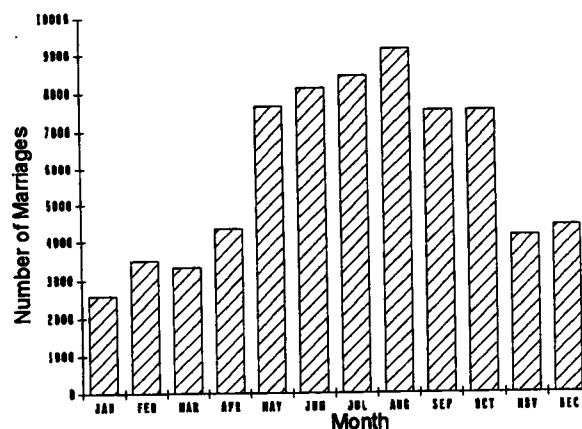
When presenting statistics of births, deaths and fetal deaths it is possible to provide total resident figures due to an interstate agreement for exchange of nonresident event information. Thus, should a Michigan resident give birth in some other state, the state will forward the information to Michigan. No such agreement exists for marriages. This is an important consideration when analyzing marriage statistics. The marriage data presented are drawn from all marriages performed in the state regardless of the couple's residence.

In general, most of the couples marrying in Michigan are residents of the state. For marriages occurring in Michigan in 1993, 95.1 percent of the brides were residents of Michigan, while 93.2 percent of the grooms were residents of the state. These data indicate that the general characteristics of marriages occurring in Michigan should be representative of marriage patterns for Michigan residents.

### MONTH OF MARRIAGE

The number of marriages occurring in Michigan varies with the seasons (Figure 3.2). The most popular months for marriages in 1993 were August, July and June, with 9,144, 8,430 and 8,115 marriage ceremonies being performed during these months, respectively. About 2 out of every 3 marriages occurred in the six months between May and October. Fewer marriages occurred during the winter months. The lowest figure was for January, with 28.5 percent of the number which occurred in August.

Figure 3.2  
Marriages by Month  
Michigan Occurrences, 1993



Source: Office of the State Registrar and Division of Health Statistics, MDPH



## AGE AT MARRIAGE

Examination of the data in Table 3.2 reveals that females generally marry at a younger age than do males. The number of females who marry before the age of 20 was 2.7 times the corresponding number of males in 1993. Between ages 20 and 24, 30.0 percent more females than males married. Among persons 25 and over, the number of males marrying was greater than females marrying. The median age of brides (26 years) marrying in Michigan was two years lower than the median age for grooms (28 years).

Since 1973, there have been significant declines in the marriage rates for persons of both sexes under the age of 25 years. The largest decline observed was for males under the age of 20 years for whom the marriage rate has dipped 84.2 percent. For individuals between 25 and 44 years of age, the marriage rate for males and females increased. The rates for persons 45 and over were about the same for males and females during these twenty years.

## FIRST MARRIAGES

First marriages are an interesting component of all marriages in that they constitute an event that can never be duplicated. The frequency of first marriages reflects the propensity of the population as a whole to enter into marital agreements.

There has been a decline in the number of first marriages between 1983 and 1993. The number of first marriages dropped 12.8 percent for women and 10.0 percent for men (Tables 3.3 and 3.4).

Changes in the frequency of first marriages have varied in different age groups. The greatest decline in first marriages occurred in the under 20 age group for both brides and grooms, between 1983 and 1993. The number of first marriages also declined substantially for brides and grooms in the 20-24 year age group. There were significant increases in the number of first marriages of both brides and grooms between ages 25 and 44.

Between 1983 and 1993 the percentages of marriages which were first marriages increased for each age group over 20 years of age.

Table 3.2  
Number of Marriages and Marriage Rates<sup>1</sup> by Age and Sex  
Michigan Occurrences, 1973, 1983 and 1993

Age in Years	Males				Females			
	1973 Rate	1983 Rate	1993		1973 Rate	1983 Rate	1993	
			Number	Rate			Number	Rate
Under 20 <sup>2</sup>	34.9	10.7	1,858	5.5	74.8	29.2	4,953	15.2
20-24	111.5	56.7	17,159	48.5	86.3	63.2	22,312	62.2
25-34	37.6	37.9	31,640	42.4	24.6	30.0	27,531	35.7
35-44	14.1	19.7	11,935	16.3	10.3	14.2	10,464	13.9
45 or Over	6.7	6.1	8,177	6.1	4.3	3.1	5,510	3.4
Total	21.3	17.7	70,771	15.4	20.4	16.8	70,771	14.6
Median Age at Last Birthday	28				26			

<sup>1</sup> Number of persons married per 1,000 population.  
<sup>2</sup> 15 - 19 population used to obtain rate.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Table 3.3**  
**Number of Marriages of Brides by Age and Order of Marriage**  
**Michigan Occurrences, 1983 and 1993**

Age in Years	1983					1993				
	All Marriages	First Marriages	Percent First Marriages	Second Marriages	Third or More Marriages	All Marriages	First Marriages	Percent First Marriage	Second Marriage	Third or More Marriages
All Ages	78,910	53,282	67.5	19,989	5,606	70,771	46,455	65.6	18,226	6,082
Under 20	12,783	12,657	99.0	108	4	4,953	4,905	99.0	46	-
20-24	29,580	26,934	91.1	2,538	94	22,312	20,938	93.8	1,326	47
25-29	16,388	10,331	63.0	5,310	744	17,463	13,386	76.7	3,714	362
30-34	8,212	2,428	29.6	4,563	1,220	10,068	4,784	47.5	4,331	951
35-39	4,578	558	12.2	2,857	1,163	6,425	1,623	25.3	3,369	1,433
40-44	2,712	167	6.2	1,643	902	4,039	532	13.2	2,238	1,269
45 or Over	4,652	204	4.4	2,970	1,477	5,510	287	5.2	3,202	2,019
Not Stated	5	3	60.0	-	2	1	-	-	-	1
Median Age at Last Birthday	24	22	000	32	38	26	24	000	34	40

Source: Office of the State Registrar and Division of Health Statistics, MDPH

**Table 3.4**  
**Number of Marriages of Grooms by Age and Order of Marriage**  
**Michigan Occurrences, 1983 and 1993**

Age in Years	1983					1993				
	All Marriages	First Marriages	Percent First Marriages	Second Marriages	Third or More Marriages	All Marriages	First Marriages	Percent First Marriage	Second Marriage	Third or More Marriages
All Ages	78,910	51,891	65.8	20,915	6,083	70,771	46,722	66.0	18,100	5,942
Under 20	4,808	4,794	99.7	9	-	1,858	1,853	99.7	5	-
20-24	26,542	25,467	95.9	1,046	20	17,159	16,653	97.1	495	9
25-29	20,182	15,544	77.0	4,300	336	19,767	17,024	86.1	2,630	110
30-34	10,167	4,286	42.2	4,920	959	11,873	7,315	61.6	3,994	563
35-39	6,144	1,075	17.5	3,786	1,283	7,217	2,611	36.2	3,582	1,024
40-44	3,635	321	8.8	2,249	1,065	4,718	803	17.0	2,632	1,282
45 or Over	7,421	398	5.4	4,601	2,420	8,177	461	5.6	4,762	2,954
Not Stated	11	7	63.6	4	-	2	2	100.0	-	-
Median Age at Last Birthday	26	24	000	35	42	28	26	000	36	44

Source: Office of the State Registrar and Division of Health Statistics, MDPH

### MEDIAN AGE AT FIRST MARRIAGE

The median age at first marriage declined for both brides and grooms between 1953 and the mid-1960's (Figure 3.3). The initial decline was greater for grooms than for brides.

Grooms were 34 months older than brides at the median in 1953, 23 months older in 1963 and 20 months older in 1968. During the past fifteen years, the median age at first marriage has increased by about the same amount for both grooms and brides. Grooms were 24 months older than brides at the median in 1993.

The median age at first marriage in 1993 was 24 years 5 months for brides and 26 years 2 months for grooms.

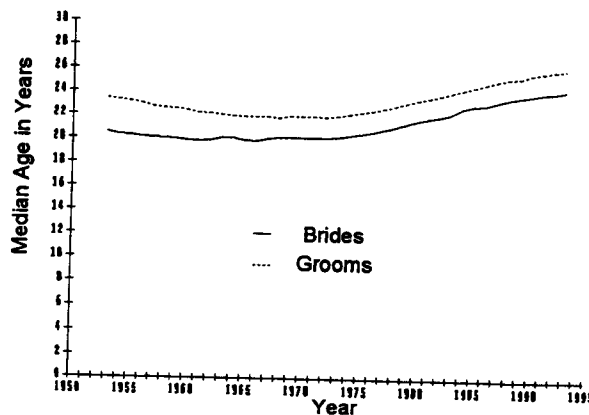
### REMARRIAGES

The proportion of all marriages which were remarriages is displayed graphically in Figure 3.4 for the period 1960-1993. Between 1960 and 1965, the proportion of remarriages dropped. Since 1965, this proportion has increased.

The number of remarriages among brides decreased by 5.0 percent between 1983 and 1993, while the number of brides who had been married at least three times previously increased by 8.5 percent. Total remarriages for grooms decreased by 10.9 percent, while the number of third or higher order marriages decreased (2.3 percent).

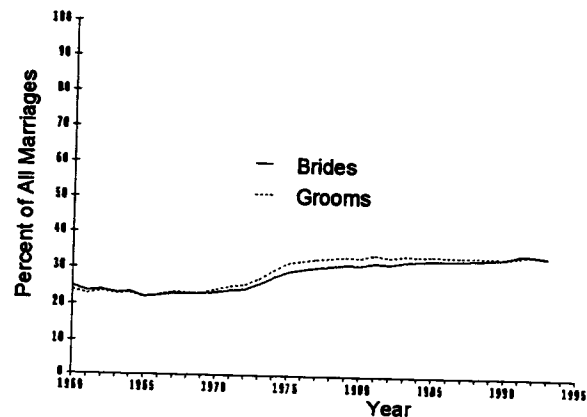
The median age at second and later marriages increased between 1983 and 1993 (Tables 3.3 and 3.4).

Figure 3.3  
Median Age at First Marriage by Sex  
Michigan Occurrences, 1953 - 1993



Source: Office of the State Registrar and Division of Health Statistics, MDPH

Figure 3.4  
Percent of All Marriages that are Remarriages  
Michigan Occurrences, 1960 - 1993



Source: Office of the State Registrar and Division of Health Statistics, MDPH

## DIVORCES AND ANNULMENTS

The number of reported divorces and annulments reached a record high in 1981 in the nation and in 1980 in Michigan. Between 1980 and 1985, the Michigan frequency declined. The number then increased to 40,470 in 1993. The 1993 frequency was 10.2 percent below the 1980 frequency. Nationally, the provisional number of divorces in 1993 was a record high figure of 1,187,000.

The number of persons divorced in Michigan per thousand population generally increased from 2.0 in 1900 to the then century high of 5.1 in 1929, then declined between 1930 and 1933 to 3.1 (Figure 3.5). Between 1934 and 1946 the rate generally increased, peaking at 10.2 in 1946. The rate of divorces and annulments decreased to 3.6 in 1958 and increased to a high of 9.8 in 1978. It has fluctuated between 8.3 and 8.7 since 1982.

The national rates generally followed the same pattern, reaching a provisional rate of 9.2 in 1993. Michigan's divorce rate was higher than that for the United States each year from 1900 through 1947. In the following 45 years the Michigan divorce rate has been at or below the national rate 38 times, including each of the past 23 years. The lowest national rate was 1.5 in 1900. The highest national divorce rate during this century was recorded in 1981 (10.6).

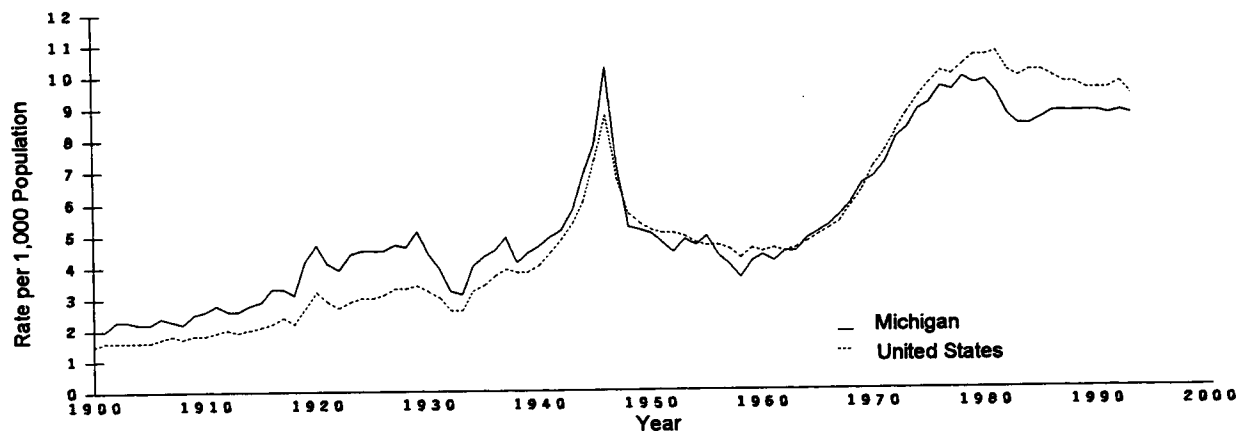
Table 3.5  
Number of Divorces and Annulments  
Divorce and Annulment Rates<sup>1</sup>  
Michigan and United States Occurrences  
Selected Years, 1900 - 1993

United States		Year	Michigan	
Number	Rate		Number	Rate
56,000	1.5	1900	2,435	2.0
8,300	1.8	1910	3,716	2.6
170,505	3.2	1920	8,679	4.7
195,961	3.2	1930	10,639	4.4
264,000	4.0	1940	12,054	4.6
385,144	5.1	1950	15,979	5.0
393,000	4.4	1960	16,656	4.3
708,000	7.0	1970	29,934	6.7
1,189,000	10.5	1980	45,047	9.7
1,190,000	10.0	1985	38,775	8.5
1,178,000	9.8	1986	39,553	8.7
1,166,000	9.6	1987	39,857	8.7
1,167,000	9.6	1988	40,103	8.7
1,163,000	9.4	1989	40,276	8.7
1,175,000	9.4	1990	40,568	8.7
1,187,000Pr.	9.4Pr	1991	40,103	8.6
1,215,000Pr.	9.6Pr	1992	40,425	8.6
1,187,000Pr.	9.2Pr	1993	40,470	8.6

<sup>1</sup> Number of persons whose marriages ended in divorce or annulment per 1,000 population.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Figure 3.5  
Divorce Rates  
Michigan and United States Occurrences, 1900-1993<sup>1</sup>



<sup>1</sup> United States rates for 1991 through 1993 are provisional.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

The number of children under 18 of couples dissolving marriages in 1993 was at least 39,372 (Table 3.6). This is 20.5 percent below the peak number of 49,555 in 1976. The number of children affected by divorce as a proportion of all children peaked at 17.0 in 1981 (Table 3.6). It has fluctuated between 14.8 and 16.1 per 1,000 children during the

last ten years. The average number of children per divorce has, nonetheless, dropped from a high of 1.37 children in 1971 to 0.97 in 1993.

Data for the United States indicate a similar pattern.

Table 3.6  
Estimated Number of Children Involved in Divorces and Annulments, Average Number of Children Per Decree, and Rate Per 1,000 Children Under 18 Years of Age  
Michigan and United States, Selected Years 1960 - 1993

Michigan			Year	United States		
Estimated Number of Children Involved	Average Number of Children Per Decree	Rate Per 1,000 Under 18 Years of Age		Estimated Number of Children Involved	Average Number of Children Per Decree	Rate Per 1,000 Under 18 Years of Age
19,209	1.15	6.5	1960	463,000	1.18	7.2
40,596	1.36	12.5	1970	870,000	1.22	12.5
46,603	1.04	16.9	1980	1,174,000	0.98	17.3
45,461	1.05	17.0	1981	1,180,000	0.97	18.7
41,156	1.04	15.8	1982	1,108,000	0.94	17.6
38,712	1.02	15.3	1983	1,091,000	0.94	17.4
37,629	1.00	14.8	1984	1,081,000	0.92	17.2
38,673	1.00	15.3	1985	1,091,000	0.92	17.3
39,378	1.00	15.7	1986	1,064,000	0.90	16.8
39,321	1.00	15.7	1987	1,038,000	0.89	16.3
39,635	0.99	15.9	1988	1,044,000	0.89	16.4
39,897	0.99	16.1	1989	—	—	—
39,792	0.98	16.0	1990	—	—	—
39,000	0.97	15.6	1991	—	—	—
39,579	0.98	15.8	1992	—	—	—
39,372	0.97	15.7	1993	—	—	—

Source: Office of the State Registrar and Division of Health Statistics, MDPH



# REFERENCE APPENDIX

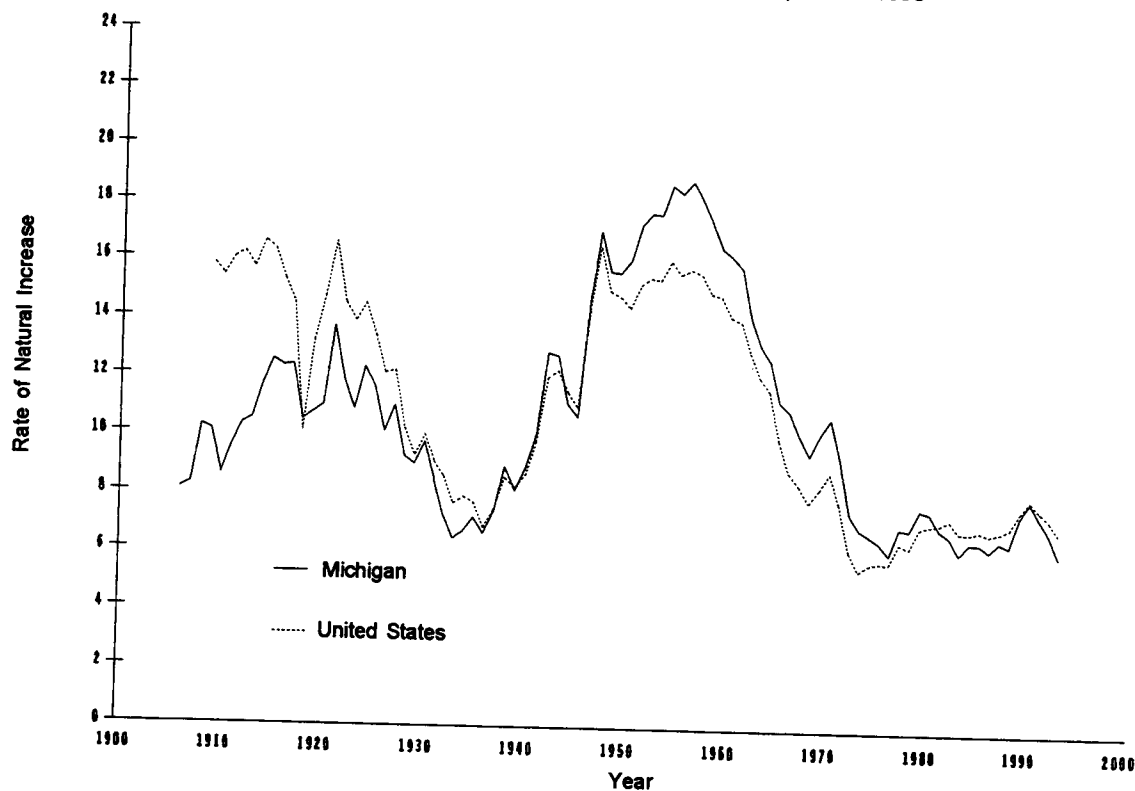
## SECTION IV







Figure 4.1  
**Rate of Natural Increase<sup>1</sup>**  
 Michigan, 1906 - 1993 and the United States, 1909 - 1993<sup>2</sup>



<sup>1</sup> Excess of live births over deaths per 1,000 population.

<sup>2</sup> Rates for the United States for 1909 - 1932 are based on death rates from the Death Registration States and estimated birth rates for the United States, adjusted for under-registration. For 1933 - 1959 rates are based on registered deaths in the United States and births adjusted for under-registration. After 1959 rates are based on registered births and deaths. 1992 United States data is provisional.

Source: Office of the State Registrar and Division of Health Statistics

Table 4.1  
Population, Live Births, Deaths (All Ages, Infant, Neonatal, Postneonatal, Perinatal, Fetal and Maternal), Marriages and Divorces  
Michigan, 1900 - 1993  
(Deaths exclusive of fetal deaths. Perinatal deaths include deaths under 1 week and fetal deaths. Divorces include annulments.)

Year	Population <sup>1</sup>	Live Births	Deaths						Marriages	Divorces <sup>3</sup>
			All Ages	Under 1 Year	Under 28 Days <sup>2</sup>	Perinatal	Fetal	Maternal		
1900	2,420,982	43,699	32,453	6,866			1,325	452	23,295	2,435
1901	2,459,901	43,221	32,834	6,319			1,501	531	24,079	2,448
1902	2,498,820	45,546	31,472	5,949			1,793	468	25,653	2,828
1903	2,537,739	46,020	33,176	6,488			1,814	427	26,029	2,945
1904	2,576,658	47,508	34,494	6,419			1,911	436	24,918	2,808
1905	2,615,578	46,976	34,679	8,054			2,044	416	26,307	2,825
1906	2,654,497	56,599	37,033	7,952			2,358	400	27,519	3,192
1907	2,693,416	59,029	36,701	6,906			2,358	391	27,940	3,107
1908	2,732,335	64,772	36,761	7,697			2,694	440	25,765	3,020
1909	2,771,254	64,323	36,313	7,443			2,540	405	27,353	3,516
1910	2,810,173	64,109	39,913	7,998			2,559	431	29,039	3,716
1911	2,895,997	65,756	38,007	7,131			2,716	451	29,859	4,125
1912	2,981,821	69,537	38,804	6,985			2,906	396	31,694	3,838
1913	3,067,645	73,058	40,827	7,659			2,953	528	33,529	3,978
1914	3,153,469	76,761	39,906	7,431			3,113	507	35,316	4,395
1915	3,239,293	81,100	40,441	6,943			3,357	488	35,527	4,757
1916	3,325,116	87,062	46,047	8,415			3,689	503	40,143	5,540
1917	3,410,940	89,419	47,236	7,916			3,550	586	42,791	5,627
1918	3,496,764	91,261	54,617	8,197			3,686	709	33,260	5,493
1919	3,582,588	84,062	45,636	7,560			3,361	578	45,579	7,469
1920	3,668,412	92,245	51,982	8,587			3,770	795	50,805	8,679
1921	3,785,799	96,035	44,186	7,584			3,669	605	41,508	7,676
1922	3,903,186	90,042	43,817	6,730			3,779	551	43,561	7,591
1923	4,020,573	92,956	49,333	7,477			3,657	583	49,569	8,745
1924	4,137,960	98,187	47,304	7,088		6,791	3,703	636	49,788	9,400
1925	4,255,347	98,983	49,417	7,498	4,119	2,969	3,670	629	46,276	9,650
1926	4,372,734	98,289	54,080	7,620	4,022	3,476	3,816	631	39,788	9,795
1927	4,490,121	99,940	50,600	6,766	3,915	3,566	3,834	667	36,276	10,617
1928	4,607,508	97,462	54,755	6,806	3,739	2,851	3,701	603	37,300	10,615
1929	4,724,895	98,695	56,117	6,605	3,777	2,828	3,710	617	36,816	12,094

<sup>1</sup> 1971-1979 population estimates have been revised by the U.S. Census Bureau. 1992 estimated population is being used to calculate rates for 1993.

<sup>2</sup> For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

<sup>3</sup> 1974 divorce data is an estimate.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.1 (continued)  
**Population, Live Births, Deaths (All Ages, Infant, Neonatal, Postneonatal, Perinatal, Fetal and Maternal), Marriages and Divorces**  
 Michigan, 1900 - 1993  
*(Deaths exclusive of fetal deaths. Perinatal deaths include deaths under 1 week and fetal deaths. Divorces include annulments.)*

Year	Population <sup>1</sup>	Live Births	Deaths							Marriages	Divorces <sup>3</sup>
			All Ages	Under 1 Year	Under 28 Days <sup>2</sup>	28-364 Days	Perinatal	Fetal	Maternal		
1930	4,842,325	98,882	51,561	6,213	3,624	2,589	6,518	3,714	597	29,482	10,639
1931	4,883,703	90,547	49,068	5,187	3,084	2,103	5,643	3,220	539	28,856	9,507
1932	4,925,081	85,254	49,569	4,630	2,798	1,832	5,210	2,980	493	28,552	7,889
1933	4,966,459	80,482	48,507	4,094	2,591	1,503	4,906	2,776	447	33,132	7,671
1934	5,007,837	83,944	50,440	4,377	2,717	1,660	4,781	2,607	450	43,241	10,124
1935	5,049,216	87,403	51,051	4,170	2,550	1,620	4,832	2,717	438	45,313	10,844
1936	5,090,594	88,457	54,777	4,479	2,647	1,832	4,726	2,625	425	47,023	11,419
1937	5,131,972	91,566	53,468	4,374	2,700	1,674	4,919	2,707	326	47,954	12,472
1938	5,173,350	96,962	50,678	4,319	2,734	1,585	4,984	2,732	345	30,105	10,646
1939	5,214,728	94,432	52,017	3,952	2,594	1,358	4,706	2,572	280	37,725	11,589
1940	5,256,106	99,106	52,092	4,022	2,629	1,393	4,749	2,602	292	46,342	12,054
1941	5,437,546	107,498	52,671	4,166	2,687	1,479	4,991	2,769	298	50,989	13,317
1942	5,538,856	124,068	52,738	4,606	3,091	1,515	5,581	3,067	260	51,582	14,085
1943	5,377,329	125,441	56,774	4,804	2,979	1,825	5,563	3,213	237	44,385	15,259
1944	5,377,329	113,586	54,016	4,326	2,784	1,542	5,140	2,874	198	41,678	18,356
1945	5,435,092	111,557	53,641	4,008	2,670	1,338	4,906	2,703	166	48,329	21,133
1946	5,708,415	138,572	54,856	4,541	3,323	1,218	5,978	3,168	163	78,808	29,158
1947	6,069,000	160,275	56,807	5,055	3,677	1,378	6,583	3,422	173	71,319	21,386
1948	6,195,000	153,726	56,520	4,617	3,352	1,265	5,968	3,132	120	61,986	16,017
1949	6,352,000	156,469	57,107	4,520	3,232	1,288	5,746	2,994	105	53,109	16,274
1950	6,371,766	160,055	57,567	4,214	3,043	1,171	5,781	3,095	91	58,180	15,979
1951	6,545,000	172,451	59,181	4,505	3,296	1,209	6,088	3,158	94	53,411	15,446
1952	6,708,000	177,835	59,138	4,689	3,414	1,275	6,266	3,224	82	50,487	14,925
1953	6,852,000	182,968	62,087	4,728	3,369	1,339	6,188	3,180	79	53,308	16,537
1954	7,024,000	192,104	60,706	4,795	3,560	1,235	6,415	3,249	94	51,243	16,281
1955	7,236,000	196,294	63,087	4,873	3,707	1,166	6,381	3,029	61	55,698	17,676
1956	7,516,000	206,068	64,352	5,047	3,796	1,251	6,655	3,245	84	57,068	16,228
1957	7,803,000	208,488	66,435	5,093	3,884	1,209	6,668	3,154	79	55,121	15,442
1958	7,866,000	202,690	65,899	4,980	3,789	1,191	6,516	3,101	69	55,159	14,040
1959	7,960,000	198,301	66,812	4,846	3,674	1,172	6,250	2,928	72	58,826	16,168

<sup>1</sup> 1971-1979 population estimates have been revised by the U.S. Census Bureau. 1992 estimated population is being used to calculate rates for 1993.  
<sup>2</sup> For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.  
<sup>3</sup> 1974 divorce data is an estimate.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.1 (continued)  
 Population, Live Births, Deaths (All Ages, Infant, Neonatal, Postneonatal, Perinatal, Fetal and Maternal), Marriages and Divorces  
 Michigan, 1900 - 1993  
 (Deaths exclusive of fetal deaths. Perinatal deaths include deaths under 1 week and fetal deaths. Divorces include annulments.)

Year	Population <sup>1</sup>	Live Births	Deaths						Marriages	Divorces <sup>3</sup>
			All Ages	Under 1 Year	Under 28 Days <sup>2</sup>	28-364 Days	Perinatal	Fetal		
1960	7,823,194	195,056	67,912	4,702	3,580	1,122	6,247	3,008	61,090	16,656
1961	7,903,000	192,825	67,375	4,604	3,475	1,129	5,875	2,735	63,320	16,219
1962	7,939,000	182,790	70,049	4,367	3,251	1,116	5,669	2,703	65,002	17,500
1963	8,030,000	178,871	72,438	4,150	3,109	1,041	5,407	2,540	68,160	17,479
1964	8,100,000	175,103	72,129	4,043	3,071	972	5,293	2,466	73,911	19,400
1965	8,199,283	166,464	73,665	3,936	2,909	1,027	5,139	2,475	81,247	20,305
1966	8,314,070	165,794	74,596	3,751	2,830	921	4,909	2,295	83,903	21,727
1967	8,615,000	162,756	75,360	3,595	2,714	881	4,693	2,195	84,363	23,620
1968	8,675,000	159,058	76,855	3,438	2,617	821	4,476	2,064	90,984	25,400
1969	8,734,000	165,760	76,693	3,356	2,550	806	4,488	2,175	93,392	28,347
1970	8,875,083	171,667	76,321	3,492	2,671	821	4,522	2,060	91,933	29,934
1971	8,972,000	162,244	77,395	3,157	2,412	745	4,139	1,923	92,134	31,790
1972	9,025,000	146,854	79,210	2,801	2,115	686	3,700	1,765	94,447	35,505
1973	9,072,000	141,550	78,522	2,561	1,902	659	3,392	1,682	94,486	37,128
1974	9,109,000	137,414	76,143	2,387	1,734	653	2,947	1,438	88,023	39,940
1975	9,108,000	133,931	74,522	2,205	1,563	642	2,673	1,356	82,856	40,782
1976	9,117,000	131,378	75,801	1,978	1,424	554	2,495	1,264	82,753	43,101
1977	9,157,000	138,416	74,144	1,945	1,367	578	2,452	1,284	86,088	43,036
1978	9,202,000	138,802	74,773	1,931	1,281	650	2,302	1,201	88,333	45,029
1979	9,249,000	144,452	73,480	1,921	1,295	626	2,285	1,175	89,450	44,242
1980	9,262,078	145,162	74,991	1,851	1,284	567	2,235	1,135	86,898	45,047
1981	9,270,000	140,579	75,818	1,851	1,281	570	2,151	1,040	85,252	43,167
1982	9,227,327	137,950	75,536	1,672	1,202	470	1,988	954	82,633	39,739
1983	9,155,480	133,026	76,639	1,573	1,067	506	1,843	933	78,910	37,991
1984	9,057,432	135,782	76,401	1,595	1,100	495	1,884	929	80,810	37,563
1985	9,086,341	138,052	78,635	1,575	1,071	504	1,867	953	79,022	38,775
1986	9,144,545	137,626	80,177	1,565	1,079	486	1,782	865	77,815	39,553
1987	9,199,871	140,466	79,795	1,538	1,029	509	1,701	824	74,418	39,857
1988	9,239,811	139,635	80,075	1,542	1,068	474	1,659	761	75,386	40,103
1989	9,273,429	148,164	78,566	1,645	1,070	575	1,792	881	76,210	40,276
1990	9,295,297	153,080	78,501	1,638	1,073	565	1,722	830	76,099	40,568
1991	9,375,057	149,478	79,738	1,554	1,003	551	1,620	775	72,747	40,103
1992	9,433,666	143,827	78,916	1,460	962	498	1,576	755	71,322	40,425
1993	9,433,666	139,560	82,286	1,319	856	463	1,434	726	70,771	40,470

<sup>1</sup> 1971-1979 population estimates have been revised by the U.S. Census Bureau. 1992 estimated population is being used to calculate rates for 1993.

<sup>2</sup> For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

<sup>3</sup> 1974 divorce data is an estimate.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.2  
Live Birth Rates, Death Rates (All Ages, Infant, Neonatal, Postneonatal, Perinatal and Maternal), Fetal Death Ratios, Marriage and Divorce Rates

(Birth rate, death rate for all ages, rate of persons married and rate of persons divorced per 1,000 population<sup>1</sup>. Fetal death ratio, mortality rates for deaths under 1 year, under 28 days, and from 28-364 days per 1,000 live births. Maternal mortality rate per 100,000 live births. Perinatal mortality rate per 1,000 live births and fetal deaths.)

Year	Live Births	Deaths						Marriages	Divorces <sup>3</sup>
		All Ages	Under 1 Year	Under 28 Days <sup>2</sup>	28-364 Days	Perinatal	Fetal		
1900	18.1	13.4	157.1				30.3	19.2	2.0
1901	17.6	13.3	146.2				34.7	19.6	2.0
1902	18.2	12.6	130.6				39.4	20.5	2.3
1903	18.1	13.1	141.0				39.4	20.5	2.3
1904	18.4	13.4	135.1				40.2	19.3	2.2
1905	18.0	13.3	150.2				43.5	20.1	2.2
1906	22.1	14.0	135.7				40.2	20.7	2.4
1907	21.9	13.6	117.0				39.9	20.7	2.3
1908	23.7	13.5	118.8				41.6	18.9	2.2
1909	23.2	13.1	115.7				39.5	19.7	2.5
1910	22.8	14.2	124.8				39.9	20.7	2.6
1911	22.7	13.1	108.4				41.3	20.6	2.8
1912	23.3	13.0	100.4				41.8	21.3	2.6
1913	23.8	13.3	104.8				40.4	21.9	2.6
1914	24.3	12.7	96.8				40.6	22.4	2.8
1915	25.0	12.5	85.6				41.4	21.9	2.9
1916	26.2	13.8	96.7				42.4	24.1	3.3
1917	26.2	13.8	88.5				39.7	25.1	3.3
1918	26.1	15.6	89.8				40.4	19.0	3.1
1919	23.5	12.7	89.9				40.0	25.4	4.2
1920	25.1	14.2	93.1				40.9	27.7	4.7
1921	25.4	11.7	79.0				38.2	21.9	4.1
1922	23.1	11.2	74.7				42.0	22.3	3.9
1923	23.1	12.3	80.4				39.3	24.7	4.4
1924	23.7	11.4	72.2			66.7	37.7	24.1	4.5
1925	23.3	11.6	75.7	41.9	30.2	64.9	37.1	21.7	4.5
1926	22.5	12.4	77.5	40.6	35.1	66.3	38.8	18.7	4.5
1927	22.3	11.3	67.7	41.2	36.3	65.5	38.4	16.2	4.7
1928	21.2	11.9	69.8	39.2	28.5	65.2	38.0	15.6	4.6
1929	20.9	11.9	66.9	38.4	28.7	64.6	37.6	15.6	5.1

<sup>1</sup> 1971-1979 birth, death, marriage and divorce rates have been recalculated using revised population estimates. 1992 estimated population is used to calculate 1993 rates.  
<sup>2</sup> For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.  
<sup>3</sup> 1974 divorce data is an estimate.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.2 (continued)  
**Live Birth Rates, Death Rates (All Ages, Infant, Neonatal, Postneonatal, Perinatal and Maternal), Fetal Death Ratios, Marriage and Divorce Rates**  
 Michigan, 1900 - 1993

(Birth rate, death rate for all ages, rate of persons married and rate of persons divorced per 1,000 population<sup>1</sup>. Fetal death ratio, mortality rates for deaths under 1 year, under 28 days, and from 28-364 days per 1,000 live births. Maternal mortality rate per 100,000 live births. Perinatal mortality rate per 1,000 live births and fetal deaths.)

Year	Live Births	Deaths							Marriages		Divorces <sup>3</sup>
		All Ages	Under 1 Year	Under 28 Days <sup>2</sup>	28-364 Days	Perinatal	Fetal	Maternal			
1930	20.4	10.6	62.8	36.6	26.2	63.5	37.6	603.7	12.2		4.4
1931	18.5	10.1	57.3	34.1	23.2	60.2	35.6	595.3	11.8		3.9
1932	17.3	10.1	54.3	32.8	21.5	59.0	35.0	578.3	11.6		3.2
1933	16.2	9.8	50.9	32.2	18.7	58.9	34.5	555.4	13.3		3.1
1934	16.8	10.1	52.1	32.4	19.8	55.2	31.1	536.1	17.3		4.0
1935	17.3	10.1	47.7	29.2	18.5	53.6	29.7	501.1	17.9		4.3
1936	17.4	10.8	50.6	29.9	20.7	51.9	29.6	480.5	18.5		4.5
1937	17.8	10.4	47.8	29.5	18.3	52.2	28.2	356.0	18.7		4.9
1938	18.7	9.8	44.5	28.2	16.3	50.0	28.2	355.8	11.6		4.1
1939	18.1	10.0	41.8	27.5	14.4	48.5	27.2	296.5	14.5		4.4
1940	18.9	9.9	40.6	26.5	14.1	46.7	26.3	294.6	17.6		4.6
1941	19.8	9.7	38.8	25.0	13.8	45.3	25.8	277.2	18.8		4.9
1942	22.4	9.5	37.1	24.9	12.2	43.9	24.7	209.6	18.6		5.1
1943	23.3	10.6	38.3	23.7	14.5	43.2	25.6	188.9	16.5		5.7
1944	21.1	10.0	38.1	24.5	13.6	44.1	25.3	174.3	15.5		6.8
1945	20.5	9.9	35.9	23.9	12.0	42.9	24.2	148.8	17.8		7.8
1946	24.3	9.6	32.8	24.0	8.8	42.2	22.9	117.6	27.6		10.2
1947	26.4	9.4	31.5	22.9	8.6	40.2	21.4	107.9	23.5		7.1
1948	24.8	9.1	30.0	21.8	8.2	38.0	20.4	78.1	20.0		5.2
1949	24.6	9.0	28.9	20.7	8.2	36.0	19.1	67.1	16.7		5.1
1950	25.1	9.0	26.3	19.0	7.3	35.4	19.3	56.9	18.3		5.0
1951	26.3	9.0	26.1	19.1	7.0	34.7	18.3	54.5	16.3		4.7
1952	26.5	8.8	26.4	19.2	7.2	34.6	18.1	46.1	15.1		4.4
1953	26.7	9.1	25.8	18.5	7.3	33.2	17.4	43.2	15.6		4.8
1954	27.3	8.6	25.0	18.5	6.4	32.8	16.9	48.9	14.6		4.6
1955	27.1	8.7	24.8	18.9	5.9	32.0	15.4	31.1	15.4		4.9
1956	27.4	8.6	24.5	18.4	6.1	31.8	15.7	40.8	15.2		4.3
1957	26.7	8.5	24.4	18.6	5.8	31.5	15.1	37.9	14.1		4.0
1958	25.8	8.4	24.6	18.7	5.9	31.7	15.3	34.0	14.0		3.6
1959	24.9	8.4	24.4	18.5	5.9	31.1	14.8	36.3	14.8		4.1

<sup>1</sup> 1971-1979 birth, death, marriage and divorce rates have been recalculated using revised population estimates. 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

<sup>3</sup> 1974 divorce data is an estimate.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.2 (continued)  
**Live Birth Rates, Death Rates (All Ages, Infant, Neonatal, Postneonatal, Perinatal and Maternal), Fetal Death Ratios, Marriage and Divorce Rates**  
 (Birth rate, death rate for all ages, rate of persons married and rate of persons divorced per 1,000 population<sup>1</sup>. Fetal death ratio, mortality rates for deaths under 1 year, under 28 days, and from 28-364 days per 1,000 live births. Maternal mortality rate per 100,000 live births. Perinatal mortality rate per 1,000 live births and fetal deaths.)

Year	Live Births	Deaths							Marriages	Divorces <sup>3</sup>
		All Ages	Under 1 Year	Under 28 Days <sup>2</sup>	28-364 Days	Perinatal	Fetal	Maternal		
1960	24.9	8.7	24.1	18.4	5.8	31.5	15.4	38.5	15.6	4.3
1961	24.4	8.5	23.9	18.0	5.9	30.0	14.2	40.5	16.0	4.1
1962	23.0	8.8	23.9	17.8	6.1	30.6	14.8	30.6	16.4	4.4
1963	22.3	9.0	23.2	17.4	5.8	29.8	14.2	49.7	17.0	4.4
1964	21.6	8.9	23.1	17.5	5.6	29.8	14.1	35.4	18.2	4.8
1965	20.3	9.0	23.6	17.5	6.2	30.4	14.9	32.4	19.8	5.0
1966	19.9	9.0	23.6	17.1	5.6	29.2	13.8	32.6	20.2	5.2
1967	18.9	8.7	22.1	16.7	5.4	28.4	13.5	31.9	19.6	5.5
1968	18.3	8.9	21.6	16.5	5.2	27.8	13.0	27.7	21.0	5.9
1969	19.0	8.8	20.2	15.4	4.9	26.7	13.1	16.3	21.4	6.5
1970	19.3	8.6	20.3	15.6	4.8	26.0	12.0	16.9	20.7	6.7
1971	18.1	8.6	19.5	14.9	4.6	25.2	11.9	19.7	20.5	7.1
1972	16.3	8.8	19.1	14.4	4.7	24.9	12.0	23.8	20.9	7.9
1973	15.6	8.7	18.1	13.4	4.7	23.7	11.9	18.4	20.8	8.2
1974	15.1	8.4	17.4	12.6	4.8	21.2	10.5	13.8	19.3	8.8
1975	14.7	8.2	16.5	11.7	4.8	19.8	10.1	11.9	18.2	9.0
1976	14.4	8.3	15.1	10.8	4.2	18.8	9.6	10.7	18.2	9.5
1977	15.1	8.1	14.1	9.9	4.2	17.6	9.3	7.9	18.8	9.4
1978	15.1	8.1	13.9	9.2	4.7	16.4	8.7	10.8	19.2	9.8
1979	15.6	7.9	13.3	9.0	4.3	15.7	8.1	7.6	19.3	9.6
1980	15.7	8.1	12.8	8.8	3.9	15.3	7.8	11.0	18.8	9.7
1981	15.2	8.2	13.2	9.1	4.1	15.2	7.4	5.0	18.4	9.3
1982	15.0	8.2	12.1	8.7	3.4	14.3	6.9	8.0	17.9	8.6
1983	14.5	8.4	11.8	8.0	3.8	13.8	7.0	4.5	17.2	8.3
1984	15.0	8.4	11.7	8.1	3.6	13.8	6.8	*	17.8	8.3
1985	15.2	8.7	11.4	7.8	3.7	13.4	6.9	6.5	17.4	8.5
1986	15.1	8.8	11.4	7.8	3.5	12.9	6.3	8.0	17.0	8.7
1987	15.3	8.7	10.9	7.3	3.6	12.0	5.7	5.7	16.2	8.7
1988	15.1	8.7	11.0	7.6	3.4	11.9	5.4	7.9	16.3	8.7
1989	16.0	8.5	11.1	7.2	3.9	12.0	5.9	8.8	16.4	8.7
1990	16.5	8.4	10.7	7.0	3.7	11.2	5.4	6.5	16.4	8.7
1991	15.9	8.5	10.4	6.7	3.7	10.8	5.2	10.7	15.5	8.6
1992	15.2	8.4	10.2	6.7	3.5	10.9	5.2	10.4	15.1	8.6
1993	14.8	8.7	9.5	6.1	3.3	10.2	5.2	5.7	15.0	8.6

<sup>1</sup> 1971-1979 birth, death, marriage and divorce rates have been recalculated using revised population estimates. 1992 estimated population is used to calculate 1993 rates.  
<sup>2</sup> For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.  
<sup>3</sup> 1974 divorce data is an estimate.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.3  
Number of Live Births by Age of Mother  
Michigan Residents, 1920 - 1993

Michigan Residents, 1920 - 1993										
Year	All Ages <sup>1</sup>	Age of Mother								Not Stated
		10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 +	
1920	92,740	34	8,129	26,344	26,251	17,521	10,427	3,523	336	175
1921	96,322	39	8,747	26,583	27,292	18,433	11,150	3,572	337	169
1922	90,209	28	8,125	24,575	25,154	17,690	10,584	3,485	343	225
1923	93,066	37	8,725	25,887	25,459	18,072	10,770	3,476	382	258
1924	98,025	38	9,877	28,000	25,781	18,707	11,395	3,682	321	224
1925	99,220	62	10,248	28,116	26,204	18,869	11,406	3,695	379	241
1926	98,781	76	10,496	28,479	25,876	18,444	11,219	3,568	354	269
1927	100,178	59	10,685	29,302	25,707	18,790	11,287	3,722	332	294
1928	97,797	54	10,788	28,895	25,003	17,953	10,913	3,558	315	318
1929	99,134	56	11,312	30,582	25,557	16,957	10,555	3,523	293	299
1930	99,325	60	11,476	29,956	25,861	17,125	10,684	3,582	291	290
1931	90,929	61	10,109	27,255	23,806	15,937	9,905	3,317	302	237
1932	85,736	62	9,297	25,686	22,608	14,988	9,314	3,250	291	240
1933	80,923	52	8,642	23,874	21,618	14,298	8,795	3,173	261	210
1934	83,925	48	9,039	25,458	22,507	14,968	8,391	3,050	259	205
1935	87,446	47	9,808	27,631	22,938	15,026	8,473	3,029	284	210
1936	88,427	53	9,764	28,681	23,584	14,814	8,194	2,866	274	197
1937	91,539	54	10,524	30,532	24,366	15,022	7,949	2,653	242	197
1938	96,963	64	11,024	32,581	26,116	15,690	8,397	2,698	253	140
1939	94,302	51	10,368	31,036	26,095	15,976	8,021	2,416	209	130
1940	99,021	51	10,671	32,960	27,860	16,549	8,146	2,390	202	192
1941	107,458	50	11,309	36,833	31,067	17,132	8,351	2,361	200	155
1942	123,886	66	12,721	43,947	36,034	19,367	8,985	2,445	202	119
1943	125,778	67	11,934	41,627	37,773	21,449	9,980	2,615	184	149
1944	114,700	76	10,113	36,096	33,654	21,094	10,636	2,714	182	135
1945	112,655	73	9,294	32,790	33,143	22,831	11,185	2,970	229	140
1946	139,277	72	10,899	45,999	41,985	25,184	11,811	3,002	223	102
1947	161,085	91	15,594	55,954	47,793	26,296	12,009	3,073	182	93
1948	154,730	95	16,245	53,520	45,059	25,268	11,391	2,888	173	91
1949	157,178	117	16,404	53,608	46,363	25,971	11,565	2,906	181	63

<sup>1</sup> Total live births for the years 1920 through 1959 differ from figures in Table 4.1 as they are derived from outside sources. Live births by age of mother were not tabulated in Michigan prior to 1960. These data were obtained from the following sources:

1920-1923: Unpublished tables from the National Center for Health Statistics.  
 1924-1932: Bureau of the Census publication, Birth, Stillbirth and Infant Mortality Statistics for Birth, Registration Areas of the United States.  
 1933-1936: Unpublished tables from the National Center for Health Statistics.  
 1937-1949: Bureau of the Census publication, Vital Statistics of the United States series.  
 1950-1959: Department of Health Education and Welfare publication, Vital Statistics of the United States series.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



Table 4.3 (continued)  
Number of Live Births by Age of Mother  
Michigan Residents, 1920 - 1993

Michigan Residents, 1920 - 1993										
Year	All Ages <sup>1</sup>	Age of Mother								Not Stated
		10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 +	
1950	160,955	111	16,310	53,442	48,186	27,422	12,392	2,831	169	92
1951	173,506	104	17,974	57,340	52,044	29,674	13,086	3,040	160	84
1952	178,634	134	17,206	58,012	54,198	31,756	13,880	3,176	220	52
1953	182,810	166	18,510	58,070	54,734	32,948	14,798	3,350	190	44
1954	192,332	208	20,522	60,776	55,962	35,152	15,862	3,598	220	32
1955	196,623	195	21,417	61,952	56,462	35,968	16,554	3,862	198	15
1956	206,226	192	22,808	66,332	58,392	36,870	17,282	4,172	164	14
1957	208,808	190	23,798	67,086	58,424	36,980	17,956	4,160	200	14
1958	202,900	222	23,034	65,834	55,130	36,278	17,892	4,296	196	18
1959	198,576	200	21,922	65,426	53,434	34,934	18,030	4,424	198	8
1960	195,056	186	22,786	65,108	51,842	33,228	17,410	4,288	202	6
1961	192,825	212	23,891	64,336	50,277	32,456	17,067	4,363	203	20
1962	182,790	268	22,702	62,243	47,109	29,817	16,160	4,250	224	17
1963	178,871	210	21,686	62,834	46,063	28,364	15,117	4,359	229	9
1964	175,103	264	22,526	62,196	44,671	26,542	14,509	4,162	220	13
1965	166,464	267	24,653	59,439	40,693	23,767	13,528	3,886	211	20
1966	165,794	310	28,690	60,711	39,225	21,205	11,846	3,547	223	37
1967	162,756	316	27,267	61,541	40,052	19,840	10,479	3,059	178	24
1968	159,058	400	26,390	60,072	41,561	18,613	9,095	2,739	163	25
1969	165,760	421	28,061	63,376	44,615	18,535	8,157	2,433	134	28
1970	171,667	489	29,764	65,892	46,262	19,003	7,904	2,223	118	12
1971	162,244	472	28,480	62,367	43,639	18,259	6,975	1,926	112	14
1972	146,854	503	28,108	54,199	40,442	16,133	5,805	1,555	95	14
1973	141,550	569	27,808	51,284	39,845	15,520	5,163	1,277	62	22
1974	137,414	501	25,977	49,975	40,215	15,317	4,291	1,063	50	25
1975	133,931	463	24,509	48,975	40,061	14,891	4,273	982	54	23
1976	131,378	404	22,593	47,161	41,412	14,893	4,053	799	47	16
1977	138,416	426	22,585	49,740	43,346	17,293	4,178	771	51	26
1978	138,802	345	21,487	49,498	43,744	18,367	4,562	729	50	20
1979	144,452	355	21,239	51,319	46,084	19,962	4,720	715	41	17

<sup>1</sup> Total live births for the years 1920 through 1959 differ from figures in Table 4.1 as they are derived from outside sources. Live births by age of mother were not tabulated in Michigan prior to 1960. These data were obtained from the following sources:

1920-1923: Unpublished tables from the National Center for Health Statistics.  
 1924-1932: Bureau of the Census publication, *Birth, Stillbirth and Infant Mortality Statistics for Birth, Registration Areas of the United States*.  
 1933-1936: Unpublished tables from the National Center for Health Statistics.  
 1937-1949: Bureau of the Census publication, *Vital Statistics of the United States series*.  
 1950-1959: Department of Health Education and Welfare publication, *Vital Statistics of the United States series*.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.3 (continued)  
Number of Live Births by Age of Mother  
Michigan Residents, 1920 - 1993

Michigan Residents, 1920 - 1993										
Year	All Ages <sup>1</sup>	Age of Mother								
		10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 +	Not Stated
1980	145,162	331	20,000	51,218	47,113	21,024	4,692	740	22	22
1981	140,579	300	18,397	47,737	46,527	22,178	4,701	695	34	10
1982	137,950	319	17,344	45,586	45,995	22,564	5,395	711	29	7
1983	133,026	328	16,589	42,034	45,065	22,505	5,669	791	38	7
1984	135,782	341	16,442	41,664	45,908	24,320	6,295	780	30	2
1985	138,052	352	16,279	41,125	47,049	25,491	6,864	851	36	5
1986	137,626	335	16,536	39,611	46,421	26,331	7,503	842	35	12
1987	140,466	329	16,911	39,314	47,052	27,795	8,038	969	46	12
1988	139,635	371	17,003	37,529	45,924	28,469	8,553	1,094	54	638
1989	148,164	396	19,149	39,352	47,853	30,462	9,571	1,207	58	116
1990	153,080	426	20,224	39,992	48,466	32,058	10,421	1,382	40	71
1991	149,478	414	19,325	39,546	45,995	32,025	10,627	1,464	36	46
1992	143,827	373	18,341	37,446	43,246	31,496	11,199	1,604	60	62
1993	139,560	371	17,198	35,732	40,975	31,833	11,682	1,636	71	62

<sup>1</sup> Total live births for the years 1920 through 1959 differ from figures in Table 4.1 as they are derived from outside sources. Live births by age of mother were not tabulated in Michigan prior to 1960. These data were obtained from the following sources:

1920-1923: Unpublished tables from the National Center for Health Statistics.  
1924-1932: Bureau of the Census publication, *Birth, Stillbirth and Infant Mortality Statistics for Birth, Registration Areas of the United States*.  
1933-1936: Unpublished tables from the National Center for Health Statistics.  
1937-1949: Bureau of the Census publication, *Vital Statistics of the United States series*.  
1950-1959: Department of Health Education and Welfare publication, *Vital Statistics of the United States series*.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.4  
**Live Birth Rates,<sup>1</sup> by Age of Mother**  
 Michigan Residents, 1920 - 1993  
 (Live birth rates are per 1,000 women per year. Total fertility rate is total children to 1,000 women in their lifetime assuming constant live birth rates.)

Year	Age of Mother								Total Fertility Rate
	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 + <sup>2</sup>	
1920	0.2	55.7	173.1	164.0	124.2	83.8	34.3	3.8	3,195.5
1921	0.2	56.9	167.3	165.5	125.8	84.8	32.8	3.6	3,184.5
1922	0.2	50.8	149.6	149.1	117.3	77.1	30.7	3.5	2,891.5
1923	0.2	52.6	152.6	147.5	116.5	75.4	29.3	3.8	2,889.5
1924	0.2	57.4	160.0	146.1	117.3	76.7	29.9	3.1	2,953.5
1925	0.3	57.4	155.9	145.4	115.2	73.9	28.8	3.5	2,902.0
1926	0.4	56.9	153.3	140.5	109.7	70.1	26.8	3.2	2,804.5
1927	0.3	56.0	153.3	136.8	108.9	68.1	27.0	2.9	2,766.5
1928	0.2	54.8	147.1	130.3	101.5	63.7	25.0	2.6	2,626.0
1929	0.2	55.7	151.5	130.6	93.6	59.6	23.9	2.4	2,587.5
1930	0.3	55.2	145.5	130.2	92.8	58.9	23.7	2.3	2,544.5
1931	0.3	47.8	130.4	118.3	85.3	54.3	21.5	2.3	2,301.0
1932	0.3	43.4	121.5	111.0	79.4	50.8	20.8	2.2	2,148.0
1933	0.2	39.7	111.6	105.2	75.0	47.7	20.0	1.9	2,006.5
1934	0.2	41.0	117.6	108.4	77.8	45.3	18.9	1.8	2,055.0
1935	0.2	43.9	126.2	109.4	77.4	45.5	18.5	2.0	2,115.5
1936	0.2	43.1	129.5	111.4	75.5	43.8	17.3	1.8	2,113.0
1937	0.2	45.9	136.4	113.9	75.9	42.3	15.8	1.6	2,160.0
1938	0.3	47.4	143.9	120.9	78.5	44.4	15.8	1.6	2,264.0
1939	0.2	44.1	135.6	119.6	79.2	42.3	14.0	1.3	2,181.5
1940	0.2	44.9	142.8	126.8	81.5	42.8	13.7	1.2	2,269.5
1941	0.2	48.1	157.8	137.1	81.6	42.5	13.2	1.2	2,408.5
1942	0.3	54.5	186.6	155.3	89.9	44.7	13.4	1.2	2,729.5
1943	0.3	51.6	175.1	159.0	97.1	48.6	14.1	1.1	2,734.5
1944	0.3	44.1	150.5	138.5	93.2	50.6	14.3	1.0	2,462.5
1945	0.3	40.8	135.5	133.4	98.5	52.1	15.4	1.3	2,386.5
1946	0.3	48.3	188.5	165.3	106.2	53.8	15.3	1.2	2,894.5
1947	0.4	69.7	227.3	184.2	108.4	53.6	15.4	1.0	3,300.0
1948	0.4	73.2	215.5	170.0	101.9	49.8	14.2	1.0	3,130.0
1949	0.5	74.6	214.0	171.4	102.5	49.6	14.1	1.0	3,138.5

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Number of live births to women aged 45 and over per 1,000 women 45-49 years of age.

Source: Population figures used for 1920-1970 rates are from General Population Characteristics, Michigan, USBC, 1971, with arithmetic extrapolation between census years. For 1971-1988 population source, see Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.4 (continued)  
**Live Birth Rates<sup>1</sup> by Age of Mother**  
 Michigan Residents, 1920 - 1993  
 (Live birth rates are per 1,000 women per year. Total fertility rate is total children to 1,000 women in their lifetime assuming constant live birth rates.)

Year	Age of Mother							Total Fertility Rate
	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45+ <sup>2</sup>
1950	0.5	74.6	212.0	175.5	106.5	52.3	13.6	0.9
1951	0.4	79.1	229.0	192.2	114.4	53.9	14.1	0.8
1952	0.5	73.5	233.0	202.5	121.7	56.1	14.4	1.1
1953	0.6	76.8	234.5	207.0	125.5	58.7	14.9	0.9
1954	0.7	82.8	246.8	214.1	133.1	61.8	15.6	1.1
1955	0.6	84.1	253.0	218.6	135.4	63.4	16.4	0.9
1956	0.6	87.2	272.4	228.9	138.0	65.0	17.4	0.8
1957	0.6	88.6	277.1	231.8	137.6	66.4	17.0	0.9
1958	0.6	83.6	273.4	221.5	134.3	65.0	17.2	0.9
1959	0.6	77.6	273.3	217.4	128.6	64.4	17.3	0.9
1960	0.5	79.3	273.1	213.0	121.8	61.4	16.6	0.9
1961	0.6	78.1	252.0	200.7	120.2	61.3	16.8	0.9
1962	0.7	70.7	231.5	183.9	111.4	58.9	16.3	0.9
1963	0.5	64.6	222.5	175.9	107.0	55.9	16.6	0.9
1964	0.6	64.2	210.1	167.0	101.0	54.4	15.8	0.9
1965	0.6	67.4	192.0	149.0	91.2	51.5	14.7	0.8
1966	0.7	75.4	187.9	140.7	82.1	45.8	13.4	0.9
1967	0.7	69.0	182.8	140.8	77.6	41.2	11.5	0.7
1968	0.9	64.3	171.5	143.2	73.4	36.3	10.2	0.6
1969	0.9	66.0	174.2	150.8	73.8	33.1	9.1	0.5
1970	1.0	68.2	176.0	154.0	76.1	32.4	8.3	0.4
1971	1.0	63.7	157.3	142.4	71.2	29.0	7.4	0.4
1972	1.1	61.6	137.4	122.7	60.8	24.2	6.1	0.4
1973	1.2	59.9	128.0	117.3	55.2	21.5	5.1	0.2
1974	1.1	55.3	122.3	113.7	52.4	17.7	4.4	0.2
1975	1.0	52.0	116.8	109.3	49.6	17.5	4.2	0.2
1976	0.9	48.0	111.0	107.5	49.1	16.3	3.4	0.2
1977	1.0	48.4	114.3	112.7	52.9	16.3	3.3	0.2
1978	0.8	46.5	111.5	111.6	54.5	16.8	3.1	0.2
1979	0.9	46.7	114.0	114.9	57.0	16.8	3.0	0.2

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Number of live births to women aged 45 and over per 1,000 women 45-49 years of age.

Source: Population figures used for 1920-1970 rates are from General Population Characteristics, Michigan, USBC, 1971, with arithmetic extrapolation between census years. For 1971-1988 population source, see Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.4 (continued)  
**Live Birth Rates<sup>1</sup> by Age of Mother**  
 Michigan Residents, 1920 - 1993  
 (Live birth rates are per 1,000 women per year. Total fertility rate is total children to 1,000 women in their lifetime assuming constant live birth rates.)

Year	Age of Mother							Total Fertility Rate	
	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44		45+ <sup>2</sup>
1980	0.8	44.8	113.1	115.6	58.4	16.4	3.1	0.1	1,761.5
1981	0.8	41.3	103.5	110.8	59.5	16.2	3.0	0.2	1,817.5
1982	0.9	39.2	98.0	107.6	59.2	18.4	3.1	0.1	1,811.5
1983	0.9	37.9	89.8	104.0	58.0	19.3	3.6	0.2	1,772.5
1984	1.0	43.8	103.8	111.4	65.2	19.3	3.0	0.1	1,738.0
1985	1.0	43.9	104.1	115.1	67.1	20.5	3.1	0.2	1,775.0
1986	1.0	45.2	101.6	114.4	68.3	21.8	2.9	0.1	1,776.5
1987	1.0	46.9	102.3	117.1	71.5	22.9	3.3	0.2	1,826.0
1988	1.1	47.8	99.2	115.8	73.0	23.9	3.6	0.2	1,823.0
1989	1.2	54.6	105.7	122.3	78.2	26.4	3.8	0.2	1,962.0
1990	1.3	58.8	112.3	125.0	77.5	27.5	4.1	0.2	2,033.6
1991	1.2	58.7	109.6	122.7	78.7	27.3	4.1	0.1	2,012.0
1992	1.1	56.4	104.4	119.0	77.2	28.2	4.5	0.2	1,955.0
1993	1.1	52.9	99.6	112.7	78.0	29.4	4.6	0.2	1,892.5

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Number of live births to women aged 45 and over per 1,000 women 45-49 years of age.

Source: Population figures used for 1920-1970 rates are from General Population Characteristics, Michigan, USBC, 1971, with arithmetic extrapolation between census years. For 1971-1988 population source, see Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.5  
Reported Cases of Certain Communicable Diseases  
Michigan Residents, 1900 - 1993

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis All Types	TB <sup>1</sup> (all forms)	Meningo- coccal Infections <sup>2</sup>	Polio	Syphilis <sup>3</sup>	Gonorrhea	Acquired Immune Deficiency Syndrome
1900	2,706	694	5,122	3,375	20,356		2,721	654				
1901	2,498	5,088	3,002	2,955	4,629		2,915	506				
1902	2,993	7,086	2,456	3,534	11,978		2,658	528				
1903	3,670	6,341	2,840	4,172	8,941		2,745	525				
1904	3,510	5,753	3,028	1,779	10,386		2,928	448				
1905	2,159	2,985	2,774	1,196	6,061		2,590	577				
1906	3,648	1,240	3,163	1,364	7,403		2,653	533				
1907	2,935	1,712	1,953	872	12,139		2,699	575				
1908	2,658	2,306	2,656	1,248	4,775		2,705	487				
1909	3,109	1,533	2,694	1,054	9,047		3,423	457				
1910	3,433	3,319	3,361	1,136	13,934		4,415	522	104			
1911	3,762	888	2,660	1,897	9,639		5,254	478	68			
1912	3,294	1,127	2,847	1,255	2,834		1,958	88	78			
1913	5,505	1,995	2,253	929	9,185		1,920	165	56			
1914	5,149	1,527	2,167	1,822	11,356		2,566	205	49			
1915	4,386	1,094	1,956	2,258	4,438		3,648	107	95			
1916	5,625	1,581	2,513	1,837	12,143		7,076	163	598			
1917	8,499	3,674	1,723	3,211	14,472		4,856	75	91			
1918	6,128	5,241	1,339	2,563	6,726		3,655	95	121			
1919	7,896	2,381	1,254	1,829	8,885		4,231	75	155	5,077	7,910	
1920	10,360	4,818	1,421	7,171	22,364		4,994	203	67	8,117	11,463	
1921	12,075	4,512	1,837	6,696	3,043		5,708	173	483	7,421	9,774	
1922	8,513	1,230	1,108	5,642	12,107		5,573	159	43	7,900	9,717	
1923	7,725	2,311	982	7,617	30,041		5,471	186	39	10,480	9,597	
1924	6,011	4,527	782	4,364	18,290		5,570	157	647	13,000	10,490	
1925	3,925	784	962	7,576	10,332		5,785	128	99	14,668	10,660	
1926	5,377	549	583	8,776	39,946		5,387	96	107	14,872	10,707	
1927	4,575	1,467	581	6,818	8,303		5,406	138	282	15,713	9,318	
1928	3,724	1,335	390	9,700	27,039		5,885	276	77	15,323	8,592	
1929	4,618	2,410	310	9,340	18,040		6,248	1,864	180	16,606	9,661	

<sup>1</sup> Effective January 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, case counts and rates prior to 1975 are not directly comparable to the figures in 1975 and later years.

<sup>2</sup> Meningococcal infections prior to 1952 data were for meningococcal meningitis.

<sup>3</sup> Starting with 1992 data, syphilis counts represent only primary and secondary cases. Prior year counts included early latent cases.

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH.

Table 4.5 (continued)  
Reported Cases of Certain Communicable Diseases  
Michigan Residents, 1900 - 1993

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis All Types	TB <sup>1</sup> (all forms)	Meningococcal Infections <sup>2</sup>	Polio	Syphilis <sup>3</sup>	Gonorrhea	Acquired Immune Deficiency Syndrome
1930	3,206	2,375	504	7,937	28,129		5,128	901	208	16,538	8,554	
1931	1,831	915	424	11,448	6,212		6,132	293	1,137	14,662	7,843	
1932	1,188	222	513	13,091	42,129		7,103	129	112	11,969	6,963	
1933	1,152	46	453	11,720	21,654		6,624	86	93	7,691	6,447	
1934	614	49	486	11,255	6,528		5,264	53	230	6,483	6,188	
1935	645	16	355	13,427	79,061		4,642	113	614	6,416	6,372	
1936	661	32	287	14,287	2,453		5,157	120	152	6,401	6,460	
1937	842	152	241	11,426	6,154		6,469	87	421	8,708	7,072	
1938	619	274	285	14,563	79,400		6,335	69	59	14,684	7,046	
1939	452	371	177	8,997	12,948		6,119	46	904	13,144	6,364	
1940	264	76	120	11,757	20,206		6,063	49	1,228	9,999	7,650	
1941	242	114	147	16,512	70,748		5,371	49	270	11,370	8,767	
1942	243	17	74	11,602	8,569		5,720	66	162	12,461	8,753	
1943	281	18	115	12,091	51,764		6,546	757	255	15,933	9,526	
1944	419	10	78	4,049	26,711		6,419	857	884	17,288	11,987	
1945	630	16	59	5,339	6,328	134	5,471	270	215	16,046	12,565	
1946	385	3	85	8,116	42,261	34	5,548	185	1,091	18,051	12,635	
1947	238	1	77	10,472	9,574	14	6,470	113	646	15,276	10,989	
1948	126	-	49	2,668	42,952	9	6,109	107	775	12,100	9,448	
1949	119	-	48	4,157	20,279	28	5,953	120	2,909	8,740	9,427	
1950	84	-	43	9,184	38,245	48	5,538	133	2,029	8,830	8,678	
1951	48	-	33	3,156	15,227	325	6,144	138	1,463	6,532	8,494	
1952	45	-	53	1,992	32,941	283	6,152	169	3,912	7,377	7,691	
1953	12	-	31	2,932	23,334	868	5,643	151	2,346	5,619	8,790	
1954	57	-	30	5,620	40,725	1,419	5,764	150	2,168	4,686	9,940	
1955	59	-	24	4,249	23,882	1,244	5,488	170	1,177	4,865	10,306	
1956	220	-	56	1,907	41,966	814	5,515	182	656	4,785	9,598	
1957	130	-	12	1,363	19,070	657	5,011	175	498	4,571	8,428	
1958	6	-	18	1,233	41,448	688	5,587	228	1,228	4,267	8,621	
1959	3	-	8	3,001	12,234	1,136	4,743	141	448	3,421	8,033	

<sup>1</sup> Effective January 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, case counts and rates prior to 1975 are not directly comparable to the figures in 1975 and later years.  
<sup>2</sup> Meningococcal infections prior to 1952 data were for meningococcal meningitis.  
<sup>3</sup> Starting with 1992 data, syphilis counts represent only primary and secondary cases. Prior year counts included early latent cases.

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH.

Table 4.5 (continued)  
Reported Cases of Certain Communicable Diseases  
Michigan Residents, 1900 - 1993

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis All Types	TB <sup>1</sup> (all forms)	Meningo- coccal Infections <sup>2</sup>	Polio	Syphilis <sup>3</sup>	Gonorrhea	Acquired Immune Deficiency Syndrome
1960	9	-	14	1,129	36,161	2,113	4,127	169	88	3,647	8,372	
1961	3	-	7	639	29,391	4,607	3,838	253	40	3,309	9,505	
1962	4	-	12	1,756	25,303	3,280	3,474	139	21	4,331	11,654	
1963	5	-	14	1,410	48,752	2,661	3,298	104	18	5,512	11,043	
1964	1	-	13	957	30,897	2,472	3,047	80	3	5,220	12,028	
1965	-	-	7	612	28,132	2,625	3,069	107	1	5,638	14,319	
1966	1	-	7	653	15,251	2,589	3,259	135	1	5,842	15,424	
1967	1	-	8	1,058	1,048	1,915	2,951	76	3	5,581	17,088	
1968	-	-	1	429	353	2,356	2,618	94	3	5,351	18,153	
1969	-	-	6	192	401	3,359	2,133	114	1	3,809	18,534	
1970	-	-	14	195	1,834	4,594	1,992	69	2	3,920	20,359	
1971	1	-	10	140	2,659	4,828	1,789	64	-	4,800	22,260	
1972	1	-	7	116	2,353	4,322	1,632	55	1	4,891	24,750	
1973	-	-	14	86	4,552	3,872	1,473	54	-	4,375	31,086	
1974	-	-	11	104	2,365	3,599	1,431	54	2	2,722	32,067	
1975	1	-	10	98	3,253	2,877	1,271	76	-	1,638	32,583	
1976	-	-	10	70	6,139	2,845	1,349	65	1	1,089	34,836	
1977	-	-	13	73	1,392	2,686	1,290	51	1	1,185	36,794	
1978	-	-	15	47	8,006	2,174	1,260	87	1	1,133	36,647	
1979	-	-	14	102	869	2,036	1,052	79	-	1,275	36,906	
1980	1	-	12	38	250	1,799	1,185	77	1	1,110	35,125	2
1981	-	-	26	30	34	1,700	966	93	-	926	32,316	2
1982	-	-	14	34	64	1,745	932	81	-	917	32,286	16
1983	-	-	10	43	8	1,788	842	91	-	695	34,052	31
1984	-	-	9	31	465	1,728	630	90	-	763	34,758	64
1985	-	-	8	54	113	1,490	535	107	-	673	33,516	149
1986	-	-	5	35	185	1,266	619	81	-	584	37,920	260
1987	-	-	5	54	42	1,610	540	111	1	621	37,348	439
1988	-	-	5	38	54	1,202	526	92	-	1,105	37,412	510
1989	-	-	6	48	359	1,044	464	70	-	1,613	33,627	
1990	-	-	8	88	545	1,111	504	69	-	2,625	30,779	576
1991	-	-	12	38	66	1,120	451	75	-	3,520	27,015	470
1992	-	-	4	16	13	1,238	496	87	-	1,022	21,470	706
1993	-	-	8	110	9	1,0414	463	63	-	551	17,870	1,735

<sup>1</sup> Effective January 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, case counts and rates prior to 1975 are not directly comparable to the figures in 1975 and later years.

<sup>2</sup> Meningococcal infections prior to 1952 data were for meningococcal meningitis.

<sup>3</sup> Starting with 1992 data, syphilis counts represent only primary and secondary cases. Prior year counts included early latent cases.

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH.



Table 4.6  
Case Rates<sup>1</sup> of Certain Reported Communicable Diseases  
Michigan Residents, 1900 - 1993  
(Rates per 100,000 population)

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis All Types	TB <sup>2</sup> (all forms)	Meningococcal Infections <sup>3</sup>	Polio	Syphilis <sup>4</sup>	Gonorrhea	Acquired Immune Deficiency Syndrome
1900	111.8	28.7	211.6	139.4	840.8		112.4	27.0				
1901	101.5	206.8	122.0	120.1	188.2		118.5	20.6				
1902	119.8	283.6	98.3	141.4	479.3		106.4	21.1				
1903	144.6	249.9	111.9	164.4	352.3		108.2	20.7				
1904	136.2	223.3	117.5	69.0	403.1		113.6	17.4				
1905	82.5	114.1	106.1	45.7	231.7		99.0	22.1				
1906	137.4	46.7	119.2	51.4	278.9		99.9	20.1				
1907	109.0	63.6	72.5	32.4	450.7		100.2	21.3				
1908	97.3	84.4	97.2	45.7	174.8		99.0	17.8				
1909	112.2	55.3	97.2	38.0	326.5		123.5	16.5				
1910	122.2	118.1	119.6	40.4	495.8		157.1	18.6	3.7			
1911	129.9	31.0	91.8	65.5	332.8		181.4	16.5	2.3			
1912	110.5	37.8	95.5	42.1	95.0		65.7	3.0	2.6			
1913	179.5	65.0	73.4	30.3	299.4		62.6	5.4	1.8			
1914	163.3	48.4	68.7	57.8	360.1		81.4	6.5	1.6			
1915	135.4	33.8	60.4	69.7	137.0		112.6	3.3	2.9			
1916	169.2	47.5	75.6	55.2	365.2		212.8	4.9	18.0			
1917	249.2	107.7	50.5	94.1	424.3		142.4	2.2	2.7			
1918	175.2	149.9	38.3	73.3	192.4		104.5	2.7	3.5			
1919	220.4	66.5	35.0	51.1	248.0		118.1	2.1	4.3	141.7	220.8	
1920	282.4	131.3	38.7	195.5	609.6		136.1	5.5	1.8	221.3	312.8	
1921	318.9	119.2	48.5	176.9	80.4		150.8	4.6	12.8	196.0	258.2	
1922	218.1	31.5	28.4	144.5	310.2		142.8	4.1	1.1	202.4	248.9	
1923	192.1	57.5	24.4	189.5	747.2		136.1	4.6	1.0	260.7	238.7	
1924	145.3	109.4	18.9	105.5	442.0		134.6	3.8	15.6	314.2	253.5	
1925	92.2	18.4	22.6	178.0	242.8		135.9	3.0	2.3	344.7	250.5	
1926	123.0	12.6	13.3	200.7	913.5		123.2	2.2	2.4	340.1	244.9	
1927	101.9	32.7	12.9	151.8	184.9		120.4	3.1	6.3	349.9	207.5	
1928	80.8	29.0	8.5	210.5	586.9		127.7	6.0	1.7	332.6	186.5	
1929	97.7	51.0	6.6	197.7	381.8		132.2	39.4	3.8	351.4	204.5	

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates

<sup>2</sup> Effective January, 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, case counts and rates prior to 1975 are not directly comparable to the figures in 1975 and later years.

<sup>3</sup> Meningococcal infections prior to 1952 data were for meningococcal meningitis.

<sup>4</sup> Starting with 1992 data, syphilis counts represent only primary and secondary cases. Prior year counts included early latent cases.

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH.

Table 4.6 (continued)  
**Case Rates<sup>1</sup> of Certain Reported Communicable Diseases**  
 Michigan Residents, 1900 - 1993  
*(Rates per 100,000 population)*

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis All Types	TB <sup>2</sup> (all forms)	Meningococcal Infections <sup>3</sup>	Polio	Syphilis <sup>4</sup>	Gonorrhea	Acquired Immune Deficiency Syndrome
1930	66.2	49.0	10.4	163.9	580.9		105.9	18.6	4.3	341.5	176.6	
1931	37.5	18.7	8.7	234.4	127.2		125.6	6.0	23.3	300.2	160.6	
1932	24.1	4.5	10.4	265.8	855.4		144.2	2.6	2.3	243.0	141.4	
1933	23.2	0.9	9.1	236.0	436.0		133.4	1.7	1.9	154.9	129.8	
1934	12.3	1.0	9.7	224.8	130.4		105.1	1.1	4.6	129.5	123.6	
1935	12.8	0.3	7.0	265.9	1,565.8		91.9	2.2	12.2	127.1	126.2	
1936	13.0	0.6	5.6	280.7	48.2		101.3	2.4	3.0	125.7	126.9	
1937	16.4	3.0	4.7	222.6	119.9		126.1	1.7	8.2	169.7	137.8	
1938	12.0	5.3	5.5	281.5	1,534.8		122.5	1.3	1.1	283.8	136.2	
1939	8.7	7.1	3.4	172.5	248.3		117.3	0.9	17.3	252.0	122.0	
1940	5.0	1.4	2.3	223.7	384.4		115.3	0.9	23.4	190.2	145.5	
1941	4.5	2.1	2.7	303.7	1,301.1		98.8	0.9	5.0	209.1	161.2	
1942	4.4	0.3	1.3	209.5	154.7		103.3	1.2	2.9	225.0	158.0	
1943	5.2	0.3	2.1	224.8	962.6		121.7	14.1	4.7	296.3	177.1	
1944	7.8	0.2	1.5	75.3	496.7		119.4	15.9	16.4	321.5	222.9	
1945	11.6	0.3	1.1	98.2	116.4	2.5	100.7	5.0	4.0	295.2	231.2	
1946	6.7	*	1.5	142.2	740.3	0.6	97.2	3.2	19.1	316.2	221.3	
1947	3.9	*	1.3	172.5	157.8	0.2	106.6	1.9	10.6	251.7	181.1	
1948	2.0	-	0.8	43.1	693.3	0.1	98.6	1.7	12.5	195.3	152.5	
1949	1.9	-	0.8	65.4	319.3	0.4	93.7	1.9	45.8	137.6	148.4	
1950	1.3	-	0.7	144.1	600.2	0.8	86.9	2.1	31.8	138.6	136.2	
1951	0.7	-	0.5	48.2	232.7	5.0	93.9	2.1	22.4	99.8	129.8	
1952	0.7	-	0.8	29.7	491.1	4.2	91.7	2.5	58.3	110.0	114.7	
1953	0.2	-	0.5	42.8	340.5	12.7	82.4	2.2	34.2	82.0	128.3	
1954	0.8	-	0.4	80.0	579.8	20.2	82.1	2.1	30.9	66.7	141.5	
1955	0.8	-	0.3	58.7	330.0	17.2	75.8	2.3	16.3	67.2	142.4	
1956	2.9	-	0.7	25.4	558.4	10.8	73.4	2.4	8.7	63.7	127.7	
1957	1.7	-	0.2	17.5	244.4	8.4	64.2	2.2	6.4	58.6	108.0	
1958	0.1	-	0.2	15.7	526.9	8.7	71.0	2.9	15.6	54.2	109.6	
1959	*	-	0.1	37.7	153.7	14.3	59.6	1.8	5.6	43.0	100.9	

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Effective January, 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, case counts and rates prior to 1975 are not directly comparable to the figures in 1975 and later years.

<sup>3</sup> Meningococcal infections prior to 1952 data were for meningococcal meningitis.

<sup>4</sup> Starting with 1992 data, syphilis counts represent only primary and secondary cases. Prior year counts included early latent cases.

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH.

Table 4.6 (continued)  
Case Rates<sup>1</sup> of Certain Reported Communicable Diseases  
Michigan Residents, 1900 - 1993  
(Rates per 100,000 population)

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis All Types	TB <sup>2</sup> (all forms)	Meningococcal Infections <sup>3</sup>	Polio	Syphilis <sup>4</sup>	Gonorrhea	Acquired Immune Deficiency Syndrome
1960	0.1	-	0.2	14.4	462.2	27.0	52.8	2.2	1.1	46.6	107.0	
1961	*	-	0.1	8.1	371.9	58.3	48.6	3.2	0.5	41.9	120.3	
1962	*	-	0.2	22.1	318.7	41.3	43.8	1.8	0.3	54.6	146.8	
1963	*	-	0.2	17.6	607.1	33.1	41.1	1.3	0.2	68.6	137.5	
1964	*	-	0.2	11.8	381.4	30.5	37.6	1.0	*	64.4	148.5	
1965	-	-	0.1	7.5	343.1	32.0	37.4	1.3	*	68.8	174.6	
1966	*	-	0.1	7.9	183.4	31.1	39.2	1.6	*	70.3	185.5	
1967	*	-	0.1	12.3	12.2	22.2	34.2	0.9	*	64.8	198.4	
1968	-	-	*	4.9	4.1	27.2	30.2	1.1	*	61.7	209.3	
1969	-	-	0.1	2.2	4.6	38.5	24.4	1.3	*	43.6	212.2	
1970	-	-	0.2	2.2	20.7	51.8	22.4	0.8	*	44.2	229.4	
1971	*	-	0.1	1.6	29.6	53.8	19.9	0.7	-	53.5	248.1	
1972	*	-	0.1	1.3	26.1	47.9	18.1	0.6	-	54.2	274.2	
1973	-	-	0.2	0.9	50.2	42.7	16.2	0.6	-	48.2	342.7	
1974	-	-	0.1	1.1	26.0	39.5	15.7	0.6	-	29.9	352.0	
1975	*	-	0.1	1.1	35.7	31.6	14.0	0.8	-	18.0	357.7	
1976	-	-	0.1	0.8	67.3	29.0	14.8	0.7	*	11.9	382.1	
1977	-	-	0.1	0.8	15.2	29.3	14.1	0.6	-	12.9	401.8	
1978	-	-	0.2	0.5	87.0	23.6	13.7	0.9	*	12.3	398.3	
1979	-	-	0.2	1.1	9.4	22.0	11.4	0.9	-	13.6	396.0	
1980	*	-	0.1	0.4	2.7	19.4	12.6	0.8	*	12.6	377.4	*
1981	-	-	0.3	0.3	0.4	18.3	10.0	1.0	-	11.4	350.9	*
1982	-	-	0.2	0.4	0.7	18.9	9.4	0.9	-	10.0	356.0	
1983	-	-	0.1	0.5	0.1	19.5	8.6	1.0	-	8.0	372.1	
1984	-	-	0.1	0.3	5.1	19.0	7.3	1.0	-	8.3	383.9	0.2
1985	-	-	0.1	0.6	0.7	16.4	5.9	1.2	-	7.2	368.8	0.5
1986	-	-	*	0.4	0.2	13.8	6.8	0.9	-	6.4	414.8	0.9
1987	-	-	*	0.6	0.5	17.5	5.9	1.2	*	6.8	503.8	1.6
1988	-	-	*	0.4	0.3	13.0	5.5	1.0	-	11.0	405.1	2.4
1989	-	-	0.1	0.5	3.9	11.3	5.0	0.8	-	17.4	362.6	3.9
1990	-	-	0.1	0.9	5.9	12.0	5.4	0.7	-	28.2	331.1	5.5
1991	-	-	0.1	0.4	0.7	11.9	4.8	0.8	-	37.5	288.2	6.2
1992	-	-	0.0	0.2	0.2	13.1	5.3	0.9	-	10.8	227.6	5.0
1993	-	-	0.1	1.2	0.1	10.7	4.9	0.7	-	5.8	189.4	7.5
												18.4

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Effective January, 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, case counts and rates prior to 1975 are not directly comparable to the figures in 1975 and later years.

<sup>3</sup> Meningococcal infections prior to 1952 data were for meningococcal meningitis.

<sup>4</sup> Starting with 1982 data, syphilis counts represent only primary and secondary cases. Prior year counts included early latent cases.

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH.

Table 4.7  
**Number of Deaths and Death Rates<sup>1</sup> for Certain Communicable Diseases**  
 Michigan Residents, 1900 - 1993  
*(Rates per 100,000 population)*

Year	Diphtheria		Strep. Sore Throat Incl. Scarlet Fever		Typhoid Fever		Whooping Cough		Measles		TB of the Respiratory System		Tuberculosis <sup>2</sup> (all forms)		Poliomyelitis		Syphilis <sup>3</sup>		Gonorrhea		AIDS	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1900	529	21.9	272	11.2	869	35.9	208	8.6	342	14.1	2,018	83.4	2,500	103.3			88	3.6				
1901	502	20.4	312	12.7	645	26.2	163	6.6	79	3.2	2,152	87.5	2,548	103.6			114	4.6				
1902	504	20.2	277	11.1	608	24.3	289	11.6	238	9.5	2,088	83.6	2,462	98.5			130	5.2				
1903	686	27.0	200	7.9	606	23.9	383	15.1	176	6.9	2,155	84.9	2,562	101.0			101	4.0				
1904	515	20.0	210	8.1	641	24.9	148	5.7	194	7.5	2,306	89.5	2,761	107.2			89	3.5				
1905	478	18.3	123	4.7	636	24.3	131	5.0	123	4.7	2,288	87.5	2,732	104.5			89	3.4				
1906	472	17.8	227	8.6	721	27.2	469	17.7	251	9.5	2,303	86.8	2,737	103.1			94	3.6				
1907	421	15.6	159	5.9	594	22.1	223	8.3	256	9.5	2,338	86.8	2,728	101.3			118	4.5				
1908	343	12.6	194	7.1	687	25.1	305	11.2	121	4.4	2,249	82.3	2,706	99.0			127	4.8				
1909	395	14.3	275	9.9	653	23.6	217	7.8	270	9.7	2,237	80.7	2,629	94.9								
1910	495	17.6	297	10.6	654	23.3	318	11.3	251	8.9	2,273	80.9	2,756	98.1	52	1.9	65	2.3				
1911	473	16.3	208	7.2	551	19.0	254	8.8	200	6.9	2,284	76.8	2,766	95.5	55	1.9	104	3.6				
1912	465	15.6	186	6.2	534	17.9	252	8.5	118	4.0	2,289	78.9	2,744	92.0	48	1.7	90	3.1				
1913	676	22.0	283	9.2	538	17.5	292	9.5	258	8.4	2,243	73.1	2,703	88.1	43	1.5	136	4.6				
1914	507	16.1	177	5.6	400	12.7	304	9.6	180	5.7	2,325	73.7	2,799	88.8	41	1.4	160	5.3				
1915	354	10.9	107	3.3	353	10.9	236	7.3	101	3.1	2,527	78.0	2,986	92.2	36	1.2	163	5.3				
1916	507	15.2	177	5.3	424	12.8	228	6.9	363	10.9	2,573	77.4	3,070	92.3	141	4.6	206	6.7				
1917	851	24.9	340	10.0	386	11.3	360	10.6	259	7.6	2,779	81.5	3,310	97.0	44	1.4	224	7.1				
1918	686	19.6	181	5.2	337	9.6	496	14.2	270	7.7	3,059	87.5	3,612	103.3	58	1.8	290	9.1				
1919	764	21.3	179	5.0	272	7.6	172	4.8	183	5.1	2,620	73.1	3,127	87.3	80	2.2	299	8.2				
1920	888	24.2	305	8.3	297	8.1	511	13.9	436	11.9	2,645	72.1	3,149	85.8	30	0.8	314	8.4	14	0.4		
1921	954	25.2	334	8.8	285	7.5	316	8.3	58	1.5	2,285	60.4	2,736	72.3	100	2.6	226	5.9	6	0.2		
1922	620	15.9	217	5.6	192	4.9	232	5.9	232	5.9	2,232	57.2	2,654	68.0	21	0.5	186	4.7	5	*		
1923	675	16.8	304	7.6	202	5.0	323	8.0	258	6.4	2,410	59.9	2,837	70.6	18	0.5	262	6.8	13	0.3		
1924	470	11.4	265	6.4	149	3.6	169	4.1	221	5.3	2,474	59.8	2,952	71.3	116	3.0	271	7.0	27	0.6		
1925	358	8.4	208	4.9	157	3.7	260	6.1	69	1.6	2,410	56.6	2,830	66.5	31	0.7	282	6.6	12	0.3		
1926	677	15.5	235	5.4	119	2.7	355	8.1	577	13.2	2,601	59.5	3,041	69.5	34	0.8	327	7.5	16	0.4		
1927	516	11.5	168	3.7	94	2.1	201	4.5	67	1.5	2,514	56.0	2,952	65.7	69	1.5	305	6.8	19	0.4		
1928	384	8.3	178	3.9	83	1.8	219	4.8	303	6.6	2,647	57.4	3,108	67.5	27	0.6	384	8.4	19	0.4		
1929	498	10.5	145	3.1	81	1.7	255	5.4	146	3.1	2,685	56.8	3,140	66.5	50	1.1	397	8.4	19	0.4		

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Effective January 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, deaths and rates prior to 1975 are not directly comparable to the figures in 1975 and later years.

<sup>3</sup> From 1901 through 1920, syphilis includes all other venereal diseases, beginning with 1968 excludes aortic aneurysms not specified as syphilitic.

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH

Table 4.7 (continued)  
**Number of Deaths and Death Rates<sup>1</sup> for Certain Communicable Diseases**  
 Michigan Residents, 1900 - 1993  
*(Rates per 100,000 population)*

Year	Diphtheria		Strep. Sore Throat Incl. Scarlet Fever		Typhoid Fever		Whooping Cough		Measles		TB of the Respiratory System		Tuberculosis <sup>2</sup> (all forms)		Poliomyelitis		Syphilis <sup>3</sup>		Gonorrhea		AIDS	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1930	299	6.2	130	2.7	87	1.8	176	3.6	231	4.8	2,443	50.5	2,912	60.1	39	0.8	395	8.2	12	0.2		
1931	172	3.5	122	2.5	73	1.5	190	3.9	28	0.6	2,263	46.3	2,660	54.5	108	2.2	361	7.4	3	*		
1932	106	2.2	112	2.3	56	1.1	199	4.0	183	3.7	2,101	42.7	2,463	50.0	23	0.5	377	7.7	2	*		
1933	112	2.3	157	3.2	50	1.0	153	3.1	111	2.2	1,996	40.2	2,348	47.3	5	*	327	6.6	7	0.1		
1934	38	0.8	171	3.4	65	1.3	141	2.8	36	0.7	1,909	38.1	2,199	43.9	25	0.5	402	8.0	10	0.2		
1935	58	1.1	98	1.9	34	0.7	132	2.6	184	3.6	1,741	34.5	2,044	40.5	32	0.6	393	7.8	3	*		
1936	52	1.0	114	2.2	37	0.7	107	2.1	12	0.2	1,816	35.7	2,100	41.3	21	0.4	394	7.7	6	0.1		
1937	72	1.4	148	2.9	29	0.6	132	2.6	11	0.2	1,860	36.2	2,119	41.3	51	1.0	401	7.8	8	0.2		
1938	44	0.9	87	1.7	23	0.4	116	2.2	100	1.9	1,633	31.6	1,866	36.1	10	0.2	401	7.8	8	0.2		
1939	25	0.5	69	1.3	25	0.5	76	1.5	29	0.6	1,651	31.7	1,881	36.1	40	0.8	389	7.5	4	*		
1940	20	0.4	41	0.8	11	0.2	59	1.1	19	0.4	1,547	29.4	1,752	33.3	72	1.4	591	11.2	3	*		
1941	18	0.3	32	0.6	14	0.3	91	1.7	65	1.2	1,532	28.2	1,723	31.7	18	0.3	537	9.9	1	*		
1942	24	0.4	23	0.4	5	*	72	1.3	8	0.1	1,630	29.4	1,827	33.0	10	0.2	559	10.1	7	0.1		
1943	21	0.4	11	0.2	9	0.2	101	1.9	89	1.7	1,588	29.5	1,802	33.5	27	0.5	579	10.8	3	*		
1944	32	0.6	7	0.1	7	0.1	33	0.6	49	0.9	1,544	28.7	1,748	32.5	45	0.8	543	10.1	2	*		
1945	46	0.8	9	0.2	3	*	36	0.7	10	0.2	1,591	29.3	1,758	32.3	20	0.4	527	9.7	2	*		
1946	27	0.5	3	*	6	0.1	44	0.8	47	0.8	1,645	28.8	1,843	32.3	89	1.6	547	9.6	2	*		
1947	23	0.4	6	0.1	5	*	63	1.0	5	*	1,483	24.4	1,643	27.1	29	0.5	502	8.3	3	*		
1948	8	0.1	1	*	4	*	9	0.1	43	0.7	1,395	22.5	1,561	25.2	54	0.9	512	8.3	-	-		
1949	11	0.2	4	*	1	*	22	0.3	33	0.5	1,254	19.7	1,400	22.0	216	3.4	455	7.2	-	-		
1950	2	*	1	*	5	*	28	0.4	28	0.4	1,134	17.8	1,270	19.9	128	2.0	325	5.1	1	*		
1951	6	0.1	-	-	1	*	21	0.3	11	0.2	1,049	16.0	1,154	17.6	67	1.0	299	4.6	1	*		
1952	2	*	-	-	-	-	8	0.1	17	0.3	689	10.3	775	11.6	213	3.2	174	2.6	2	*		
1953	2	*	1	*	-	-	11	0.2	16	0.2	536	7.8	607	8.9	108	1.6	182	2.7	1	*		
1954	3	*	3	*	-	-	17	0.2	17	0.2	471	6.7	530	7.5	89	1.3	139	2.0	2	*		
1955	1	*	1	*	1	*	8	0.1	10	0.1	435	6.0	477	6.6	32	0.4	115	1.6	1	*		
1956	6	0.1	3	*	-	-	6	0.1	26	0.3	426	5.7	466	6.2	22	0.3	114	1.5	1	*		
1957	1	*	-	-	-	-	6	0.1	23	0.3	403	5.2	442	5.7	15	0.2	105	1.3	4	*		
1958	-	-	-	-	-	-	1	*	18	0.2	357	4.5	395	5.0	37	0.5	84	1.1	8	0.1		
1959	1	*	2	*	1	*	5	*	11	0.1	335	4.2	370	4.6	17	0.2	84	1.1	4	*		

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Effective January 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, deaths and rates prior to 1975 are not directly comparable to the figures in 1975 and later years.

<sup>3</sup> From 1901 through 1920, syphilis includes all other venereal diseases, beginning with 1968 excludes aortic aneurysms not specified as syphilitic.

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH

Table 4.7 (continued)  
**Number of Deaths and Death Rates<sup>1</sup> for Certain Communicable Diseases**  
 Michigan Residents, 1900 - 1993  
*(Rates per 100,000 population)*

Year	Diphtheria		Strep. Sore Throat Incl. Scarlet Fever		Typhoid Fever		Whooping Cough		Measles		TB of the Respiratory System		Tuberculosis <sup>2</sup> (all forms)		Poliomyelitis		Syphilis <sup>3</sup>		Gonorrhea		AIDS	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1960	2	*	1	*	-	-	1	*	17	0.2	364	4.7	390	5.0	4	*	79	1.0	7	0.1	-	-
1961	1	*	1	*	-	-	2	*	13	0.2	307	3.9	332	4.2	-	-	71	0.9	7	0.1	-	-
1962	2	-	1	-	-	-	2	*	8	0.1	307	3.9	331	4.2	2	*	94	1.2	3	*	-	-
1963	-	-	-	-	-	-	-	-	27	0.3	276	3.4	299	3.7	1	*	72	0.9	1	*	-	-
1964	-	-	-	-	-	-	2	*	11	0.1	288	3.6	315	3.9	1	*	66	0.8	3	*	-	-
1965	-	-	-	-	-	-	-	-	5	*	261	3.2	285	3.5	-	-	65	0.8	2	*	-	-
1966	1	*	-	-	-	-	-	-	7	0.1	284	3.4	301	3.6	-	-	63	0.8	-	*	-	-
1967	-	-	-	-	-	-	-	-	3	*	206	2.4	226	2.6	-	-	44	0.5	1	*	-	-
1968	-	-	1	*	-	-	-	-	-	-	203	2.3	262	3.0	2	*	29	0.3	-	*	-	-
1969	-	-	-	-	-	-	-	-	-	-	147	1.7	201	2.3	-	-	26	0.3	1	*	-	-
1970	-	-	2	*	-	-	-	-	1	*	134	1.5	180	2.0	-	-	17	0.2	2	*	-	-
1971	-	-	4	*	-	-	-	-	-	-	122	1.4	173	1.9	-	-	18	0.2	-	-	-	-
1972	-	-	1	*	-	-	-	-	-	-	111	1.2	157	1.7	1	*	12	0.1	-	-	-	-
1973	-	-	-	-	-	-	1	*	2	*	101	1.1	138	1.5	3	*	12	0.1	-	-	-	-
1974	-	-	1	-	-	-	2	*	-	-	109	1.2	142	1.6	3	*	11	0.1	-	-	-	-
1975	-	-	-	-	-	-	1	*	1	-	81	0.9	110	1.2	5	*	10	0.1	1	*	-	-
1976	-	-	-	-	-	-	-	-	-	-	80	0.9	102	1.1	6	0.1	11	0.1	-	-	-	-
1977	-	-	1	*	-	-	-	-	-	-	67	0.7	97	1.1	6	0.1	3	*	-	-	-	-
1978	-	-	-	-	-	-	1	*	1	*	60	0.7	80	0.9	2	*	5	*	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-	47	0.5	62	0.7	2	*	9	0.1	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-	51	0.6	61	0.7	-	-	1	*	1	*	-	-
1981	-	-	-	-	-	-	-	-	-	-	41	0.4	53	0.6	-	-	4	*	1	*	-	-
1982	-	-	-	-	-	-	-	-	1	*	30	0.3	41	0.4	-	-	-	-	-	-	-	-
1983	-	-	1	*	-	-	-	-	1	*	28	0.3	39	0.4	-	-	3	*	-	-	-	-
1984	-	-	-	-	-	-	-	-	-	-	47	0.5	59	0.7	-	-	2	*	-	-	-	-
1985	-	-	-	-	-	-	-	-	-	-	37	0.4	46	0.5	-	-	3	*	-	-	-	-
1986	-	-	-	-	-	-	-	-	-	-	36	0.4	44	0.5	-	-	2	*	-	-	-	-
1987	-	-	-	-	-	-	-	-	-	-	39	0.4	46	0.5	-	-	2	*	-	-	-	-
1988	-	-	1	*	-	-	1	*	-	-	36	0.4	42	0.5	-	-	2	*	-	-	-	-
1989	-	-	-	-	-	-	-	-	-	-	31	0.3	32	0.3	-	-	3	*	-	-	-	-
1990	-	-	1	*	-	-	-	-	-	-	28	0.3	43	0.5	-	-	-	-	-	-	160	1.7
1991	-	-	-	-	-	-	-	-	-	-	20	0.2	41	0.4	-	-	-	-	-	-	216	2.3
1992	-	-	-	-	-	-	-	-	-	-	30	0.3	49	0.5	-	-	1	*	-	-	329	3.5
1993	-	-	-	-	-	-	-	-	-	-	26	0.3	38	0.4	-	-	5	*	1	*	691	7.3

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Effective January 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, deaths and rates prior to 1975 are not directly comparable to the figures in 1975 and later years.

<sup>3</sup> From 1901 through 1920, syphilis includes all other venereal diseases, beginning with 1968 excludes aortic aneurysms not specified as syphilitic.

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH

Table 4.8  
Number of Deaths and Death Rates<sup>1</sup> by Specified Causes  
Michigan Residents, 1900 - 1993  
(Rates per 100,000 population)

Year	Heart Disease		Cancer <sup>2</sup> (all forms)		Cerebrovascular Disease <sup>3</sup>		Accidents <sup>4</sup> (all forms)		Motor Vehicle Accidents <sup>5</sup>		Diabetes		Pneumonia		Chronic Liver Disease & Cirrhosis <sup>6</sup>		Atherosclerosis <sup>7</sup>	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1900	2,836	117.1	1,460	60.3	2,136	88.2	1,740	71.9			224	9.3	2,388	98.6				
1901	3,040	123.6	1,484	60.3	2,147	87.3	1,901	77.3			264	10.7	2,901	117.9				
1902	3,302	132.1	1,483	59.3	2,097	83.9	1,796	71.9			289	11.6	2,637	105.5				
1903	3,702	145.9	1,694	66.8	2,321	91.5	2,017	79.5			265	10.4	2,607	102.7				
1904	3,981	154.5	1,728	67.1	2,431	94.3	2,035	79.0			298	11.6	2,646	102.7				
1905	3,715	142.0	1,693	64.7	2,405	91.9	2,034	77.8			267	10.2	2,417	92.4				
1906	3,933	148.2	1,736	65.4	2,554	96.2	2,126	80.1			311	11.7	2,621	98.7				
1907	4,269	158.5	1,747	64.9	2,690	99.9	2,209	82.0			352	13.1	3,018	112.0				
1908	4,202	153.8	1,921	70.3	2,630	96.3	2,036	74.5			359	13.1	2,313	84.7				
1909	4,354	157.1	1,948	70.3	2,739	98.8	1,903	68.7			374	13.5	2,265	81.7				
1910	4,581	163.0	2,105	74.9	3,091	110.0	2,158	76.8	49	1.7	398	14.2	2,785	99.1	282	10.0		
1911	4,639	160.2	2,142	74.0	2,916	100.7	2,121	73.2	44	1.5	373	12.9	2,763	95.4				
1912	5,324	178.5	2,291	76.8	2,707	90.8	2,005	67.2	75	2.5	448	15.0	2,796	93.8				
1913	4,908	160.0	2,388	77.8	2,834	92.4	2,333	76.1	132	4.3	483	15.7	3,082	100.5				
1914	5,124	162.5	2,414	76.6	2,993	94.9	2,108	66.8	120	3.8	503	16.0	2,909	92.2				
1915	5,538	171.0	2,567	79.2	3,384	104.5	2,219	68.5	190	5.9	498	15.4	3,229	99.7				
1916	5,819	175.0	2,710	81.5	3,559	107.0	2,853	85.8	257	7.7	500	15.0	3,698	111.2				
1917	6,103	178.9	2,765	81.1	3,703	108.6	2,925	85.8	335	9.8	569	16.7	4,455	130.6				
1918	6,091	174.2	2,931	83.8	3,493	99.9	2,599	74.3	279	8.0	591	16.9	7,238	207.0				
1919	5,651	157.7	2,990	83.5	3,483	97.2	2,612	72.9	328	9.2	559	15.6	4,081	113.9				
1920	6,732	183.5	3,158	86.1	3,676	105.7	2,646	72.1	397	10.8	577	15.7	5,794	157.9				
1921	6,176	163.1	3,373	89.1	3,931	103.8	2,476	65.4	403	10.6	586	15.5	2,849	75.3	261	6.9		
1922	6,897	176.7	3,481	89.2	4,041	103.5	2,475	63.4	529	13.6	650	16.7	3,728	95.5	267	6.8		
1923	7,266	180.7	3,545	88.2	4,420	109.9	2,826	70.3	677	16.8	635	15.8	4,719	117.4	251	6.2		
1924	6,985	168.8	3,824	92.4	4,241	102.5	3,090	74.7	1,001	24.2	661	16.0	3,332	80.5	256	6.2		
1925	7,540	177.2	3,858	90.7	4,623	108.6	3,278	77.0	1,103	25.9	746	17.5	3,294	77.4	319	7.5		
1926	8,281	189.4	4,067	93.5	4,663	106.6	3,557	81.3	1,221	27.9	743	17.0	4,440	101.5	326	7.5		
1927	8,780	195.5	4,264	95.0	4,378	97.5	3,634	80.9	1,389	30.9	819	18.2	3,543	78.9	340	7.6		
1928	9,786	212.4	4,381	95.1	4,718	102.4	3,704	80.4	1,429	31.0	905	19.6	4,518	98.1	373	8.1		
1929	10,185	215.6	4,571	96.7	4,694	99.3	3,913	82.8	1,552	32.8	935	19.8	4,216	89.2	361	7.6		

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Cancer includes leukemias, leukemias, and Hodgkin's disease beginning with 1921.

<sup>3</sup> Cerebrovascular disease was called Vascular Lesions Affecting Central Nervous System prior to 1968.

<sup>4</sup> Accidents exclude injuries undetermined whether accidentally or purposely inflicted since 1968.

<sup>5</sup> Motor vehicle accidents do not include collision with heavier vehicles from 1910 through 1922. Motorcycle accidents are included beginning 1923.

<sup>6</sup> Chronic liver disease and cirrhosis was called Cirrhosis of the Liver prior to 1979.

<sup>7</sup> Atherosclerosis was called General Arteriosclerosis prior to 1968 and was called Arteriosclerosis from 1968-1978.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.8 (continued)  
**Number of Deaths and Death Rates<sup>1</sup> by Specified Causes**  
 Michigan Residents, 1900 - 1993  
*(Rates per 100,000 population)*

Year	Heart Disease		Cancer <sup>2</sup> (all forms)		Cerebrovascular Disease <sup>3</sup>		Accidents <sup>4</sup> (all forms)		Motor Vehicle Accidents <sup>5</sup>		Diabetes		Pneumonia		Chronic Liver Disease & Cirrhosis <sup>6</sup>		Atherosclerosis <sup>7</sup>	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1930	9,947	205.4	4,572	94.4	4,533	93.6	3,805	78.6	1,572	32.5	880	18.2	3,321	68.6	329	6.8	1,047	21.6
1931	10,206	209.0	4,763	97.5	4,388	89.8	3,630	74.3	1,516	31.0	950	19.5	2,883	59.0	365	7.5	1,005	20.6
1932	11,162	226.6	4,935	100.2	4,518	91.7	3,179	64.5	1,229	25.0	1,121	22.8	3,238	65.7	386	7.8	948	19.2
1933	11,509	231.7	5,055	101.8	4,318	86.9	3,304	66.5	1,278	25.7	1,103	22.2	2,756	55.5	354	7.1	966	19.5
1934	11,824	236.1	5,370	107.2	4,485	89.6	3,774	75.4	1,511	30.2	1,100	22.0	3,466	69.2	378	7.5	914	18.3
1935	12,456	246.7	5,399	106.9	4,420	87.5	3,771	74.7	1,676	33.2	1,228	24.3	3,801	75.3	368	7.3	897	17.8
1936	13,374	262.7	5,752	113.0	4,705	92.4	5,246	103.1	1,924	37.8	1,266	24.9	4,096	80.5	446	8.8	997	19.6
1937	13,233	257.8	5,732	111.7	4,378	85.3	4,580	89.2	2,187	42.6	1,255	24.5	4,098	79.8	430	8.4	1,168	22.8
1938	13,887	268.4	6,059	117.1	4,543	87.8	3,608	69.7	1,490	28.8	1,283	24.8	2,869	55.5	424	8.2	869	16.8
1939	14,898	285.7	6,296	120.7	4,415	84.7	3,761	72.1	1,553	29.8	1,360	26.1	2,803	53.8	387	7.4	918	17.6
1940	15,480	294.5	6,513	123.9	4,690	89.2	3,961	75.4	1,743	33.2	1,408	26.8	2,478	47.1	468	8.9	941	17.9
1941	15,761	289.8	6,551	120.5	4,698	86.4	4,450	81.8	2,156	39.6	1,382	25.4	2,235	41.1	450	8.3	906	16.7
1942	16,016	289.2	6,646	120.0	4,841	87.4	3,685	66.5	1,368	24.7	1,448	26.1	2,349	42.4	535	9.7	1,015	18.3
1943	17,816	331.3	7,127	132.5	5,311	98.8	3,480	64.7	1,103	20.5	1,535	28.5	2,931	54.5	518	9.6	1,092	20.3
1944	17,004	320.5	7,277	135.3	4,954	92.1	3,450	62.3	1,103	20.5	1,554	28.9	2,369	44.1	471	8.8	980	18.2
1945	17,421	320.5	7,486	137.7	5,295	97.4	3,432	63.1	1,199	22.1	1,561	28.7	1,932	35.5	535	9.8	970	17.8
1946	17,691	309.9	7,845	137.4	5,224	91.5	3,776	66.1	1,506	26.4	1,530	26.8	1,891	33.1	554	9.7	933	16.3
1947	18,412	303.4	8,188	134.9	5,426	89.4	3,848	63.4	1,499	24.7	1,618	26.7	2,089	34.4	697	11.5	1,031	17.0
1948	18,726	302.3	8,336	134.6	5,272	85.1	4,017	64.8	1,545	24.9	1,771	28.6	1,853	29.9	771	12.4	1,085	17.5
1949	19,137	301.3	8,697	136.9	5,438	85.6	3,838	60.4	1,493	23.5	1,884	29.7	1,885	29.7	730	11.5	1,135	17.9
1950	20,521	322.1	8,685	136.3	6,376	100.1	3,783	59.4	1,880	26.4	1,438	22.6	1,358	21.3	616	9.7	1,296	20.3
1951	21,118	322.6	9,187	140.4	6,579	100.5	3,916	59.8	1,806	27.6	1,374	21.0	1,619	24.7	569	8.7	1,312	20.0
1952	21,247	316.8	9,256	138.0	6,521	97.2	3,901	58.2	1,815	27.1	1,339	20.0	1,571	23.4	599	8.9	1,294	19.3
1953	22,425	327.3	9,904	144.5	7,045	102.8	4,375	63.8	2,051	29.9	1,419	20.7	1,538	22.4	715	10.4	1,270	18.5
1954	22,362	318.4	10,105	143.9	6,964	99.1	3,948	58.2	1,916	27.3	1,469	20.9	1,380	19.6	677	9.6	1,170	16.7
1955	23,440	323.9	10,297	142.3	7,362	101.7	4,213	58.2	2,129	29.4	1,415	19.6	1,538	21.3	805	11.1	1,237	17.1
1956	24,661	328.1	10,489	139.6	7,114	94.7	3,925	52.2	1,826	24.3	1,443	19.2	1,723	22.9	788	10.5	1,251	16.6
1957	25,369	325.1	10,810	138.5	7,632	97.8	3,643	46.7	1,680	21.5	1,510	19.4	2,045	26.2	861	11.0	1,248	16.0
1958	25,215	320.6	10,946	139.2	7,547	95.9	3,306	42.0	1,466	18.6	1,595	20.3	2,076	26.4	818	10.4	1,300	16.5
1959	25,323	318.1	11,113	139.6	7,700	96.7	3,666	46.1	1,587	19.9	1,715	21.5	1,810	22.7	815	10.2	1,403	17.6

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Cancer includes leukemias, alkemias, and Hodgkin's disease beginning with 1921.

<sup>3</sup> Cerebrovascular disease was called Vascular Lesions Affecting Central Nervous System prior to 1968.

<sup>4</sup> Accidents exclude injuries undetermined whether accidentally or purposely inflicted since 1968.

<sup>5</sup> Motor vehicle accidents do not include collision with heavier vehicles from 1910 through 1922. Motorcycle accidents are included beginning 1923.

<sup>6</sup> Chronic liver disease and cirrhosis was called Cirrhosis of the Liver prior to 1979.

<sup>7</sup> Atherosclerosis was called General Arteriosclerosis prior to 1968 and was called Arteriosclerosis from 1968-1978.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



Table 4.8 (continued)  
Number of Deaths and Death Rates<sup>1</sup> by Specified Causes  
Michigan Residents, 1900 - 1993  
(Rates per 100,000 population)

Year	Heart Disease		Cancer <sup>2</sup> (all forms)		Cerebrovascular Disease <sup>3</sup>		Accidents <sup>4</sup> (all forms)		Motor Vehicle Accidents <sup>5</sup>		Diabetes		Pneumonia		Chronic Liver Disease & Cirrhosis <sup>6</sup>		Atherosclerosis <sup>7</sup>	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1960	25,728	328.9	11,331	144.8	7,682	98.2	3,688	47.1	1,710	21.9	1,784	22.8	2,002	25.6	840	10.7	1,352	17.3
1961	25,519	322.9	11,476	145.2	7,745	98.0	3,692	46.7	1,656	21.0	1,778	22.5	1,692	21.4	858	10.9	1,448	18.3
1962	27,226	342.9	11,752	148.0	7,783	98.0	3,758	47.3	1,668	21.0	1,908	24.0	1,824	23.0	859	10.8	1,477	18.6
1963	27,483	342.3	12,078	150.4	8,168	101.7	4,033	50.2	2,005	25.0	2,049	25.5	1,995	24.8	958	11.9	1,652	20.6
1964	27,496	339.5	12,087	149.2	7,940	98.0	4,416	54.5	2,286	28.2	2,055	25.4	1,714	21.2	995	12.3	1,559	19.2
1965	28,134	343.1	12,419	151.5	7,769	94.8	4,494	54.8	2,271	27.7	2,153	26.3	1,987	24.2	1,068	13.0	1,726	21.1
1966	28,277	340.1	12,506	150.4	7,732	93.0	4,737	57.0	2,407	29.0	2,243	27.0	2,026	24.4	1,152	13.9	1,745	21.0
1967	28,757	333.8	13,030	151.2	7,846	91.1	4,519	52.4	2,265	26.3	2,182	25.3	1,973	22.9	1,240	14.4	1,730	20.1
1968	29,680	342.1	13,292	153.2	7,913	91.2	4,603	53.1	2,466	28.4	2,298	26.5	2,341	27.0	1,259	14.5	1,262	14.5
1969	29,396	336.6	13,328	152.6	7,706	88.2	4,766	54.6	2,579	29.5	2,188	25.1	2,229	25.5	1,430	16.4	1,289	14.8
1970	29,204	329.1	13,551	152.7	7,691	86.7	4,428	49.9	2,309	26.0	2,180	24.6	2,004	22.6	1,558	17.6	1,174	13.2
1971	30,095	335.4	13,594	151.5	7,826	87.2	4,426	49.3	2,274	25.3	2,103	23.4	1,981	22.1	1,657	18.5	1,187	13.2
1972	30,885	342.0	14,045	155.6	7,999	88.6	4,566	50.6	2,450	27.1	2,222	24.6	2,009	22.3	1,778	19.7	1,153	12.8
1973	29,944	330.1	14,220	156.7	7,987	88.0	4,630	51.0	2,389	26.3	2,074	22.9	1,958	21.6	1,711	18.9	1,142	12.6
1974	29,220	320.8	14,241	156.3	7,645	83.9	4,211	46.2	1,929	21.2	1,940	21.3	1,637	18.0	1,650	18.1	1,187	13.0
1975	28,298	310.7	14,445	158.6	7,262	79.7	4,002	42.9	1,841	20.2	1,819	20.0	1,690	18.6	1,574	17.3	1,119	12.3
1976	29,233	320.6	14,880	163.2	7,354	80.7	3,912	42.9	1,993	21.9	1,719	18.9	1,812	19.9	1,486	16.3	1,207	13.2
1977	28,895	315.6	15,125	165.2	6,818	74.5	3,945	43.1	1,993	21.8	1,615	17.6	1,639	17.9	1,356	14.8	1,164	12.7
1978	29,406	319.6	15,249	165.7	6,520	70.9	3,970	43.1	2,138	23.2	1,551	16.9	1,828	19.9	1,351	14.7	1,146	12.5
1979	29,296	316.7	15,409	166.6	6,067	65.6	3,839	41.5	1,967	21.3	1,449	15.7	1,454	15.7	1,367	14.8	1,173	12.7
1980	29,790	321.6	15,828	170.9	6,164	66.6	3,627	39.2	1,880	20.3	1,467	15.8	1,712	18.5	1,362	14.7	1,254	13.5
1981	30,172	325.5	16,142	174.1	6,121	66.0	3,390	36.6	1,727	18.6	1,487	16.0	1,644	17.7	1,253	13.5	1,270	13.7
1982	30,099	326.2	16,566	179.5	5,839	63.3	3,113	33.7	1,555	16.9	1,347	14.6	1,665	18.0	1,244	13.5	1,284	13.9
1983	30,412	332.2	16,785	183.3	5,721	62.5	2,947	32.2	1,419	15.5	1,470	16.1	2,007	21.9	1,250	13.7	1,269	13.9
1984	30,100	331.7	16,907	186.3	5,631	62.1	3,049	33.6	1,630	18.0	1,476	16.3	2,018	22.2	1,194	13.2	1,142	12.6
1985	30,618	336.9	17,281	190.1	5,528	60.8	3,228	35.5	1,676	18.4	1,367	15.3	2,193	24.1	1,256	13.8	1,173	12.9
1986	31,270	342.0	17,321	189.4	5,421	59.3	3,202	35.0	1,736	19.0	1,494	16.3	2,513	27.5	1,120	12.2	1,214	13.3
1987	30,521	331.8	17,669	192.1	5,481	59.6	3,143	34.2	1,725	18.8	1,479	16.1	2,377	25.8	1,099	11.9	1,168	12.7
1988	30,218	327.0	17,890	193.6	5,237	56.7	3,237	35.0	1,806	19.5	1,522	16.5	2,626	28.4	1,080	11.7	1,187	12.8
1989	28,031	302.3	18,264	196.9	5,173	55.8	3,228	34.8	1,750	18.9	2,052	22.1	2,633	28.4	1,170	12.6	832	9.0
1990	27,527	296.1	18,413	198.1	5,090	54.8	3,137	33.7	1,669	18.0	2,009	21.6	2,863	30.8	1,123	12.1	807	8.7
1991	27,517	293.5	19,204	204.8	5,165	55.1	3,011	32.1	1,494	15.9	2,113	22.5	2,773	29.6	1,060	11.3	823	8.8
1992	26,863	284.8	19,217	203.7	5,087	53.9	2,844	30.1	1,426	15.1	2,114	22.4	2,697	28.6	947	10.0	774	8.2
1993	28,512	302.2	19,187	203.4	5,299	56.2	2,830	30.0	1,438	15.2	2,105	22.3	2,981	31.6	1,006	10.7	753	8.0

<sup>1</sup> 1992 estimated population is used to calculate 1993 rates.

<sup>2</sup> Cancer includes leukemias, leukemias, and Hodgkin's disease beginning with 1921.

<sup>3</sup> Cerebrovascular disease was called Vascular Lesions Affecting Central Nervous System prior to 1968.

<sup>4</sup> Accidents exclude injuries undetermined whether accidentally or purposely inflicted since 1968.

<sup>5</sup> Motor vehicle accidents do not include collision with heavier vehicles from 1910 through 1922. Motorcycle accidents are included beginning 1923.

<sup>6</sup> Chronic liver disease and cirrhosis was called Cirrhosis of the Liver prior to 1979.

<sup>7</sup> Atherosclerosis was called General Arteriosclerosis prior to 1968 and was called Arteriosclerosis from 1968-1978.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.9  
Selected Vital Statistics by County  
Michigan Residents, 1993

Area	Population Estimate <sup>1</sup>	Deaths	Live Births	Low Weight Live Births	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages <sup>2</sup>	Divorces <sup>2</sup>
Michigan	9,433,666	82,286	139,560	10,700	1,319	856	1,434	726	70,771	40,470
Alcona	10,254	132	85	5	1	1	1	-	65	55
Alger	9,349	109	82	5	-	-	1	1	73	36
Allegan	93,078	811	1,389	83	11	4	7	3	715	433
Alpena	31,000	323	326	23	4	3	4	2	252	138
Antrim	18,897	227	274	12	2	-	2	2	179	95
Arenac	15,625	186	181	13	2	-	1	1	121	65
Baraga	7,828	121	85	4	2	-	1	1	50	17
Barry	51,196	411	693	36	-	4	5	1	395	257
Bay	112,131	1,032	1,451	108	8	12	17	7	882	573
Benzie	12,616	159	164	10	16	-	1	1	113	75
Berrien	161,466	1,629	2,392	187	21	11	26	17	1,417	762
Branch	41,871	382	576	33	8	1	5	4	331	258
Calhoun	138,381	1,343	1,921	143	29	17	20	10	1,171	804
Cass	49,112	463	572	37	11	5	10	8	378	236
Charlevoix	22,225	220	311	16	2	1	5	4	228	113
Cheboygan	21,780	239	283	23	7	4	6	2	204	98
Chippewa	35,640	302	413	18	1	-	3	3	266	128
Clare	26,384	350	391	19	4	-	5	5	230	154
Clinton	59,397	385	799	35	2	1	6	5	438	239
Crawford	12,972	145	167	16	4	4	5	1	107	65
Delta	38,208	387	445	19	6	4	4	1	334	136
Dickinson	27,014	309	340	23	1	1	1	1	251	132
Eaton	95,253	656	1,217	67	5	1	6	5	793	424
Emmet	26,057	251	350	18	4	3	8	5	223	133
Genesee	433,508	3,644	6,995	639	72	43	65	29	3,388	1,709
Gladwin	23,007	244	285	19	-	-	-	-	170	118
Gogebic	17,891	252	165	10	1	-	1	1	131	70
Grand Traverse	67,290	502	886	40	8	6	7	3	682	429
Gratiot	39,450	395	547	30	6	5	8	4	260	146
Hillsdale	44,407	392	607	35	2	1	7	6	319	241
Houghton	35,831	404	367	12	2	1	-	-	259	98
Huron	34,977	433	384	27	3	2	4	2	223	106
Ingham	281,798	1,854	4,056	288	33	21	45	28	2,362	1,205
Ionia	57,986	446	806	55	8	4	5	3	480	248
Iosco	30,211	337	291	13	2	1	4	3	199	155
Iron	13,136	210	125	4	-	-	-	-	99	52
Isabella	56,212	340	657	32	5	3	6	3	435	239
Jackson	151,740	1,376	2,106	138	19	13	29	19	1,257	889
Kalamazoo	225,648	1,724	3,155	212	27	14	29	16	1,990	1,022
Kalkaska	14,038	130	198	9	2	2	2	-	122	85

<sup>1</sup> 1992 estimated population is used for Michigan.<sup>2</sup> By county of occurrence rather than county of residence.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.9 (continued)  
Selected Vital Statistics by County  
Michigan Residents, 1993

Area	Population Estimate <sup>1</sup>	Deaths	Live Births	Low Weight Live Births	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages <sup>2</sup>	Divorces <sup>2</sup>
Kent	511,997	3,784	8,811	603	91	53	86	43	4,649	2,252
Keweenaw	1,706	27	17	1	2	2	1	-	15	5
Lake	9,029	129	120	6	1	-	-	-	76	40
Lapeer	78,526	532	1,137	58	5	4	10	7	638	366
Leelanau	17,292	166	231	14	4	2	1	-	129	76
Lenawee	94,132	827	1,185	81	14	10	14	6	561	459
Livingston	122,658	705	1,688	79	17	14	22	11	956	566
Luce	5,604	54	76	6	-	-	-	-	57	28
Mackinac	10,752	126	130	5	1	-	-	-	183	57
Macomb	728,220	6,188	9,643	579	63	44	86	46	6,102	2,981
Manistee	21,925	274	232	12	1	-	4	4	202	129
Marquette	71,428	598	933	38	7	3	6	3	622	266
Mason	26,420	271	325	18	3	2	2	1	236	149
Mecosta	38,553	301	470	25	2	2	5	3	279	146
Menominee	24,593	293	266	17	2	2	3	1	202	98
Midland	77,950	532	1,131	74	7	3	4	2	757	371
Missaukee	12,739	126	164	8	2	1	-	-	163	48
Monroe	135,962	934	1,608	99	10	7	8	2	843	591
Montcalm	55,445	472	807	47	6	2	7	5	471	289
Montmorency	9,355	140	85	-	1	-	-	-	63	27
Muskegon	161,980	1,537	2,389	165	13	-	15	11	1,357	895
Newaygo	40,756	386	613	22	7	5	4	2	367	240
Oakland	1,118,611	8,316	16,160	1,069	115	87	152	81	8,704	4,919
Oceana	22,954	220	343	28	5	3	7	4	209	115
Ogemaw	19,640	274	259	23	-	-	1	1	163	90
Ontonagon	8,761	107	85	7	1	-	1	1	64	30
Oscoda	20,638	194	290	16	1	-	2	2	172	105
Oscoda	8,222	142	83	5	1	1	2	2	72	51
Oshtemo	19,096	175	289	21	1	-	1	1	164	85
Ottawa	197,297	1,229	3,152	176	19	12	24	13	1,572	730
Presque Isle	13,865	172	129	3	1	1	1	-	96	49
Roscommon	20,861	333	210	16	4	3	4	2	163	102
Saginaw	212,477	1,998	3,221	309	38	27	22	1	1,730	889
St. Clair	150,085	1,361	2,112	145	19	13	19	8	1,055	702
St. Joseph	59,388	559	866	59	6	4	12	8	494	380
Sanilac	40,810	432	557	32	2	2	3	1	289	151
Schoolcraft	8,478	118	108	5	-	-	-	-	74	27
Shiawassee	70,832	519	1,026	67	5	3	7	6	570	293
Tuscola	56,130	528	759	55	11	6	6	-	378	219
Van Buren	72,331	647	1,118	78	8	3	4	3	566	438
Washtenaw	288,025	1,591	3,944	239	23	18	40	27	2,088	1,190
Wayne	2,096,179	21,455	35,802	3,845	459	319	483	209	11,356	7,460
Wexford	27,099	254	436	27	2	1	3	2	272	128

<sup>1</sup> 1992 estimated population is used for Michigan.<sup>2</sup> By county of occurrence rather than county of residence.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.10  
Selected Vital Statistics Rates<sup>1</sup> by County  
Michigan Residents, 1993

Area	Deaths	Live Births	Low Weight Live Births <sup>2</sup>	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages <sup>3</sup>	Divorces <sup>3</sup>
Michigan	8.7	14.8	76.7	9.5	6.1	10.2	5.2	15.0	8.6
Alcona	12.9	8.3	.	.	.	.	.	12.7	10.7
Alger	11.7	8.8	.	.	.	.	.	15.6	7.7
Allegan	8.7	14.9	59.8	7.9	.	5.0	.	15.4	9.3
Alpena	10.4	10.5	70.6	.	.	.	.	16.3	8.9
Antrim	12.0	14.5	43.8	.	.	.	.	18.9	10.1
Arenac	11.9	11.6	71.8	.	.	.	.	15.5	8.3
Arenac	15.5	10.9	.	.	.	.	.	12.8	4.3
Baraga	8.0	13.5	51.9	11.5	8.3	11.7	4.8	15.4	10.0
Barry	9.2	12.9	74.4	11.0	.	.	.	15.7	10.2
Bay	12.6	13.0	61.0	.	.	.	.	17.9	11.9
Benzie	10.1	14.8	78.2	8.8	4.6	10.8	7.1	17.6	9.4
Berrien	9.1	13.8	57.3	13.9	8.8	10.4	.	15.8	12.3
Branch	9.7	13.9	74.4	15.1	.	17.2	5.2	16.9	11.6
Calhoun	9.4	11.6	64.7	19.2	.	.	13.8	15.4	9.6
Cass	9.9	14.0	51.4	.	.	.	.	20.5	10.2
Charlevoix	11.0	13.0	81.3	24.7	.	21.1	.	18.7	9.0
Cheboygan	8.5	11.6	43.6	.	.	.	.	14.9	7.2
Chippewa	13.3	14.8	48.6	.	.	.	.	17.4	11.7
Clare	6.5	13.5	43.8	.	.	7.5	.	14.7	8.0
Clinton	11.2	12.9	95.8	.	.	.	.	16.5	10.0
Crawford	10.1	11.6	42.7	13.5	.	.	.	17.5	7.1
Delta	11.4	12.6	67.6	.	.	.	.	18.6	9.8
Dickinson	6.9	12.8	55.1	.	.	4.9	.	16.7	8.9
Eaton	9.6	13.4	51.4	.	.	22.5	.	17.1	10.2
Emmet	8.4	16.1	91.4	10.3	6.1	9.3	4.1	15.6	7.9
Genesee	10.6	12.4	66.7	.	.	.	.	14.8	10.3
Gladwin	14.1	9.2	60.6	.	.	.	.	14.6	7.8
Gogebic	7.5	13.2	45.1	9.0	6.8	7.9	.	20.3	12.8
Grand Traverse	10.0	13.9	54.8	11.0	.	14.5	.	13.2	7.4
Gratiot	8.8	13.7	57.7	.	.	11.4	9.8	14.4	10.9
Hillsdale	11.3	10.2	32.7	.	.	.	.	14.5	5.5
Houghton	12.4	11.0	70.3	.	.	.	.	12.8	6.1
Huron	6.6	14.4	71.0	8.1	5.2	11.0	6.9	16.8	8.6
Ingham	7.7	13.9	68.2	9.9	.	.	.	16.6	8.6
Ionia	11.2	9.6	44.7	.	.	.	.	13.2	10.3
Iosco	16.0	9.5	.	.	.	.	.	15.1	7.9
Iron	6.0	11.7	48.7	.	.	9.1	.	15.5	8.5
Isabella	9.1	13.9	65.5	9.0	6.2	13.6	8.9	16.6	11.7
Jackson	7.6	14.0	67.2	8.6	4.4	9.1	5.0	17.6	9.1
Kalamazoo	9.3	14.1	45.5	.	.	.	.	17.4	12.1

<sup>1</sup> 1992 estimated population is used to calculate rates.

<sup>2</sup> Ratio per 1,000 live births.

<sup>3</sup> By county of occurrence rather than county of residence. Rate of persons per 1,000 population rather than events per population.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.10 (continued)  
Selected Vital Statistics Rates by County  
Michigan Residents, 1993

Area	Deaths	Live Births	Low Weight Live Births <sup>2</sup>	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages <sup>3</sup>	Divorces <sup>3</sup>
Kent	7.4	17.2	68.4	10.3	6.0	9.7	4.9	18.2	8.8
Keweenaw	15.8	10.0	50.0	•	•	•	•	17.6	•
Lake	14.3	13.3	51.0	•	•	•	•	16.8	8.9
Lapeer	6.8	14.5	60.6	•	•	8.7	6.1	16.2	9.3
Leelanau	9.6	13.4	68.4	11.8	8.4	11.8	5.0	14.9	8.8
Lenawee	8.8	12.6	46.8	10.1	8.3	12.9	6.5	11.9	9.8
Livingston	5.7	13.8	78.9	•	•	•	•	15.6	9.2
Luce	9.6	13.6	•	•	•	•	•	20.3	10.0
Mackinac	11.7	12.1	•	•	•	•	•	34.0	10.6
Macomb	8.5	13.2	60.0	6.5	4.6	8.9	4.7	16.8	8.2
Manistee	12.5	10.6	51.7	•	•	16.9	•	18.4	11.8
Marquette	8.4	13.1	40.7	7.5	•	6.4	•	17.4	7.4
Mason	10.3	12.3	55.4	•	•	•	•	17.9	11.3
Mecosta	7.8	12.2	53.2	•	•	•	•	14.5	7.6
Merominee	11.9	10.8	63.9	•	•	•	•	16.4	8.0
Midland	6.8	14.5	65.4	6.2	•	•	•	19.4	9.5
Missaukee	9.9	12.9	48.8	•	•	•	•	25.6	7.5
Monroe	6.9	11.8	61.6	6.2	4.4	5.0	•	12.4	8.7
Montcalm	8.5	14.6	58.2	7.4	•	8.6	•	17.0	10.4
Montmorency	15.0	9.1	•	•	•	•	•	13.5	5.8
Muskegon	9.5	14.7	69.1	5.4	•	6.3	4.6	16.8	11.1
Newaygo	9.5	15.0	35.9	11.4	•	•	•	18.0	11.8
Oakland	7.4	14.4	66.2	7.1	5.4	9.4	5.0	15.6	8.8
Oceana	9.6	14.9	81.6	•	•	20.2	•	18.2	10.0
Ogemaw	14.0	13.2	88.8	•	•	•	•	16.6	9.2
Ontonagon	12.2	9.7	82.4	•	•	•	•	14.6	6.8
Osceola	9.4	14.1	55.2	•	•	•	•	16.7	10.2
Oscoda	17.3	10.1	•	•	•	•	•	17.5	12.4
Oshtemo	9.2	15.1	72.7	•	•	•	•	17.2	8.9
Ottawa	6.2	16.0	55.8	6.0	3.8	7.6	4.1	15.9	7.4
Presque Isle	12.4	9.3	•	•	•	•	•	13.8	7.1
Roscommon	16.0	10.1	76.2	•	•	•	•	15.6	9.8
Saginaw	9.4	15.2	95.9	11.8	8.4	6.8	•	16.3	8.4
St. Clair	9.1	14.1	68.7	9.0	6.2	9.0	3.8	14.1	9.4
St. Joseph	9.4	14.6	68.1	6.9	•	13.7	9.2	16.6	12.8
Sanilac	10.6	13.6	57.5	•	•	•	•	14.2	7.4
Schoolcraft	13.9	12.7	•	•	•	•	•	17.5	6.4
Shiawassee	7.3	14.5	65.3	•	•	6.8	5.8	16.1	8.3
Tuscola	9.4	13.5	72.5	14.5	7.9	7.9	•	13.5	7.8
Van Buren	8.9	15.5	69.8	7.2	•	•	•	15.7	12.1
Washtenaw	5.5	13.7	60.6	5.8	4.6	10.1	6.8	14.5	8.3
Wayne	10.2	17.1	107.4	12.8	8.9	13.4	5.8	10.8	7.1
Wexford	9.4	16.1	61.9	•	•	•	•	20.1	9.4

<sup>1</sup> 1992 estimated population is used to calculate Michigan rates.

<sup>2</sup> Ratio per 1,000 live births.

<sup>3</sup> By county of occurrence rather than county of residence. Rate of persons per 1,000 population rather than events per population.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.11  
Live Births with Selected Risk Factors by County  
Michigan Residents, 1993

Area	Medical Risk Factor Present		Complications of Labor/Delivery <sup>2</sup>		Abnormal Conditions of Newborn <sup>3</sup>		Mother Smoked While Pregnant		Mother Drank Alcohol While Pregnant		Congenital Anomalies Reported <sup>4</sup>		Inadequate Prenatal Care <sup>5</sup>		Mother's Education <12 Grade		Mother <18 Years of Age	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Michigan	26,315	18.9	37,082	26.6	13,888	10.0	27,015	19.4	2,861	2.1	1,589	1.1	13,080	9.4	27,155	19.5	6,736	4.8
Alcona	40	47.1	33	38.8	4	4.7	26	30.6	-	-	-	-	1	1.2	7	8.2	2	2.4
Alger	10	12.2	25	30.5	2	2.4	19	23.2	2	2.4	2	2.4	3	3.7	12	14.6	4	4.9
Allegan	189	13.6	345	24.8	106	7.6	249	17.9	17	1.2	12	0.9	54	3.9	256	18.4	62	4.5
Alpena	147	15.1	151	46.3	29	8.9	96	29.4	-	-	5	1.5	13	4.0	61	18.7	21	6.4
Antrim	44	16.1	79	28.8	7	2.6	77	28.1	3	1.1	2	0.7	19	6.9	46	16.8	12	4.4
Arenac	47	26.0	45	24.9	6	3.3	66	36.5	4	2.2	5	2.8	9	5.0	36	19.9	7	3.9
Baraga	15	17.6	28	32.9	3	3.5	28	32.9	4	4.7	2	2.4	5	5.9	13	15.3	1	1.2
Barry	159	22.9	253	36.5	103	14.9	162	23.4	14	2.0	7	1.0	23	3.3	99	14.3	28	4.0
Bay	173	11.9	315	21.7	71	4.9	401	27.6	18	1.2	14	1.0	29	2.0	281	19.4	84	5.8
Benzie	26	15.9	41	25.0	6	3.7	36	22.0	-	-	4	2.4	6	3.7	26	15.9	6	3.7
Berrien	600	25.1	568	23.7	210	8.8	509	21.3	91	3.8	37	1.5	270	11.3	666	27.8	204	8.5
Branch	106	18.4	210	36.5	24	4.2	159	27.6	9	1.6	7	1.2	75	13.0	143	24.8	35	6.1
Calhoun	324	16.9	539	28.1	66	3.4	439	22.9	48	2.5	26	1.4	85	4.4	388	20.2	130	6.8
Cass	258	45.1	165	28.8	80	14.0	149	26.0	16	2.8	15	2.6	56	9.8	149	26.0	30	5.2
Charlevoix	40	12.9	92	29.6	15	4.8	68	21.9	4	1.3	6	1.9	9	2.9	34	10.9	7	2.3
Cheboygan	60	21.2	96	33.9	16	5.7	86	30.4	2	0.7	5	1.8	13	4.6	42	14.8	13	4.6
Chippewa	68	16.0	99	24.0	17	4.1	139	33.7	7	1.7	3	0.7	25	6.1	94	22.8	18	4.4
Clare	70	17.9	76	19.4	26	6.6	88	22.5	6	1.5	3	0.8	27	6.9	101	25.8	20	5.1
Clinton	138	17.3	271	33.9	53	6.6	72	9.0	7	0.9	12	1.5	46	5.8	59	7.4	14	1.8
Crawford	45	26.9	64	38.3	21	12.6	64	38.3	7	4.2	5	3.0	3	1.8	39	23.4	10	6.0
Delta	149	33.5	117	26.3	22	4.9	123	27.6	12	2.7	14	3.1	18	4.0	48	10.8	12	2.7
Dickinson	38	11.2	63	18.5	15	4.4	82	24.1	23	6.8	5	1.5	5	1.5	35	10.3	13	3.8
Eaton	240	19.7	382	31.4	87	7.1	166	13.6	33	2.7	13	1.1	53	4.4	145	11.9	49	4.0
Emmet	74	21.1	126	36.0	16	4.6	80	22.9	1	0.3	-	-	12	3.4	41	11.7	15	4.3
Genesee	894	12.8	1,426	20.4	229	3.3	1,359	19.4	111	1.6	41	0.6	274	3.9	1,631	23.3	468	6.7
Gladwin	54	18.9	76	26.7	23	8.1	72	25.3	4	1.4	5	1.8	22	7.7	65	22.8	15	5.3
Gogebic	18	10.9	52	31.5	11	6.7	25	15.2	-	-	-	-	10	6.1	19	11.5	6	3.6
Grand Traverse	134	15.1	230	26.0	33	3.7	157	17.7	11	1.2	11	1.2	68	7.7	86	9.7	24	2.7
Graiot	70	12.8	147	26.9	63	11.5	116	21.2	9	1.6	8	1.5	28	5.1	92	16.8	35	6.4
Hillsdale	148	24.4	183	30.1	30	4.9	191	31.5	12	2.0	7	1.2	60	9.9	139	22.9	38	6.3

1 Examples of medical risk factors include: anemia, diabetes, hypertension, eclampsia, renal disease, maternal drug use.  
 2 Examples of labor and/or delivery include: abruptio placenta, seizures during labor, dysfunctional labor, fetal distress, breech/malpresentation, cord prolapse.  
 3 Examples of abnormal conditions of the newborn include: anemia, birth injury, fetal alcohol syndrome, hyaline membrane disease, seizures.  
 4 Congenital anomalies reported have increased due to a change in reporting procedure.  
 5 The Kessner Index is a classification of prenatal care based on the month of pregnancy prenatal care began, the number of prenatal visits and the length of pregnancy.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.11 (continued)  
Live Births with Selected Risk Factors by County  
Michigan Residents, 1993

Area	Medical Risk Factor Present <sup>1</sup>		Complications of Labor/Delivery <sup>2</sup>		Abnormal Conditions of Newborn <sup>3</sup>		Mother Smoked While Pregnant		Mother Drank Alcohol While Pregnant		Congenital Anomalies Reported <sup>4</sup>		Inadequate Prenatal Care <sup>5</sup>		Mother's Education <12 Grade		Mother <18 Years of Age	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Houghton	94	25.6	136	37.1	15	4.1	86	23.4	21	5.7	11	3.0	20	5.4	29	7.9	8	2.2
Huron	82	21.4	129	33.6	39	10.2	91	23.7	11	2.9	4	1.0	19	4.9	45	11.7	9	2.3
Ingham	818	20.2	1,298	32.0	348	8.6	322	7.9	74	1.8	69	1.7	327	8.1	783	19.3	241	5.9
Ionia	152	18.9	225	27.9	106	13.2	205	25.4	15	1.9	14	1.7	48	6.0	141	17.5	34	4.2
Iosco	120	41.2	126	43.3	10	3.4	85	29.2	3	1.0	2	0.7	22	7.6	64	22.0	11	3.6
Iron	17	13.6	29	23.2	6	4.8	27	21.6	6	4.8	-	-	6	4.8	22	17.6	10	8.0
Isabella	137	20.9	155	23.6	45	6.8	126	19.2	5	0.8	8	1.2	31	4.7	99	15.1	27	4.1
Jackson	468	22.2	658	31.2	68	3.2	515	24.5	12	0.6	10	0.5	287	13.6	367	18.4	117	5.6
Kalamazoo	809	25.6	1,407	44.6	167	5.3	625	19.8	136	4.3	30	1.0	126	4.0	560	17.7	151	4.8
Kalkaska	31	15.7	48	24.2	12	6.1	64	32.3	1	0.5	2	1.0	16	8.1	50	25.3	13	6.6
Kent	1,320	15.0	1,908	21.7	2,337	26.5	1,289	14.6	185	2.1	102	1.2	421	4.8	1,414	16.0	399	4.5
Keweenaw	2	11.8	4	23.5	3	17.6	5	29.4	-	-	2	11.8	1	5.9	1	5.9	-	-
Lake	27	22.5	28	23.3	1	0.8	42	35.0	-	-	3	2.5	10	8.3	40	33.3	11	9.2
Lapeer	246	21.6	303	26.6	114	10.0	205	18.0	17	1.5	22	1.9	58	5.1	173	15.2	36	3.2
Leelanau	27	11.7	54	23.4	17	7.4	33	14.3	3	1.3	5	2.2	15	6.5	28	12.1	4	1.7
Lenawee	259	21.9	408	34.4	61	5.1	248	20.9	30	2.5	14	1.2	89	7.5	216	18.2	57	4.8
Livingston	310	18.4	491	29.1	51	3.0	245	14.5	33	2.0	14	0.8	234	13.9	92	5.5	27	1.6
Luce	14	18.4	26	34.2	6	7.9	31	40.8	2	2.6	1	1.3	2	2.6	21	27.6	4	5.3
Mackinac	25	19.2	45	34.6	8	6.2	36	27.7	2	1.5	1	0.8	7	5.4	28	21.5	7	5.4
Macomb	2,023	21.0	2,834	29.4	1,822	18.9	2,020	20.9	151	1.6	176	1.8	613	6.4	1,325	13.7	175	1.8
Manistee	32	13.8	60	25.9	13	5.6	44	18.0	1	0.4	3	1.3	18	7.8	42	18.1	9	3.9
Marquette	167	17.9	284	30.4	55	5.9	181	19.4	18	1.9	20	2.1	24	2.6	69	7.4	23	2.5
Mason	41	12.6	79	24.3	13	4.0	82	25.2	3	0.9	3	0.9	26	8.0	62	19.1	10	3.1
Mecosta	108	23.0	100	21.3	46	9.8	112	23.8	3	0.6	16	3.4	48	10.2	83	17.7	22	4.7
Menominee	101	38.0	108	40.6	14	5.3	78	29.3	13	4.9	4	1.5	11	4.1	37	13.9	11	4.1
Midland	213	18.8	364	32.2	106	9.4	203	17.9	4	0.4	14	1.2	20	1.8	118	10.4	28	2.5
Missaukee	68	41.5	31	18.9	7	4.3	49	29.9	3	1.8	1	0.6	7	4.3	32	19.5	15	9.1
Monroe	284	17.7	502	31.2	134	8.3	376	23.4	10	0.6	19	1.2	134	8.3	300	18.7	80	5.0
Montcalm	131	16.2	188	23.3	98	12.1	208	25.8	12	1.5	20	2.5	83	10.3	176	21.8	51	6.3
Montmorency	28	32.9	28	32.9	7	8.2	37	43.5	1	1.2	3	3.5	2	2.4	19	22.4	5	5.9

<sup>1</sup> Examples of medical risk factors include: anemia, diabetes, hypertension, eclampsia, renal disease, maternal drug use.

<sup>2</sup> Examples of labor and/or delivery include: abruptio placenta, seizures during labor, dysfunctional labor, fetal distress, breech/malpresentation, cord prolapse.

<sup>3</sup> Examples of abnormal conditions of the newborn include: anemia, birth injury, fetal alcohol syndrome, hyaline membrane disease, seizures.

<sup>4</sup> Congenital anomalies reported have increased due to a change in reporting procedure.

<sup>5</sup> The Kessner Index is a classification of prenatal care based on the month of pregnancy prenatal care began, the number of prenatal visits and the length of pregnancy.

Source: Office of the State Registrar and Division of Health Statistics, MDPH.

Table 4.11 (continued)  
Live Births with Selected Risk Factors by County  
Michigan Residents, 1993

Area	Medical Risk Factor Present <sup>1</sup>		Complications of Labor/Delivery <sup>2</sup>		Abnormal Conditions of Newborn <sup>3</sup>		Mother Smoked While Pregnant		Mother Drank Alcohol While Pregnant		Congenital Anomalies Reported <sup>4</sup>		Inadequate Prenatal Care <sup>5</sup>		Mother's Education <12 Grade		Mother <18 Years of Age	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Muskegon	162	6.8	386	16.2	99	4.1	637	26.7	32	1.3	9	0.4	132	5.5	525	22.0	173	7.2
Newaygo	129	21.0	163	26.6	76	12.4	167	27.2	9	1.5	10	1.6	36	5.9	149	24.3	34	5.5
Oakland	3,616	22.4	4,912	30.4	2,181	13.5	2,492	15.4	286	1.8	240	1.5	920	5.7	1,658	10.3	351	2.2
Oceana	59	17.2	93	27.1	17	5.0	74	21.6	6	1.7	6	1.7	32	9.3	98	28.6	15	4.4
Ogemaw	57	22.0	69	26.6	19	7.3	77	29.7	5	1.9	6	2.3	19	7.3	49	18.9	7	2.7
Ontonagon	16	18.8	29	34.1	5	5.9	13	15.3	-	-	2	2.4	2	2.4	10	11.8	4	4.7
Oscoda	109	37.6	66	22.8	17	5.9	71	24.5	7	2.4	9	3.1	16	5.5	42	14.5	10	3.4
Oscoda	22	26.5	30	36.1	9	10.8	20	24.1	-	-	-	-	6	7.2	27	32.5	4	4.8
Oshtemo	58	20.1	78	27.0	25	8.7	82	28.4	-	-	2	0.7	5	1.7	44	15.2	7	2.4
Ottawa	357	11.3	651	20.7	405	12.8	260	8.2	39	1.2	33	1.0	74	2.3	380	12.1	96	3.0
Presque Isle	42	32.6	47	36.4	7	5.4	35	27.1	-	-	2	1.6	1	0.8	12	9.3	3	2.3
Roscommon	47	22.4	66	31.4	17	8.1	67	31.9	15	7.1	5	2.4	13	6.2	53	25.2	16	7.6
Saginaw	760	23.6	906	28.1	265	8.2	677	21.0	100	3.1	27	0.8	250	7.8	738	22.9	195	6.1
St. Clair	417	19.7	430	20.4	199	9.4	643	30.4	75	3.6	34	1.6	90	4.3	389	18.4	81	3.8
St. Joseph	197	22.7	243	28.1	42	4.8	162	18.7	15	1.7	14	1.6	45	5.2	232	26.8	46	5.3
Sanilac	94	16.9	160	28.7	29	5.2	145	26.0	19	3.4	8	1.4	39	7.0	99	17.8	17	3.1
Schoolcraft	12	11.1	33	30.6	5	4.6	33	30.6	1	0.9	2	1.9	3	2.8	18	16.7	7	6.5
Shiawassee	189	18.4	302	29.4	55	5.4	244	23.8	40	3.9	16	1.6	38	3.7	168	16.4	44	4.3
Tuscola	126	16.6	164	21.6	50	6.6	187	24.6	9	1.2	7	0.9	27	3.6	121	15.9	22	2.9
Van Buren	213	19.1	352	31.5	50	4.5	257	23.0	52	4.7	11	1.0	96	8.6	324	29.0	69	6.2
Washtenaw	750	19.0	1,278	32.4	45	1.1	512	13.0	95	2.4	17	0.4	1,049	26.6	375	9.5	121	3.1
Wayne	6,182	17.3	8,189	22.9	3,130	8.7	7,058	19.7	794	2.2	256	0.7	6,104	17.0	10,251	28.6	2,419	6.8
Wexford	164	37.6	80	18.3	16	3.7	125	28.7	12	2.8	3	0.7	33	7.6	81	18.6	16	3.7
Unknown	7	53.8	2	15.4	2	15.4	3	23.1	-	-	1	7.7	4	30.8	3	23.1	1	7.7

- <sup>1</sup> Examples of medical risk factors include: anemia, diabetes, hypertension, eclampsia, renal disease, maternal drug use.  
<sup>2</sup> Examples of labor and/or delivery include: abruptio placentae, seizures during labor, dysfunctional labor, fetal distress, breech/malpresentation, cord prolapse.  
<sup>3</sup> Examples of abnormal conditions of the newborn include: anemia, birth injury, fetal alcohol syndrome, hyaline membrane disease, seizures.  
<sup>4</sup> Congenital anomalies reported have increased due to a change in reporting procedure.  
<sup>5</sup> The Kessner Index is a classification of prenatal care based on the month of pregnancy prenatal care began, the number of prenatal visits and the length of pregnancy.

Source: Office of the State Registrar and Division of Health Statistics, MDPH



Table 4.12  
Live Births by Age of Mother and County  
Michigan Residents, 1993

Michigan Residents, 1993														
Area	Total	Age of Mother												
		Under 15	15	16	17	18	19	15-19	20-24	25-29	30-34	35-39	40 +	Not Stated
Michigan	139,560	371	971	1,991	3,403	4,825	6,008	17,198	35,732	40,975	31,833	11,682	1,707	61
Alcona	85	1	-	-	1	3	5	9	18	28	26	3	-	-
Alger	82	-	-	3	1	2	-	6	36	25	10	5	-	-
Allegan	1,389	1	6	14	41	55	59	175	361	453	299	88	12	-
Alpena	326	1	5	4	11	17	17	54	68	93	79	30	1	-
Antrim	274	-	-	3	9	6	18	36	86	78	46	27	1	-
Arenac	181	-	-	5	2	13	7	27	55	52	33	12	2	-
Baraga	85	-	-	-	1	4	1	6	30	30	12	5	2	-
Barry	693	2	5	9	12	15	40	81	191	213	139	62	2	-
Bay	1,451	2	10	33	39	52	69	203	343	476	333	81	4	1
Benzie	164	-	1	2	3	2	12	20	41	55	31	14	3	-
Berrien	2,392	15	35	67	87	116	136	441	682	651	426	155	22	-
Branch	576	2	6	9	18	17	37	87	185	149	105	39	8	1
Calhoun	1,921	7	18	42	63	77	98	298	589	547	365	98	14	3
Cass	572	3	6	7	14	38	27	92	199	147	104	23	3	1
Charlevoix	311	-	-	2	5	12	15	34	93	87	71	20	6	-
Cheboygan	283	1	2	1	9	12	16	40	88	89	39	24	2	-
Chippewa	413	-	4	5	9	20	24	62	129	105	83	29	5	-
Clare	391	-	1	5	14	11	28	59	150	98	61	16	6	1
Clinton	799	1	3	5	5	15	22	50	186	281	209	59	13	-
Crawford	167	-	-	4	6	9	10	29	50	54	23	10	1	-
Delta	445	-	1	4	7	15	19	46	109	153	94	39	4	-
Dickinson	340	-	-	7	6	4	12	29	83	118	82	27	1	-
Eaton	1,217	2	7	8	32	42	52	141	342	343	262	113	14	-
Emmet	350	-	2	3	10	10	8	33	94	95	81	42	5	-
Genesee	6,995	24	72	147	225	289	385	1,118	2,155	1,883	1,293	463	57	2
Gladwin	285	-	1	3	11	9	14	38	85	96	37	23	6	-
Gogebic	165	-	-	3	3	8	9	23	48	54	29	9	2	-
Grand Traverse	886	-	2	8	14	20	28	72	207	262	236	93	16	-
Gratiot	547	4	5	11	15	14	29	74	175	174	90	25	5	-
Hillsdale	607	1	4	11	22	31	43	111	185	186	84	32	8	-
Houghton	367	-	1	2	5	15	6	29	101	113	75	41	8	-
Huron	384	-	-	3	6	5	10	24	113	142	83	21	1	-
Ingham	4,056	17	35	61	128	155	169	548	1,030	1,136	885	370	69	1
Ionia	806	1	3	8	22	26	49	108	247	250	145	52	3	-
Iosco	291	1	1	2	7	16	13	39	106	67	53	20	5	-
Iron	125	-	2	-	8	6	7	23	32	34	26	8	2	-
Isabella	657	-	3	11	13	24	22	73	186	215	132	44	7	-
Jackson	2,106	5	16	33	63	80	99	291	632	589	427	138	23	1
Kalamazoo	3,155	12	22	32	85	104	142	385	797	901	711	307	41	1
Kalkaska	198	-	3	1	9	11	13	37	73	45	29	11	3	-
Kent	8,811	33	61	118	187	273	315	954	2,041	2,775	2,199	713	94	2

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.12 (continued)  
Live Births by Age of Mother and County  
Michigan Residents, 1993

Area	Total	Age of Mother										40 +	Not Stated
		Under 15	15	16	17	18	19	15-19	20-24	25-29	30-34	35-39	
Keweenaw	17	-	-	-	-	1	-	1	7	5	2	2	-
Lake	120	-	2	-	9	12	6	29	45	29	14	2	1
Lapeer	1,137	-	4	12	20	35	45	116	308	360	247	95	10
Leelanau	231	-	-	2	2	3	10	17	50	56	77	24	7
Lenawee	1,185	-	5	20	32	51	64	172	341	376	208	79	8
Livingston	1,688	-	-	8	19	24	36	87	281	550	552	198	19
Luce	76	1	-	1	2	8	7	18	31	16	7	3	-
Mackinac	130	-	-	1	6	6	5	18	30	41	26	13	1
Macomb	9,643	5	18	48	104	169	217	556	1,919	3,386	2,774	869	123
Manistee	232	-	1	2	6	11	14	34	49	59	56	32	2
Marquette	933	-	3	7	13	21	33	77	254	325	180	81	16
Mason	325	1	4	3	2	11	13	33	114	96	59	20	2
Mecosta	470	-	7	5	10	16	27	65	162	123	92	25	3
Menominee	266	-	-	3	8	8	12	31	71	86	63	15	-
Midland	1,131	-	3	9	16	29	33	90	262	353	311	96	19
Missaukee	164	-	-	6	9	3	4	22	55	41	33	13	-
Monroe	1,608	1	11	23	45	62	70	211	436	501	337	100	22
Montcalm	807	1	7	14	29	33	45	128	283	214	126	46	9
Montmorency	85	-	1	1	3	2	4	11	34	18	16	6	-
Muskegon	2,389	13	29	57	74	111	133	404	701	667	437	152	15
Newaygo	613	3	6	6	19	22	30	83	186	177	124	31	8
Oakland	16,160	14	46	94	197	298	366	1,001	2,567	4,983	5,228	2,077	290
Oceana	343	2	1	8	4	15	22	50	124	79	70	16	2
Ogemaw	259	-	2	-	5	10	11	28	88	78	49	12	4
Ontonagon	85	-	2	1	3	-	8	12	32	24	13	3	1
Oscoda	290	-	-	3	5	7	16	33	94	82	63	15	3
Oscoda	83	-	-	1	3	2	6	12	21	21	17	7	4
Osego	289	-	1	3	3	6	12	25	95	83	65	17	4
Ottawa	3,152	3	8	37	48	71	84	248	665	1,159	816	229	29
Presque Isle	129	-	-	1	2	3	6	12	27	44	32	12	2
Roscommon	210	-	3	5	8	5	11	32	74	48	37	18	-
Saginaw	3,221	11	30	59	95	148	186	518	916	886	626	232	30
St Clair	2,112	4	10	25	42	63	107	247	587	661	446	142	23
St Joseph	866	1	5	16	24	45	64	154	275	236	139	51	10
Sanilac	557	1	-	7	9	16	20	52	169	178	122	31	4
Schoolcraft	108	-	2	1	4	30	5	19	36	32	14	7	-
Shiawassee	1,026	1	3	13	27	30	54	127	263	328	216	84	7
Tuscola	759	1	1	6	14	23	22	66	249	239	153	47	4
Van Buren	1,118	4	11	21	33	44	73	182	343	290	216	70	12
Washtenaw	3,944	4	18	32	67	92	107	316	765	1,127	1,143	508	81
Wayne	35,802	163	383	729	1,144	1,624	1,910	5,790	10,170	9,438	7,000	2,783	438
Wexford	436	1	1	5	9	24	25	64	129	133	78	28	2

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.13  
Vital Statistics for Residents of Selected Michigan Cities<sup>1</sup>  
1993

Area	Live Births	Deaths	Infant Deaths		Fetal Deaths	
			Number	Rate	Number	Rate
Allen Park	338	363	2	*	-	-
Ann Arbor	1,387	510	7	5.0	5	*
Battle Creek	1,104	614	16	14.5	8	7.2
Bay City	624	465	11	17.6	5	*
Burton City	368	252	4	*	1	*
Dearborn	1,542	887	12	7.8	9	5.8
Dearborn Heights	697	601	7	10.0	2	*
Detroit	20,260	11,638	348	17.2	115	5.6
East Detroit	457	458	3	*	4	*
East Lansing	385	181	2	*	3	*
Farmington Hills	1,016	571	5	*	9	8.8
Ferndale	433	270	1	*	1	*
Flint	3,441	1,405	50	14.5	11	3.2
Garden City	426	242	0	0.0	2	*
Grand Rapids	3,918	1,907	46	11.7	22	5.6
Highland Park	351	268	6	17.1	2	*
Holland	643	320	6	9.3	6	9.2
Inkster	515	311	5	*	3	*
Jackson	800	402	8	10.0	10	12.3
Kalamazoo	1,511	692	16	10.6	7	4.6
Kentwood	686	134	0	0.0	2	*
Lansing	2,444	988	25	10.2	16	6.5
Lincoln Park	601	397	1	*	2	*
Livonia	1,230	943	6	4.9	2	*
Madison Heights	494	313	9	18.2	4	*
Midland	531	318	2	*	2	*
Muskegon	823	485	5	*	3	*
Novi City	571	183	4	*	2	*
Oak Park	473	258	2	*	4	*
Pontiac	1,576	610	21	13.3	3	*
Portage	476	258	6	12.6	2	*
Port Huron	605	380	3	*	4	*
Rochester Hills City	887	389	4	*	1	*
Roseville	707	506	7	9.9	1	*
Royal Oak	925	595	3	*	5	*
Saginaw	1,671	779	25	15.0	-	-
St. Clair Shores	738	741	5	*	4	*
Southfield	941	806	10	10.6	4	*
Southgate	376	262	0	0.0	4	*
Sterling Heights	1,429	698	4	*	7	4.9
Taylor	1,183	491	10	8.5	9	7.6
Troy	897	421	4	*	4	*
Warren	1,809	1,531	17	9.4	13	7.1
Westland	1,386	771	7	5.1	10	7.2
Wyandotte	403	333	3	*	1	*
Wyoming	1,134	392	9	7.9	6	5.3

<sup>1</sup> 25,000 population or over according to the 1980 or 1990 Census.

<sup>2</sup> On January 1, 1983, Battle Creek City annexed Battle Creek Township. The data shown for Battle Creek in this table are for the current boundaries of Battle Creek, and thus are not comparable to data for Battle Creek for earlier years. The infant death rate in 1982 for the area which is now Battle Creek was 15.9.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.14  
Number of Deaths by Underlying Cause and County  
Michigan Residents, 1993

Area	All Causes	T.B. All Forms	All Other Infectious and Parasitic Diseases	Malignant Neoplasms						Leukemia	Other
				Total	Digestive Organs and Peritoneum	Respiratory and Intrathoracic Organs	Breast	Genital Organs	Urinary Organs		
Michigan	82,286	38	1,703	19,187	4,430	5,730	1,544	2,240	822	698	3,723
Alcona	132	-	1	39	8	11	3	4	3	-	10
Alger	109	-	1	24	4	10	3	4	1	-	2
Allegan	811	-	11	183	36	52	18	17	9	6	45
Alpena	323	-	1	81	18	22	8	10	4	4	15
Antrim	227	-	4	51	13	11	4	11	2	5	5
Arenac	186	-	-	41	8	17	1	6	1	2	6
Baraga	121	-	1	26	5	11	2	3	1	2	2
Barry	411	-	8	92	19	37	4	15	-	1	16
Bay	1,032	-	8	257	59	77	21	32	15	7	46
Benzie	159	-	1	40	12	13	5	3	3	1	3
Berrien	1,629	-	25	400	93	127	31	54	25	8	62
Branch	382	-	5	90	22	32	6	9	3	5	13
Calhoun	1,343	-	24	302	61	93	25	32	13	16	62
Cass	463	-	3	111	22	37	6	11	4	4	27
Charlevoix	220	-	2	60	16	13	3	8	8	3	9
Cheboygan	239	-	2	55	11	14	4	10	3	3	10
Chippewa	302	-	3	62	17	20	2	7	1	2	13
Clare	350	-	2	85	13	33	3	7	9	4	16
Clinton	385	-	5	98	14	31	6	18	1	5	23
Crawford	145	-	3	30	3	17	3	1	-	-	6
Delta	387	1	2	88	19	32	5	8	5	2	17
Dickinson	309	-	4	79	20	25	4	9	2	4	15
Eaton	656	-	12	145	35	36	11	19	3	8	33
Emmet	251	-	1	56	12	14	4	7	4	2	13
Genesee	3,644	2	56	837	190	263	76	80	37	30	161
Gladwin	244	-	1	67	16	22	4	8	2	1	14
Gogebic	252	-	3	58	10	16	4	6	1	3	18
Grand Traver	502	-	4	119	29	34	10	10	5	4	27
Gratiot	395	-	6	91	19	28	8	8	4	4	20
Hillsdale	392	-	6	102	25	35	4	9	4	7	18
Houghton	404	-	1	90	24	22	9	10	6	4	15
Huron	433	-	6	94	23	20	8	14	6	4	19
Ingham	1,854	1	39	449	100	118	42	43	21	17	108
Ionia	446	-	7	117	27	37	9	15	5	3	21
Iosco	337	-	7	84	19	33	6	8	4	1	13
Iron	210	-	1	51	9	13	6	6	2	3	12
Isabella	340	-	5	70	18	26	3	8	3	5	7
Jackson	1,376	-	31	333	76	106	26	31	19	6	69
Kalamazoo	1,724	-	40	431	81	137	28	58	24	17	86
Kalkaska	130	-	4	32	7	10	1	5	1	1	7
Kent	3,784	1	96	890	193	244	88	86	49	43	187

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.14, (continued)  
Number of Deaths by Underlying Cause and County  
Michigan Residents, 1993

Area	All Causes	T.B. All Forms	All Other Infectious and Parasitic Diseases	Malignant Neoplasms						Leukemia	Other
				Total	Digestive Organs and Peritoneum	Respiratory and Infrathoracic Organs	Breast	Genital Organs	Urinary Organs		
Keweenaw	27	-	-	8	3	2	1	1	-	-	1
Lake	129	-	3	34	8	8	2	10	1	-	5
Lapeer	532	1	6	132	44	38	7	9	6	-	22
Leelanaw	166	-	1	36	7	12	3	3	5	1	5
Leonia	827	-	9	186	32	53	15	22	11	11	42
Livingston	705	-	13	183	50	46	15	20	8	6	38
Luce	54	-	2	12	3	3	2	3	1	-	-
Mackinac	126	-	-	29	9	7	2	1	2	-	8
Macomb	6,188	4	117	1,580	364	451	132	182	73	65	313
Manistee	274	-	3	61	16	17	4	7	2	2	13
Marquette	598	2	5	129	34	36	8	18	2	7	24
Mason	271	-	1	43	10	14	4	6	1	-	8
Mecosta	301	-	3	67	17	20	6	9	3	3	9
Menominee	293	-	3	72	16	19	5	9	-	6	17
Midland	532	-	10	141	23	49	12	13	7	7	30
Missaukee	126	-	1	26	2	14	1	2	-	-	7
Monroe	934	-	16	244	49	68	21	31	10	12	53
Montcalm	472	-	8	114	25	39	4	16	1	4	25
Montmorency	140	-	1	37	9	13	1	7	1	2	4
Muskegon	1,537	2	20	378	82	131	27	48	13	14	63
Newaygo	386	1	5	95	21	29	1	9	10	3	22
Oakland	8,316	3	152	2,021	462	572	189	234	86	76	402
Oceana	220	-	1	51	8	19	1	5	3	5	10
Ogemaw	274	-	1	70	19	19	5	11	3	3	10
Ontonagon	107	-	-	22	3	6	2	4	-	2	5
Osceola	194	-	2	54	13	17	2	6	2	-	14
Oscoda	142	-	-	36	8	14	2	3	1	1	7
Otsego	175	-	2	39	14	7	4	6	-	2	6
Ottawa	1,229	-	20	297	77	45	21	45	16	16	77
Presque Isle	172	-	-	43	14	13	3	2	2	9	9
Roscommon	333	-	7	81	21	25	3	13	5	3	11
Saginaw	1,998	-	40	493	115	135	43	54	22	15	109
St. Clair	1,361	-	17	320	62	99	38	32	18	12	59
St. Joseph	559	-	5	129	34	35	7	16	5	4	28
Sanilac	432	-	5	88	26	29	7	14	1	-	11
Schoolcraft	118	-	1	22	5	12	-	2	-	-	3
Shiawassee	519	-	12	127	36	39	6	16	-	4	26
Tuscola	528	-	7	112	24	36	10	21	4	1	16
Van Buren	647	-	7	147	24	48	9	21	9	6	30
Washtenaw	1,591	-	38	378	92	114	38	46	15	7	66
Wayne	21,455	20	714	4,583	1,136	1,409	360	547	159	142	830
Wexford	254	-	3	56	7	19	6	6	1	3	14
County Not Stated	5	-	-	1	-	-	1	-	-	-	-

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.14 (continued)  
Number of Deaths by Underlying Cause and County  
Michigan Residents, 1993

Area	Diabetes Mellitus	Nutritional Deficiencies	Major Cardiovascular Diseases						Pneumonia and Influenza	C.O.P.D. and Allied Diseases	Ulcer of Stomach and Duodenum	Chronic Liver Disease & Cirrhosis
			Total	Diseases of the Heart	Hypertension with or without Renal Disease	Cerebrovascular Disease	Atherosclerosis	Other Diseases of Arteries, Arterioles, and Capillaries				
Michigan	2,105	150	35,867	28,512	331	5,299	753	972	2,981	3,445	213	1,006
Alcona	4	-	55	42	-	7	5	1	2	7	-	-
Alger	4	-	52	43	-	7	-	2	4	3	-	-
Allegan	24	2	333	260	1	50	13	9	42	31	1	10
Alpena	7	-	156	128	1	19	2	6	9	7	-	1
Antrim	9	1	99	76	-	17	4	2	12	10	-	3
Arenac	3	-	102	82	-	14	3	3	3	7	1	-
Baraga	2	-	66	44	-	15	1	6	8	4	-	2
Barry	5	1	172	147	-	20	3	2	14	25	1	3
Bay	40	-	491	403	4	48	26	10	36	26	2	7
Benzie	5	-	75	58	-	11	2	4	8	5	-	1
Berrien	53	3	708	535	11	121	24	17	51	65	2	16
Branch	14	-	175	139	1	27	15	6	13	20	1	8
Calhoun	26	3	562	427	6	96	15	18	79	73	8	15
Cass	13	-	203	171	-	21	4	7	18	28	-	5
Charlevoix	7	-	91	73	-	17	-	1	10	6	1	3
Cheboygan	11	-	102	84	-	17	-	1	9	13	-	4
Chippewa	10	-	129	98	-	25	4	2	11	21	1	2
Clare	9	-	160	133	-	22	1	4	14	15	-	4
Clinton	10	-	163	117	1	39	4	2	15	12	-	6
Crawford	3	1	59	43	1	9	3	3	4	14	1	-
Delta	9	-	175	137	-	27	3	8	14	18	1	3
Dickinson	10	-	138	97	-	28	9	4	10	13	4	2
Eaton	22	6	261	206	3	43	3	6	27	27	-	4
Emmet	3	-	106	80	1	17	3	5	14	15	-	3
Genesee	109	11	1,667	1,330	17	241	30	49	91	174	6	34
Gladwin	12	1	95	73	-	16	5	1	9	9	1	3
Gogebic	3	2	124	95	1	21	1	6	12	13	-	-
Grand Traver	7	-	212	158	2	45	1	6	22	20	2	6
Gratiot	13	1	189	157	1	22	3	6	20	15	-	-
Hillsdale	11	6	153	133	2	13	1	4	19	17	3	5
Houghton	8	1	202	146	1	41	3	11	21	10	3	-
Huron	8	-	232	179	-	47	2	4	16	14	-	8
Ingham	46	2	737	575	9	119	12	22	68	82	6	12
Ionia	8	1	183	147	1	27	4	4	18	23	3	5
Iosco	5	-	162	126	3	20	10	3	15	13	-	3
Iron	5	-	93	72	1	15	4	1	10	20	-	3
Isabella	7	-	159	116	-	37	5	1	24	13	-	1
Jackson	36	1	542	418	7	82	13	22	72	98	2	19
Kalamazoo	39	5	677	522	6	113	11	25	73	74	5	21
Kalkaska	6	1	46	29	1	8	5	3	2	8	-	2
Kent	94	6	1,550	1,186	25	257	29	53	161	174	8	41

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.14 (continued)  
Number of Deaths by Underlying Cause and County  
Michigan Residents, 1993

Area	Diabetes Mellitus	Nutritional Deficiencies	Major Cardiovascular Diseases						Pneumonia and Influenza	C.O.P.D. and Allied Diseases	Ulcer of Stomach and Duodenum	Chronic Liver Disease & Cirrhosis
			Total	Diseases of the Heart	Hypertension with or without Renal Disease	Cerebro-vascular Disease	Athero-sclerosis	Other Diseases of Arteries, Arterioles, and Capillaries				
Keweenaw	1	-	11	8	-	3	-	-	-	-	-	-
Lake	2	-	55	44	1	7	1	2	6	7	-	4
Lapeer	22	-	230	188	1	33	2	6	20	28	1	2
Leelanaw	6	-	77	60	-	13	2	2	4	7	-	1
Lenawee	27	1	377	287	4	65	14	7	29	35	1	10
Livingston	13	2	291	229	4	40	5	13	26	38	-	3
Luce	1	-	22	17	-	2	-	3	4	2	-	2
Mackinac	3	-	49	44	-	4	-	1	3	11	2	1
Macomb	148	10	2,809	2,233	18	392	95	71	219	235	14	80
Manistee	9	-	137	101	1	28	4	3	5	10	1	-
Marquette	18	1	276	201	3	54	6	12	22	17	1	9
Mason	4	-	142	101	2	29	4	6	8	8	1	3
Mecosta	5	-	131	113	-	16	1	1	18	9	-	4
Menominee	4	-	147	110	2	19	15	1	12	16	1	4
Midland	12	1	215	168	3	25	10	9	25	31	-	5
Missaukee	5	1	68	55	-	10	2	1	1	4	-	-
Monroe	30	1	381	312	5	47	7	10	21	46	3	10
Montcalm	14	-	207	163	3	29	5	7	8	22	2	-
Montmorency	1	-	74	55	-	13	4	2	1	2	-	3
Muskegon	49	4	680	538	10	102	14	16	41	80	1	12
Newaygo	6	-	162	129	-	28	2	3	24	25	1	2
Oakland	209	12	3,662	2,921	19	592	59	71	271	333	25	127
Oceana	4	1	102	79	1	14	5	3	6	5	-	2
Ogemaw	6	1	124	85	1	21	15	2	3	18	1	2
Ontonagon	4	-	55	45	-	6	3	1	1	2	-	-
Osceola	4	-	83	72	-	8	2	1	8	6	1	1
Oscoda	2	-	73	59	-	12	1	1	3	5	-	2
Otsego	3	2	78	60	-	13	3	2	5	6	-	5
Ottawa	23	8	493	379	7	72	17	18	71	50	7	5
Presque Isle	4	-	76	64	-	11	1	-	7	10	-	2
Roscommon	6	-	155	121	1	25	5	3	6	16	1	5
Saginaw	56	5	867	667	10	130	24	36	47	86	6	21
St. Clair	33	1	594	473	5	99	3	14	60	73	5	17
St. Joseph	17	-	252	197	3	39	2	11	19	29	2	8
Sanilac	13	2	211	173	1	24	4	9	13	16	2	3
Schoolcraft	4	-	53	45	-	8	-	-	10	3	-	2
Shiawassee	9	1	236	185	1	32	7	11	19	20	-	-
Tuscola	18	-	226	179	4	34	1	8	23	30	1	2
Van Buren	17	1	280	213	-	37	21	9	18	31	2	6
Washtenaw	31	6	636	496	-	108	7	19	61	74	8	21
Wayne	533	34	9,295	7,672	6	1,193	102	221	742	744	59	352
Wexford	9	-	116	83	107	21	5	6	11	13	1	3
Not Stated	-	-	3	3	-	-	-	-	-	-	-	-

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.14 (continued)  
Number of Deaths by Underlying Cause and County  
Michigan Residents, 1993

Area	Nephritis, Nephrotic Syndrome & Nephrosis	Complica- tions of Preg- nancy, Child- birth and the Puerperium	Congenital Anomalies	Certain Conditions Originating in the Peri- natal Period	Symptoms, Signs, and Ill-defined Conditions	All Other Disease	Accidents			Suicide	Homicide and Legal Inter- vention	All Other External Causes
							Total	Motor Vehicle	All Other			
Michigan	948	8	419	670	665	7,835	2,830	1,438	1,392	1,078	1,031	107
Alcona	1	-	1	-	-	15	5	4	1	2	-	-
Alger	2	-	-	-	2	6	8	3	5	2	1	-
Allegan	11	-	3	3	7	86	47	27	20	14	3	-
Alpena	2	-	1	3	-	36	14	6	8	2	3	-
Antrim	2	-	3	-	1	19	9	6	3	4	-	-
Arenac	3	-	-	1	1	9	9	4	5	5	1	-
Baraga	-	-	-	-	1	5	3	2	1	3	-	-
Barry	3	-	2	2	7	40	28	19	9	8	1	-
Bay	13	-	7	6	5	85	40	21	19	8	-	1
Benzie	3	-	1	-	-	14	3	-	3	2	-	-
Berrien	15	-	5	10	23	162	60	29	31	16	14	1
Branch	1	-	1	1	6	17	17	8	9	6	-	-
Calhoun	12	-	12	12	12	127	54	27	27	15	7	-
Cass	4	-	2	1	9	36	19	15	4	10	1	-
Charlevoix	3	-	-	1	2	27	7	3	4	-	-	-
Cheboygan	3	-	2	2	3	27	3	-	3	2	1	-
Chippewa	2	-	2	-	4	31	16	6	10	7	1	-
Clare	4	-	2	-	4	26	17	7	10	8	-	-
Clinton	6	-	1	-	6	39	16	8	8	5	1	-
Crawford	-	-	-	4	2	18	3	2	1	2	1	-
Delta	4	-	4	3	4	43	12	6	6	5	1	-
Dickinson	6	-	-	1	1	24	12	8	4	5	-	-
Eaton	5	-	7	1	8	76	45	21	24	8	2	1
Emmet	5	-	8	3	1	29	7	6	1	7	-	-
Genesee	48	-	8	43	40	298	128	67	61	34	54	4
Gladwin	1	-	-	-	1	21	17	6	11	4	2	-
Gogebic	2	-	2	-	2	21	9	2	7	1	-	-
Grand Traver	4	-	3	4	7	64	22	11	11	5	1	-
Gratiot	5	-	1	4	-	33	14	7	7	2	3	-
Hillsdale	3	-	2	1	2	35	23	14	9	6	-	-
Houghton	5	-	-	-	-	37	20	11	9	1	-	-
Huron	6	-	1	1	-	34	10	7	3	3	-	-
Ingham	15	1	14	9	21	222	72	38	34	38	19	1
Ionia	6	-	3	3	3	40	16	7	9	9	1	-
Iosco	7	-	-	1	2	26	9	6	3	3	-	-
Iron	-	-	-	-	-	19	8	1	7	-	2	-
Isabella	2	-	2	3	1	29	16	13	3	6	7	1
Jackson	22	-	7	11	12	111	53	25	28	18	10	2
Kalamazoo	14	-	9	11	13	185	87	43	44	28	1	-
Kalkaska	1	-	3	-	-	13	9	7	2	2	1	-
Kent	38	-	25	41	35	419	116	46	70	48	35	6

Source: Office of the State Registrar and Division of Health Statistics, MDPH



Table 4.14 (continued)  
Number of Deaths by Underlying Cause and County  
Michigan Residents, 1993

Area	Nephritis, Nephrotic Syndrome & Nephrosis	Complica- tions of Preg- nancy, Child- birth and the Puerperium	Congenital Anomalies	Certain Conditions Originating in the Peri- natal Period	Symptoms, Signs, and Ill-defined Conditions	All Other Disease	Accidents			Suicide	Homicide and Legal Inter- vention	All Other External Causes
							Total	Motor Vehicle	All Other			
Keweenaw	1	-	-	1	1	2	1	1	-	-	1	-
Lake	1	-	-	-	2	7	5	1	4	3	-	-
Lapeer	7	-	4	3	3	42	23	11	12	8	-	-
Leelanaw	3	-	-	1	1	20	6	2	4	3	-	-
Lenawee	5	-	-	10	6	82	37	25	12	10	-	-
Livingston	7	-	-	12	8	64	27	16	11	12	-	-
Luce	-	-	-	-	-	6	2	-	2	-	2	-
Mackinac	-	-	-	-	1	16	6	2	4	3	1	-
Macomb	74	-	36	24	42	540	150	68	82	77	25	-
Manistee	4	-	2	-	1	26	11	9	2	4	-	4
Marquette	4	-	1	3	3	71	20	15	5	15	1	-
Mason	-	-	2	1	-	31	18	6	12	7	2	-
Mecosta	2	-	1	1	3	38	14	6	8	3	1	-
Menominee	2	-	1	1	1	19	9	6	3	1	-	1
Midland	3	-	1	1	6	47	18	9	9	12	1	-
Missaukee	1	-	4	1	-	13	6	-	6	-	-	-
Monroe	12	-	-	3	7	95	41	27	14	17	1	-
Montcalm	7	-	6	-	7	47	23	15	8	7	2	-
Montmorency	2	-	3	1	2	9	6	2	4	2	-	-
Muskegon	25	-	9	5	8	147	49	28	21	17	10	-
Newaygo	5	-	3	1	3	29	19	12	7	4	1	-
Oakland	94	1	43	71	58	829	199	103	96	128	56	22
Oceana	6	-	1	2	2	25	5	1	4	6	1	-
Ogemaw	3	-	1	2	2	22	17	4	13	3	-	-
Ontonagon	3	-	-	-	3	11	5	3	2	1	-	-
Osceola	4	-	-	-	2	18	9	5	4	2	-	-
Oscoda	1	-	-	1	-	8	7	4	3	4	-	-
Otsego	-	-	-	-	2	27	3	2	1	2	1	-
Ottawa	14	-	6	8	15	139	54	33	21	14	4	1
Presque Isle	3	-	-	1	-	15	11	3	8	-	-	-
Roscommon	6	-	2	2	3	34	4	-	4	5	-	-
Saginaw	15	-	8	20	19	174	82	39	43	21	34	4
St. Clair	12	-	11	12	4	102	55	27	28	35	10	-
St. Joseph	7	-	5	2	6	49	25	13	12	3	1	-
Sanilac	6	-	1	2	2	44	15	10	5	8	1	-
Schoolcraft	2	-	-	-	-	14	6	4	2	1	-	-
Shiawassee	7	-	-	2	3	49	27	15	12	7	-	-
Tuscola	10	-	3	5	5	45	32	21	11	9	-	-
Van Buren	10	1	2	2	10	57	43	30	13	10	3	-
Washtenaw	14	-	8	15	11	194	65	33	32	17	14	-
Wayne	275	5	111	271	163	1,992	583	273	310	239	685	55
Wexford	2	-	-	1	2	24	9	5	4	3	1	-
Not Stated	-	-	-	-	-	1	-	-	-	-	-	-

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.15  
Reported Cases of Certain Communicable Diseases by County  
Michigan Residents, 1993

Area	Total	Gonorrhea	Chicken Pox	Hepatitis (all types)	Salmonella Infections	Tuberculosis	Syphilis	Mumps	Dysentery Bacillary	Measles	Rubella	Meningococcal Infections	Whooping Cough
Michigan	53,586	17,870	32,471	1,015	815	463	635	80	48	6	2	65	116
Alcona	3	-	-	3	-	-	-	-	-	-	-	-	-
Alger	-	-	-	-	9	2	-	2	1	-	-	1	1
Allegan	134	25	81	12	1	-	-	-	-	-	-	1	-
Alpena	94	-	90	4	-	-	-	1	-	-	-	-	-
Antrim	14	-	8	-	-	-	-	-	-	-	-	-	-
Arenac	1	-	-	-	1	-	-	-	-	-	-	-	-
Baraga	116	-	116	-	4	1	1	-	-	-	1	-	-
Barry	69	3	57	3	3	-	1	-	-	-	-	2	-
Bay	802	26	768	1	3	-	1	-	-	-	-	-	-
Benzie	40	-	38	2	-	-	-	-	-	-	-	-	-
Berrien	1,062	604	374	10	4	14	46	2	7	-	-	1	-
Branch	172	2	146	14	5	3	1	-	-	-	-	1	-
Calhoun	488	246	207	15	12	2	2	-	2	-	-	1	-
Cass	117	58	46	6	5	2	-	-	-	-	-	-	-
Charlevoix	51	1	41	2	5	1	1	-	-	-	-	-	-
Cheboygan	14	-	12	2	-	1	-	-	-	-	-	-	-
Chippewa	144	4	136	-	3	1	-	-	-	-	-	-	-
Clare	5	1	-	1	1	2	-	-	-	-	-	-	-
Clinton	61	-	54	2	2	1	-	-	2	-	-	-	-
Crawford	19	-	14	2	3	-	-	-	-	-	-	-	-
Delta	697	3	686	3	4	1	-	-	-	-	-	-	-
Dickinson	79	-	77	2	-	-	-	-	-	-	-	-	-
Eaton	508	11	486	1	8	1	-	-	1	-	-	-	-
Emmet	54	-	40	-	14	-	-	-	-	-	-	-	1
Genesee	2,199	1,520	586	16	27	16	30	3	-	-	-	-	-
Gladwin	21	1	14	3	3	-	-	-	-	-	-	-	-
Gogebic	6	-	6	-	-	-	-	-	-	-	-	-	3
Grand Traverse	671	11	644	8	3	2	-	-	-	-	-	-	-
Gratiot	40	3	29	2	3	1	-	2	-	-	-	-	2
Hillsdale	168	4	144	12	2	-	-	4	-	-	-	-	-
Houghton	56	-	49	1	5	1	-	-	-	-	-	-	-
Huron	2	-	-	-	-	2	-	-	-	-	-	2	4
Ingham	977	506	404	11	23	14	4	-	9	-	-	-	2
Ionia	93	4	75	7	4	-	1	-	-	-	-	-	-
Iosco	11	-	6	2	3	-	-	-	-	-	-	-	-
Iron	7	-	4	-	-	1	-	-	-	-	-	1	-
Isabella	52	26	7	2	7	3	-	-	6	-	-	1	-
Jackson	489	148	295	20	14	4	7	-	-	-	-	1	-
Kalamazoo	928	516	346	31	13	8	1	1	1	2	-	5	4
Kalkaska	9	-	5	2	1	1	-	-	-	-	-	-	-
Kent	3,044	1,089	1,827	22	32	23	33	-	1	1	-	5	11

Sources: Bureau of Infectious Disease Control, Disease Control Division, MDPH

Table 4.15 (continued)  
Reported Cases of Certain Communicable Diseases by County  
Michigan Residents, 1993

Area	Total	Gonorrhea	Chicken Pox	Hepatitis (all types)	Salmonella Infections	Tuberculosis	Syphilis	Mumps	Dysentery Bacillary	Measles	Rubella	Meningococcal Infections	Whooping Cough
Keweenaw	-	-	-	-	-	-	-	-	-	-	-	-	-
Lake	2	2	-	-	-	-	-	-	-	-	-	-	-
Lapeer	415	3	402	4	4	-	-	1	-	-	-	1	-
Leelanau	35	1	29	1	2	-	-	1	-	-	-	1	-
Lenawee	273	5	249	8	10	-	-	-	-	-	-	-	-
Livingson	368	10	342	3	8	-	1	-	1	-	-	-	-
Luce	1	-	-	1	-	-	-	2	-	-	-	1	1
Mackinac	1	-	-	-	-	-	-	-	-	-	-	-	-
Macomb	3,355	160	3,081	24	60	13	7	-	-	-	-	-	-
Manistee	54	1	52	-	-	-	-	-	-	3	-	2	5
Marquette	140	7	119	2	8	1	-	1	-	-	-	1	1
Mason	76	6	62	1	3	2	-	-	-	-	-	1	1
Mecosta	251	11	237	1	2	-	-	-	-	-	-	-	-
Menominee	44	-	39	-	4	1	-	-	-	-	-	-	-
Midland	303	4	284	4	9	-	-	-	-	-	1	-	-
Missaukee	12	-	10	2	-	-	-	-	-	-	-	-	-
Monroe	295	29	234	14	13	2	-	1	1	-	-	1	-
Montcalm	43	4	33	1	2	2	-	-	-	-	-	-	-
Montmorency	3	-	3	-	-	-	-	-	-	-	-	-	-
Muskegon	1,279	742	380	84	3	5	64	-	-	-	-	-	1
Newaygo	189	3	170	11	2	-	-	1	-	-	-	-	1
Oakland	7,972	1,051	6,566	88	109	45	20	40	3	-	-	8	42
Oceana	12	5	4	-	-	-	1	-	-	-	-	-	2
Ogemaw	8	-	-	8	-	-	-	-	-	-	-	-	-
Ontonagon	31	-	31	-	-	-	-	-	-	-	-	-	-
Oscoda	0	-	-	-	-	-	-	-	-	-	-	-	-
Oscoda	0	-	-	-	-	-	-	-	-	-	-	-	-
Otsego	7	-	-	-	-	-	-	-	-	-	-	-	-
Ottawa	706	52	588	1	2	-	-	-	-	-	-	-	-
Presque Isle	20	-	20	35	20	4	3	1	3	-	-	-	-
Roscommon	103	5	94	1	2	1	-	-	-	-	-	-	-
Saginaw	1,725	759	923	6	6	8	16	2	-	-	-	2	3
St. Clair	361	65	262	10	14	7	1	-	-	-	-	1	1
St. Joseph	128	16	98	4	10	-	-	-	-	-	-	-	-
Sanilac	46	4	39	1	1	1	-	-	-	-	-	-	-
Schoolcraft	0	-	-	-	-	-	-	-	-	-	-	-	-
Shiawassee	285	3	274	2	4	-	-	-	-	-	-	-	-
Tuscola	165	8	145	2	9	-	-	-	-	-	-	2	-
Van Buren	132	47	76	2	3	3	-	-	1	-	-	-	-
Washtenaw	392	230	66	12	46	17	6	-	4	-	-	1	10
Wayne	20,712	9,822	9,522	453	233	243	388	15	5	-	-	20	11
Wexford	125	1	115	3	2	1	-	-	-	-	-	-	3

Source: Bureau of Infectious Disease Control, Disease Control Division, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
<b>I. INFECTIOUS AND PARASITIC DISEASES (001-139)</b>		
8	Intestinal infections due to other organisms . . . . .	6
9	Ill-defined intestinal infections . . . . .	6
11	Pulmonary tuberculosis . . . . .	25
12	Other respiratory tuberculosis . . . . .	1
13	Tuberculosis of meninges and central nervous system . . . . .	1
14	Tuberculosis of intestines, peritoneum and mesenteric glands . . . . .	1
15	Tuberculosis of bones and joints . . . . .	2
16	Tuberculosis of genitourinary system . . . . .	1
17	Tuberculosis of other organs . . . . .	3
18	Miliary tuberculosis . . . . .	4
31	Diseases due to other mycobacteria . . . . .	7
36	Meningococcal infection . . . . .	8
38	Septicemia . . . . .	743
39	Actinomycotic infections . . . . .	4
40	Other bacterial diseases . . . . .	10
41	Bacterial infection in conditions classified elsewhere and of unspecified site . . . . .	10
42	Human immunodeficiency virus infection [AIDS] with specified conditions . . . . .	651
43	Human immunodeficiency virus infection [AIDS] causing other specified Conditions . . . . .	13
44	Other human immunodeficiency virus infection [AIDS] . . . . .	27
46	Slow virus infection of central nervous system . . . . .	7
47	Meningitis due to enterovirus . . . . .	1
49	Other non-arthropod-borne viral diseases of central nervous system . . . . .	3
52	Chickenpox . . . . .	2
53	Herpes zoster . . . . .	3
54	Herpes simplex . . . . .	7
62	Mosquito-borne viral encephalitis . . . . .	1
70	Viral hepatitis . . . . .	52
75	Infectious mononucleosis . . . . .	2
78	Other diseases due to viruses and Chlamydiae . . . . .	7
79	Viral infection in conditions classified elsewhere and of unspecified site . . . . .	10
90	Congenital syphilis . . . . .	1
94	Neurosyphilis . . . . .	2
97	Other and unspecified syphilis . . . . .	2
98	Gonococcal infections . . . . .	1
112	Candidiasis . . . . .	23
117	Other mycoses . . . . .	34
130	Toxoplasmosis . . . . .	1
135	Sarcoidosis . . . . .	25
136	Other and unspecified infections and parasitic diseases . . . . .	21
137	Late effects of tuberculosis . . . . .	1
138	Late effects of acute poliomyelitis . . . . .	7
139	Late effects of other infectious and parasitic diseases . . . . .	5
<b>II. NEOPLASMS (140-239)</b>		
141	Malignant neoplasm of tongue . . . . .	65
142	Malignant neoplasm of major salivary glands . . . . .	26
143	Malignant neoplasm of gum . . . . .	3
144	Malignant neoplasm of floor of mouth . . . . .	8
145	Malignant neoplasm of other and unspecified parts of mouth . . . . .	39

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
146	Malignant neoplasm of oropharynx	44
147	Malignant neoplasm of nasopharynx	16
148	Malignant neoplasm of hypopharynx	8
149	Malignant neoplasm of other and ill-defined sites within the lip, oral cavity and pharynx	59
150	Malignant neoplasm of esophagus	402
151	Malignant neoplasm of stomach	467
152	Malignant neoplasm of small intestine, including duodenum	28
153	Malignant neoplasm of colon	1,754
154	Malignant neoplasm of rectum, rectosigmoid junction and anus	273
155	Malignant neoplasm of liver and intrahepatic bile ducts	347
156	Malignant neoplasm of gallbladder and extrahepatic bile ducts	140
157	Malignant neoplasm of pancreas	956
158	Malignant neoplasm of retroperitoneum and peritoneum	15
159	Malignant neoplasm of other and ill-defined sites within the digestive organs and peritoneum	48
160	Malignant neoplasm of nasal cavities, middle ear and accessory sinuses	19
161	Malignant neoplasm of larynx	144
162	Malignant neoplasm of trachea, bronchus and lung	5,546
163	Malignant neoplasm of pleura	6
164	Malignant neoplasm of thymus, heart and mediastinum	14
165	Malignant neoplasm of other and ill-defined sites within the respiratory system and intrathoracic organs	1
170	Malignant neoplasm of bone and articular cartilage	54
171	Malignant neoplasm of connective and other soft tissue	144
172	Malignant melanoma of skin	212
173	Other malignant neoplasm of skin	60
174	Malignant neoplasm of female breast	1,526
175	Malignant neoplasm of male breast	18
179	Malignant neoplasm of uterus, part unspecified	108
180	Malignant neoplasm of cervix uteri	136
182	Malignant neoplasm of body of uterus	128
183	Malignant neoplasm of ovary and other uterine adnexa	497
184	Malignant neoplasm of other and unspecified female genital organs	36
185	Malignant neoplasm of prostate	1,315
186	Malignant neoplasm of testis	11
187	Malignant neoplasm of penis and other male genital organs	9
188	Malignant neoplasm of bladder	427
189	Malignant neoplasm of kidney and other and unspecified urinary organs	395
190	Malignant neoplasm of eye	9
191	Malignant neoplasm of brain	416
192	Malignant neoplasm of other and unspecified parts of nervous system	5
193	Malignant neoplasm of thyroid gland	32
194	Malignant neoplasm of other endocrine glands and related structures	26
195	Malignant neoplasm of other and ill-defined sites	144
199	Malignant neoplasm without specification of site	1,135
200	Lymphosarcoma and reticulosarcoma	38
201	Hodgkin's disease	58
202	Other malignant neoplasm of lymphoid and histiocytic tissue	691
203	Multiple myeloma and immunoproliferative neoplasms	431
204	Lymphoid leukemia	200

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
205	Myeloid leukemia . . . . .	273
206	Monocytic leukemia . . . . .	14
207	Other specified leukemia . . . . .	7
208	Leukemia of unspecified cell type . . . . .	204
211	Benign neoplasm of other parts of digestive system . . . . .	5
212	Benign neoplasm of respiratory and intrathoracic organs . . . . .	2
213	Benign neoplasm of bone and articular cartilage . . . . .	1
223	Benign neoplasm of kidney and other urinary organs . . . . .	1
225	Benign neoplasm of brain and other parts of nervous system . . . . .	26
227	Benign neoplasm of other endocrine glands and related structures . . . . .	6
228	Hemangioma and lymphangioma, any site . . . . .	2
229	Benign neoplasm of other and unspecified sites . . . . .	2
235	Neoplasm of uncertain behavior of digestive and respiratory systems . . . . .	7
236	Neoplasm of uncertain behavior of genitourinary organs . . . . .	1
237	Neoplasm of uncertain behavior of endocrine glands and nervous system . . . . .	6
238	Neoplasm of uncertain behavior of other and unspecified sites and tissues . . . . .	51
239	Neoplasm of unspecified nature . . . . .	169
<b>III. ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES AND IMMUNITY DISORDERS (240-279)</b>		
240	Simple and unspecified goiter . . . . .	1
242	Thyrotoxicosis with or without goiter . . . . .	8
244	Acquired hypothyroidism . . . . .	35
246	Other disorders of thyroid . . . . .	1
250	Diabetes mellitus . . . . .	2,105
251	Other disorders of pancreatic internal secretion . . . . .	6
252	Disorders of parathyroid gland . . . . .	1
253	Disorders of the pituitary gland and its hypothalamic control . . . . .	8
255	Disorders of adrenal glands . . . . .	13
259	Other endocrine disorders . . . . .	5
260	Kwashiorkor . . . . .	3
261	Nutritional marasmus . . . . .	13
263	Other and unspecified protein-calorie malnutrition . . . . .	128
265	Thiamine and niacin deficiency states . . . . .	1
269	Other nutritional deficiencies . . . . .	5
270	Disorders of amino-acid transport and metabolism . . . . .	3
271	Disorders of carbohydrate transport and metabolism . . . . .	2
272	Disorders of lipid metabolism . . . . .	76
273	Disorders of plasma protein metabolism . . . . .	25
274	Gout . . . . .	2
275	Disorders of mineral metabolism . . . . .	13
276	Disorders of fluid, electrolyte and acid-base balance . . . . .	220
277	Other and unspecified disorders of metabolism . . . . .	56
278	Obesity and other hyperalimentation . . . . .	60
279	Disorders involving the immune mechanism . . . . .	28
<b>IV. DISEASES OF BLOOD AND BLOOD-FORMING ORGANS (280-289)</b>		
280	Iron deficiency anemias . . . . .	5
281	Other deficiency anemias . . . . .	5
282	Hereditary hemolytic anemias . . . . .	24

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
283	Acquired hemolytic anemias . . . . .	
284	Aplastic anemias . . . . .	6
285	Other and unspecified anemia . . . . .	51
286	Coagulation defects . . . . .	97
287	Purpura and other hemorrhagic conditions . . . . .	57
288	Diseases of white blood cells . . . . .	19
289	Other diseases of blood and blood-forming organs . . . . .	12
		102
	<b>V. MENTAL DISORDERS (290-319)</b>	
290	Senile and presenile organic psychotic conditions . . . . .	417
291	Alcoholic psychoses . . . . .	12
295	Schizophrenic disorders . . . . .	9
296	Affective psychoses . . . . .	2
298	Other nonorganic psychoses . . . . .	207
300	Neurotic disorders . . . . .	3
303	Alcohol dependence syndrome . . . . .	174
304	Drug dependence . . . . .	3
305	Nondependent abuse of drugs . . . . .	159
306	Physiological malfunction arising from mental factors . . . . .	2
307	Special symptoms or syndromes, not elsewhere classified . . . . .	7
308	Acute reaction to stress . . . . .	1
310	Specific nonpsychotic mental disorders following organic brain damage . . . . .	99
311	Depressive disorder, not elsewhere classified . . . . .	13
318	Other specified mental retardation . . . . .	5
319	Unspecified mental retardation . . . . .	11
	<b>VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS (320-389)</b>	
320	Bacterial meningitis . . . . .	16
322	Meningitis of unspecified cause . . . . .	20
323	Encephalitis, myelitis and encephalomyelitis . . . . .	11
324	Intracranial and intraspinal abscess . . . . .	6
325	Phlebitis and thrombophlebitis of intracranial venous sinuses . . . . .	1
326	Late effects of intracranial abscess or pyogenic infection . . . . .	4
330	Cerebral degenerations usually manifest in childhood . . . . .	9
331	Other cerebral degenerations . . . . .	519
332	Parkinson's disease . . . . .	304
333	Other extrapyramidal disease and abnormal movement disorders . . . . .	37
334	Spinocerebellar disease . . . . .	9
335	Anterior horn cell disease . . . . .	158
336	Other diseases of spinal cord . . . . .	7
337	Disorders of the autonomic nervous system . . . . .	1
340	Multiple sclerosis . . . . .	100
341	Other demyelinating diseases of central nervous system . . . . .	2
342	Hemiplegia . . . . .	7
343	Infantile cerebral palsy . . . . .	45
344	Other paralytic syndromes . . . . .	32
345	Epilepsy . . . . .	71
348	Other conditions of brain . . . . .	150
349	Other and unspecified disorders of the nervous system . . . . .	10
354	Mononeuritis of upper limb and mononeuritis multiplex . . . . .	1

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
356	Hereditary and idiopathic peripheral neuropathy . . . . .	24
357	Inflammatory and toxic neuropathy . . . . .	4
358	Myoneural disorders . . . . .	13
359	Muscular dystrophies and other myopathies . . . . .	44
380	Disorders of external ear . . . . .	1
<b>VII. DISEASES OF THE CIRCULATORY SYSTEM (390-459)</b>		
390	Rheumatic fever without mention of heart involvement . . . . .	1
391	Rheumatic fever with heart involvement . . . . .	7
394	Diseases of mitral valve . . . . .	97
395	Diseases of aortic valve . . . . .	2
396	Diseases of mitral and aortic valves . . . . .	30
397	Diseases of other endocardial structures . . . . .	9
398	Other rheumatic heart disease . . . . .	46
401	Essential hypertension . . . . .	166
402	Hypertensive heart disease . . . . .	743
403	Hypertensive renal disease . . . . .	165
404	Hypertensive heart and renal disease . . . . .	87
410	Acute myocardial infarction . . . . .	9,299
411	Other acute and subacute forms of ischemic heart disease . . . . .	29
412	Old myocardial infarction . . . . .	20
413	Angina pectoris . . . . .	40
414	Other forms of chronic ischemic heart disease . . . . .	9,603
415	Acute pulmonary heart disease . . . . .	320
416	Chronic pulmonary heart disease . . . . .	121
420	Acute pericarditis . . . . .	1
421	Acute and subacute endocarditis . . . . .	40
422	Acute myocarditis . . . . .	7
423	Other diseases of pericardium . . . . .	26
424	Other diseases of endocardium . . . . .	486
425	Cardiomyopathy . . . . .	1,077
426	Conduction disorders . . . . .	21
427	Cardiac dysrhythmias . . . . .	1,067
428	Heart failure . . . . .	1,655
429	Ill-defined descriptions and complications of heart disease . . . . .	3,678
430	Subarachnoid hemorrhage . . . . .	254
431	Intracerebral hemorrhage . . . . .	612
432	Other and unspecified intracranial hemorrhage . . . . .	149
433	Occlusion and stenosis of precerebral arteries . . . . .	37
434	Occlusion of cerebral arteries . . . . .	785
435	Transient cerebral ischemia . . . . .	7
436	Acute but ill-defined cerebrovascular disease . . . . .	2,684
437	Other and ill-defined cerebrovascular disease . . . . .	316
438	Late effects of cerebrovascular disease . . . . .	455
440	Atherosclerosis . . . . .	753
441	Aortic aneurysm . . . . .	601
442	Other aneurysm . . . . .	31
443	Other peripheral vascular disease . . . . .	199
444	Arterial embolism and thrombosis . . . . .	62
446	Polyarteritis nodosa and allied conditions . . . . .	25

Source: Office of the State Registrar and Division of Health Statistics, MDPH



Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
447	Other disorders of arteries and arterioles . . . . .	51
448	Diseases of capillaries . . . . .	3
451	Phlebitis and thrombophlebitis . . . . .	54
452	Portal vein thrombosis . . . . .	4
453	Other venous embolism and thrombosis . . . . .	12
454	Varicose veins of lower extremities . . . . .	5
456	Varicose veins of other sites . . . . .	9
457	Noninfective disorders of lymphatic channels . . . . .	3
458	Hypotension . . . . .	21
459	Other disorders of circulatory system . . . . .	59
<b>VIII. DISEASES OF THE RESPIRATORY SYSTEM (460-519)</b>		
464	Acute laryngitis and tracheitis . . . . .	3
465	Acute upper respiratory infections of multiple or unspecified sites . . . . .	6
466	Acute bronchitis and bronchiolitis . . . . .	17
473	Chronic sinusitis . . . . .	3
475	Peritonsillar abscess . . . . .	1
478	Other diseases of upper respiratory tract . . . . .	8
480	Viral pneumonia . . . . .	21
481	Pneumococcal pneumonia . . . . .	72
482	Other bacterial pneumonia . . . . .	93
483	Pneumonia due to other specified organism . . . . .	11
485	Bronchopneumonia, organism unspecified . . . . .	118
486	Pneumonia, organism unspecified . . . . .	2,634
487	Influenza . . . . .	32
490	Bronchitis, not specified as acute or chronic . . . . .	33
491	Chronic bronchitis . . . . .	113
492	Emphysema . . . . .	809
493	Asthma . . . . .	196
494	Bronchiectasis . . . . .	19
496	Chronic airways obstruction, not elsewhere classified . . . . .	2,275
500	Coal workers' pneumoconiosis . . . . .	5
501	Asbestosis . . . . .	6
502	Pneumoconiosis due to other silica or silicates . . . . .	5
505	Pneumoconiosis, unspecified . . . . .	3
507	Pneumonitis due to solids and liquids . . . . .	239
508	Respiratory conditions due to other and unspecified external agents . . . . .	2
510	Empyema . . . . .	12
511	Pleurisy . . . . .	28
512	Pneumothorax . . . . .	8
513	Abscess of lung and mediastinum . . . . .	17
514	Pulmonary congestion and hypostasis . . . . .	30
515	Postinflammatory pulmonary fibrosis . . . . .	265
516	Other alveolar and parietoalveolar pneumopathy . . . . .	24
518	Other diseases of lung . . . . .	226
519	Other diseases of respiratory system . . . . .	31
<b>IX. DISEASES OF THE DIGESTIVE SYSTEM (520-579)</b>		
522	Diseases of pulp and periapical tissues . . . . .	1
525	Other diseases and conditions of the teeth and supporting structures . . . . .	1

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
527	Diseases of the salivary glands . . . . .	1
530	Diseases of esophagus . . . . .	56
531	Gastric ulcer . . . . .	67
532	Duodenal ulcer . . . . .	67
533	Peptic ulcer, site unspecified . . . . .	79
535	Gastritis and duodenitis . . . . .	22
536	Disorders of function of stomach . . . . .	7
537	Other disorders of stomach and duodenum . . . . .	15
540	Acute appendicitis . . . . .	10
541	Appendicitis, unqualified . . . . .	1
550	Inguinal hernia . . . . .	3
551	Other hernia of abdominal cavity, with gangrene . . . . .	5
552	Other hernia of abdominal cavity with obstruction, without mention of gangrene . . . . .	16
553	Other hernia of abdominal cavity without mention of obstruction or gangrene . . . . .	16
555	Regional enteritis . . . . .	11
556	Idiopathic proctocolitis . . . . .	14
557	Vascular insufficiency of intestine . . . . .	247
558	Other noninfective gastroenteritis and colitis . . . . .	48
560	Intestinal obstruction without mention of hernia . . . . .	184
562	Diverticula of intestine . . . . .	122
564	Functional digestive disorders, not elsewhere classified . . . . .	9
566	Abscess of anal and rectal regions . . . . .	1
567	Peritonitis . . . . .	65
568	Other disorders of peritoneum . . . . .	8
569	Other disorders of intestine . . . . .	64
570	Acute and subacute necrosis of liver . . . . .	22
571	Chronic liver disease and cirrhosis . . . . .	1,006
572	Liver abscess and sequelae of chronic liver disease . . . . .	152
573	Other disorders of liver . . . . .	72
574	Cholelithiasis . . . . .	33
575	Other disorders of gallbladder . . . . .	46
576	Other disorders of biliary tract . . . . .	31
577	Diseases of pancreas . . . . .	119
578	Gastrointestinal hemorrhage . . . . .	288
579	Intestinal malabsorption . . . . .	8
<b>X. DISEASES OF THE GENITOURINARY SYSTEM (580-629)</b>		
580	Acute glomerulonephritis . . . . .	2
581	Nephrotic syndrome . . . . .	10
582	Chronic glomerulonephritis . . . . .	33
583	Nephritis and nephropathy, not specified as acute or chronic . . . . .	10
584	Acute renal failure . . . . .	159
585	Chronic renal failure . . . . .	235
586	Renal failure, unspecified . . . . .	498
588	Disorders resulting from impaired renal function . . . . .	1
590	Infections of kidney . . . . .	22
591	Hydronephrosis . . . . .	5
592	Calculus of kidney and ureter . . . . .	8
593	Other disorders of kidney and ureter . . . . .	144
594	Calculus of lower urinary tract . . . . .	4

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
595	Cystitis . . . . .	6
596	Other disorders of bladder . . . . .	4
597	Urethritis, not sexually transmitted, and urethral syndrome . . . . .	1
598	Urethral stricture . . . . .	2
599	Other disorders of urethra and urinary tract . . . . .	402
600	Hyperplasia of prostate . . . . .	13
601	Inflammatory diseases of prostate . . . . .	2
602	Other disorders of prostate . . . . .	4
608	Other disorders of male genital organs . . . . .	3
611	Other disorders of breast . . . . .	1
614	Inflammatory disease of ovary, fallopian tube, pelvic cellular tissue and peritoneum . . . . .	3
618	Genital prolapse . . . . .	2
619	Fistula involving female genital tract . . . . .	3
620	Noninflammatory disorders of ovary, fallopian tube and broad ligament . . . . .	1
626	Disorders of menstruation and other abnormal bleeding from female genital tract . . . . .	1
<b>XI. COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM (630-676)</b>		
642	Hypertension complicating pregnancy, childbirth and the puerperium . . . . .	1
667	Retained placenta or membranes, without hemorrhage . . . . .	1
670	Major puerperal infection . . . . .	1
673	Obstetrical pulmonary embolism . . . . .	3
674	Other and unspecified complications of the puerperium, not elsewhere classified . . . . .	2
<b>XII. DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE (680-709)</b>		
682	Other cellulitis and abscess . . . . .	28
686	Other local infections of skin and subcutaneous tissue . . . . .	7
692	Contact dermatitis and other eczema . . . . .	2
694	Bullous dermatoses . . . . .	4
695	Erythematous conditions . . . . .	3
696	Psoriasis and similar disorders . . . . .	2
700	Corns and callosities . . . . .	1
705	Disorders of sweat glands . . . . .	1
707	Chronic ulcer of skin . . . . .	104
<b>XIII. DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE (710-739)</b>		
710	Diffuse diseases of connective tissue . . . . .	99
711	Arthropathy associated with infections . . . . .	6
714	Rheumatoid arthritis and other inflammatory polyarthropathies . . . . .	57
715	Osteoarthritis and allied disorders . . . . .	16
716	Other and unspecified arthropathies . . . . .	15
719	Other and unspecified disorder of joint . . . . .	1
721	Spondylosis and allied disorders . . . . .	6
725	Polymyalgia rheumatica . . . . .	2
727	Other disorders of synovium tendon and bursa . . . . .	1
728	Disorders of muscle, ligament and fascia . . . . .	12
729	Other disorders of soft tissues . . . . .	12
730	Osteomyelitis, periostitis and other infections involving bone . . . . .	28

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
731	Osteitis deformans and osteopathies associated with other disorders classified elsewhere	7
733	Other disorders of bone and cartilage	19
736	Other acquired deformities of limbs	1
737	Curvature of spine	16
<b>XIV. CONGENITAL ANOMALIES (740-759)</b>		
740	Anencephalus and similar anomalies	10
741	Spina bifida	2
742	Other congenital anomalies of nervous system	59
745	Bulbus cordis anomalies and anomalies of cardiac septal closure	41
746	Other congenital anomalies of heart	111
747	Other congenital anomalies of circulatory system	25
748	Congenital anomalies of respiratory system	39
750	Other congenital anomalies of upper alimentary tract	3
751	Other congenital anomalies of digestive system	6
752	Congenital anomalies of genital organs	1
753	Congenital anomalies of urinary system	16
756	Other congenital musculoskeletal anomalies	22
757	Congenital anomalies of the integument	3
758	Chromosomal anomalies	57
759	Other and unspecified congenital anomalies	24
<b>XV. CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD (760-779)</b>		
760	Fetus or newborn affected by maternal conditions which may be unrelated to present pregnancy	6
761	Fetus or newborn affected by maternal complications of pregnancy	30
762	Fetus or newborn affected by complications of placenta, cord and membranes	21
763	Fetus or newborn affected by other complications of labor and delivery	4
764	Slow fetal growth and fetal malnutrition	1
765	Disorders relating to short gestation and unspecified low birthweight	270
767	Birth trauma	12
768	Intrauterine hypoxia and birth asphyxia	21
769	Respiratory distress syndrome	94
770	Other respiratory conditions of fetus and newborn	90
771	Infections specific to the perinatal period	36
772	Fetal and neonatal hemorrhage	13
773	Hemolytic disease of fetus or newborn, due to isoimmunization	2
774	Other perinatal jaundice	1
775	Endocrine and metabolic disturbances specific to the fetus and newborn	2
776	Hematological disorders of fetus and newborn	3
777	Perinatal disorders of digestive system	12
778	Conditions involving the integument and temperature regulation of fetus and newborn	11
779	Other and ill-defined conditions originating in the perinatal period	41
<b>XVI. SYMPTOMS, SIGNS AND ILL-DEFINED CONDITIONS (780-799)</b>		
780	General symptoms	32
781	Symptoms involving nervous and musculoskeletal systems	1
783	Symptoms concerning nutrition, metabolism and development	1
784	Symptoms involving head and neck	1

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
785	Symptoms involving cardiovascular system . . . . .	44
786	Symptoms involving respiratory system and other chest symptoms . . . . .	2
787	Symptoms involving digestive system . . . . .	2
789	Other symptoms involving abdomen and pelvis . . . . .	1
791	Nonspecific findings on examination of urine . . . . .	2
797	Senility without mention of psychosis . . . . .	12
798	Sudden death, cause unknown . . . . .	224
799	Other ill-defined and unknown causes of morbidity and mortality . . . . .	343
<b>XVII. EXTERNAL CAUSES OF INJURY AND POISONING (E800-E999)</b>		
E805	Hit by rolling stock [railway] . . . . .	13
E810	Motor vehicle traffic accident involving collision with train . . . . .	16
E812	Other motor vehicle traffic accident involving collision with another motor vehicle . . . . .	675
E813	Motor vehicle traffic accident involving collision with other vehicle . . . . .	32
E814	Motor vehicle traffic accident involving collision with pedestrian . . . . .	198
E815	Other motor vehicle traffic accident involving collision on the highway . . . . .	200
E816	Motor vehicle traffic accident due to loss of control, without collision on the highway . . . . .	201
E818	Other noncollision motor vehicle traffic accident . . . . .	16
E819	Motor vehicle traffic accident of unspecified nature . . . . .	70
E820	Nontraffic accident involving motor-driven snow vehicle . . . . .	13
E821	Nontraffic accident involving other off-road motor vehicle . . . . .	6
E822	Other motor vehicle nontraffic accident involving collision with moving object . . . . .	3
E823	Other motor vehicle nontraffic accident involving collision with stationary object . . . . .	2
E825	Other motor vehicle nontraffic accident of other and unspecified nature . . . . .	6
E826	Pedal cycle accident . . . . .	5
E828	Accident involving animal being ridden . . . . .	1
E830	Accident to watercraft causing submersion . . . . .	9
E831	Accident to watercraft causing other injury . . . . .	4
E832	Other accidental submersion or drowning in water transport accident . . . . .	9
E838	Other and unspecified water transport accident . . . . .	2
E841	Accident to powered aircraft, other and unspecified . . . . .	16
E848	Accidents involving other vehicles not elsewhere classifiable . . . . .	1
E850	Accidental poisoning by analgesics, antipyretics, antirheumatics . . . . .	17
E853	Accidental poisoning by tranquilizers . . . . .	3
E854	Accidental poisoning by other psychotropic agents . . . . .	1
E855	Accidental poisoning by other drugs acting on central and autonomic nervous systems . . . . .	13
E856	Accidental poisoning by antibiotics . . . . .	1
E857	Accidental poisoning by anti-infectives . . . . .	2
E858	Accidental poisoning by other drugs . . . . .	38
E860	Accidental poisoning by alcohol, not elsewhere classified . . . . .	8
E861	Accidental poisoning by cleaning and polishing agents, disinfectants, paints and varnishes . . . . .	1
E864	Accidental poisoning by corrosives and caustics, not elsewhere classified . . . . .	1
E866	Accidental poisoning by other and unspecified solid and liquid substances . . . . .	2
E868	Accidental poisoning by other utility gas and other carbon monoxide . . . . .	22
E869	Accidental poisoning by other gases and vapors . . . . .	1
E870	Accidental cut, puncture, perforation or hemorrhage during medical care . . . . .	1
E871	Foreign object left in body during procedure . . . . .	1
E878	Surgical operation and other surgical procedures as the cause of abnormal reaction of patient, or of later complication, without mention of misadventure at the time of procedure . . . . .	64

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
E879	Other procedures, without mention of misadventure at the time of procedure, as the cause of abnormal reaction of patient, or of misadventure at the time of procedure . . . . .	15
E880	Fall on or from stairs or steps . . . . .	42
E881	Fall on or from ladders or scaffolding . . . . .	2
E882	Fall from or out of building or other structure . . . . .	7
E883	Fall into hole or other opening in surface . . . . .	2
E884	Other fall from one level to another . . . . .	19
E885	Fall on same level from slipping, tripping or stumbling . . . . .	12
E886	Fall on same level from collision, pushing or shoving, by or with other person . . . . .	1
E887	Fracture, cause unspecified . . . . .	152
E888	Other and unspecified fall . . . . .	151
E890	Conflagration in private dwelling . . . . .	154
E891	Conflagration in other and unspecified building or structure . . . . .	1
E892	Conflagration not in building or structure . . . . .	2
E893	Accident caused by ignition of clothing . . . . .	3
E894	Ignition of highly inflammable material . . . . .	2
E895	Accident caused by controlled fire in private dwelling . . . . .	5
E898	Accident caused by other specified fire and flames . . . . .	2
E899	Accident caused by unspecified fire . . . . .	3
E900	Excessive heat . . . . .	1
E901	Excessive cold . . . . .	42
E902	High and low air pressure and changes in air pressure . . . . .	2
E904	Hunger, thirst, exposure, neglect . . . . .	13
E905	Venomous animals and plants as the cause of poisoning and toxic reactions . . . . .	3
E906	Other injury caused by animals . . . . .	5
E907	Lightning . . . . .	1
E910	Accidental drowning and submersion . . . . .	106
E911	Inhalation and ingestion of food causing obstruction of respiratory tract or suffocation . . . . .	18
E912	Inhalation and ingestion of other object causing obstruction of respiratory tract or suffocation . . . . .	73
E913	Accidental mechanical suffocation . . . . .	53
E915	Foreign body accidentally entering other orifice . . . . .	1
E916	Struck accidentally by falling object . . . . .	23
E917	Striking against or struck accidentally by objects or persons . . . . .	4
E918	Caught accidentally in or between objects . . . . .	5
E919	Accidents caused by machinery . . . . .	29
E922	Accident caused by firearm missile . . . . .	26
E923	Accident caused by explosive material . . . . .	6
E924	Accident caused by hot substance or object, caustic or corrosive material and steam . . . . .	6
E925	Accident caused by electric current . . . . .	14
E928	Other and unspecified environmental and accidental causes . . . . .	108
E929	Late effects of accidental injury . . . . .	35
E934	Agents primarily affecting blood constituents . . . . .	1
E938	Other central nervous system depressants . . . . .	1
E939	Psychotropic agents . . . . .	1
E947	Other and unspecified drugs and medicaments [medicinal substances] . . . . .	3
E949	Other vaccines and biological substances . . . . .	1
E950	Suicide and self-inflicted poisoning by solid or liquid substance . . . . .	85
E951	Suicide and self-inflicted poisoning by gases in domestic use . . . . .	2
E952	Suicide and self-inflicted poisoning by other gases and vapors . . . . .	98

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.16  
Number of Deaths by Cause  
Michigan Residents, 1993

ICD List Number	Cause of Death	Number
E953	Suicide and self-inflicted injury by hanging, strangulation and suffocation . . . . .	195
E954	Suicide and self-inflicted injury by submersion [drowning] . . . . .	13
E955	Suicide and self-inflicted injury by firearms and explosives . . . . .	638
E956	Suicide and self-inflicted injury by cutting and piercing instrument . . . . .	22
E957	Suicide and self-inflicted injuries by jumping from high place . . . . .	10
E958	Suicide and self-inflicted injury by other and unspecified means . . . . .	14
E959	Late effects of self-inflicted injury . . . . .	1
E960	Fight, brawl, rape . . . . .	1
E963	Assault by hanging and strangulation . . . . .	42
E965	Assault by firearms and explosives . . . . .	762
E966	Assault by cutting and piercing instrument . . . . .	103
E967	Child battering and other maltreatment . . . . .	17
E968	Assault by other and unspecified means . . . . .	96
E969	Late effects of injury purposely inflicted by other persons . . . . .	3
E970	Injury due to legal intervention by firearms . . . . .	7
E980	Poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted . . . . .	68
E982	Poisoning by other gases, undetermined whether accidentally or purposely inflicted . . . . .	6
E983	Hanging, strangulation or suffocation, undetermined whether accidentally or purposely inflicted . . . . .	2
E984	Submersion [drowning], undetermined whether accidentally or purposely inflicted . . . . .	11
E985	Injury by firearms and explosives, undetermined whether accidentally or purposely inflicted . . . . .	9
E987	Falling from high place, undetermined whether accidentally or purposely inflicted . . . . .	2
E988	Injury by other and unspecified means, undetermined whether accidentally or purposely inflicted . . . . .	9

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.17  
Population Changes by County  
Michigan, 1982 and 1992

Area	Population Estimate July 1, 1982	Population Estimate July 1, 1992	Net Change	Percent Change	Natural Increase	Estimated Net Migration
Michigan	9,118,373	9,433,665	315,292	3.5	631,143	-315,851
Alcona	9,798	10,254	456	4.7	-348	804
Alger	9,091	9,349	258	2.8	-12	270
Allegan	82,846	93,078	10,232	12.4	7,375	2,857
Alpena	31,934	31,000	-934	-2.9	999	-1,933
Antrim	16,520	18,897	2,377	14.4	428	1,949
Arenac	15,004	15,625	621	4.1	480	141
Baraga	8,413	7,828	-585	-7.0	50	-635
Barry	46,039	51,196	5,157	11.2	3,181	1,976
Bay	118,101	112,131	-5,970	-5.1	6,633	-12,603
Benzie	11,047	12,616	1,569	14.2	346	1,223
Berrien	165,498	161,466	-4,032	-2.4	9,714	-13,746
Branch	39,178	41,871	2,693	6.9	2,343	350
Calhoun	139,377	138,381	-996	-0.7	7,214	-8,210
Cass	48,548	49,112	564	1.2	1,792	-1,228
Charlevoix	19,713	22,225	2,512	12.7	1,235	1,277
Cheboygan	20,810	21,780	970	4.7	638	332
Chippewa	29,096	35,640	6,544	22.5	1,005	5,539
Clare	24,185	26,384	2,199	9.1	676	1,523
Clinton	55,268	59,397	4,129	7.5	4,792	-663
Crawford	9,635	12,972	3,337	34.6	633	2,704
Delta	39,509	38,208	-1,301	-3.3	1,489	-2,790
Dickinson	25,319	27,014	1,695	6.7	444	1,251
Eaton	88,098	95,253	7,155	8.1	6,009	1,146
Emmet	23,243	26,057	2,814	12.1	1,329	1,485
Genesee	440,354	433,508	-6,846	-1.6	34,960	-41,806
Gladwin	20,439	23,007	2,568	12.6	654	1,914
Gogebic	19,561	17,891	-1,670	-8.5	-739	-931
Grand Traverse	56,224	67,290	11,066	19.7	4,623	6,443
Gratiot	39,434	39,450	16	0.0	1,703	-1,687
Hillsdale	41,493	44,407	2,914	7.0	2,501	413
Houghton	37,869	35,831	-2,038	-5.4	444	-2,482
Huron	36,256	34,977	-1,279	-3.5	1,162	-2,441
Ingham	271,472	281,798	10,326	3.8	27,256	-16,930
Ionia	51,911	57,986	6,075	11.7	4,512	1,563
Iosco	28,968	30,211	1,243	4.3	2,672	-1,429
Iron	13,598	13,136	-462	-3.4	-657	195
Isabella	53,474	56,212	2,738	5.1	3,821	-1,083
Jackson	148,506	151,740	3,234	2.2	8,612	-5,378
Kalamazoo	214,042	225,648	11,606	5.4	17,202	-5,596
Kalkaska	11,178	14,038	2,860	25.6	979	1,881

Source: Office of the State Registrar and Division of Health Statistics, MDPH



Table 4.17 (continued)  
Population Changes by County  
Michigan, 1982 and 1992

Area	Population Estimate July 1, 1982	Population Estimate July 1, 1992	Net Change	Percent Change	Natural Increase	Estimated Net Migration
Kent	451,847	511,997	60,150	13.3	53,635	6,515
Keweenaw	2,016	1,706	-310	-15.4	-152	-158
Lake	8,149	9,029	880	10.8	-165	1,045
Lapeer	69,535	78,526	8,991	12.9	5,661	3,330
Leelanau	14,363	17,292	2,929	20.4	780	2,149
Lenawee	88,538	94,132	5,594	6.3	5,558	36
Livingston	100,247	122,658	22,411	22.4	8,467	13,944
Luce	6,162	5,604	-558	-9.1	57	-615
Mackinac	10,166	10,752	586	5.8	177	409
Macomb	687,901	728,220	40,319	5.9	41,568	-1,249
Manistee	22,420	21,925	-495	-2.2	-76	-419
Marquette	72,845	71,428	-1,417	-1.9	5,645	-7,062
Mason	26,489	26,420	-69	-0.3	680	-749
Mecosta	36,888	38,553	1,665	4.5	1,762	-97
Menominee	26,004	24,593	-1,411	-5.4	577	-1,988
Midland	73,957	77,950	3,993	5.4	6,539	-2,546
Missaukee	10,388	12,739	2,351	22.6	732	1,619
Monroe	132,011	135,962	3,951	3.0	8,537	-4,586
Montcalm	48,555	55,445	6,890	14.2	3,581	3,309
Montmorency	7,427	9,355	1,928	26.0	-301	2,229
Muskegon	155,444	161,980	6,536	4.2	11,891	-5,355
Newaygo	35,690	40,756	5,066	14.2	2,841	2,225
Oakland	1,000,033	1,118,611	118,578	11.9	74,877	43,701
Oceana	21,931	22,954	1,023	4.7	1,582	-559
Ogemaw	16,836	19,640	2,804	16.7	370	2,434
Ontonagon	10,183	8,761	-1,422	-14.0	-123	-1,299
Osceola	19,560	20,638	1,078	5.5	1,110	-32
Oscoda	7,007	8,222	1,215	17.3	67	1,148
Otsego	15,167	19,096	3,929	25.9	1,088	2,841
Ottawa	159,978	197,297	37,319	23.3	18,991	18,328
Presque Isle	13,989	13,865	-124	-0.9	75	-199
Roscommon	17,397	20,861	3,464	19.9	-367	3,831
Saginaw	223,166	212,477	-10,689	-4.8	16,575	-27,264
St. Clair	137,720	150,085	12,365	9.0	8,192	4,173
St. Joseph	57,096	59,388	2,292	4.0	3,825	-1,533
Sanilac	39,993	40,810	817	2.0	1,546	-729
Schoolcraft	8,516	8,478	-38	-0.4	26	-64
Shiawassee	69,608	70,832	1,224	1.8	4,816	-3,592
Tuscola	55,817	56,130	313	0.6	3,293	-2,980
Van Buren	66,511	72,331	5,820	8.8	4,354	1,466
Washtenaw	260,799	288,025	27,226	10.4	24,846	2,380
Wayne	2,243,320	2,096,179	-147,141	-6.6	138,432	-285,573
Wexford	25,654	27,099	1,445	5.6	1,493	-48

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.18  
Population by Age, Race and Sex  
Michigan Residents, 1992

Age in Years	All Races			White			Black			All Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<1	138,684	70,764	67,920	105,312	53,761	51,551	30,120	15,305	14,815	3,252	1,698	1,554
1-4	575,565	294,137	281,428	460,483	235,965	224,518	101,307	51,142	50,165	13,775	7,030	6,745
5-9	694,130	355,548	338,582	567,974	291,891	276,083	109,598	55,321	54,277	16,558	8,336	8,222
10-14	695,735	356,001	339,734	560,531	287,919	272,612	118,836	59,893	58,943	16,368	8,189	8,179
15-19	662,245	337,261	324,984	518,321	265,345	252,976	126,667	63,063	63,604	17,257	8,853	8,404
20-24	712,213	353,561	358,652	582,654	291,992	290,662	112,751	52,899	59,852	16,808	8,670	8,138
25-29	717,175	353,631	363,544	600,913	300,237	300,676	99,962	45,218	54,744	16,300	8,176	8,124
30-34	800,239	392,383	407,856	673,567	334,964	338,603	110,987	49,513	61,474	15,685	7,906	7,779
35-39	782,349	385,156	397,193	658,963	329,853	329,110	108,580	48,287	60,293	14,806	7,016	7,790
40-44	702,933	345,923	357,010	596,757	297,755	299,002	92,463	42,017	50,446	13,713	6,151	7,562
45-49	572,864	281,962	290,902	495,633	246,017	249,616	66,943	30,915	36,028	10,288	5,030	5,258
50-54	452,002	220,284	231,718	394,144	193,989	200,155	50,413	22,450	27,963	7,445	3,845	3,600
55-59	387,635	186,092	201,543	336,645	163,513	173,132	46,073	20,198	25,875	4,917	2,381	2,536
60-64	389,197	185,304	203,893	340,691	163,878	176,813	44,656	19,740	24,916	3,850	1,686	2,164
65-69	367,746	167,190	200,556	323,690	147,714	175,976	41,230	18,229	23,001	2,826	1,247	1,579
70-74	301,583	128,178	173,405	269,009	114,712	154,297	30,706	12,734	17,972	1,868	732	1,136
75-79	227,715	90,118	137,597	203,839	80,927	122,912	22,611	8,682	13,929	1,265	509	756
80-84	140,978	49,315	91,663	127,685	44,401	83,284	12,604	4,589	8,015	689	325	364
85+	112,678	31,696	80,982	101,586	28,036	73,550	10,669	3,491	7,178	423	169	254
Total	9,433,666	4,584,504	4,849,162	7,918,397	3,872,869	4,045,528	1,337,176	623,686	713,490	178,093	87,949	90,144

Source: The United States Bureau of the Census, 1990 Census of Population; compiled and released by Demographic Research and Statistics, Michigan Department Budget.

Table 4.19  
Abridged Life Table  
Michigan Residents, 1993

Age	$nqx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
0-1	0.00951	100,000	951	99,166	7,513,107	75.131
1-5	0.00191	99,049	188	395,745	7,413,941	74.851
5-10	0.00116	98,860	115	493,987	7,018,196	70.991
10-15	0.00123	98,746	121	493,493	6,524,209	66.071
15-20	0.00435	98,625	428	492,137	6,030,716	61.148
20-25	0.00519	98,197	510	489,731	5,538,578	56.403
25-30	0.00531	97,688	518	487,176	5,048,847	51.684
30-35	0.00691	97,169	671	484,250	4,561,671	46.946
35-40	0.00933	96,499	900	480,371	4,077,421	42.254
40-45	0.01343	95,599	1,284	474,949	3,597,050	37.627
45-50	0.01796	94,315	1,693	467,649	3,122,101	33.103
50-55	0.02983	92,622	2,762	456,688	2,654,452	28.659
55-60	0.04481	89,859	4,026	439,881	2,197,763	24.458
60-65	0.06863	85,833	5,890	415,358	1,757,882	20.480
65-70	0.10561	79,943	8,442	379,709	1,342,524	16.794
70-75	0.15637	71,500	11,180	330,635	962,815	13.466
75-80	0.22625	60,320	13,647	268,444	632,180	10.480
80-85	0.33831	46,673	15,790	193,878	363,736	7.793
85+	1.00000	30,883	30,883	169,858	169,858	5.500

<sup>1</sup> Definitions of life table values are contained in the Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.20  
Abridged Life Table for Males  
Michigan Residents, 1993

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
0-1	0.01083	100,000	1,083	99,061	7,199,591	71.996
1-5	0.00203	98,917	200	395,195	7,100,530	71.782
5-10	0.00128	98,717	126	493,239	6,705,335	67.925
10-15	0.00137	98,591	134	492,718	6,212,096	63.009
15-20	0.00611	98,457	601	490,915	5,719,378	58.090
20-25	0.00795	97,856	778	487,369	5,228,463	53.430
25-30	0.00795	97,078	771	483,498	4,741,094	48.838
30-35	0.00985	96,307	948	479,254	4,257,596	44.209
35-40	0.01261	95,359	1,202	473,941	3,778,342	39.622
40-45	0.01781	94,157	1,676	466,774	3,304,401	35.095
45-50	0.02240	92,481	2,071	457,593	2,837,627	30.683
50-55	0.03802	90,410	3,437	444,046	2,380,034	26.325
55-60	0.05638	86,973	4,903	423,336	1,935,988	22.260
60-65	0.08459	82,070	6,942	394,057	1,512,652	18.431
65-70	0.13311	75,128	10,000	351,887	1,118,595	14.889
70-75	0.19839	65,128	12,921	294,351	766,708	11.772
75-80	0.28464	52,207	14,860	224,487	472,357	9.048
80-85	0.42311	37,347	15,802	146,605	247,870	6.637
85+	1.00000	21,546	21,546	101,264	101,264	4.700

<sup>1</sup> Definitions of life table values are contained in the Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.21  
Abridged Life Table for Females  
Michigan Residents, 1993

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
0-1	0.00807	100,000	807	99,283	7,820,389	78.204
1-5	0.00178	99,193	176	396,347	7,721,106	77.839
5-10	0.00104	99,017	102	494,804	7,324,759	73.975
10-15	0.00108	98,915	106	494,339	6,829,955	69.049
15-20	0.00251	98,809	248	493,453	6,335,616	64.120
20-25	0.00247	98,561	243	492,203	5,842,164	59.275
25-30	0.00274	98,318	269	490,951	5,349,961	54.415
30-35	0.00407	98,049	398	489,320	4,859,010	49.557
35-40	0.00614	97,651	599	486,859	4,369,690	44.748
40-45	0.00918	97,052	891	483,180	3,882,830	40.008
45-50	0.01363	96,161	1,311	477,778	3,399,650	35.354
50-55	0.02198	94,850	2,085	469,425	2,921,873	30.805
55-60	0.03402	92,766	3,155	456,513	2,452,448	26.437
60-65	0.05391	89,610	4,831	436,768	1,995,935	22.273
65-70	0.08209	84,780	6,959	407,505	1,559,167	18.391
70-75	0.12404	77,820	9,652	366,159	1,151,662	14.799
75-80	0.18570	68,168	12,658	310,519	785,503	11.523
80-85	0.28840	55,510	16,009	237,976	474,984	8.557
85+	1.00000	39,501	39,501	237,008	237,008	6.000

<sup>1</sup> Definitions of life table values are contained in the Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.22  
Abridged Life Table for Whites  
Michigan Residents, 1993

Age	$nxq(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
0-1	0.00731	100,000	731	99,361	7,636,209	76.362
1-5	0.00145	99,269	144	396,741	7,536,848	75.924
05-10	0.00099	99,125	98	495,356	7,140,106	72.031
10-15	0.00111	99,027	109	494,914	6,644,750	67.100
15-20	0.00347	98,918	343	493,783	6,149,837	62.171
20-25	0.00363	98,575	357	491,995	5,656,054	57.378
25-30	0.00417	98,218	409	490,102	5,164,059	52.578
30-35	0.0054	97,809	528	487,784	4,673,958	47.787
35-40	0.00711	97,281	691	484,778	4,186,174	43.032
40-45	0.01045	96,590	1,009	480,572	3,701,396	38.321
45-50	0.01447	95,581	1,382	474,751	3,220,824	33.697
50-55	0.02608	94,199	2,456	465,342	2,746,073	29.152
55-60	0.04061	91,743	3,725	450,061	2,280,730	24.860
60-65	0.06379	88,018	5,614	426,999	1,830,669	20.799
65-70	0.10013	82,404	8,250	392,540	1,403,670	17.034
70-75	0.14978	74,154	11,106	344,226	1,011,130	13.636
75-80	0.22391	63,048	14,117	281,050	666,904	10.578
80-85	0.33514	48,931	16,398	203,671	385,855	7.886
85+	1.00000	32,533	32,533	182,183	182,183	5.600

<sup>1</sup> Definitions of life table values are contained in the Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.23  
Abridged Life Table for White Males  
Michigan Residents, 1993

Age	$nxq(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
0-1	0.00852	100,000	852	99,261	7,342,720	73.427
1-5	0.00158	99,148	156	396,241	7,243,459	73.057
5-10	0.00119	98,992	117	494,638	6,847,218	69.170
10-15	0.00106	98,875	105	494,179	6,352,581	64.249
15-20	0.00439	98,770	433	492,857	5,858,402	59.313
20-25	0.00535	98,337	526	490,404	5,365,545	54.563
25-30	0.00598	97,812	585	487,642	4,875,141	49.842
30-35	0.00763	97,227	742	484,350	4,387,499	45.126
35-40	0.00953	96,485	919	480,249	3,903,150	40.453
40-45	0.01380	95,566	1,319	474,706	3,422,901	35.817
45-50	0.01843	94,248	1,736	467,264	2,948,195	31.281
50-55	0.03320	92,512	3,071	455,470	2,480,931	26.817
55-60	0.05102	89,440	4,563	436,539	2,025,461	22.646
60-65	0.07826	84,878	6,642	408,899	1,588,922	18.720
65-70	0.12683	78,235	9,922	367,687	1,180,023	15.083
70-75	0.18979	68,313	12,965	310,342	812,337	11.891
75-80	0.28258	55,348	15,640	238,438	501,994	9.070
80-85	0.42315	39,708	16,802	155,900	263,557	6.637
85+	1.00000	22,906	22,906	107,657	107,657	4.700

<sup>1</sup> Definitions of life table values are contained in the Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.24  
Abridged Life Table for White Females  
Michigan Residents, 1993

Age	$q_x(1)^1$	$l_x(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$T_x(5)^1$	$ex(6)^1$
0-1	0.00603	100,000	603	99,468	7,914,688	79.147
1-5	0.00132	99,397	131	397,271	7,815,220	78.627
5-10	0.00078	99,266	77	496,116	7,417,949	74.728
10-15	0.00116	99,188	115	495,692	6,921,833	69.785
15-20	0.00251	99,074	248	494,764	6,426,141	64.862
20-25	0.00190	98,826	187	493,657	5,931,377	60.019
25-30	0.00235	98,639	231	492,642	5,437,720	55.128
30-35	0.00319	98,408	313	491,302	4,945,078	50.251
35-40	0.00467	98,094	458	489,405	4,453,776	45.403
40-45	0.00711	97,636	693	486,566	3,964,370	40.603
45-50	0.01055	96,943	1,022	482,397	3,477,805	35.875
50-55	0.01912	95,921	1,834	475,407	2,995,408	31.228
55-60	0.03067	94,087	2,885	463,793	2,520,001	26.784
60-65	0.05019	91,202	4,577	445,358	2,056,208	22.546
65-70	0.07715	86,625	6,683	417,445	1,610,850	18.596
70-75	0.11889	79,942	9,504	377,245	1,193,406	14.928
75-80	0.18298	70,439	12,889	321,392	816,160	11.587
80-85	0.28367	57,550	16,325	247,419	494,768	8.597
85+	1.00000	41,225	41,225	247,349	247,349	6.000

<sup>1</sup> Definitions of life table values are contained in the Technical Notes.  
Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.25  
Abridged Life Table for Blacks  
Michigan Residents, 1993

Age	$q_x(1)^1$	$l_x(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$T_x(5)^1$	$ex(6)^1$
0-1	0.01760	100,000	1,760	98,445	6,839,583	68.396
1-5	0.00390	98,240	383	392,003	6,741,137	68.619
5-10	0.00196	97,857	192	488,758	6,349,134	64.882
10-15	0.00177	97,665	172	488,018	5,860,376	60.005
15-20	0.00799	97,493	779	485,752	5,372,358	55.105
20-25	0.01340	96,714	1,295	480,421	4,886,606	50.526
25-30	0.01258	95,419	1,200	474,140	4,406,185	46.177
30-35	0.01610	94,219	1,517	467,497	3,932,045	41.733
35-40	0.02301	92,702	2,133	458,485	3,464,548	37.373
40-45	0.03290	90,570	2,980	445,755	3,006,064	33.191
45-50	0.04381	87,590	3,837	428,768	2,560,309	29.231
50-55	0.05907	83,753	4,947	406,825	2,131,540	25.450
55-60	0.07471	78,806	5,887	379,846	1,724,715	21.886
60-65	0.10294	72,919	7,506	346,586	1,344,869	18.443
65-70	0.14539	65,413	9,510	304,177	998,283	15.261
70-75	0.21036	55,903	11,759	250,381	694,107	12.416
75-80	0.24419	44,144	10,779	193,879	443,726	10.052
80-85	0.36802	33,365	12,279	135,983	249,847	7.488
85+	1.00000	21,086	21,086	113,864	113,864	5.400

<sup>1</sup> Definitions of life table values are contained in the Technical Notes.  
Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.26  
Abridged Life Table for Black Males  
Michigan Residents, 1993

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
0-1	0.01928	100,000	1,928	98,327	6,378,877	63.789
1-5	0.00414	98,072	406	391,240	6,280,550	64.040
5-10	0.00172	97,667	168	487,873	5,889,310	60.300
10-15	0.00276	97,499	268	487,063	5,401,437	55.400
15-20	0.01348	97,231	1,311	483,272	4,914,374	50.543
20-25	0.02254	95,920	2,161	474,345	4,431,103	46.196
25-30	0.02156	93,759	2,021	463,772	3,956,758	42.201
30-35	0.02515	91,738	2,307	453,131	3,492,986	38.076
35-40	0.03373	89,431	3,016	439,963	3,039,855	33.991
40-45	0.04597	86,415	3,972	422,443	2,599,892	30.086
45-50	0.05390	82,443	4,443	401,562	2,177,449	26.412
50-55	0.07886	78,000	6,151	375,189	1,775,887	22.768
55-60	0.09967	71,849	7,161	341,866	1,400,697	19.495
60-65	0.13383	64,689	8,657	302,403	1,058,831	16.368
65-70	0.17935	56,032	10,049	255,811	756,428	13.500
70-75	0.26919	45,983	12,378	198,987	500,617	10.887
75-80	0.30169	33,605	10,138	142,173	301,630	8.976
80-85	0.42415	23,467	9,953	91,890	159,457	6.795
85+	1.00000	13,513	13,513	67,567	67,567	5.000

<sup>1</sup> Definitions of life table values are contained in the Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.27  
Abridged Life Table for Black Females  
Michigan Residents, 1993

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
0-1	0.01559	100,000	1,559	98,596	7,287,685	72.877
1-5	0.00366	98,441	360	392,899	7,189,088	73.030
5-10	0.00221	98,080	217	489,807	6,796,190	69.292
10-15	0.00077	97,864	75	489,139	6,306,383	64.440
15-20	0.00252	97,789	246	488,423	5,817,244	59.488
20-25	0.00525	97,543	512	486,489	5,328,821	54.630
25-30	0.00511	97,031	495	483,989	4,842,332	49.905
30-35	0.00875	96,536	845	480,753	4,358,343	45.147
35-40	0.01434	95,692	1,372	475,283	3,877,590	40.522
40-45	0.02188	94,320	2,064	466,830	3,402,307	36.072
45-50	0.03507	92,256	3,235	453,559	2,935,477	31.819
50-55	0.04290	89,021	3,819	435,856	2,481,918	27.880
55-60	0.05476	85,202	4,666	414,855	2,046,062	24.014
60-65	0.07771	80,537	6,258	387,885	1,631,206	20.254
65-70	0.11757	74,278	8,732	350,526	1,243,321	16.739
70-75	0.16611	65,546	10,888	301,038	892,795	13.621
75-80	0.20606	54,658	11,262	245,884	591,757	10.826
80-85	0.33366	43,396	14,479	181,048	345,873	7.970
85+	1.00000	28,917	28,917	164,825	164,825	5.700

<sup>1</sup> Definitions of life table values are contained in the Technical Notes

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Table 4.28  
**Age-Adjusted Death Rates<sup>1</sup> by Race and Sex**  
 Michigan<sup>2</sup> and United States Residents, 1970 - 1993

Place	Year	All Races			White			Black		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Mich.	1970	717.5	925.9	537.3	685.5	889.4	510.8	1,017.1	1,274.1	787.8
	1971	707.9	922.9	524.0	672.5	881.2	495.7	1,034.2	1,315.0	785.3
	1972	711.1	928.2	526.4	677.2	888.0	499.4	1,017.8	1,302.6	767.1
	1973	694.3	906.3	513.7	658.4	862.6	486.0	1,014.1	1,309.1	757.9
	1974	660.7	865.1	488.0	628.4	824.6	464.2	948.4	1,235.6	698.6
	1975	640.2	840.3	472.4	610.1	800.5	452.0	904.1	1,198.8	649.8
	1976	636.1	838.5	469.1	607.2	801.4	448.5	889.6	1,170.5	650.8
	1977	614.4	814.8	449.4	587.3	781.6	428.8	851.7	1,116.5	628.0
	1978	606.3	797.8	449.8	578.7	765.7	426.8	842.7	1,085.5	640.3
	1979	585.4	775.6	431.4	557.9	742.5	409.7	812.6	1,063.9	604.2
	1980	588.0	773.9	438.7	557.1	735.5	414.9	829.5	1,091.4	615.2
	1981	567.4	752.1	424.5	542.2	718.5	403.0	823.9	1,075.3	619.6
	1982	556.9	739.5	416.8	531.9	705.4	395.6	807.8	1,055.2	607.2
	1983	557.1	735.0	421.2	531.1	698.7	399.3	816.6	1,065.3	615.7
	1984	564.5	736.5	431.3	533.7	694.8	407.2	813.3	1,072.4	605.0
	1985	570.0	747.3	427.6	534.9	701.2	402.8	840.4	1,121.8	612.3
	1986	566.9	734.8	431.0	529.2	685.4	404.0	857.1	1,136.4	632.4
	1987	556.4	713.6	428.4	516.1	658.8	400.9	866.4	1,159.1	632.0
	1988	545.0	698.0	419.1	504.9	647.2	388.6	858.2	1,120.2	647.9
	1989	531.5	675.4	412.0	494.3	634.9	377.3	883.6	1,163.5	659.9
	1990	527.9	681.2	405.4	488.0	628.2	377.1	797.9	1,069.2	585.2
	1991	533.6	686.6	412.0	492.4	631.9	383.3	814.8	1,081.1	603.2
	1992	525.3	677.3	404.4	483.1	623.7	372.4	806.8	1,060.0	608.6
	1993	525.8	671.6	408.1	482.1	614.3	376.6	814.7	1,077.6	607.1
U.S.	1970	714.3	931.6	532.5	679.6	893.4	501.7	1,044.0	1,318.6	814.4
	1971	697.6	913.3	519.1	663.7	876.0	489.1	1,007.8	1,276.1	784.6
	1972	698.0	918.0	516.6	664.0	879.3	487.6	1,009.5	1,296.6	772.8
	1973	687.3	905.9	508.1	654.0	868.5	479.3	993.1	1,272.1	640.9
	1974	659.5	870.9	487.0	629.0	836.1	461.0	940.4	1,215.5	717.1
	1975	630.4	837.2	462.5	602.2	804.3	439.0	890.8	1,163.0	670.6
	1976	618.5	820.9	455.0	591.3	789.3	432.5	870.5	1,138.3	654.5
	1977	602.1	801.3	441.8	575.7	770.6	419.6	849.3	1,112.1	639.6
	1978	595.0	791.4	437.4	569.5	761.1	416.4	831.8	1,093.9	622.7
	1979	577.0	768.6	423.1	551.9	738.4	402.5	840.1	1,090.4	636.1
	1980	585.8	777.2	432.6	559.4	745.3	411.1	842.5	1,112.8	631.1
	1981	568.6	753.8	420.8	544.8	724.8	401.5	807.0	1,068.8	602.7
	1982	554.7	734.2	411.9	532.3	706.8	393.6	782.1	1,035.4	585.9
	1983	552.5	729.4	412.5	529.4	701.6	393.3	787.4	1,037.5	595.3
	1984	548.1	721.6	410.5	525.2	693.6	391.7	783.3	1,035.9	590.1
	1985	548.9	723.0	410.3	524.9	693.3	391.0	793.6	1,053.4	594.8
	1986	544.8	716.2	407.6	520.1	684.9	388.1	796.8	1,061.9	594.1
	1987	539.2	706.8	404.6	513.7	674.2	384.8	796.4	1,063.6	592.4
	1988	539.9	706.1	406.1	512.8	671.3	385.3	809.7	1,083.0	601.0
	1989	528.0	689.3	397.3	499.6	652.2	376.0	805.9	1,082.8	594.3
	1990	520.2	680.2	390.6	492.8	644.3	369.9	789.2	1,061.3	581.6
	1991	513.7	669.9	386.5	486.8	634.4	366.3	780.7	1,048.8	575.1
	1992Pr.	504.5	656.0	380.3	477.5	620.9	359.9	767.5	1,026.9	568.4
	1993	—	—	—	—	—	—	—	—	—

<sup>1</sup> Based on age-specific death rates per 100,000 population in specified group. Computed by the direct method, using as the standard population the age distribution of the total population of the United States as enumerated in 1940; see Technical Notes.

<sup>2</sup> Michigan rates for 1981-1985 have been revised based upon revisions to population estimates; see Technical Notes.

Source: Office of the State Registrar and Division of Health Statistics, MDPH

Figure 4.2  
Michigan Live Birth Certificate

STATE OF MICHIGAN  
DEPARTMENT OF PUBLIC HEALTH 49

**CERTIFICATE OF  
LIVE BIRTH**

121 - STATE FILE NUMBER  
**0416973**

LF \_\_\_\_\_

CF \_\_\_\_\_

1 CHILD - NAME (FIRST) (MIDDLE) (LAST)

**CHILD**

2 SEX ☐ Male ☐ Female

3a PLURALITY - SINGLE, TWIN, TRIPLET, ETC. (SPECIFY)

3b. IF NOT SINGLE - BORN 1ST, 2ND, 3RD, ETC. (SPECIFY)

4a DATE OF BIRTH (Month, Day, Year)

4b TIME OF BIRTH

**PLACE**

5a HOSPITAL NAME - (IF NOT HOSPITAL GIVE STREET AND NUMBER)

5b CITY, VILLAGE, OR TOWNSHIP OF BIRTH

5c COUNTY OF BIRTH

**CERTIFICATION**

6a I CERTIFY THAT THE ABOVE NAMED CHILD WAS BORN ALIVE AT THE PLACE AND TIME AND ON THE DATE STATED ABOVE

6b CERTIFIER'S NAME & TITLE (print or type)

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

6c NAME AND TITLE OF ATTENDANT IF OTHER THAN CERTIFIER

6d MAILING ADDRESS OF ATTENDANT (STREET NO., CITY OR VILLAGE, STATE, ZIP)

7a REGISTRAR'S SIGNATURE

7b DATE RECEIVED BY LOCAL REGISTRAR - (Month, Day, Year)

**MOTHER**

8a MOTHER'S NAME (FIRST, MIDDLE, LAST)

8b SOCIAL SECURITY NUMBER

8c STATE OF BIRTH - NAME COUNTRY IF NOT USA

8d DATE OF BIRTH (Month, Day, Year)

8e MOTHER - SURNAME BEFORE FIRST MARRIED

8f RESIDENCE (Check one box and specify)

☐ INSIDE CITY OR VILLAGE OF \_\_\_\_\_

☐ TWP. OF \_\_\_\_\_

8g COUNTY

8h STATE

**FATHER**

9a FATHER'S NAME (FIRST, MIDDLE, LAST)

9b SOCIAL SECURITY NUMBER

9c STATE OF BIRTH - NAME COUNTRY IF NOT USA

9d DATE OF BIRTH (Month, Day, Year)

B213 (11-89) MDPH

10a I CERTIFY THAT THE PERSONAL INFORMATION PROVIDED ON THIS CERTIFICATE IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF

10b THE PARENT(S) REQUEST THAT INFORMATION ON THIS BIRTH BE RELEASED TO THE SOCIAL SECURITY ADMIN. FOR ISSUANCE OF A SOCIAL SECURITY NUMBER AND CARD

☐ YES ☐ NO

SIGNATURE \_\_\_\_\_ (PARENT OR OTHER INFORMANT)

**CONFIDENTIAL INFORMATION FOR PUBLIC HEALTH USE ONLY**

**MOTHER**

11 ANCESTRY - Mexican, Puerto Rican, Cuban, Central or South American, Chicano, other Hispanic, Afro-American, Arab, English, French, Finnish, etc. (Specify below)

12 RACE - American Indian, Black, White, etc. If Asian, give nationality, i.e., Chinese, Filipino, Asian Indian, etc. (Specify below)

13 EDUCATION (Specify only highest grade completed) Elementary/Secondary (0-12) College (14 or 5+)

11a \_\_\_\_\_ 12a \_\_\_\_\_ 13a \_\_\_\_\_

11b \_\_\_\_\_ 12b \_\_\_\_\_ 13b \_\_\_\_\_

**FATHER**

14 EXPECTED SOURCE OF PAYMENT FOR MEDICAL SERVICES (Private insurance, Medicaid, etc.)

15 MOTHER'S MAILING ADDRESS (STREET NUMBER, CITY OR VILLAGE, STATE, ZIP)

16a MEDICAL RECORD NUMBER OF MOTHER

16b MEDICAL RECORD NUMBER OF CHILD

17 DATE LAST NORMAL MENSTRUATION BEGAN (Month, Day, Year)

18 MONTH OF PREGNANCY PRENATAL CARE BEGAN

19 TOTAL PRENATAL VISITS

**MEDICAL AND HEALTH INFORMATION**

20 LIVE BIRTHS (Do not include this Child)

20a NOW LIVING 20b NOW DEAD

20c OTHER TERMINATIONS (Spontaneous and induced at any time after conception)

21a MOTHER TRANSFERRED PRIOR TO DELIVERY (If yes enter name of facility transferred from)

21b INFANT TRANSFERRED (If yes enter name of facility transferred to)

22 ATTENDANT AT BIRTH

23 INFANT ADMITTED TO NICU? ☐ YES ☐ NO

24 BIRTHWEIGHT (Specify unit)

25 ESTIMATED WEEKS GESTATION

26 APGAR SCORE

27 PLACE OF BIRTH

28 MEDICAL RISK FACTORS FOR THIS PREGNANCY (Check all that apply)

29 OTHER RISK FACTORS FOR THIS PREGNANCY

30 OBSTETRIC PROCEDURES (Check all that apply)

31 COMPLICATIONS OF LABOR AND/OR DELIVERY (Check all that apply)

32 METHOD OF DELIVERY (Check all that apply)

33 ABNORMAL CONDITIONS OF THE NEWBORN (Check all that apply)

34 APPARENT CONGENITAL ANOMALIES OF NEWBORN (Check all that apply)



Figure 4.3  
Michigan Fetal Death Certificate

MICHIGAN DEPARTMENT OF PUBLIC HEALTH  
**REPORT OF FETAL DEATH**  
(TYPE OR PRINT IN INK)

<b>FETUS</b>	1a. DATE OF DELIVERY (Month, Day, Year)	1b. TIME	1c. SEX OF FETUS 1 <input type="checkbox"/> MALE 2 <input type="checkbox"/> FEMALE 3 <input type="checkbox"/> INDETERMINABLE	1d. WEIGHT OF FETUS	1e. ESTIMATED WEEKS GESTATION  WEEKS	1f. ATTENDANT AT DELIVERY 1 <input type="checkbox"/> M.D. 3 <input type="checkbox"/> NURSE 5 <input type="checkbox"/> NURSE-MIDWIFE 2 <input type="checkbox"/> D.O. 4 <input type="checkbox"/> MIDWIFE 6 <input type="checkbox"/> OTHER (SPECIFY)
<b>MOTHER</b>	2a. RESIDENCE - STATE, IF OUTSIDE USA ENTER COUNTRY		2b. RESIDENCE - COUNTY		2c. RESIDENCE - LOCAL (Check one box and specify) <input type="checkbox"/> INSIDE CITY OR VILLAGE OF _____ <input type="checkbox"/> TWP. OF _____	
					2d. ZIP CODE	
<b>MOTHER</b>	3. ANCESTRY - Mexican, Puerto Rican, Cuban, Central or South American, Chicano, other Hispanic, Afro-American, Arab, English, French, Finnish, etc. (Specify below)		4. RACE - American Indian, Black, White, etc. If Black, give nationality i.e. Chinese, Filipino, Asian Indian, etc. (Specify below)		5. EDUCATION (Specify only highest grade completed) Elementary/Secondary (0-12) _____ College (1-4 or 5+) _____	
					6. OCCUPATION AND BUSINESS/INDUSTRY (Worked during last year) Occupation _____ Business/Industry _____	
<b>FATHER</b>	3a. _____		4a. _____		5a. _____	
	3b. _____		4b. _____		5b. _____	
<b>MEDICAL AND PREGNANCY HISTORY INFORMATION</b>	8. EXPECTED SOURCE OF PAYMENT FOR MEDICAL SERVICES (Private Insurance, Medicaid, etc.)		9. MOTHER TRANSFERRED PRIOR TO DELIVERY? <input type="checkbox"/> YES <input type="checkbox"/> NO If yes, enter name of facility transferred from: _____			
	10. PREGNANCY HISTORY (Complete each section)					
	11. DATE LAST NORMAL MENSTRUATION BEGAN (Month, Day, Year)					
	LIVE BIRTHS					
	10a. NOW LIVING Number _____ None <input type="checkbox"/>		10b. NOW DEAD Number _____ None <input type="checkbox"/>		10c. DO NOT INCLUDE THIS FETUS Number _____ None <input type="checkbox"/>	
	10d. DATE OF LAST LIVE BIRTH (Mo., Year)		10e. DATE OF LAST OTHER TERMINATION (Mo., Year)		12. PLURALITY - Single, Twin, Triplet, etc. (Specify)	
					13. IF NOT SINGLE BIRTH - Born First, Second, Third, etc. (Specify)	
					14a. MONTH OF PREGNANCY PRENATAL CARE BEGAN - First, Second, Third, etc. (Specify)	
					14b. PRENATAL VISITS - Total Number (If none, so state)	
15a. MEDICAL RISK FACTORS FOR THIS PREGNANCY (Check all that apply)			16. OBSTETRIC PROCEDURES (Check all that apply)			
Anemia (Hct. < 30/Hgb. < 10) ..... 01 <input type="checkbox"/> Cardiac disease ..... 02 <input type="checkbox"/> Acute or chronic lung disease ..... 03 <input type="checkbox"/> Diabetes ..... 04 <input type="checkbox"/> Genital herpes ..... 05 <input type="checkbox"/> Hydramnios/Oligohydramnios ..... 06 <input type="checkbox"/> Hemoglobinopathy ..... 07 <input type="checkbox"/> Hypertension, chronic ..... 08 <input type="checkbox"/> Hypertension, pregnancy-associated ..... 09 <input type="checkbox"/> Eclampsia ..... 10 <input type="checkbox"/> Incompetent cervix ..... 11 <input type="checkbox"/> Previous infant 4000+ grams ..... 12 <input type="checkbox"/> Previous preterm or small-for-gestational-age infant ..... 13 <input type="checkbox"/> Renal disease ..... 14 <input type="checkbox"/> Rh sensitization ..... 15 <input type="checkbox"/> Uterine bleeding ..... 16 <input type="checkbox"/> None ..... 00 <input type="checkbox"/> Other (Specify) ..... 17 <input type="checkbox"/>			Amniocentesis ..... 01 <input type="checkbox"/> Electronic fetal monitoring ..... 02 <input type="checkbox"/> Induction of labor ..... 03 <input type="checkbox"/> Stimulation of labor ..... 04 <input type="checkbox"/> Tocolysis ..... 05 <input type="checkbox"/> Ultrasound ..... 06 <input type="checkbox"/> None ..... 00 <input type="checkbox"/> Other (Specify) ..... 07 <input type="checkbox"/>			
15b. OTHER RISK FACTORS FOR THIS PREGNANCY (Complete all items)			17. COMPLICATIONS OF LABOR AND/OR DELIVERY (Check all that apply)			
Tobacco use during pregnancy ..... Yes <input type="checkbox"/> No <input type="checkbox"/> Average number cigarettes per day _____ Alcohol use during pregnancy ..... Yes <input type="checkbox"/> No <input type="checkbox"/> Average number of drinks per week _____ Weight gained during pregnancy _____ lbs.			Febrile (> 100° F. or 38° C.) ..... 01 <input type="checkbox"/> Meconium, moderate/heavy ..... 02 <input type="checkbox"/> Premature rupture of membrane (> 12 hours) ..... 03 <input type="checkbox"/> Abruptio placentae ..... 04 <input type="checkbox"/> Placenta previa ..... 05 <input type="checkbox"/> Other excessive bleeding ..... 06 <input type="checkbox"/> Seizures during labor ..... 07 <input type="checkbox"/> Precipitate labor (< 3 hours) ..... 08 <input type="checkbox"/> Prolonged labor (> 20 hours) ..... 09 <input type="checkbox"/> Dysfunctional labor ..... 10 <input type="checkbox"/> Breech/Malpresentation ..... 11 <input type="checkbox"/> Cephalopelvic disproportion ..... 12 <input type="checkbox"/> Cord prolapse ..... 13 <input type="checkbox"/> Anesthetic complication ..... 14 <input type="checkbox"/> Fetal distress ..... 15 <input type="checkbox"/> None ..... 00 <input type="checkbox"/> Other (Specify) ..... 16 <input type="checkbox"/>			
			18. METHOD OF DELIVERY (Check all that apply)			
			Vaginal delivery after previous C-section ..... 01 <input type="checkbox"/> Primary vaginal delivery ..... 02 <input type="checkbox"/> Vaginal C-section ..... 03 <input type="checkbox"/> Forceps ..... 04 <input type="checkbox"/> Vacuum ..... 05 <input type="checkbox"/> Hysterectomy ..... 06 <input type="checkbox"/> Hysterotomy ..... 07 <input type="checkbox"/> Other (Specify) ..... 08 <input type="checkbox"/>			
			19. APPARENT CONGENITAL ANOMALIES OF FETUS (Check all that apply)			
			Anencephalus ..... 01 <input type="checkbox"/> Spina Bifida/Meningocele ..... 02 <input type="checkbox"/> Hydrocephalus ..... 03 <input type="checkbox"/> Microcephalus ..... 04 <input type="checkbox"/> Other central nervous system anomalies (Specify) ..... 05 <input type="checkbox"/> Heart malformations ..... 06 <input type="checkbox"/> Other circulatory/respiratory anomalies (Specify) ..... 07 <input type="checkbox"/> Rectal atresia/stenosis ..... 08 <input type="checkbox"/> Tracheo-esophageal fistula/Esoophageal atresia ..... 09 <input type="checkbox"/> Omphalocele/Gastroschisis ..... 10 <input type="checkbox"/> Other gastrointestinal anomalies (Specify) ..... 11 <input type="checkbox"/> Malformed genitalia ..... 12 <input type="checkbox"/> Anal agenesis ..... 13 <input type="checkbox"/> Other urogenital anomalies (Specify) ..... 14 <input type="checkbox"/> Cleft lip/palate ..... 15 <input type="checkbox"/> Polydactyly/Syndactyly/Adactyly ..... 16 <input type="checkbox"/> Club foot ..... 17 <input type="checkbox"/> Diaphragmatic hernia ..... 18 <input type="checkbox"/> Other musculoskeletal/integumental anomalies (Specify) ..... 19 <input type="checkbox"/> Down's syndrome ..... 20 <input type="checkbox"/> Other chromosomal anomalies (Specify) ..... 21 <input type="checkbox"/> None ..... 00 <input type="checkbox"/> Other (Specify) ..... 22 <input type="checkbox"/>			
20. PART I. Fetal or maternal condition directly causing fetal death. Enter only one case per line for a, b, and c.						
a. _____ DUE TO (OR AS A CONSEQUENCE OF) _____ b. _____ DUE TO (OR AS A CONSEQUENCE OF) _____ c. _____ Fetal and/or maternal conditions, if any, giving rise to the immediate cause(s), stating the underlying cause last.						
PART II. Other significant conditions of fetus or mother contributing to fetal death but not resulting in the underlying cause given in Part I.						
21. FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify)						
22a. HOSPITAL WHERE FETUS WAS DELIVERED (IF NOT HOSPITAL - GIVE ADDRESS OF PERSON COMPLETING REPORT)						
22b. CITY, VILLAGE, OR TOWNSHIP OF DELIVERY						
22c. COUNTY OF DELIVERY						
23. NAME OF PERSON COMPLETING REPORT (TYPE OR PRINT)						
24. DATE REPORT COMPLETED (Month, Day, Year)						
25. DATE REPORT RECEIVED BY DEPARTMENT (Month, Day, Year)						

FAILURE TO PROVIDE THE REQUIRED INFORMATION IS A MISDEMEANOR PUNISHABLE BY IMPRISONMENT OF NOT MORE THAN 1 YEAR OR A FINE OF NOT MORE THAN \$1,000.00 OR BOTH.

**Figure 4.4**  
**Michigan Death Certificate**

STATE OF MICHIGAN DEPARTMENT OF PUBLIC HEALTH		STATE FILE NUMBER <b>No 0187597</b>	
CF _____		LF _____	
TYPE/PRINT IN PERMANENT BLACK INK			
NAME OF DECEDENT FOR USE BY PHYSICIAN OR INSTITUTION			
1. DECEDENT'S NAME (First, Middle, Last)		2. SEX	
3. DATE OF DEATH (Month, Day, Year)			
4a. AGE - Last Birthday (Years)		4b. UNDER 1 YEAR	
4c. UNDER 1 DAY		5. DATE OF BIRTH (Month, Day, Year)	
6. COUNTY OF DEATH			
7a. LOCATION OF DEATH (Enter place officially pronounced dead in 7a, 7b, 7c.)		7b. IF HOSP. OR INST. Inpatient, Op./Emer. Room, DOA (Specify)	
7c. CITY, VILLAGE, OR TOWNSHIP OF DEATH			
8. SOCIAL SECURITY NUMBER		9a. USUAL OCCUPATION (Give kind of work done during most of working life. Do not use retired)	
9b. KIND OF BUSINESS OR INDUSTRY			
10a. CURRENT RESIDENCE - STATE		10b. COUNTY	
10c. LOCALITY (Check one box and specify)		10d. STREET AND NUMBER	
10e. ZIP CODE		11. BIRTHPLACE (City and State or Foreign Country)	
12. MARITAL STATUS - Married, Never Married, Widowed, Divorced (Specify)		13. SURVIVING SPOUSE (If living, give name, date first married)	
14. WAS DECEDENT EVER IN U.S. ARMED FORCES? (Specify Yes or No)		15. ANCESTRY - Mexican, Puerto Rican, Cuban, Central or South American, Chicano, other Hispanic, Afro-American, Arab, English, French, Finnish, etc. (Specify below)	
16. RACE - American Indian, Black, White, etc. (Specify below)		17. DECEDENT'S EDUCATION (Specify only highest grade completed)	
18. FATHER'S NAME (First, Middle, Last)		19. MOTHER'S NAME (First, Middle, Surname before first married)	
20a. INFORMANT'S NAME (Type/Print)		20b. MAILING ADDRESS (Street and Number or Rural Route Number, City or Village, State, ZIP Code)	
21. METHOD OF DISPOSITION - Burial, Cremation, Removal, Donation, Other (Specify)		22. PLACE OF DISPOSITION (Name of Cemetery, Crematory, or other place)	
23. SIGNATURE OF FUNERAL SERVICE LICENSEE		24. LICENSE NUMBER (of Licensee)	
25. NAME AND ADDRESS OF FACILITY			
26. PART I. Enter the diseases, injuries, or complications that caused the death. Do NOT enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.		Approximate Interval Between Onset and Death	
IMMEDIATE CAUSE (Final disease or condition resulting in death)			
Sequitally list conditions, IF ANY, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST			
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I		27a. WAS AN AUTOPSY PERFORMED? (Yes or No)	
		27b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or No)	
28. ACTUAL PLACE OF DEATH (Home, Nursing Home, Hospital, Ambulance) (Specify)		29. WAS CASE REFERRED TO MEDICAL EXAMINER? (Specify Yes or No)	
30a. To the best of my knowledge, death occurred at the time, date and place and due to the cause(s) stated		31a. (Check one only) The case reviewed and determined not to be a medical examiner's case.	
30b. DATE SIGNED (Mo., Day, Yr.)		31b. DATE SIGNED (Mo., Day, Yr.)	
30c. TIME OF DEATH		31c. CASE NUMBER	
30d. NAME OF ATTENDING PHYSICIAN IF OTHER THAN CERTIFIER (Type or Print)		31d. PRONOUNCED DEAD (Mo., Day, Yr.)	
32a. NAME AND ADDRESS OF PERSON WHO COMPLETED CAUSE OF DEATH (ITEM 26) (Type or Print)		32b. LICENSE NUMBER	
33a. ACC. SUICIDE, HOM. NATURAL OR PENDING INVEST. (Specify)		33b. DATE OF INJURY (Mo., Day, Yr.)	
33c. TIME OF INJURY		33d. DESCRIBE HOW INJURY OCCURRED	
33e. INJURY AT WORK (Specify Yes or No)		33f. PLACE OF INJURY - At home, farm, street, factory, office building, etc. (Specify)	
33g. LOCATION - Street or R.F.D. No. City, Village or Twp. State		34a. REGISTRAR'S SIGNATURE	
34b. DATE FILED (Month, Day, Year)			

Section 2843 of Act 368 Public Acts of 1978 requires that the attending physician shall fill out and sign the medical certificate of death within 48 hours after death.

In the absence of the attending physician and in the absence of a physician representing the attendant, medical certification must be provided as follows:

For deaths pronounced within a hospital, by the chief medical officer of the hospital based on the available records or by a pathologist.

For deaths pronounced outside a hospital, by the county medical examiner.

The funeral director is responsible for completing all other portions of the certificate and obtaining a burial or removal permit prior to disposing of the body or removing from the registration district where the death occurred.

This document must be typewritten (except signatures) or printed in black indelible ink. Alterations to the document must be accomplished using a lift off process. Damaged or folded documents are not acceptable.

Failure to provide the required information is a misdemeanor punishable by imprisonment of not more than 1 year or a fine of not more than \$1,000.00 or both.


**NOTE:** If the decedent is suspected of having had an infectious condition notification of the funeral director to whom the body is released may be required by Act 185 of 1986.

Figure 4.5  
Michigan Marriage License

Except for signature, spaces left  
blank must be completed by typewriter  
or printed legibly.

By Authority of MCL 333.2813

This Space Reserved for Binding

  
**Marriage License**  
State of Michigan

DATE OF APPLICATION \_\_\_\_\_ STATE FILE NO. \_\_\_\_\_  
DATE CERTIFICATE FILED \_\_\_\_\_ LOCAL FILE NO. **0166087**

To any person legally authorized to solemnize marriage in the State of Michigan,  
Marriage must be solemnized In the State of Michigan on or before \_\_\_\_\_ DATE \_\_\_\_\_

between \_\_\_\_\_ and \_\_\_\_\_  
FULL NAME OF MALE (FIRST, MIDDLE, LAST) FULL NAME OF FEMALE (FIRST, MIDDLE, LAST)

LAST NAME BEFORE FIRST MARRIED, IF DIFFERENT \_\_\_\_\_  
PRESENT AGE \_\_\_\_\_ DATE OF BIRTH \_\_\_\_\_  
PRESENT AGE \_\_\_\_\_ DATE OF BIRTH \_\_\_\_\_

RESIDENCE NO. \_\_\_\_\_ STREET \_\_\_\_\_ RESIDENCE NO. \_\_\_\_\_ STREET \_\_\_\_\_  
CITY, STATE, AND ZIP CODE \_\_\_\_\_ CITY, STATE, AND ZIP CODE \_\_\_\_\_

RESIDENCE COUNTY \_\_\_\_\_ NUMBER OF TIMES PREVIOUSLY MARRIED \_\_\_\_\_ RESIDENCE COUNTY \_\_\_\_\_ NUMBER OF TIMES PREVIOUSLY MARRIED \_\_\_\_\_  
BIRTHPLACE — CITY AND STATE \_\_\_\_\_ BIRTHPLACE — CITY AND STATE \_\_\_\_\_

FATHER'S FULL NAME \_\_\_\_\_ FATHER'S FULL NAME \_\_\_\_\_  
MOTHER'S FULL NAME BEFORE FIRST MARRIED \_\_\_\_\_ MOTHER'S FULL NAME BEFORE FIRST MARRIED \_\_\_\_\_  
FATHER'S BIRTHPLACE \_\_\_\_\_ MOTHER'S BIRTHPLACE \_\_\_\_\_ FATHER'S BIRTHPLACE \_\_\_\_\_ MOTHER'S BIRTHPLACE \_\_\_\_\_

An affidavit has been filed in this office by which it appears that said statements are true. This marriage license authorizes the marriage of the parties named above within the State of Michigan by any person authorized to perform a marriage ceremony under the laws of the State of Michigan.

In witness whereof,

I have signed and sealed these presents, this \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_;

COUNTY CLERK \_\_\_\_\_

COUNTY \_\_\_\_\_

DEPUTY CLERK \_\_\_\_\_

## \* Certificate of Marriage

Between Mr. \_\_\_\_\_ and M \_\_\_\_\_

I hereby certify that, in accordance with the above license, the persons herein mentioned were joined in marriage by me, in \_\_\_\_\_, county of \_\_\_\_\_, MICHIGAN,  
CITY, VILLAGE, OR TOWNSHIP  
on the \_\_\_\_\_ day of \_\_\_\_\_ A.D. 19\_\_\_\_, in the presence of

SIGNATURE OF WITNESS \_\_\_\_\_ SIGNATURE OF WITNESS \_\_\_\_\_  
NAME OF WITNESS (TYPE OR PRINT) \_\_\_\_\_ NAME OF WITNESS (TYPE OR PRINT) \_\_\_\_\_  
SIGNATURE OF MAGISTRATE OR CLERGY \_\_\_\_\_ NAME AND TITLE OF MAGISTRATE OR CLERGY (TYPE OR PRINT) \_\_\_\_\_

POST OFFICE ADDRESS OF MAGISTRATE OR CLERGY \_\_\_\_\_

THIS ORIGINAL must be returned WITHIN TEN DAYS AFTER THE MARRIAGE to the COUNTY CLERK, who issued the same under severe penalty. This provision must be complied with to insure a PROPER LEGAL RECORD of the marriage.

Figure 4.6  
Michigan Divorce Record

<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 60%;"> <b>RECORD OF DIVORCE OR ANNULMENT</b>  MICHIGAN DEPARTMENT OF PUBLIC HEALTH  By authority of MCL 333.2813. </div>		<div style="border-bottom: 1px solid black; margin-bottom: 5px;">Court Case Number</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">County Circuit Court</div>
<div style="border-bottom: 1px solid black; margin-bottom: 5px;">State File Number</div>		
1. Husband's Name <div style="float: right; font-size: small;">First, Middle, Last</div>	2. Husband's Birthdate <div style="float: right; font-size: small;">Month, Day, Year</div>	
3. Husband's Residence <div style="float: right; font-size: small;">City, Village or Township      County      State</div>		
4. Husband's Birthplace <div style="float: right; font-size: small;">State or Foreign Country</div>	5. Number of this Marriage <div style="float: right; font-size: small;">First, Second, etc. (Specify)</div>	
6. Wife's Name <div style="float: right; font-size: small;">First, Middle, Last</div>	7. Wife's Birthdate <div style="float: right; font-size: small;">Month, Day, Year</div>	
8. Wife's Last Name Before First Married <div style="float: right; font-size: small;">_____</div>		
9. Wife's Residence <div style="float: right; font-size: small;">City, Village or Township      County      State</div>		
10. Wife's Birthplace <div style="float: right; font-size: small;">State or Foreign Country</div>	11. Number of this Marriage <div style="float: right; font-size: small;">First, Second, etc. (Specify)</div>	
12. Place of this Marriage <div style="float: right; font-size: small;">City, Village or Township      County      State or Foreign Country</div>		
13. Date of this Marriage <div style="float: right; font-size: small;">Month, Day, Year</div>	14. Date Couple Last Resided in Same Household <div style="float: right; font-size: small;">Month, Day, Year</div>	<input type="checkbox"/> Check If Not Separated
15. Number of Minor Children in Household at Separation Date (Filing Date if Not Separated)	<input type="checkbox"/> Check If None	Number <div style="float: right; font-size: small;">_____</div>
16. Plaintiff <div style="display: inline-block; width: 100px;"> <input type="checkbox"/> Husband    <input type="checkbox"/> Wife    <input type="checkbox"/> Other </div>	17. Plaintiff's Attorney <div style="float: right; font-size: small;">Name (Type or Print)      Bar Number</div>	
18. Attorney's Address <div style="float: right; font-size: small;">Number and Street      City      State      ZIP Code</div>		
19. Judgement of <div style="float: right; font-size: small;">Divorce/Annulment (Specify)</div>	20. Number of Minor Children whose Physical Custody was Awarded to: Husband <div style="float: right; font-size: small;">Number</div> Wife <div style="float: right; font-size: small;">Number</div> Joint <div style="float: right; font-size: small;">Number</div> Other <div style="float: right; font-size: small;">Number</div> <input type="checkbox"/> No Children	
21. Judgement Recorded on <div style="float: right; font-size: small;">Month, Day, Year</div>	22. I certify that this Divorce was granted on <div style="float: right; font-size: small;">Month, Day, Year</div>	
23. Certifying Official <div style="float: right; font-size: small;">Signature      Title      Date Signed</div>		

Failure to provide the required information is a misdemeanor punishable by imprisonment of not more than 1 year or a fine of not more than \$1,000.00 or both.

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