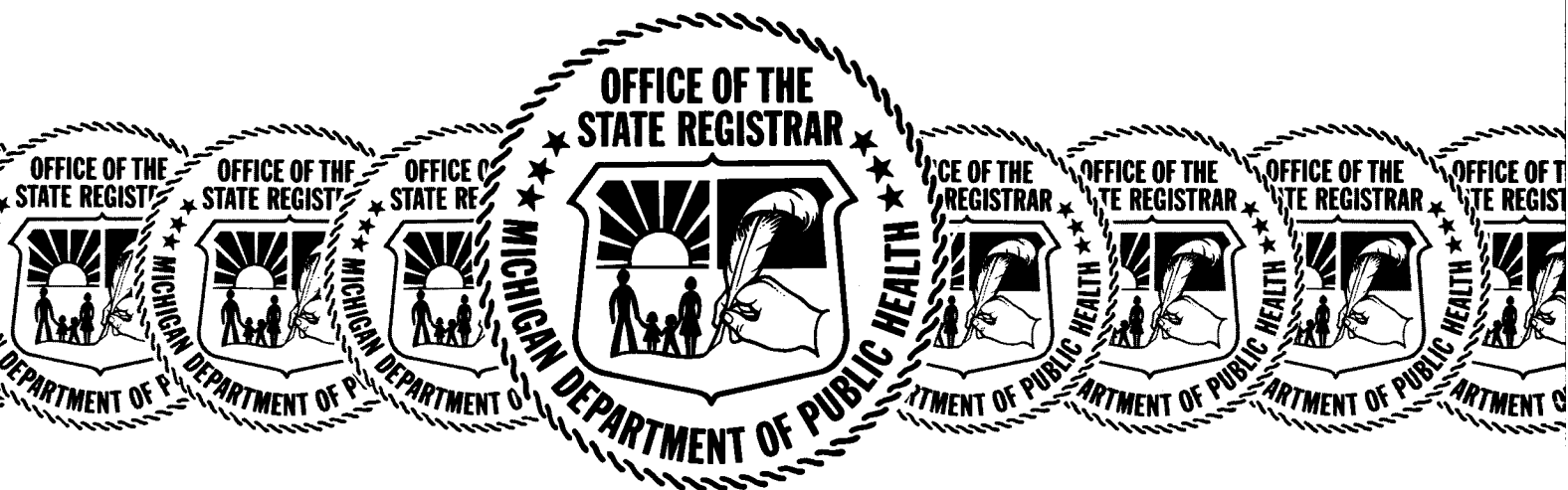


Michigan **HEALTH STATISTICS**



1990

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MICHIGAN HEALTH STATISTICS

1990

Office of the State Registrar and Center for Health Statistics

**Michigan Department of Public Health
Lansing, Michigan January 1993**

Michigan Department of Public Health

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TABLE OF CONTENTS

INTRODUCTION	1
TECHNICAL NOTES, DEFINITIONS, RATES AND RATIOS	2
QUALIFICATIONS AND LIMITATIONS OF DATA AND CALCULATIONS	7
COUNTY AND STATE HEALTH STATISTICS PROFILES	11

SECTION I - NATALITY

Nativity: An Overview, 1990	99
Live Births	99
Racial Composition	101
Ancestry	102
Age of Mother	102
Fertility	103
Age-specific Live Birth Rates	105
Birth Order	108
Interpregnancy Time Period	108
Prenatal Care	109
Birth Weight	113
Congenital Anomalies	115
Medical Factors Associated with Delivery and/or Labor	116
Place of Occurrence	120
Fetal Deaths	121
Causes of Fetal Death	122
Age, Race and Ancestry of Mother	123
Medical and Other Risk Factors for Fetal Deaths	123
Prenatal Care	124
Fetal Weight	125

SECTION 11 - MORTALITY

Mortality: An Overview, 1990	129
Leading Causes of Death	137
Communicable Disease Deaths	147
Life Expectancy	147

Years of Potential Life Lost	148
Place of Occurrence	151
Infant Deaths	152

SECTION III - MARRIAGE AND DIVORCE

Marriage and Divorce: An Overview, 1990	165
Marriages	165
Residence of Couples Marrying in Michigan	166
Month of Marriage	166
Age at Marriage	167
First Marriages	167
Median Age at First Marriage	168
Remarriages	168
Divorces and Annulments	170

REFERENCE APPENDIX	175
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LIST OF TABLES

SECTION I - NATALITY

1.1	Live Births and Crude Birth Rates, Michigan and United States Residents, Selected Years, 1900 - 1990	99
1.2	Live Births and Percent Distribution by Age and Ancestry of Mother, Michigan Residents, 1990	102
1.3	Live Births and Percent Distribution by Age and Race of Mother, Michigan Residents, 1990	103
1.4	Fertility Rates, Michigan and United States Residents, Selected Years, 1900 - 1990 . .	103
1.5	Crude Live Birth Rates and Fertility Rates by Race of Mother, Michigan Residents, 1970 - 1990	105
1.6	Live Births to Women Reporting Prior Pregnancy Terminations by Time Span Between Last and Current Termination and by Whether Prior Termination Resulted in a Live Birth or a Fetal Death, Michigan Residents, 1990	108
1.7	Numbers and Percents of Live Births with Prenatal Care Beginning in the First Trimester by Age and Race of Mother, Michigan Residents, 1990	109
1.8	Numbers and Percents of Live Births with Prenatal Care Beginning in the First Trimester by Age and Ancestry of Mother, Michigan Residents, 1990	110
1.9	Live Births with No Prenatal Care by Age and Race of Mother, Michigan Residents, 1990	110
1.10	Numbers and Percents of Live Births by Level of Prenatal Care and Race of Mother, Michigan Residents, 1990	111
1.11	Numbers and Percents of Live Births by Level of Prenatal Care and Ancestry of Mother, Michigan Residents, 1990	112
1.12	Live Births by Birth Weight and Race of Mother, Michigan Residents, 1990	113
1.13	Numbers and Percents of Live Births by Birthweight and Ancestry of Mother, Michigan Residents, 1990	113

1.14	Low Weight Live Births and Low Birth Weight Ratios by Level of Prenatal Care and Race of Mother, Michigan Residents, 1990	114
1.15	Live Births with Congenital Anomalies Reported and Congenital Anomaly Rates by Age and Race of Mother, Michigan Residents, 1990	115
1.16	Numbers and Percents of Live Births by Complications of Labor/Delivery and Race of Mother, Michigan Residents, 1990	117
1.17	Numbers and Percents of Live Births With Maternal Risk Factors and Race of Mother, Michigan Residents, 1990	117
1.18	Numbers and Percents of Live Births by Race of Mother and Medical Risk Factors, Michigan Residents, 1990	118
1.19	Numbers and Percents of Live Births by Method of Delivery and Race of Mother, Michigan Residents, 1990	119
1.20	Numbers and Rates of Live Births With Abnormal Conditions by Race of Mother, Michigan Residents, 1990	119
1.21	Michigan Resident Live Births Occurring Outside of Michigan by Place of Occurrence, and Occurring in Michigan to Non-Michigan Residents by Place of Residence, 1990	120
1.22	Fetal Deaths and Fetal Death Ratios, Michigan and United States Residents, 1900 - 1990	122
1.23	Fetal Deaths and Fetal Death Ratios by Underlying Cause of Death, Michigan Residents, 1990	122
1.24	Fetal Deaths, Total Births and Fetal Death Rates by Age, Race and Ancestry of Mother, Michigan Residents, 1990	123
1.25	Numbers and Percents of Fetal Deaths, and Fetal Death Rates by Medical and Other Risk Factors, Michigan Residents, 1990	124
1.26	Fetal Deaths, Total Births and Fetal Death Rates by Level of Prenatal Care and Race of Mother, Michigan Residents, 1990	125
1.27	Fetal Deaths by Fetal Weight, 1990	125

SECTION II - MORTALITY

2.1	Number of Deaths and Crude Death Rates, Michigan and United States Residents, 1970 - 1990	129
2.2	Age-Adjusted Death Rates by Race and Sex, Michigan and United States Residents, 1970 - 1990	131
2.3	Deaths by Sex and Marital Status, Michigan Residents, 1990	132
2.4	Deaths by Age and Ancestry, Michigan Residents, 1990	133
2.5	Number of Deaths by Race, Michigan Residents, 1980 - 1990	133
2.6	Number of Deaths by Age, Race and Sex, Michigan Residents, 1990	134
2.7	Death Rates by Age, Race and Sex, Michigan Residents, 1990	135
2.8	Leading Causes of Death and Cause-Specific Rates, Michigan and United States Residents, 1990	138
2.9	Leading Causes of Death by Race and Sex, Michigan Residents, 1990	139
2.10	Leading Causes of Death and Crude Death Rates by Race and Sex, Michigan Residents, 1990	139
2.11	Leading Causes of Death and Age-Adjusted Death Rates by Race and Sex, Michigan Residents, 1990	140
2.12	Leading Causes of Death and Cause-Specific Rates by Age, Michigan Residents, 1990	142
2.13	Leading Causes of Death and Cause-Specific Rates by Age, Michigan Resident White Males, 1990	143
2.14	Leading Causes of Death and Cause-Specific Rates by Age, Michigan Resident Black Males, 1990	144
2.15	Leading Causes of Death and Cause-Specific Rates by Age, Michigan Resident White Females, 1990	145
2.16	Leading Causes of Death and Cause-Specific Rates by Age, Michigan Resident Black Females, 1990	146

2.17	Deaths from Selected Infectious and Parasitic Diseases, Michigan Residents, 1990 . .	147
2.18	Life Expectancy at Birth by Sex, Michigan and United States Residents, Selected Years, 1901 - 1990	148
2.19	Life Expectancy at Birth by Sex and Race, Michigan Residents, Selected Years, 1950 - 1990	149
2.20	Years of Potential Life Lost Below Age 65 Due to the Ten Leading Causes of Death and Selected Other Causes, Michigan Residents, 1990	150
2.21	Michigan Resident Deaths Occurring Outside Michigan by Place of Occurrence and Occurring in Michigan to Non-Michigan Residents, by Place of Residence, 1990 . . .	151
2.22	Infant Deaths and Infant Death Rates, Michigan and United States Residents, 1950 - 1990	152
2.23	Infant Deaths and Infant Death Rates by Age at Death, Michigan Residents, 1970 - 1990	153
2.24	Infant, Hebdomadal, Fetal and Perinatal Death Rates by Race of Mother, Michigan Residents, 1990	155
2.25	Infant Deaths, Live Births and Infant Death Rates by Ancestry, Michigan Residents, 1990	155
2.26	Infant Deaths by Age at Death and Underlying Cause, Michigan Residents, 1990 . .	156
2.27	Infant Deaths and Infant Death Rates by Race and Underlying Cause, Michigan Residents, 1990	157
2.28	Infant Deaths and Infant Death Rates by Sex of Infant and Underlying Cause, Michigan Residents, 1990	158
2.29	Infant Deaths, Live Births and Infant Death Rates by Age and Race of Mother, Michigan Resident Infants Born in 1989	158
2.30	Infant Deaths, Live Births and Infant Death Rates by Level of Prenatal Care and Race of Mother, Michigan Resident Infants Born in 1989	159
2.31	Live Births, Infant Deaths and Infant Death Rates by Birth Weight, Age at Death and Race of Mother, Michigan Resident Infants Born in 1989	160

-
- 2.32 Perinatal Deaths, Total Births and Perinatal Death Rates by Age and Race of Mother, Births to Michigan Residents in 1989 161
- 2.33 Perinatal Deaths, Total Births and Perinatal Death Rates by Level of Prenatal Care and Race of Mother, Births to Michigan Residents in 1989 161

SECTION III - MARRIAGE & DIVORCE

- 3.1 Marriages and Marriage Rates, Michigan and United States Occurrences, Selected Years, 1900 - 1990 165
- 3.2 Number of Marriages and Marriage Rates by Age and Sex, Michigan Occurrences, 1970, 1980 and 1990 167
- 3.3 Number of Marriages of Brides, by Age and Order of Marriage, Michigan Occurrences, 1980 and 1990 169
- 3.4 Number of Marriages of Grooms, by Age and Order of Marriage, Michigan Occurrences, 1980 and 1990 169
- 3.5 Number of Divorces and Annulments, Divorce and Annulment Rates, Michigan and United States Occurrences, Selected Years, 1900 - 1990 170
- 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 - 1990 171

SECTION IV - REFERENCE APPENDIX

- 4.1 Population, Live Births, Deaths (All Ages, Infant, Neonatal, Postneonatal, Perinatal, Fetal and Maternal), Marriages and Divorces, Michigan, 1900 - 1990 176
- 4.2 Live Birth Rates, Death Rates (All Ages, Infant, Neonatal, Postneonatal, Perinatal and Maternal), Fetal Death Ratios, Marriage and Divorce Rates, Michigan, 1900 - 1990 179
- 4.3 Number of Live Births by Age of Mother, Michigan Residents, 1920 - 1990 182
- 4.4 Live Birth Rates by Age of Mother, Michigan Residents, 1920 - 1990 185

4.5	Reported Cases of Certain Communicable Diseases, Michigan Residents, 1900 - 1990	188
4.6	Case Rates of Certain Reported Communicable Diseases, Michigan Residents, 1900 - 1990	191
4.7	Number of Deaths and Death Rates for Certain Communicable Diseases, Michigan Residents, 1900 - 1990	194
4.8	Number of Deaths and Death Rates by Specified Causes, Michigan Residents, 1900 - 1990	197
4.9	Selected Vital Statistics by County, Michigan Residents, 1990	200
4.10	Selected Vital Statistics Rates by County, Michigan Residents, 1990	202
4.11	Live Births with Selected Risk Factors by County of Residence, Michigan Residents, 1990	204
4.12	Live Births by Age of Mother and County of Residence, Michigan Residents, 1990 .	207
4.13	Vital Statistics for Residents of Selected Michigan Cities, 1990	209
4.14	Number of Deaths by Underlying Cause and County of Residence, Michigan Residents, 1990	210
4.15	Reported Cases of Certain Communicable Diseases by County, Michigan Residents, 1990	216
4.16	Number of Deaths by Cause, Michigan Residents, 1990	218
4.17	Population Changes by County, Michigan, 1980 and 1990	230
4.18	Population by Age, Race and Sex, Michigan Residents, 1990	232
4.19	Abridged Life Table, Michigan Residents, 1990	232
4.20	Abridged Life Table for Males, Michigan Residents, 1990	233
4.21	Abridged Life Table for Females, Michigan Residents, 1990	233
4.22	Abridged Life Table for Whites, Michigan Residents, 1990	234

4.23	Abridged Life Table for White Males, Michigan Residents, 1990	234
4.24	Abridged Life Table for White Females, Michigan Residents, 1990	235
4.25	Abridged Life Table for Blacks, Michigan Residents, 1990	235
4.26	Abridged Life Table for Black Males, Michigan Residents, 1990	236
4.27	Abridged Life Table for Black Females, Michigan Residents, 1990	236

LIST OF FIGURES

SECTION I - NATALITY

1.1	Live Births, Michigan Residents, 1900-1990	100
1.2	Live Birth Rates, Michigan Residents, 1900 - 1990 and United States Residents, 1909 - 1990	100
1.3	Live Births by Mother's Race or National Origin, Michigan Residents, 1970 - 1990 .	101
1.4	Total Fertility Rates, Michigan Residents, 1920 - 1990 and United States Residents, 1920 - 1989	104
1.5	Age-Specific Live Birth Rates, Michigan Residents, 1970 - 1990	106
1.6	Age-Specific Live Birth Rates to White Mothers, Michigan Residents, 1980 - 1990 . .	107
1.7	Age-Specific Live Birth Rates to Black Mothers, Michigan Residents, 1980 - 1990 . .	107
1.8	First Births as a Percentage of All Live Births, Michigan Residents, 1960 - 1990 and United States Residents, 1960 - 1989	108
1.9	Percent of Women Having Live Births Who Received Care Prior to the 4th Month and 6th Month of Pregnancy, Michigan Residents, 1970 - 1990	109
1.10	Low Birth Weight Ratios, Michigan Residents, 1960 - 1990 and United States Residents, 1960 - 1990	114
1.11	Fetal Deaths, Michigan Residents, 1900 - 1990	121
1.12	Fetal Death Ratios, Michigan Residents, 1900 - 1990 and United States Residents, 1922 - 1988	121
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 - 1990	124

SECTION II - MORTALITY

2.1	Crude Death Rates, Michigan and United States Residents, 1900 - 1990	130
2.2	Age-Specific Death Rates by Sex, Michigan Residents, 1990	135

2.3	Age-Specific Death Rates by Race, Michigan Resident Males, 1990	136
2.4	Age-Specific Death Rates by Race, Michigan Resident Females, 1990	136
2.5	Leading Causes of Death, Michigan Residents, 1990	137
2.6	Remaining Years of Life by Age, Sex and Race Michigan Residents, 1990	149
2.7	Infant Mortality Rates, Michigan Residents, 1900 - 1990 and United States Residents, 1915 - 1990	152
2.8	Infant Death Rates by Race, Michigan Residents, 1970 - 1990	154

SECTION III - MARRIAGE AND DIVORCE

3.1	Marriage Rates, Michigan and United States Occurrences, 1900-1990	166
3.2	Marriages by Month, Michigan Occurrences, 1990	166
3.3	Median Age at First Marriage by Sex, Michigan Occurrences, 1953 - 1990	168
3.4	Percent of All Marriages that are Remarriages, Michigan Occurrences, 1960 - 1990 .	168
3.5	Divorce Rates, Michigan and United States Occurrences, 1900-1990	170

SECTION IV - REFERENCE APPENDIX

4.1	Rate of Natural Increase, Michigan, 1906 - 1990 and United States, 1909 - 1990 . . .	175
4.2	Michigan Live Births Certificate	237
4.3	Michigan Fetal Death Certificate	238
4.4	Michigan Death Certificate	239
4.5	Michigan Marriage License	240
4.6	Michigan Divorce Record	241

INTRODUCTION

The 1990 edition of Michigan Health Statistics is a statistical summary of vital events for calendar year 1990. 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 1990, 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, 1991, and all in-state certificates and records received prior to March 15, 1991. Although a few additional records for the calendar year 1990 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

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 - Death occurring to an individual less than 7 days of age.

INFANT DEATH - Death occurring to an individual 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 x 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_x = 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.

e_x = 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 - Birth in 1984 or later wherein the birth weight is less than 2,500 grams (approximately 5 lbs., 8 oz.) or birth 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 - Death occurring to an individual less than 28 days of age.

OCCURRENCE - Place where the event actually occurred.

PERINATAL DEATH - Fetal death and death to an individual less than 7 days of age.

POSTNEONATAL DEATH - Death occurring to an individual 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 and fetal deaths.

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

VERY LOW-WEIGHT BIRTH - Birth in 1984 or later wherein the birth weight is less than 1,500 grams (approximately 3 lbs., 4 oz.) or birth 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 $\times 100,000$.

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

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

CRUDE BIRTH RATE - Number of resident live births divided by total resident population $\times 1,000$.

CRUDE DEATH RATE - Number of resident deaths divided by total resident population $\times 1,000$.

DIVORCE RATE - Number of persons (with occurrent divorces and annulments) divided by total resident population $\times 1,000$.

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

FETAL DEATH RATE - Number of resident fetal deaths divided by total resident live births and resident fetal deaths $\times 1,000$.

FETAL DEATH RATIO - Number of resident fetal deaths divided by total resident live births $\times 1,000$.

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

INFANT MORTALITY RATE - Number of resident infant deaths divided by total resident live births $\times 1,000$.

LOW-WEIGHT BIRTH RATIO - Number of resident low-weight births divided by total resident live births $\times 1,000$.

MARRIAGE RATE - Number of resident persons married in an area divided by total resident population $\times 1,000$.

MATERNAL DEATH RATE - Number of resident maternal deaths divided by total resident live births $\times 10,000$.

NEONATAL DEATH RATE - Number of resident neonatal deaths divided by total resident live births $\times 1,000$.

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

PERINATAL DEATH RATE - Number of perinatal deaths divided by total resident live births and resident fetal deaths $\times 1,000$.

POSTNEONATAL DEATH RATE - Number of resident postneonatal deaths divided by total resident live births $\times 1,000$.

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

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

RELIABILITY OF RATES

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 under-reporting 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 1989.

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 Center for 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.

The age-adjusted rates for Michigan presented in this report for years 1970-1990 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, be-

tween 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 age-adjusted death rates for Michigan and the United States are based on the 1980 census enumeration.

The U.S. rates for 1971-1980 have been revised 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 unadjusted death rates for the United States for all causes and by cause for 1981 through 1989 quoted in the text and shown in Tables 2.1 and 2.2 were calculated using population estimates based on the 1980 census enumeration.

COUNTY AND STATE HEALTH STATISTICS PROFILES

Michigan Health Statistics includes profiles of county and state vital events statistics. In a one page summary form for each county and the state as a whole, these profiles contain those data most often requested of the Center for 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.

1990 Profile of Michigan

**POPULATION**

As of April 1, 1990: 9,295,297
 Rank Among Counties: -
 Per Square Mile: 163.2
 Median Age: 32.6

NATILITY

Total Live Births: 153,080
 Teenage Mothers: 20,650
 Low Weight Births: 11,608
 First Births: 60,626
 Median Age of Mother: 26

MORTALITY

Total Deaths: 78,501
 Infant Deaths: 1,638
 Neonatal Deaths: 1,073
 Postneonatal Deaths: 565
 Perinatal Deaths: 1,722
 Fetal Deaths: 830
 Maternal Deaths: 10

MARRIAGE

Marriages: 76,099
 Marriage Rate: 16.4

DIVORCE

Divorces: 40,568
 Divorce Rate: 8.7

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	153,080	16.5	118,180	15.1	31,842	24.5	2,623	16.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	20,650	134.9	11,821	100.0	8,477	266.2	298	113.6
Low Weight	11,608	75.8	6,702	56.7	4,691	147.3	165	62.9
Under 1,500 Grams	2,386	15.6	1,225	10.4	1,111	34.9	38	14.5
< 38 Weeks Gestation	26,212	171.2	17,024	144.1	8,686	272.8	437	166.6
Prenatal Care Began in 1st Trimester	119,586	781.2	96,873	819.7	20,523	644.5	1,895	722.5

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	1,638	10.7	930	7.9	689	21.6	18	6.9
Neonatal Deaths	1,073	7.0	588	5.0	472	14.8	13	5.0
Postneonatal Deaths	565	3.7	342	2.9	217	6.8	5	.
Perinatal Deaths	1,722	11.2	1,015	8.6	663	20.6	27	10.2
Fetal Deaths	830	5.4	526	4.4	271	8.4	16	6.1

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	78,501	40,471	38,000	66,156	33,599	32,536	11,739	6,552	5,179	572	301	270	
Mortality Rate	8.4	9.0	7.9	8.4	8.8	8.1	9.0	10.8	7.5	3.5	3.7	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	1,638	250	155	169	633	763	857	2,464	3,535	6,209	14,267	47,558	3
White Male	551	96	65	65	270	384	400	1,127	1,586	2,975	7,054	19,046	1
White Female	378	70	54	64	113	114	165	503	920	1,989	4,761	23,424	1
Black Male	376	42	18	20	204	201	203	533	651	701	1,320	2,283	-
Black Female	308	38	12	17	32	49	77	278	341	475	1,021	2,531	-
Other Male	7	-	2	2	9	8	8	16	32	50	61	105	1
Other Female	11	3	4	1	5	6	3	5	23	35	42	131	1

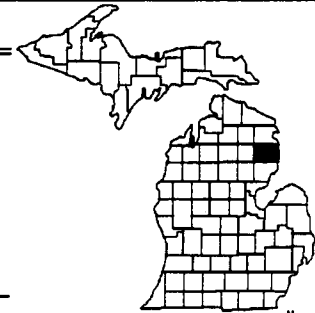
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	78,501	844.5	66,156	844.6	11,739	904.1	1,207	46.1
Diseases of the Heart	27,527	296.1	23,745	303.1	3,617	278.6	32	1.2
Malignant Neoplasms	18,413	198.1	15,813	201.9	2,459	189.4	109	4.2
Cerebrovascular Diseases	5,090	54.8	4,440	56.7	614	47.3	9	0.3
Accidents and Adverse Effects	3,137	33.7	2,672	34.1	410	31.6	451	17.2
Chronic Obstructive Pulmonary Diseases and Allied Conditions	3,004	32.3	2,739	35.0	239	18.4	5	.
Pneumonia and Influenza	2,863	30.8	2,524	32.2	316	24.3	12	0.5
Diabetes Mellitus	2,009	21.6	1,624	20.7	365	28.1	1	.
Chronic Liver Disease and Cirrhosis	1,123	12.1	835	10.7	273	21.0	2	.
Homicide	1,080	11.6	314	4.0	762	58.7	213	8.1
Suicide	1,068	11.5	945	12.1	106	8.2	94	3.6
Atherosclerosis	807	8.7	766	9.8	38	2.9	-	.
AIDS	373	4.0	199	2.5	174	13.4	5	.

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

1990 Profile of Alcona County

**POPULATION**

As of April 1, 1990: 10,145
 Rank Among Counties: 74
 Per Square Mile: 14.9
 Median Age: 44.8

NATALITY

Total Live Births: 108
 Teenage Mothers: 15
 Low Weight Births: 3
 First Births: 44
 Median Age of Mother: 25

MORTALITY

Total Deaths: 151
 Infant Deaths: 1
 Neonatal Deaths: -
 Postneonatal Deaths: 1
 Perinatal Deaths: 3
 Fetal Deaths: 3
 Maternal Deaths: -

MARRIAGE

Marriages: 79
 Marriage Rate: 15.6

DIVORCE

Divorces: 42
 Divorce Rate: 8.3

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	108	10.6	108	10.8	-	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	15	138.9	15	138.9	-	-	-	-
Low Weight	3	-	3	-	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	23	213.0	23	213.0	-	-	-	-
Prenatal Care Began in 1st Trimester	88	814.8	88	814.8	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	151	72	79	148	70	78	-	-	-	3	2	1
Mortality Rate	14.9	14.3	15.5	14.7	14.0	15.4	-	-	-	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	-	-	-	-	-	1	4	5	7	34	99
White Male	-	-	-	-	-	-	-	3	1	3	18	45
White Female	1	-	-	-	-	-	1	1	4	3	14	54
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	1	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-

Note: Mortality rate is per 1,000 population in specified group.

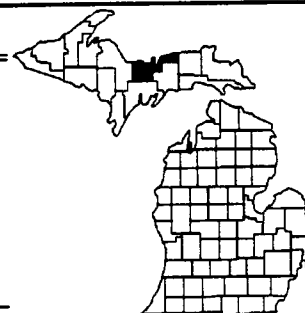
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	151	1,488.4	148	1,474.7	-	-	-	-
Diseases of the Heart	50	492.9	48	478.3	-	-	-	-
Malignant Neoplasms	36	354.9	35	348.7	-	-	-	-
Cerebrovascular Diseases	14	138.0	14	139.5	-	-	-	-
Accidents and Adverse Effects	9	88.7	9	89.7	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	9	88.7	9	89.7	-	-	-	-
Pneumonia and Influenza	5	-	5	-	-	-	-	-
Diabetes Mellitus	8	78.9	8	79.7	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	-	-	-	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

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

1990 Profile of Alger County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	8,972	Total Live Births:	105	Total Deaths:	125
Rank Among Counties:	75	Teenage Mothers:	12	Infant Deaths:	-
Per Square Mile:	9.8	Low Weight Births:	4	Neonatal Deaths:	-
Median Age:	36.7	First Births:	36	Postneonatal Deaths:	-
		Median Age of Mother:	25	Perinatal Deaths:	-
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	65	Divorces:	38		
Marriage Rate:	14.5	Divorce Rate:	8.5		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	105	11.7	103	12.2	-	-	2	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	12	114.3	11	106.8	-	-	1	-
Low Weight	4	-	4	-	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	21	200.0	20	194.2	-	-	1	-
Prenatal Care Began in 1st Trimester	78	742.9	77	747.6	-	-	1	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	125	65	60	122	64	58	1	-	1	2	1	1
Mortality Rate	13.9	14.1	13.7	14.5	15.1	13.8	-	-	-	-	-	-
	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	-	-	-	1	-	-	-	-	3	7	23	91
White Male	-	-	-	-	-	-	-	-	-	6	14	44
White Female	-	-	-	1	-	-	-	-	2	1	8	46
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	1	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

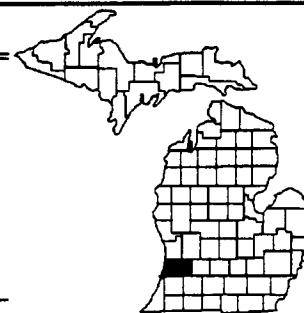
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	125	1,393.2	122	1,447.2	1	-	1	-
Diseases of the Heart	52	579.6	52	616.8	-	-	-	-
Malignant Neoplasms	35	390.1	34	403.3	-	-	1	-
Cerebrovascular Diseases	12	133.7	12	142.3	-	-	-	-
Accidents and Adverse Effects	1	-	1	-	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	4	-	3	-	1	-	-	-
Pneumonia and Influenza	6	66.9	6	71.2	-	-	-	-
Diabetes Mellitus	1	-	-	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	-	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	-	-	-	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Allegan County

**POPULATION**

As of April 1, 1990: 90,509
 Rank Among Counties: 21
 Per Square Mile: 108.8
 Median Age: 31.9

NATALITY

Total Live Births: 1,475
 Teenage Mothers: 178
 Low Weight Births: 77
 First Births: 518
 Median Age of Mother: 26

MORTALITY

Total Deaths: 678
 Infant Deaths: 13
 Neonatal Deaths: 6
 Postneonatal Deaths: 7
 Perinatal Deaths: 11
 Fetal Deaths: 7
 Maternal Deaths: -

MARRIAGE

Marriages: 707
 Marriage Rate: 15.6

DIVORCE

Divorces: 415
 Divorce Rate: 9.2

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,475	16.3	1,444	16.4	15	10.2	15	15.2
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	178	120.7	172	119.1	4	-	2	-
Low Weight	77	52.2	74	51.2	2	-	1	-
Under 1,500 Grams	11	7.5	10	6.9	1	-	-	-
< 38 Weeks Gestation	197	133.6	192	133.0	3	-	2	-
Prenatal Care Began in 1st Trimester	1,204	816.3	1,186	821.3	8	533.3	9	600.0

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	13	8.8	12	8.3	1	-	-	-
Neonatal Deaths	6	4.1	5	-	1	-	-	-
Postneonatal Deaths	7	4.7	7	4.8	-	-	-	-
Perinatal Deaths	11	7.4	10	6.9	1	-	-	-
Fetal Deaths	7	4.7	7	4.8	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	678	352	326	657	341	316	18	9	9	3	2	1
Mortality Rate	7.5	7.9	7.1	7.5	7.8	7.1	12.2	10.4	14.9	-	-	-
	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	13	2	-	1	6	10	7	16	20	35	124	444
White Male	7	1	-	-	4	9	7	10	13	18	75	197
White Female	5	-	-	1	1	1	-	6	7	14	46	235
Black Male	1	-	-	-	1	-	-	-	-	-	2	5
Black Female	-	1	-	-	-	-	-	-	-	1	-	7
Other Male	-	-	-	-	-	-	-	-	-	1	1	-
Other Female	-	-	-	-	-	-	-	-	-	1	-	-

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	678	749.1	657	746.1	18	1,224.5	9	32.3
Diseases of the Heart	196	216.6	192	218.1	3	-	-	-
Malignant Neoplasms	167	184.5	162	184.0	4	-	-	-
Cerebrovascular Diseases	51	56.3	47	53.4	4	-	-	-
Accidents and Adverse Effects	32	35.4	31	35.2	1	-	5	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	30	33.1	29	32.9	-	-	-	-
Pneumonia and Influenza	36	39.8	35	39.7	1	-	-	-
Diabetes Mellitus	16	17.7	16	18.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	6	6.6	6	6.8	-	-	-	-
Homicide	2	-	2	-	-	-	-	-
Suicide	12	13.3	12	13.6	-	-	1	-
Atherosclerosis	25	27.6	25	28.4	-	-	-	-
AIDS	2	-	2	-	-	-	-	-

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

1990 Profile of Alpena County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	30,605	Total Live Births:	370	Total Deaths:	289
Rank Among Counties:	46	Teenage Mothers:	54	Infant Deaths:	1
Per Square Mile:	53.9	Low Weight Births:	23	Neonatal Deaths:	-
Median Age:	35.3	First Births:	139	Postneonatal Deaths:	1
		Median Age of Mother:	26	Perinatal Deaths:	-
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	248	Divorces:	130		
Marriage Rate:	16.2	Divorce Rate:	8.5		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	370	12.1	367	12.1	-	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	54	145.9	54	147.1	-	-	-	-
Low Weight	23	62.2	23	62.7	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	62	167.6	62	168.9	-	-	-	-
Prenatal Care Began in 1st Trimester	320	864.9	318	866.5	-	-	2	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	289	153	136	289	153	136	-	-	-	-	-	-
Mortality Rate	9.4	10.3	8.6	9.5	10.4	8.7	-	-	-	-	-	-
	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	1	-	2	-	1	2	1	4	6	21	52	199
White Male	1	-	-	-	1	1	1	2	4	12	34	97
White Female	-	-	2	-	-	1	-	2	2	9	18	102
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

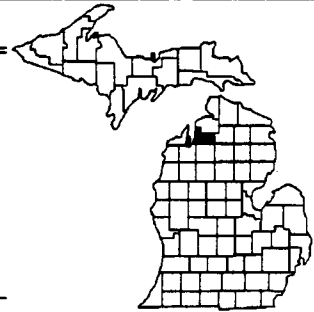
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	289	944.3	289	950.9	-	-	3	-
Diseases of the Heart	120	392.1	120	394.8	-	-	-	-
Malignant Neoplasms	68	222.2	68	223.7	-	-	-	-
Cerebrovascular Diseases	17	55.5	17	55.9	-	-	-	-
Accidents and Adverse Effects	7	22.9	7	23.0	-	-	3	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	9	29.4	9	29.6	-	-	-	-
Pneumonia and Influenza	11	35.9	11	36.2	-	-	-	-
Diabetes Mellitus	5	-	5	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	3	-	3	-	-	-	-	-
Atherosclerosis	2	-	2	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

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

1990 Profile of Antrim County

**POPULATION**

As of April 1, 1990: 18,185
 Rank Among Counties: 62
 Per Square Mile: 37.9
 Median Age: 36.8

NATALITY

Total Live Births: 245
 Teenage Mothers: 39
 Low Weight Births: 11
 First Births: 97
 Median Age of Mother: 26

MORTALITY

Total Deaths: 190
 Infant Deaths: 2
 Neonatal Deaths: 1
 Postneonatal Deaths: 1
 Perinatal Deaths: 1
 Fetal Deaths: -
 Maternal Deaths: -

MARRIAGE

Marriages: 153
 Marriage Rate: 16.8

DIVORCE

Divorces: 81
 Divorce Rate: 8.9

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	245	13.5	237	13.2	-	-	7	29.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	39	159.2	35	147.7	-	-	3	-
Low Weight	11	44.9	11	46.4	-	-	-	-
Under 1,500 Grams	2	-	2	-	-	-	-	-
< 38 Weeks Gestation	30	122.4	29	122.4	-	-	1	-
Prenatal Care Began in 1st Trimester	174	710.2	169	713.1	-	-	4	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	1	-	1	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	190	95	95	188	94	94	2	1	1	-	-	-
Mortality Rate	10.4	10.7	10.2	10.5	10.7	10.3	-	-	-	-	-	-
	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	3	7	12	33	130
White Male	2	-	-	-	1	1	1	3	2	8	14	62
White Female	-	-	-	-	-	-	-	-	5	4	19	66
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	1
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	190	1,044.8	188	1,048.8	2	-	1	-
Diseases of the Heart	63	346.4	63	351.4	-	-	-	-
Malignant Neoplasms	44	242.0	44	245.5	-	-	-	-
Cerebrovascular Diseases	15	82.5	15	83.7	-	-	-	-
Accidents and Adverse Effects	6	33.0	6	33.5	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	6	33.0	6	33.5	-	-	-	-
Pneumonia and Influenza	9	49.5	9	50.2	-	-	-	-
Diabetes Mellitus	5	-	5	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	7	38.5	7	39.0	-	-	-	-
Homicide	1	-	-	-	1	-	-	-
Suicide	2	-	1	-	1	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Arenac County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	14,931	Total Live Births:	206	Total Deaths:	182
Rank Among Counties:	66	Teenage Mothers:	32	Infant Deaths:	1
Per Square Mile:	40.6	Low Weight Births:	22	Neonatal Deaths:	1
Median Age:	35.7	First Births:	75	Postneonatal Deaths:	-
		Median Age of Mother:	25	Perinatal Deaths:	1
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	108	Divorces:	52		
Marriage Rate:	14.5	Divorce Rate:	7.0		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	206	13.8	205	13.9	1	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	32	155.3	32	156.1	-	-	-	-
Low Weight	22	106.8	22	107.3	-	-	-	-
Under 1,500 Grams	4	-	4	-	-	-	-	-
< 38 Weeks Gestation	44	213.6	44	214.6	-	-	-	-
Prenatal Care Began in 1st Trimester	164	796.1	163	795.1	1	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	182	104	78	180	103	77	-	-	-	2	1	1
Mortality Rate	12.2	14.2	10.2	12.2	14.3	10.2	-	-	-	-	-	-
	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	-	-	3	1	-	6	4	13	42	111
White Male	1	1	-	-	2	1	-	5	2	9	27	55
White Female	-	-	-	-	1	-	-	-	2	4	15	55
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	1	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

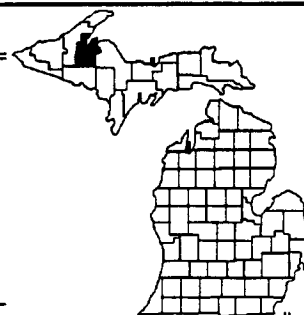
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	182	1,218.9	180	1,220.9	-	-	4	-
Diseases of the Heart	70	468.8	70	474.8	-	-	-	-
Malignant Neoplasms	48	321.5	48	325.6	-	-	1	-
Cerebrovascular Diseases	10	67.0	10	67.8	-	-	-	-
Accidents and Adverse Effects	5	-	4	-	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	107.2	16	108.5	-	-	-	-
Pneumonia and Influenza	4	-	3	-	-	-	-	-
Diabetes Mellitus	4	-	4	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	1	-	1	-	-	-	1	-
Suicide	4	-	4	-	-	-	-	-
Atherosclerosis	2	-	2	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Baraga County

**POPULATION**

As of April 1, 1990: 7,954
 Rank Among Counties: 80
 Per Square Mile: 8.8
 Median Age: 36.7

NATALITY

Total Live Births: 109
 Teenage Mothers: 16
 Low Weight Births: 7
 First Births: 29
 Median Age of Mother: 25

MORTALITY

Total Deaths: 111
 Infant Deaths: 2
 Neonatal Deaths: 1
 Postneonatal Deaths: 1
 Perinatal Deaths: 2
 Fetal Deaths: 1
 Maternal Deaths: -

MARRIAGE

Marriages: 45
 Marriage Rate: 11.3

DIVORCE

Divorces: 30
 Divorce Rate: 7.5

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	109	13.7	77	11.0	-	-	32	34.4
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	16	146.8	10	129.9	-	-	6	187.5
Low Weight	7	64.2	6	77.9	-	-	1	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	17	156.0	14	181.8	-	-	3	-
Prenatal Care Began in 1st Trimester	78	715.6	57	740.3	-	-	21	656.3

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	2	-	1	-	-	-	1	-
Fetal Deaths	1	-	1	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	111	62	49	101	56	45	1	1	-	9	5	4
Mortality Rate	14.0	15.5	12.4	14.5	15.9	13.0	-	-	-	9.7	-	-
	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	2	-	-	-	-	-	-	3	4	7	16	79
White Male	-	-	-	-	-	-	-	1	4	3	9	39
White Female	1	-	-	-	-	-	-	1	-	2	6	35
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	1	-	-	-	-	-	-	1	-	2	-	1
Other Female	-	-	-	-	-	-	-	-	-	-	1	3

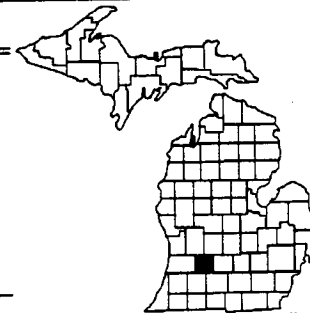
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	111	1,395.5	101	1,448.0	1	-	-	-
Diseases of the Heart	45	565.8	44	630.8	-	-	-	-
Malignant Neoplasms	22	276.6	19	272.4	-	-	-	-
Cerebrovascular Diseases	18	226.3	16	229.4	1	-	-	-
Accidents and Adverse Effects	4	-	3	-	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	4	-	2	-	-	-	-	-
Pneumonia and Influenza	4	-	4	-	-	-	-	-
Diabetes Mellitus	1	-	1	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Barry County



POPULATION
As of April 1, 1990: 50,057
Rank Among Counties: 34
Per Square Mile: 89.4
Median Age: 33.8

NATILITY
Total Live Births: 733
Teenage Mothers: 97
Low Weight Births: 36
First Births: 260
Median Age of Mother: 26

MORTALITY
Total Deaths: 388
Infant Deaths: 8
Neonatal Deaths: 6
Postneonatal Deaths: 2
Perinatal Deaths: 8
Fetal Deaths: 3
Maternal Deaths: -

MARRIAGE
Marriages: 408
Marriage Rate: 16.3

DIVORCE
Divorces: 242
Divorce Rate: 9.7

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	733	14.6	726	14.6	3	.	2	.
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	97	132.3	95	130.9	2	.	-	.
Low Weight	36	49.1	35	48.2	-	-	1	.
Under 1,500 Grams	7	9.5	7	9.6	-	-	-	.
< 38 Weeks Gestation	100	136.4	99	136.4	-	-	1	.
Prenatal Care Began in 1st Trimester	576	785.8	572	787.9	1	.	1	.

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	8	10.9	8	11.0	-	-	-	-
Neonatal Deaths	6	8.2	6	8.3	-	-	-	-
Postneonatal Deaths	2	.	2	.	-	-	-	-
Perinatal Deaths	8	10.9	8	11.0	-	-	-	-
Fetal Deaths	3	.	3	.	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	388	220	168	384	217	167	1	1	-	3	2	1	
Mortality Rate	7.8	8.8	6.7	7.7	8.7	6.7	.	.	-	.	.	.	
	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+	Unk
Total Deaths	8	2	1	2	8	4	3	10	9	30	67	244	-
White Male	4	1	1	1	5	4	2	7	8	22	41	121	-
White Female	4	1	-	1	3	-	1	3	1	8	25	120	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	1	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	1	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	1	-

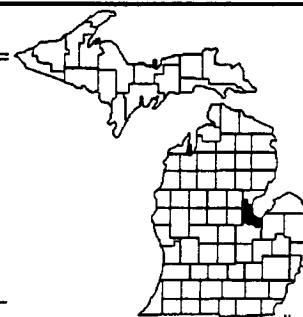
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	388	775.1	384	773.9	1	.	13	88.5
Diseases of the Heart	118	235.7	116	233.8	1	.	-	-
Malignant Neoplasms	90	179.8	89	179.4	-	-	-	-
Cerebrovascular Diseases	30	59.9	30	60.5	-	-	-	-
Accidents and Adverse Effects	22	43.9	22	44.3	-	-	5	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	22	43.9	21	42.3	-	-	1	.
Pneumonia and Influenza	15	30.0	15	30.2	-	-	-	-
Diabetes Mellitus	9	18.0	9	18.1	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	.	2	.	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	7	14.0	7	14.1	-	-	2	.
Atherosclerosis	4	.	4	.	-	-	-	-
AIDS	1	.	1	.	-	-	-	-

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

1990 Profile of Bay County

**POPULATION**

As of April 1, 1990: 111,723
 Rank Among Counties: 18
 Per Square Mile: 249.8
 Median Age: 33.9

NATALITY

Total Live Births: 1,684
 Teenage Mothers: 206
 Low Weight Births: 112
 First Births: 705
 Median Age of Mother: 26

MORTALITY

Total Deaths: 939
 Infant Deaths: 12
 Neonatal Deaths: 5
 Postneonatal Deaths: 7
 Perinatal Deaths: 13
 Fetal Deaths: 9
 Maternal Deaths: -

MARRIAGE

Marriages: 968
 Marriage Rate: 17.3

DIVORCE

Divorces: 425
 Divorce Rate: 7.6

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,684	15.1	1,640	15.0	26	20.7	15	12.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	206	122.3	201	122.6	4	*	1	*
Low Weight	112	66.5	110	67.1	2	*	-	-
Under 1,500 Grams	16	9.5	15	9.1	1	*	-	-
< 38 Weeks Gestation	278	165.1	265	161.6	9	346.2	4	*
Prenatal Care Began in 1st Trimester	1,414	839.7	1,384	843.9	18	692.3	9	600.0

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	12	7.1	12	7.3	-	-	-	-
Neonatal Deaths	5	*	5	*	-	-	-	-
Postneonatal Deaths	7	4.2	7	4.3	-	-	-	-
Perinatal Deaths	13	7.7	12	7.3	1	*	-	-
Fetal Deaths	9	5.3	8	4.9	1	*	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	939	492	444	923	485	435	10	4	6	5	3	2	
Mortality Rate	8.4	9.1	7.7	8.5	9.2	7.7	8.0	*	10.2	*	*	*	
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	12	3	5	2	3	6	5	23	30	68	166	616	-
White Male	8	3	3	1	2	3	4	14	17	32	96	302	-
White Female	3	-	1	1	1	2	1	9	10	34	67	306	-
Black Male	-	-	1	-	-	1	-	-	-	1	-	1	-
Black Female	-	-	-	-	-	-	-	-	1	-	1	4	-
Other Male	-	-	-	-	-	-	-	-	1	-	-	2	-
Other Female	-	-	-	-	-	-	-	-	1	1	-	-	-

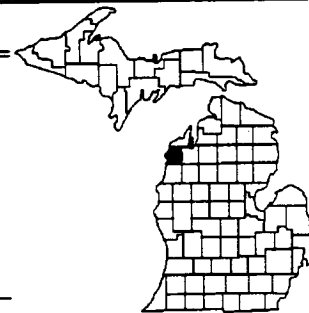
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	939	840.5	923	845.0	10	796.8	13	41.9
Diseases of the Heart	345	308.8	340	311.3	3	*	-	-
Malignant Neoplasms	243	217.5	238	217.9	3	*	1	*
Cerebrovascular Diseases	55	49.2	55	50.4	-	-	-	-
Accidents and Adverse Effects	37	33.1	34	31.1	2	*	7	22.6
Chronic Obstructive Pulmonary Diseases and Allied Conditions	43	38.5	43	39.4	-	-	-	-
Pneumonia and Influenza	17	15.2	17	15.6	-	-	-	-
Diabetes Mellitus	33	29.5	33	30.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	10	9.0	10	9.2	-	-	-	-
Homicide	3	*	3	*	-	-	1	*
Suicide	14	12.5	11	10.1	2	*	-	-
Atherosclerosis	11	9.8	11	10.1	-	-	-	-
AIDS	2	*	2	*	-	-	-	-

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

1990 Profile of Benzie County

**POPULATION**

As of April 1, 1990: 12,200
 Rank Among Counties: 71
 Per Square Mile: 37.9
 Median Age: 37.5

NATILITY

Total Live Births: 174
 Teenage Mothers: 30
 Low Weight Births: 16
 First Births: 67
 Median Age of Mother: 25

MORTALITY

Total Deaths: 126
 Infant Deaths: 4
 Neonatal Deaths: 4
 Postneonatal Deaths: -
 Perinatal Deaths: 3
 Fetal Deaths: -
 Maternal Deaths: -

MARRIAGE

Marriages: 102
 Marriage Rate: 16.7

DIVORCE

Divorces: 63
 Divorce Rate: 10.3

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	174	14.3	165	13.9	1	.	7	25.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	30	172.4	27	163.6	-	-	3	.
Low Weight	16	92.0	16	97.0	-	-	-	-
Under 1,500 Grams	3	.	3	.	-	-	-	-
< 38 Weeks Gestation	26	149.4	26	157.6	-	-	-	-
Prenatal Care Began in 1st Trimester	124	712.6	120	727.3	1	.	3	.

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	3	.	3	.	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	126	66	60	123	64	59	1	-	1	2	2	-	
Mortality Rate	10.3	11.0	9.7	10.3	10.9	9.8	.	-	.	.	.	-	
	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	4	-	-	1	1	1	2	5	7	12	20	73	-
White Male	3	-	-	1	-	1	1	1	3	5	12	37	-
White Female	1	-	-	-	1	-	1	4	3	6	7	36	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	1	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	1	1	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	-

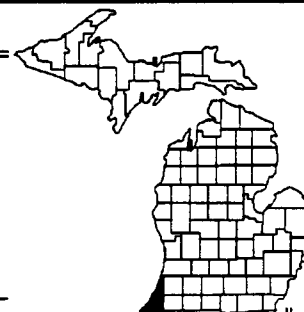
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	126	1,032.8	123	1,034.0	1	.	2	-
Diseases of the Heart	50	409.8	47	395.1	1	.	-	-
Malignant Neoplasms	26	213.1	26	218.6	-	-	-	-
Cerebrovascular Diseases	11	90.2	11	92.5	-	-	-	-
Accidents and Adverse Effects	4	.	4	.	-	-	1	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	3	.	3	.	-	-	-	-
Pneumonia and Influenza	2	.	2	.	-	-	-	-
Diabetes Mellitus	6	49.2	6	50.4	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	.	2	.	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	.	3	.	-	-	-	-
Atherosclerosis	3	.	3	.	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Berrien County

**POPULATION**

As of April 1, 1990: 161,378
 Rank Among Counties: 11
 Per Square Mile: 280.1
 Median Age: 33.6

NATALITY

Total Live Births: 2,646
 Teenage Mothers: 527
 Low Weight Births: 208
 First Births: 1,058
 Median Age of Mother: 25

MORTALITY

Total Deaths: 1,569
 Infant Deaths: 41
 Neonatal Deaths: 21
 Postneonatal Deaths: 20
 Perinatal Deaths: 29
 Fetal Deaths: 12
 Maternal Deaths: -

MARRIAGE

Marriages: 1,506
 Marriage Rate: 18.7

DIVORCE

Divorces: 720
 Divorce Rate: 8.9

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	2,646	16.4	1,887	14.1	729	29.2	27	12.3
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	527	199.2	266	141.0	259	355.3	2	.
Low Weight	208	78.6	102	54.1	103	141.3	2	.
Under 1,500 Grams	45	17.0	18	9.5	26	35.7	1	.
< 38 Weeks Gestation	463	175.0	279	147.9	178	244.2	6	222.2
Prenatal Care Began in 1st Trimester	1,943	734.3	1,447	766.8	472	647.5	23	851.9

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	41	15.5	14	7.4	25	34.3	2	.
Neonatal Deaths	21	7.9	6	3.2	14	19.2	1	.
Postneonatal Deaths	20	7.6	8	4.2	11	15.1	1	.
Perinatal Deaths	29	10.9	10	5.3	17	23.1	2	.
Fetal Deaths	12	4.5	5	.	6	8.2	1	.

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,569	827	742	1,324	684	640	237	141	96	7	2	5
Mortality Rate	9.7	10.7	8.8	9.9	10.5	9.3	9.5	12.5	7.0	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	41	6	3	2	11	17	16	38	61	121	297	956
White Male	11	1	1	1	6	9	6	15	28	56	154	396
White Female	3	2	1	-	-	1	3	12	16	37	102	463
Black Male	12	2	1	1	3	6	5	4	14	18	31	44
Black Female	13	1	-	-	2	1	2	6	3	9	10	49
Other Male	-	-	-	-	-	-	-	-	-	-	-	2
Other Female	2	-	-	-	-	-	-	1	-	1	-	1

Note: Mortality rate is per 1,000 population in specified group.

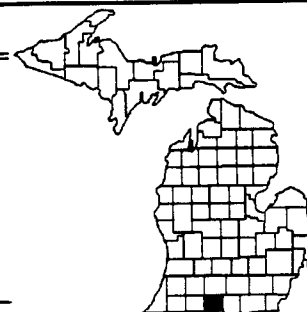
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,569	972.3	1,324	986.6	237	948.6	22	47.8
Diseases of the Heart	491	304.3	416	310.0	72	288.2	1	.
Malignant Neoplasms	382	236.7	336	250.4	45	180.1	3	.
Cerebrovascular Diseases	131	81.2	109	81.2	21	84.1	-	-
Accidents and Adverse Effects	61	37.8	55	41.0	6	24.0	9	19.6
Chronic Obstructive Pulmonary Diseases and Allied Conditions	52	32.2	49	36.5	3	.	-	-
Pneumonia and Influenza	47	29.1	43	32.0	4	.	-	-
Diabetes Mellitus	44	27.3	32	23.8	12	48.0	-	-
Chronic Liver Disease and Cirrhosis	18	11.2	15	11.2	3	.	-	-
Homicide	18	11.2	5	.	13	52.0	3	.
Suicide	17	10.5	17	12.7	-	-	1	.
Atherosclerosis	34	21.1	31	23.1	3	.	-	-
AIDS	4	.	3	.	1	.	-	-

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

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

1990 Profile of Branch County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	41,502	Total Live Births:	641	Total Deaths:	361
Rank Among Counties:	37	Teenage Mothers:	110	Infant Deaths:	10
Per Square Mile:	81.7	Low Weight Births:	43	Neonatal Deaths:	5
Median Age:	33.4	First Births:	229	Postneonatal Deaths:	5
		Median Age of Mother:	25	Perinatal Deaths:	5
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	378	Divorces:	228		
Marriage Rate:	18.2	Divorce Rate:	11.0		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	641	15.4	624	15.4	4	-	7	18.4
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	110	171.6	109	174.7	-	-	1	-
Low Weight	43	67.1	39	62.5	-	-	3	-
Under 1,500 Grams	5	-	3	-	-	-	2	-
< 38 Weeks Gestation	96	149.8	94	150.6	-	-	2	-
Prenatal Care Began in 1st Trimester	426	664.6	420	673.1	-	-	3	-

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	10	15.6	9	14.4	1	-	-	-
Neonatal Deaths	5	-	5	-	-	-	-	-
Postneonatal Deaths	5	-	4	-	1	-	-	-
Perinatal Deaths	5	-	5	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	361	203	158	359	203	156	1	-	1	1	-	1	
Mortality Rate	8.7	10.0	7.4	8.9	10.2	7.6	-	-	-	-	-	-	
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	10	2	2	1	2	4	2	8	20	26	62	222	-
White Male	4	1	-	1	2	3	1	6	14	18	44	109	-
White Female	5	1	2	-	-	1	1	2	6	8	17	113	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	1	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-	-

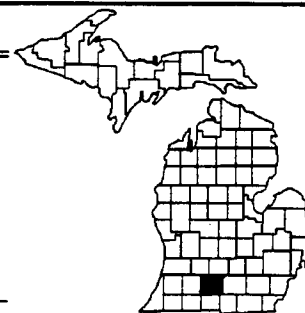
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	361	869.8	359	888.3	1	-	7	58.1
Diseases of the Heart	129	310.8	129	319.2	-	-	-	-
Malignant Neoplasms	76	183.1	75	185.6	-	-	1	-
Cerebrovascular Diseases	26	62.6	26	64.3	-	-	-	-
Accidents and Adverse Effects	13	31.3	13	32.2	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	17	41.0	17	42.1	-	-	-	-
Pneumonia and Influenza	16	38.6	16	39.6	-	-	-	-
Diabetes Mellitus	13	31.3	13	32.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	10	24.1	10	24.7	-	-	3	-
Atherosclerosis	7	16.9	7	17.3	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Calhoun County

**POPULATION**

As of April 1, 1990: 135,982
 Rank Among Counties: 15
 Per Square Mile: 191.1
 Median Age: 33.9

NATALITY

Total Live Births: 2,238
 Teenage Mothers: 393
 Low Weight Births: 171
 First Births: 882
 Median Age of Mother: 25

MORTALITY

Total Deaths: 1,288
 Infant Deaths: 26
 Neonatal Deaths: 19
 Postneonatal Deaths: 7
 Perinatal Deaths: 28
 Fetal Deaths: 11
 Maternal Deaths: -

MARRIAGE

Marriages: 1,309
 Marriage Rate: 19.3

DIVORCE

Divorces: 793
 Divorce Rate: 11.7

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	2,238	16.5	1,821	15.2	387	26.7	30	16.7
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	393	175.6	281	154.3	109	281.7	3	.
Low Weight	171	76.4	111	61.0	56	144.7	4	.
Under 1,500 Grams	42	18.8	26	14.3	16	41.3	-	.
< 38 Weeks Gestation	362	161.8	259	142.2	97	250.6	6	200.0
Prenatal Care Began in 1st Trimester	1,414	631.8	1,240	680.9	152	392.8	22	733.3

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	26	11.6	20	11.0	6	15.5	-	-
Neonatal Deaths	19	8.5	14	7.7	5	.	-	-
Postneonatal Deaths	7	3.1	6	3.3	1	.	-	-
Perinatal Deaths	28	12.4	21	11.5	7	17.9	-	-
Fetal Deaths	11	4.9	8	4.4	3	.	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,288	657	631	1,156	585	571	124	66	58	7	5	2
Mortality Rate	9.5	10.0	9.0	9.7	10.1	9.2	8.6	9.5	7.7	3.9	.	.
	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	26	2	-	1	3	8	13	33	48	109	255	790
White Male	10	1	-	1	2	5	8	18	24	53	130	333
White Female	10	1	-	-	1	2	-	9	13	31	95	409
Black Male	3	-	-	-	-	1	4	4	5	13	14	22
Black Female	3	-	-	-	-	-	1	1	4	11	15	23
Other Male	-	-	-	-	-	-	-	-	2	1	1	1
Other Female	-	-	-	-	-	-	-	-	-	-	-	2

Note: Mortality rate is per 1,000 population in specified group.

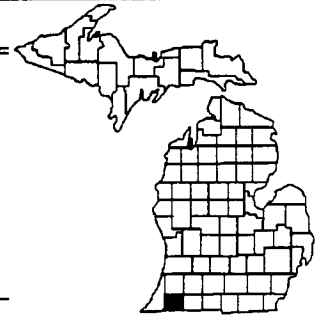
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,288	947.2	1,156	965.7	124	856.5	6	15.6
Diseases of the Heart	435	319.9	404	337.5	30	207.2	-	-
Malignant Neoplasms	308	226.5	277	231.4	29	200.3	-	-
Cerebrovascular Diseases	84	61.8	72	60.1	12	82.9	-	-
Accidents and Adverse Effects	61	44.9	53	44.3	8	55.3	4	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	71	52.2	67	56.0	4	.	-	-
Pneumonia and Influenza	57	41.9	53	44.3	4	.	-	-
Diabetes Mellitus	31	22.8	27	22.6	3	.	-	-
Chronic Liver Disease and Cirrhosis	16	11.8	11	9.2	4	.	-	-
Homicide	6	4.4	3	.	3	.	-	-
Suicide	20	14.7	15	12.5	4	.	-	-
Atherosclerosis	24	17.6	23	19.2	1	.	-	-
AIDS	3	.	3	.	-	-	-	-

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

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

1990 Profile of Cass County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	49,477	Total Live Births:	648	Total Deaths:	424
Rank Among Counties:	35	Teenage Mothers:	107	Infant Deaths:	6
Per Square Mile:	99.7	Low Weight Births:	43	Neonatal Deaths:	2
Median Age:	34.4	First Births:	258	Postneonatal Deaths:	4
		Median Age of Mother:	25	Perinatal Deaths:	4
				Fetal Deaths:	3
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	373	Divorces:	251		
Marriage Rate:	15.1	Divorce Rate:	10.1		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	648	13.1	565	12.5	82	21.9	1	.
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	107	165.1	82	145.1	25	304.9	-	-
Low Weight	43	66.4	32	56.6	11	134.1	-	-
Under 1,500 Grams	5	.	4	.	1	.	-	-
< 38 Weeks Gestation	92	142.0	74	131.0	18	219.5	-	-
Prenatal Care Began in 1st Trimester	462	713.0	408	722.1	53	646.3	1	.

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	6	9.3	6	10.6	-	-	-	-
Neonatal Deaths	2	.	2	.	-	-	-	-
Postneonatal Deaths	4	.	4	.	-	-	-	-
Perinatal Deaths	4	.	4	.	-	-	-	-
Fetal Deaths	3	.	3	.	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	424	227	197	376	200	176	42	24	18	5	2	3
Mortality Rate	8.6	9.3	7.8	8.3	9.0	7.7	11.2	13.5	9.1	.	.	.
	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	6	1	-	1	2	6	1	14	16	30	76	271
White Male	4	-	-	1	2	4	1	9	11	21	39	108
White Female	2	1	-	-	-	1	-	4	3	7	34	124
Black Male	-	-	-	-	-	1	-	-	1	1	2	19
Black Female	-	-	-	-	-	-	-	1	1	1	1	14
Other Male	-	-	-	-	-	-	-	-	-	-	-	2
Other Female	-	-	-	-	-	-	-	-	-	-	-	3

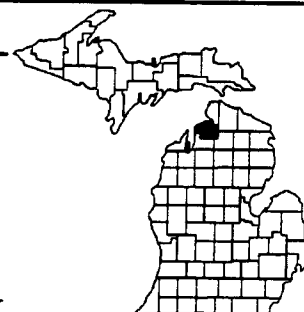
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	424	857.0	376	834.5	42	1,119.4	4	.
Diseases of the Heart	133	268.8	117	259.7	13	346.5	-	-
Malignant Neoplasms	107	216.3	98	217.5	9	239.9	-	-
Cerebrovascular Diseases	30	60.6	26	57.7	4	.	-	-
Accidents and Adverse Effects	27	54.6	25	55.5	2	.	2	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	32.3	13	28.9	3	.	-	-
Pneumonia and Influenza	19	38.4	17	37.7	1	.	-	-
Diabetes Mellitus	4	.	3	.	-	-	-	-
Chronic Liver Disease and Cirrhosis	8	16.2	8	17.8	-	-	-	-
Homicide	2	.	2	.	-	-	-	-
Suicide	5	.	5	.	-	-	-	-
Atherosclerosis	5	.	5	.	-	-	-	-
AIDS	1	.	-	-	1	.	-	-

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

1990 Profile of Charlevoix County

**POPULATION**

As of April 1, 1990: 21,468
 Rank Among Counties: 56
 Per Square Mile: 51.0
 Median Age: 34.7

NATALITY

Total Live Births: 339
 Teenage Mothers: 31
 Low Weight Births: 19
 First Births: 118
 Median Age of Mother: 26

MORTALITY

Total Deaths: 183
 Infant Deaths: 3
 Neonatal Deaths: 2
 Postneonatal Deaths: 1
 Perinatal Deaths: 4
 Fetal Deaths: 2
 Maternal Deaths: -

MARRIAGE

Marriages: 202
 Marriage Rate: 18.8

DIVORCE

Divorces: 106
 Divorce Rate: 9.9

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	339	15.8	335	15.9	-	-	4	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	31	91.4	31	92.5	-	-	-	-
Low Weight	19	56.0	19	56.7	-	-	-	-
Under 1,500 Grams	5	-	5	-	-	-	-	-
< 38 Weeks Gestation	45	132.7	44	131.3	-	-	1	-
Prenatal Care Began in 1st Trimester	269	793.5	266	794.0	-	-	3	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	-	3	-	-	-	-	-
Fetal Deaths	2	-	1	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	183	103	80	177	98	79	-	-	-	6	5	1
Mortality Rate	8.5	9.8	7.3	8.4	9.5	7.4	-	-	-	14.3	-	-
	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	3	-	-	-	-	1	1	2	7	12	29	128
White Male	2	-	-	-	-	1	-	2	4	6	12	71
White Female	1	-	-	-	-	-	1	-	2	6	13	56
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	1	-	3	1
Other Female	-	-	-	-	-	-	-	-	-	-	1	-

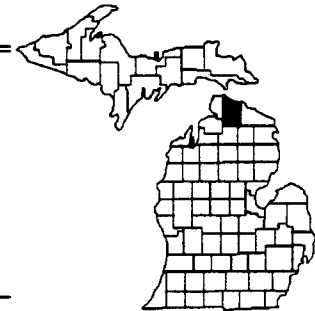
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	183	852.4	177	841.6	-	-	-	-
Diseases of the Heart	57	265.5	56	266.3	-	-	-	-
Malignant Neoplasms	48	223.6	47	223.5	-	-	-	-
Cerebrovascular Diseases	16	74.5	15	71.3	-	-	-	-
Accidents and Adverse Effects	9	41.9	8	38.0	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	5	-	5	-	-	-	-	-
Pneumonia and Influenza	12	55.9	12	57.1	-	-	-	-
Diabetes Mellitus	4	-	3	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

1990 Profile of Cheboygan County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	21,398	Total Live Births:	293	Total Deaths:	231
Rank Among Counties:	57	Teenage Mothers:	32	Infant Deaths:	6
Per Square Mile:	29.7	Low Weight Births:	15	Neonatal Deaths:	5
Median Age:	37.1	First Births:	105	Postneonatal Deaths:	1
		Median Age of Mother:	25	Perinatal Deaths:	8
				Fetal Deaths:	3
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	198	Divorces:	90		
Marriage Rate:	18.5	Divorce Rate:	8.4		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	293	13.7	283	13.6	-	-	9	16.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	32	109.2	30	106.0	-	-	2	-
Low Weight	15	51.2	14	49.5	-	-	1	-
Under 1,500 Grams	4	-	4	-	-	-	-	-
< 38 Weeks Gestation	32	109.2	31	109.5	-	-	1	-
Prenatal Care Began in 1st Trimester	251	856.7	243	858.7	-	-	7	777.8

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	6	20.5	6	21.2	-	-	-	-
Neonatal Deaths	5	-	5	-	-	-	-	-
Postneonatal Deaths	1	-	1	-	-	-	-	-
Perinatal Deaths	8	27.0	6	21.1	-	-	2	-
Fetal Deaths	3	-	1	-	-	-	2	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	231	126	105	225	125	100	-	-	-	6	1	5
Mortality Rate	10.8	12.2	9.5	10.8	12.4	9.3	-	-	-	11.2	-	-
	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	2	-	-	1	2	3	8	13	36	157
White Male	3	2	-	-	-	1	1	1	5	7	20	85
White Female	3	1	-	-	-	-	1	2	2	6	16	69
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	2	-	-	-	-	1	-	-	-	2

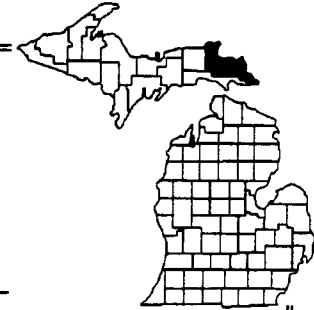
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	231	1,079.5	225	1,079.3	-	-	5	-
Diseases of the Heart	97	453.3	96	460.5	-	-	-	-
Malignant Neoplasms	52	243.0	50	239.8	-	-	1	-
Cerebrovascular Diseases	12	56.1	11	52.8	-	-	-	-
Accidents and Adverse Effects	12	56.1	10	48.0	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	10	46.7	10	48.0	-	-	-	-
Pneumonia and Influenza	10	46.7	10	48.0	-	-	-	-
Diabetes Mellitus	-	-	-	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	-	3	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Chippewa County

**POPULATION**

As of April 1, 1990: 34,604
 Rank Among Counties: 45
 Per Square Mile: 21.8
 Median Age: 32.2

NATALITY

Total Live Births: 417
 Teenage Mothers: 64
 Low Weight Births: 17
 First Births: 162
 Median Age of Mother: 25

MORTALITY

Total Deaths: 281
 Infant Deaths: 3
 Neonatal Deaths: 2
 Postneonatal Deaths: 1
 Perinatal Deaths: 2
 Fetal Deaths: -
 Maternal Deaths: -

MARRIAGE

Marriages: 331
 Marriage Rate: 19.1

DIVORCE

Divorces: 134
 Divorce Rate: 7.7

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	417	12.1	351	12.3	1	-	64	16.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	64	153.5	45	128.2	-	-	18	281.3
Low Weight	17	40.8	14	39.9	-	-	3	-
Under 1,500 Grams	5	-	3	-	-	-	2	-
< 38 Weeks Gestation	57	136.7	41	116.8	-	-	16	250.0
Prenatal Care Began in 1st Trimester	294	705.0	252	717.9	1	-	41	640.6

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

INFANT AND PERINATAL MORTALITY BY RACE

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

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	281	156	124	258	145	113	-	-	-	22	11	10
Mortality Rate	8.1	8.1	8.0	9.1	9.7	8.4	-	-	-	5.5	5.4	5.2
	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	-	-	-	1	1	4	8	9	22	34	199
White Male	1	-	-	-	1	1	3	5	6	14	22	92
White Female	1	-	-	-	-	-	1	2	3	5	9	92
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	1	-	2	2	6
Other Female	1	-	-	-	-	-	-	-	-	1	-	8

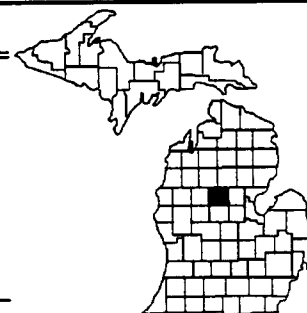
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	281	812.0	258	907.5	-	-	1	-
Diseases of the Heart	93	268.8	86	302.5	-	-	-	-
Malignant Neoplasms	76	219.6	68	239.2	-	-	-	-
Cerebrovascular Diseases	18	52.0	17	59.8	-	-	-	-
Accidents and Adverse Effects	11	31.8	10	35.2	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	6	17.3	6	21.1	-	-	-	-
Pneumonia and Influenza	8	23.1	6	21.1	-	-	-	-
Diabetes Mellitus	5	-	4	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	6	17.3	6	21.1	-	-	-	-
Atherosclerosis	4	-	4	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Clare County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	24,952	Total Live Births:	422	Total Deaths:	314
Rank Among Counties:	52	Teenage Mothers:	74	Infant Deaths:	4
Per Square Mile:	43.8	Low Weight Births:	22	Neonatal Deaths:	-
Median Age:	36.2	First Births:	153	Postneonatal Deaths:	4
		Median Age of Mother:	24	Perinatal Deaths:	2
				Fetal Deaths:	2
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	241	Divorces:	132		
Marriage Rate:	19.3	Divorce Rate:	10.6		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	422	16.9	421	17.0	-	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	74	175.4	74	175.8	-	-	-	-
Low Weight	22	52.1	22	52.3	-	-	-	-
Under 1,500 Grams	4	-	4	-	-	-	-	-
< 38 Weeks Gestation	61	144.5	61	144.9	-	-	-	-
Prenatal Care Began in 1st Trimester	372	881.5	372	883.6	-	-	-	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	-	-	-	-	-	-	-	-
Postneonatal Deaths	4	-	3	-	1	-	-	-
Perinatal Deaths	2	-	2	-	-	-	-	-
Fetal Deaths	2	-	2	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	314	173	141	311	171	140	1	1	-	2	1	1
Mortality Rate	12.6	14.3	10.9	12.6	14.3	11.0	-	-	-	-	-	-
	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	3	5	32	64	203
White Male	2	-	-	1	-	1	1	1	2	24	38	101
White Female	1	-	-	-	-	-	-	2	1	8	26	102
Black Male	1	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	1	-	-	-
Other Female	-	-	-	-	-	-	-	-	1	-	-	-

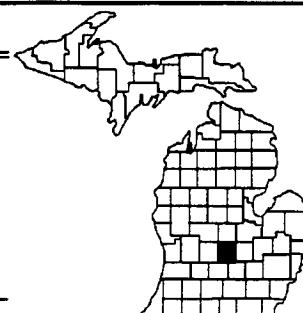
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	314	1,258.4	311	1,259.3	1	-	1	-
Diseases of the Heart	129	517.0	129	522.4	-	-	-	-
Malignant Neoplasms	71	284.5	70	283.4	-	-	-	-
Cerebrovascular Diseases	21	84.2	21	85.0	-	-	-	-
Accidents and Adverse Effects	12	48.1	12	48.6	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	64.1	16	64.8	-	-	-	-
Pneumonia and Influenza	9	36.1	9	36.4	-	-	-	-
Diabetes Mellitus	13	52.1	13	52.6	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	-	2	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Clinton County

**POPULATION**

As of April 1, 1990: 57,883
 Rank Among Counties: 29
 Per Square Mile: 101.0
 Median Age: 32.3

NATALITY

Total Live Births: 865
 Teenage Mothers: 53
 Low Weight Births: 55
 First Births: 329
 Median Age of Mother: 27

MORTALITY

Total Deaths: 359
 Infant Deaths: 7
 Neonatal Deaths: 6
 Postneonatal Deaths: 1
 Perinatal Deaths: 6
 Fetal Deaths: 1
 Maternal Deaths: -

MARRIAGE

Marriages: 495
 Marriage Rate: 17.1

DIVORCE

Divorces: 242
 Divorce Rate: 8.4

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	865	14.9	852	14.9	3	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	53	61.3	50	58.7	2	-	-	-
Low Weight	55	63.6	55	64.6	-	-	-	-
Under 1,500 Grams	8	9.2	8	9.4	-	-	-	-
< 38 Weeks Gestation	131	151.4	129	151.4	2	-	-	-
Prenatal Care Began in 1st Trimester	737	852.0	730	856.8	2	-	1	-

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	7	8.1	7	8.2	-	-	-	-
Neonatal Deaths	6	6.9	6	7.0	-	-	-	-
Postneonatal Deaths	1	-	1	-	-	-	-	-
Perinatal Deaths	6	6.9	6	7.0	-	-	-	-
Fetal Deaths	1	-	1	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	359	177	182	356	175	181	2	1	1	1	1	-
Mortality Rate	6.2	6.1	6.3	6.2	6.1	6.3	-	-	-	-	-	-
	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	7	1	-	2	3	7	2	9	14	25	53	236
White Male	3	1	-	1	1	4	1	5	11	15	26	107
White Female	4	-	-	1	1	3	-	4	3	10	27	128
Black Male	-	-	-	-	-	-	1	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	1	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

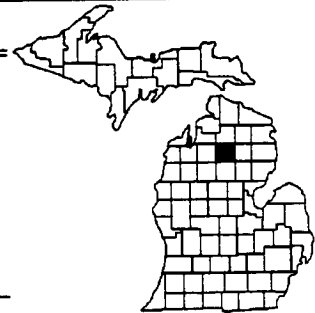
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	359	620.2	356	622.7	2	-	6	34.3
Diseases of the Heart	124	214.2	124	216.9	-	-	-	-
Malignant Neoplasms	95	164.1	95	166.2	-	-	1	-
Cerebrovascular Diseases	28	48.4	28	49.0	-	-	-	-
Accidents and Adverse Effects	20	34.6	19	33.2	1	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	14	24.2	14	24.5	-	-	-	-
Pneumonia and Influenza	14	24.2	14	24.5	-	-	-	-
Diabetes Mellitus	11	19.0	10	17.5	1	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	7	12.1	6	10.5	-	-	1	-
Atherosclerosis	2	-	2	-	-	-	-	-
AIDS	2	-	2	-	-	-	-	-

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

1990 Profile of Crawford County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	12,260	Total Live Births:	191	Total Deaths:	120
Rank Among Counties:	70	Teenage Mothers:	40	Infant Deaths:	5
Per Square Mile:	21.9	Low Weight Births:	12	Neonatal Deaths:	4
Median Age:	34.7	First Births:	74	Postneonatal Deaths:	1
		Median Age of Mother:	24	Perinatal Deaths:	4
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	111	Divorces:	58		
Marriage Rate:	18.1	Divorce Rate:	9.5		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	191	15.6	184	15.6	2	-	5	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	40	209.4	37	201.1	2	-	1	-
Low Weight	12	62.8	12	65.2	-	-	-	-
Under 1,500 Grams	4	-	4	-	-	-	-	-
< 38 Weeks Gestation	29	151.8	29	157.6	-	-	-	-
Prenatal Care Began in 1st Trimester	129	675.4	123	668.5	1	-	5	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	4	-	4	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	120	66	54	119	65	54	-	-	-	1	1	-
Mortality Rate	9.8	10.5	9.0	10.1	11.0	9.2	-	-	-	-	-	-
	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	-	-	-	1	-	-	5	3	9	17	80
White Male	3	-	-	-	1	-	-	2	2	4	12	41
White Female	2	-	-	-	-	-	-	3	1	5	4	39
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	120	978.8	119	1,007.7	-	-	1	-
Diseases of the Heart	40	326.3	40	338.7	-	-	-	-
Malignant Neoplasms	20	163.1	19	160.9	-	-	-	-
Cerebrovascular Diseases	16	130.5	16	135.5	-	-	-	-
Accidents and Adverse Effects	4	-	4	-	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	9	73.4	9	76.2	-	-	-	-
Pneumonia and Influenza	4	-	4	-	-	-	-	-
Diabetes Mellitus	3	-	3	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	-	2	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Delta County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	37,780	Total Live Births:	477	Total Deaths:	351
Rank Among Counties:	41	Teenage Mothers:	62	Infant Deaths:	3
Per Square Mile:	32.2	Low Weight Births:	18	Neonatal Deaths:	-
Median Age:	35.2	First Births:	178	Postneonatal Deaths:	3
		Median Age of Mother:	26	Perinatal Deaths:	2
				Fetal Deaths:	2
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	353	Divorces:	163		
Marriage Rate:	18.7	Divorce Rate:	8.6		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	477	12.6	451	12.2	-	-	25	27.4
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	62	130.0	56	124.2	-	-	6	240.0
Low Weight	18	37.7	16	35.5	-	-	2	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	58	121.6	53	117.5	-	-	5	-
Prenatal Care Began in 1st Trimester	366	767.3	350	776.1	-	-	15	600.0

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	-	-	-	-	-	-	-	-
Postneonatal Deaths	3	-	3	-	-	-	-	-
Perinatal Deaths	2	-	1	-	-	-	1	-
Fetal Deaths	2	-	1	-	-	-	1	-

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

MORTALITY

	All Races			White			Black			Other			
Deaths	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Mortality Rate	351	195	156	345	192	153	2	-	2	3	2	1	
	9.3	10.6	8.1	9.4	10.7	8.1							
	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	3	-	-	2	1	2	3	6	9	21	57	247	-
White Male	2	-	-	1	1	1	3	6	8	12	37	121	-
White Female	1	-	-	-	-	1	-	-	1	8	20	122	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	2	-
Other Male	-	-	-	-	-	-	-	-	-	1	-	1	-
Other Female	-	-	-	1	-	-	-	-	-	-	-	-	-

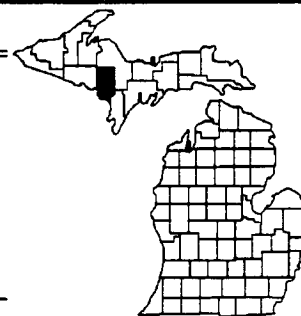
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	351	929.1	345	936.2	2	-	3	-
Diseases of the Heart	99	262.0	98	265.9	-	-	-	-
Malignant Neoplasms	80	211.8	78	211.7	1	-	-	-
Cerebrovascular Diseases	39	103.2	39	105.8	-	-	-	-
Accidents and Adverse Effects	17	45.0	17	46.1	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	8	21.2	7	19.0	-	-	-	-
Pneumonia and Influenza	21	55.6	21	57.0	-	-	-	-
Diabetes Mellitus	16	42.4	16	43.4	-	-	-	-
Chronic Liver Disease and Cirrhosis	5	-	5	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	7	18.5	7	19.0	-	-	-	-
Atherosclerosis	7	18.5	7	19.0	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Dickinson County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	26,831	Total Live Births:	339	Total Deaths:	294
Rank Among Counties:	48	Teenage Mothers:	31	Infant Deaths:	1
Per Square Mile:	34.8	Low Weight Births:	22	Neonatal Deaths:	-
Median Age:	36.3	First Births:	134	Postneonatal Deaths:	1
		Median Age of Mother:	26	Perinatal Deaths:	2
				Fetal Deaths:	2
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	273	Divorces:	145		
Marriage Rate:	20.3	Divorce Rate:	10.8		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	339	12.6	337	12.7	-	-	2	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	31	91.4	31	92.0	-	-	-	-
Low Weight	22	64.9	22	65.3	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	60	177.0	60	178.0	-	-	-	-
Prenatal Care Began in 1st Trimester	297	876.1	295	875.4	-	-	2	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	294	145	149	294	145	149	-	-	-	-	-	-
Mortality Rate	11.0	11.0	10.9	11.1	11.1	11.0	-	-	-	-	-	-
	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	2	5	8	15	56	205
White Male	1	-	-	-	-	1	1	3	6	10	31	92
White Female	-	-	-	-	-	1	1	2	2	5	25	113
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

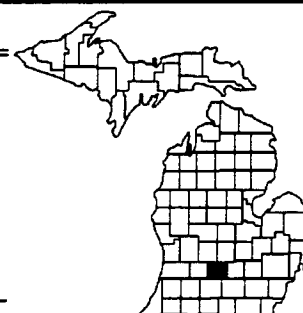
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	294	1,095.7	294	1,107.0	-	-	-	-
Diseases of the Heart	110	410.0	110	414.2	-	-	-	-
Malignant Neoplasms	76	283.3	76	286.2	-	-	-	-
Cerebrovascular Diseases	30	111.8	30	113.0	-	-	-	-
Accidents and Adverse Effects	10	37.3	10	37.7	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	8	29.8	8	30.1	-	-	-	-
Pneumonia and Influenza	4	-	4	-	-	-	-	-
Diabetes Mellitus	7	26.1	7	26.4	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	2	-	2	-	-	-	-	-
Suicide	2	-	2	-	-	-	-	-
Atherosclerosis	7	26.1	7	26.4	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

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

1990 Profile of Eaton County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	92,879	Total Live Births:	1,230	Total Deaths:	639
Rank Among Counties:	19	Teenage Mothers:	128	Infant Deaths:	9
Per Square Mile:	160.3	Low Weight Births:	82	Neonatal Deaths:	2
Median Age:	32.9	First Births:	502	Postneonatal Deaths:	7
		Median Age of Mother:	27	Perinatal Deaths:	7
				Fetal Deaths:	5
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	766	Divorces:	423		
Marriage Rate:	16.5	Divorce Rate:	9.1		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,230	13.2	1,174	13.3	34	10.2	15	14.7
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	128	104.1	124	105.6	3	-	1	-
Low Weight	82	66.7	73	62.2	8	235.3	1	-
Under 1,500 Grams	11	8.9	7	6.0	4	-	-	-
< 38 Weeks Gestation	191	155.3	179	152.5	8	235.3	3	-
Prenatal Care Began in 1st Trimester	986	801.6	947	806.6	24	705.9	10	666.7

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	9	7.3	8	6.8	1	-	-	-
Neonatal Deaths	2	-	2	-	-	-	-	-
Postneonatal Deaths	7	5.7	6	5.1	1	-	-	-
Perinatal Deaths	7	5.7	7	5.9	-	-	-	-
Fetal Deaths	5	-	5	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	639	321	318	627	314	313	10	6	4	2	1	1
Mortality Rate	6.9	7.1	6.7	7.1	7.3	6.9	3.0	3.7	-	-	-	-
	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	9	4	6	5	8	10	10	26	23	50	103	385
White Male	4	2	2	4	5	8	7	18	12	33	60	159
White Female	4	2	4	1	2	2	2	5	11	16	40	224
Black Male	-	-	-	-	-	-	-	3	-	1	1	1
Black Female	1	-	-	-	-	-	1	-	-	-	2	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	1	-	-	-	-	-	-	-

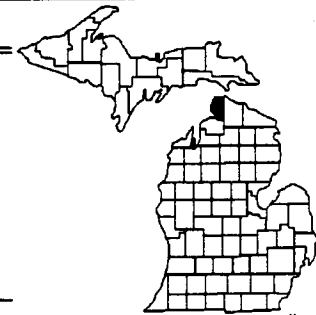
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	639	688.0	627	708.4	10	298.7	23	84.3
Diseases of the Heart	212	228.3	207	233.9	4	-	-	-
Malignant Neoplasms	136	146.4	136	153.6	-	-	3	-
Cerebrovascular Diseases	40	43.1	39	44.1	1	-	-	-
Accidents and Adverse Effects	48	51.7	47	53.1	1	-	11	40.3
Chronic Obstructive Pulmonary Diseases and Allied Conditions	27	29.1	27	30.5	-	-	-	-
Pneumonia and Influenza	21	22.6	21	23.7	-	-	-	-
Diabetes Mellitus	19	20.5	18	20.3	1	-	-	-
Chronic Liver Disease and Cirrhosis	6	6.5	6	6.8	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	20	21.5	19	21.5	-	-	5	-
Atherosclerosis	11	11.8	11	12.4	-	-	-	-
AIDS	4	-	3	-	1	-	-	-

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

1990 Profile of Emmet County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	25,040	Total Live Births:	367	Total Deaths:	245
Rank Among Counties:	51	Teenage Mothers:	35	Infant Deaths:	-
Per Square Mile:	53.5	Low Weight Births:	12	Neonatal Deaths:	-
Median Age:	34.5	First Births:	140	Postneonatal Deaths:	-
		Median Age of Mother:	27	Perinatal Deaths:	3
				Fetal Deaths:	3
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	267	Divorces:	178		
Marriage Rate:	21.3	Divorce Rate:	14.2		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	367	14.7	359	14.9	-	-	8	10.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	35	95.4	31	86.4	-	-	4	-
Low Weight	12	32.7	12	33.4	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	39	106.3	38	105.8	-	-	1	-
Prenatal Care Began in 1st Trimester	311	847.4	305	849.6	-	-	6	750.0

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	3	-	3	-	-	-	-	-
Fetal Deaths	3	-	3	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	245	136	109	236	131	105	-	-	-	9	5	4
Mortality Rate	9.8	11.2	8.5	9.8	11.2	8.4	-	-	-	12.0	-	-
	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	2	1	2	9	16	37	171
White Male	-	1	-	-	3	2	1	2	8	7	22	85
White Female	-	2	-	1	-	-	-	-	-	6	15	81
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	1	2	-	-	2
Other Female	-	-	-	-	-	-	-	-	1	-	-	3

Note: Mortality rate is per 1,000 population in specified group.

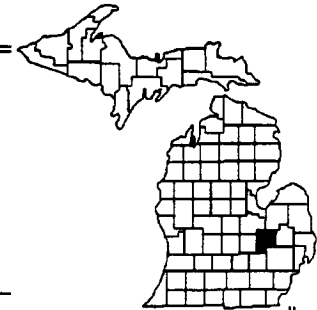
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	245	978.4	236	977.0	-	-	7	100.5
Diseases of the Heart	84	335.5	81	335.3	-	-	-	-
Malignant Neoplasms	59	235.6	56	231.8	-	-	-	-
Cerebrovascular Diseases	19	75.9	19	78.7	-	-	-	-
Accidents and Adverse Effects	9	35.9	9	37.3	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	14	55.9	14	58.0	-	-	-	-
Pneumonia and Influenza	11	43.9	11	45.5	-	-	1	-
Diabetes Mellitus	8	31.9	7	29.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	-	3	-	-	-	-	-
Atherosclerosis	4	-	4	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

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

1990 Profile of Genesee County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	430,459	Total Live Births:	7,653	Total Deaths:	3,552
Rank Among Counties:	5	Teenage Mothers:	1,278	Infant Deaths:	92
Per Square Mile:	671.0	Low Weight Births:	712	Neonatal Deaths:	61
Median Age:	32	First Births:	3,032	Postneonatal Deaths:	31
		Median Age of Mother:	25	Perinatal Deaths:	91
				Fetal Deaths:	37
				Maternal Deaths:	1
MARRIAGE		DIVORCE			
Marriages:	3,712	Divorces:	1,750		
Marriage Rate:	17.2	Divorce Rate:	8.1		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	7,653	17.8	5,352	15.8	2,230	26.3	67	10.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	1,278	167.0	647	120.9	621	278.5	8	119.4
Low Weight	712	93.0	363	67.8	342	153.4	6	89.6
Under 1,500 Grams	153	20.0	82	15.3	69	30.9	2	.
< 38 Weeks Gestation	1,524	199.1	839	156.8	671	300.9	13	194.0
Prenatal Care Began in 1st Trimester	6,423	839.3	4,656	870.0	1,717	770.0	46	686.6

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	92	12.0	43	8.0	48	21.5	1	.
Neonatal Deaths	61	8.0	29	5.4	31	13.9	1	.
Postneonatal Deaths	31	4.1	14	2.6	17	7.6	-	-
Perinatal Deaths	91	11.8	51	9.5	39	17.4	1	.
Fetal Deaths	37	4.8	25	4.6	12	5.4	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	3,552	1,820	1,732	2,873	1,422	1,451	649	383	266	27	14	13
Mortality Rate	8.3	8.8	7.7	8.5	8.7	8.3	7.7	9.8	5.8	4.4	4.7	4.0
	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	92	17	7	7	40	40	51	148	188	332	709	1,921
White Male	32	3	5	2	8	12	27	65	85	158	337	688
White Female	11	6	-	2	5	10	8	31	51	90	229	1,008
Black Male	28	5	1	1	21	14	9	31	29	47	88	109
Black Female	20	3	1	2	6	3	6	18	20	33	48	106
Other Male	-	-	-	-	-	1	1	2	3	2	2	3
Other Female	1	-	-	-	-	-	-	1	-	2	4	5

Note: Mortality rate is per 1,000 population in specified group.

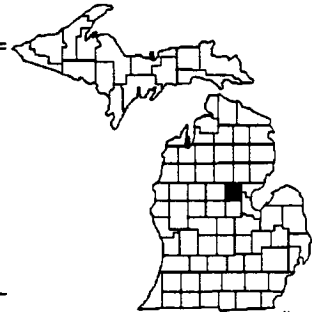
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	3,552	825.2	2,873	846.0	649	766.6	71	55.8
Diseases of the Heart	1,295	300.8	1,084	319.2	202	238.6	1	.
Malignant Neoplasms	800	185.8	643	189.3	150	177.2	2	.
Cerebrovascular Diseases	232	53.9	191	56.2	40	47.2	1	.
Accidents and Adverse Effects	159	36.9	133	39.2	23	27.2	24	18.9
Chronic Obstructive Pulmonary Diseases and Allied Conditions	124	28.8	115	33.9	9	10.6	-	-
Pneumonia and Influenza	81	18.8	68	20.0	12	14.2	2	.
Diabetes Mellitus	109	25.3	89	26.2	19	22.4	-	-
Chronic Liver Disease and Cirrhosis	34	7.9	26	7.7	8	9.4	-	-
Homicide	78	18.1	21	6.2	56	66.1	23	18.1
Suicide	45	10.5	39	11.5	4	.	2	.
Atherosclerosis	38	8.8	37	10.9	1	.	-	-
AIDS	21	4.9	13	3.8	8	9.4	-	-

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

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

1990 Profile of Gladwin County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	21,896	Total Live Births:	297	Total Deaths:	240
Rank Among Counties:	55	Teenage Mothers:	48	Infant Deaths:	5
Per Square Mile:	43.3	Low Weight Births:	20	Neonatal Deaths:	3
Median Age:	36.9	First Births:	111	Postneonatal Deaths:	2
		Median Age of Mother:	24	Perinatal Deaths:	7
				Fetal Deaths:	4
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	173	Divorces:	103		
Marriage Rate:	15.8	Divorce Rate:	9.4		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	297	13.6	295	13.6	1	.	1	.
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	48	161.6	47	159.3	-	-	1	.
Low Weight	20	67.3	20	67.8	-	-	-	-
Under 1,500 Grams	6	20.2	6	20.3	-	-	-	-
< 38 Weeks Gestation	55	185.2	55	186.4	-	-	-	-
Prenatal Care Began in 1st Trimester	236	794.6	234	793.2	1	.	1	.

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	23.3	7	23.4	-	-	-	-
Fetal Deaths	4	.	4	.	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	240	141	99	238	141	97	1	-	1	1	-	1
Mortality Rate	11.0	13.1	8.9	11.0	13.2	8.8	.	-	.	.	-	.
	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	5	1	2	-	3	1	-	12	11	11	46	148
White Male	3	1	2	-	2	1	-	8	9	8	34	73
White Female	2	-	-	-	1	-	-	4	2	3	11	74
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	1
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	-

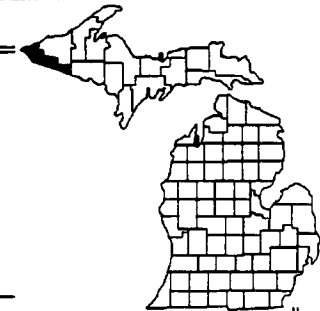
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	240	1,096.1	238	1,095.7	1	.	6	100.2
Diseases of the Heart	93	424.7	91	418.9	1	.	-	-
Malignant Neoplasms	63	287.7	63	290.0	-	-	1	.
Cerebrovascular Diseases	12	54.8	12	55.2	-	-	-	-
Accidents and Adverse Effects	14	63.9	14	64.5	-	-	3	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	11	50.2	11	50.6	-	-	-	-
Pneumonia and Influenza	9	41.1	9	41.4	-	-	-	-
Diabetes Mellitus	4	.	4	.	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	.	2	.	-	-	-	-
Homicide	1	.	1	.	-	-	-	-
Suicide	5	.	5	.	-	-	1	.
Atherosclerosis	1	.	1	.	-	-	-	-
AIDS	1	.	1	.	-	-	-	-

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

1990 Profile of Gogebic County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	18,052	Total Live Births:	171	Total Deaths:	254
Rank Among Counties:	63	Teenage Mothers:	23	Infant Deaths:	-
Per Square Mile:	16.3	Low Weight Births:	15	Neonatal Deaths:	-
Median Age:	40.2	First Births:	69	Postneonatal Deaths:	-
		Median Age of Mother:	26	Perinatal Deaths:	-
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	123	Divorces:	62		
Marriage Rate:	13.6	Divorce Rate:	6.9		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	171	9.5	160	9.1	1	-	10	32.2
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	23	134.5	21	131.3	1	-	1	-
Low Weight	15	87.7	12	75.0	-	-	3	-
Under 1,500 Grams	2	-	1	-	-	-	1	-
< 38 Weeks Gestation	27	157.9	21	131.3	1	-	5	-
Prenatal Care Began in 1st Trimester	123	719.3	117	731.3	1	-	5	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	254	117	137	250	115	135	1	-	-	3	1	2
Mortality Rate	14.1	13.2	14.9	14.3	13.6	14.9	-	-	-	-	-	-
	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	1	2	5	11	46	187
White Male	-	-	-	-	1	1	-	1	4	6	23	79
White Female	-	-	-	-	-	-	1	-	1	5	22	106
Black Male	-	-	-	-	-	-	-	1	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	2

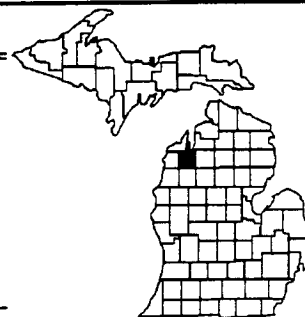
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	254	1,407.0	250	1,428.8	1	-	1	-
Diseases of the Heart	88	487.5	87	497.2	-	-	-	-
Malignant Neoplasms	63	349.0	62	354.3	-	-	-	-
Cerebrovascular Diseases	30	166.2	30	171.5	-	-	-	-
Accidents and Adverse Effects	9	49.9	8	45.7	1	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	7	38.8	7	40.0	-	-	-	-
Pneumonia and Influenza	12	66.5	12	68.6	-	-	-	-
Diabetes Mellitus	6	33.2	6	34.3	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	-	2	-	-	-	1	-
Atherosclerosis	2	-	2	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Grand Traverse County

**POPULATION**

As of April 1, 1990: 64,273
 Rank Among Counties: 27
 Per Square Mile: 137.9
 Median Age: 33.2

NATALITY

Total Live Births: 935
 Teenage Mothers: 97
 Low Weight Births: 41
 First Births: 397
 Median Age of Mother: 28

MORTALITY

Total Deaths: 481
 Infant Deaths: 5
 Neonatal Deaths: -
 Postneonatal Deaths: 5
 Perinatal Deaths: 1
 Fetal Deaths: 1
 Maternal Deaths: -

MARRIAGE

Marriages: 765
 Marriage Rate: 23.8

DIVORCE

Divorces: 336
 Divorce Rate: 10.5

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	935	14.5	905	14.3	1	.	23	26.2
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	97	103.7	91	100.6	-	-	6	260.9
Low Weight	41	43.9	39	43.1	-	-	2	.
Under 1,500 Grams	4	.	4	.	-	-	-	-
< 38 Weeks Gestation	125	133.7	119	131.5	-	-	6	260.9
Prenatal Care Began in 1st Trimester	724	774.3	701	774.6	1	.	17	739.1

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

INFANT AND PERINATAL MORTALITY BY RACE

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

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	481	240	241	476	236	240	1	1	-	4	3	1
Mortality Rate	7.5	7.7	7.3	7.5	7.7	7.4	.	.	-	.	.	.
	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	-	1	1	1	3	3	12	15	28	80	332
White Male	4	-	-	-	-	2	1	7	11	20	53	138
White Female	-	-	1	1	1	1	1	4	4	8	27	192
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	1	-	-	-	-	-	1	1	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

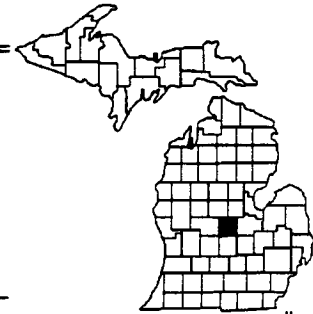
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	481	748.4	476	753.9	1	.	3	.
Diseases of the Heart	167	259.8	167	264.5	-	-	-	-
Malignant Neoplasms	108	168.0	107	169.5	1	.	-	-
Cerebrovascular Diseases	39	60.7	38	60.2	-	-	-	-
Accidents and Adverse Effects	21	32.7	20	31.7	-	-	2	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	26	40.5	26	41.2	-	-	-	-
Pneumonia and Influenza	15	23.3	15	23.8	-	-	-	-
Diabetes Mellitus	5	.	5	.	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	.	3	.	-	-	-	-
Homicide	1	.	1	.	-	-	-	-
Suicide	8	12.4	8	12.7	-	-	-	-
Atherosclerosis	6	9.3	6	9.5	-	-	-	-
AIDS	1	.	1	.	-	-	-	-

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

1990 Profile of Gratiot County

**POPULATION**

As of April 1, 1990: 38,982
 Rank Among Counties: 39
 Per Square Mile: 68.3
 Median Age: 32.7

NATALITY

Total Live Births: 559
 Teenage Mothers: 81
 Low Weight Births: 31
 First Births: 226
 Median Age of Mother: 25

MORTALITY

Total Deaths: 399
 Infant Deaths: 1
 Neonatal Deaths: 1
 Postneonatal Deaths: -
 Perinatal Deaths: 6
 Fetal Deaths: 5
 Maternal Deaths: -

MARRIAGE

Marriages: 343
 Marriage Rate: 17.6

DIVORCE

Divorces: 161
 Divorce Rate: 8.3

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	559	14.3	555	14.5	2	.	2	.
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	81	144.9	80	144.1	1	.	-	-
Low Weight	31	55.5	31	55.9	-	-	-	-
Under 1,500 Grams	2	.	2	.	-	-	-	-
< 38 Weeks Gestation	74	132.4	74	133.3	-	-	-	-
Prenatal Care Began in 1st Trimester	413	738.8	411	740.5	1	.	1	.

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	6	10.6	6	10.7	-	-	-	-
Fetal Deaths	5	.	5	.	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	399	205	194	398	204	194	-	-	-	1	1	-
Mortality Rate	10.2	10.8	9.7	10.4	11.0	9.8	-	-	-	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	-	-	2	1	3	5	3	12	24	53	295
White Male	1	-	-	2	1	2	3	3	10	13	37	132
White Female	-	-	-	-	-	1	1	-	2	11	16	163
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	1	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

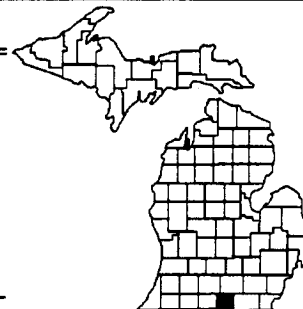
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	399	1,023.5	398	1,036.5	-	-	3	.
Diseases of the Heart	156	400.2	156	406.3	-	-	-	-
Malignant Neoplasms	84	215.5	84	218.8	-	-	1	.
Cerebrovascular Diseases	31	79.5	31	80.7	-	-	-	-
Accidents and Adverse Effects	15	38.5	14	36.5	-	-	2	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	19	48.7	19	49.5	-	-	-	-
Pneumonia and Influenza	40	102.6	40	104.2	-	-	-	-
Diabetes Mellitus	6	15.4	6	15.6	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	.	1	.	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	.	1	.	-	-	-	-
Atherosclerosis	10	25.7	10	26.0	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Hillsdale County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	43,431	Total Live Births:	615	Total Deaths:	391
Rank Among Counties:	36	Teenage Mothers:	83	Infant Deaths:	7
Per Square Mile:	72.0	Low Weight Births:	37	Neonatal Deaths:	5
Median Age:	32.6	First Births:	233	Postneonatal Deaths:	2
		Median Age of Mother:	25	Perinatal Deaths:	6
				Fetal Deaths:	4
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	347	Divorces:	233		
Marriage Rate:	16.0	Divorce Rate:	10.7		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	615	14.2	612	14.2	1	-	1	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	83	135.0	83	135.6	-	-	-	-
Low Weight	37	60.2	36	58.8	1	-	-	-
Under 1,500 Grams	7	11.4	7	11.4	-	-	-	-
< 38 Weeks Gestation	76	123.6	75	122.5	1	-	-	-
Prenatal Care Began in 1st Trimester	397	645.5	394	643.8	1	-	1	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	11.4	-	-	-	-
Neonatal Deaths	5	-	5	-	-	-	-	-
Postneonatal Deaths	2	-	2	-	-	-	-	-
Perinatal Deaths	6	9.7	5	-	-	-	-	-
Fetal Deaths	4	-	3	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	391	220	171	389	218	171	1	1	-	1	1	-	
Mortality Rate	9.0	10.3	7.7	9.0	10.3	7.8	.	.	-	.	.	-	
	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	7	3	-	-	2	3	6	10	18	32	58	252	-
White Male	5	2	-	-	2	2	4	7	13	19	32	132	-
White Female	2	1	-	-	-	1	2	3	5	11	26	120	-
Black Male	-	-	-	-	-	-	-	-	-	1	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	1	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	-

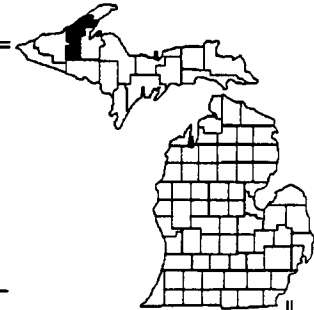
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	391	900.3	389	903.4	1	-	5	-
Diseases of the Heart	120	276.3	120	278.7	-	-	-	-
Malignant Neoplasms	90	207.2	89	206.7	-	-	-	-
Cerebrovascular Diseases	29	66.8	29	67.4	-	-	-	-
Accidents and Adverse Effects	21	48.4	21	48.8	-	-	4	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	23	53.0	23	53.4	-	-	-	-
Pneumonia and Influenza	17	39.1	17	39.5	-	-	-	-
Diabetes Mellitus	13	29.9	13	30.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	5	-	5	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	7	16.1	7	16.3	-	-	-	-
Atherosclerosis	6	13.8	6	13.9	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Houghton County

**POPULATION**

As of April 1, 1990: 35,446
 Rank Among Counties: 43
 Per Square Mile: 35.0
 Median Age: 31.7

NATALITY

Total Live Births: 476
 Teenage Mothers: 49
 Low Weight Births: 16
 First Births: 157
 Median Age of Mother: 26

MORTALITY

Total Deaths: 398
 Infant Deaths: 4
 Neonatal Deaths: 4
 Postneonatal Deaths: -
 Perinatal Deaths: 9
 Fetal Deaths: 5
 Maternal Deaths: -

MARRIAGE

Marriages: 236
 Marriage Rate: 13.3

DIVORCE

Divorces: 100
 Divorce Rate: 5.6

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	476	13.4	458	13.3	1	-	15	19.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	49	102.9	49	107.0	-	-	-	-
Low Weight	16	33.6	14	30.6	-	-	1	-
Under 1,500 Grams	5	-	5	-	-	-	-	-
< 38 Weeks Gestation	49	102.9	47	102.6	-	-	2	-
Prenatal Care Began in 1st Trimester	365	766.8	349	762.0	-	-	14	933.3

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	9	18.7	9	19.4	-	-	-	-
Fetal Deaths	5	-	5	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	398	208	190	396	207	189	-	-	-	2	1	1
Mortality Rate	11.2	11.1	11.3	11.5	11.4	11.5	-	-	-	-	-	-
	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	4	-	-	-	3	2	1	3	15	28	43	299
White Male	3	-	-	-	2	-	1	3	8	16	30	144
White Female	1	-	-	-	-	2	-	-	7	12	13	154
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	1	-	-	-	-	-	-	-

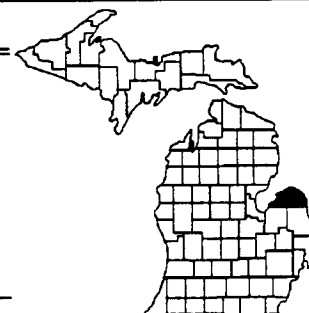
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	398	1,122.8	396	1,147.2	-	-	3	-
Diseases of the Heart	131	369.6	131	379.5	-	-	-	-
Malignant Neoplasms	99	279.3	99	286.8	-	-	-	-
Cerebrovascular Diseases	32	90.3	32	92.7	-	-	-	-
Accidents and Adverse Effects	19	53.6	18	52.1	-	-	3	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	13	36.7	13	37.7	-	-	-	-
Pneumonia and Influenza	32	90.3	31	89.8	-	-	-	-
Diabetes Mellitus	4	-	4	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	4	-	4	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	7	19.7	7	20.3	-	-	-	-
Atherosclerosis	3	-	3	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

1990 Profile of Huron County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	34,951	Total Live Births:	495	Total Deaths:	369
Rank Among Counties:	44	Teenage Mothers:	30	Infant Deaths:	3
Per Square Mile:	42.1	Low Weight Births:	28	Neonatal Deaths:	3
Median Age:	35.8	First Births:	160	Postneonatal Deaths:	-
		Median Age of Mother:	26	Perinatal Deaths:	6
				Fetal Deaths:	3
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	248	Divorces:	188		
Marriage Rate:	14.2	Divorce Rate:	10.8		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	495	14.2	490	14.1	-	-	5	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	30	60.6	30	61.2	-	-	-	-
Low Weight	28	56.6	28	57.1	-	-	-	-
Under 1,500 Grams	2	-	2	-	-	-	-	-
< 38 Weeks Gestation	70	141.4	67	136.7	-	-	3	-
Prenatal Care Began in 1st Trimester	393	793.9	389	793.9	-	-	4	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	3	-	3	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	6	12.0	6	12.2	-	-	-	-
Fetal Deaths	3	-	3	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	369	192	177	369	192	177	-	-	-	-	-	-
Mortality Rate	10.6	11.2	9.9	10.6	11.3	10.0	-	-	-	-	-	-
	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	-	2	2	1	2	14	27	60	257
White Male	2	-	-	-	2	1	1	1	11	17	37	119
White Female	1	-	-	-	-	1	-	1	3	10	23	138
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

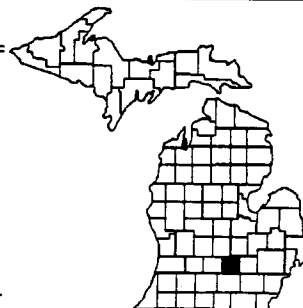
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	369	1,055.8	369	1,061.1	-	-	3	-
Diseases of the Heart	136	389.1	136	391.1	-	-	-	-
Malignant Neoplasms	94	268.9	94	270.3	-	-	-	-
Cerebrovascular Diseases	43	123.0	43	123.6	-	-	-	-
Accidents and Adverse Effects	14	40.1	14	40.3	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	13	37.2	13	37.4	-	-	-	-
Pneumonia and Influenza	15	42.9	15	43.1	-	-	-	-
Diabetes Mellitus	10	28.6	10	28.8	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

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

1990 Profile of Ingham County

**POPULATION**

As of April 1, 1990: 281,912
 Rank Among Counties: 7
 Per Square Mile: 503.7
 Median Age: 28.4

NATALITY

Total Live Births: 4,595
 Teenage Mothers: 586
 Low Weight Births: 320
 First Births: 1,875
 Median Age of Mother: 26

MORTALITY

Total Deaths: 1,757
 Infant Deaths: 56
 Neonatal Deaths: 38
 Postneonatal Deaths: 18
 Perinatal Deaths: 67
 Fetal Deaths: 38
 Maternal Deaths: -

MARRIAGE

Marriages: 2,692
 Marriage Rate: 19.1

DIVORCE

Divorces: 1,289
 Divorce Rate: 9.1

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	4,595	16.3	3,695	15.2	719	25.4	138	14.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	586	127.5	384	103.9	180	250.3	11	79.7
Low Weight	320	69.6	221	59.8	92	128.0	5	.
Under 1,500 Grams	60	13.1	38	10.3	21	29.2	1	.
< 38 Weeks Gestation	736	160.2	528	142.9	176	244.8	26	188.4
Prenatal Care Began in 1st Trimester	3,606	784.8	3,001	812.2	492	684.3	92	666.7

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	56	12.2	33	8.9	21	29.2	2	.
Neonatal Deaths	38	8.3	22	6.0	14	19.5	2	.
Postneonatal Deaths	18	3.9	11	3.0	7	9.7	-	.
Perinatal Deaths	67	14.5	45	12.1	20	27.5	2	.
Fetal Deaths	38	8.2	29	7.8	9	12.4	-	.

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,757	858	899	1,590	767	823	151	83	68	15	7	8
Mortality Rate	6.2	6.3	6.1	6.5	6.6	6.5	5.3	6.2	4.6	1.5	1.4	1.6
	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	56	6	2	5	15	11	26	62	78	144	280	1,072
White Male	20	4	1	2	11	8	16	27	44	79	146	409
White Female	13	1	1	2	2	-	2	19	20	49	105	609
Black Male	11	1	-	-	2	1	5	9	9	8	14	23
Black Female	10	-	-	1	-	2	2	7	5	6	13	22
Other Male	-	-	-	-	-	-	1	-	-	1	1	4
Other Female	2	-	-	-	-	-	-	-	-	1	1	4

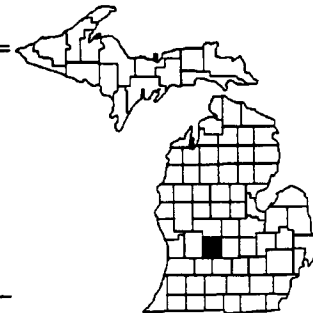
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,757	623.2	1,590	652.3	151	533.3	28	34.4
Diseases of the Heart	540	191.5	499	204.7	37	130.7	2	.
Malignant Neoplasms	386	136.9	357	146.5	27	95.4	3	.
Cerebrovascular Diseases	121	42.9	110	45.1	10	35.3	-	.
Accidents and Adverse Effects	84	29.8	75	30.8	7	24.7	8	9.8
Chronic Obstructive Pulmonary Diseases and Allied Conditions	78	27.7	74	30.4	3	.	1	.
Pneumonia and Influenza	84	29.8	79	32.4	5	.	-	.
Diabetes Mellitus	38	13.5	33	13.5	5	.	-	.
Chronic Liver Disease and Cirrhosis	24	8.5	21	8.6	3	.	-	.
Homicide	12	4.3	3	.	9	31.8	3	.
Suicide	36	12.8	34	13.9	1	.	4	.
Atherosclerosis	21	7.4	17	7.0	4	.	-	.
AIDS	17	6.0	14	5.7	3	.	-	.

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

1990 Profile of Ionia County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	57,024	Total Live Births:	824	Total Deaths:	400
Rank Among Counties:	30	Teenage Mothers:	128	Infant Deaths:	9
Per Square Mile:	98.8	Low Weight Births:	48	Neonatal Deaths:	3
Median Age:	29.9	First Births:	324	Postneonatal Deaths:	6
		Median Age of Mother:	24	Perinatal Deaths:	12
				Fetal Deaths:	10
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	492	Divorces:	241		
Marriage Rate:	17.3	Divorce Rate:	8.5		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	824	14.5	818	15.2	1	.	2	.
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	128	155.3	128	156.5	-	-	-	-
Low Weight	48	58.3	48	58.7	-	-	-	-
Under 1,500 Grams	7	8.5	7	8.6	-	-	-	-
< 38 Weeks Gestation	106	128.6	106	129.6	-	-	-	-
Prenatal Care Began in 1st Trimester	634	769.4	629	768.9	1	.	2	.

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	9	10.9	8	9.8	-	-	1	.
Neonatal Deaths	3	-	3	.	-	-	-	-
Postneonatal Deaths	6	7.3	5	.	-	-	1	.
Perinatal Deaths	12	14.4	12	14.5	-	-	-	-
Fetal Deaths	10	12.0	10	12.1	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	400	211	189	398	209	189	-	-	-	2	2	-	
Mortality Rate	7.0	6.9	7.1	7.4	7.7	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+	Unk
Total Deaths	9	2	2	3	3	5	3	5	12	39	68	249	-
White Male	4	2	2	1	1	3	1	3	5	26	38	123	-
White Female	4	-	-	2	2	2	2	2	7	13	30	125	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	1	-	-	-	-	-	-	-	-	-	-	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

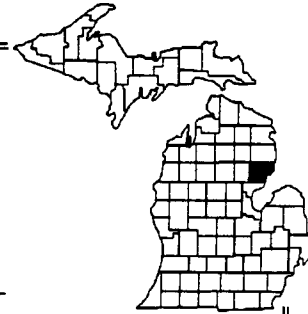
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	400	701.5	398	741.7	-	-	10	57.2
Diseases of the Heart	131	229.7	130	242.3	-	-	1	.
Malignant Neoplasms	109	191.1	109	203.1	-	-	4	.
Cerebrovascular Diseases	21	36.8	21	39.1	-	-	-	-
Accidents and Adverse Effects	15	26.3	15	28.0	-	-	3	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	23	40.3	23	42.9	-	-	-	-
Pneumonia and Influenza	11	19.3	11	20.5	-	-	-	-
Diabetes Mellitus	9	15.8	9	16.8	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	.	2	.	-	-	-	-
Homicide	1	.	1	.	-	-	-	-
Suicide	6	10.5	6	11.2	-	-	-	-
Atherosclerosis	5	.	5	.	-	-	-	-
AIDS	1	.	1	.	-	-	-	-

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

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

1990 Profile of Iosco County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	30,209	Total Live Births:	586	Total Deaths:	318
Rank Among Counties:	47	Teenage Mothers:	61	Infant Deaths:	2
Per Square Mile:	55.3	Low Weight Births:	25	Neonatal Deaths:	2
Median Age:	32.6	First Births:	233	Postneonatal Deaths:	-
		Median Age of Mother:	24	Perinatal Deaths:	7
				Fetal Deaths:	5
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	310	Divorces:	165		
Marriage Rate:	20.5	Divorce Rate:	10.9		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	586	19.4	559	19.2	16	25.2	11	22.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	61	104.1	58	103.8	2	-	1	-
Low Weight	25	42.7	23	41.1	2	-	-	-
Under 1,500 Grams	3	-	3	-	-	-	-	-
< 38 Weeks Gestation	84	143.3	81	144.9	2	-	1	-
Prenatal Care Began in 1st Trimester	468	798.6	446	797.9	13	812.5	9	818.2

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	7	11.8	7	12.4	-	-	-	-
Fetal Deaths	5	-	5	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	318	173	145	315	171	144	-	-	-	3	2	1
Mortality Rate	10.5	11.5	9.6	10.8	11.8	9.9	-	-	-	-	-	-
	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+ Unk
Total Deaths	2	-	1	-	1	1	4	3	10	29	63	204
White Male	1	-	1	-	1	1	4	2	8	15	38	100
White Female	1	-	-	-	-	-	-	1	2	14	23	103
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	2	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

Note: Mortality rate is per 1,000 population in specified group.

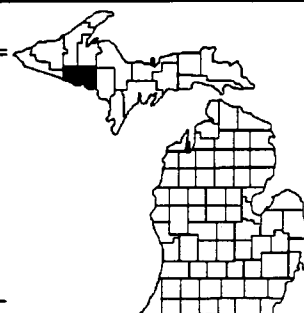
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	318	1,052.7	315	1,083.5	-	-	2	-
Diseases of the Heart	104	344.3	104	357.7	-	-	-	-
Malignant Neoplasms	95	314.5	95	326.8	-	-	-	-
Cerebrovascular Diseases	15	49.7	14	48.2	-	-	-	-
Accidents and Adverse Effects	17	56.3	16	55.0	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	18	59.6	18	61.9	-	-	-	-
Pneumonia and Influenza	12	39.7	12	41.3	-	-	-	-
Diabetes Mellitus	6	19.9	5	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	-	2	-	-	-	-	-
Atherosclerosis	12	39.7	12	41.3	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

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

1990 Profile of Iron County

**POPULATION**

As of April 1, 1990: 13,175
 Rank Among Counties: 69
 Per Square Mile: 11.3
 Median Age: 43.6

NATALITY

Total Live Births: 139
 Teenage Mothers: 17
 Low Weight Births: 9
 First Births: 42
 Median Age of Mother: 26

MORTALITY

Total Deaths: 198
 Infant Deaths: 2
 Neonatal Deaths: -
 Postneonatal Deaths: 2
 Perinatal Deaths: -
 Fetal Deaths: -
 Maternal Deaths: -

MARRIAGE

Marriages: 85
 Marriage Rate: 12.9

DIVORCE

Divorces: 45
 Divorce Rate: 6.8

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	139	10.6	136	10.4	-	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	17	122.3	17	125.0	-	-	-	-
Low Weight	9	64.7	9	66.2	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	18	129.5	18	132.4	-	-	-	-
Prenatal Care Began in 1st Trimester	107	769.8	105	772.1	-	-	2	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	198	106	92	197	105	92	-	-	-	1	1	-	
Mortality Rate	15.0	16.8	13.4	15.1	16.8	13.5	-	-	-	-	-	-	
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+	Unk
Total Deaths	2	-	-	-	1	2	1	2	3	7	25	155	-
White Male	-	-	-	-	1	1	1	2	1	4	20	75	-
White Female	2	-	-	-	-	1	-	-	1	3	5	80	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	1	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	-

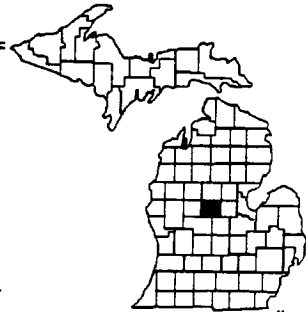
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	198	1,502.8	197	1,511.1	-	-	1	-
Diseases of the Heart	64	485.8	64	490.9	-	-	-	-
Malignant Neoplasms	53	402.3	52	398.9	-	-	-	-
Cerebrovascular Diseases	12	91.1	12	92.0	-	-	-	-
Accidents and Adverse Effects	7	53.1	7	53.7	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	8	60.7	8	61.4	-	-	-	-
Pneumonia and Influenza	5	-	5	-	-	-	-	-
Diabetes Mellitus	4	-	4	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	4	-	4	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	-	3	-	-	-	-	-
Atherosclerosis	4	-	4	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Isabella County

**POPULATION**

As of April 1, 1990: 54,624
 Rank Among Counties: 32
 Per Square Mile: 94.7
 Median Age: 24.5

NATALITY

Total Live Births: 759
 Teenage Mothers: 61
 Low Weight Births: 48
 First Births: 290
 Median Age of Mother: 26

MORTALITY

Total Deaths: 326
 Infant Deaths: 5
 Neonatal Deaths: 4
 Postneonatal Deaths: 1
 Perinatal Deaths: 5
 Fetal Deaths: 1
 Maternal Deaths: -

MARRIAGE

Marriages: 395
 Marriage Rate: 14.5

DIVORCE

Divorces: 202
 Divorce Rate: 7.4

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	759	13.9	716	13.6	12	18.8	30	19.9
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	61	80.4	53	74.0	3	-	5	-
Low Weight	48	63.2	44	61.5	-	-	4	-
Under 1,500 Grams	9	11.9	7	9.8	-	-	2	-
< 38 Weeks Gestation	119	156.8	104	145.3	4	-	11	366.7
Prenatal Care Began in 1st Trimester	559	736.5	539	752.8	5	-	15	500.0

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

INFANT AND PERINATAL MORTALITY BY RACE

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

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	326	177	149	311	169	142	4	2	2	11	6	5
Mortality Rate	6.0	6.8	5.2	5.9	6.8	5.2	-	-	-	7.3	8.1	-
	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	5	2	1	-	5	3	2	10	8	24	52	214
White Male	4	1	-	-	3	2	2	7	7	17	28	98
White Female	-	1	1	-	1	-	-	2	-	4	23	110
Black Male	1	-	-	-	-	-	-	-	-	1	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	1	-
Other Male	-	-	-	-	-	1	-	1	1	1	-	2
Other Female	-	-	-	-	1	-	-	-	-	1	-	3

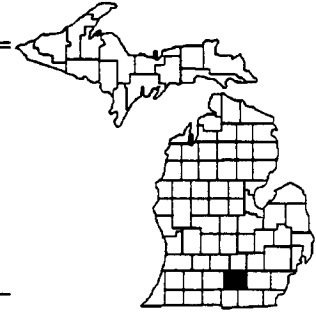
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	326	596.8	311	592.6	4	-	8	47.4
Diseases of the Heart	111	203.2	108	205.8	1	-	-	-
Malignant Neoplasms	65	119.0	65	123.9	-	-	-	-
Cerebrovascular Diseases	23	42.1	23	43.8	-	-	1	-
Accidents and Adverse Effects	18	33.0	16	30.5	-	-	3	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	11	20.1	11	21.0	-	-	-	-
Pneumonia and Influenza	25	45.8	20	38.1	2	-	-	-
Diabetes Mellitus	8	14.6	7	13.3	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	2	-	1	-	1	-	-	-
Suicide	4	-	3	-	-	-	-	-
Atherosclerosis	4	-	4	-	-	-	1	-
AIDS	1	-	1	-	-	-	-	-

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

1990 Profile of Jackson County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	149,756	Total Live Births:	2,395	Total Deaths:	1,296
Rank Among Counties:	13	Teenage Mothers:	398	Infant Deaths:	25
Per Square Mile:	212.5	Low Weight Births:	180	Neonatal Deaths:	18
Median Age:	33.4	First Births:	949	Postneonatal Deaths:	7
		Median Age of Mother:	25	Perinatal Deaths:	31
				Fetal Deaths:	13
				Maternal Deaths:	1
MARRIAGE		DIVORCE			
Marriages:	1,349	Divorces:	744		
Marriage Rate:	18.0	Divorce Rate:	9.9		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	2,395	16.0	2,135	15.7	234	19.4	23	17.3
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	398	166.2	315	147.5	78	333.3	5	-
Low Weight	180	75.2	149	69.8	31	132.5	-	-
Under 1,500 Grams	42	17.5	37	17.3	5	-	-	-
< 36 Weeks Gestation	385	160.8	325	152.2	57	243.6	1	-
Prenatal Care Began in 1st Trimester	1,597	666.8	1,474	690.4	110	470.1	11	478.3

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	25	10.4	23	10.8	2	-	-	-
Neonatal Deaths	18	7.5	17	8.0	1	-	-	-
Postneonatal Deaths	7	2.9	6	2.8	1	-	-	-
Perinatal Deaths	31	12.9	26	12.1	4	-	-	-
Fetal Deaths	13	5.4	9	4.2	3	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,296	650	645	1,204	587	616	89	60	29	3	3	-
Mortality Rate	8.7	8.5	8.8	8.8	8.7	9.0	7.4	7.7	6.9	-	-	-
	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	25	3	1	5	13	8	15	49	62	109	225	781
White Male	16	1	-	1	9	4	8	23	35	56	122	312
White Female	7	2	1	4	4	3	4	11	16	42	87	435
Black Male	1	-	-	-	-	1	2	12	9	8	8	19
Black Female	1	-	-	-	-	-	-	2	2	3	7	14
Other Male	-	-	-	-	-	-	-	1	-	-	1	1
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

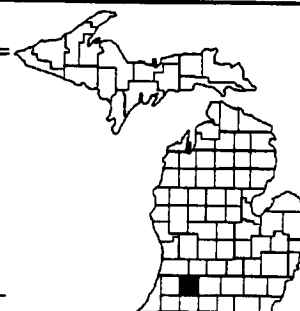
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,296	865.4	1,204	882.9	89	738.0	22	54.2
Diseases of the Heart	418	279.1	392	287.5	25	207.3	1	-
Malignant Neoplasms	351	234.4	319	233.9	30	248.8	3	-
Cerebrovascular Diseases	77	51.4	70	51.3	7	58.0	-	-
Accidents and Adverse Effects	52	34.7	50	36.7	2	-	7	17.3
Chronic Obstructive Pulmonary Diseases and Allied Conditions	65	43.4	64	46.9	1	-	-	-
Pneumonia and Influenza	51	34.1	51	37.4	-	-	-	-
Diabetes Mellitus	30	20.0	29	21.3	1	-	-	-
Chronic Liver Disease and Cirrhosis	15	10.0	15	11.0	-	-	-	-
Homicide	8	5.3	5	-	3	-	2	-
Suicide	29	19.4	26	19.1	3	-	4	-
Atherosclerosis	16	10.7	16	11.7	-	-	-	-
AIDS	6	4.0	2	-	4	-	-	-

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

1990 Profile of Kalamazoo County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	223,411	Total Live Births:	3,526	Total Deaths:	1,646
Rank Among Counties:	8	Teenage Mothers:	445	Infant Deaths:	29
Per Square Mile:	397.5	Low Weight Births:	235	Neonatal Deaths:	19
Median Age:	31	First Births:	1,409	Postneonatal Deaths:	10
		Median Age of Mother:	27	Perinatal Deaths:	34
				Fetal Deaths:	20
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	1,992	Divorces:	1,042		
Marriage Rate:	17.8	Divorce Rate:	9.3		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	3,526	15.8	2,916	14.6	531	26.4	77	18.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	445	126.2	270	92.6	164	308.9	11	142.9
Low Weight	235	66.6	163	55.9	67	126.2	5	-
Under 1,500 Grams	32	9.1	18	6.2	13	24.5	1	-
< 38 Weeks Gestation	561	159.1	428	146.8	121	227.9	11	142.9
Prenatal Care Began in 1st Trimester	2,786	790.1	2,433	834.4	295	555.6	58	753.2

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	29	8.2	20	6.9	9	16.9	-	-
Neonatal Deaths	19	5.4	13	4.5	6	11.3	-	-
Postneonatal Deaths	10	2.8	7	2.4	3	-	-	-
Perinatal Deaths	34	9.6	25	8.5	9	16.8	-	-
Fetal Deaths	20	5.6	16	5.5	4	-	-	-

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

MORTALITY

Deaths Mortality Rate	All Races			White			Black			Other			
	Total 1,646 7.4	Male 779 7.2	Female 866 7.5	Total 1,525 7.7	Male 716 7.5	Female 808 7.8	Total 107 5.3	Male 56 5.9	Female 51 4.8	Total 13 3.0	Male 7 3.2	Female 6 2.9	
Age in Years													
Total Deaths	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70+	Unk
White Male	29	3	3	2	12	15	21	40	82	103	247	1,089	-
White Female	10	2	2	2	8	9	12	26	43	52	117	433	-
Black Male	10	-	-	-	3	3	5	8	25	41	103	610	-
Black Female	7	-	1	-	1	1	2	4	6	4	11	19	-
Other Male	2	1	-	-	-	1	1	2	6	5	12	21	-
Other Female	-	-	-	-	-	1	1	-	-	1	3	1	-
	-	-	-	-	-	-	-	-	1	-	1	4	-

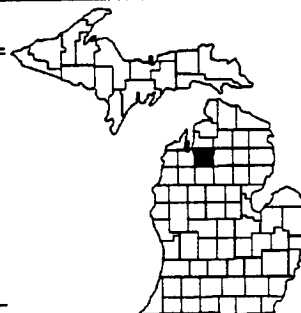
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,646	736.8	1,525	766.1	107	532.7	20	32.4
Diseases of the Heart	519	232.3	485	243.6	30	149.4	1	-
Malignant Neoplasms	371	166.1	345	173.3	22	109.5	1	-
Cerebrovascular Diseases	120	53.7	115	57.8	4	-	-	-
Accidents and Adverse Effects	80	35.8	76	38.2	3	-	10	16.2
Chronic Obstructive Pulmonary Diseases and Allied Conditions	76	34.0	71	35.7	4	-	-	-
Pneumonia and Influenza	82	36.7	79	39.7	3	-	-	-
Diabetes Mellitus	35	15.7	29	14.6	6	29.9	-	-
Chronic Liver Disease and Cirrhosis	21	9.4	18	9.0	2	-	-	-
Homicide	15	6.7	5	-	9	44.8	1	-
Suicide	23	10.3	23	11.6	-	-	1	-
Atherosclerosis	17	7.6	17	8.5	-	-	1	-
AIDS	14	6.3	11	5.5	3	-	1	-

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

1990 Profile of Kalkaska County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	13,497	Total Live Births:	199	Total Deaths:	110
Rank Among Counties:	68	Teenage Mothers:	38	Infant Deaths:	2
Per Square Mile:	24.0	Low Weight Births:	6	Neonatal Deaths:	1
Median Age:	33.1	First Births:	82	Postneonatal Deaths:	1
		Median Age of Mother:	25	Perinatal Deaths:	-
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	132	Divorces:	116		
Marriage Rate:	19.6	Divorce Rate:	17.2		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	199	14.7	196	14.7	-	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	38	191.0	38	193.9	-	-	-	-
Low Weight	6	30.2	6	30.6	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	24	120.6	24	122.4	-	-	-	-
Prenatal Care Began in 1st Trimester	139	698.5	139	709.2	-	-	-	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	-	-	-	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	Total	All Races		Total	White		Total	Black		Total	Other	
		Male	Female		Male	Female		Male	Female		Male	Female
Deaths	110	67	43	109	67	42	-	-	-	1	-	1
Mortality Rate	8.1	9.9	6.4	8.2	10.0	6.3	-	-	-	-	-	-
	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	-	-	-	2	-	-	1	3	15	23	64
White Male	1	-	-	-	2	-	-	-	3	10	17	34
White Female	1	-	-	-	-	-	-	1	-	5	6	29
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

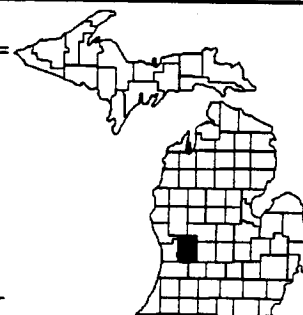
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	110	815.0	109	816.7	-	-	2	-
Diseases of the Heart	39	289.0	38	284.7	-	-	-	-
Malignant Neoplasms	37	274.1	37	277.2	-	-	1	-
Cerebrovascular Diseases	3	-	3	-	-	-	-	-
Accidents and Adverse Effects	4	-	4	-	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	3	-	3	-	-	-	-	-
Pneumonia and Influenza	2	-	2	-	-	-	-	-
Diabetes Mellitus	2	-	2	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	-	2	-	-	-	1	-
Atherosclerosis	8	59.3	8	59.9	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Kent County

**POPULATION**

As of April 1, 1990: 500,631
 Rank Among Counties: 4
 Per Square Mile: 580.9
 Median Age: 30.7

NATILITY

Total Live Births: 9,781
 Teenage Mothers: 1,158
 Low Weight Births: 567
 First Births: 3,780
 Median Age of Mother: 26

MORTALITY

Total Deaths: 3,593
 Infant Deaths: 86
 Neonatal Deaths: 56
 Postneonatal Deaths: 30
 Perinatal Deaths: 110
 Fetal Deaths: 66
 Maternal Deaths: -

MARRIAGE

Marriages: 4,908
 Marriage Rate: 19.6

DIVORCE

Divorces: 2,261
 Divorce Rate: 9.0

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	9,781	19.5	8,438	18.7	1,184	28.6	154	17.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	1,158	118.4	773	91.6	352	297.3	32	207.8
Low Weight	567	58.0	409	48.5	153	129.2	5	.
Under 1,500 Grams	104	10.6	77	9.1	26	22.0	1	.
< 38 Weeks Gestation	1,404	143.5	1,095	129.8	281	237.3	27	175.3
Prenatal Care Began in 1st Trimester	7,391	755.6	6,695	793.4	594	501.7	98	636.4

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	86	8.8	67	7.9	17	14.4	2	.
Neonatal Deaths	56	5.7	43	5.1	12	10.1	1	.
Postneonatal Deaths	30	3.1	24	2.8	5	.	1	.
Perinatal Deaths	110	11.2	72	8.5	30	24.9	3	.
Fetal Deaths	66	6.7	39	4.6	20	16.6	2	.

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	3,593	1,782	1,806	3,329	1,635	1,689	238	133	105	25	14	11
Mortality Rate	7.2	7.4	7.0	7.4	7.5	7.3	5.8	6.7	4.9	2.9	3.3	2.5
	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	86	12	7	9	28	43	36	95	135	245	597	2,300
White Male	44	7	2	2	11	32	20	52	71	129	319	946
White Female	23	2	3	5	9	3	7	22	44	84	231	1,256
Black Male	6	1	-	1	8	2	6	13	11	14	23	48
Black Female	11	1	-	1	-	3	2	7	8	13	20	39
Other Male	-	-	1	-	-	2	-	-	1	4	2	4
Other Female	2	1	1	-	-	1	1	1	-	-	2	2

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	3,593	717.7	3,329	738.8	238	575.5	56	37.9
Diseases of the Heart	1,211	241.9	1,141	253.2	66	159.6	3	.
Malignant Neoplasms	823	164.4	768	170.4	53	128.2	7	4.7
Cerebrovascular Diseases	241	48.1	229	50.8	7	16.9	2	.
Accidents and Adverse Effects	159	31.8	141	31.3	13	31.4	23	15.6
Chronic Obstructive Pulmonary Diseases and Allied Conditions	143	28.6	133	29.5	10	24.2	1	.
Pneumonia and Influenza	164	32.8	149	33.1	13	31.4	1	.
Diabetes Mellitus	73	14.6	67	14.9	6	14.5	-	-
Chronic Liver Disease and Cirrhosis	42	8.4	37	8.2	4	.	-	-
Homicide	19	3.8	7	1.6	12	29.0	4	.
Suicide	45	9.0	43	9.5	2	.	4	.
Atherosclerosis	63	12.6	59	13.1	3	.	-	-
AIDS	15	3.0	12	2.7	3	.	-	-

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

1990 Profile of Keweenaw County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	1,701	Total Live Births:	17	Total Deaths:	41
Rank Among Counties:	83	Teenage Mothers:	1	Infant Deaths:	-
Per Square Mile:	3.1	Low Weight Births:	-	Neonatal Deaths:	-
Median Age:	46.4	First Births:	7	Postneonatal Deaths:	-
		Median Age of Mother:	27	Perinatal Deaths:	-
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	13	Divorces:	4		
Marriage Rate:	15.3	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	10.1	-	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	1	.	1	.	-	-	-	-
Low Weight	-	-	-	-	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	1	.	1	.	-	-	-	-
Prenatal Care Began in 1st Trimester	13	764.7	13	764.7	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	41	20	21	41	20	21	-	-	-	-	-	-
Mortality Rate	24.1	23.9	24.3	24.3	24.0	24.5	-	-	-	-	-	-
	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	-	-	-	-	-	-	-	3	1	3	2	32
White Male	-	-	-	-	-	-	-	2	-	1	1	16
White Female	-	-	-	-	-	-	-	1	1	2	1	16
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

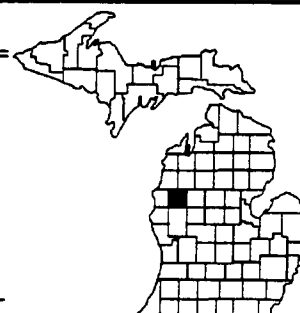
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	41	2,410.3	41	2,426.0	-	-	-	-
Diseases of the Heart	20	1,175.8	20	1,183.4	-	-	-	-
Malignant Neoplasms	9	529.1	9	532.5	-	-	-	-
Cerebrovascular Diseases	1	.	1	.	-	-	-	-
Accidents and Adverse Effects	2	.	2	.	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	1	.	1	.	-	-	-	-
Pneumonia and Influenza	-	-	-	-	-	-	-	-
Diabetes Mellitus	1	.	1	.	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	.	2	.	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	.	1	.	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Lake County

**POPULATION**

As of April 1, 1990: 8,583
 Rank Among Counties: 78
 Per Square Mile: 15.1
 Median Age: 40.9

NATIVITY

Total Live Births: 106
 Teenage Mothers: 20
 Low Weight Births: 11
 First Births: 27
 Median Age of Mother: 25

MORTALITY

Total Deaths: 145
 Infant Deaths: 5
 Neonatal Deaths: 1
 Postneonatal Deaths: 4
 Perinatal Deaths: 1
 Fetal Deaths: -
 Maternal Deaths: -

MARRIAGE

Marriages: 62
 Marriage Rate: 14.4

DIVORCE

Divorces: 27
 Divorce Rate: 6.3

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	106	12.3	90	12.2	16	14.0	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	20	188.7	16	177.8	4	-	-	-
Low Weight	11	103.8	9	100.0	2	-	-	-
Under 1,500 Grams	3	-	1	-	2	-	-	-
< 38 Weeks Gestation	17	160.4	13	144.4	4	-	-	-
Prenatal Care Began in 1st Trimester	53	500.0	48	533.3	5	-	-	-

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	5	-	3	-	2	-	-	-
Neonatal Deaths	1	-	-	-	1	-	-	-
Postneonatal Deaths	4	-	3	-	1	-	-	-
Perinatal Deaths	1	-	-	-	1	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	145	81	64	107	58	49	38	23	15	-	-	-
Mortality Rate	16.9	19.3	14.6	14.6	15.9	13.2	33.2	44.7	23.8	-	-	-
	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	5	-	-	1	1	-	-	1	1	7	25	104
White Male	2	-	-	-	-	-	-	-	-	4	9	43
White Female	1	-	-	1	-	-	-	-	1	2	11	33
Black Male	1	-	-	-	-	-	-	-	-	1	4	16
Black Female	1	-	-	-	-	-	-	1	-	-	1	12
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

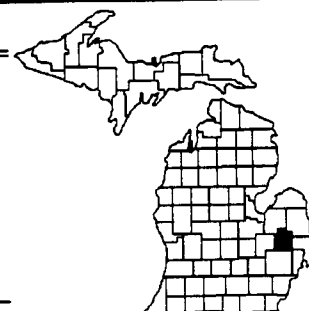
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	145	1,689.4	107	1,456.4	38	3,315.9	2	-
Diseases of the Heart	51	584.2	41	558.1	10	872.6	-	-
Malignant Neoplasms	37	431.1	27	367.5	10	872.6	1	-
Cerebrovascular Diseases	12	139.8	10	136.1	2	-	-	-
Accidents and Adverse Effects	5	-	4	-	1	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	8	93.2	5	-	3	-	-	-
Pneumonia and Influenza	4	-	3	-	1	-	-	-
Diabetes Mellitus	2	-	1	-	1	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	-	-	-	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Lapeer County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	74,768	Total Live Births:	1,150	Total Deaths:	500
Rank Among Counties:	23	Teenage Mothers:	127	Infant Deaths:	4
Per Square Mile:	113.6	Low Weight Births:	53	Neonatal Deaths:	1
Median Age:	31.8	First Births:	443	Postneonatal Deaths:	3
		Median Age of Mother:	26	Perinatal Deaths:	7
				Fetal Deaths:	6
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	641	Divorces:	377		
Marriage Rate:	17.1	Divorce Rate:	10.1		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,150	15.4	1,143	15.5	2	.	3	.
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	127	110.4	127	111.1	-	-	-	-
Low Weight	53	46.1	52	45.5	-	-	-	-
Under 1,500 Grams	6	5.2	6	5.2	-	-	-	-
< 38 Weeks Gestation	156	135.7	156	136.5	-	-	-	-
Prenatal Care Began in 1st Trimester	889	773.0	884	773.4	2	.	2	.

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	1	.	1	.	-	-	-	-
Postneonatal Deaths	3	.	3	.	-	-	-	-
Perinatal Deaths	7	6.1	6	5.2	-	-	-	-
Fetal Deaths	6	5.2	5	.	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	500	241	259	495	238	257	-	-	-	5	3	2
Mortality Rate	6.7	6.4	6.9	6.7	6.5	7.0	-	-	-	.	.	.
	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	3	1	9	5	5	23	19	49	82	298
White Male	1	1	2	1	5	5	4	18	11	26	47	117
White Female	3	1	1	-	4	-	1	5	7	22	35	178
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	1	1	-	3
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

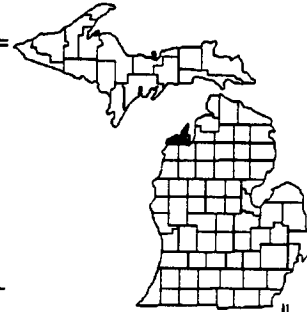
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	500	668.7	495	671.9	-	-	15	64.0
Diseases of the Heart	175	234.1	173	234.8	-	-	1	.
Malignant Neoplasms	88	117.7	85	115.4	-	-	-	-
Cerebrovascular Diseases	45	60.2	45	61.1	-	-	-	-
Accidents and Adverse Effects	28	37.4	28	38.0	-	-	6	25.6
Chronic Obstructive Pulmonary Diseases and Allied Conditions	26	34.8	26	35.3	-	-	-	-
Pneumonia and Influenza	20	26.7	20	27.1	-	-	-	-
Diabetes Mellitus	26	34.8	26	35.3	-	-	-	-
Chronic Liver Disease and Cirrhosis	6	8.0	6	8.1	-	-	-	-
Homicide	4	.	4	.	-	-	-	-
Suicide	11	14.7	11	14.9	-	-	6	25.6
Atherosclerosis	2	.	2	.	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Leelanau County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	16,527	Total Live Births:	222	Total Deaths:	159
Rank Among Counties:	65	Teenage Mothers:	19	Infant Deaths:	-
Per Square Mile:	48.4	Low Weight Births:	4	Neonatal Deaths:	-
Median Age:	36.5	First Births:	82	Postneonatal Deaths:	-
		Median Age of Mother:	28	Perinatal Deaths:	2
				Fetal Deaths:	2
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	126	Divorces:	55		
Marriage Rate:	15.2	Divorce Rate:	6.7		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	222	13.4	207	12.9	-	-	15	29.9
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	19	85.6	15	72.5	-	-	4	-
Low Weight	4	-	4	-	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	28	126.1	26	125.6	-	-	2	-
Prenatal Care Began in 1st Trimester	166	747.7	161	777.8	-	-	5	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	2	-	2	-	-	-	-	-
Fetal Deaths	2	-	2	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	159	83	76	153	80	73	1	1	-	5	2	3
Mortality Rate	9.6	10.1	9.2	9.6	10.0	9.1	-	-	-	-	-	-
	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	-	-	1	2	10	18	125
White Male	-	-	-	1	-	-	-	1	2	4	13	59
White Female	-	-	-	1	-	-	-	-	-	6	3	63
Black Male	-	-	-	-	1	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	1	1
Other Female	-	-	-	-	-	-	-	-	-	-	1	2

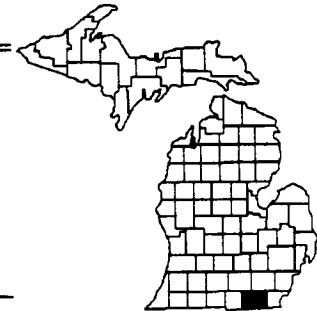
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	159	962.1	153	955.8	1	-	3	-
Diseases of the Heart	53	320.7	52	324.8	-	-	-	-
Malignant Neoplasms	40	242.0	40	249.9	-	-	1	-
Cerebrovascular Diseases	11	66.6	11	68.7	-	-	-	-
Accidents and Adverse Effects	6	36.3	6	37.5	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	7	42.4	6	37.5	-	-	-	-
Pneumonia and Influenza	7	42.4	6	37.5	-	-	-	-
Diabetes Mellitus	3	-	2	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	4	-	4	-	-	-	-	-
Atherosclerosis	2	-	2	-	-	-	1	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Lenawee County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	91,476	Total Live Births:	1,362	Total Deaths:	754
Rank Among Counties:	20	Teenage Mothers:	204	Infant Deaths:	11
Per Square Mile:	121.6	Low Weight Births:	79	Neonatal Deaths:	5
Median Age:	32.6	First Births:	531	Postneonatal Deaths:	6
		Median Age of Mother:	25	Perinatal Deaths:	9
				Fetal Deaths:	4
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	689	Divorces:	411		
Marriage Rate:	15.1	Divorce Rate:	9.0		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,362	14.9	1,337	15.0	16	10.9	7	8.3
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	204	149.8	199	148.8	4	.	1	.
Low Weight	79	58.0	77	57.6	2	.	-	-
Under 1,500 Grams	13	9.5	12	9.0	1	.	-	-
< 38 Weeks Gestation	188	138.0	182	136.1	3	.	3	.
Prenatal Care Began in 1st Trimester	1,081	793.7	1,061	793.6	13	812.5	6	857.1

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	11	8.1	11	8.2	-	-	-	-
Neonatal Deaths	5	.	5	.	-	-	-	-
Postneonatal Deaths	6	4.4	6	4.5	-	-	-	-
Perinatal Deaths	9	6.6	9	6.7	-	-	-	-
Fetal Deaths	4	.	4	.	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	754	378	375	750	377	372	3	1	2	1	-	1	
Mortality Rate	8.2	8.4	8.1	8.4	8.6	8.2	-	.	
	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	11	2	3	1	7	5	11	16	18	44	125	510	1
White Male	5	1	2	-	6	3	6	10	7	28	76	233	-
White Female	6	-	1	1	1	2	5	6	11	16	49	274	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	1	-
Black Female	-	1	-	-	-	-	-	-	-	-	-	1	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	1

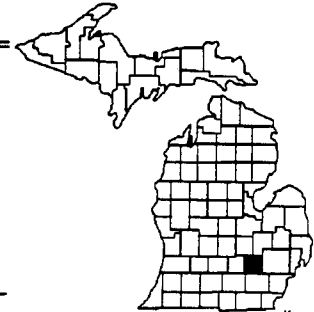
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	754	824.3	750	841.2	3	.	13	47.1
Diseases of the Heart	264	288.6	263	295.0	1	.	-	-
Malignant Neoplasms	177	193.5	177	198.5	-	-	-	-
Cerebrovascular Diseases	58	63.4	57	63.9	1	.	-	-
Accidents and Adverse Effects	37	40.4	36	40.4	1	.	10	36.3
Chronic Obstructive Pulmonary Diseases and Allied Conditions	35	38.3	35	39.3	-	-	-	-
Pneumonia and Influenza	23	25.1	23	25.8	-	-	1	.
Diabetes Mellitus	19	20.8	19	21.3	-	-	-	-
Chronic Liver Disease and Cirrhosis	7	7.7	7	7.9	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	9	9.8	9	10.1	-	-	1	.
Atherosclerosis	14	15.3	14	15.7	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Livingston County

**POPULATION**

As of April 1, 1990: 115,645
 Rank Among Counties: 17
 Per Square Mile: 201.4
 Median Age: 32.9

NATALITY

Total Live Births: 1,664
 Teenage Mothers: 103
 Low Weight Births: 82
 First Births: 654
 Median Age of Mother: 28

MORTALITY

Total Deaths: 704
 Infant Deaths: 12
 Neonatal Deaths: 7
 Postneonatal Deaths: 5
 Perinatal Deaths: 10
 Fetal Deaths: 4
 Maternal Deaths: -

MARRIAGE

Marriages: 1,003
 Marriage Rate: 17.3

DIVORCE

Divorces: 536
 Divorce Rate: 9.3

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,664	14.4	1,649	14.5	2	-	10	8.4
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	103	61.9	101	61.2	-	-	2	-
Low Weight	82	49.3	81	49.1	-	-	1	-
Under 1,500 Grams	25	15.0	25	15.2	-	-	-	-
< 38 Weeks Gestation	217	130.4	216	131.0	-	-	1	-
Prenatal Care Began in 1st Trimester	1,416	851.0	1,407	853.2	2	-	7	700.0

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	12	7.2	12	7.3	-	-	-	-
Neonatal Deaths	7	4.2	7	4.2	-	-	-	-
Postneonatal Deaths	5	-	5	-	-	-	-	-
Perinatal Deaths	10	6.0	10	6.0	-	-	-	-
Fetal Deaths	4	-	4	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	704	365	339	697	361	336	2	1	1	5	3	2
Mortality Rate	6.1	6.3	5.9	6.1	6.3	5.9	-	-	-	-	-	-
	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	12	8	2	1	14	10	6	26	38	50	118	419
White Male	7	5	2	1	8	6	2	19	18	32	66	195
White Female	5	3	-	-	5	3	4	7	20	18	51	220
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	1
Other Male	-	-	-	-	1	-	-	-	-	-	1	1
Other Female	-	-	-	-	-	1	-	-	-	-	1	-

Note: Mortality rate is per 1,000 population in specified group.

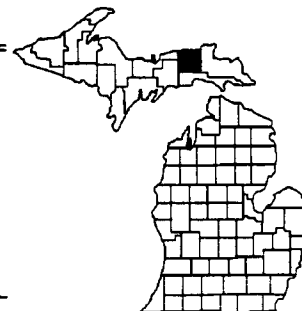
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	704	608.8	697	612.6	2	-	25	71.6
Diseases of the Heart	241	208.4	238	209.2	1	-	1	-
Malignant Neoplasms	188	162.6	187	164.4	-	-	3	-
Cerebrovascular Diseases	34	29.4	33	29.0	1	-	-	-
Accidents and Adverse Effects	60	51.9	59	51.9	-	-	19	54.4
Chronic Obstructive Pulmonary Diseases and Allied Conditions	26	22.5	25	22.0	-	-	-	-
Pneumonia and Influenza	22	19.0	22	19.3	-	-	-	-
Diabetes Mellitus	15	13.0	15	13.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	10	8.6	10	8.8	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	8	6.9	8	7.0	-	-	-	-
Atherosclerosis	8	6.9	8	7.0	-	-	-	-
AIDS	3	-	3	-	-	-	-	-

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

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

1990 Profile of Luce County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	5,763	Total Live Births:	75	Total Deaths:	66
Rank Among Counties:	82	Teenage Mothers:	18	Infant Deaths:	-
Per Square Mile:	6.4	Low Weight Births:	4	Neonatal Deaths:	-
Median Age:	37.1	First Births:	24	Postneonatal Deaths:	-
		Median Age of Mother:	24	Perinatal Deaths:	1
				Fetal Deaths:	1
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	43	Divorces:	36		
Marriage Rate:	14.9	Divorce Rate:	12.5		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	75	13.0	71	13.1	-	-	4	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	18	240.0	17	239.4	-	-	1	-
Low Weight	4	-	4	-	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	11	146.7	11	154.9	-	-	-	-
Prenatal Care Began in 1st Trimester	58	773.3	55	774.6	-	-	3	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	66	37	29	64	35	29	-	-	-	2	2	-
Mortality Rate	11.5	13.1	9.9	11.8	13.2	10.5	-	-	-	-	-	-
	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	-	2	-	1	-	2	-	2	3	7	11	38
White Male	-	2	-	1	-	2	-	2	2	4	6	16
White Female	-	-	-	-	-	-	-	-	1	2	4	22
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	1	1	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

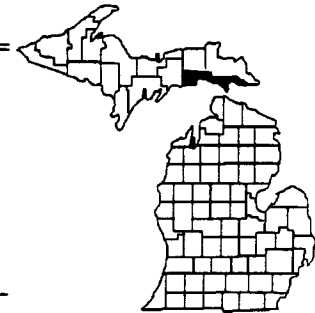
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	66	1,145.2	64	1,179.9	-	-	3	-
Diseases of the Heart	22	381.7	21	387.2	-	-	-	-
Malignant Neoplasms	19	329.7	18	331.9	-	-	-	-
Cerebrovascular Diseases	5	-	5	-	-	-	-	-
Accidents and Adverse Effects	7	121.5	7	129.1	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	1	-	1	-	-	-	-	-
Pneumonia and Influenza	1	-	1	-	-	-	-	-
Diabetes Mellitus	1	-	1	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	-	-	-	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

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

1990 Profile of Mackinac County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	10,674	Total Live Births:	136	Total Deaths:	125
Rank Among Counties:	73	Teenage Mothers:	11	Infant Deaths:	-
Per Square Mile:	10.4	Low Weight Births:	3	Neonatal Deaths:	-
Median Age:	37.1	First Births:	39	Postneonatal Deaths:	-
		Median Age of Mother:	27	Perinatal Deaths:	2
				Fetal Deaths:	2
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	171	Divorces:	49		
Marriage Rate:	32.0	Divorce Rate:	9.2		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	136	12.7	112	12.5	-	-	24	14.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	11	80.9	6	53.6	-	-	5	-
Low Weight	3	-	2	-	-	-	1	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	12	88.2	12	107.1	-	-	-	-
Prenatal Care Began in 1st Trimester	107	786.8	91	812.5	-	-	16	666.7

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	2	-	1	-	-	-	1	-
Fetal Deaths	2	-	1	-	-	-	1	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	125	65	60	112	60	52	-	-	-	13	5	8
Mortality Rate	11.7	12.3	11.1	12.5	13.6	11.4	-	-	-	7.6	-	9.5
	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	1	6	6	24	85
White Male	-	-	-	-	-	1	1	-	3	5	17	33
White Female	-	-	-	-	-	-	1	-	-	-	6	45
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	1	3	-	-	1
Other Female	-	-	-	-	-	-	-	-	-	1	1	6

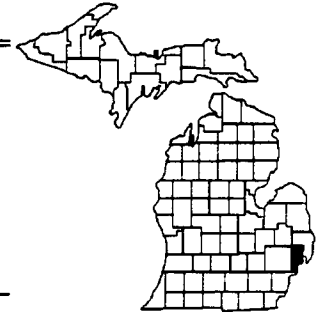
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	125	1,171.1	112	1,249.0	-	-	-	-
Diseases of the Heart	49	459.1	46	513.0	-	-	-	-
Malignant Neoplasms	34	318.5	32	356.9	-	-	-	-
Cerebrovascular Diseases	9	84.3	7	78.1	-	-	-	-
Accidents and Adverse Effects	7	65.6	6	66.9	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	-	-	-	-	-	-	-	-
Pneumonia and Influenza	5	-	4	-	-	-	-	-
Diabetes Mellitus	3	-	3	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	-	2	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Macomb County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	717,400	Total Live Births:	10,499	Total Deaths:	5,716
Rank Among Counties:	3	Teenage Mothers:	694	Infant Deaths:	66
Per Square Mile:	1,487.1	Low Weight Births:	635	Neonatal Deaths:	48
Median Age:	33.9	First Births:	4,461	Postneonatal Deaths:	18
		Median Age of Mother:	28	Perinatal Deaths:	85
				Fetal Deaths:	45
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	6,803	Divorces:	3,092		
Marriage Rate:	19.0	Divorce Rate:	8.6		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	10,499	14.6	10,042	14.4	223	21.3	183	15.5
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	694	66.1	630	62.7	46	206.3	13	71.0
Low Weight	635	60.5	576	57.4	40	179.4	14	76.5
Under 1,500 Grams	117	11.1	106	10.6	6	26.9	4	-
< 38 Weeks Gestation	1,578	150.3	1,465	145.9	76	340.8	32	174.9
Prenatal Care Began in 1st Trimester	9,150	871.5	8,816	877.9	141	632.3	152	830.6

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	66	6.3	62	6.2	3	-	1	-
Neonatal Deaths	48	4.6	46	4.6	1	-	1	-
Postneonatal Deaths	18	1.7	16	1.6	2	-	-	-
Perinatal Deaths	85	8.1	78	7.7	4	-	2	-
Fetal Deaths	45	4.3	40	4.0	3	-	1	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	5,716	2,900	2,812	5,586	2,827	2,755	94	57	37	36	1	6
Mortality Rate	8.0	8.3	7.6	8.0	8.4	7.7	9.0	11.0	7.1	3.1	2.8	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	66	16	5	12	21	31	38	163	222	474	1,120	3,548
White Male	35	10	2	5	12	21	23	107	127	261	666	1,558
White Female	27	5	3	7	7	8	14	49	83	194	425	1,933
Black Male	3	-	-	-	2	1	1	5	4	11	9	21
Black Female	-	1	-	-	-	-	-	1	3	4	11	17
Other Male	1	-	-	-	-	1	-	1	1	1	2	9
Other Female	-	-	-	-	-	-	-	-	4	3	5	8

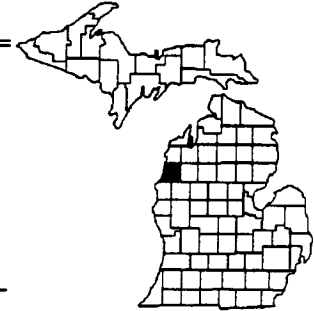
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	5,716	798.8	5,586	803.6	94	899.5	54	29.7
Diseases of the Heart	2,107	293.7	2,059	296.2	36	344.5	1	-
Malignant Neoplasms	1,462	203.8	1,426	205.1	22	210.5	9	4.9
Cerebrovascular Diseases	363	50.6	357	51.4	5	-	-	-
Accidents and Adverse Effects	163	22.7	155	22.3	5	-	16	8.8
Chronic Obstructive Pulmonary Diseases and Allied Conditions	211	29.4	209	30.1	2	-	1	-
Pneumonia and Influenza	218	30.4	214	30.8	4	-	1	-
Diabetes Mellitus	119	16.6	116	16.7	2	-	-	-
Chronic Liver Disease and Cirrhosis	92	12.8	90	12.9	2	-	-	-
Homicide	27	3.8	26	3.7	1	-	6	3.3
Suicide	79	11.0	79	11.4	-	-	2	-
Atherosclerosis	68	9.5	68	9.8	-	-	-	-
AIDS	16	2.2	14	2.0	2	-	-	-

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

1990 Profile of Manistee County

**POPULATION**

As of April 1, 1990: 21,265
 Rank Among Counties: 58
 Per Square Mile: 39.2
 Median Age: 38.1

NATALITY

Total Live Births: 235
 Teenage Mothers: 30
 Low Weight Births: 16
 First Births: 86
 Median Age of Mother: 26

MORTALITY

Total Deaths: 270
 Infant Deaths: -
 Neonatal Deaths: -
 Postneonatal Deaths: -
 Perinatal Deaths: 2
 Fetal Deaths: 2
 Maternal Deaths: -

MARRIAGE

Marriages: 177
 Marriage Rate: 16.6

DIVORCE

Divorces: 94
 Divorce Rate: 8.8

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	235	11.1	229	10.9	1	.	5	.
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	30	127.7	28	122.3	-	-	2	.
Low Weight	16	68.1	16	69.9	-	-	-	-
Under 1,500 Grams	1	.	1	.	-	-	-	-
< 38 Weeks Gestation	28	119.1	27	117.9	-	-	1	.
Prenatal Care Began in 1st Trimester	168	714.9	166	724.9	1	.	1	.

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	2	.	2	.	-	-	-	-
Fetal Deaths	2	.	2	.	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	270	143	127	267	142	125	2	1	1	1	-	1
Mortality Rate	12.7	13.9	11.6	12.7	14.0	11.6	-	.
	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	-	3	9	2	20	46	188
White Male	-	-	1	-	1	-	2	6	1	14	28	89
White Female	-	-	-	-	-	-	1	3	1	6	18	96
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	1
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	270	1,269.7	267	1,273.6	2	.	2	.
Diseases of the Heart	85	399.7	85	405.4	-	-	-	-
Malignant Neoplasms	78	368.8	78	372.0	-	-	-	-
Cerebrovascular Diseases	21	98.8	20	95.4	-	-	-	-
Accidents and Adverse Effects	9	42.3	9	42.9	-	-	1	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	9	42.3	9	42.9	-	-	-	-
Pneumonia and Influenza	9	42.3	9	42.9	-	-	-	-
Diabetes Mellitus	10	47.0	9	42.9	1	.	-	-
Chronic Liver Disease and Cirrhosis	3	.	3	.	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	.	2	.	-	-	-	-
Atherosclerosis	9	42.3	9	42.9	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Marquette County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	70,887	Total Live Births:	1,032	Total Deaths:	501
Rank Among Counties:	24	Teenage Mothers:	103	Infant Deaths:	6
Per Square Mile:	38.9	Low Weight Births:	47	Neonatal Deaths:	2
Median Age:	30.7	First Births:	458	Postneonatal Deaths:	4
		Median Age of Mother:	26	Perinatal Deaths:	6
				Fetal Deaths:	5
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	620	Divorces:	303		
Marriage Rate:	17.5	Divorce Rate:	8.5		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,032	14.6	976	14.3	12	10.2	42	28.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	103	99.8	94	96.3	1	.	8	190.5
Low Weight	47	45.5	43	44.1	1	.	3	.
Under 1,500 Grams	6	5.8	6	6.1	-	-	-	-
< 38 Weeks Gestation	138	133.7	131	134.2	3	.	3	.
Prenatal Care Began in 1st Trimester	895	867.2	852	873.0	9	750.0	32	761.9

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	6	5.8	6	6.1	-	-	-	-
Neonatal Deaths	2	.	2	.	-	-	-	-
Postneonatal Deaths	4	.	4	.	-	-	-	-
Perinatal Deaths	6	5.8	6	6.1	-	-	-	-
Fetal Deaths	5	.	5	.	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	501	262	239	494	261	233	-	-	-	5	1	4
Mortality Rate	7.1	7.3	6.8	7.2	7.6	6.9	-	-	-	.	.	.
	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	6	-	-	1	1	2	2	10	22	33	79	345
White Male	4	-	-	-	1	2	1	5	12	15	38	183
White Female	2	-	-	1	-	-	1	5	9	17	41	157
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	-	1	1	-	2

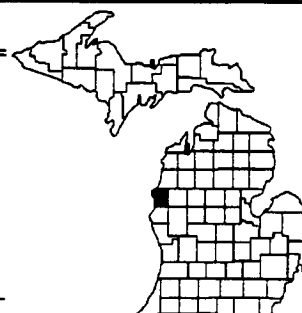
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	501	706.8	494	724.2	-	-	2	.
Diseases of the Heart	168	237.0	168	246.3	-	-	-	-
Malignant Neoplasms	128	180.6	125	183.2	-	-	-	-
Cerebrovascular Diseases	27	38.1	27	39.6	-	-	-	-
Accidents and Adverse Effects	14	19.7	14	20.5	-	-	1	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	25	35.3	23	33.7	-	-	-	-
Pneumonia and Influenza	22	31.0	22	32.3	-	-	-	-
Diabetes Mellitus	13	18.3	13	19.1	-	-	-	-
Chronic Liver Disease and Cirrhosis	7	9.9	7	10.3	-	-	-	-
Homicide	1	.	1	.	-	-	-	-
Suicide	12	16.9	12	17.6	-	-	-	-
Atherosclerosis	9	12.7	9	13.2	-	-	-	-
AIDS	1	.	1	.	-	-	-	-

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

1990 Profile of Mason County

**POPULATION**

As of April 1, 1990: 25,537
 Rank Among Counties: 50
 Per Square Mile: 51.6
 Median Age: 36.2

NATALITY

Total Live Births: 372
 Teenage Mothers: 44
 Low Weight Births: 21
 First Births: 136
 Median Age of Mother: 25

MORTALITY

Total Deaths: 310
 Infant Deaths: 2
 Neonatal Deaths: 1
 Postneonatal Deaths: 1
 Perinatal Deaths: 1
 Fetal Deaths: -
 Maternal Deaths: -

MARRIAGE

Marriages: 269
 Marriage Rate: 21.1

DIVORCE

Divorces: 152
 Divorce Rate: 11.9

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	372	14.6	350	13.9	3	-	19	68.8
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	44	118.3	40	114.3	-	-	4	-
Low Weight	21	56.5	20	57.1	1	-	-	-
Under 1,500 Grams	3	-	3	-	-	-	-	-
< 38 Weeks Gestation	41	110.2	36	102.9	2	-	3	-
Prenatal Care Began in 1st Trimester	260	698.9	249	711.4	1	-	10	526.3

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	1	-	1	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	310	146	164	307	145	162	1	1	-	2	-	2
Mortality Rate	12.1	11.8	12.5	12.2	11.9	12.5	-	-	-	-	-	-
	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	2	-	2	1	-	2	1	-	4	15	51	232
White Male	-	-	1	-	-	1	-	-	4	9	34	96
White Female	2	-	1	1	-	1	1	-	-	6	15	135
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	1	1

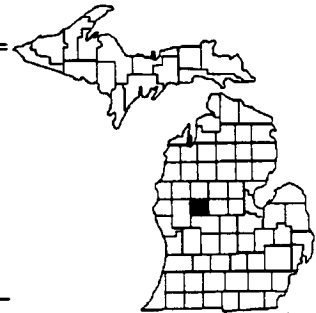
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	310	1,213.9	307	1,222.9	1	-	3	-
Diseases of the Heart	116	454.2	115	458.1	-	-	-	-
Malignant Neoplasms	72	281.9	70	278.8	1	-	-	-
Cerebrovascular Diseases	20	78.3	20	79.7	-	-	-	-
Accidents and Adverse Effects	6	23.5	6	23.9	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	9	35.2	9	35.8	-	-	-	-
Pneumonia and Influenza	18	70.5	18	71.7	-	-	-	-
Diabetes Mellitus	10	39.2	10	39.8	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	3	-	3	-	-	-	-	-
Atherosclerosis	5	-	5	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

1990 Profile of Mecosta County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	37,308	Total Live Births:	476	Total Deaths:	282
Rank Among Counties:	42	Teenage Mothers:	62	Infant Deaths:	8
Per Square Mile:	66.6	Low Weight Births:	24	Neonatal Deaths:	8
Median Age:	25.6	First Births:	188	Postneonatal Deaths:	-
		Median Age of Mother:	25	Perinatal Deaths:	8
				Fetal Deaths:	1
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	239	Divorces:	139		
Marriage Rate:	12.8	Divorce Rate:	7.5		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	476	12.8	455	12.7	13	13.2	6	13.3
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	62	130.3	58	127.5	1	.	2	.
Low Weight	24	50.4	22	48.4	2	.	-	-
Under 1,500 Grams	8	16.8	8	17.6	-	-	-	-
< 38 Weeks Gestation	58	121.8	55	120.9	3	.	-	-
Prenatal Care Began in 1st Trimester	291	611.3	282	619.8	4	.	4	.

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	8	16.8	8	17.6	-	-	-	-
Neonatal Deaths	8	16.8	8	17.6	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	8	16.8	8	17.5	-	-	-	-
Fetal Deaths	1	.	1	.	-	-	-	-

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

MORTALITY

	All Races			White			Black				Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	282	181	101	279	178	101	3	3	-	-	-	-	
Mortality Rate	7.6	9.4	5.6	7.8	9.6	5.8	.	.	-	-	-	-	
	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	8	1	2	1	3	2	4	5	11	21	46	178	-
White Male	6	1	2	-	3	2	4	4	6	16	31	103	-
White Female	2	-	-	1	-	-	-	1	5	5	14	73	-
Black Male	-	-	-	-	-	-	-	-	-	-	1	2	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	282	755.9	279	777.7	3	.	7	60.5
Diseases of the Heart	97	260.0	95	264.8	2	.	-	-
Malignant Neoplasms	63	168.9	62	172.8	1	.	1	.
Cerebrovascular Diseases	18	48.2	18	50.2	-	-	-	-
Accidents and Adverse Effects	21	56.3	21	58.5	-	-	2	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	10	26.8	10	27.9	-	-	-	-
Pneumonia and Influenza	17	45.6	17	47.4	-	-	-	-
Diabetes Mellitus	13	34.8	13	36.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	.	1	.	-	-	-	-
Homicide	1	.	1	.	-	-	-	-
Suicide	6	16.1	6	16.7	-	-	1	.
Atherosclerosis	6	16.1	6	16.7	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

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

1990 Profile of Menominee County

**POPULATION**

As of April 1, 1990: 24,920
 Rank Among Counties: 53
 Per Square Mile: 23.8
 Median Age: 35.8

NATIVITY

Total Live Births: 273
 Teenage Mothers: 44
 Low Weight Births: 11
 First Births: 115
 Median Age of Mother: 25

MORTALITY

Total Deaths: 232
 Infant Deaths: 1
 Neonatal Deaths: -
 Postneonatal Deaths: 1
 Perinatal Deaths: -
 Fetal Deaths: -
 Maternal Deaths: -

MARRIAGE

Marriages: 221
 Marriage Rate: 17.7

DIVORCE

Divorces: 113
 Divorce Rate: 9.1

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	273	11.0	263	10.7	-	-	10	22.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	44	161.2	39	148.3	-	-	5	-
Low Weight	11	40.3	11	41.8	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	28	102.6	26	98.9	-	-	2	-
Prenatal Care Began in 1st Trimester	204	747.3	199	756.7	-	-	5	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	232	120	112	231	120	111	-	-	-	1	-	1
Mortality Rate	9.3	9.8	8.9	9.4	9.9	8.9	-	-	-	-	-	-
	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+ Unk
Total Deaths	1	1	-	-	1	3	1	3	5	13	41	163
White Male	1	1	-	-	1	3	1	2	4	7	22	78
White Female	-	-	-	-	-	-	-	-	1	6	19	85
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	1	-	-	-	-

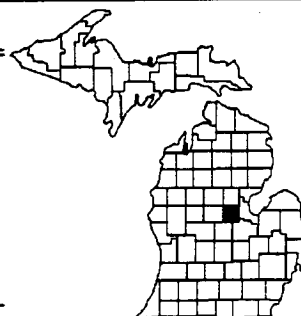
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	232	931.0	231	944.0	-	-	2	-
Diseases of the Heart	77	309.0	77	314.7	-	-	-	-
Malignant Neoplasms	47	188.6	47	192.1	-	-	1	-
Cerebrovascular Diseases	21	84.3	21	85.8	-	-	-	-
Accidents and Adverse Effects	10	40.1	10	40.9	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	64.2	16	65.4	-	-	-	-
Pneumonia and Influenza	11	44.1	11	45.0	-	-	-	-
Diabetes Mellitus	14	56.2	14	57.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	4	-	4	-	-	-	-	-
Atherosclerosis	7	28.1	7	28.6	-	-	1	-
AIDS	1	-	1	-	-	-	-	-

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

1990 Profile of Midland County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	75,651	Total Live Births:	1,218	Total Deaths:	427
Rank Among Counties:	22	Teenage Mothers:	98	Infant Deaths:	9
Per Square Mile:	144.1	Low Weight Births:	61	Neonatal Deaths:	6
Median Age:	32.5	First Births:	495	Postneonatal Deaths:	3
		Median Age of Mother:	27	Perinatal Deaths:	13
				Fetal Deaths:	7
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	749	Divorces:	351		
Marriage Rate:	19.8	Divorce Rate:	9.3		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,218	16.1	1,175	15.9	11	15.1	30	26.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	98	80.5	93	79.1	3	-	2	-
Low Weight	61	50.1	60	51.1	-	-	1	-
Under 1,500 Grams	13	10.7	13	11.1	-	-	-	-
< 38 Weeks Gestation	163	133.8	155	131.9	1	-	6	200.0
Prenatal Care Began in 1st Trimester	1,089	894.1	1,055	897.9	5	-	27	900.0

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	9	7.4	9	7.7	-	-	-	-
Neonatal Deaths	6	4.9	6	5.1	-	-	-	-
Postneonatal Deaths	3	-	3	-	-	-	-	-
Perinatal Deaths	13	10.6	13	11.0	-	-	-	-
Fetal Deaths	7	5.7	7	5.9	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	427	221	206	421	221	200	-	-	-	5	-	5
Mortality Rate	5.6	5.9	5.4	5.7	6.1	5.4	-	-	-	-	-	-
	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	9	-	1	1	5	8	3	12	20	34	66	268
White Male	4	-	1	-	5	7	1	12	13	26	38	114
White Female	5	-	-	1	-	1	2	-	6	7	28	150
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	1	1	-	3

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	427	564.4	421	570.7	-	-	7	31.9
Diseases of the Heart	126	166.6	124	168.1	-	-	-	-
Malignant Neoplasms	108	142.8	107	145.0	-	-	1	-
Cerebrovascular Diseases	40	52.9	40	54.2	-	-	1	-
Accidents and Adverse Effects	22	29.1	22	29.8	-	-	3	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	21	27.8	19	25.8	-	-	-	-
Pneumonia and Influenza	14	18.5	14	19.0	-	-	-	-
Diabetes Mellitus	8	10.6	8	10.8	-	-	-	-
Chronic Liver Disease and Cirrhosis	6	7.9	5	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	9	11.9	9	12.2	-	-	2	-
Atherosclerosis	8	10.6	8	10.8	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

1990 Profile of Missaukee County

**POPULATION**

As of April 1, 1990: 12,147
 Rank Among Counties: 72
 Per Square Mile: 21.5
 Median Age: 33.5

NATALITY

Total Live Births: 169
 Teenage Mothers: 23
 Low Weight Births: 9
 First Births: 60
 Median Age of Mother: 25

MORTALITY

Total Deaths: 116
 Infant Deaths: 2
 Neonatal Deaths: 2
 Postneonatal Deaths: -
 Perinatal Deaths: 2
 Fetal Deaths: -
 Maternal Deaths: -

MARRIAGE

Marriages: 105
 Marriage Rate: 17.3

DIVORCE

Divorces: 57
 Divorce Rate: 9.4

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	169	13.9	165	13.7	-	-	4	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	23	136.1	23	139.4	-	-	-	-
Low Weight	9	53.3	9	54.5	-	-	-	-
Under 1,500 Grams	3	-	3	-	-	-	-	-
< 38 Weeks Gestation	25	147.9	25	151.5	-	-	-	-
Prenatal Care Began in 1st Trimester	126	745.6	126	763.6	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	116	66	50	116	66	50	-	-	-	-	-	-
Mortality Rate	9.5	11.0	8.1	9.6	11.1	8.2	-	-	-	-	-	-
	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	-	-	1	-	2	-	2	-	10	19	80
White Male	2	-	-	1	-	2	-	2	-	5	15	39
White Female	-	-	-	-	-	-	-	-	-	5	4	41
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

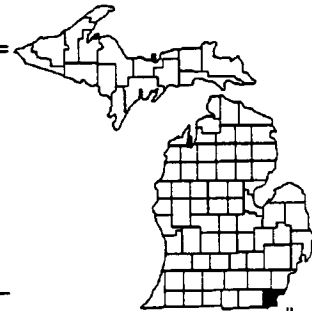
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	116	955.0	116	963.5	-	-	1	-
Diseases of the Heart	48	395.2	48	398.7	-	-	-	-
Malignant Neoplasms	18	148.2	18	149.5	-	-	-	-
Cerebrovascular Diseases	12	98.8	12	99.7	-	-	-	-
Accidents and Adverse Effects	8	65.9	8	66.5	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	4	-	4	-	-	-	-	-
Pneumonia and Influenza	7	57.6	7	58.1	-	-	-	-
Diabetes Mellitus	6	49.4	6	49.8	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

1990 Profile of Monroe County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	133,600	Total Live Births:	1,572	Total Deaths:	975
Rank Among Counties:	16	Teenage Mothers:	214	Infant Deaths:	8
Per Square Mile:	240.0	Low Weight Births:	87	Neonatal Deaths:	4
Median Age:	32.2	First Births:	591	Postneonatal Deaths:	4
		Median Age of Mother:	26	Perinatal Deaths:	10
				Fetal Deaths:	7
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	1,047	Divorces:	659		
Marriage Rate:	15.7	Divorce Rate:	9.9		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,572	11.8	1,518	11.7	41	17.4	13	12.2
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	214	136.1	199	131.1	13	317.1	2	-
Low Weight	87	55.3	82	54.0	5	-	-	-
Under 1,500 Grams	12	7.6	11	7.2	1	-	-	-
< 38 Weeks Gestation	253	160.9	241	158.8	11	268.3	1	-
Prenatal Care Began in 1st Trimester	1,272	809.2	1,234	812.9	31	756.1	7	538.5

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	8	5.1	8	5.3	-	-	-	-
Neonatal Deaths	4	-	4	-	-	-	-	-
Postneonatal Deaths	4	-	4	-	-	-	-	-
Perinatal Deaths	10	6.3	9	5.9	1	-	-	-
Fetal Deaths	7	4.4	6	3.9	1	-	-	-

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

MORTALITY

	All Races			White			Black				Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	975	504	471	950	491	459	21	13	8	3	-	3	
Mortality Rate	7.3	7.7	7.0	7.3	7.7	7.0	8.9	10.5	7.1	-	-	-	
	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	6	5	1	11	8	11	23	42	94	190	576	-
White Male	5	3	1	1	9	7	8	15	25	50	106	261	-
White Female	3	2	3	-	2	1	2	5	16	43	81	301	-
Black Male	-	-	1	-	-	-	1	3	1	-	1	6	-
Black Female	-	-	-	-	-	-	-	-	-	1	2	5	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	3	-

Note: Mortality rate is per 1,000 population in specified group.

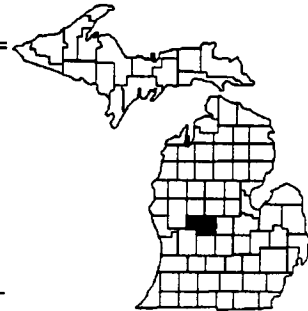
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	975	729.8	950	729.8	21	891.0	23	57.0
Diseases of the Heart	357	267.2	349	268.1	8	339.4	1	-
Malignant Neoplasms	247	184.9	244	187.4	3	-	1	-
Cerebrovascular Diseases	52	38.9	52	39.9	-	-	-	-
Accidents and Adverse Effects	61	45.7	58	44.6	2	-	14	34.7
Chronic Obstructive Pulmonary Diseases and Allied Conditions	41	30.7	41	31.5	-	-	-	-
Pneumonia and Influenza	22	16.5	22	16.9	-	-	-	-
Diabetes Mellitus	24	18.0	24	18.4	-	-	-	-
Chronic Liver Disease and Cirrhosis	6	4.5	6	4.6	-	-	-	-
Homicide	7	5.2	6	4.6	1	-	-	-
Suicide	16	12.0	15	11.5	1	-	-	-
Atherosclerosis	5	-	5	-	-	-	-	-
AIDS	2	-	2	-	-	-	-	-

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

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

1990 Profile of Montcalm County

**POPULATION**

As of April 1, 1990: 53,059
 Rank Among Counties: 33
 Per Square Mile: 74.5
 Median Age: 32.3

NATALITY

Total Live Births: 869
 Teenage Mothers: 148
 Low Weight Births: 44
 First Births: 322
 Median Age of Mother: 24

MORTALITY

Total Deaths: 459
 Infant Deaths: 7
 Neonatal Deaths: 4
 Postneonatal Deaths: 3
 Perinatal Deaths: 8
 Fetal Deaths: 4
 Maternal Deaths: -

MARRIAGE

Marriages: 500
 Marriage Rate: 18.8

DIVORCE

Divorces: 282
 Divorce Rate: 10.6

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	869	16.4	857	16.6	2	.	9	16.1
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	148	170.3	145	169.2	-	-	3	.
Low Weight	44	50.6	44	51.3	-	-	-	-
Under 1,500 Grams	4	.	4	.	-	-	-	-
< 38 Weeks Gestation	104	119.7	103	120.2	-	-	1	.
Prenatal Care Began in 1st Trimester	616	708.9	610	711.8	1	.	5	.

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	7	8.1	7	8.2	-	-	-	-
Neonatal Deaths	4	.	4	.	-	-	-	-
Postneonatal Deaths	3	.	3	.	-	-	-	-
Perinatal Deaths	8	9.2	8	9.3	-	-	-	-
Fetal Deaths	4	.	4	.	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	459	247	212	456	245	211	1	1	-	2	1	1
Mortality Rate	8.7	9.1	8.1	8.8	9.5	8.2	.	.	-	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	7	1	3	-	2	2	3	5	14	48	84	290
White Male	6	-	1	-	1	2	1	4	10	25	42	153
White Female	1	1	2	-	1	-	2	1	3	22	42	136
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	1	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	1	-	-

Note: Mortality rate is per 1,000 population in specified group.

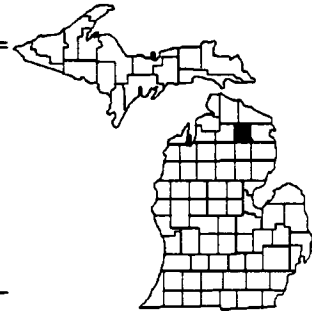
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	459	865.1	456	884.8	1	.	6	37.8
Diseases of the Heart	165	311.0	164	318.2	1	.	1	.
Malignant Neoplasms	110	207.3	109	211.5	-	-	-	-
Cerebrovascular Diseases	21	39.6	21	40.7	-	-	-	-
Accidents and Adverse Effects	24	45.2	23	44.6	-	-	4	.
Chronic Obstructive Pulmonary Diseases and Allied Conditions	22	41.5	22	42.7	-	-	-	-
Pneumonia and Influenza	7	13.2	7	13.6	-	-	-	-
Diabetes Mellitus	17	32.0	17	33.0	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	.	3	.	-	-	-	-
Homicide	3	.	3	.	-	-	-	-
Suicide	6	11.3	6	11.6	-	-	-	-
Atherosclerosis	2	.	2	.	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

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

1990 Profile of Montgomery County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	8,936	Total Live Births:	77	Total Deaths:	128
Rank Among Counties:	76	Teenage Mothers:	14	Infant Deaths:	1
Per Square Mile:	16.2	Low Weight Births:	3	Neonatal Deaths:	-
Median Age:	41.6	First Births:	36	Postneonatal Deaths:	1
		Median Age of Mother:	24	Perinatal Deaths:	-
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	60	Divorces:	33		
Marriage Rate:	13.4	Divorce Rate:	7.4		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	77	8.6	76	8.6	-	-	1	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	14	181.8	13	171.1	-	-	1	-
Low Weight	3	-	2	-	-	-	1	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	11	142.9	10	131.6	-	-	1	-
Prenatal Care Began in 1st Trimester	63	818.2	63	828.9	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	128	84	44	127	83	44	-	-	-	-	-	-
Mortality Rate	14.3	19.2	9.6	14.3	19.1	9.7	-	-	-	-	-	-
	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	1	-	1	-	1	1	-	3	2	10	30	79
White Male	1	-	-	-	1	1	-	2	1	8	20	49
White Female	-	-	1	-	-	-	-	1	1	2	10	30
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

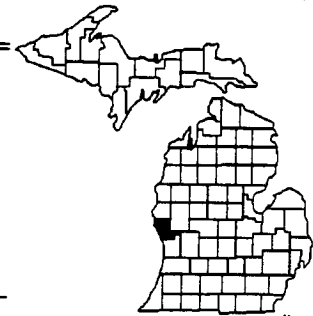
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	128	1,432.4	127	1,430.7	-	-	2	-
Diseases of the Heart	55	615.5	55	619.6	-	-	-	-
Malignant Neoplasms	35	391.7	35	394.3	-	-	-	-
Cerebrovascular Diseases	5	-	5	-	-	-	-	-
Accidents and Adverse Effects	6	67.1	6	67.6	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	7	78.3	7	78.9	-	-	-	-
Pneumonia and Influenza	3	-	3	-	-	-	-	-
Diabetes Mellitus	3	-	3	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

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

1990 Profile of Muskegon County

**POPULATION**

As of April 1, 1990: 158,983
 Rank Among Counties: 12
 Per Square Mile: 313.6
 Median Age: 32.7

NATALITY

Total Live Births: 2,762
 Teenage Mothers: 471
 Low Weight Births: 192
 First Births: 1,010
 Median Age of Mother: 25

MORTALITY

Total Deaths: 1,442
 Infant Deaths: 24
 Neonatal Deaths: 15
 Postneonatal Deaths: 9
 Perinatal Deaths: 28
 Fetal Deaths: 14
 Maternal Deaths: 1

MARRIAGE

Marriages: 1,433
 Marriage Rate: 18.0

DIVORCE

Divorces: 841
 Divorce Rate: 10.6

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	2,762	17.4	2,125	15.7	603	27.7	32	16.4
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	471	170.5	276	129.9	185	306.8	8	250.0
Low Weight	192	69.5	125	58.8	65	107.8	1	-
Under 1,500 Grams	40	14.5	23	10.8	16	26.5	-	-
< 38 Weeks Gestation	493	178.5	322	151.5	165	273.6	5	-
Prenatal Care Began in 1st Trimester	1,864	674.9	1,582	744.5	269	446.1	13	406.3

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	24	8.7	15	7.1	9	14.9	-	-
Neonatal Deaths	15	5.4	8	3.8	7	11.6	-	-
Postneonatal Deaths	9	3.3	7	3.3	2	-	-	-
Perinatal Deaths	28	10.1	15	7.0	13	21.3	-	-
Fetal Deaths	14	5.0	8	3.8	6	9.9	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,442	740	702	1,271	646	625	159	87	72	11	6	5
Mortality Rate	9.1	9.5	8.6	9.4	9.8	9.0	7.3	8.2	6.5	5.6	6.5	-
	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	24	5	2	5	7	13	9	40	51	116	273	897
White Male	8	3	1	3	5	9	2	19	22	63	141	370
White Female	7	2	-	1	1	-	4	10	17	40	98	445
Black Male	4	-	1	-	1	3	3	7	4	7	19	38
Black Female	5	-	-	1	-	1	-	4	7	4	12	38
Other Male	-	-	-	-	-	-	-	-	-	1	2	3
Other Female	-	-	-	-	-	-	-	-	-	1	1	3

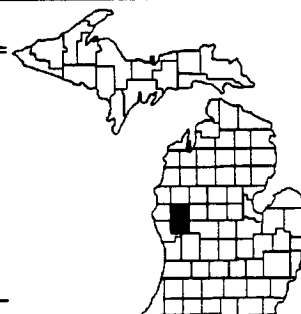
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,442	907.0	1,271	939.5	159	731.4	19	40.7
Diseases of the Heart	493	310.1	448	331.1	40	184.0	-	-
Malignant Neoplasms	331	208.2	291	215.1	38	174.8	1	-
Cerebrovascular Diseases	103	64.8	93	68.7	10	46.0	1	-
Accidents and Adverse Effects	53	33.3	48	35.5	5	-	9	19.3
Chronic Obstructive Pulmonary Diseases and Allied Conditions	73	45.9	68	50.3	5	-	-	-
Pneumonia and Influenza	45	28.3	39	28.8	4	-	-	-
Diabetes Mellitus	60	37.7	50	37.0	9	41.4	-	-
Chronic Liver Disease and Cirrhosis	14	8.8	13	9.6	1	-	-	-
Homicide	8	5.0	2	-	6	27.6	-	-
Suicide	16	10.1	15	11.1	1	-	1	-
Atherosclerosis	21	13.2	20	14.8	1	-	-	-
AIDS	4	-	3	-	1	-	-	-

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

1990 Profile of Newaygo County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	38,202	Total Live Births:	686	Total Deaths:	373
Rank Among Counties:	40	Teenage Mothers:	100	Infant Deaths:	3
Per Square Mile:	45.1	Low Weight Births:	31	Neonatal Deaths:	2
Median Age:	33.3	First Births:	245	Postneonatal Deaths:	1
		Median Age of Mother:	24	Perinatal Deaths:	2
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	374	Divorces:	178		
Marriage Rate:	19.6	Divorce Rate:	9.3		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	686	18.0	679	18.2	2	-	5	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	100	145.8	98	144.3	1	-	1	-
Low Weight	31	45.2	31	45.7	-	-	-	-
Under 1,500 Grams	5	-	5	-	-	-	-	-
< 38 Weeks Gestation	72	105.0	72	106.0	-	-	-	-
Prenatal Care Began in 1st Trimester	446	650.1	442	651.0	-	-	4	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	373	181	192	354	171	183	12	6	6	7	4	3
Mortality Rate	9.8	9.6	9.9	9.5	9.3	9.6	25.5	25.1	25.9	18.7	-	-
	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	3	2	1	-	2	3	4	7	12	23	74	242
White Male	2	1	-	-	2	1	4	3	4	14	37	103
White Female	1	-	1	-	-	1	-	2	7	7	35	129
Black Male	-	-	-	-	-	1	-	2	-	-	-	3
Black Female	-	1	-	-	-	-	-	-	-	-	1	4
Other Male	-	-	-	-	-	-	-	-	-	1	-	3
Other Female	-	-	-	-	-	-	-	-	1	1	1	-

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	373	976.4	354	947.6	12	2,547.8	5	-
Diseases of the Heart	132	345.5	127	340.0	4	-	-	-
Malignant Neoplasms	95	248.7	91	243.6	1	-	-	-
Cerebrovascular Diseases	25	65.4	23	61.6	1	-	-	-
Accidents and Adverse Effects	31	81.1	28	75.0	3	-	3	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	15	39.3	14	37.5	1	-	-	-
Pneumonia and Influenza	20	52.4	19	50.9	-	-	-	-
Diabetes Mellitus	10	26.2	9	24.1	1	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	-	2	-	-	-	1	-
Atherosclerosis	3	-	3	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Oakland County

**POPULATION**

As of April 1, 1990: 1,083,592
 Rank Among Counties: 2
 Per Square Mile: 1,238.6
 Median Age: 33.8

NATALITY

Total Live Births: 17,008
 Teenage Mothers: 1,255
 Low Weight Births: 1,000
 First Births: 7,291
 Median Age of Mother: 28

MORTALITY

Total Deaths: 7,690
 Infant Deaths: 119
 Neonatal Deaths: 87
 Postneonatal Deaths: 32
 Perinatal Deaths: 159
 Fetal Deaths: 91
 Maternal Deaths: 2

MARRIAGE

Marriages: 9,570
 Marriage Rate: 17.7

DIVORCE

Divorces: 5,006
 Divorce Rate: 9.2

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	17,008	15.7	14,997	15.4	1,531	19.7	351	12.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	1,255	73.8	891	59.4	339	221.4	24	68.4
Low Weight	1,000	58.8	797	53.1	173	113.0	18	51.3
Under 1,500 Grams	171	10.1	139	9.3	29	18.9	1	.
< 38 Weeks Gestation	2,605	153.2	2,184	145.6	342	223.4	62	176.6
Prenatal Care Began in 1st Trimester	14,759	867.8	13,323	888.4	1,043	681.3	280	797.7

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	119	7.0	95	6.3	23	15.0	1	.
Neonatal Deaths	87	5.1	68	4.5	18	11.8	1	.
Postneonatal Deaths	32	1.9	27	1.8	5	.	-	.
Perinatal Deaths	159	9.3	127	8.4	26	16.8	3	.
Fetal Deaths	91	5.3	71	4.7	14	9.1	3	.

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	7,690	3,796	3,893	7,181	3,524	3,657	437	236	200	67	32	35
Mortality Rate	7.1	7.2	7.0	7.4	7.4	7.3	5.6	6.5	4.8	2.3	2.2	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	119	23	12	8	54	64	72	211	336	588	1,356	4,847
White Male	54	8	7	3	30	41	49	119	173	302	764	1,974
White Female	41	12	3	4	13	12	14	64	114	233	482	2,665
Black Male	15	-	-	-	6	8	6	16	24	29	53	79
Black Female	8	3	1	-	2	3	3	9	16	13	46	96
Other Male	1	-	-	1	2	-	-	3	4	3	7	11
Other Female	-	-	1	-	1	-	-	-	5	6	3	19

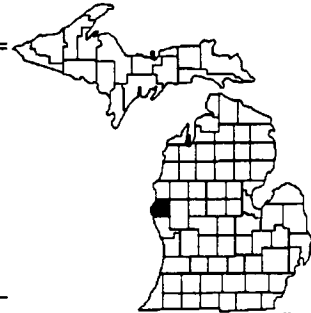
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	7,690	709.7	7,181	735.5	437	561.0	97	34.6
Diseases of the Heart	2,778	256.4	2,620	268.3	135	173.3	5	.
Malignant Neoplasms	1,900	175.3	1,789	183.2	98	125.8	12	4.3
Cerebrovascular Diseases	564	52.0	528	54.1	28	35.9	-	.
Accidents and Adverse Effects	264	24.4	240	24.6	20	25.7	35	12.5
Chronic Obstructive Pulmonary Diseases and Allied Conditions	292	26.9	282	28.9	8	10.3	-	.
Pneumonia and Influenza	259	23.9	247	25.3	10	12.8	-	.
Diabetes Mellitus	179	16.5	165	16.9	13	16.7	1	.
Chronic Liver Disease and Cirrhosis	93	8.6	85	8.7	6	7.7	-	.
Homicide	60	5.5	38	3.9	22	28.2	8	2.9
Suicide	114	10.5	108	11.1	1	.	9	3.2
Atherosclerosis	46	4.2	44	4.5	1	.	-	.
AIDS	33	3.0	24	2.5	9	11.6	-	.

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

1990 Profile of Oceana County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	22,454	Total Live Births:	401	Total Deaths:	199
Rank Among Counties:	54	Teenage Mothers:	72	Infant Deaths:	3
Per Square Mile:	41.5	Low Weight Births:	9	Neonatal Deaths:	3
Median Age:	33.5	First Births:	168	Postneonatal Deaths:	-
		Median Age of Mother:	25	Perinatal Deaths:	3
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	196	Divorces:	121		
Marriage Rate:	17.5	Divorce Rate:	10.8		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	401	17.9	391	17.7	-	-	10	30.2
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	72	179.6	69	176.5	-	-	3	-
Low Weight	9	22.4	9	23.0	-	-	-	-
Under 1,500 Grams	3	-	3	-	-	-	-	-
< 38 Weeks Gestation	47	117.2	43	110.0	-	-	4	-
Prenatal Care Began in 1st Trimester	262	653.4	256	654.7	-	-	6	600.0

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	3	-	3	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	3	-	3	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	199	116	83	194	114	80	3	2	1	2	-	2
Mortality Rate	8.9	10.5	7.3	8.8	10.5	7.1	-	-	-	-	-	-
	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	3	-	2	-	-	-	2	2	6	15	40	129
White Male	1	-	2	-	-	-	1	1	2	12	28	67
White Female	2	-	-	-	-	-	1	1	4	3	11	58
Black Male	-	-	-	-	-	-	-	-	-	-	1	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	1
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	2	-

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	199	886.3	194	879.5	3	-	2	-
Diseases of the Heart	92	409.7	91	412.6	-	-	-	-
Malignant Neoplasms	36	160.3	33	149.6	3	-	1	-
Cerebrovascular Diseases	10	44.5	10	45.3	-	-	-	-
Accidents and Adverse Effects	5	-	5	-	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	10	44.5	10	45.3	-	-	-	-
Pneumonia and Influenza	7	31.2	7	31.7	-	-	-	-
Diabetes Mellitus	7	31.2	6	27.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	2	-	2	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Ogemaw County

**POPULATION**

As of April 1, 1990: 18,681
 Rank Among Counties: 61
 Per Square Mile: 32.8
 Median Age: 37

NATALITY

Total Live Births: 290
 Teenage Mothers: 49
 Low Weight Births: 11
 First Births: 119
 Median Age of Mother: 24

MORTALITY

Total Deaths: 253
 Infant Deaths: 4
 Neonatal Deaths: 2
 Postneonatal Deaths: 2
 Perinatal Deaths: 1
 Fetal Deaths: -
 Maternal Deaths: 1

MARRIAGE

Marriages: 154
 Marriage Rate: 16.5

DIVORCE

Divorces: 34
 Divorce Rate: 3.6

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	290	15.5	287	15.5	-	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	49	169.0	48	167.2	-	-	1	-
Low Weight	11	37.9	11	38.3	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	39	134.5	39	135.9	-	-	-	-
Prenatal Care Began in 1st Trimester	252	869.0	250	871.1	-	-	2	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	2	-	2	-	-	-	-	-
Postneonatal Deaths	2	-	2	-	-	-	-	-
Perinatal Deaths	1	-	1	-	-	-	-	-
Fetal Deaths	-	-	-	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	253	136	117	251	134	117	1	1	-	1	1	-
Mortality Rate	13.5	14.8	12.3	13.6	14.7	12.4	-	-	-	-	-	-
	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	4	-	-	1	2	2	2	4	7	15	47	169
White Male	2	-	-	-	1	1	-	3	5	10	28	84
White Female	2	-	-	1	1	1	2	1	2	5	17	85
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

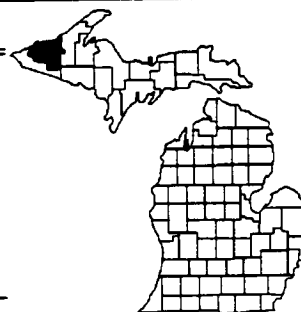
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	253	1,354.3	251	1,356.5	1	-	3	-
Diseases of the Heart	77	412.2	76	410.7	-	-	-	-
Malignant Neoplasms	65	347.9	65	351.3	-	-	1	-
Cerebrovascular Diseases	26	139.2	26	140.5	-	-	-	-
Accidents and Adverse Effects	7	37.5	7	37.8	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	85.6	16	86.5	-	-	-	-
Pneumonia and Influenza	8	42.8	8	43.2	-	-	-	-
Diabetes Mellitus	2	-	2	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	3	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	9	48.2	9	48.6	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Ontonagon County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	8,854	Total Live Births:	96	Total Deaths:	97
Rank Among Counties:	77	Teenage Mothers:	16	Infant Deaths:	-
Per Square Mile:	6.8	Low Weight Births:	5	Neonatal Deaths:	-
Median Age:	40.2	First Births:	43	Postneonatal Deaths:	-
		Median Age of Mother:	24	Perinatal Deaths:	-
				Fetal Deaths:	-
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	63	Divorces:	28		
Marriage Rate:	14.2	Divorce Rate:	6.3		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	96	10.8	96	11.0	-	-	-	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	16	166.7	16	166.7	-	-	-	-
Low Weight	5	-	5	-	-	-	-	-
Under 1,500 Grams	-	-	-	-	-	-	-	-
< 38 Weeks Gestation	15	156.3	15	156.3	-	-	-	-
Prenatal Care Began in 1st Trimester	68	708.3	68	708.3	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	97	58	39	97	58	39	-	-	-	-	-	-
Mortality Rate	11.0	12.9	8.9	11.1	13.1	9.0	-	-	-	-	-	-
	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	7	18	69
White Male	-	-	-	-	1	1	-	-	1	5	12	38
White Female	-	-	-	-	-	-	-	-	-	2	6	31
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

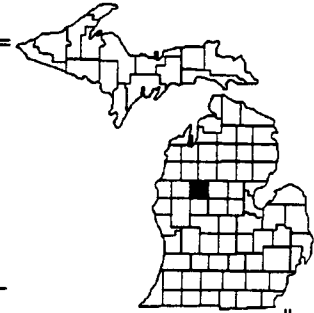
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	97	1,095.6	97	1,111.6	-	-	1	-
Diseases of the Heart	33	372.7	33	378.2	-	-	-	-
Malignant Neoplasms	24	271.1	24	275.0	-	-	-	-
Cerebrovascular Diseases	7	79.1	7	80.2	-	-	-	-
Accidents and Adverse Effects	2	-	2	-	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	3	-	3	-	-	-	-	-
Pneumonia and Influenza	3	-	3	-	-	-	-	-
Diabetes Mellitus	1	-	1	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	4	-	4	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

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

1990 Profile of Osceola County

**POPULATION**

As of April 1, 1990: 20,146
 Rank Among Counties: 59
 Per Square Mile: 35.4
 Median Age: 33.5

NATALITY

Total Live Births: 297
 Teenage Mothers: 49
 Low Weight Births: 18
 First Births: 109
 Median Age of Mother: 25

MORTALITY

Total Deaths: 184
 Infant Deaths: 3
 Neonatal Deaths: 2
 Postneonatal Deaths: 1
 Perinatal Deaths: 5
 Fetal Deaths: 4
 Maternal Deaths: -

MARRIAGE

Marriages: 184
 Marriage Rate: 18.3

DIVORCE

Divorces: 122
 Divorce Rate: 12.1

NATALITY BY RACE OF MOTHER

Live Births	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	297	14.7	294	14.8	-	-	3	-
Teenage Mothers	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
	49	165.0	49	166.7	-	-	-	-
Low Weight	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
	18	60.6	18	61.2	-	-	-	-
Under 1,500 Grams	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
	2	-	2	-	-	-	-	-
< 38 Weeks Gestation	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
	39	131.3	39	132.7	-	-	-	-
Prenatal Care Began in 1st Trimester	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
	198	666.7	196	666.7	-	-	2	-

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

INFANT AND PERINATAL MORTALITY BY RACE

Infant Deaths	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	3	-	3	-	-	-	-	-
Neonatal Deaths	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	2	-	2	-	-	-	-	-
Postneonatal Deaths	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	1	-	1	-	-	-	-	-
Perinatal Deaths	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	5	-	5	-	-	-	-	-
Fetal Deaths	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	4	-	4	-	-	-	-	-

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

MORTALITY

Deaths	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	184	91	93	184	91	93	-	-	-	-	-	-
Mortality Rate	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	9.1	9.1	9.2	9.2	9.2	9.3	-	-	-	-	-	-
Total Deaths	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+
	3	1	-	1	2	3	1	2	5	10	32	124
White Male	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+
	2	1	-	1	2	1	-	2	3	4	18	57
White 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+
	1	-	-	-	-	2	1	-	2	6	14	67
Black Male	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+
	-	-	-	-	-	-	-	-	-	-	-	-
Black 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+
	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	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+
	-	-	-	-	-	-	-	-	-	-	-	-
Other 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+
	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

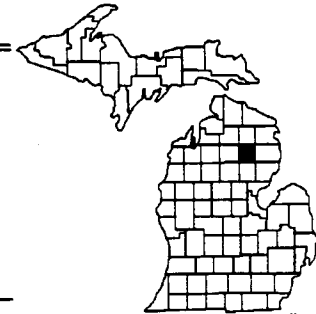
LEADING CAUSES OF DEATH

All Causes	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	184	913.3	184	923.3	-	-	4	-
Diseases of the Heart	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	72	357.4	72	361.3	-	-	1	-
Malignant Neoplasms	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	36	178.7	36	180.7	-	-	-	-
Cerebrovascular Diseases	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	13	64.5	13	65.2	-	-	-	-
Accidents and Adverse Effects	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	7	34.7	7	35.1	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	11	54.6	11	55.2	-	-	-	-
Pneumonia and Influenza	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	10	49.6	10	50.2	-	-	-	-
Diabetes Mellitus	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	4	-	4	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	-	-	-	-	-	-	-	-
Homicide	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	2	-	2	-	-	-	-	-
Suicide	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	1	-	1	-	-	-	1	-
Atherosclerosis	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	1	-	1	-	-	-	-	-
AIDS	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	-	-	-	-	-	-	-	-

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

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

1990 Profile of Oscoda County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	7,842	Total Live Births:	119	Total Deaths:	88
Rank Among Counties:	81	Teenage Mothers:	11	Infant Deaths:	-
Per Square Mile:	13.8	Low Weight Births:	4	Neonatal Deaths:	-
Median Age:	40	First Births:	46	Postneonatal Deaths:	-
		Median Age of Mother:	25	Perinatal Deaths:	2
				Fetal Deaths:	2
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	72	Divorces:	32		
Marriage Rate:	18.4	Divorce Rate:	8.2		

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	119	15.2	118	15.1	-	-	1	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	11	92.4	11	93.2	-	-	-	-
Low Weight	4	-	4	-	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	16	134.5	16	135.6	-	-	-	-
Prenatal Care Began in 1st Trimester	88	739.5	88	745.8	-	-	-	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	2	-	2	-	-	-	-	-
Fetal Deaths	2	-	2	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
Deaths	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Mortality Rate	88	42	46	86	40	46	1	1	-	1	1	-	
	11.2	10.9	11.6	11.0	10.4	11.6	.	.	-	.	.	-	
	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	2	-	1	-	1	2	1	5	22	53	-
White Male	-	-	1	-	-	-	-	1	-	3	14	21	-
White Female	-	1	-	-	1	-	1	1	1	1	8	32	-
Black Male	-	-	-	-	-	-	-	-	-	1	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	1	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-	-

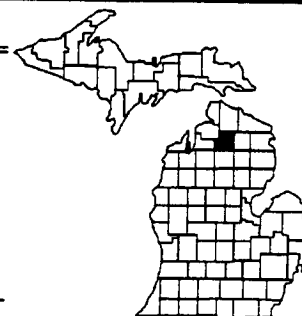
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	88	1,122.2	86	1,103.4	1	-	4	-
Diseases of the Heart	35	448.3	34	436.2	1	-	-	-
Malignant Neoplasms	23	293.3	23	295.1	-	-	-	-
Cerebrovascular Diseases	7	89.3	7	89.8	-	-	-	-
Accidents and Adverse Effects	5	-	4	-	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	3	-	3	-	-	-	-	-
Pneumonia and Influenza	3	-	3	-	-	-	1	-
Diabetes Mellitus	-	-	-	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	1	-	1	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	3	-	3	-	-	-	-	-
Atherosclerosis	1	-	1	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Otsego County

**POPULATION**

As of April 1, 1990: 17,957
 Rank Among Counties: 64
 Per Square Mile: 34.8
 Median Age: 33.7

NATALITY

Total Live Births: 300
 Teenage Mothers: 41
 Low Weight Births: 18
 First Births: 117
 Median Age of Mother: 26

MORTALITY

Total Deaths: 177
 Infant Deaths: 3
 Neonatal Deaths: 3
 Postneonatal Deaths: -
 Perinatal Deaths: 3
 Fetal Deaths: 1
 Maternal Deaths: -

MARRIAGE

Marriages: 180
 Marriage Rate: 20.0

DIVORCE

Divorces: 82
 Divorce Rate: 9.1

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	300	16.7	295	16.6	-	-	5	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	41	136.7	39	132.2	-	-	2	-
Low Weight	18	60.0	17	57.6	-	-	1	-
Under 1,500 Grams	5	-	4	-	-	-	1	-
< 38 Weeks Gestation	49	163.3	48	162.7	-	-	1	-
Prenatal Care Began in 1st Trimester	238	793.3	234	793.2	-	-	4	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	3	-	3	-	-	-	-	-
Postneonatal Deaths	-	-	-	-	-	-	-	-
Perinatal Deaths	3	-	3	-	-	-	-	-
Fetal Deaths	1	-	1	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	177	90	87	175	88	87	1	1	-	-	-	-
Mortality Rate	9.9	10.2	9.5	9.9	10.1	9.6	-	-	-	-	-	-
	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	3	-	-	-	2	2	2	1	4	14	27	122
White Male	3	-	-	-	2	2	1	1	3	6	16	54
White Female	-	-	-	-	-	-	1	-	1	8	11	66
Black Male	-	-	-	-	-	-	-	-	-	-	-	1
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

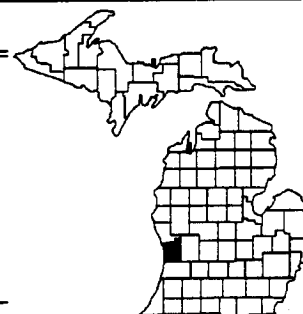
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	177	985.7	175	985.8	1	-	2	-
Diseases of the Heart	54	300.7	53	298.6	1	-	-	-
Malignant Neoplasms	44	245.0	44	247.9	-	-	-	-
Cerebrovascular Diseases	24	133.7	24	135.2	-	-	-	-
Accidents and Adverse Effects	7	39.0	7	39.4	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	6	33.4	6	33.8	-	-	-	-
Pneumonia and Influenza	6	33.4	6	33.8	-	-	-	-
Diabetes Mellitus	4	-	4	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	-	-	-	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	4	-	4	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Ottawa County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	187,768	Total Live Births:	3,164	Total Deaths:	1,090
Rank Among Counties:	10	Teenage Mothers:	247	Infant Deaths:	21
Per Square Mile:	331.1	Low Weight Births:	131	Neonatal Deaths:	13
Median Age:	30.3	First Births:	1,182	Postneonatal Deaths:	8
		Median Age of Mother:	27	Perinatal Deaths:	25
				Fetal Deaths:	16
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	1,507	Divorces:	564		
Marriage Rate:	16.1	Divorce Rate:	6.0		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	3,164	16.9	3,099	16.9	9	8.6	54	17.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	247	78.1	242	78.1	1	-	4	-
Low Weight	131	41.4	127	41.0	1	-	3	-
Under 1,500 Grams	28	8.8	26	8.4	1	-	1	-
< 38 Weeks Gestation	361	114.1	352	113.6	2	-	6	111.1
Prenatal Care Began in 1st Trimester	2,683	848.0	2,636	850.6	8	888.9	37	685.2

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	21	6.6	21	6.8	-	-	-	-
Neonatal Deaths	13	4.1	13	4.2	-	-	-	-
Postneonatal Deaths	8	2.5	8	2.6	-	-	-	-
Perinatal Deaths	25	7.9	23	7.4	-	-	2	-
Fetal Deaths	16	5.0	14	4.5	-	-	2	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,090	516	574	1,075	506	569	7	5	2	7	5	2
Mortality Rate	5.8	5.6	6.0	5.9	5.6	6.1	6.7	-	-	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	21	4	2	2	8	7	6	29	40	66	150	755
White Male	8	2	1	1	2	6	4	18	25	36	85	318
White Female	13	2	1	1	4	1	2	11	13	28	63	430
Black Male	-	-	-	-	-	-	-	-	1	-	2	2
Black Female	-	-	-	-	-	-	-	-	-	-	-	2
Other Male	-	-	-	-	1	-	-	-	-	2	-	2
Other Female	-	-	-	-	1	-	-	-	1	-	-	-

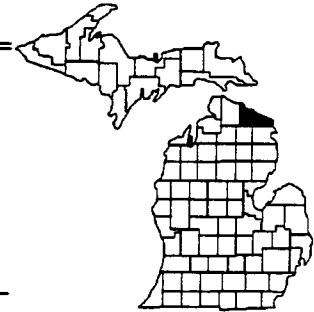
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,090	580.5	1,075	585.7	7	667.9	16	27.0
Diseases of the Heart	381	202.9	378	205.9	1	-	1	-
Malignant Neoplasms	242	128.9	236	128.6	3	-	2	-
Cerebrovascular Diseases	79	42.1	78	42.5	1	-	1	-
Accidents and Adverse Effects	50	26.6	49	26.7	-	-	8	13.5
Chronic Obstructive Pulmonary Diseases and Allied Conditions	40	21.3	40	21.8	-	-	-	-
Pneumonia and Influenza	47	25.0	47	25.6	-	-	-	-
Diabetes Mellitus	31	16.5	30	16.3	1	-	-	-
Chronic Liver Disease and Cirrhosis	9	4.8	9	4.9	-	-	-	-
Homicide	1	-	1	-	-	-	1	-
Suicide	10	5.3	9	4.9	-	-	1	-
Atherosclerosis	25	13.3	25	13.6	-	-	-	-
AIDS	3	-	3	-	-	-	-	-

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

1990 Profile of Presque Isle County

**POPULATION**

As of April 1, 1990: 13,743
 Rank Among Counties: 67
 Per Square Mile: 21.0
 Median Age: 38.5

NATALITY

Total Live Births: 144
 Teenage Mothers: 11
 Low Weight Births: 10
 First Births: 47
 Median Age of Mother: 27

MORTALITY

Total Deaths: 167
 Infant Deaths: 2
 Neonatal Deaths: 2
 Postneonatal Deaths: -
 Perinatal Deaths: -
 Fetal Deaths: 1
 Maternal Deaths: -

MARRIAGE

Marriages: 82
 Marriage Rate: 11.9

DIVORCE

Divorces: 37
 Divorce Rate: 5.4

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	144	10.5	143	10.5	-	-	1	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	11	76.4	11	76.9	-	-	-	-
Low Weight	10	69.4	10	69.9	-	-	-	-
Under 1,500 Grams	2	-	2	-	-	-	-	-
< 38 Weeks Gestation	20	138.9	20	139.9	-	-	-	-
Prenatal Care Began in 1st Trimester	122	847.2	122	853.1	-	-	-	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	1	-	1	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	167	103	64	167	103	64	-	-	-	-	-	-
Mortality Rate	12.2	15.2	9.2	12.2	15.3	9.2	-	-	-	-	-	-
	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	-	-	1	1	4	1	3	4	6	27	118
White Male	2	-	-	1	-	3	1	3	4	3	20	66
White Female	-	-	-	-	1	1	-	-	-	3	7	52
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

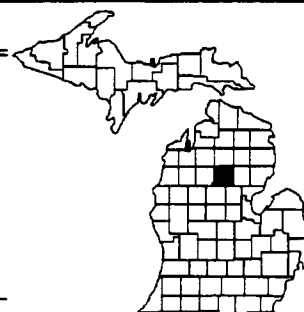
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	167	1,215.2	167	1,222.6	-	-	2	-
Diseases of the Heart	63	458.4	63	461.2	-	-	-	-
Malignant Neoplasms	40	291.1	40	292.8	-	-	-	-
Cerebrovascular Diseases	9	65.5	9	65.9	-	-	-	-
Accidents and Adverse Effects	8	58.2	8	58.6	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	4	-	4	-	-	-	-	-
Pneumonia and Influenza	4	-	4	-	-	-	-	-
Diabetes Mellitus	3	-	3	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	6	43.7	6	43.9	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

1990 Profile of Roscommon County



POPULATION		NATILITY		MORTALITY	
As of April 1, 1990:	19,776	Total Live Births:	246	Total Deaths:	260
Rank Among Counties:	60	Teenage Mothers:	33	Infant Deaths:	1
Per Square Mile:	37.4	Low Weight Births:	17	Neonatal Deaths:	1
Median Age:	44.9	First Births:	86	Postneonatal Deaths:	-
		Median Age of Mother:	25	Perinatal Deaths:	2
				Fetal Deaths:	2
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	137	Divorces:	76		
Marriage Rate:	13.9	Divorce Rate:	7.7		

NATILITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	246	12.4	243	12.4	-	-	2	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	33	134.1	33	135.8	-	-	-	-
Low Weight	17	69.1	17	70.0	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	-	-
< 38 Weeks Gestation	37	150.4	36	148.1	-	-	-	-
Prenatal Care Began in 1st Trimester	178	723.6	177	728.4	-	-	1	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	260	148	112	258	146	112	-	-	-	2	2	-
Mortality Rate	13.1	15.3	11.1	13.2	15.3	11.1	-	-	-	-	-	-
	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	2	5	7	21	57	163
White Male	1	1	-	-	-	2	1	3	5	9	29	95
White Female	-	-	-	1	-	-	1	2	2	12	27	67
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	1	1
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

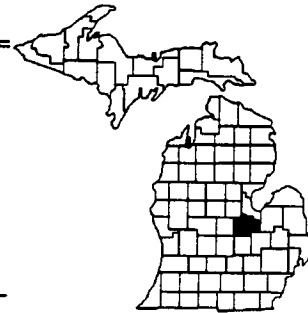
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	260	1,314.7	258	1,315.3	-	-	2	-
Diseases of the Heart	95	480.4	95	484.3	-	-	-	-
Malignant Neoplasms	68	343.9	66	336.5	-	-	-	-
Cerebrovascular Diseases	11	55.6	11	56.1	-	-	-	-
Accidents and Adverse Effects	17	86.0	17	86.7	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	80.9	16	81.6	-	-	-	-
Pneumonia and Influenza	13	65.7	13	66.3	-	-	-	-
Diabetes Mellitus	2	-	2	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	2	-	2	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	1	-	1	-	-	-	-	-
Atherosclerosis	-	-	-	-	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

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

1990 Profile of Saginaw County

**POPULATION**

As of April 1, 1990: 211,946
 Rank Among Counties: 9
 Per Square Mile: 260.0
 Median Age: 32.7

NATALITY

Total Live Births: 3,702
 Teenage Mothers: 664
 Low Weight Births: 335
 First Births: 1,424
 Median Age of Mother: 25

MORTALITY

Total Deaths: 1,841
 Infant Deaths: 45
 Neonatal Deaths: 30
 Postneonatal Deaths: 15
 Perinatal Deaths: 57
 Fetal Deaths: 31
 Maternal Deaths: -

MARRIAGE

Marriages: 1,464
 Marriage Rate: 13.8

DIVORCE

Divorces: 875
 Divorce Rate: 8.3

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	3,702	17.5	2,569	14.9	1,093	29.2	38	15.5
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	664	179.4	313	121.8	347	317.5	4	.
Low Weight	335	90.5	172	67.0	159	145.5	4	.
Under 1,500 Grams	75	20.3	41	16.0	32	29.3	2	.
< 38 Weeks Gestation	695	187.7	385	149.9	300	274.5	10	263.2
Prenatal Care Began in 1st Trimester	2,859	772.3	2,127	827.9	702	642.3	29	763.2

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	45	12.2	29	11.3	16	14.6	-	-
Neonatal Deaths	30	8.1	17	6.6	13	11.9	-	-
Postneonatal Deaths	15	4.1	12	4.7	3	.	-	-
Perinatal Deaths	57	15.3	31	12.0	26	23.5	-	-
Fetal Deaths	31	8.3	17	6.6	14	12.6	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,841	938	902	1,541	772	768	292	164	128	8	2	6
Mortality Rate	8.7	9.3	8.1	9.0	9.3	8.6	7.8	9.6	6.3	3.3	.	4.7
	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+ Unk
Total Deaths	45	7	5	4	22	23	18	46	89	150	317	1,115
White Male	16	2	1	1	7	6	9	20	41	67	154	448
White Female	13	2	1	2	3	7	2	8	24	48	110	548
Black Male	11	-	1	-	11	7	5	10	13	22	26	58
Black Female	5	3	2	1	1	2	2	8	11	12	26	55
Other Male	-	-	-	-	-	-	-	-	-	1	-	1
Other Female	-	-	-	-	-	1	-	-	-	-	1	4

Note: Mortality rate is per 1,000 population in specified group.

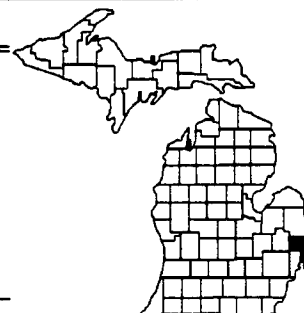
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,841	868.6	1,541	895.5	292	780.5	38	60.3
Diseases of the Heart	616	290.6	532	309.2	82	219.2	1	.
Malignant Neoplasms	431	203.4	362	210.4	68	181.8	2	.
Cerebrovascular Diseases	142	67.0	126	73.2	16	42.8	-	-
Accidents and Adverse Effects	102	48.1	82	47.7	18	48.1	13	20.6
Chronic Obstructive Pulmonary Diseases and Allied Conditions	58	27.4	55	32.0	3	.	-	-
Pneumonia and Influenza	64	30.2	57	33.1	6	16.0	-	-
Diabetes Mellitus	50	23.6	40	23.2	10	26.7	-	-
Chronic Liver Disease and Cirrhosis	23	10.9	16	9.3	5	.	-	-
Homicide	33	15.6	8	4.6	25	66.8	12	19.0
Suicide	15	7.1	11	6.4	4	.	1	.
Atherosclerosis	23	10.9	20	11.6	3	.	-	-
AIDS	2	.	1	.	1	.	-	-

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

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

1990 Profile of St. Clair County



POPULATION		NATALITY	MORTALITY
As of April 1, 1990:	145,607	Total Live Births:	2,204
Rank Among Counties:	14	Teenage Mothers:	257
Per Square Mile:	198.3	Low Weight Births:	169
Median Age:	32.9	First Births:	833
		Median Age of Mother:	26
MARRIAGE		DIVORCE	
Marriages:	1,191	Divorces:	690
Marriage Rate:	16.4	Divorce Rate:	9.5
			Total Deaths: 1,300
			Infant Deaths: 22
			Neonatal Deaths: 15
			Postneonatal Deaths: 7
			Perinatal Deaths: 14
			Fetal Deaths: 4
			Maternal Deaths: -

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	2,204	15.1	2,115	15.0	69	22.9	16	12.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	257	116.6	237	112.1	17	246.4	2	-
Low Weight	169	76.7	151	71.4	17	246.4	-	-
Under 1,500 Grams	24	10.9	24	11.3	-	-	-	-
< 38 Weeks Gestation	361	163.8	333	157.4	24	347.8	3	-
Prenatal Care Began in 1st Trimester	1,754	795.8	1,697	802.4	43	623.2	12	750.0

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	22	10.0	20	9.5	2	-	-	-
Neonatal Deaths	15	6.8	14	6.6	1	-	-	-
Postneonatal Deaths	7	3.2	6	2.8	1	-	-	-
Perinatal Deaths	14	6.3	13	6.1	1	-	-	-
Fetal Deaths	4	-	4	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	1,300	678	621	1,267	660	606	26	14	12	7	4	3	
Mortality Rate	8.9	9.6	8.3	9.0	9.6	8.4	8.6	9.6	7.7	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+	Unk
Total Deaths	22	4	4	-	13	12	11	39	45	95	228	827	-
White Male	12	1	1	-	10	5	10	28	32	52	135	374	-
White Female	8	3	3	-	3	4	1	11	12	40	84	437	-
Black Male	2	-	-	-	-	1	-	-	1	-	2	8	-
Black Female	-	-	-	-	-	1	-	-	-	2	2	7	-
Other Male	-	-	-	-	-	-	-	-	-	1	3	-	-
Other Female	-	-	-	-	-	1	-	-	-	-	2	-	-

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,300	892.8	1,267	896.5	26	862.1	21	49.3
Diseases of the Heart	499	342.7	488	345.3	8	265.3	-	-
Malignant Neoplasms	295	202.6	288	203.8	5	-	1	-
Cerebrovascular Diseases	72	49.4	70	49.5	1	-	-	-
Accidents and Adverse Effects	61	41.9	58	41.0	3	-	10	23.5
Chronic Obstructive Pulmonary Diseases and Allied Conditions	69	47.4	68	48.1	1	-	-	-
Pneumonia and Influenza	60	41.2	59	41.7	1	-	-	-
Diabetes Mellitus	20	13.7	20	14.2	-	-	-	-
Chronic Liver Disease and Cirrhosis	11	7.6	10	7.1	1	-	-	-
Homicide	2	-	1	-	1	-	-	-
Suicide	21	14.4	21	14.9	-	-	2	-
Atherosclerosis	10	6.9	9	6.4	1	-	-	-
AIDS	3	-	3	-	-	-	-	-

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

1990 Profile of St. Joseph County

**POPULATION**

As of April 1, 1990: 58,913
 Rank Among Counties: 28
 Per Square Mile: 117.2
 Median Age: 32.8

NATALITY

Total Live Births: 931
 Teenage Mothers: 157
 Low Weight Births: 61
 First Births: 357
 Median Age of Mother: 24

MORTALITY

Total Deaths: 549
 Infant Deaths: 13
 Neonatal Deaths: 11
 Postneonatal Deaths: 2
 Perinatal Deaths: 17
 Fetal Deaths: 8
 Maternal Deaths: -

MARRIAGE

Marriages: 455
 Marriage Rate: 15.4

DIVORCE

Divorces: 356
 Divorce Rate: 12.1

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	931	15.8	895	15.8	28	17.4	6	12.2
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	157	168.6	152	169.8	5	.	-	-
Low Weight	61	65.5	55	61.5	4	.	2	.
Under 1,500 Grams	15	16.1	13	14.5	-	-	2	.
< 38 Weeks Gestation	124	133.2	115	128.5	6	214.3	3	.
Prenatal Care Began in 1st Trimester	696	747.6	681	760.9	13	464.3	2	.

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	13	14.0	13	14.5	-	-	-	-
Neonatal Deaths	11	11.8	11	12.3	-	-	-	-
Postneonatal Deaths	2	.	2	.	-	-	-	-
Perinatal Deaths	17	18.1	17	18.8	-	-	-	-
Fetal Deaths	8	8.5	8	8.9	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	549	282	267	525	270	255	20	11	9	3	1	2
Mortality Rate	9.3	9.8	8.9	9.2	9.7	8.8	12.4	14.1	10.9	.	.	.
	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	13	2	1	3	5	5	6	17	14	41	88	354
White Male	7	1	1	2	4	3	4	12	11	22	50	153
White Female	6	1	-	1	1	2	2	5	3	17	32	185
Black Male	-	-	-	-	-	-	-	-	-	-	4	7
Black Female	-	-	-	-	-	-	-	-	-	1	1	7
Other Male	-	-	-	-	-	-	-	-	-	1	-	-
Other Female	-	-	-	-	-	-	-	-	-	1	1	-

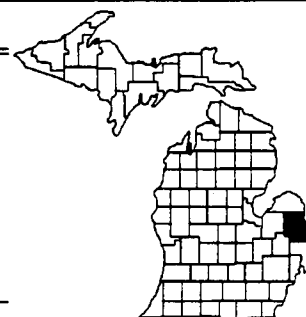
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	549	931.9	525	924.1	20	1,243.8	11	62.1
Diseases of the Heart	198	336.1	190	334.4	5	-	-	-
Malignant Neoplasms	124	210.5	117	205.9	7	435.3	2	-
Cerebrovascular Diseases	33	56.0	33	58.1	-	-	-	-
Accidents and Adverse Effects	30	50.9	30	52.8	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	25	42.4	24	42.2	1	.	-	-
Pneumonia and Influenza	12	20.4	11	19.4	1	.	-	-
Diabetes Mellitus	11	18.7	10	17.6	1	.	-	-
Chronic Liver Disease and Cirrhosis	2	.	2	.	-	-	-	-
Homicide	3	.	3	.	-	-	-	-
Suicide	11	18.7	11	19.4	-	-	-	-
Atherosclerosis	8	13.6	8	14.1	-	-	3	.
AIDS	2	.	2	.	-	-	-	-

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

1990 Profile of Sanilac County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	39,928	Total Live Births:	559	Total Deaths:	426
Rank Among Counties:	38	Teenage Mothers:	71	Infant Deaths:	8
Per Square Mile:	41.4	Low Weight Births:	39	Neonatal Deaths:	6
Median Age:	34.1	First Births:	190	Postneonatal Deaths:	2
		Median Age of Mother:	25	Perinatal Deaths:	7
				Fetal Deaths:	1
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	323	Divorces:	142		
Marriage Rate:	16.2	Divorce Rate:	7.1		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	559	14.0	546	13.8	1	-	9	33.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	71	127.0	66	120.9	-	-	3	-
Low Weight	39	69.8	35	64.1	-	-	3	-
Under 1,500 Grams	5	-	4	-	-	-	-	-
< 38 Weeks Gestation	73	130.6	68	124.5	-	-	3	-
Prenatal Care Began in 1st Trimester	411	735.2	405	741.8	1	-	4	-

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	8	14.3	8	14.7	-	-	-	-
Neonatal Deaths	6	10.7	6	11.0	-	-	-	-
Postneonatal Deaths	2	-	2	-	-	-	-	-
Perinatal Deaths	7	12.5	7	12.8	-	-	-	-
Fetal Deaths	1	-	1	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	426	242	184	425	242	183	-	-	-	1	-	1	
Mortality Rate	10.7	12.4	9.0	10.7	12.5	9.1	-	-	-	-	-	-	
	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	-	-	-	2	3	9	7	25	61	310	-
White Male	6	-	-	-	-	2	3	7	5	20	39	160	-
White Female	2	1	-	-	-	-	-	2	2	4	22	150	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	1	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	426	1,066.9	425	1,072.9	-	-	1	-
Diseases of the Heart	170	425.8	170	429.2	-	-	-	-
Malignant Neoplasms	87	217.9	87	219.6	-	-	-	-
Cerebrovascular Diseases	29	72.6	29	73.2	-	-	-	-
Accidents and Adverse Effects	15	37.6	15	37.9	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	19	47.6	19	48.0	-	-	-	-
Pneumonia and Influenza	15	37.6	15	37.9	-	-	-	-
Diabetes Mellitus	13	32.6	13	32.8	-	-	-	-
Chronic Liver Disease and Cirrhosis	5	-	5	-	-	-	-	-
Homicide	2	-	2	-	-	-	-	-
Suicide	6	15.0	6	15.1	-	-	-	-
Atherosclerosis	3	-	3	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Schoolcraft County

**POPULATION**

As of April 1, 1990: 8,302
 Rank Among Counties: 79
 Per Square Mile: 7.1
 Median Age: 37.5

NATALITY

Total Live Births: 102
 Teenage Mothers: 8
 Low Weight Births: 6
 First Births: 33
 Median Age of Mother: 27

MORTALITY

Total Deaths: 101
 Infant Deaths: -
 Neonatal Deaths: -
 Postneonatal Deaths: -
 Perinatal Deaths: -
 Fetal Deaths: -
 Maternal Deaths: 1

MARRIAGE

Marriages: 65
 Marriage Rate: 15.7

DIVORCE

Divorces: 36
 Divorce Rate: 8.7

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	102	12.3	98	12.6	-	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	8	78.4	8	81.6	-	-	-	-
Low Weight	6	58.8	5	-	-	-	-	-
Under 1,500 Grams	1	-	1	-	-	-	1	-
< 38 Weeks Gestation	10	98.0	10	102.0	-	-	-	-
Prenatal Care Began in 1st Trimester	89	872.5	85	867.3	-	-	3	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	101	52	49	100	52	48	-	-	-	1	-	1
Mortality Rate	12.2	13.0	11.4	12.9	14.0	11.8	-	-	-	-	-	-
	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	-	-	-	-	1	2	1	3	2	5	9	78
White Male	-	-	-	-	1	-	1	1	1	4	5	39
White Female	-	-	-	-	-	2	-	-	-	-	-	38
Black Male	-	-	-	-	-	-	-	2	1	1	4	38
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	1

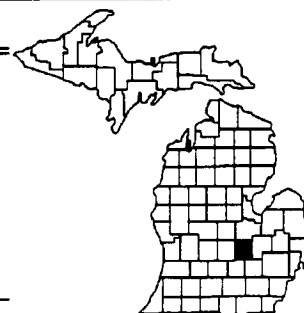
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	101	1,216.6	100	1,288.5	-	-	1	-
Diseases of the Heart	39	469.8	38	489.6	-	-	-	-
Malignant Neoplasms	17	204.8	17	219.0	-	-	-	-
Cerebrovascular Diseases	8	96.4	8	103.1	-	-	-	-
Accidents and Adverse Effects	2	-	2	-	-	-	-	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	2	-	2	-	-	-	1	-
Pneumonia and Influenza	3	-	3	-	-	-	-	-
Diabetes Mellitus	2	-	2	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	4	-	4	-	-	-	-	-
Homicide	-	-	-	-	-	-	-	-
Suicide	2	-	2	-	-	-	-	-
Atherosclerosis	2	-	2	-	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Shiawassee County



POPULATION		NATIVITY		MORTALITY	
As of April 1, 1990:	69,770	Total Live Births:	1,063	Total Deaths:	543
Rank Among Counties:	26	Teenage Mothers:	137	Infant Deaths:	6
Per Square Mile:	129.1	Low Weight Births:	66	Neonatal Deaths:	3
Median Age:	32.5	First Births:	423	Postneonatal Deaths:	3
		Median Age of Mother:	26	Perinatal Deaths:	7
				Fetal Deaths:	4
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	579	Divorces:	303		
Marriage Rate:	16.6	Divorce Rate:	8.7		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,063	15.2	1,056	15.3	-	-	3	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	137	128.9	137	129.7	-	-	-	-
Low Weight	66	62.1	66	62.5	-	-	-	-
Under 1,500 Grams	10	9.4	10	9.5	-	-	-	-
< 38 Weeks Gestation	184	173.1	184	174.2	-	-	-	-
Prenatal Care Began in 1st Trimester	863	811.9	859	813.4	-	-	2	-

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	6	5.6	6	5.7	-	-	-	-
Neonatal Deaths	3	-	3	-	-	-	-	-
Postneonatal Deaths	3	-	3	-	-	-	-	-
Perinatal Deaths	7	6.6	7	6.6	-	-	-	-
Fetal Deaths	4	-	4	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other			
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Deaths	543	299	243	538	295	242	-	-	-	5	4	1	
Mortality Rate	7.8	8.8	6.8	7.8	8.8	6.8	-	-	-	-	-	-	
	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	6	1	1	3	6	8	5	13	26	40	101	333	-
White Male	4	-	1	2	3	8	2	9	18	27	66	155	-
White Female	2	1	-	1	3	-	3	4	7	11	35	175	-
Black Male	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	2	-	2	-
Other Female	-	-	-	-	-	-	-	-	1	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

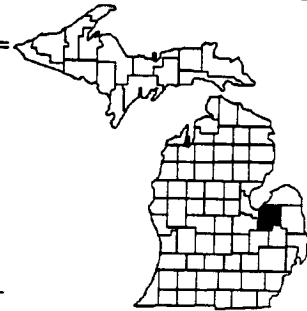
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	543	778.3	538	779.4	-	-	11	51.8
Diseases of the Heart	172	246.5	171	247.7	-	-	-	-
Malignant Neoplasms	126	180.6	125	181.1	-	-	2	-
Cerebrovascular Diseases	47	67.4	47	68.1	-	-	-	-
Accidents and Adverse Effects	29	41.6	28	40.6	-	-	4	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	24	34.4	23	33.3	-	-	-	-
Pneumonia and Influenza	18	25.8	18	26.1	-	-	-	-
Diabetes Mellitus	10	14.3	10	14.5	-	-	-	-
Chronic Liver Disease and Cirrhosis	4	-	4	-	-	-	-	-
Homicide	2	-	2	-	-	-	-	-
Suicide	8	11.5	8	11.6	-	-	3	-
Atherosclerosis	22	31.5	22	31.9	-	-	-	-
AIDS	-	-	-	-	-	-	-	-

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

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

1990 Profile of Tuscola County

**POPULATION**

As of April 1, 1990: 55,498
 Rank Among Counties: 31
 Per Square Mile: 68.3
 Median Age: 33

NATALITY

Total Live Births: 735
 Teenage Mothers: 94
 Low Weight Births: 39
 First Births: 279
 Median Age of Mother: 26

MORTALITY

Total Deaths: 433
 Infant Deaths: 5
 Neonatal Deaths: 2
 Postneonatal Deaths: 3
 Perinatal Deaths: 3
 Fetal Deaths: 1
 Maternal Deaths: -

MARRIAGE

Marriages: 448
 Marriage Rate: 16.1

DIVORCE

Divorces: 221
 Divorce Rate: 8.0

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	735	13.2	728	13.4	2	-	4	-
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	94	127.9	94	129.1	-	-	-	-
Low Weight	39	53.1	37	50.8	-	-	2	-
Under 1,500 Grams	8	10.9	8	11.0	-	-	-	-
< 38 Weeks Gestation	97	132.0	97	133.2	-	-	-	-
Prenatal Care Began in 1st Trimester	573	779.6	568	780.2	1	-	3	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	2	-	2	-	-	-	-	-
Postneonatal Deaths	3	-	3	-	-	-	-	-
Perinatal Deaths	3	-	3	-	-	-	-	-
Fetal Deaths	1	-	1	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	433	232	201	428	229	199	3	2	1	1	1	-
Mortality Rate	7.8	8.4	7.2	7.9	8.5	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	5	1	1	1	3	3	5	17	20	26	71	280
White Male	4	-	1	1	1	1	3	12	12	17	50	127
White Female	1	1	-	-	2	2	2	4	7	9	20	151
Black Male	-	-	-	-	-	-	-	-	1	-	1	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	-	-	-	-	-	-	-	1
Other Female	-	-	-	-	-	-	-	1	-	-	-	-

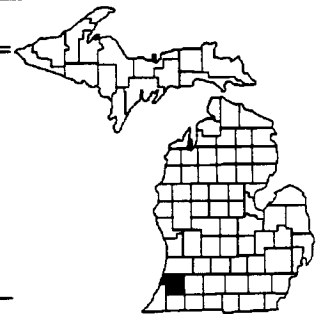
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	433	780.2	428	786.0	3	-	6	35.7
Diseases of the Heart	157	282.9	156	286.5	1	-	-	-
Malignant Neoplasms	102	183.8	101	185.5	1	-	3	-
Cerebrovascular Diseases	28	50.5	27	49.6	-	-	-	-
Accidents and Adverse Effects	16	28.8	16	29.4	-	-	1	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	16	28.8	16	29.4	-	-	-	-
Pneumonia and Influenza	13	23.4	13	23.9	-	-	-	-
Diabetes Mellitus	16	28.8	16	29.4	-	-	-	-
Chronic Liver Disease and Cirrhosis	6	10.8	6	11.0	-	-	-	-
Homicide	5	-	5	-	-	-	-	-
Suicide	10	18.0	10	18.4	-	-	-	-
Atherosclerosis	3	-	3	-	-	-	1	-
AIDS	-	-	-	-	-	-	-	-

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

1990 Profile of Van Buren County



POPULATION		NATALITY		MORTALITY	
As of April 1, 1990:	70,060	Total Live Births:	1,159	Total Deaths:	603
Rank Among Counties:	25	Teenage Mothers:	209	Infant Deaths:	17
Per Square Mile:	114.6	Low Weight Births:	75	Neonatal Deaths:	9
Median Age:	33.3	First Births:	477	Postneonatal Deaths:	8
		Median Age of Mother:	25	Perinatal Deaths:	13
				Fetal Deaths:	6
				Maternal Deaths:	-
MARRIAGE		DIVORCE			
Marriages:	628	Divorces:	387		
Marriage Rate:	17.9	Divorce Rate:	11.0		

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	1,159	16.5	1,053	16.3	96	20.3	8	8.7
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	209	180.3	168	159.5	38	395.8	2	-
Low Weight	75	64.7	62	58.9	13	135.4	-	-
Under 1,500 Grams	16	13.8	11	10.4	5	-	-	-
< 38 Weeks Gestation	181	156.2	147	139.6	34	354.2	-	-
Prenatal Care Began in 1st Trimester	831	717.0	769	730.3	57	593.8	4	-

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	17	14.7	14	13.3	3	-	-	-
Neonatal Deaths	9	7.8	6	5.7	3	-	-	-
Postneonatal Deaths	8	6.9	8	7.6	-	-	-	-
Perinatal Deaths	13	11.2	11	10.4	2	-	-	-
Fetal Deaths	6	5.2	5	-	1	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	603	304	299	522	262	260	73	38	35	8	4	4
Mortality Rate	8.6	8.9	8.3	8.1	8.3	7.9	15.4	16.9	14.2	8.7	-	-
	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	17	1	2	-	6	6	3	16	33	42	115	362
White Male	8	-	1	-	4	3	1	11	17	22	54	141
White Female	6	1	1	-	1	1	1	3	11	12	45	178
Black Male	2	-	-	-	1	-	-	1	4	4	7	19
Black Female	1	-	-	-	-	-	-	1	-	3	7	23
Other Male	-	-	-	-	-	1	1	-	-	1	-	1
Other Female	-	-	-	-	-	1	-	-	1	-	2	-

Note: Mortality rate is per 1,000 population in specified group.

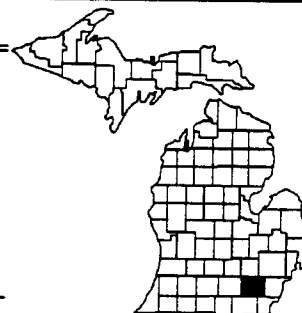
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	603	860.7	522	810.4	73	1,545.0	9	42.3
Diseases of the Heart	195	278.3	168	260.8	25	529.1	-	-
Malignant Neoplasms	159	226.9	137	212.7	20	423.3	-	-
Cerebrovascular Diseases	30	42.8	26	40.4	4	-	-	-
Accidents and Adverse Effects	28	40.0	22	34.2	4	-	7	32.9
Chronic Obstructive Pulmonary Diseases and Allied Conditions	19	27.1	19	29.5	-	-	-	-
Pneumonia and Influenza	30	42.8	28	43.5	1	-	-	-
Diabetes Mellitus	15	21.4	11	17.1	4	-	-	-
Chronic Liver Disease and Cirrhosis	3	-	2	-	1	-	-	-
Homicide	4	-	3	-	1	-	-	-
Suicide	10	14.3	8	12.4	1	-	-	-
Atherosclerosis	17	24.3	17	26.4	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

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

1990 Profile of Washtenaw County

**POPULATION**

As of April 1, 1990: 282,937
 Rank Among Counties: 6
 Per Square Mile: 398.4
 Median Age: 29.2

NATIVITY

Total Live Births: 4,169
 Teenage Mothers: 374
 Low Weight Births: 280
 First Births: 1,831
 Median Age of Mother: 28

MORTALITY

Total Deaths: 1,537
 Infant Deaths: 33
 Neonatal Deaths: 23
 Postneonatal Deaths: 10
 Perinatal Deaths: 43
 Fetal Deaths: 24
 Maternal Deaths: 1

MARRIAGE

Marriages: 2,348
 Marriage Rate: 16.6

DIVORCE

Divorces: 1,254
 Divorce Rate: 8.9

NATIVITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	4,169	14.7	3,236	13.6	694	21.7	233	18.0
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	374	89.7	207	64.0	161	232.0	5	.
Low Weight	280	67.2	174	53.8	93	134.0	12	51.5
Under 1,500 Grams	68	16.3	41	12.7	24	34.6	3	.
< 38 Weeks Gestation	666	159.8	461	142.5	179	257.9	24	103.0
Prenatal Care Began in 1st Trimester	3,454	828.5	2,804	866.5	447	644.1	200	858.4

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	33	7.9	24	7.4	9	13.0	-	-
Neonatal Deaths	23	5.5	17	5.3	6	8.6	-	-
Postneonatal Deaths	10	2.4	7	2.2	3	.	-	-
Perinatal Deaths	43	10.3	32	9.8	9	12.9	-	-
Fetal Deaths	24	5.7	17	5.2	5	.	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	1,537	728	808	1,355	634	720	168	88	80	14	6	8
Mortality Rate	5.4	5.2	5.6	5.7	5.4	6.0	5.3	5.7	4.9	1.1	0.9	1.3
	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	33	5	3	3	10	15	23	52	91	126	238	938
White Male	12	1	1	2	6	5	13	23	45	56	114	356
White Female	12	-	2	1	2	3	6	19	33	50	94	498
Black Male	7	-	-	-	1	3	2	5	8	9	13	40
Black Female	2	4	-	-	1	2	1	5	3	8	16	38
Other Male	-	-	-	-	-	-	-	-	2	-	1	3
Other Female	-	-	-	-	-	1	1	-	-	3	-	-

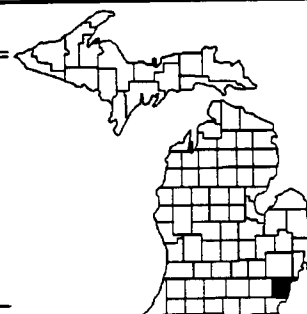
Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	1,537	543.2	1,355	569.1	168	526.2	21	28.6
Diseases of the Heart	471	166.5	416	174.7	53	166.0	2	.
Malignant Neoplasms	385	129.0	325	136.5	35	109.6	-	-
Cerebrovascular Diseases	102	36.1	92	38.6	10	31.3	-	-
Accidents and Adverse Effects	84	29.7	69	29.0	10	31.3	9	12.3
Chronic Obstructive Pulmonary Diseases and Allied Conditions	50	17.7	47	19.7	2	.	1	.
Pneumonia and Influenza	55	19.4	54	22.7	1	.	-	-
Diabetes Mellitus	38	13.4	30	12.6	8	25.1	-	-
Chronic Liver Disease and Cirrhosis	19	6.7	18	7.6	1	.	1	.
Homicide	11	3.9	4	.	7	21.9	3	.
Suicide	25	8.8	25	10.5	-	-	2	.
Atherosclerosis	8	2.8	7	2.9	1	.	-	-
AIDS	7	2.5	4	.	3	.	-	-

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

1990 Profile of Wayne County

**POPULATION**

As of April 1, 1990: 2,111,687
 Rank Among Counties: 1
 Per Square Mile: 3,433.1
 Median Age: 32.5

NATALITY

Total Live Births: 40,680
 Teenage Mothers: 7,338
 Low Weight Births: 4,489
 First Births: 15,734
 Median Age of Mother: 25

MORTALITY

Total Deaths: 21,409
 Infant Deaths: 661
 Neonatal Deaths: 443
 Postneonatal Deaths: 218
 Perinatal Deaths: 619
 Fetal Deaths: 246
 Maternal Deaths: 2

MARRIAGE

Marriages: 12,895
 Marriage Rate: 12.2

DIVORCE

Divorces: 8,035
 Divorce Rate: 7.6

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	40,680	19.3	18,833	15.3	21,148	24.8	595	19.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	7,338	180.4	1,769	93.9	5,499	260.0	47	79.0
Low Weight	4,489	110.3	1,177	62.5	3,243	153.3	47	79.0
Under 1,500 Grams	1,062	26.1	233	12.4	811	38.3	11	18.5
< 38 Weeks Gestation	8,960	220.3	2,940	156.1	5,900	279.0	99	166.4
Prenatal Care Began in 1st Trimester	29,841	733.6	15,593	828.0	13,756	650.5	436	732.8

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

INFANT AND PERINATAL MORTALITY BY RACE

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Infant Deaths	661	16.2	166	8.8	489	23.1	5	.
Neonatal Deaths	443	10.9	101	5.4	338	16.0	4	.
Postneonatal Deaths	218	5.4	65	3.5	151	7.1	1	.
Perinatal Deaths	619	15.1	159	8.4	452	21.2	6	10.0
Fetal Deaths	246	6.0	72	3.8	169	7.9	3	.

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	21,409	11,275	10,125	12,605	6,375	6,228	8,674	4,818	3,849	123	75	48
Mortality Rate	10.1	11.3	9.1	10.3	10.7	9.8	10.2	12.4	8.3	4.1	5.0	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+
Total Deaths	661	73	40	53	216	270	334	939	1,283	1,884	4,266	11,388
White Male	93	13	8	10	31	75	84	242	322	626	1,475	3,396
White Female	73	7	13	14	18	15	40	86	195	393	1,017	4,356
Black Male	260	33	11	17	144	149	151	403	506	500	980	1,664
Black Female	224	18	8	11	20	30	56	205	249	345	766	1,917
Other Male	2	-	-	1	3	1	2	2	9	13	17	24
Other Female	3	2	-	-	-	-	1	1	2	6	10	23

Note: Mortality rate is per 1,000 population in specified group.

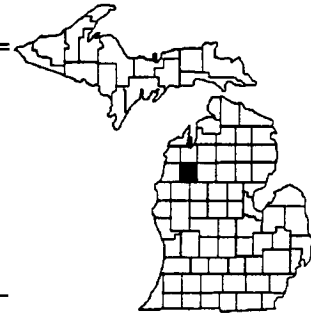
LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	21,409	1,013.8	12,605	1,025.0	8,674	1,018.5	382	63.8
Diseases of the Heart	7,672	363.3	4,924	400.4	2,713	318.6	7	1.2
Malignant Neoplasms	4,728	223.9	2,929	238.2	1,769	207.7	29	4.8
Cerebrovascular Diseases	1,106	52.4	677	55.1	423	49.7	2	.
Accidents and Adverse Effects	659	31.2	384	31.2	268	31.5	93	15.5
Chronic Obstructive Pulmonary Diseases and Allied Conditions	663	31.4	479	39.0	175	20.5	-	.
Pneumonia and Influenza	705	33.4	460	37.4	242	28.4	4	.
Diabetes Mellitus	593	28.1	328	26.7	259	30.4	1	.
Chronic Liver Disease and Cirrhosis	483	22.9	245	19.9	232	27.2	1	.
Homicide	718	34.0	125	10.2	591	69.4	144	24.0
Suicide	248	11.7	165	13.4	81	9.5	23	3.8
Atherosclerosis	73	3.5	53	4.3	19	2.2	-	.
AIDS	188	8.9	54	4.4	134	15.7	4	.

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

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

1990 Profile of Wexford County

**POPULATION**

As of April 1, 1990: 26,360
 Rank Among Counties: 49
 Per Square Mile: 46.6
 Median Age: 33.2

NATALITY

Total Live Births: 394
 Teenage Mothers: 59
 Low Weight Births: 21
 First Births: 160
 Median Age of Mother: 25

MORTALITY

Total Deaths: 248
 Infant Deaths: 1
 Neonatal Deaths: 1
 Postneonatal Deaths: -
 Perinatal Deaths: 3
 Fetal Deaths: 3
 Maternal Deaths: -

MARRIAGE

Marriages: 225
 Marriage Rate: 17.1

DIVORCE

Divorces: 159
 Divorce Rate: 12.1

NATALITY BY RACE OF MOTHER

	Total		White		Black		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Live Births	394	14.9	387	14.9	-	-	6	22.6
	Total		White		Black		Other	
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio
Teenage Mothers	59	149.7	57	147.3	-	-	2	-
Low Weight	21	53.3	21	54.3	-	-	-	-
Under 1,500 Grams	6	15.2	6	15.5	-	-	-	-
< 38 Weeks Gestation	54	137.1	52	134.4	-	-	2	-
Prenatal Care Began in 1st Trimester	290	736.0	286	739.0	-	-	3	-

Note: Rate is per 1,000 population and ratio per 1,000 live births 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	3	-	3	-	-	-	-	-
Fetal Deaths	3	-	3	-	-	-	-	-

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

MORTALITY

	All Races			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Deaths	248	132	116	247	131	116	-	-	-	1	1	-
Mortality Rate	9.4	10.3	8.6	9.5	10.3	8.7	-	-	-	-	-	-
	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	1	-	-	1	2	2	2	4	11	16	43	166
White Male	1	-	-	1	1	2	2	2	5	9	30	78
White Female	-	-	-	-	-	-	-	2	6	7	13	88
Black Male	-	-	-	-	-	-	-	-	-	-	-	-
Black Female	-	-	-	-	-	-	-	-	-	-	-	-
Other Male	-	-	-	-	1	-	-	-	-	-	-	-
Other Female	-	-	-	-	-	-	-	-	-	-	-	-

Note: Mortality rate is per 1,000 population in specified group.

LEADING CAUSES OF DEATH

	Total		White		Black		Children Ages 1-19	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Causes	248	940.8	247	947.8	-	-	3	-
Diseases of the Heart	86	326.3	86	330.0	-	-	-	-
Malignant Neoplasms	57	216.2	57	218.7	-	-	-	-
Cerebrovascular Diseases	15	56.9	15	57.6	-	-	-	-
Accidents and Adverse Effects	8	30.3	7	26.9	-	-	2	-
Chronic Obstructive Pulmonary Diseases and Allied Conditions	11	41.7	11	42.2	-	-	-	-
Pneumonia and Influenza	13	49.3	13	49.9	-	-	-	-
Diabetes Mellitus	2	-	2	-	-	-	-	-
Chronic Liver Disease and Cirrhosis	5	-	5	-	-	-	-	-
Homicide	1	-	1	-	-	-	-	-
Suicide	6	22.8	6	23.0	-	-	1	-
Atherosclerosis	6	22.8	6	23.0	-	-	-	-
AIDS	1	-	1	-	-	-	-	-

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

NATALITY

SECTION I



NATALITY

An Overview, 1990

Total Resident Births	153,910
Total Resident Live Births	153,080
Resident Live Births per Day	419
Total Resident Fetal Deaths	830
Resident Fetal Deaths per Day	2
Crude Birth Rate	16.5
Fertility Rate	69.1
Fetal Death Ratio	5.4
First Order Births (Percent of Total Live Births)	39.6
Median Birth Weight in Grams (Live Births)	3,380
Median Birth Weight in Grams (Fetal Deaths)	853
Low Weight Live Births	11,608
Low Weight Birth Ratio	75.8
Median Age of Mother (Live Births)	26
Median Age of Mother (Fetal Deaths)	26
Live Births with Congenital Anomalies	3,327
Congenital Anomalies per 10,000 Live Births	217.3
Live Births with No Prenatal Care	2,410
No Prenatal Care Ratio	15.7
Home Births	900
Live Born Sets of Twins	1,895
Live Born Sets of Triplets	39
Live Born Multiple Births of Four or More	1
Male Live Births per 100 Female Live Births	104.6

Between 1900 and 1990, 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 and 1990 which posted the largest numbers of total births since 1971.

LIVE BIRTHS

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. Figure 1.1 portrays the number of live births for Michigan from 1900 through 1990.

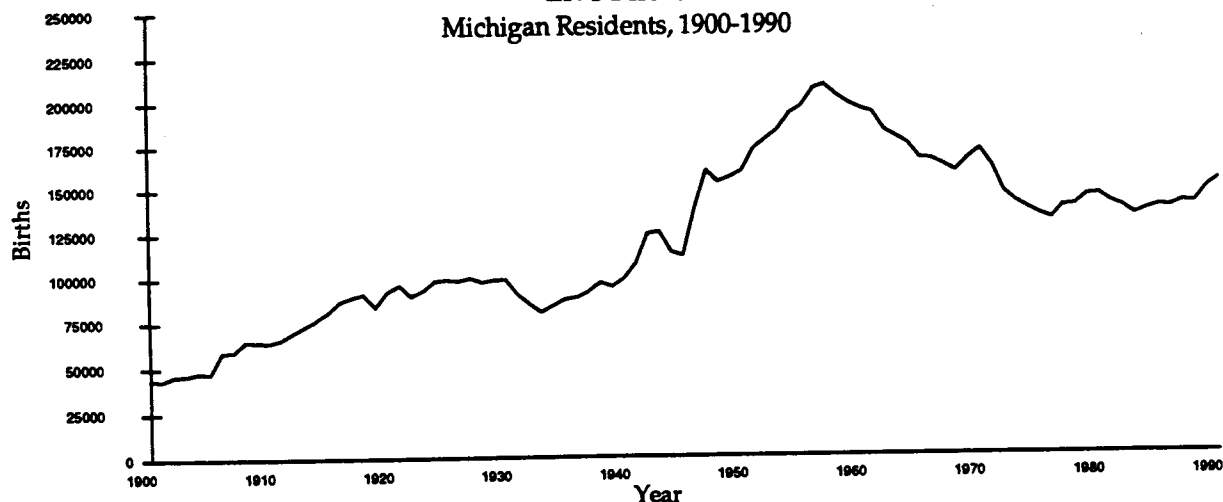
Live births generally increased from 43,699 in 1900 to 208,488 in the peak year of 1957 with major declines occurring during the first years of the Great Depression and the Second World War (Figure 1.1 and Table 1.1). Between 1957 and 1976, live births decreased by 37.0 percent to 131,378, the lowest total since 1945. The number of births increased to 145,162 live births in 1980, the highest annual total since 1972. Between 1980 and 1988 the number of live births declined to 133,026 in 1983 and increased to 139,635 in 1988. Between 1988 and 1990 the number increased 9.6 percent to 153,080.

Table 1.1
Live Births and Crude Birth Rates
Michigan and United States Residents
Selected Years, 1900 - 1990

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
4,179,000Pr.	16.7Pr.	1990	153,080	16.5

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

Figure 1.1
Live Births
Michigan Residents, 1900-1990

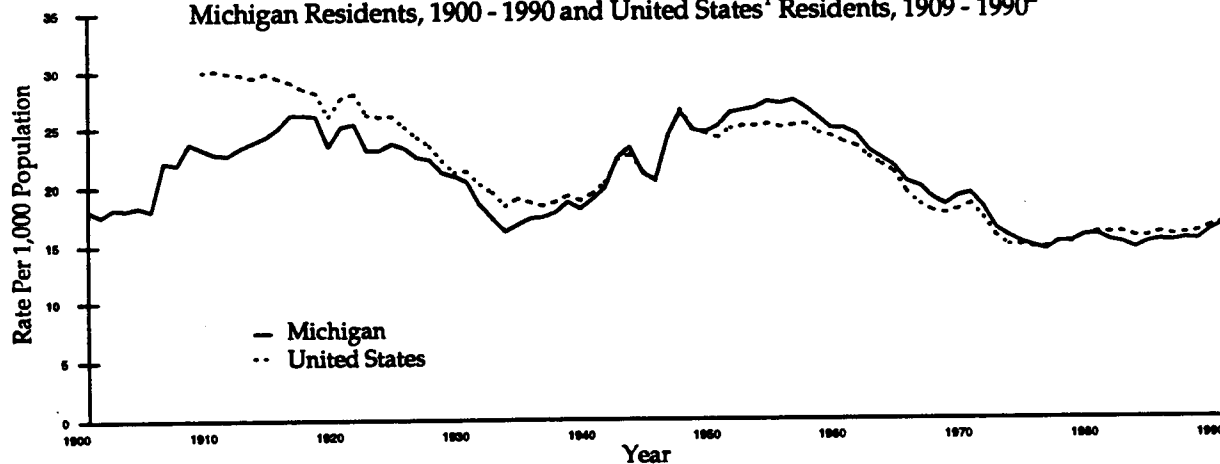


The national pattern was similar to that observed in Michigan. Live births increased from an estimated 2,718,000 in 1909 to an estimated 4,300,000 in 1957. Since 1957, there has been a general decline in live births. The low point occurred in 1973 when live births in the United States totaled 3,136,965. For 1990, the provisional figure was 4,179,000 an increase (6.9 percent) from the number born in 1988.

Another view of the historic pattern in live births may be obtained through examination

of changes in the crude birth rate. By considering population size, the historic pattern of live births changes (Figure 1.2). 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. The rate increased from 22.1 in 1906, the first year for filing individual birth certificates, to 26.2 in 1916. During the period 1917 to 1933 Michigan's rate declined steadily, reaching 16.2. The rate rose over the next 23 years to a peak in 1956 (27.4). Between 1956 and 1976 Michigan's birth rate declined by 47.4 percent,

Figure 1.2
Live Birth Rates
Michigan Residents, 1900 - 1990 and United States¹ Residents, 1909 - 1990²



¹ United States rates prior to 1909 are not available.

² United States rate for 1990 is provisional.

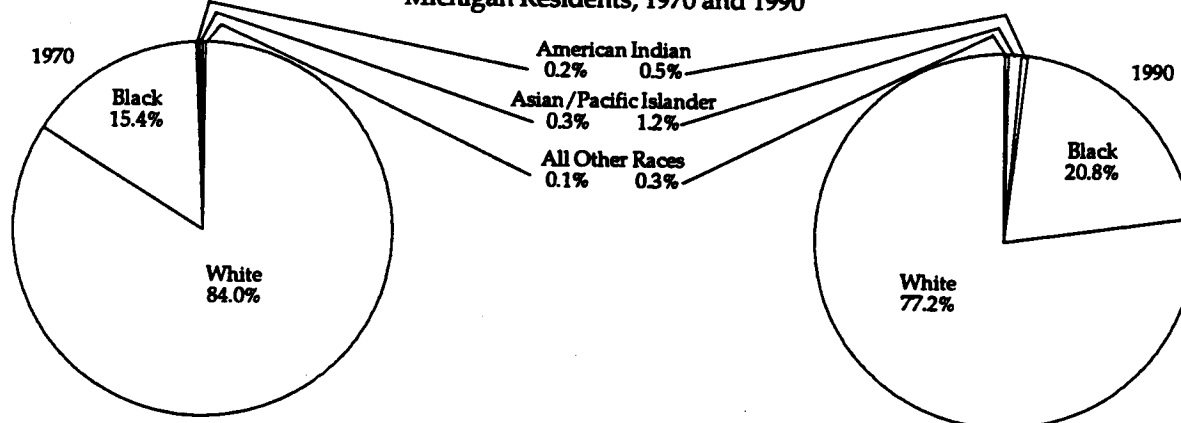
RACIAL COMPOSITION

falling to 14.4. Between 1976 and 1988, the rate fluctuated between the high of 15.7 in 1980 and a low of 14.5 in 1983. In 1990 the crude birth rate was 16.5, the highest rate since 1971.

National statistics since 1900 follow the same general pattern of rising and falling as observed in Michigan. The highest rate observed nationally over the period 1909 through 1986 was 30.1 in 1910, while the lowest was 14.6, occurring in both 1975 and 1976. United States live birth rates were above those observed in Michigan without exception from 1909 to 1941. Between 1942 and 1947, national rates were slightly above those for the state twice. National birth rates were below Michigan rates from 1949 through 1975. Between 1980 and 1990, the rates for the nation were above those observed in Michigan. The 1990 provisional rate for the United States was 16.7 per 1,000 people.

As part of the changing demographics in Michigan, the racial composition of women having live births in Michigan changed over the period 1970 through 1990 (Figure 1.3). Live births to white women declined from 84.0 percent of all live births in 1970 to a low of 77.2 percent in 1990. Live births to black women increased from 15.4 percent of the total in 1970 to a high of 20.8 percent of all live births in 1990. Live births of all other races increased from 0.6 percent in 1970 to 2.0 percent in 1990. It should be noted that Indians from India were classified as white before 1978 and among Asian or Pacific Islanders since 1978. There has been a corresponding increase in the number of live births recorded to Asian or Pacific Islander mothers since 1978. Between 1970 and 1990 the percent of live births to women recorded as Asian or Pacific Islanders increased from 0.3 percent to 1.2 percent. In 1970 0.2 percent of the live births were born to American Indian women. This increased to 0.5 percent by 1990.

Figure 1.3
Live Births by Mother's Race or National Origin
Michigan Residents, 1970 and 1990



ANCESTRY

Information on the mother's ancestry was collected in a write-in item on the Michigan certificate of live birth for the first time in 1989.

The median age for mothers reporting African or American Indian ancestry was 23 years, with mothers of Hispanic ancestry having a median age of 24 years (Table 1.2). Mothers of European and Arabian Asian ancestry had median ages of 27 years, with mothers of all other ancestry groups having a median age of 26 years.

Women under 25 years of age gave birth to 58.2 percent of the live births born to women of African ancestry. The corresponding figures for American Indian and Hispanic women under 25 years of age were 57.7 and 53.4 percent, respectively. For women of European or Arabian Asian ancestry that delivered live born infants, 29.0 or 31.9 percent, respectively, were under 25 years of age. Less than six percent (5.2) of all live births were to mothers of unknown ancestry. However, it appears that African ancestry may be considerably under reported on the live birth certificate. Of the 42,354 birth certificates

where the mothers ancestry was listed as American, race of mothers was recorded as black on 9,372 (22.1 percent) of these certificates.

AGE OF MOTHER

In 1990, 39.6 percent of all live births were to women less than 25 years of age. Only 0.9 percent occurred to women 40 or more years of age. The median age of mothers was 26 years. Black mothers were younger (median 23 years) than white mothers (median 27 years). The median age for mothers of all other races was the same as the median age for white mothers.

Approximately 58.4 percent of the infants born to black women were to women aged 24 or less compared to 34.7 percent of infants born to white women and 33.3 percent of infants born to women of all other races. This differential was the result of the relatively large percentage of infants born to black women at ages below 20 (26.6 percent) (Table 1.3).

Table 1.2
Live Births and Percent Distribution by Age and Ancestry of Mother
Michigan Residents, 1990

Age of Mother in Years	Total		African		American Indian		Arabian Asian		European		Hispanic		Other (incl. American)		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Under 15	426	0.3	180	0.8	10	0.4	0	0.0	50	0.1	19	0.4	152	0.3	15	0.2
15 - 19	20,224	13.2	5,567	25.8	499	22.1	153	6.7	5,036	7.3	922	21.4	6,773	15.0	1,274	16.1
20 - 24	39,993	26.1	6,817	31.6	795	35.2	578	25.2	15,034	21.6	1,362	31.6	12,928	28.5	2,479	31.4
25 - 29	48,466	31.7	4,958	23.0	590	26.1	716	31.2	24,570	35.8	1,074	24.9	13,864	30.6	2,394	30.3
30 - 34	32,058	20.9	2,873	13.3	267	11.8	577	25.1	17,990	25.9	650	15.1	8,411	18.6	1,290	16.4
35 - 39	10,421	6.8	1,022	4.7	83	3.7	225	9.8	5,690	8.2	239	5.5	2,804	6.2	358	4.5
40 +	1,422	0.9	150	0.7	12	0.5	48	2.1	769	1.1	40	0.9	351	0.8	52	0.7
Not Stated	70	0.0	11	0.1	1	0.0	1	0.0	21	0.0	2	0.0	7	0.0	27	0.3
Total	153,080	100.0	21,578	100.0	2,257	100.0	2,298	100.0	69,460	100.0	4,308	100.0	45,290	100.0	7,889	100.0
Median Age at Last Birthday	26		23		23		27		27		24		26		25	

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

Table 1.3
Live Births and Percent Distribution by Age and Race of Mother
Michigan Residents, 1990

Age of Mother	Race of Mother									
	Total		White		Black		All Other		Not Stated	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 15	426	0.3	137	0.1	282	0.9	4	0.2	3	0.7
15-19	20,224	13.2	11,684	9.9	8,195	25.7	294	11.2	51	11.7
20-24	39,993	26.1	29,217	24.7	10,111	31.8	575	21.9	90	20.7
25-29	48,466	31.7	40,268	34.1	7,225	22.7	851	32.4	122	28.0
30-34	32,058	20.9	27,134	23.0	4,187	13.1	615	23.4	122	28.0
35-39	10,421	6.8	8,552	7.2	1,593	5.0	237	9.0	39	9.0
40 +	1,422	0.9	1,136	1.0	235	0.7	46	1.8	5	1.1
Not Stated	70	0.0	52	0.0	14	0.0	1	0.0	3	0.7
Total	153,080	100.0	118,180	100.0	31,842	100.0	2,623	100.0	435	100.0
Median Age at Last Birthday	26		27		23		27		27	

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

FERTILITY

The crude birth rates examined above are useful statistics for gauging overall trends in live births for specific geographic areas. Where attempts are made to interpret such trends, however, crude birth rates can be misleading. These rates do not specifically incorporate the size of the population capable of bearing children. This population subset, generally considered to be women between the ages of 15 through 44, does not always maintain a stable relationship with the total population. A more exact measure for analyzing changing birth patterns is the fertility rate. Since the fertility rate relates the number of live births to the female population of childbearing age, more valid comparisons for various periods of time and locations are possible. Similarly, age specific rates which relate the number of live births to the females in a specific age group provides more detail on the fertility of women in the age group.

A comparison of fertility rates since 1900 for Michigan with those for the United States since 1930 is presented in Table 1.4. The crude birth rate changes discussed above understate the recent decline in fecundity for

both regions. Since 1960 the crude birth rate in Michigan has dropped 33.7 percent, while the fertility rate in 1990 was 43.9 percent below the 1960 rate. For the United States over this same period, the crude birth rate declined 29.5 percent and the fertility rate fell by 39.7 percent. The difference in these two measures occurred because the proportion of the population in the childbearing ages has

Table 1.4
Fertility Rates
Michigan and United States Residents
Selected Years, 1900 - 1990

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
71.1Pr.	1990	69.1

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

increased over this 30 year period. In Michigan, though the total population has increased 18.8 percent in this time period, the number of women 15 to 44 years of age has increased 39.8 percent. The proportion of women of childbearing age in Michigan increased from 20.3 percent to 23.8 percent of the population.

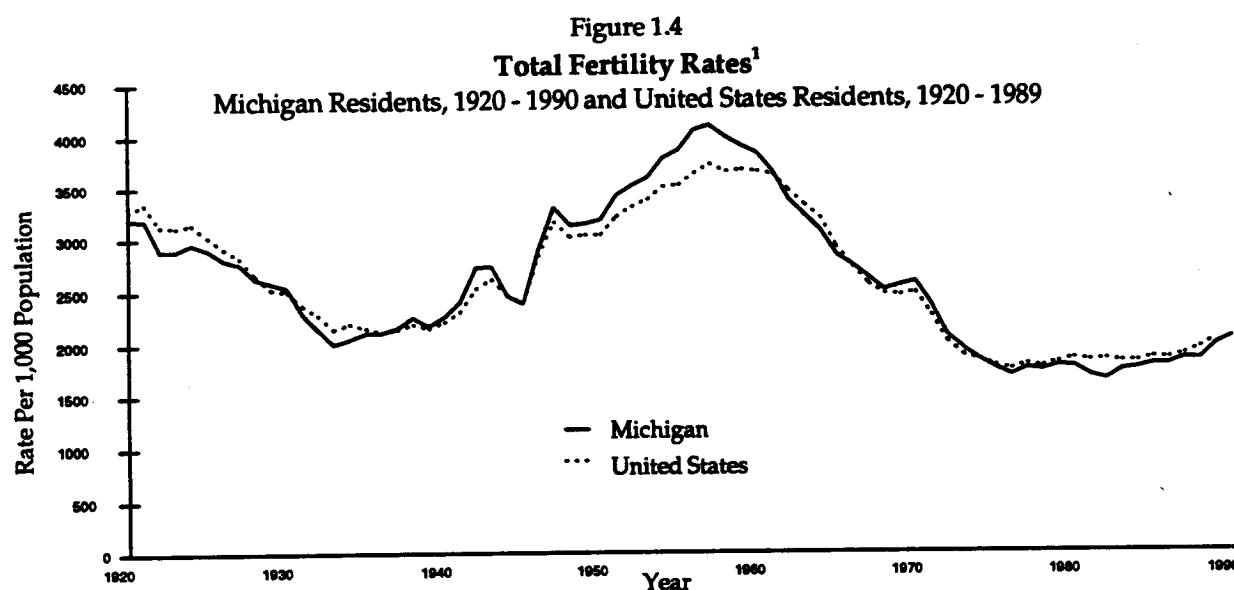
Figure 1.4 displays the changes in the total fertility rate between 1920 and 1990 for Michigan and the United States. (See also Table 4.4) The total fertility rate is a hypothetical measure of the number of live births that would occur to each 1,000 women during their reproductive life, if these women 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 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 1990 the total fertility rate in Michigan declined to a low of 1,632.5 in 1982 and increased to 2,033.6 in 1990. The rate was 2,014.0 in 1989 for the United States. The

national rates have been higher than the Michigan rates since 1975.

For the first time since 1973, Michigan and national total fertility rates were above 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 been below 2,000 since 1973, the rate of natural increase for Michigan remains positive. Over the period 1973 through 1990, there were 1,132,946 persons added to the population of Michigan through the excess of live births over deaths.

Table 1.5 provides a comparison between crude birth rates and fertility rates for white and black persons in Michigan for the period since 1970. In 1970 the crude birth rate for black persons was 51.6 percent above that for white persons. By 1982 this percentage had fallen to 20.0 percent. By 1990 the crude birth rate for black persons was 62.3 percent higher than the rate for white persons. This increase



¹ Total fertility rate is total children to 1,000 women in their lifetime assuming constant live birth rates.

Table 1.5
Crude Live Birth Rates and
Fertility Rates by Race of Mother
Michigan Residents, 1970 - 1990

Crude Birth Rate		Year	Fertility Rate	
White	Black		White	Black
18.4	27.9	1970	87.9	123.5
13.9	21.1	1975	62.6	89.5
15.0	19.5	1980	64.2	78.3
14.7	17.9	1985	62.8	69.6
15.1	24.5	1990	64.6	93.1
-17.9	-12.2	Percent Change 1970-1990	-26.5	-24.6

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

occured because the crude birth rate for white persons remained stable while the rate increased substantially for black persons between 1985 and 1990.

Paralleling the trends in numbers of live births, the crude birth rates for both groups declined between 1970 and 1990. The crude birth rate for white persons in 1990 was 17.9 percent below that observed in 1970 while the rate for the black group was 12.2 percent below the rate for 1970.

By comparing live births to the respective numbers of women aged 15-44 for these two groups, the relative differences in rates for 1990 decrease. The fertility rate for black persons was 40.5 percent above the rate for white persons in 1970, fell sharply to 10.8 percent higher in 1985 and increased to 44.1 percent higher in 1990. Since 1970 the fertility rate for black persons has declined 24.6 percent compared with a 26.5 percent drop for white persons.

AGE-SPECIFIC LIVE BIRTH RATES

Figure 1.5 displays age-specific live birth rates for the period 1970-1990. Live birth rates in all age groups dropped between 1970 and 1976. For women under 20 years the rate continued to decline throughout the years 1976-1983 reaching a low of 38.6 in 1983. The rate increased after 1983 to 60.0 in 1990.

After declining between 1970 and 1976, live birth rates for women between 20 and 29 years of age remained stable until 1980. Rates for women in the age groups 20-24 decreased through 1983, increased in 1984. Then, after a decline to a low of 99.2 live births per 1,000 women in 1988, increased 13.2 percent to 112.3 in 1990.

Rates for women 25-29 declined between 1970 and 1976 then generally increased through 1980; decreased between 1980 and 1983 and then generally increased since 1983.

For women in the age groups 30-34 and 35-39 live birth rates decreased between 1970 and 1976 then increased by 57.8 and 68.7 percent, respectively by 1990.

In 1970, women aged 20-24 had the highest live birth rate of any age group, 14.3 percent higher than that of women aged 25-29. From 1978 through 1990 the live birth rate of women in the 25-29 year age group was above that of women aged 20-24 (Table 4.4). In 1990, the rate of 125.0 for women 25-29 was 11.3 percent higher than the rate for women 20-24 years of age.

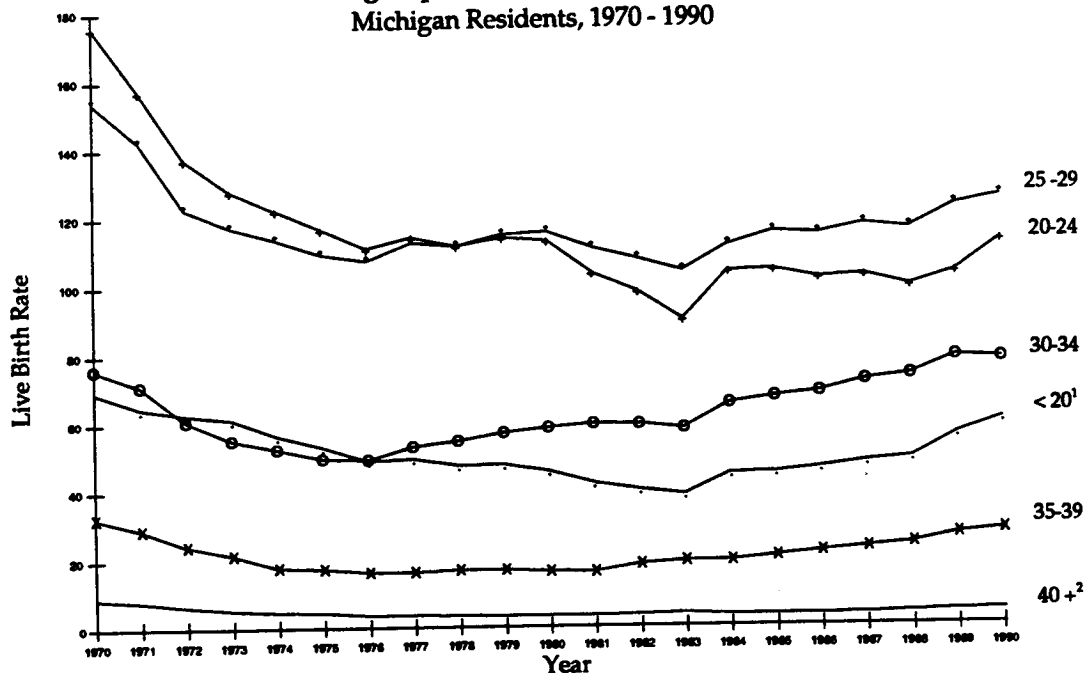
Figures 1.6 and 1.7 present the trends in age-specific rates for black and white women

respectively for these years. Rates for black women under age 25 and over age 34 were above those for white women during these years. The live birth rate for white women between 25 and 34 years of age was usually higher than the rates for their black counterparts.

Between 1980 and 1990 the rates for white and black females increased for all age groups, except for white females ages 20 to 24. For teenagers, birth rates increased 14.6 percent for white mothers and 43.3 percent for black mothers. For ages 20 to 24 years, the rates increased 35.3 for black females but decreased 9.1 percent for white females. The rates increased less for black females over 29 years of age than for their white counterparts.

The rates for all other women decreased overall and for most age groups during the ten years. However, there was a 26.7 percent increase in the live birth rate for women under 20 years of age. In 1980 and 1990 live birth rates for all other women above 29 years of age were higher than the rates for black women of the same ages. Live birth rates for all other women under 25 years of age were lower than rates for black women of the same ages. In the same years, rates for all other women over 29 years of age were higher than rates for white women of the same age. For women under 30 years of age, however, live birth rates for all other women were lower than those for white women.

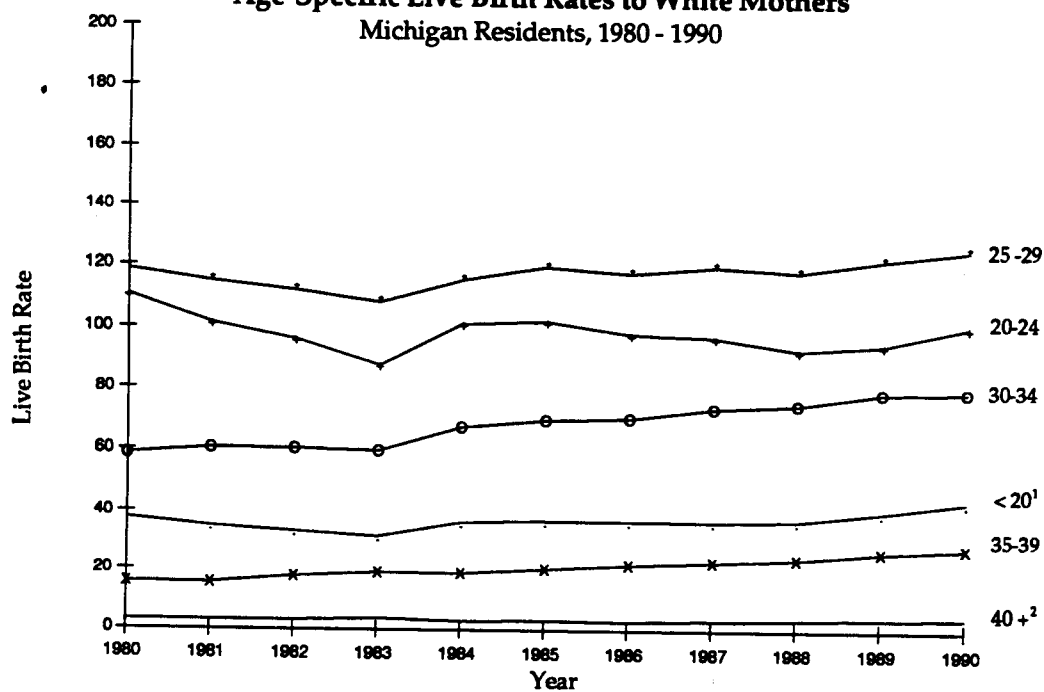
Figure 1.5
Age-Specific Live Birth Rates
Michigan Residents, 1970 - 1990



¹ Based on live births to women under 20 and population of females 15-19.

² Based on live births to women 40 and over and population of females 40-44.

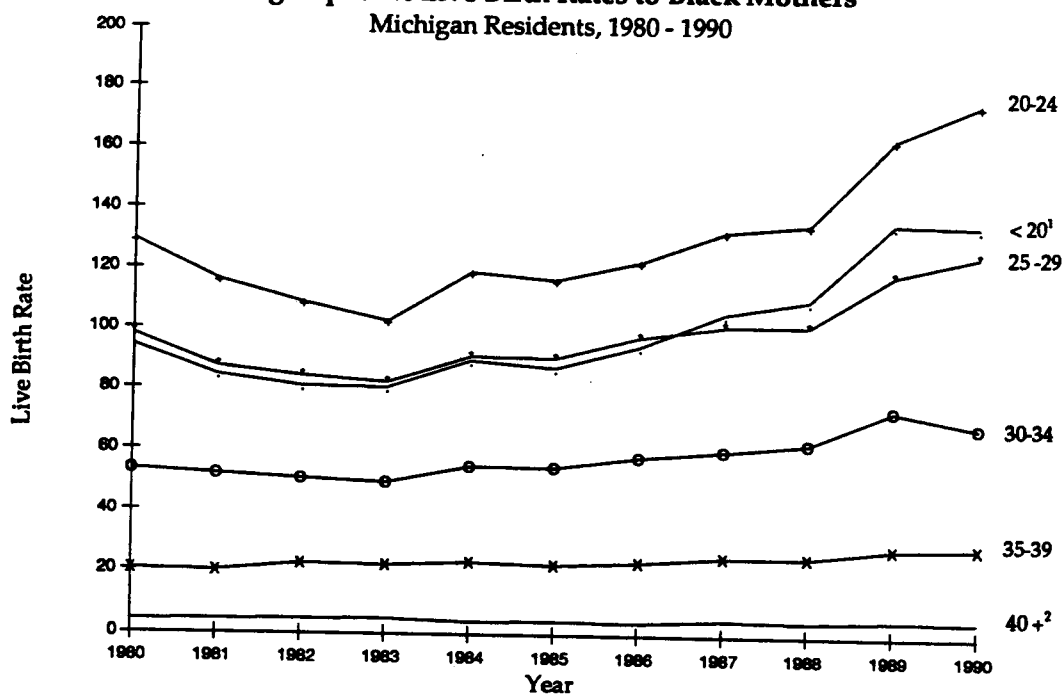
Figure 1.6
Age-Specific Live Birth Rates to White Mothers
Michigan Residents, 1980 - 1990



¹ Based on live births to women under 20 and population of females 15-19.

² Based on live births to women 40 and over and population of females 40-44.

Figure 1.7
Age-Specific Live Birth Rates to Black Mothers
Michigan Residents, 1980 - 1990



¹ Based on live births to women under 20 and population of females 15-19.

² Based on live births to women 40 and over and population of females 40-44.

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 since 1960. 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 39.6 in 1990, the lowest proportion since 1972.

INTERPREGNANCY TIME PERIOD

In 1990 women having live births whose most recent prior termination was a fetal

death had a median time span of 1 year and 11 months between their previous termination and a live birth (Table 1.6). This compares to a median of 2 years 7 months for prior live births. Although 1 to 2 years was the modal time span for both groups, the percent of women with prior fetal deaths in this interval (40.1) was much larger than that for women with prior live births (29.6). The greatest relative difference was associated with time spans of less than one year. A spacing of less than one year was observed for 10.7 percent of all women reporting their most recent prior pregnancy as a fetal death. This compares to 2.0 percent of all women reporting their most recent prior pregnancy as a live birth.

Figure 1.8
First Births as a Percentage of All Live Births
Michigan Residents, 1960 - 1990 and
United States Residents, 1960 - 1989

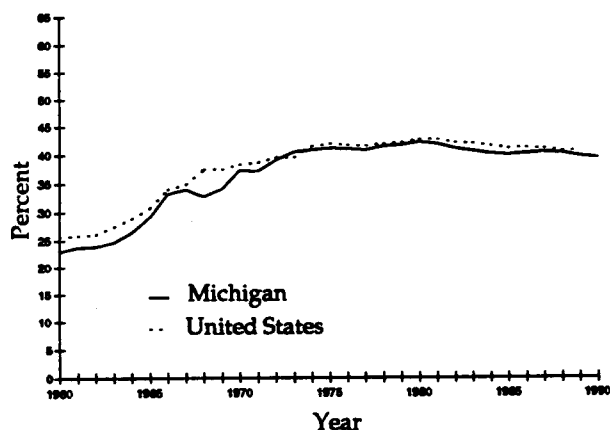


Table 1.6
Live Births to Women Reporting Prior
Pregnancy Terminations¹ by Time Span
Between Last and Current Termination and
by Whether Prior Termination Resulted
in a Live Birth or a Fetal Death²
Michigan Residents, 1990³

Time Span In Years	Total		Prior Fetal Death		Prior Live Birth	
	Number	%	Number	%	Number	%
Total	67,462	100.0	17,474	100.0	49,988	100.0
< 1	2,883	4.3	1,875	10.7	1,008	2.0
1 < 2	21,796	32.3	6,999	40.1	14,797	29.6
2 < 3	16,013	23.7	2,885	16.5	13,128	26.3
3 < 5	14,718	21.8	2,652	15.2	12,066	24.1
5 +	12,052	17.9	3,063	17.5	8,989	18.0
Median Time Span	2 yrs., 6 mos.		1 yr., 11 mos.		2 yrs., 7 mos.	

¹ Terminations with time spans of zero years (i.e., second or later births in plural deliveries) and terminations with unknown time spans are excluded.

² Fetal death as defined for the pregnancy history on the birth record is a fetal death of any gestational age.

³ 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 Center for Health Statistics, MDPH

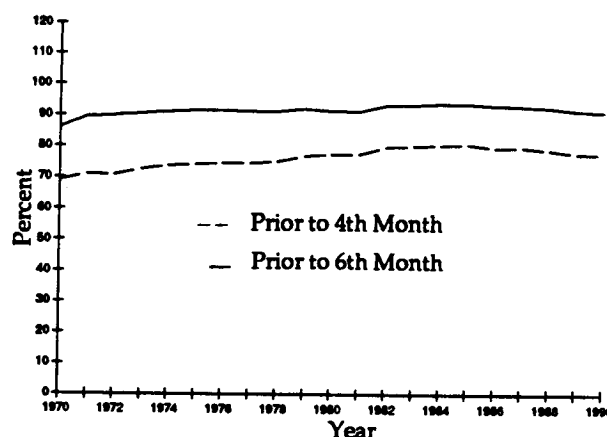
PRENATAL CARE

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 proportion of women delivering live born infants who initially obtained prenatal care in the first trimester of pregnancy was 78.1 percent in 1990. This percentage 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.

In 1970, 86.0 percent of all live births were to women who received care prior to the sixth month of pregnancy. By 1985 the percent had risen to 93.9 percent. The percentage decreased to 91.7 by 1990.

The proportion of live births to women receiving early prenatal care varied considerably by race and age of mother (Table 1.7). In 1990, 82.0 percent of infants born to white women compared to 64.5 percent of the infants born to black women were born to mothers who began their prenatal care in the first trimester. Over 84 percent of live births to women 25 to 39 years of age were to

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 - 1990



women who sought care promptly. The proportion fell to 79.3 percent for women 40 years or over and 39.2 percent for women under 15 years. About six in ten (57.8 percent) live births to mothers 15-19 years of age were to mothers who received care early. Similar patterns in this proportion by age of mother are evident for white, black and all other mothers. However, the highest levels of proportions for black mothers were between

Table 1.7
Numbers and Percents of Live Births with Prenatal Care Beginning in the First Trimester by Age and Race of Mother
Michigan Residents, 1990

Age of Mother in Years	Race of Mother									
	Total		White		Black		All Other		Not Stated	
	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹	Number	Percent ¹
< 15	167	39.2	65	47.4	100	35.5	1	25.0	1	33.3
15 - 19	11,698	57.8	7,036	60.2	4,480	54.7	157	53.4	25	49.0
20 - 24	28,800	72.0	22,011	75.3	6,373	63.0	365	63.5	51	56.7
25 - 29	41,016	84.6	35,088	87.1	5,173	71.6	666	78.3	89	73.0
30 - 34	27,854	86.9	24,164	89.1	3,093	73.9	502	81.6	95	77.9
35 - 39	8,881	85.2	7,544	88.2	1,131	71.0	176	74.3	30	76.9
40 +	1,127	79.3	930	81.9	165	70.2	28	60.9	4	80.0
Not Stated	43	61.4	35	67.3	8	57.1	-	-	-	-
All Ages	119,586	78.1	96,873	82.0	20,523	64.5	1,895	72.2	295	67.8

¹ Percent denominators obtained from Table 1.3.

Table 1.8
Numbers and Percents¹ of Live Births with Prenatal Care
Beginning in the First Trimester by Age and Ancestry of Mother
Michigan Residents, 1990

Age of Mother in Years	Total		African		American Indian		Arabian Asian		European		Hispanic		Other (Ind. American)		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Under 15	167	39.2	51	28.3	7	70.0	-	-	16	32.0	7	36.8	80	52.6	6	40.0
15 - 19	11,698	57.8	2,846	51.1	292	58.5	111	72.5	3,064	61.2	452	49.0	4,211	62.2	702	55.1
20 - 24	28,800	72.0	4,171	61.2	537	67.5	468	81.0	11,576	77.0	845	62.0	9,452	73.1	1,751	70.6
25 - 29	41,016	84.6	3,551	71.6	468	79.3	610	85.2	22,028	88.6	783	72.9	11,605	83.7	1,971	82.3
30 - 34	27,854	86.9	2,119	73.8	214	80.1	508	88.0	16,188	90.0	485	74.6	7,255	86.3	1,085	84.1
35 - 39	8,881	85.2	740	72.4	57	68.7	187	83.1	5,070	89.1	167	69.9	2,366	84.4	294	82.1
40 or More	1,127	79.3	107	71.3	10	83.3	36	75.0	637	82.8	26	65.0	273	77.8	38	73.1
Not Stated	43	61.4	6	54.5	-	-	1	100.0	12	57.1	2	100.0	5	71.4	17	63.0
Total	119,586	78.1	13,591	63.0	1,585	70.2	1,921	83.6	58,611	84.4	2,767	64.2	35,247	77.8	5,864	74.3

¹ Percent denominators obtained from Table 1.2.

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

70.2 and 73.9 for mothers over twenty-four while the rates were between 81.9 and 89.1 for white mothers over twenty-four years of age.

The proportion of live births to women receiving early prenatal care also varied by ancestry and age of the mother (Table 1.8). In 1990, 63.0 and 64.2 percent, respectively, of live births to women of African and Hispanic ancestry received prenatal care beginning in the first trimester, while 70.2 percent of live births to American Indian women received

prompt care. Early prenatal care was received by 84.4 and 83.6 percent, respectively, of live births born to women of European and Arab Asian ancestry.

In 1990, 2,410 resident live births, or 15.7 of every 1,000, occurred with the mother having had no prenatal care (Table 1.9). 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.

Table 1.9
Live Births with No Prenatal Care by Age and Race of Mother
Michigan Residents, 1990

Age of Mother in Years	Race of Mother									
	Total		White		Black		All Other		Not Stated	
	Number	Ratio ¹	Number	Ratio ¹	Number	Ratio ¹	Number	Ratio ¹	Number	Ratio ¹
Under 15	27	63.4	7	51.1	18	63.8	1	*	1	*
15-19	617	30.5	212	18.1	396	48.3	2	*	7	137.3
20-24	768	19.2	312	10.7	442	43.7	11	19.1	3	*
25-29	528	10.9	202	5.0	316	43.7	6	7.1	4	*
30-34	287	9.0	114	4.2	163	38.9	7	11.4	3	*
35-39	143	13.7	52	6.1	85	53.4	5	*	1	*
40 and Over	37	26.0	18	15.8	18	76.6	1	*	-	-
Not Stated	3	*	1	*	1	*	1	*	-	-
Total	2,410	15.7	918	7.8	1,439	45.2	34	13.0	19	43.7
Median Age at Last Birthday	23		23		23		26		22	

¹ Ratio denominators obtained from Table 1.3.

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

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. The ratio of live births in which the mother received no prenatal care to the total number of live births was 5.8 times greater for black mothers than for white mothers in 1990. The ratio was 3.5 times higher for black mothers than for mothers of all other races.

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 71.9 percent of the live births (Table 1.10). The proportion of live births to white mothers who received adequate care (75.8 percent) was higher than the corresponding proportion for black mothers (58.0 percent) and mothers all other races (64.8 percent). Inadequate care was received by the mothers of 6.6 percent of all live births. The proportions of live births to mothers who received inadequate care were 4.7 percent for white mothers, 13.1 percent for black mothers and 8.9 percent for mothers of all other races.

Although the mothers of 78.1 percent of all live births received prenatal care during the first trimester, only 71.9 percent received adequate care as defined by the Kessner Index. Overall, this means that of the mothers who initiated prenatal care most promptly, 8.0 percent did not receive the minimum number of visits they should have received.

As a percentage of mothers who initiated care in the first trimester, 7.5 percent of white mothers failed to receive an adequate number of prenatal visits during the pregnancy. The percentages for black mothers and mothers of all other races were 10.0 and 10.2, respectively (Tables 1.7 and 1.10).

Considered as a proportion of the live births to mothers who did not receive adequate care, 22.1 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. The percentages were 25.4, 15.3 and 21.0 percent, respectively, for mothers of white, black and all other races.

Table 1.10
Numbers and Percents of Live Births by Level of Prenatal Care and Race of Mother
Michigan Residents, 1990

Level of Prenatal Care (Kessner Index ¹)	Race of Mother									
	Total		White		Black		All Other		Not Stated	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Adequate	110,050	71.9	89,620	75.8	18,476	58.0	1,701	64.8	253	58.2
Intermediate	28,793	18.8	19,733	16.7	8,392	26.4	600	22.9	68	15.6
Inadequate	10,076	6.6	5,608	4.7	4,168	13.1	233	8.9	67	15.4
Unknown	4,161	2.7	3,219	2.7	806	2.5	89	3.4	47	10.8
Total	153,080	100.0	118,180	100.0	31,842	100.0	2,623	100.0	435	100.0

¹ 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.)

The highest proportions of adequate prenatal care, 78.3 and 76.0 percent, respectively, were obtained by mothers of European and Arab Asian ancestry (Table 1.11). Live births to mothers of African and Hispanic ancestry had the lowest proportions receiving adequate levels of prenatal care, 56.4 and 56.9 percent, respectively. Adequate prenatal care was obtained by 62.5 percent American Indian mothers and 71.9 percent of mothers of all other ancestry groups.

For mothers of Hispanic ancestry, 11.4 percent who began prenatal care during the first trimester, failed to receive adequate care. The percentages for African mothers, American Indian mothers and Arabian Asian mothers were 10.5, 11.0 and 9.1 percent, respectively. In 7.2 and 7.6 percent mothers of European ancestry and all other ancestry groups, respectively, the mother began prenatal care early, but did not receive adequate care (Table 1.8 and 1.11)

Table 1.11
Numbers and Percents of Live Births by Level of Prenatal Care
and Ancestry of Mother
Michigan Residents, 1990

Level of Care	Total		African		American Indian		Arabian Asian		European		Hispanic		Other (incl. American)		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Adequate	110,050	71.9	12,169	56.4	1,410	62.5	1,747	76.0	54,416	78.3	2,452	56.9	32,572	71.9	5,284	67.0
Intermediate	28,793	18.8	6,239	28.9	579	25.7	371	16.1	10,560	15.2	1,201	27.9	8,243	18.2	1,600	20.3
Inadequate	10,076	6.6	2,637	12.2	181	8.0	122	5.3	2,710	3.9	517	12.0	3,310	7.3	599	7.6
Unknown	4,161	2.7	533	2.5	87	3.9	58	2.5	1,774	2.6	138	3.2	1,165	2.6	406	5.1
Total	153,080	100.0	21,578	100.0	2,257	100.0	2,298	100.0	69,460	100.0	4,308	100.0	45,290	100.0	7,889	100.0

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

BIRTH WEIGHT

The mean weight for all live births was 3,341 grams or approximately 7 pounds 6 ounces (Table 1.12). The median weight was 3,375 grams or about 7 pounds 7 ounces. For infants of black mothers the mean (3,074.6 grams) and median (3,147 grams) birth weights were much lower than the mean and median birth weights for infants of white mothers (3,414.1 and 3,440 grams, respectively). For infants of mothers of all other races, the mean and median birth weights were about 125 and 123 grams less than the mean and median for infant born to white mothers, but were 214 and 170 grams higher than the birth weights of infants born to black mothers.

Birth weight data by ancestry of the mother is displayed in Table 1.13. The mean birth weight for babies born to mothers of European ancestry was 3,445.4 grams and the median birth weight was 3,460 grams. The mean and median birth weight of babies born to mothers of African ancestry was 3,100.9 grams and 3,175 grams, respectively. Mean and median birth weights for American Indians, Arab-Asians and Hispanic babies were very similar and between the means and medians for infants of European and African mothers.

A subgroup of major importance when analyzing 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 low birth weight ratio for Michigan and the United States over the last thirty-one years. In 1960 this ratio was 72.0 for Michigan. Between 1960 and 1966 the ratio increased, reaching a high for

Table 1.12
Live Births by Birth Weight
and Race of Mother
Michigan Residents, 1990

Weight at Birth in Grams	Race of Mother				
	Total	White	Black	All Other	Not Stated
<1,500	2,401	1,229	1,122	38	12
1,500-2,499 ¹	9,207	5,473	3,569	127	38
2,500+	141,330	111,379	27,120	2,456	375
Not Stated	142	99	31	2	10
Total	153,080	118,180	31,842	2,623	435
Mean Weight	3,341.0	3,414.1	3,074.6	3,288.8	3,219.0
Median Weight	3,375	3,440	3,147	3,317	3,289

¹ In order to conform to national standards, the definition of low birth weight was changed in 1984 to less than 2,500 grams.

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

Table 1.13
Numbers and Percents of Live Births by Birthweight and Ancestry of Mother
Michigan Residents, 1990

Weight at Birth in Grams	Total		African		American Indian		Arabian Asian		European		Hispanic		Other (Ind. American)		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
< 1,500	2,401	1.6	670	3.1	35	1.6	19	0.8	582	0.8	55	1.2	952	2.1	88	1.1
1,500 - 2,499 ¹	9,207	6.0	2,244	10.4	118	5.2	95	4.1	2,775	4.0	210	4.9	3,317	7.3	448	5.7
2,500 +	141,330	92.3	18,647	86.4	2,104	93.2	2,182	95.0	66,049	95.1	4,039	93.8	40,977	90.5	7,332	92.9
Not Stated	142	0.1	17	0.1	-	-	2	0.1	54	0.1	4	0.1	44	0.1	21	0.3
Total	153,080	100.0	21,578	100.0	2,257	100.0	2,298	100.0	69,460	100.0	4,308	100.0	45,290	100.0	7,889	100.0
Mean Weight	3,341.0		3,100.9		3,350.6		3,342.2		3,445.4		3,357.0		3,287.1		3,372.0	
Median Weight	3,375		3,175		3,375		3,345		3,460		3,380		3,345		3,402	

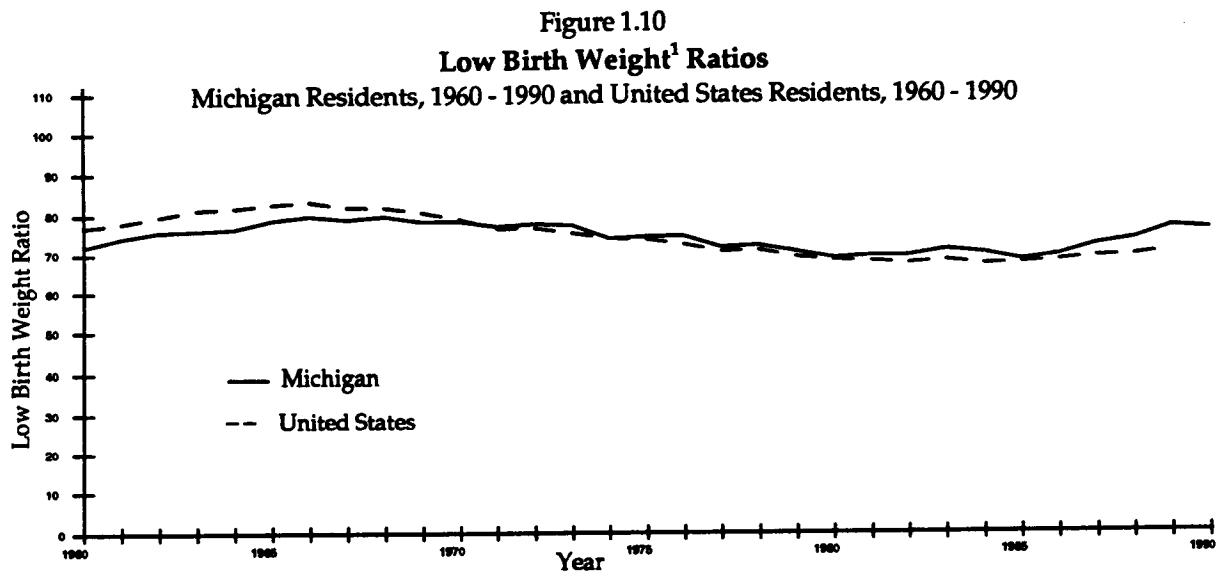
¹ In order to conform to national standards, the definition of low birthweight was changed in 1984 to less than 2,500 grams.

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

the 31 year period in 1966 (79.8). The ratio generally declined until 1985 when the ratio was 68.1, the lowest rate since 1960. It rose to 75.8 in 1990. The pattern for the United States has been similar. The ratio increased from 76.9 in 1960 to 83.3 in 1966, and declined to 67.1 in 1984. By 1989 the low birth weight ratio for the nation had increased to 70.4. The ratio for the United States was above that for Michigan each year from 1960 through 1970.

Since then the ratio for the nation has been the same or lower than that of Michigan.

The low birth weight ratio for infants of black mothers was 147.3 compared with 56.7 for infants of white mothers and 62.9 for infants born to mothers of all other races (Table 1.14).



¹ 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.

Table 1.14
Low Weight¹ Live Births and Low Birth Weight Ratios
by Level of Prenatal Care and Race of Mother
Michigan Residents, 1990

Level of Prenatal Care (Kessner Index ²)	Race of Mother									
	Total		White		Black		All Other		Not Stated	
	Number	Ratio ³	Number	Ratio ³	Number	Ratio ³	Number	Ratio ³	Number	Ratio ³
Adequate	6,777	61.6	4,358	48.6	2,306	124.8	99	58.2	14	55.3
Intermediate	2,678	93.0	1,445	73.2	1,195	142.4	30	50.0	8	117.6
Inadequate	1,662	164.9	614	109.5	1,004	240.9	26	111.6	18	268.7
Unknown	491	118.0	285	88.5	186	230.8	10	112.4	10	212.8
Total	11,608	75.8	6,702	56.7	4,691	147.3	165	62.9	50	114.9

¹ Less than 2,500 grams.

² 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).

³ Ratio denominators obtained from Table 1.10.

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

The low birth weight ratio varied by adequacy of prenatal care as indicated by the Kessner Index. The ratios were 1.9 and 2.3 times higher for infants born to black and white mothers, respectively, with inadequate care than to mothers with adequate prenatal care. The ratios were 1.1 and 1.5 times higher for infants born to black and white women, respectively, with intermediate care than for women with adequate care. For infants born to women of all other races the ratios of low birth weight for women who receive inadequate care were 1.9 times higher than the ratio for their counterparts who received adequate care.

At birth, 14.7 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 (12.5) 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 white women and women of all other races at any level of prenatal care. The low birth weight ratio was 2.6 and 2.1 times higher for

infants born to black women with adequate care than for corresponding white and all other women.

CONGENITAL ANOMALIES

One or more congenital anomalies were reported on the birth certificate for 3,327 of the 153,080 resident live births in 1990 (Table 1.15). This translates to a rate of 217.3 per 10,000 live births.

The method of reporting congenital anomalies on the birth record was altered with the 1989 birth certificate. In years prior to 1989 congenital anomalies were written in a blank space provided for this information. The write-in information was coded using an appropriate version of the International Classification of Disease (ICD). Starting in 1989, however, a check-box format with detailed lists of congenital anomalies was implemented in reporting congenital anomalies. The 1989 and later congenital anomalies rates obtained by this modification are not, there-

Table 1.15
Live Births with Congenital Anomalies Reported and Congenital Anomaly Rates¹
by Age and Race of Mother
Michigan Residents, 1990

Age of Mother in Years	Race of Mother									
	Total		White		Black		All Other		Not Stated	
	Number	Ratio ²	Number	Ratio ²	Number	Ratio ²	Number	Ratio ²	Number	Ratio ²
Under 15 Years	5	*	4	*	1	*	-	-	-	-
15-19 Years	420	207.7	314	268.7	98	119.6	6	204.1	2	*
20-24 Years	843	210.8	695	237.9	141	139.5	6	104.3	1	*
25-29 Years	1,055	217.7	924	229.5	116	160.6	13	152.8	2	*
30-34 Years	701	218.7	613	225.9	72	172.0	11	178.9	5	*
35-39 Years	255	244.7	218	254.9	32	200.9	4	*	1	*
40 and Over	47	330.5	40	352.1	6	255.3	1	*	-	-
Unknown	1	*	1	*	-	-	-	-	-	-
Total	3,327	217.3	2,809	237.7	466	146.3	41	156.3	11	252.9
Median Age at Last Birthday	26		27		24		29		31	

¹ Number of live births with congenital anomalies reported per 10,000 live births.

² Rate denominator obtained from Table 1.3.

fore, comparable to rates obtained in previous years. Particularly, 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 proportion of congenital anomalies occurring. It is most likely that such an increase is a consequence of the more diligent reporting of congenital anomalies.

While the check-box reporting format may help reduce the level of underreporting of congenital anomalies, it is still true that 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.

The congenital anomaly rate of 237.7 per 10,000 live births for live births to white mothers was 62.5 percent higher than the rate of 146.3 for live births to black mothers and 52.1 percent higher than the rate of 156.3 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 were experienced by mothers 15-19 years of age. Rate rose slightly for mothers up to age 35, then they rose sharply. Congenital anomaly rates for infants of black mothers followed the same pattern. For infants of white mothers the rates decreased with increasing age until age 35, then also they rose sharply.

MEDICAL FACTORS ASSOCIATED WITH DELIVERY AND/OR LABOR

In previous years numbers of deliveries with specific types of labor or delivery related complications were obtained from write-in entries in three boxes on the live birth certificate: Complications of pregnancy, Concurrent illness or conditions affecting this pregnancy, and Complications of labor and/or delivery. In 1989 these write-in items were generally replaced by a series of check-box items intended to capture more accurately and comprehensively information on medical risk factors, behavioral risk factors, complications of labor and/or delivery, obstetrical procedures, method of delivery and abnormal fetal conditions (see Figure 4.3).

Even with the move to check responses to specifically presented items, there were a few items relating to pregnancy and live births best captured by write-in responses such as five minute Apgar score and weight gain during pregnancy.

There were 43,611 deliveries (28.5 percent of live births) reported with one or more complications of labor and/or delivery in 1990 (Table 1.16). Among the most commonly reported complications were meconium, moderate/heavy (8,298 instances); fetal distress (6,256 cases); breech/malpresentation of fetus (6,188 cases); premature rupture of membranes (5,713 cases); and cephalopelvic disproportion (5,203 cases).

The proportion of live births for which there was at least one complication were relatively similar for women of different races (Table 1.16). The types of complications which were most common were also very similar among mothers of different races, although the exact ordering by frequency of occurrence varied somewhat for mothers of differing race.

The mother smoked while pregnant for 21.9 percent (33,456) of the live births in 1990 (Table 1.17). The mother drank alcohol while pregnant for 3.3 percent (5,032) of the live births. It is generally believed that reported numbers of mothers who drank while preg-

nant as obtained from certificates of live birth underreport the frequency of these risk factors. A weight gain during pregnancy of less than sixteen pounds was reported for mothers of 7.7 percent (11,810) of the live births.

The reported percentage of live births whose mothers smoked while pregnant was relatively similar for white and black mothers (22.2 and 21.0 percent, respectively) (Table 1.17). Mothers of other races were reported to smoke during pregnancy considerably less than white or black mothers (15.6 percent). A weight gain of less than sixteen pounds was most common among black mothers (12.6

Table 1.16
Numbers and Percents of Live Births by Complications of Labor/Delivery and Race of Mother
Michigan Residents, 1990

Complications of Labor/Delivery	Total		White		Black		Other		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%
Meconium, moderate/heavy	8,298	5.4	6,014	5.1	2,130	6.7	126	4.8	28	6.4
Fetal distress	6,256	4.1	4,636	3.9	1,484	4.7	117	4.5	19	4.4
Breech/Malpresentation	6,188	4.0	5,239	4.4	830	2.6	99	3.8	20	4.6
Premature rupture of membranes (12hours)	5,713	3.7	4,419	3.7	1,185	3.7	98	3.7	11	2.5
Cephalopelvic disproportion	5,203	3.4	4,507	3.8	572	1.8	112	4.3	12	2.8
Dysfunctional Labor	4,242	2.8	3,730	3.2	429	1.3	62	2.4	21	4.8
Precipitate labor (hours)	2,950	1.9	2,462	2.1	416	1.3	65	2.5	7	1.6
At least one complication	43,611	28.5	34,524	29.2	8,183	25.7	779	29.7	125	28.7
Total Live Births	153,080	100.0	118,180	100.0	31,842	100.0	2,623	100.0	435	100.0

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

Table 1.17
Numbers and Percents of Live Births With Maternal Risk Factors and Race of Mother
Michigan Residents, 1990

Maternal Risk Factors	Total		White		Black		Other		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%
Mother smoked while pregnant	33,456	21.9	26,286	22.2	6,688	21.0	408	15.6	74	17.0
Weight gain less than 16 pounds while pregnant	11,810	7.7	7,548	6.4	3,999	12.6	224	8.5	39	9.0
Mother drank alcohol while pregnant	5,032	3.3	3,708	3.1	1,238	3.9	67	2.6	19	4.4
Total Live Births	153,080	100.0	118,180	100.0	31,842	100.0	2,623	100.0	435	100.0

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

percent), followed by mothers of other races (8.5 percent) and white mothers (6.4 percent).

For 20.0 percent (30,579) of the 153,080 resident live births occurring in 1990, the mother had at least one medically relevant risk factor (Table 1.18). The most commonly specified medical risk factor was pregnancy related hypertension which occurred in mothers of 3.0 percent (4,611) of the live births. The next most common maternal medical risk factors were diabetes and anemia which occurred in mothers of 2.4 percent (3,704) and 1.4 percent (2,133) of the live

births. Previous preterm or small-for-gestational age infant, previous infant 4,000+ grams and uterine bleeding were reported for mothers of 1.3, 1.2 and 1.1 percent of the live births, respectively.

The most common maternal medical risk factors varied somewhat among races (Table 1.18). Pregnancy related hypertension was the most common risk factor for white mothers (3.2 percent); drug abuse was most common for black mothers (3.4 percent); and diabetes was most common for mothers of all other races (3.4 percent).

Table 1.18
Numbers and Percents of Live Births by Race of Mother and Medical Risk Factors
Michigan Residents, 1990

Risk Factors	Total		White		Black		Other		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%
Hypertension, pregnancy-associated	4,611	3.0	3,785	3.2	754	2.4	58	2.2	14	3.2
Diabetes	3,704	2.4	3,147	2.7	452	1.4	90	3.4	15	3.4
Anemia (Hct. 30/Hgb. 10)	2,133	1.4	1,299	1.1	778	2.4	47	1.8	9	2.1
Previous preterm or small-for-gestational age infant	2,001	1.3	1,645	1.4	316	1.0	26	1.0	14	3.2
Previous infant 4000+ grams	1,829	1.2	1,734	1.5	69	0.2	23	0.9	3	0.7
Uterine bleeding	1,623	1.1	1,316	1.1	267	0.8	36	1.4	4	0.9
Drug abuse	1,589	1.0	480	0.4	1,097	3.4	6	0.2	6	1.4
At least one medical risk	30,579	20.0	23,354	19.8	6,653	20.9	479	18.3	93	21.4
Total Live Births	153,080	100.0	118,180	100.0	31,842	100.0	2,623	100.0	435	100.0

¹ Indicates anomalies apparent soon after a live birth.

² Does not equal the sum of anomalies specified because of multiple anomaly occurrences.

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

Vaginal delivery was the most common method of delivery in 1990, accounting for 77.3 percent of the live births (Table 1.19). Of the vaginal deliveries, 2.8 percent were for live births whose mother had previously had a Caesarian section (C-section). Primary C-sections were performed in the case of 13.1 percent of the live births and repeat C-sections were performed in 8.7 percent of the live births. Forceps and vacuum assistance were used in 2.8 and 2.0 percent of live birth deliveries.

Black mothers had the smallest proportion of live births delivered by C-section, either

primary or repeat (18.7 percent). Mothers other than white or black mothers had the greatest proportion of live births delivered with the aid of forceps or vacuum (5.9 percent).

In 1990, 9,807 babies were born with at least one recorded abnormal condition at birth for a rate of 640.6 per 10,000 live births (Table 1.20). The highest rate for a specified abnormal condition was associated with live births having a five minute Apgar score of less than 7 (165.5 per 10,000). The next two highest rates, 145.2 and 94.5, were associated with assisted ventilation of less than 30 minutes

Table 1.19
Numbers and Percents of Live Births by Method of Delivery and Race of Mother
Michigan Residents, 1990

Procedures During and Methods of Delivery	Total		White		Black		Other		Unknown	
	Number	%	Number	%	Number	%	Number	%	Number	%
Procedures										
Forceps	4,339	2.8	3,864	3.3	380	1.2	77	2.9	18	4.1
Vacuum	3,033	2.0	2,551	2.2	395	1.2	80	3.0	7	1.6
Method										
Vaginal	115,179	75.2	87,700	74.2	25,178	79.1	1,973	75.2	328	75.4
Primary C-section	20,111	13.1	15,998	13.5	3,699	11.6	360	13.7	54	12.4
Repeat C-section	13,258	8.7	10,774	9.1	2,248	7.1	205	7.8	31	7.1
Vaginal birth after previous C-section	3,272	2.1	2,634	2.2	570	1.8	62	2.4	6	1.4
Unknown	1,260	0.8	1,074	0.9	147	0.5	23	0.9	16	3.7
Total Live Births	153,080	100.0	118,180	100.0	31,842	100.0	2,623	100.0	435	100.0

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

Table 1.20
Numbers and Rates¹ of Live Births With Abnormal Conditions by Race of Mother
Michigan Residents, 1990

Abnormal Conditions	Total		White		Black		Other		Unknown	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
5 minute Apgar <7	2,533	165.5	1,542	130.5	939	294.9	38	144.9	14	321.8
Assisted ventilation <30 minutes	2,222	145.2	1,888	159.8	249	78.2	47	179.2	38	873.6
Hyaline membrane disease/RDS	1,446	94.5	853	72.2	564	177.1	18	68.6	11	252.9
Assisted ventilation >30 minutes	1,006	65.7	797	67.4	187	58.7	14	53.4	8	183.9
Meconium aspiration syndrome	800	52.3	598	50.6	178	55.9	24	91.5	-	-
At least one condition	9,807	640.6	7,728	653.9	1,850	581.0	164	625.2	65	1,494.3
Total Live Births	153,080		118,180		31,842		2,623		435	

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

¹ Rate is per 10,000 live births.

and hyaline membrane disease/RDS (Respiratory Distress Syndrome), respectively.

The rate of live births to white mothers with at least one abnormal condition, 653.9, was 12.5 percent greater than the rate for live births to black mothers, 581.0, and 4.6 percent greater than the rate for live births to mothers of all other races, 625.2.

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.

In 1990, 1,662 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 1.21 shows that births in the three border states comprise 93.0 percent of all resident live births that occurred out of state. Live births to Michigan residents occurred in 34 of the 50 states in 1990.

The number of nonresident live births that occurred in Michigan in 1990 was 444. 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. Births in the four border areas comprised 67.3 percent of these events, as shown in Table 1.21. There were live births in Michigan to residents of 28 states, the Virgin Islands and at least 3 foreign countries.

Table 1.21

Michigan Resident Live Births Occurring Outside of Michigan by Place of Occurrence, and Occurring in Michigan to Non-Michigan Residents by Place of Residence, 1990

Geographic Area	Live Births To Residents Occurring Outside Michigan		Live Births To Non-residents Occurring in Michigan	
	Number	Percent	Number	Percent
Total	1,662	100.0	444	100.0
Florida	11	0.7	17	3.8
Illinois	-	-	19	4.3
Indiana	609	36.6	80	18.0
Ohio	542	32.6	42	9.5
Texas	9	0.5	20	4.5
Wisconsin	395	23.8	158	35.6
Other States	96	5.8	70	15.8
U.S. Territories	-	-	5	1.1
Canada	-	-	22	5.0
Other Countries	-	-	7	1.6
Unknown	-	-	4	0.9

Source: Office of the State Registrar and Center for 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 1.22).

In 1990, the number of resident fetal deaths was 830, the third 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. Through the teens and early twenties, this ratio fluctuated between 38.2 and 42.4. 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 ratio in 1990 was 5.4, equaling the century low rate obtained in 1988.

Figure 1.11
Fetal Deaths
Michigan Residents, 1900 - 1990

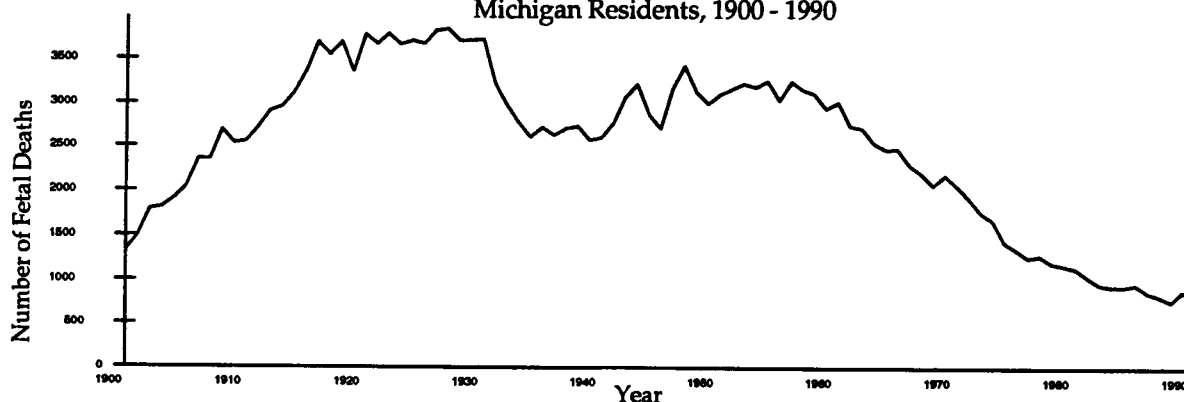
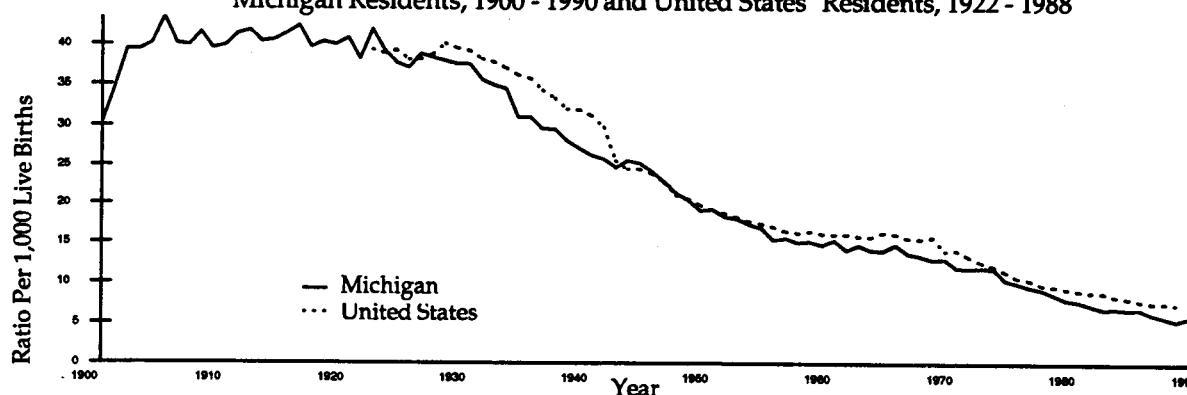


Figure 1.12
Fetal Death Ratios
Michigan Residents, 1900 - 1990 and United States¹ Residents, 1922 - 1988



¹ 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

Table 1.22
Fetal Deaths and Fetal Death Ratios
Michigan and United States Residents, 1900-1990

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
N.A.	N.A.	1989	881	5.9
N.A.	N.A.	1990	830	5.4

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

Michigan's fetal death ratios have generally been below national ratios. In fact, the United States ratio has been below that for Michigan in only nine of the 67 years for which national data are available. The last time the United States ratio was below the Michigan ratio was in 1950. In 1988, the Michigan ratio of 5.4 was 28.0 percent below the national ratio of 7.5. It should be noted that 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.

CAUSES OF FETAL DEATH

A classification of fetal deaths by underlying cause of death is contained in Table 1.23.

In 1990, 251 of the total 830 deaths were assigned to the category of "other and ill-defined conditions originating in the perinatal period". Nearly half (46.5 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.

Second in frequency was the category maternal complications of pregnancy (ICD 761), which was listed as the cause of 107 fetal deaths. This includes such complications as premature rupture of membranes, multiple pregnancy, and incompetent cervix. An additional 44 and 45 fetal deaths were caused by disorders relating to short gestation and unspecified low birth weight and by maternal

Table 1.23
Fetal Deaths and Fetal Death Ratios by Underlying Cause of Death
Michigan Residents, 1990

ICD. No. ¹	Cause of Death	Frequency	Ratio ²
762	Fetus or newborn affected by complications of placenta, cord and membranes	269	175.7
779	Other and ill-defined conditions originating in the perinatal period	251	164.0
761	Fetus or newborn affected by maternal complications of pregnancy	107	69.9
760	Fetus or newborn affected by maternal conditions which may be unrelated to present pregnancy	45	29.4
765	Disorders relating to short gestation and unspecified low birthweight	44	28.7
740-759	All congenital anomalies combined	74	48.3
	All other causes	40	26.1
740-779	All Causes	830	542.2

¹ Ninth Revision of the International Classification of Diseases. WHO.

² Ratios per 100,000 resident live births.

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

conditions which may be unrelated to the pregnancy, respectively. There were 74 fetal deaths caused by congenital anomalies in 1990.

AGE, RACE AND ANCESTRY OF MOTHER

The overall fetal death rate per 1,000 total births (live births plus fetal deaths) was 5.4 in 1990. In Table 1.24, information is presented by the race of the mother for fetal deaths and live births. It appears that younger mothers and black mothers have a greater risk of delivering a stillborn fetus. The 20-24 age group displayed the lowest rate. However, caution must be exercised in interpreting these rates because 1 in 6 fetal death records contained no maternal age.

Table 1.24
Fetal Deaths, Total Births and Fetal Death Rates by Age, Race and Ancestry of Mother
Michigan Residents, 1990

Age and Race of Mother	Fetal Deaths	Total Births	Rate Per 1,000 Total Births
Age			
Under 15 Years	1	427	*
15-19 Years	118	20,342	5.8
20-24 Years	160	40,153	4.0
25-29 Years	212	48,678	4.4
30-39 Years	189	42,668	4.4
40 or Over	6	1,428	4.2
Not Stated	144	214	672.9
Race			
White	542	118,722	4.6
Black	260	32,102	8.1
All Other Races	10	2,633	3.8
Not Stated	18	453	39.7
Ancestry			
African	238	21,816	10.9
American Indian	7	2,264	3.1
Arabian Asian	11	2,309	4.8
European	252	69,712	3.6
Hispanic	23	4,331	5.3
American	153	42,507	3.6
Other	11	2,947	3.7
Unknown	135	8,024	16.8
Total	830	153,910	5.4

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

In 1990 the fetal death rate for white mothers was 4.6. The rate for black mothers (8.1) was 76.1 percent higher than the rate for white mothers. The fetal death rate for fetuses of races other than black or white, 3.8 percent is lower than the fetal death rate for fetuses of black or white mothers.

If mothers of unknown ancestry are disregarded, mothers of African ancestry had the highest fetal death rate (10.9 in 1990). Mothers of American Indian ancestry had the lowest fetal death rate overall (3.1). Again, caution should be used in interpreting fetal death rates for individual ancestry categories, because on 135 fetal deaths (1 in 6 records) ancestry of the mother was not known, (Table 1.24). Of those fetal deaths whose mothers' ancestries were unknown, 84.4 percent (114) were to white mothers, 5.9 percent (8) to black mothers and 9.6 percent (13) were to mothers of unknown race.

MEDICAL AND OTHER RISK FACTORS FOR FETAL DEATHS

In 1990, 356 fetal deaths, or 42.9 percent of all fetal deaths, occurred to women who were reported to have at least one medical or other birth-related risk factor. Besides the Other category of risk factor which was reported for 334 fetal deaths, the most frequent risk factor mentioned was tobacco use during pregnancy which was reported in 26.0 percent (216) of all fetal deaths. The next most common risk factor associated with fetal deaths was alcohol use during pregnancy (62 fetal deaths)(Table 1.25).

The highest rate of fetal deaths associated with risk factors occurred among women giving birth with reported hydramnios/oligohydramnios (50.6). The next highest fetal death rates were to women with reported uterine bleeding (24.0) and anemia (23.8). Relatively low fetal death rates were

noted for women using tobacco during pregnancy.

PRENATAL CARE

The proportion of all fetal deaths in 1990 that were to women who reported receiving care prior to the fourth month of pregnancy was 64.2, with 78.0 percent receiving care prior to the sixth month.

The percentage of fetal deaths in which the mother received care prior to the fourth and sixth month generally increased from 1970 through 1973, declined between 1973 and 1976, and generally increased again between 1976 and 1983 (Figure 1.13). Both percentages declined between 1983 and 1986 to the lowest level in the decade. By 1990 the percentages returned to the percentages observed in the

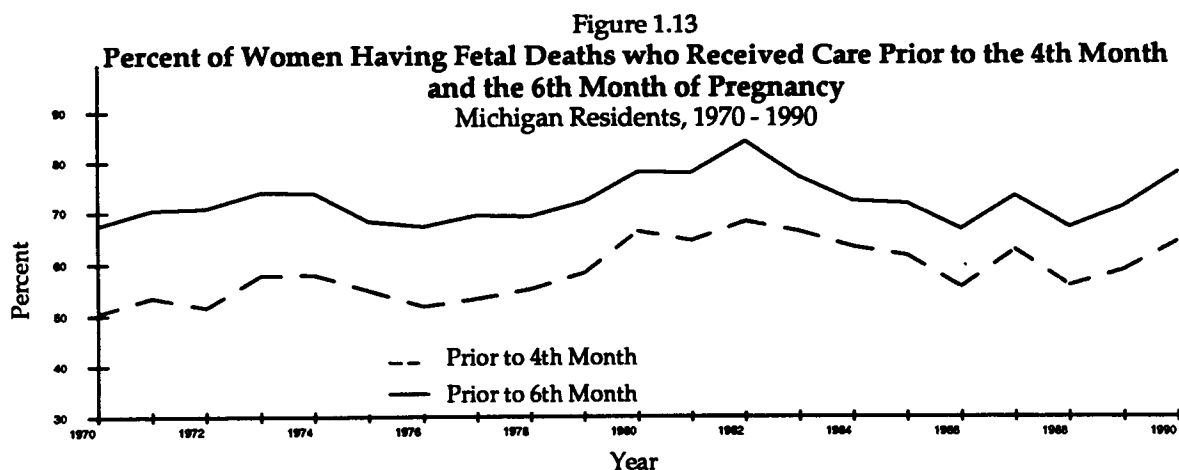
early 1980's. However the percentage of live births in which the mother received care prior to the fourth month increased between 1970 and 1985 to 81.0 percent, declined to 79.8 percent in 1986, increased to 80.0 in 1987 and declined to 78.1 in 1990. The percentage of live births in which the mother received care prior to the sixth month increased to 93.9 percent in 1985 then declined to 91.7 in 1990 (Figure 1.7).

The relationship between the fetal death rates and the Kessner Index of adequacy of care is displayed in Table 1.26. The fetal death rate increased as the quality of prenatal care measured by the Kessner Index decreased (Table 1.26). The rate was 3.3 per 1,000 total births (fetal deaths and live births) born to women receiving adequate prenatal care. The rate increased to 7.0 and 17.2 for

Table 1.25
Numbers and Percents of Fetal Deaths, and Fetal Death Rates by Medical and Other Risk Factors
Michigan Residents, 1990

Risk Factors of Mother	Number of Fetal Deaths	Percent of Fetal Deaths	Fetal Death Rate
Tobacco use during pregnancy	216	26.0	6.4
Alcohol use during pregnancy	62	7.5	12.2
Anemia(Hct./Hgb.)	52	6.3	23.8
Hydramnios/Oligohydramnios	50	6.0	50.6
Uterine Bleeding	40	4.8	24.0
All other risk factors	334	40.2	7.7
At least one risk factor	356	42.9	9.5

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



births to women receiving intermediate and inadequate levels of care respectively.

The fetal death rate was slightly (3.2 percent) higher for white mothers than for black mothers receiving an adequate level of care. For black mothers receiving intermediate levels of care, the fetal death rate was 40.3 percent higher than white mothers receiving the same level of care. The fetal death rate was 50.7 percent higher for black mothers than for white mothers receiving inadequate levels of care.

Overall, the proportion of live births born to women receiving adequate care in 1990 was 71.9 percent while 43.3 percent of the fetal deaths were to women with adequate prenatal

care. Since the Kessner Index reduces the minimum number of prenatal visits required to meet the definition of adequate care when gestational age at birth is less than 36 weeks, the percentage of fetal deaths for women with adequate prenatal care should not be affected by the shorter gestational age experienced by many fetal deaths.

FETAL WEIGHT

Among live births, the percentage of infants weighing less than 2,500 grams at birth was 7.6. The comparable percent among fetal deaths was 78.9 (Table 1.27).

Table 1.26
Fetal Deaths, Total Births and Fetal Death Rates by Level of Prenatal Care and Race¹ of Mother
Michigan Residents, 1990

Level of Care (Kessner Index ²)	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	359	110,409	3.3	291	89,911	3.2	57	18,533	3.1	2	1,703	*
Intermediate	203	28,996	7.0	124	19,857	6.2	74	8,466	8.7	3	603	*
Inadequate	176	10,252	17.2	81	5,689	14.2	91	4,259	21.4	3	236	*
Unknown	92	4,253	21.6	46	3,265	14.1	38	844	45.0	2	91	*
Total	830	153,910	5.4	542	118,722	4.6	260	32,102	8.1	10	2,633	3.8

¹ Race not stated included in total columns only.

² 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 Center for Health Statistics, MDPH

Table 1.27
Fetal Deaths by Fetal Weight
Michigan Residents, 1990

Weight in Grams	Fetal Deaths	Cum. Percent
Less than 1,500	511	61.6
1,500-2,499	144	78.9
2,500 or More	150	97.0
Unknown	25	100.0
Total	830	100.0

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

MORTALITY

SECTION II



MORTALITY

AN OVERVIEW, 1990

Resident Deaths	78,501
Crude Death Rate	8.4
Infant Deaths	1,638
Infant Death Rate	10.7
Neonatal Deaths	1,073
Neonatal Death Rate	7.0
Perinatal Deaths	1,722
Perinatal Death Rate	11.2
Maternal Deaths	10
Maternal Death Rate	0.7
Deaths from Heart Disease per Day	75.4
Deaths from Cancer per Day	50.4
Deaths from Stroke per Day	13.9
Deaths from Accidents per Day	8.6
Median Age at Death	74
Median Age at Death for Males	71
Median Age at Death for Females	77

Table 2.1
Number of Deaths and Crude Death Rates
Michigan and United States Residents, 1970 - 1990

United States		Year	Michigan	
Number	Rate		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	1981	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
2,162,000 ¹	8.6 ¹	1990	78,501	8.4

¹ Provisional Data

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

In 1990, there were 78,501 deaths recorded for Michigan residents, 65 less than in the previous year. The crude death rate per 1,000 population was 8.4 in 1990, 1.2 percent less than the rate of 8.5 observed in 1989 (Table 2.1). The age-adjusted death rate decreased in 1990, being 0.7 percent less than the age-adjusted rate for 1989. This latter rate, 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 1,638 infant deaths in 1990, 7 fewer than in 1989. The 1990 infant death and neonatal death rates were 3.6 and 2.8 percent lower than the 1989 rates of 11.1 and 7.2 deaths per 1,000 live births, respectively.

Between 1900 and 1990, the number of deaths occurring to Michigan residents increased from 32,453 to 78,501. 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 1986 (80,177) was the greatest number of resident deaths for the century.

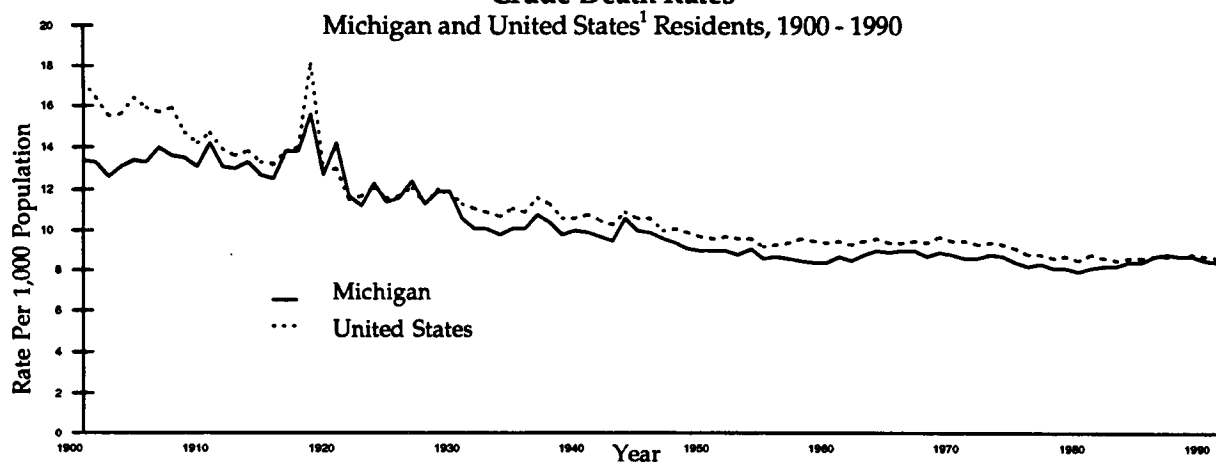
Although the total number of deaths increased between 1900 and 1990, the increase is due to an increasing population. The crude death rate decreased from 13.4 (per 1,000 population) in 1900 to 8.4 in 1990. The 1979 death rate of 7.9 was the lowest crude death rate ever recorded for Michigan. The highest death rate (15.6) was observed in 1918 (Figure 2.1).

A comparison of deaths and crude death rates for Michigan and the United States for the period 1970-1990 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 were relatively stable between 1970 and 1973, declined 9.2 percent between 1973 and 1979 and then increased to equal the rates in the mid-1970's. The national rates followed a similar pattern.

Between 1970 and 1990, the number of Michigan resident deaths increased by 2.9 percent, but the crude death rate decreased by 2.3 percent. The age-adjusted death rate dropped 26.4 percent during the same period (Table 2.2). Over the period 1970-1990 the age-adjusted death rates for the nation declined by a greater amount, 27.9 percent. For this same period, the age-adjusted rates for Michigan were higher than national rates twenty out of twenty-one years. Between 1970 and 1982 the rates were similar, based upon the revised data in Table 2.2. During 1984 through 1987 the Michigan rates were 3.4 percent to 4.7 percent above U.S. rates. By 1990 the age-adjusted rate for Michigan was 2.4 percent above the provisional national rate.

In Table 2.2, population and death counts for black and additional other than white persons have been combined for the purpose of calculating "other than white" age-adjusted mortality rates. This grouping was made in order to keep present data comparable with the National historical data which was received only for white and other than white groups in previous years. Efforts are being made to obtain national age-adjusted rates in more narrow racial categories. The data will be presented in future versions of this report.

Figure 2.1
Crude Death Rates



¹ United States rates for 1971-1979 have been revised using population estimates based on the 1980 Census enumeration. United States rate for 1989 is provisional.

Table 2.2
Age - Adjusted Death Rates¹ by Race and Sex
Michigan² and United States Residents, 1970 - 1990

Place	Year	All Races			White			Other Than White		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Mich.	1970	717.5	925.9	537.3	685.5	889.4	510.8	961.5	1,201.7	744.8
	1971	707.9	922.9	524.0	672.5	881.2	495.7	969.6	1,226.9	739.3
	1972	711.1	928.2	526.4	677.2	888.0	499.4	954.7	1,220.4	719.6
	1973	694.3	906.3	513.7	658.4	862.6	486.0	949.5	1,223.6	709.2
	1974	660.7	865.1	488.0	628.4	824.6	464.2	885.2	1,153.2	651.4
	1975	640.2	840.3	472.4	610.1	800.5	452.0	846.1	1,122.0	607.8
	1976	636.1	838.5	469.1	607.2	801.4	448.5	835.0	1,100.7	608.1
	1977	614.4	814.8	449.4	587.3	781.6	428.8	802.2	1,049.4	592.9
	1978	606.3	797.8	449.8	578.7	765.7	426.8	798.9	1,025.7	608.9
	1979	585.4	775.6	431.4	557.9	742.5	409.7	773.0	1,007.6	577.6
	1980	588.0	773.9	438.7	557.1	735.5	414.9	797.3	1,045.8	594.3
	1981	567.4	752.1	424.5	542.2	718.5	403.0	742.4	977.6	554.1
	1982	556.9	739.5	416.8	531.9	705.4	395.6	730.9	961.8	546.1
	1983	557.1	735.0	421.2	531.1	698.7	399.3	738.9	973.3	551.7
	1984	564.5	736.5	431.3	533.7	694.8	407.2	779.4	1,024.5	582.0
	1985	570.0	747.3	427.6	534.9	701.2	402.8	801.0	1,063.7	587.9
	1986	566.9	734.8	431.0	529.2	685.4	404.0	815.2	1,076.8	603.9
	1987	556.4	713.6	428.4	516.1	658.8	400.9	822.4	1,094.8	603.5
	1988	545.0	698.0	419.1	504.9	647.2	388.6	813.1	1,054.9	618.0
	1989	531.5	675.4	412.0	484.2	613.9	377.3	850.0	1,113.8	637.8
	1990	527.9	681.2	405.4	488.0	628.2	377.1	766.9	1,017.7	569.0
U.S.	1970	714.3	931.6	532.5	679.6	893.4	501.7	983.4	1,231.4	770.8
	1971	697.6	913.3	519.1	663.7	876.0	489.1	959.5	1,206.7	749.8
	1972	698.0	918.0	516.6	664.0	879.3	487.6	958.6	1,223.1	737.1
	1973	687.3	905.9	508.1	654.0	868.5	479.3	942.2	1,199.5	728.1
	1974	659.5	870.9	487.0	629.0	836.1	461.0	889.6	1,142.4	680.5
	1975	630.4	837.2	462.5	602.2	804.3	439.0	840.6	1,090.1	634.5
	1976	618.5	820.9	455.0	591.3	789.3	432.5	818.5	1,063.4	618.3
	1977	602.1	801.3	441.8	575.7	770.6	419.6	796.7	1,036.1	601.8
	1978	595.0	791.4	437.4	569.5	761.1	416.4	780.0	1,021.0	585.8
	1979	577.0	768.6	423.1	551.9	738.4	402.5	757.1	994.8	566.9
	1980	585.8	777.2	432.6	559.4	745.3	411.1	774.2	1,015.1	582.6
	1981	568.2	753.3	420.4	544.6	724.4	401.4	732.6	964.3	549.4
	1982	553.8	733.1	411.2	531.8	706.0	393.3	704.6	928.4	529.3
	1983	550.5	725.3	411.5	528.0	698.4	392.7	703.1	916.3	535.2
	1984	545.9	716.7	409.6	523.6	689.9	391.3	694.5	904.4	529.0
	1985	546.1	716.8	409.4	523.1	688.7	390.6	697.8	910.4	530.0
	1986	541.7	709.1	406.6	518.0	679.8	387.7	693.1	905.7	524.0
	1987	535.5	698.6	403.3	511.1	668.2	384.1	688.0	898.1	520.1
	1988	535.5	696.7	404.4	509.8	664.3	384.4	692.5	904.3	523.5
	1989	523.0	678.7	395.3	496.1	644.2	374.9	684.8	896.4	515.0
	1990 ³	515.1	—	—	—	—	—	—	—	—

¹ 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.

² Michigan rates for 1981-1985 have been revised based upon revisions to population estimates; see Technical Notes.

³ Provisional data.

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

Michigan age-adjusted death rates for other than white persons were considerably higher than comparable rates for white persons throughout the period 1970-1990 (Table 2.2). Age-adjusted rates for other than white males and females were 35.1 and 45.8 percent higher than their white counterparts in 1970. By 1980 the differential had increased to 42.2 percent for males but decreased slightly to 43.2 percent for females. By 1990 the differential had increased to 62.0 percent for males and 50.9 percent for females.

Declines have occurred since 1970 both in Michigan and the United States in age-adjusted death rates in each race-sex group. The rates for Michigan and the United States white males and females and the United States male and female persons of other races generally decreased during the twenty-one years. However, other than white males and females in Michigan were lowest in 1982. Michigan's age-adjusted rate for the population as a whole declined by 26.4 percent between 1970 and 1990 while the estimated decline for the United States was 27.9 percent.

For the other than white population, the decline in Michigan between 1970 and 1990 was less than it was for the United States through the year 1989, the last year for which national data were available. For Michigan other than white persons, male age-adjusted rates declined 15.3 percent and female rates declined 23.6 percent between 1970 and 1990. The United States rates for these groups declined by 27.2 and 33.2 percent, respectively, during this period. The Michigan rates for white males and females declined 29.4 and 26.2 percent, respectively, between 1970 and 1990. The United States rates for these groups dropped 27.9 and 25.3 percent, respectively, between 1970 and 1989.

During the period 1970 through 1988, the age-adjusted mortality rates for Michigan white females have been consistently greater

than the rates for their national counterparts. For ten of the twenty years of this period, Michigan white male rates have exceeded the national white male rates. Michigan rates for other than white females were less than the rates for their national counterparts from 1970 through 1977 and greater since then. For Michigan other than white males the age-adjusted mortality rates have been greater than the rates for national other than white males for eighteen of the twenty years of the period.

Between 1970 and 1990, the minimum age-adjusted death rates were achieved in 1989 for Michigan and United States white males. For white females the lowest rates were achieved in 1990 in Michigan and 1989 in the United States, the latest available year. United States other than white males and females achieved their lowest rates in 1989. In Michigan other than white males and females achieved their lowest rates in 1982.

The numbers of deaths by marital status and age for men and women are displayed in Table 2.3. 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 (57.0 percent compared to 26.8 percent). Conversely, women were over three times as likely to be widows at the time of death as men were to be widowers (56.0 percent compared to 17.8 percent).

Table 2.3
Deaths by Sex and Marital Status
Michigan Residents, 1990

Marital Status	Males		Females	
	Number	Percent	Number	Percent
Total	40,471	100.0	38,000	100.0
Never Married	6,025	14.9	3,564	9.4
Divorced	4,025	9.9	2,925	7.7
Widowed	7,218	17.8	21,269	56.0
Married	23,052	57.0	10,189	26.8
Unknown	151	0.4	53	0.1

¹ Includes legally separated.

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

Table 2.4
Deaths by Age and Ancestry
Michigan Residents, 1990

Age in Years	African	American	American Indian	Arabian Asian	European	Hispanic	Other	Unknown	Total
<15	797	283	31	23	928	48	31	71	2,212
15-24	446	124	18	9	671	38	19	71	1,396
25-34	575	186	26	18	1,009	46	18	71	1,949
35-44	904	236	39	18	1,545	61	42	123	2,968
45-54	909	344	88	22	2,706	44	93	178	4,384
55-64	1,658	705	119	80	6,492	105	173	423	9,755
65-74	2,392	1,104	171	87	13,141	107	263	721	17,986
75-84	2,061	1,299	128	118	16,622	92	319	792	21,431
85+	1,245	871	63	96	13,359	62	224	497	16,417
Unknown	-	-	-	-	1	-	2	-	3
Total	10,987	5,152	683	471	56,474	603	1,184	2,947	78,501

Of the 78,501 Michigan resident deaths in 1990, 71.9 percent (56,474) were to individuals of European ancestry (Table 2.4). The next largest proportion, 14.0 percent (10,987), were to individuals of African ancestry. Individuals with a reported ancestry of American accounted for 6.6 percent (5,152) of the 1990 resident deaths. Individuals of American Indian, Hispanic and Arab Asian each accounted for less than 1.0 percent of the 1990 resident deaths.

Table 2.5 presents data on the number of deaths by race for the period 1980-1990. The number of deaths of white persons increased by 1.9 percent over these years while deaths of black persons increased by 21.0 percent. In 1990 deaths of white persons numbered 66,156 and accounted for 84.3 percent of all deaths, while deaths of black persons constituted 15.0 percent of the state total.

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 other races dying than are reported as members of those groups on the death certificate.¹ 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 2.5
Number of Deaths by Race¹
Michigan Residents, 1980 - 1990

Year	All Races	White	Black	American Indian	Other ²
1980	74,991	64,897	9,704	137	93
1985	78,635	67,426	10,903	130	116
1986	80,177	68,602	11,283	139	134
1987	79,795	67,831	11,614	137	146
1988	80,075	68,191	11,569	132	152
1989	78,566	66,031	11,939	335	185
1990	78,501	66,156	11,739	352	220

¹ Deaths with race not stated included in total column only. Persons of Spanish or of Mexican-American descent are included with white.

² Includes Chinese, Japanese, Filipino, Hawaiian, other Asian or Pacific Islander. Indians from India were counted as "White" from 1970-1977 and with "Other" since 1978.

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

¹ 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).

Michigan resident deaths in 1990 are tabulated by age, race, and sex in Table 2.6. Of the 78,501 Michigan resident deaths that occurred in 1990, 40,471 (51.6 percent) occurred to males and 38,000 occurred to females (30 records had sex not stated).

Crude, age-specific and age-adjusted death rates by race and sex are presented in Table 2.7. The crude rate for males of 897.2 was 12.9 percent above that for females, while the age-adjusted rate for males was 68.0 percent higher than the age-adjusted rate for females.

The population with the lowest crude death rate was black females (748.5) and the highest crude rate was experienced by black males (1,080.4). Age-adjusting the data revealed a different relationship. The age-adjusted rate was lowest for white females and again highest for black males.

The age-specific death rates for all males and all females displayed in Figure 2.2 indicate a similar pattern. Rates for both sexes declined from birth to a low for ages 1-14 years, then rose through the terminal age group (85 years and over). Rates for males were consistently above those for females with the greatest relative differential occurring in the age group 15-24 years, where the rate for males was 3.3 times that for females.

A comparison by race of 1990 age-specific death rates for males is graphically presented in Figure 2.3. Rates for black males were above those for white males at all ages below 85 years. The largest relative differentials were for persons from 15 through 54 years of age, where the rates for black males were 2.6 to 3.4 times higher than rates for white males. Beyond age 84, the rates for white males were higher.

Table 2.6
Number of Deaths by Age, Race and Sex¹
Michigan Residents, 1990

Age in Years	All Races			White			Black			All Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
< 1	1,638	935	697	930	551	378	689	376	308	18	7	11
1-4	250	138	112	166	96	70	80	42	38	3	0	3
5-9	155	85	70	119	65	54	30	18	12	6	2	4
10-14	169	87	82	129	65	64	37	20	17	3	2	1
15-19	633	483	150	383	270	113	236	204	32	14	9	5
20-24	763	593	169	499	384	114	250	201	49	14	8	6
25-29	857	611	245	566	400	165	280	203	77	11	8	3
30-34	1,092	761	331	758	538	220	327	218	109	7	5	2
35-39	1,372	917	455	872	589	283	484	315	169	14	11	3
40-44	1,596	1,040	556	1,085	715	370	483	310	173	26	14	12
45-49	1,939	1,210	729	1,401	851	550	509	341	168	29	18	11
50-54	2,445	1,471	973	1,924	1,155	769	478	294	183	42	21	21
55-59	3,764	2,257	1,506	3,021	1,820	1,200	699	407	292	43	29	14
60-64	5,991	3,619	2,369	4,878	2,974	1,901	1,059	612	447	51	32	19
65-69	8,276	4,817	3,457	6,942	4,080	2,860	1,282	708	574	52	29	23
70-74	9,710	5,529	4,178	8,391	4,814	3,575	1,256	687	568	60	27	33
75-79	10,931	5,667	5,261	9,654	5,010	4,641	1,210	623	587	62	30	32
80-84	10,500	4,799	5,698	9,424	4,296	5,126	1,017	476	540	53	23	30
85-89	8,721	3,288	5,430	7,961	2,966	4,993	717	301	416	37	19	17
90+	7,696	2,163	5,530	7,052	1,960	5,089	616	196	420	25	6	19
Not Stated	3	1	2	1	-	1	-	-	-	2	1	1
All Ages	78,501	40,471	38,000	66,156	33,599	32,536	11,739	6,552	5,179	572	301	270

¹ Deaths with race and/or sex not stated are included only in the total column.

Table 2.7
Death Rates by Age, Race and Sex¹
Michigan Residents, 1990

Age In Years	All Races			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All Ages Crude Rate	844.5	897.2	794.9	844.9	879.0	812.4	904.5	1,080.4	748.5
< 1	1,082.9	1,213.6	946.3	791.1	917.7	658.5	2,261.6	2,447.5	2,070.0
1-14	29.9	31.6	28.2	26.7	28.3	25.0	45.8	49.4	42.1
15-24	99.2	152.3	45.7	77.2	113.2	40.4	208.2	358.6	67.2
25-34	123.8	177.5	71.9	99.7	142.1	57.7	280.9	433.0	156.5
35-44	211.7	284.1	141.7	164.8	220.4	109.4	519.0	744.5	334.4
45-54	464.3	580.1	353.2	405.4	495.1	317.9	909.4	1,288.6	592.8
55-64	1,228.5	1,555.5	931.5	1,136.1	1,436.6	858.5	1,944.1	2,535.0	1,471.3
65-74	2,749.2	3,608.7	2,078.5	2,642.2	3,488.4	1,978.9	3,655.8	4,672.3	2,888.8
75-84	6,217.1	8,140.7	5,072.7	6,147.2	8,054.5	5,015.2	6,874.0	9,023.0	5,578.4
85+	15,612.8	18,453.6	14,501.9	15,789.7	18,760.7	14,655.3	13,833.9	15,936.0	12,826.0
Age-Adjusted Rate	527.9	681.2	405.4	488.0	628.2	377.1	797.9	1,069.2	585.2

¹ 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.

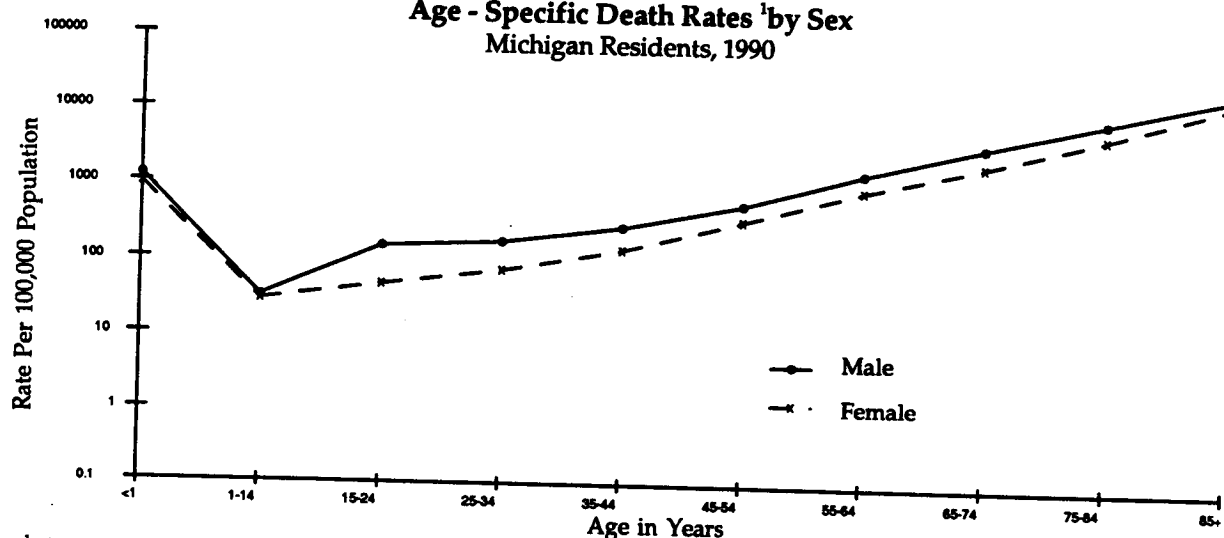
² Based on age-specific death rates per 100,000 population in specified group. Computed by the direct method, using as the standard population the age distribution of the total population of the United States as enumerated in 1940.

* Rate is considered statistically unreliable.

Note: Population estimates by race used to compute the rates in this table are from a revised series of population estimates based on a modified race distribution for 1980. The race distribution was modified to be consistent with the racial categories from the 1970 Census and the categories used by state departments of health.

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

Figure 2.2
Age - Specific Death Rates¹ by Sex
Michigan Residents, 1990

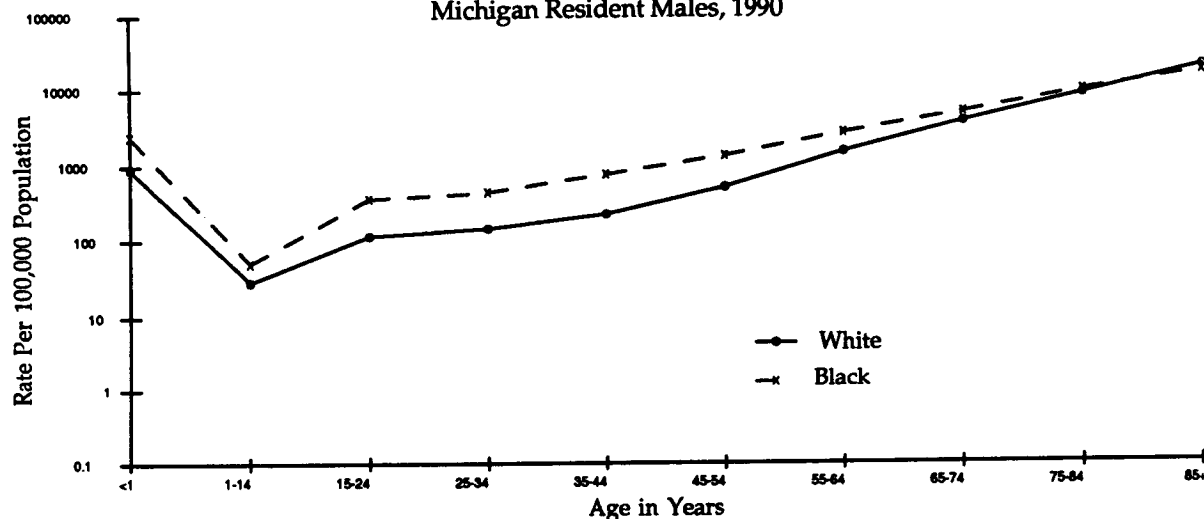


¹ Note that death rates are shown on a logarithmic scale: vertical distances represent relative differences in rate rather than absolute differences.

Rates for black females were higher than those for white females at all ages below 85 years (Figure 2.4). For women from 25

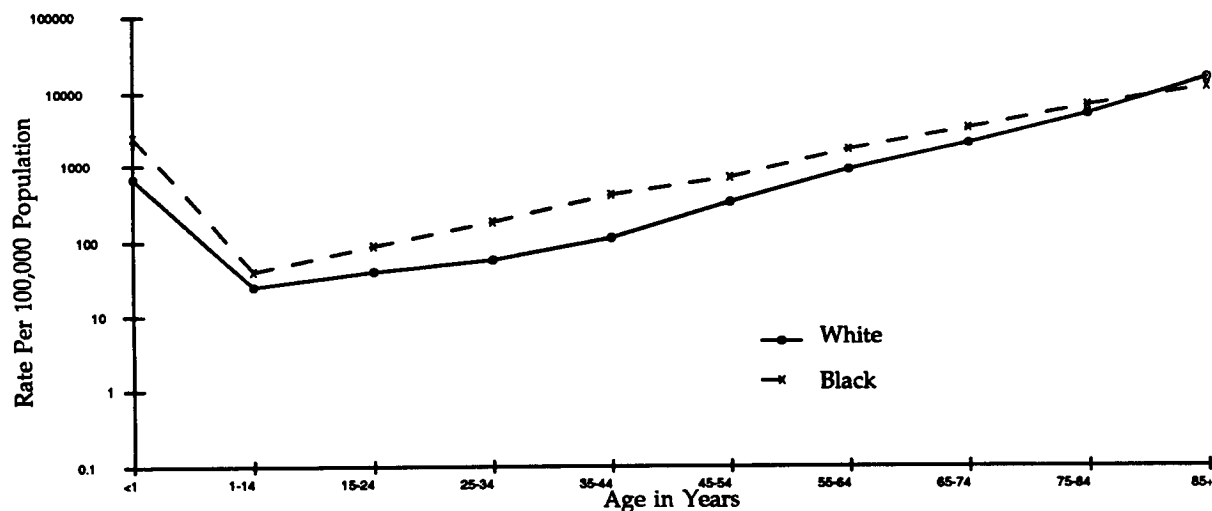
through 54 years, the rates for black females were 1.9 to 3.1 times the rates for their white female counterparts.

Figure 2.3
Age - Specific Death Rates¹ by Race
Michigan Resident Males, 1990



¹ Note that death rates are shown on a logarithmic scale: vertical distances represent relative differences in rate rather than absolute differences.

Figure 2.4
Age - Specific Death Rates¹ by Race
Michigan Resident Females, 1990



¹ Note that death rates are shown on a logarithmic scale: vertical distances represent relative differences in rate rather than absolute differences.

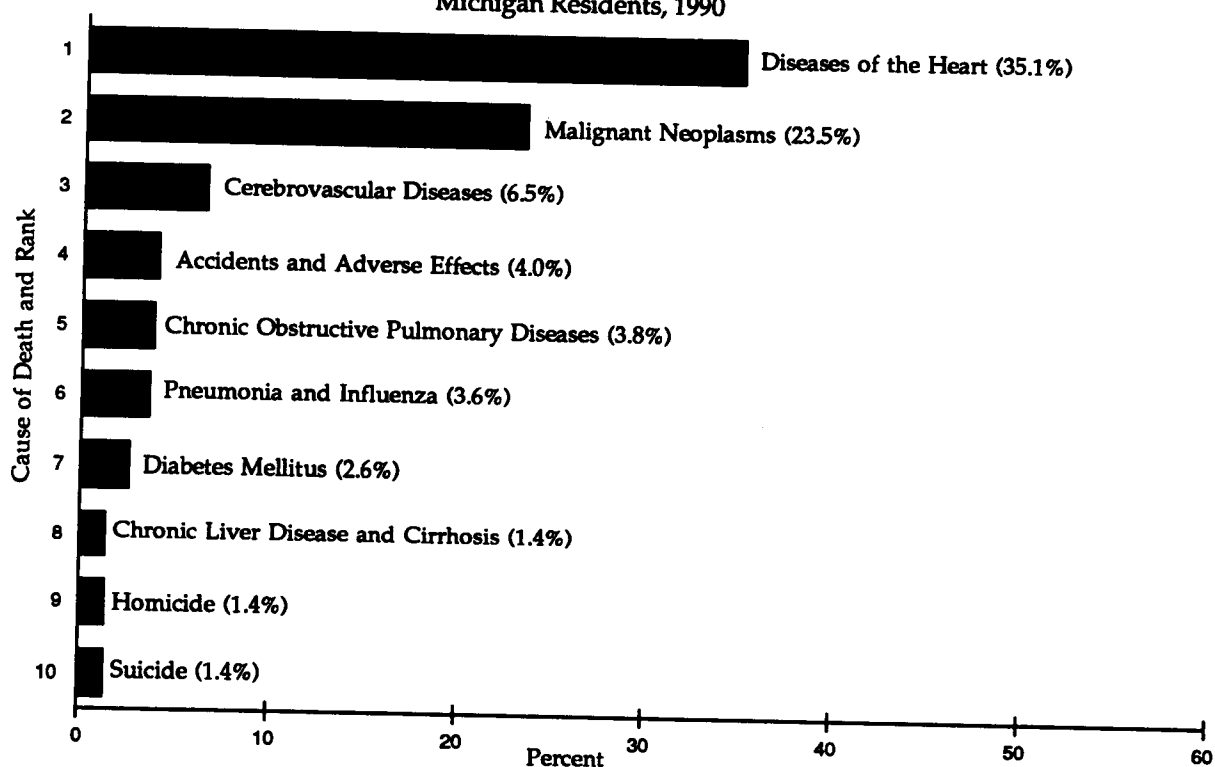
LEADING CAUSES OF DEATH

Deaths due to the 10 leading causes accounted for 83.2 percent of all deaths in 1990. Diseases of the heart were the leading cause of death with 35.1 percent of all deaths due to heart diseases. Another 23.5 percent of the deaths were due to cancer. Together these two causes of death were responsible for 58.5 percent of all Michigan resident deaths. The percentage of total deaths resulting from each of the 10 leading causes of death in 1990 is illustrated in Figure 2.5.

The numbers of deaths and the death rates for the 10 leading causes for 1990 are shown

in Table 2.8. The ranking of the 10 leading causes for 1990 was the same as the ranking in 1989, but somewhat different from the rankings for the past ten years. Homicide was among the 10 leading causes of death, as it was in 1987. It was not among the 10 leading causes of death from 1979 through 1986 and 1988. Atherosclerosis, previously termed arteriosclerosis, dropped out of the 10 leading causes of death in 1989 and 1990. Previously it had consistently been among the 10 leading causes of death, ranking 7th in 1950 and 8th in 1988.

Figure 2.5
Leading Causes of Death
Michigan Residents, 1990



Crude death rates in Michigan were lower in 1990 than in 1989 for half of the ten leading causes. The rates were lower in 1990 for diseases of the heart, cerebrovascular disease, accidents and adverse effects, diabetes mellitus and chronic liver disease and cirrhosis. The rates were higher for malignant neoplasms, chronic obstructive pulmonary diseases and allied conditions, pneumonia and influenza, homicide and suicide.

The order of the leading causes of death for Michigan and the United States were similar

for 1990 (Table 2.8). For the United States, suicide was the 8th leading cause of death with 30,780 attributed deaths and a rate of 12.3. Nationally, chronic liver disease and cirrhosis was the 10th leading cause of death. The overall Michigan death rate was lower than the national rate. Nevertheless, Michigan's mortality rates for diseases of the heart, diabetes mellitus, homicide and chronic liver disease and cirrhosis were higher than the comparable national rates. This was the same pattern observed in 1989.

Table 2.8
Leading Causes of Death and Cause - Specific Rates
Michigan and United States Residents, 1990

Rank	Cause of Death	Number of Deaths		Rate	
		Michigan	U.S. ¹	Michigan	U.S. ¹
1	Diseases of the Heart	27,527	725,010	296.1	289.0
2	Malignant Neoplasms	18,413	506,000	198.1	201.7
3	Cerebrovascular Diseases	5,090	145,340	54.8	57.9
4	Accidents and Adverse Effects	3,137	93,550	33.7	37.3
5	Chronic Obstructive Pulmonary Diseases and Allied Conditions	3,004	88,980	32.3	35.5
6	Pneumonia and Influenza	2,863	78,640	30.8	31.3
7	Diabetes Mellitus	2,009	48,840	21.6	19.5
8	Chronic Liver Disease and Cirrhosis	1,123	25,600	12.1	10.2
9	Homicide	1,080	25,700	11.6	10.2
10	Suicide	1,068	30,780	11.5	12.3
Sub Total		65,314	1,768,440	702.7	704.9
All Other Causes		13,187	393,560	141.9	157.0
Total		78,501	2,162,000	844.5	861.9

¹ United States data are estimates based on a 10 percent sample of deaths.

Table 2.9
Leading Causes of Death by Race and Sex¹
Michigan Residents, 1990

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	27,527	13,749	13,775	23,745	11,820	11,922	3,617	1,842	1,775	155	82	73
Malignant Neoplasms	18,413	9,821	8,583	15,813	8,373	7,432	2,459	1,372	1,087	134	72	61
Cerebrovascular Diseases	5,090	1,996	3,094	4,440	1,715	2,725	614	264	350	35	17	18
Accidents and Adverse Effects	3,137	2,072	1,065	2,672	1,751	921	410	286	124	54	35	19
C.O.P.D	3,004	1,702	1,302	2,739	1,539	1,200	239	150	89	24	12	12
Pneumonia/Influenza	2,863	1,393	1,467	2,524	1,205	1,316	316	178	138	23	10	13
Diabetes Mellitus	2,009	870	1,138	1,624	702	921	365	159	206	20	9	11
Chronic Liver Disease and Cirrhosis	1,123	711	411	835	521	313	273	182	91	15	8	7
Homicide	1,080	838	242	314	207	107	762	628	134	4	3	1
Suicide	1,068	861	204	945	762	181	106	89	17	16	10	6
All Other Causes	13,187	6,463	6,724	10,515	5,011	5,504	2,580	1,409	1,171	92	43	49
Total	78,501	40,471	38,000	66,156	33,599	32,536	11,739	6,552	5,179	571	301	270

¹ Sex with race/sex not stated are included only in the "Total" column.

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

Table 2.10
Leading Causes of Death and Crude Death Rates by Race and Sex¹
Michigan Residents, 1990

Cause of Death	All Races			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Diseases of the Heart	296.1	304.7	288.0	303.2	309.1	297.6	278.7	303.9	256.7
Malignant Neoplasms	198.1	217.7	179.6	202.0	219.1	185.6	189.5	226.2	157.2
Cerebrovascular Diseases	54.8	44.2	64.7	56.7	44.8	68.0	47.3	43.5	50.6
Accidents and Adverse Effects	33.7	45.9	22.3	34.1	45.8	23.0	31.6	47.2	17.9
Chronic Obstructive Pulmonary Diseases and Allied Conditions	32.3	37.7	27.2	35.0	40.3	30.0	18.4	24.7	12.9
Pneumonia/Influenza	30.8	30.9	30.7	32.2	31.6	32.9	24.3	29.4	19.9
Diabetes Mellitus	21.6	19.3	23.8	20.7	18.4	23.0	28.1	26.2	29.8
Chronic Liver Disease and Cirrhosis	12.1	15.8	8.6	10.7	13.6	7.8	21.0	30.0	13.2
Homicide	11.6	18.6	5.1	4.0	5.4	2.7	58.7	103.6	19.4
Suicide	11.5	19.1	4.3	12.1	20.0	4.5	8.2	14.7	2.5
All Other Causes	141.9	143.2	140.6	134.2	131.0	137.3	198.7	232.3	169.2
Total	844.5	897.2	794.9	844.9	879.0	812.4	904.5	1,081.5	749.4

¹ Sex with race/sex not stated are included only in the "Total" column.

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

The numbers of deaths and crude death rates are presented by race and sex for the 10 leading causes of death in Tables 2.9 and 2.10. The order of the leading causes for each group was similar with some notable exceptions. Suicide, the overall tenth leading cause of death, was the seventh leading cause for white males. Accidents and adverse effects, the

fourth leading cause of death, was the sixth 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.

The age-adjusted rates for race and sex groups are presented for the ten leading causes of death in Table 2.11. These rates are adjusted for the differences in age distributions among the groups. The age-adjusted death rates for white females were lower than the rates for the other three groups for eight of the ten leading causes of death. Rates for black females were lower for chronic obstructive pulmonary diseases and allied conditions and suicides.

Black and white female rates for accidents and adverse effects were similar. The greatest differentials between black and white female rates occur for diabetes where black female rates were 2.1 times higher than white female

rates, chronic liver disease and cirrhosis (2.4 times higher) and homicide (6.6 times). For the other four causes black female rates were 1.2 to 1.6 times higher than white female rates.

Black male rates were higher than white male rates, for eight of the ten leading causes of death. White male rates were higher than black male rates for chronic obstructive pulmonary diseases and allied conditions and suicide. The greatest differentials between black and white male rates also occur for diabetes (2.0 times) chronic liver disease and cirrhosis (2.7 times) and homicide (17.4 times). For the other five conditions the black male rates were 1.1 to 1.5 higher than white male rates.

Table 2.11
Leading Causes of Death and Age-Adjusted Death Rates by Race and Sex¹
Michigan Residents, 1990

Cause of Death	All Races			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Diseases of the Heart	163.6	219.1	119.7	154.8	209.4	111.4	226.0	290.4	176.6
Malignant Neoplasms	136.8	168.3	114.6	131.7	160.8	111.2	173.6	225.8	136.1
Cerebrovascular Diseases	27.8	29.9	26.1	26.2	28.2	24.7	38.1	42.1	34.8
Accidents and Adverse Effects	29.4	42.8	17.0	29.2	42.2	16.8	31.3	48.2	17.1
Chronic Obstructive Pulmonary Diseases and Allied Conditions	19.4	26.4	14.8	19.7	26.6	15.2	16.4	23.9	11.2
Pneumonia/Influenza	14.2	19.4	10.8	13.3	18.4	10.1	19.2	26.5	14.2
Diabetes Mellitus	13.5	14.5	12.7	12.0	13.0	11.1	24.8	26.2	23.7
Chronic Liver Disease and Cirrhosis	10.3	14.4	6.7	8.5	11.7	5.5	21.7	32.1	13.2
Homicide	12.0	19.1	5.1	3.9	5.3	2.6	52.2	92.0	17.2
Suicide	10.7	18.1	3.9	11.0	18.4	4.1	8.5	14.9	2.9
All Other Causes	90.1	109.4	74.1	77.8	94.2	64.4	165.2	210.5	128.2
Total	527.9	681.2	405.4	488.0	628.2	377.1	797.9	1,017.7	569.0

¹ Sex with race/sex not stated are included only in the "Total" column.

Age-specific mortality rates for the leading causes of death among residents of different ages, sexes or races are more varied than age-adjusted rates for the race-sex groups. Tables 2.12 through 2.16 contain the five most frequent causes of death by age, sex and race. Races other than white and black are not presented in this table because of the small number of deaths in any age-sex-cause of death category.

Overall and for the four race-sex groups, deaths due to diseases of the heart and malignant neoplasms account for 49.1 percent to 60.1 percent of the deaths. Cerebrovascular diseases was the third leading cause of death for females and fourth or fifth for males. Accidents were the third and fourth leading cause of death for white and black males, respectively. Homicide was the third leading cause of death for black males, but was not in the leading five causes for the other groups.

Leading causes of death for infants are generally different than the causes observed for other age groups. The leading cause for all four 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 overall for age groups from ages 1 through 34 years. Similar results occurred for white males and females. Accidents were one of the top leading causes of death among black males under 35 years of age and the leading cause for ages 1 to 14 years.

Homicide was the second leading cause of deaths overall for ages 15 through 34 years, but was the leading cause of death for black females aged 5 through 34 years and black males aged 15 through 34 years and the second leading cause of death for black males aged 5 through 14 and 35 through 44 years. In fact, over half of the homicides among Michigan residents occurred among black males 15 to 49 years of age.

Suicide was the second leading cause of death for ages 15-34, third for ages 5-14 and fourth for age groups 35-49 among white males. Suicide was the third leading cause among black males ages 15 to 24 years and the fourth leading cause for ages 25-34 years.

Among persons 35 years and over, chronic conditions are responsible for the majority of deaths. Malignant neoplasms were the leading cause of death for both black and white females aged 35 through 64 years and second leading cause for black and white females aged 25-34 and 65 and over. They were the second or third leading cause of death for white males 25 years of age or over and for black males 35 years of age or over.

Diseases of the heart were the leading cause of death for both black and white males aged 35 years or over and females 65 years of age or over. They were the second leading cause of death for both black and white females aged 35-64 years of age. After 34 years of age chronic liver diseases and cirrhosis, cerebrovascular diseases and chronic obstructive pulmonary diseases and allied conditions and diabetes are among the five leading cause of death for two or more race-sex-age groups over 34 years of age.

Table 2.12
Leading Causes of Death and Cause-Specific Rates by Age
Michigan Residents, 1990

Age	Rank and Cause of Death	Number ¹	Rate ^{2,3}
All Ages	1. Diseases of the Heart 2. Malignant Neoplasms 3. Cerebrovascular Diseases 4. Accidents 5. Chronic Obstructive Pulmonary Diseases and Allied Conditions All Causes	27,527 18,413 5,090 3,137 3,004 78,501	296.1 198.1 54.8 33.7 32.3 844.5
Under 1 Year	1. Certain Conditions Originating in the Perinatal Period 2. Congenital Anomalies 3. Sudden Infant Death Syndrome 4. Accidents 5. Pneumonia and Influenza All Causes	822 300 257 38 26 1,638	543.4 198.3 169.9 25.1 17.2 1,082.9
1-4 Years	1. Accidents 2. Congenital Anomalies 3. Malignant Neoplasms 4. Diseases of the Heart 5. Homicide All Causes	85 30 22 12 10 250	15.1 5.3 3.9 2.1 1.8 44.5
5-14 Years	1. Accidents 2. Malignant Neoplasms 3. Homicide 4. Congenital Anomalies 5. Suicide All Causes	126 52 24 23 12 324	9.3 3.8 1.8 1.7 0.9 23.9
15-24 Years	1. Accidents 2. Homicide 3. Suicide 4. Malignant Neoplasms 5. Diseases of the Heart All Causes	539 368 167 79 27 1,396	38.3 26.2 11.9 5.6 1.9 99.2
25-34 Years	1. Accidents 2. Homicide 3. Suicide 4. Malignant Neoplasms 5. Diseases of the Heart All Causes	462 310 219 204 126 1,949	29.3 19.7 13.9 13.0 8.0 123.8
35-49 Years	1. Malignant Neoplasms 2. Diseases of the Heart 3. Accidents 4. Chronic Liver Disease and Cirrhosis 5. Suicide All Causes	1,193 956 535 294 276 4,907	62.1 49.7 27.8 15.3 14.4 255.3
50-64 Years	1. Malignant Neoplasms 2. Diseases of the Heart 3. Cerebrovascular Diseases 4. Chronic Obstructive Pulmonary Diseases and Allied Conditions 5. Accidents All Causes	4,560 3,842 490 451 388 12,200	374.3 315.4 40.2 37.0 31.9 1,001.5
65 and Over	1. Diseases of the Heart 2. Malignant Neoplasms 3. Cerebrovascular Diseases 4. Pneumonia and Influenza 5. Chronic Obstructive Pulmonary Diseases and Allied Conditions All Causes	22,528 12,302 4,380 2,542 2,463 55,834	2,040.4 1,114.2 396.7 230.2 223.1 5,057.0

¹ Subtotals by sex and race do not add to the grand total as the race was not stated on records for 19 males and 15 females. In, addition, the sex was not stated on 21 records for white and 9 other than white persons. Age groups do not add to respective totals because records with age not stated are included only in the total.

² 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.

³ Rate per 100,000 population.

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

Table 2.13
Leading Causes of Death and Cause-Specific Rates by Age
 Michigan Resident White Males, 1990

Age	Rank and Cause of Death	Number ¹	Rate ^{2,3}
All Ages	1. Diseases of the Heart	11,820	309.0
	2. Malignant Neoplasms	8,373	218.9
	3. Accidents	1,751	45.8
	4. Cerebrovascular Diseases	1,715	44.8
	5. Chronic Obstructive Pulmonary Diseases and Allied Conditions	1,539	40.2
	All Causes	33,599	878.3
Under 1 Year	1. Certain Conditions Originating in the Perinatal Period	242	402.3
	2. Congenital Anomalies	128	212.8
	3. Sudden Infant Death Syndrome	105	174.6
	4. Accidents	11	18.3
	5-6. Pneumonia and Influenza - Diseases of Heart	8	13.3
	All Causes	551	916.1
1-4 Years	1. Accidents	36	15.5
	2. Malignant Neoplasms	15	6.5
	3. Congenital Anomalies	9	3.9
	4. Certain Conditions Originating in the Perinatal Period	4	*
	5. Diseases of the Heart	2	*
	All Causes	96	41.5
5-14 Years	1. Accidents	58	10.2
	2. Malignant Neoplasms	20	3.5
	3. Suicide	9	1.6
	4. Congenital Anomalies	8	1.4
	5. Diseases of the Heart	6	1.1
	All Causes	130	23.0
15-24 Years	1. Accidents	375	64.9
	2. Suicide	111	19.2
	3. Malignant Neoplasms	38	6.6
	4. Homicide	37	6.4
	5. Congenital Anomalies	11	1.9
	All Causes	654	113.2
25-34 Years	1. Accidents	311	47.1
	2. Suicide	151	22.8
	3. Malignant Neoplasms	72	10.9
	4. Homicide-AIDS	71	10.7
	5. Diseases of the Heart	66	10.0
	All Causes	938	141.9
35-49 Years	1. Diseases of the Heart	542	66.4
	2. Malignant Neoplasms	412	50.5
	3. Accidents	307	37.6
	4. Suicide	198	24.3
	5. Chronic Liver Disease and Cirrhosis	109	13.4
	All Causes	2,155	264.1
50-64 Years	1. Diseases of the Heart	2,134	413.6
	2. Malignant Neoplasms	2,097	406.4
	3. Accidents	212	41.1
	4. Chronic Obstructive Pulmonary Diseases and Allied Conditions	209	40.5
	5. Chronic Liver Disease and Cirrhosis	200	38.8
	All Causes	5,949	1,152.9
65 and Over	1. Diseases of the Heart	9,056	2,281.2
	2. Malignant Neoplasms	5,718	1,440.4
	3. Cerebrovascular Diseases	1,463	368.5
	4. Chronic Obstructive Pulmonary Diseases and Allied Conditions	1,299	327.2
	5. Pneumonia and Influenza	1,079	271.8
	All Causes	23,126	5,825.4

¹ Subtotals by sex and race do not add to the grand total as the race was not stated on records for 19 males and 15 females. In addition, the sex was not stated on 21 records for white and 9 other than white persons. Age groups do not add to respective totals because records with age not stated are included only in the total.

² 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.

³ Rate per 100,000 population.

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

Table 2.14
Leading Causes of Death and Cause-Specific Rates by Age
Michigan Resident Black Males, 1990

Age	Rank and Cause of Death	Number ¹	Rate ^{2,3}
All Ages	1. Diseases of the Heart	1,842	303.7
	2. Malignant Neoplasms	1,372	226.2
	3. Homicide	628	103.6
	4. Accidents	286	47.2
	5. Cerebrovascular Diseases	264	43.5
	All Causes	6,552	1,080.4
Under 1 Year	1. Certain Conditions Originating in the Perinatal Period	236	1,524.1
	2. Sudden Infant Death Syndrome	51	329.4
	3. Congenital Anomalies	35	226.0
	4. Accidents	8	51.7
	5. Homicide	7	45.2
	All Causes	376	2,428.2
1-4 Years	1. Accidents	14	28.3
	2. Congenital Anomalies	4	*
	3-5. Certain Conditions Originating in the Perinatal Period - Homicide-Anemia	3	*
	All Causes	42	85.0
5-14 Years	1. Accidents	17	15.1
	2. Homicide	7	6.2
	3. Malignant Neoplasms	3	*
	4-5. Suicide - AIDS	2	*
	All Causes	38	33.7
15-24 Years	1. Homicide	274	242.6
	2. Accidents	44	39.0
	3. Suicide	26	23.0
	4. Malignant Neoplasms	11	9.7
	5. Diseases of the Heart	6	5.3
	All Causes	405	358.6
25-34 Years	1. Homicide	173	177.9
	2. AIDS	47	48.3
	3. Accidents	38	39.1
	4. Suicide	29	29.8
	5. Diseases of the Heart	23	23.7
	All Causes	421	433.0
35-49 Years	1. Diseases of the Heart	188	167.6
	2. Homicide	126	112.3
	3. Malignant Neoplasms	114	101.6
	4. Chronic Liver Disease and Cirrhosis	99	88.3
	5. Accidents	70	62.4
	All Causes	966	861.3
50-64 Years	1. Diseases of the Heart	444	722.9
	2. Malignant Neoplasms	388	631.7
	3. Cerebrovascular Diseases	70	114.0
	4. Chronic Liver Disease and Cirrhosis	54	87.9
	5. Accidents	41	66.8
	All Causes	1,313	2,137.6
65 and Over	1. Diseases of the Heart	1,175	2,601.1
	2. Malignant Neoplasms	840	1,859.5
	3. Cerebrovascular Diseases	164	363.0
	4. Pneumonia and Influenza	114	252.4
	5. Chronic Obstructive Pulmonary Diseases and Allied Conditions	105	232.4
	All Causes	2,991	6,621.2

¹ Subtotals by sex and race do not add to the grand total as the race was not stated on records for 19 males and 15 females. In addition, the sex was not stated on 21 records for white and 9 other than white persons. Age groups do not add to respective totals because records with age not stated are included only in the total.

² 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.

³ Rate per 100,000 population.

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

Table 2.15
Leading Causes of Death and Cause-Specific Rates by Age
 Michigan Resident White Females, 1990

Age	Rank and Cause of Death	Number ¹	Rate ^{2,3}
All Ages	1. Diseases of the Heart	11,922	297.5
	2. Malignant Neoplasms	7,432	185.5
	3. Cerebrovascular Diseases	2,725	68.0
	4. Pneumonia and Influenza	1,316	32.8
	5. Chronic Obstructive Pulmonary Diseases and Allied Conditions	1,200	29.9
	All Causes	32,536	811.9
Under 1 Year	1. Certain Conditions Originating in the Perinatal Period	161	280.5
	2. Congenital Anomalies	90	156.8
	3. Sudden Infant Death Syndrome	58	101.0
	4. Accidents	11	19.2
	5. Pneumonia and Influenza	8	13.9
	All Causes	378	658.5
1-4 Years	1. Accidents	25	11.4
	2. Congenital Anomalies	14	6.4
	3. Diseases of the Heart	5	*
	4. Malignant Neoplasms	4	*
	5. Pneumonia and Influenza	3	*
	All Causes	70	31.8
5-14 Years	1. Accidents	37	6.9
	2. Malignant Neoplasms	23	4.3
	3. Congenital Anomalies	12	2.2
	4. Homicide	6	1.1
	5. Pneumonia and Influenza	3	*
	All Causes	118	22.0
15-24 Years	1. Accidents	96	17.0
	2. Malignant Neoplasms	23	4.1
	3. Homicide	22	3.9
	4. Suicide	20	3.5
	5. Diseases of the Heart	11	1.9
	All Causes	227	40.2
25-34 Years	1. Accidents	90	13.5
	2. Malignant Neoplasms	83	12.4
	3. Suicide	34	5.1
	4. Homicide	23	3.4
	5. Diseases of the Heart	20	3.0
	All Causes	385	57.7
35-49 Years	1. Malignant Neoplasms	525	63.8
	2. Diseases of the Heart	130	15.8
	3. Accidents	118	14.3
	4. Cerebrovascular Diseases	51	6.2
	5. Diabetes	49	6.0
	All Causes	1,203	146.1
50-64 Years	1. Malignant Neoplasms	1,713	311.5
	2. Diseases of the Heart	932	169.5
	3. Cerebrovascular Diseases	188	34.2
	4. Chronic Obstructive Pulmonary Diseases and Allied Conditions	186	33.8
	5. Accidents	114	20.7
	All Causes	3,870	703.8
65 and Over	1. Diseases of the Heart	10,814	1,835.7
	2. Malignant Neoplasms	5,061	859.1
	3. Cerebrovascular Diseases	2,467	418.8
	4. Pneumonia and Influenza	1,237	210.0
	5. Chronic Obstructive Pulmonary Diseases and Allied Conditions	983	166.9
	All Causes	26,284	4,461.7

¹ Subtotals by sex and race do not add to the grand total as the race was not stated on records for 19 males and 15 females. In addition, the sex was not stated on 21 records for white and 9 other than white persons. Age groups do not add to respective totals because records with age not stated are included only in the total.

² 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.

³ Rate per 100,000 population.

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

Table 2.16
Leading Causes of Death and Cause-Specific Rates by Age
 Michigan Resident Black Females, 1990

Age	Rank and Cause of Death	Number ¹	Rate ^{2,3}
All Ages	1. Diseases of the Heart	1,775	256.5
	2. Malignant Neoplasms	1,087	157.1
	3. Cerebrovascular Diseases	350	50.6
	4. Diabetes Mellitus	206	29.8
	5. Certain Conditions Originating in the Perinatal Period	171	24.7
	All Causes	5,179	748.5
Under 1 Year	1. Certain Conditions Originating in the Perinatal Period	171	1,138.2
	2. Congenital Anomalies	43	286.2
	3. Sudden Infant Death Syndrome	39	259.6
	4. Pneumonia and Influenza	9	59.9
	5. Accidents	8	53.2
	All Causes	308	2,050.1
1-4 Years	1. Accidents	9	18.6
	2. Homicide	7	14.4
	3. Diseases of the Heart	3	*
	4-6. Anemia - Benign Neoplasms - Pneumonia & Influenza - Congenital Anomalies	2	*
	All Causes	38	78.4
5-14 Years	1. Homicides	9	8.1
	2. Accidents	7	6.3
	3. Malignant Neoplasms	6	5.4
	4-7. Suicide-Diseases of the Heart - Congenital Anomalies - AIDS	1	*
	All Causes	29	26.2
15-24 Years	1. Homicide	34	28.2
	2. Accidents	13	10.8
	3. Malignant Neoplasms	7	5.8
	4-5. Anemia - Complications of Pregnancy, Childbirth and the Puerperium	3	*
	All Causes	81	67.2
25-34 Years	1. Homicide	41	34.5
	2. Malignant Neoplasms	34	28.6
	3. Diseases of the Heart - Accident	16	13.5
	4. Accidents	16	13.5
	5. Cerebrovascular Diseases	9	7.6
	All Causes	186	156.5
35-49 Years	1. Malignant Neoplasms	115	84.8
	2. Diseases of the Heart	87	64.2
	3. Chronic Liver Disease and Cirrhosis	37	27.3
	4. Cerebrovascular Diseases	31	22.9
	5-6. Accidents - Homicides	29	21.4
	All Causes	510	376.2
50-64 Years	1. Malignant Neoplasms	308	403.0
	2. Diseases of the Heart	287	375.6
	3. Cerebrovascular Diseases	51	66.7
	4. Diabetes Mellitus	50	65.4
	5. Chronic Liver Disease and Cirrhosis	29	37.9
	All Causes	922	1,206.5
65 and Over	1. Diseases of the Heart	1,375	2,073.8
	2. Malignant Neoplasms	616	929.0
	3. Cerebrovascular Diseases	258	389.1
	4. Diabetes Mellitus	139	209.6
	5. Pneumonia and Influenza	89	134.2
	All Causes	3,105	4,682.9

¹ Subtotals by sex and race do not add to the grand total as the race was not stated on records for 19 males and 15 females. In addition, the sex was not stated on 21 records for white and 9 other than white persons. Age groups do not add to respective totals because records with age not stated are included only in the total.

² 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.

³ Rate per 100,000 population.

Source: Office of the State Registrar and Center for 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 1990, deaths from all infectious and parasitic diseases numbered 1,196. As can be observed from Table 2.17, 44.0 percent of these deaths were caused by septicemia (526 deaths).

There were 373 deaths (31.2 percent) attributable to AIDS. This is a 13.4 percent increase in the number of deaths due to AIDS since 1989 when there were 329 deaths. There were 216 deaths reported in 1988 due to AIDS.

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.

LIFE EXPECTANCY

In 1990 the life expectancy at birth was 71.7 years for males and 78.1 years for females based on 1990 mortality and population data. Females demonstrated a significantly greater longevity than males, due to the higher mortality rates of males at all ages.

Life expectancies by sex in selected years for Michigan and United States residents are presented in Table 2.18. It can be seen that longevity has increased greatly in Michigan since 1901, by 18.3 years for males and by 23.0 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. By 1980 male life

Table 2.17
Deaths from Selected Infectious and
Parasitic Diseases
Michigan Residents, 1990

ICD List ¹ Number	Cause of Death	Frequency
038	Septicemia	526
042-044	AIDS (HTLV-III/LAV Infection)	373
110-118	Mycoses	60
010-018	Tuberculosis	43
070	Viral Hepatitis	35
135	Sarcoidosis	23
136.3	Pneumocystosis	13
036	Meningococcal Infection	5
054	Herpes Simplex	3
040.0	Gas Gangrene	6
137	Late Effects of Tuberculosis	2
046	Slow Virus Infection of Central Nervous System	8
053	Herpes Zoster	7
052	Chickenpox	4
Residual 000-139	All Other Infectious and Parasitic Diseases	88
Total		1,196

¹ Detailed list of the 9th revision of the International Classification of Diseases, WHO.

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

expectancy had risen faster than female life expectancy and the disparity decreased to 6.9 years and by 1990 the disparity decreased further to 6.4 years. Between 1980 and 1990 life expectancy increased by 1.7 years for males and 1.2 years for females.

The life expectancy of Michigan residents was well above that for the nation in 1901, but this differential had virtually disappeared by 1950. In 1980 the life expectancy of males in Michigan was equal to that for males nationwide, at 70.0 years, while longevity for females residing in this state was 0.5 years below the average for the country.

Between 1981 and 1990, both males and females in Michigan had lower life expectancy than both sex groups in the nation. By 1990 the life expectancies of males and females in Michigan were 0.3 and 0.7 years, respectively, below the national provisional life expectancy. Note that females have consistently

Table 2.18
Life Expectancy at Birth by Sex
 Michigan and United States Residents
 Selected Years, 1901 - 1990³

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 ¹	56.0 ¹
58.1	61.6	1930	59.8 ¹	62.8 ¹
60.8	65.2	1940	63.4 ¹	67.4 ¹
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
71.4	78.3	1988	71.3	77.6
71.8	78.6	1989	71.6	77.7
72.0 ²	78.8 ²	1990	71.7	78.1

¹ Michigan data for years 1920, 1930 and 1940 are for white persons only.

² Provisional data.

³ Data for 1981-1985 have been revised.

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

demonstrated greater longevity than males both in Michigan and in the United States.

White persons had a higher life expectancy than persons of all other races of the same sex since 1950 (Table 2.19). Life expectancy for white males and females of all other races are usually similar. The life expectancy of white males was 9.3 years greater than males of all other races in 1990 compared to a differential of 5.8 years in 1950. In 1970 the differential was 7.2 years, due in part to an actual reduction in life expectancy for males of all other races between 1960 and 1970. Life expectancy for males of all other races increased from 61.0 in 1970 to 65.3 years in 1982 and 1983 and decreased to 63.2 in 1989, while

the life expectancy for white males rose from 68.2 in 1970 to 73.1 years in 1989 and 1990. In 1990 the life expectancy of males of all other races increased 0.6 years to 63.8.

The differential by race for female life expectancies has generally declined over the 1950-1990 period. In 1950, Michigan resident white females had an average longevity 8.5 years greater than females of all other races. This disparity declined to 4.9 years by 1980 and increased to 5.8 years by 1990. Life expectancy generally increased for white females between 1950 and 1990, but it peaked for females of all other races in 1982 and has generally declined since then.

The expected number of years of life remaining are presented graphically by age, race, and sex in Figure 2.6. 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, black persons displayed similar life expectancies with their white counterparts in age intervals over 69 years.

YEARS OF POTENTIAL LIFE LOST

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 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 2.20 includes the years of potential life lost to the Michigan population in 1990 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. Malignant neoplasms, with

Table 2.19
Life Expectancy at Birth by Sex and Race
 Michigan Residents, Selected Years, 1950 - 1990¹

Population Subgroup	Year													
	1950	1960	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
White Male	66.2	67.5	68.2	71.0	71.1	71.5	71.6	71.8	71.7	71.9	72.4	72.6	73.1	73.1
White Female	71.9	74.0	75.3	77.6	77.7	78.0	78.1	78.0	78.1	78.2	78.2	78.5	78.8	79.0
All Other Male	60.4	63.6	61.0	64.3	65.2	65.3	65.3	64.7	64.0	63.8	64.0	64.2	63.2	63.8
All Other Female	63.4	67.7	69.4	72.7	73.4	73.8	73.7	73.0	73.2	72.7	73.0	72.5	71.9	73.2

¹ Data for 1981-1985 have been revised. Early years are All Other Races, but mostly represented by Black Race.

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

70,333 total years lost in Michigan, was the leading cause of years of potential life lost in Michigan and second in the United States. There was an 8.2 percent decrease in the years of potential life lost below age 65 due to accidents between 1989 and 1990 in Michigan, which resulted in accidents declining to the second leading cause of years of potential life lost in Michigan, while remaining first in the United States. Homicide and suicide, combined, ranked third in Michigan and the United States. Three causes associated with infancy, prematurity, congenital anomalies and sudden infant death syndrome (SIDS), ranked as the fifth, sixth and seventh leading causes of potential life lost, respectively, in Michigan.

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 9th leading cause of years of potential life lost and 6th in the United States.

For causes of death listed in Table 2.20, Michigan males lost more potential years of life than Michigan females for all causes of death. The ranking of the leading causes of years of potential life lost was different from the ranking of numbers of deaths presented in Table 2.8. 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. Accidents and adverse effects, which was the fourth leading cause of death,

Figure 2.6
Remaining Years of Life by Age, Sex and Race
 Michigan Residents, 1990

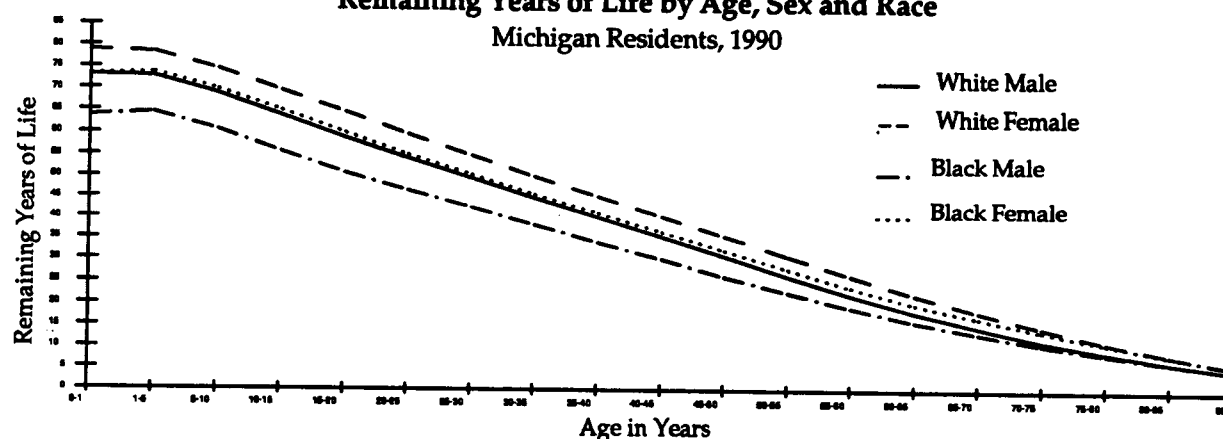


Table 2.20
Years of Potential Life Lost Below Age 65
Due to the Ten Leading Causes of Death and Selected Other Causes
Michigan Residents, 1990

1990 Rank	Cause of Death	Years of Potential Life Lost			U.S. ² Rank
		Total ¹	Male	Female	
1	Malignant Neoplasms	70,333	35,220	35,098	2
2	Accidents and Adverse Effects	69,939	50,874	19,065	1
3	Homicide/Suicide	59,839	47,996	11,763	3
4	Diseases of the Heart	53,807	37,734	16,073	4
5	Prematurity ³	26,826	15,860	10,901	7
6	Congenital Anomalies	24,927	13,462	11,336	5
7	Sudden Infant Death Syndrome	16,634	10,184	6,450	8
8	Chronic Liver Disease and Cirrhosis	11,521	7,792	3,729	10
9	AIDS (HTLV-III/LAV Infection)	10,004	8,761	1,243	6
10	Cerebrovascular Diseases	9,474	4,924	4,550	9
11	Diabetes Mellitus	6,427	3,620	2,807	12
12	Pneumonia and Influenza	6,223	3,305	2,918	11
13	Chronic Obstructive Pulmonary Diseases and Allied Conditions	5,239	2,695	2,544	13
	All Other	86,955	50,516	36,225	

¹ Total includes data for individuals with sex unspecified.

² U.S. rankings based on a 10 percent sample of provisional data.

³ Codes 765 and 769, detailed list of the 9th revision of the International Classification of Diseases, WHO.

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

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.

PLACE OF OCCURRENCE

There were 2,016 Michigan resident deaths in 1990 that occurred outside the state. This represents 2.6 percent of all resident deaths. Of the 2,016 deaths among Michigan residents the state with the highest number of Michigan resident deaths was Ohio with 19.7 percent (398 deaths). The second highest number, 385 (19.1 percent), occurred in the state of Florida, more than in any other non-border state. The border areas of Illinois, Indiana, Ohio, Wisconsin and Canada accounted for 53.5 percent of all resident deaths outside Michigan. In

addition to the above-mentioned areas, over 50 Michigan resident deaths occurred in Texas and Arizona. Michigan resident deaths occurred in 45 of the 50 states in 1990, the District of Columbia and Canada (Table 2.21).

Of the 1,155 non-residents that died in Michigan in 1990, 42.2 percent were from the border areas while 25.8 percent were Floridians. Overall, non-residents who died in Michigan were residents of 44 states, the District of Columbia, Canada and at least six foreign countries.

Table 2.21

Michigan Resident Deaths
Occurring Outside Michigan by Place of Occurrence and Occurring in Michigan to Non-Michigan Residents by Place of Residence, 1990

Geographic Area	Residents Occurring Outside Michigan		Non-Residents Occurring In Michigan	
	Number	Percent	Number	Percent
Total	2,016	100.0	1,155	100.0
Ohio	398	19.7	156	13.5
Florida	385	19.1	298	25.8
Indiana	322	16.0	74	6.4
Wisconsin	273	13.5	138	11.9
Illinois	83	4.1	77	6.7
Texas	66	3.3	35	3.0
Arizona	65	3.2	24	2.1
Minnesota	46	2.3	10	0.9
Tennessee	38	1.9	13	1.1
Georgia	27	1.3	7	0.6
Pennsylvania	25	1.2	27	2.3
California	23	1.1	33	2.9
New York	12	0.6	27	2.3
Canada	3	0.1	42	3.6
Other Areas	250	12.4	194	16.8

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

INFANT DEATHS

Of the 78,501 deaths occurring to Michigan residents in 1990, 1,638 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 1990 the rate fluctuated, slowly declining to 10.7 in 1990 (Table 2.22).

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

Table 2.22
Infant Deaths and Infant Death Rates
Michigan and United States Residents, 1950 - 1990

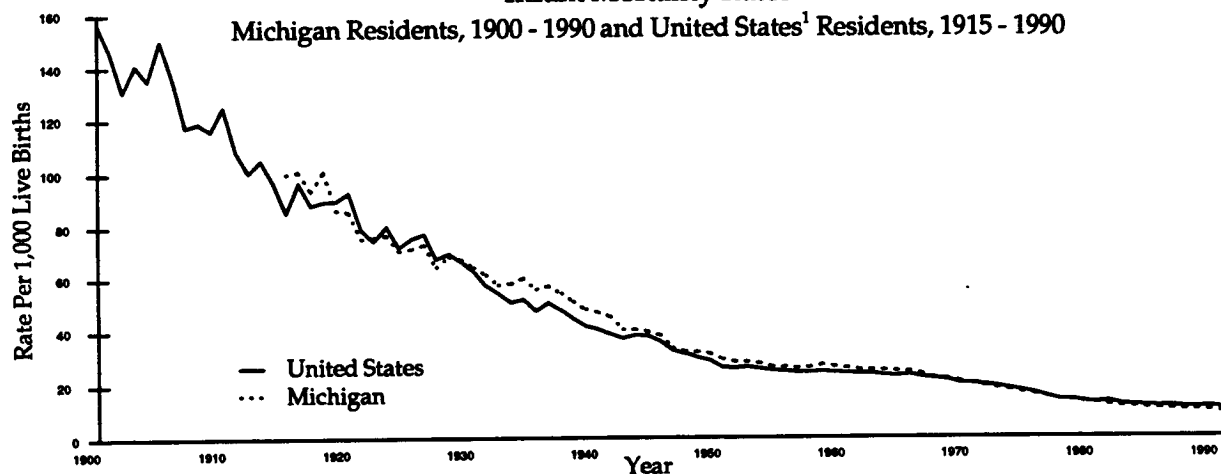
United States		Year	Michigan	
Number	Rate		Number	Rate
103,825	28.6	1950	4,230	26.4
110,873	26.0	1960	4,704	24.1
74,667	20.0	1970	3,492	20.3
45,526	12.6	1980	1,851	12.8
40,030	10.6	1985	1,575	11.4
38,891	10.4	1986	1,565	11.4
38,408	10.1	1987	1,538	10.9
38,910	10.0	1988	1,542	11.0
39,655	9.8	1989	1,645	11.1
38,100 ¹	9.1 ¹	1990	1,638	10.7

¹ Provisional data.

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

Michigan 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 18 percent above the national rate. The provisional rate for the United States in 1990 was 9.1 infant death deaths per 1,000 live births.

Figure 2.7
Infant Mortality Rates



¹ United States rate for 1990 is provisional.

Table 2.23 shows the numbers of infant deaths and infant death rates by age at death for the period 1970-1990. The number of infants who died during the first week of life in 1990 (892) is greater than the number of deaths of infants aged 7-364 days (746). In 1990 65.5 percent of all infant deaths occurred within the first four weeks of life and 41.1 percent occurred in the first day. These percentages were 76.8 and 39.1 percent in 1970 and were 69.4 and 42.7 percent by 1980.

A review of Table 2.23 reveals that the 16.4 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. There were 2.1 fewer infant deaths per 1,000 live births in

1990 than in 1980. Of these, there were 1.0 and 0.7 fewer infant deaths per 1,000 live births, respectively, for ages under 1 day and 1 to 6 days of life in 1990 than in 1980. They represented 81.0 percent of the reduction.

The death rate for infants during their first day of life declined 18.5 percent since 1980. The death rate for ages 1-6 days declined by 33.3 percent between 1980 and 1990. The death rate for infants aged 7-27 days had a lesser decrease of 7.7 percent below the 1980 level. The death rate for infants aged 28-364 days has generally decreased between 1980 and 1988, but the rates for 1989 and 1990 were greater than the 1988 rate. In 1990 the death rate for these infants was 3.7, 5.1 percent below the comparable rate for 1980.

Table 2.23
Infant Deaths and Infant Death Rates by Age at Death
Michigan Residents, 1970 - 1990

Year	Age at Death									
	Total <1 Year		<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

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

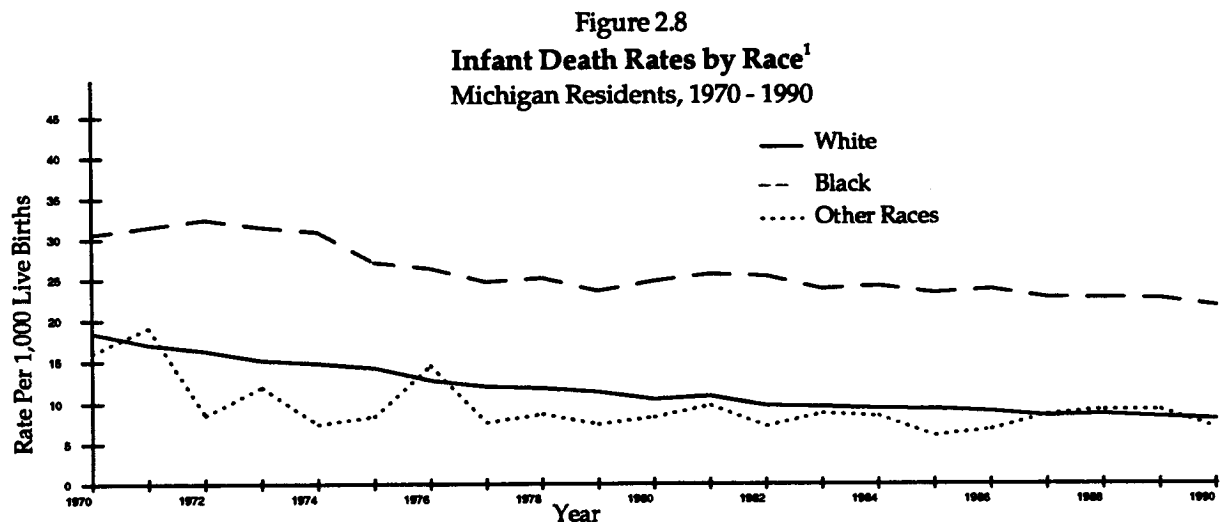
Infant death rates since 1970 for white, black and other races are graphically displayed in Figure 2.8. The rates used in this graph were calculated using the race of the mother for live births.

Black infant death rates were higher than rates for both of the other racial groups throughout the period. The infant death rate for other races was below the white infant death rate for all years in this period except 1971, 1976, 1987 and 1989.

Although the rates for all three race groups have declined, those for the white and other races decreased by a relatively larger amount than those for the black race. As a result, the

differential in infant mortality rate between black infants and white and other race infants has increased since 1970.

The infant mortality rate for infants of other races dropped 57.1 percent between 1970 and 1990. In the same period the rate for white infants dropped by 57.3 percent, while for black infants the decline was 29.4 percent. The rate for black infants of 30.6 in 1970 was 65.4 percent higher than that for white infants (18.5) and 90.1 percent higher than the rate for infants of other races (16.1). The infant death rate for white infants in 1970 was 14.9 percent higher than the corresponding rate for infants of other races.



¹ Based on live births by race of mother and infant deaths by race of infant.

² Starting in 1989 live birth numbers used in the calculation of infant death rates were enumerated by race of mother. Prior to 1989, race of infant was used.

In Table 2.24 infant, hebdomadal, fetal and perinatal deaths are presented by race of mother. In 1990 the infant death rate for black infants of 21.6 was 2.7 times that for white infants (7.9). The infant mortality rate for infants born to American Indian mothers (7.5) was lower than the rate for infants born to white mothers.

The fetal, hebdomadal and perinatal rates followed similar patterns. The number of perinatal deaths which were fetal deaths was higher than the number of hebdomadal deaths for white women, but there were 50.8 percent

known ancestry, live births to mothers of African ancestry have the highest infant death rate, 22.0 infant deaths per 1,000 live births. This is 2.4 times higher than the next highest rate, 9.3, occurring to live births whose mothers are of American Indian ancestry. The infant death rate of 6.1 among live births whose mothers are of Arabian Asian ancestry was the lowest reported.

Infant deaths of unknown ancestry accounted for 2.9 percent of the infant deaths. Among live births, 5.2 percent were reported with mother's ancestry as unknown.

Table 2.24
Infant, Hebdomadal, Fetal and Perinatal Death Rates by Race of Mother¹
Michigan Residents, 1990

Race	Live Births	Infant Deaths		Hebdomadal Deaths		Fetal Deaths		Perinatal Deaths	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate
Total	153,080	1,638	10.7	892	5.8	830	5.4	1,722	11.2
White	118,180	930	7.9	489	4.1	542	4.6	1,031	8.7
Black	31,842	689	21.6	392	12.3	260	8.1	652	20.3
American Indian	805	6	7.5	5	*	3	*	8	9.9
Asian & Pacific Islander	1,754	12	6.8	6	3.4	7	4.0	13	7.4
Other Non-White	64	-	-	-	-	-	-	-	-
Unknown	435	1	*	-	-	18	39.7	18	39.7

¹ Based on mother's race on birth certificate.

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

more hebdomadal deaths than fetal deaths for black women.

In Table 2.25 numbers of infant deaths are presented by ancestry of the infant death and live births are presented by the mother's ancestry. Disregarding individuals of un-

Table 2.25
Infant Deaths, Live Births and
Infant Death Rates by Ancestry
Michigan Residents, 1990

Ancestry ¹	Infant Deaths	Live Births	Infant Death Rate
Total	1,638	153,080	10.7
African ²	680	30,950	22.0
European	630	69,460	9.1
Hispanic	35	4,308	8.1
American Indian	21	2,257	9.3
Arabian Asian	14	2,298	6.1
Asian & Pacific Islander	9	1,442	6.2
Other	202	34,476	5.6
Unknown	47	7,889	6.0

¹ Ancestry of infant at death; ancestry of mother of the live births.

² Individuals who indicated black race and American ancestry have been allocated to African ancestry.

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

Michigan resident infant deaths in 1990 are listed by cause of death classification and age at death in Table 2.26. Congenital anomalies caused the death of 300 infants and was the specific disease category most frequently reported. Sudden infant death syndrome was responsible for 257 infant deaths in 1990, while disorders relating to short gestation and unspecified low birth weight was listed as the cause of 251 deaths.

Over half (51.0 percent) of all infant deaths were attributed to either congenital anomalies, disorders relating to short gestation and unspecified low birthweight, respiratory distress syndrome or other respiratory conditions of newborn. This proportion was 70.1 percent for those infant deaths which occurred during the first day, 71.2 percent for deaths of infants at ages 1 through 6 days, and 51.4 percent for deaths of infants 7-27 days of age. This percentage was 17.6 percent for infants from

1-5 months and 31.7 percent for those 6-11 months of age.

The most frequent specific cause of death category during the first day of life was disorders relating to short gestation and unspecified low birth weight (35.2 percent).

Congenital anomalies and respiratory distress syndrome were the leading causes of death for infants 1-27 days of age.

Sudden infant death syndrome was reported as the cause of 47.3 percent of the deaths to infants from 1-5 months of age. The leading causes of death for infants from 6-11 months of age were sudden infant death syndrome (19.2 percent) and congenital anomalies (15.4 percent). The 15 deaths due to accidents to infants aged 6-11 months represent 14.4 percent of the total deaths in this age group, while accidental deaths represent only 2.3 percent of all infant deaths.

Table 2.26
Infant Deaths by Age at Death and Underlying Cause
Michigan Residents, 1990

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
740-759	Congenital anomalies	300	116	64	42	62	16
798.0	Sudden infant death syndrome	257	3	2	14	218	20
765	Disorders relating to short gestation and unspecified low birthweight	251	237	10	3	1	-
769	Respiratory distress syndrome	164	70	56	29	6	3
770	Other respiratory conditions of newborn	120	49	26	19	12	14
E800-949	Accidents and adverse effects	38	2	-	2	19	15
E960-969	Homicide	17	2	-	1	9	5
Residual	All other causes	491	194	61	71	134	31
Total		1,638	673	219	181	461	104

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

In Table 2.27 infant deaths and death rates by cause are shown for white, black and other race infants using race of mother for live births when calculating rates. The most frequent causes of death for white infants were congenital anomalies (219 deaths) and sudden infant death syndrome (163 deaths). These deaths represented 41.1 percent of all white infant deaths. In contrast, 40.9 percent of all black infant deaths are due to disorders relating to short gestation and unspecified low birth weight (159), respiratory distress syndrome (66) and other respiratory conditions of newborn (57).

Cause-specific infant death rates for black infants were higher than white infants for all categories with sufficient events to calculate rates for racial groups.

The infant death rate from all causes for males was 28.2 percent greater than that for females (Table 2.28). The death rates for males, due to respiratory distress syndrome and sudden infant death syndrome were 100.3 percent and 50.0 percent greater, respectively, than rates for females.

Table 2.27
Infant Deaths and Infant Death Rates by Race¹ and Underlying Cause
Michigan Residents, 1990

ICD - 9 Code	Cause of Death	Race of Mother							
		Total ²		White		Black		All Other	
		Number	Rate ³	Number	Rate ³	Number	Rate ³	Number	Rate ³
740-759	Congenital anomalies	300	196.0	219	185.3	79	248.1	2	*
798.0	Sudden infant death syndrome	257	167.9	163	137.9	90	282.6	4	*
765	Disorders relating to short gestation and unspecified low birthweight	251	164.0	87	73.6	159	499.3	5	*
769	Respiratory distress syndrome	164	107.1	98	82.9	66	207.3	-	-
770	Other respiratory conditions of newborn	120	78.4	62	52.5	57	179.0	1	*
E800-949	Accidents and adverse effects	38	24.8	22	18.6	16	50.2	-	-
E960-969	Homicide	17	11.1	5	*	12	37.7	-	-
Residual	All other causes	491	320.7	274	231.8	210	659.5	6	196.2
Total		1,638	1,070.0	930	786.9	689	2163.8	18	588.6

¹ Numbers of infant deaths are by race of infant; rates are calculated using live births by race of mother as denominator.

² Records with race not stated are included only in total columns.

³ Rates per 100,000 live births.

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

Table 2.28
Infant Deaths and Infant Death Rates by Sex of Infant and Underlying Cause
Michigan Residents, 1990

ICD - 9 CODE	Cause of Death	Sex of Infant					
		Total ¹		Male		Female	
		Number	Rate ²	Number	Rate ²	Number	Rate ²
740-759	Congenital anomalies	300	196.0	165	210.8	133	177.8
798.0	Sudden infant death syndrome	257	167.9	157	200.6	100	133.7
765	Disorders relating to short gestation and unspecified low birthweight	251	164.0	134	171.2	116	155.1
769	Respiratory distress syndrome	164	107.1	111	141.8	53	70.8
770	Other respiratory conditions of newborn	120	78.4	68	86.9	52	69.5
E800-949	Accidents and adverse effects	38	24.8	19	24.3	19	25.4
E960-969	Homicide	17	11.1	11	14.1	6	8.0
Residual	All other causes	491	320.7	270	345.0	218	291.4
Total		1,638	1,070.0	935	1,194.7	697	931.7

¹ Records with sex not stated are included only in total columns.

² Rates per 100,000 live births.

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

In this section infant mortality rates are present for deaths among Michigan resident infants born in 1989. These data are from a file of merged live birth and infant death information. Note that this matched file is approximately 100 percent complete.

Data from the matched file on infant mortality rates by age and race of mother are presented in Table 2.29. The infant mortality rate for black women, 22.4, was 2.7 times that for white women, 8.2. Infant deaths display a parabolic relationship with mother's age. The

rates were lowest for infants born to white mothers 25 to 29 years of age.

For black infants, the lowest rate was associated with mothers 15 to 19 years of age. Rates for black infants were significantly above those for the white group in all categories with a sufficient number of events to calculate rates. The smallest differential was for mothers 15-19 years of age, where the death rate for black infants was 58.2 percent greater than the rate for white infants.

Table 2.29
Infant Deaths, Live Births and Infant Death Rates by Age and Race¹ of Mother
Michigan Resident Infants Born in 1989

Age of Mother	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	1,668	148,164	11.3	946	115,186	8.2	669	29,839	22.4	25	2,525	9.9
Under 15	9	396	22.7	2	112	*	7	281	24.9	-	2	-
15-19	291	19,149	15.2	137	11,263	12.2	145	7,530	19.3	4	275	*
20-24	499	39,352	12.7	274	29,192	9.4	213	9,442	22.6	5	574	*
25-29	452	47,853	9.4	267	39,992	6.7	173	6,861	25.2	5	819	*
30-39	392	40,033	9.8	250	33,538	7.5	124	5,476	22.6	10	816	12.3
40 or More	22	1,265	17.4	16	1,014	15.8	5	211	*	1	36	*
Not Stated	3	116	*	-	75	-	2	38	*	-	3	-

¹ Race not stated included in total columns only.

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

Infant death rates increased when the mother received less adequate prenatal care as measured by the Kessner Index (Table 2.30). The infant death rate was 3.3 times greater for mothers with inadequate care (27.9 deaths per 1,000 live births) than for mothers with adequate care (8.4 deaths per 1,000 live births) and 2.3 times greater for mothers with intermediate care (12.2 deaths per 1,000 live births). 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 (17.3) was 2.6 times greater than for infants born to white mothers (6.6 deaths per 1,000 live births).

Infant death rates by race, birth weight and age at death are displayed in Table 2.31 for infants born in 1989. While the overall infant death rate for black infants was 2.7 times that of white infants, the rate for black infants was 8.3 percent lower than for white infants born weighing less than 1,500 grams. The rate for white infants weighing 1,500-2,499 grams was 13.0 percent lower than the comparable rate for black infants. For infants weighing 2,500

grams or more the rate for black infants exceeded by 88.2 percent that 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 black infants were born at weights below 2,500 grams (15.5 percent for black infants compared to 5.6 percent for white infants).

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 less than 1,500 grams, the neonatal rate for black infants was 11.9 percent lower than for white infants. The postneonatal rate for black infants, however, was 22.9 percent higher than the comparable rate for white infants. The neonatal rate for white infants weighing 1500-2,499 grams was 30.1 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 69.9 percent. For infants weighing 2,500 grams or more at birth, the neonatal rate was 58.3 percent higher for black infants than white infants. The postneonatal black infant death rate was

Table 2.30
Infant Deaths, Live Births and Infant Death Rates by Level of Prenatal Care and
Race¹ of Mother
Michigan Resident Infants Born in 1989

Level of Care (Kessner Index ²)	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	1,668	148,164	11.3	946	115,186	8.2	669	29,839	22.4	25	2,525	9.9
Adequate	879	104,985	8.4	571	86,316	6.6	288	16,691	17.3	12	1,625	7.4
Intermediate	346	28,327	12.2	189	19,608	9.6	149	8,042	18.5	8	588	13.6
Inadequate	301	10,770	27.9	110	6,141	17.9	177	4,295	41.2	3	229	*
Unknown	142	4,082	34.8	76	3,121	24.4	55	811	67.8	2	83	*

¹ Race not stated included in total columns only.

² 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 Center for Health Statistics, MDPH

Table 2.31
**Live Births, Infant Deaths and Infant Death Rates
 by Birth Weight, Age at Death, and Race of Mother**
 Michigan Resident Infants Born in 1989

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	148,164	1,668	11.3	1,092	7.4	570	3.8
	White	115,186	946	8.2	612	5.3	333	2.9
	Black	29,839	669	22.4	445	14.9	220	7.4
	All Other ¹	2,525	25	9.9	14	5.5	11	4.4
Less Than 1,500 Grams	All Races	2,269	882	388.7	785	346.0	93	41.0
	White	1,102	443	402.0	402	364.8	40	36.3
	Black	1,120	413	368.8	360	321.4	50	44.6
	All Other ¹	30	10	333.3	9	300.0	1	*
1,500-2,499 Grams	All Races	9,054	222	24.5	113	12.5	109	12.0
	White	5,366	122	22.7	72	13.4	50	9.3
	Black	3,492	91	26.1	36	10.3	55	15.8
	All Other ¹	147	5	*	2	*	3	*
2,500 Grams Or Greater	All Races	136,662	545	4.0	177	1.3	367	2.7
	White	108,609	369	3.4	126	1.2	243	2.2
	Black	25,171	162	6.4	47	1.9	114	4.5
	All Other ¹	2,344	10	4.3	3	*	7	3.0
Unknown Birthweight	All Races	179	19	106.1	17	95.0	1	*
	White	109	12	110.1	12	110.1	-	-
	Black	56	3	*	2	*	1	*
	All Other ¹	4	-	-	-	-	-	-

¹ Race not stated included in total rows only.

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

twice as high as the white postneonatal infant death rate.

For total births in 1989, Michigan resident perinatal deaths numbered 1,805 and the perinatal death rate was 12.1 (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 over 2.4 times the rate for white fetuses and infants.

Table 2.32 displays the increased risk of death to fetuses and infants of mothers under 20 years of age or 40 or greater years of age. The highest perinatal death rate for both the

black and white groups was associated with mothers 40 or more years of age. The minimum risk of a perinatal death was associated with white mothers 25-29 years of age and with black mothers 15-19 years of age. The overall perinatal mortality rate for fetuses and infants of races other than black and white was 23.7 percent less than the white infant and fetus rate, and 67.7 percent less than the rate for black fetuses and infants.

The perinatal death rates increased for mothers with less than adequate prenatal care (Table 2.33). The death rate was 4.5 times higher for mothers with inadequate care than for mothers with adequate care (35.6 vs. 7.9

deaths per 1,000 live births and fetal deaths, respectively). The perinatal death rate of fetuses and infants of black women with adequate care was 84.1 percent higher than the rate for fetuses and infants of white

women. The rate for black fetuses and infants of black mothers with inadequate care was 81.9 percent higher than the rate for fetuses and infants of white mothers with inadequate care.

Table 2.32
Perinatal Deaths, Total Births and Perinatal Death Rates by Age and Race¹ of Mother
Births to Michigan Residents in 1989

Age of Mother	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	1,805	149,045	12.1	1,082	115,746	9.3	663	30,126	22.0	18	2,534	7.1
Under 15	6	399	15.0	4	114	*	2	282	*	-	2	-
15-19	273	19,273	14.2	133	11,326	11.7	137	7,590	18.1	1	275	*
20-24	488	39,573	12.3	279	29,330	9.5	195	9,519	20.5	4	576	*
25-29	509	48,105	10.6	326	40,170	8.1	168	6,925	24.3	5	822	*
30-39	452	40,252	11.2	302	33,689	9.0	131	5,535	23.7	7	819	8.5
40 or More	27	1,280	21.1	20	1,024	19.5	6	215	27.9	1	37	-
Not Stated	50	163	306.7	18	93	193.5	24	60	400.0	-	3	*

¹ Race not stated included in total columns only.

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

Table 2.33
Perinatal Deaths, Total Births and Perinatal Death Rates by Level of Prenatal Care
and Race¹ of Mother
Births to Michigan Residents in 1989

Level of Care (Kessner Index ²)	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	1,805	149,045	12.1	1,082	115,746	9.3	663	30,126	22.0	18	2,534	7.1
Adequate	833	105,337	7.9	598	86,593	6.9	212	16,752	12.7	7	1,628	4.3
Intermediate	344	28,522	12.1	205	19,738	10.4	128	8,098	15.8	6	592	10.1
Inadequate	391	10,971	35.6	165	6,233	26.5	212	4,398	48.2	3	230	*
Unknown	237	4,215	56.2	114	3,182	35.8	111	878	126.4	2	84	*

¹ Race not stated included in total columns only.

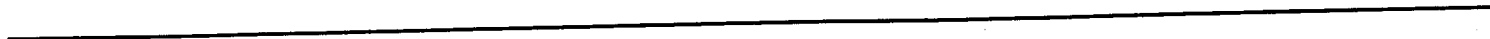
² The Kessner Index is a classification of prenatal care based on the month of pregnancy in which prenatal care began, the number of prenatal visits and the length of pregnancy (i.e., for shorter pregnancies, fewer prenatal visits constitute adequate care).

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

MARRIAGE & DIVORCE

SECTION III





MARRIAGE AND DIVORCE

AN OVERVIEW, 1990

Total Marriages	76,099
Total Divorces and Annulments	40,568
Marriage Rate ¹	16.4
Divorce Rate ¹	8.7
Median Age of the Bride	26
Median Age of the Groom	28
Median Age of Wife at Divorce Decree	33
Median Age of Husband at Divorce Decree	35
Median Duration of Marriage at Divorce Decree	7

¹ Number of persons married or divorced per 1,000 population.

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

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 (Table 3.1). In 1990 the number was 76,099 and the marriage rate was 16.4 per 1,000 population (Figure 3.1).

The number of divorces and annulments increased from a low of 2,435 in 1900 to a high of 45,047 in 1980. In 1990 the number of divorces and annulments was 40,568. The divorce rate was 8.7 per 1,000 populations.

MARRIAGES

Table 3.1
Marriages and Marriage Rates¹
Michigan and United States² Occurrences
Selected Years, 1900 - 1990

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	19.4	1988	75,386	16.3
2,404,000Pr.	19.4Pr.	1989	76,210	16.4
2,448,000Pr.	19.6Pr.	1990	76,099	16.4

¹ Number of persons married per 1,000 population.

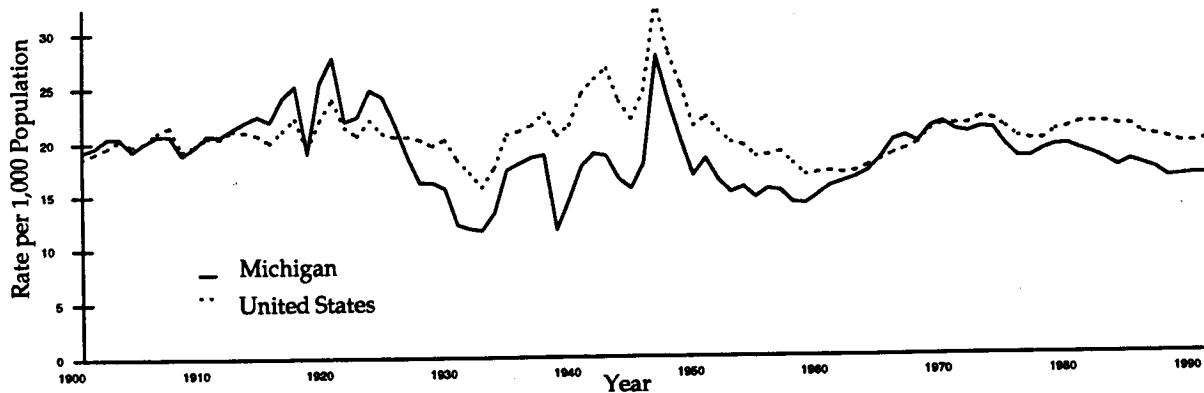
² Beginning with 1978, marriage data for the United States include nonlicensed marriages registered in California. If nonlicensed marriages were included in the 1977 total, the marriage rate would increase from 19.8 to 20.1.

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

Since 1900 there have been noticeable changes in the marriage rates both nationally and in Michigan (Figure 3.1). The marriage rates observed for the state have generally followed the pattern of rising and falling rates observed nationally. 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, 1900-1990¹



¹ United States rates for 1987 and 1988 are provisional.

RESIDENCE OF COUPLES MARRYING IN MICHIGAN

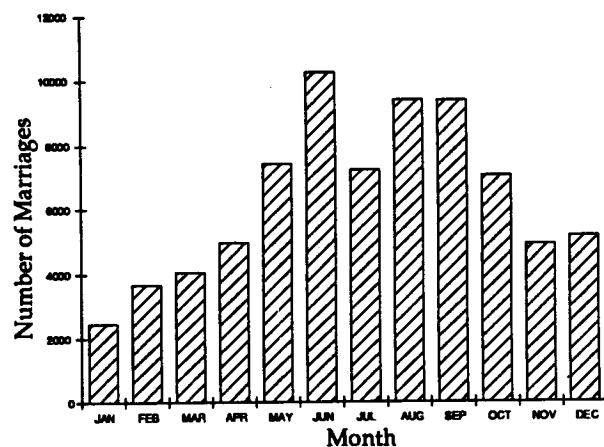
When presenting statistics of births, deaths and fetal deaths it is possible to provide total resident figures due to an interstate agreement for exchange of nonresident event information. Thus, should a Michigan resident give birth in some other state, the state will forward the information to Michigan. 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 1990, 95.3 percent of the brides were residents of Michigan, while 93.1 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 1990 were June, August and September, with 10,250, 9,402 and 9,390 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 24.1 percent of the number which occurred in June (Figure 3.2).

Figure 3.2
Marriages by Month
 Michigan Occurrences, 1990



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 2.5 times the corresponding number of males in 1990. Between ages 20 and 24, 26.1 percent more brides than grooms married. Among persons 25 and over, males married more frequently than females. The median age of brides (26 years) marrying in Michigan was two years lower than the median age for grooms (28 years).

Since 1970, 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 80.2 percent. The comparable decline for females was 50.3 percent. The marriage rate declined about 8.6 and 56.0 percent for females and males respectively between the ages of 20 and 24. 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 can not be directly affected by rates of divorce or deaths to married persons and as such 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 1980 and 1990. The number of first marriages dropped 15.5 percent for women and a 13.0 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 1980 and 1990. The number of first marriages in the under 20 age group dropped by 61.5 percent for brides and by 60.0 percent for grooms. 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.

Table 3.2
Number of Marriages and Marriage Rates¹ by Age and Sex
Michigan Occurrences, 1970, 1980 and 1990

Age in Years	Males				Females			
	1970 Rate	1980 Rate	1990		1970 Rate	1980 Rate	1990	
			Number	Rate			Number	Rate
Under 20 ²	38.9	15.0	2,732	7.7	39.8	77.6	6,823	19.8
20-24	126.7	74.7	19,542	55.8	75.7	93.8	24,635	69.2
25-34	36.1	41.2	33,999	44.0	30.7	22.1	29,276	36.5
35-44	12.7	17.2	12,007	17.4	12.1	9.7	10,242	14.4
45 or Over	6.6	6.1	7,818	6.1	3.3	4.4	5,121	3.3
Not Stated	000	-	1	*	000	*	2	*
Total	21.1	19.2	76,099	16.9	18.3	20.3	76,099	15.9
Median Age at Last Birthday	28				26			

¹ Number of persons married per 1,000 population.

² 15 - 19 population used to obtain rate.

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

Between 1980 and 1990, the percentages of marriages which were first marriages increased slightly for all age groups below 45 years of age. However, since there were fewer marriages among people below age 25 and more among people 25 years of age or older in 1990, the overall percentage of first marriages declined slightly between 1980 and 1990.

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 males than for females.

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 males and females. Grooms were 21 months older than brides at the median in 1990.

The median age at first marriage in 1990 was 24 years 0 months for brides and 25 years 9 months for grooms. The 1990 figure for

brides and grooms are the highest median age at first marriage for brides recorded during the period 1953-1990.

REMARRIAGES

The proportion of all marriages which were remarriages is displayed graphically in Figure 3.4 for the period 1960-1990. Between 1960 and 1965, the proportion of remarriages dropped. Since 1965, this proportion has increased. The increase in the period 1972 through 1975 was especially marked for both sexes. Between 1975 and 1990 the percent of all marriages that were remarriages gradually increased.

The number of remarriages among females decreased by 5.7 percent between 1980 and 1990, while the number of brides who had been married at least three times previously increased by 8.7 percent. Total remarriages for grooms decreased by 11.4 percent and numbers of third or higher order marriages increased 5.2 percent between 1980 and 1990.

As remarriages can only occur when a prior marriage has been terminated by a divorce, an annulment or the death of a spouse, it is

Figure 3.3
Median Age at First Marriage by Sex
Michigan Occurrences, 1953 - 1990

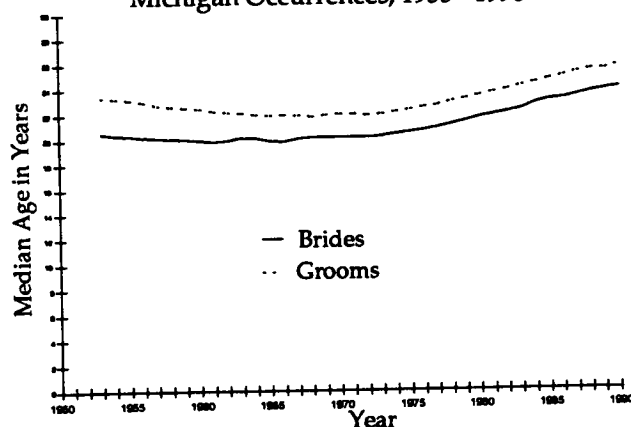
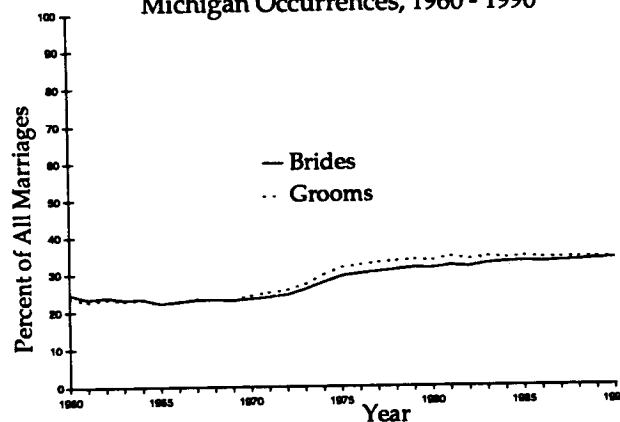


Figure 3.4
Percent of All Marriages that are Remarriages
Michigan Occurrences, 1960 - 1990



apparent that persons remarrying will be generally older. Tables 3.3 and 3.4 demonstrate that the order of marriage has a strong positive relationship with the age of both brides and grooms. Note, however, the upward shift between 1980 and 1990 in the age distribution for first and higher order marriages for both brides and grooms.

The trends between 1980 and 1990 of delaying first marriages by two years and remar-

riages by three or four years have resulted in the percent of marriages which are first marriages being higher in all age groups up to 45 years of age (Tables 3.3 and 3.4).

The most frequent age interval for remarriage among males and female was 30-34 years of age in 1990. In 1980 the most frequent age interval for remarriage was 25-29 years of age for both groups.

Table 3.3
Number of Marriages of Brides by Age and Order of Marriage
Michigan Occurrences, 1980 and 1990

Age in Years	1980					1990				
	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	86,898	59,656	68.7	21,604	5,630	76,099	50,396	66.2	19,552	6,118
Under 20	17,753	17,541	98.8	207	1	6,823	6,753	99.0	68	-
20-24	34,281	30,620	89.3	3,483	176	24,635	23,020	93.4	1,565	37
25-29	15,977	8,895	55.7	6,293	789	18,898	14,022	74.2	4,406	455
30-34	7,621	1,781	23.4	4,586	1,253	10,378	4,581	44.1	4,700	1,097
35-39	3,960	415	10.5	2,448	1,096	6,325	1,411	22.3	3,475	1,437
40-44	2,403	160	6.7	1,496	747	3,917	382	9.8	2,230	1,304
45 or Over	4,902	244	5.0	3,090	1,568	5,121	226	4.4	3,107	1,788
Not Stated	1	-	-	1	-	2	1	50.0	1	-
Median Age at Last Birthday	23	21	-	30	37	26	23	-	33	40

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

Table 3.4
Number of Marriages of Grooms by Age and Order of Marriage
Michigan Occurrences, 1980 and 1990

Age in Years	1980					1990				
	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	86,898	57,840	66.6	23,015	6,032	76,099	50,328	66.1	19,387	6,346
Under 20	6,834	6,810	99.6	21	-	2,732	2,724	99.7	6	-
20-24	32,988	31,256	94.7	1,680	48	19,542	18,897	96.7	625	7
25-29	20,667	14,654	70.9	5,530	483	21,695	18,361	84.6	3,137	185
30-34	10,144	3,580	35.3	5,449	1,115	12,304	7,123	57.9	4,461	715
35-39	5,389	816	15.1	3,391	1,180	7,261	2,237	30.8	3,802	1,220
40-44	3,297	292	8.9	2,063	942	4,746	617	13.0	2,688	1,440
45 or Over	7,579	432	5.7	4,881	2,266	7,818	369	4.7	4,667	2,779
Not Stated	-	-	-	-	-	1	-	0.0	1	-
Median Age at Last Birthday	25	23	-	33	39	28	25	-	36	43

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

DIVORCES AND ANNULMENTS

The number of reported divorces and annulments reached a record high in 1980, in Michigan and in 1981 in the nation (Table 3.5). Between 1980 and 1985, the Michigan frequency declined. The number then increased to 40,568 in 1990. The 1990 frequency was 9.9 percent below the 1980 frequency and 0.7 percent greater than the 1989 frequency. Nationally, the provisional number of divorces in 1990 was 3.1 percent below the record high figure set in 1981 (1,213,000).

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, increased to a high of 9.8 in 1978, decreased to 8.3 in 1983 and increased to 8.7 in 1986, remaining at 8.7 through 1990.

The national rates generally followed the same pattern, reaching a provisional rate of 9.4 in 1990. Michigan's divorce rate was higher than that for the United States each year from 1900 through 1947. In the following

Table 3.5
Number of Divorces and Annulments
Divorce and Annulment Rates¹
Michigan and United States Occurrences
Selected Years, 1900 - 1990

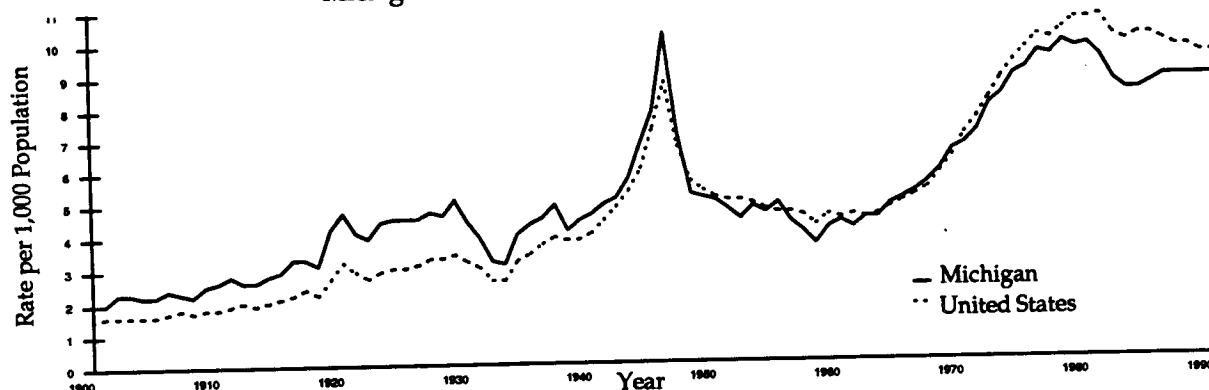
United States		Year	Michigan	
Number	Rate		Number	Rate
56,000	1.5	1900	2,435	2.0
8,300	1.8	1910	3,716	2.6
170,505	3.2	1920	8,679	4.7
195,961	3.2	1930	10,639	4.4
264,000	4.0	1940	12,054	4.6
385,144	5.1	1950	15,979	5.0
393,000	4.4	1960	16,656	4.3
708,000	7.0	1970	29,934	6.7
1,189,000	10.5	1980	45,047	9.7
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	9.4	1988	40,103	8.7
1,163,000Pr.	9.4Pr.	1989	40,276	8.7
1,175,000Pr.	9.4Pr.	1990	40,568	8.7

¹ Number of persons whose marriages ended in divorce or annulment per 1,000 population.

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

43 years the Michigan divorce rate has been at or below the national rate 36 times, including each of the past 21 years. The lowest national rate was 1.5 in 1900. The highest national divorce rate during this century was recorded in 1981 (10.6).

Figure 3.5
Divorce Rates
Michigan and United States Occurrences, 1900-1990¹



¹ United States rates for 1987 and 1988 are provisional.

The number of children under 18 of couples dissolving marriages in 1990 was at least 39,792 (Table 3.6). This is 15.4 percent below the peak number of 47,019 in 1979. The number of children affected by divorce has, however, increased as a proportion of all children. This ratio increased from 6.5 per 1,000 Michigan children in 1960 to 12.5 in 1970 and to a peak of 18.2 by 1981 (Table 3.6). It declined to 14.8 in 1984 and increased to 16.0 in 1990.

The average number of children per divorce has, nonetheless, dropped from a high of 1.37 children in 1971 to a low of 0.98 in 1990. The decline primarily reflects a decline in the proportion of divorces involving three or more children. It should be noted that Michigan live birth data indicate that there has been a slight increase in the relative proportion of women having third or higher order live births over the past decade. 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 - 1990

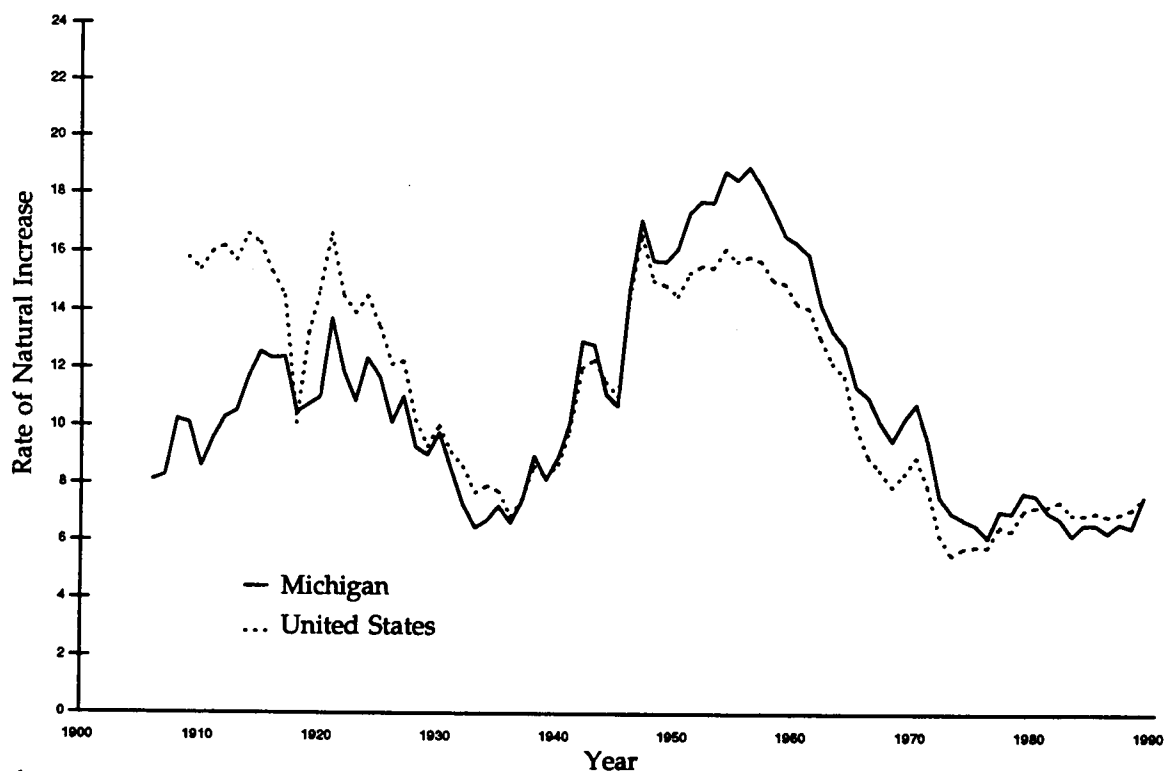
Michigan			Year	United States		
Estimated Number of Children Involved	Average Number of Children Per Decree	Rate Per 1,000 Under 18 Years of Age		Estimated Number of Children Involved	Average Number of Children Per Decree	Rate Per 1,000 Under 18 Years of Age
19,209	1.15	6.5	1960	463,000	1.18	7.2
40,596	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	18.2	1981	1,180,000	0.97	18.7
41,156	1.04	16.9	1982	1,108,000	0.94	17.6
38,712	1.02	16.2	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	14.8	1987	1,038,000	0.89	16.3
39,635	0.99	15.0	1988	1,044,000	0.89	16.4
39,897	0.99	15.2	1989	—	—	—
39,792	0.98	16.0	1990	—	—	—

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

REFERENCE APPENDIX
SECTION IV



Figure 4.1
Rate of Natural Increase¹
 Michigan, 1906 - 1990 and the United States, 1909 - 1990²



¹ Excess of live births over deaths per 1,000 population.

² 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.

Table 4.1
Population, Live Births, Deaths (All Ages, Infant, Neonatal, Postneonatal, Perinatal, Fetal and Maternal), Marriages and Divorces
Michigan, 1900 - 1990
(Deaths exclusive of fetal deaths. Perinatal deaths include deaths under 1 week and fetal deaths. Divorces include annulments.)

Year	Population ¹	Live Births	Deaths						Marriages	Divorces
			All Ages	Under 1 Year	Under 28 Days ²	28-364 Days	Perinatal	Fetal	Maternal	
1900	2,420,982	43,699	32,453	6,866				1,325	452	2,435
1901	2,459,901	43,221	32,834	6,319				1,501	531	2,448
1902	2,498,820	45,546	31,472	5,949				1,793	468	2,828
1903	2,537,739	46,020	33,176	6,488				1,814	427	2,945
1904	2,576,658	47,508	34,494	6,419				1,911	436	2,808
1905	2,615,578	46,976	34,679	8,054				2,044	416	2,825
1906	2,654,497	58,599	37,033	7,952				2,358	400	3,192
1907	2,693,416	59,029	36,701	6,906				2,358	391	3,107
1908	2,732,335	64,772	36,761	7,697				2,694	440	3,020
1909	2,771,254	64,323	36,313	7,443				2,540	405	3,516
1910	2,810,173	64,109	39,913	7,998				2,559	431	3,716
1911	2,895,997	65,756	38,007	7,131				2,716	451	4,125
1912	2,981,821	69,537	38,804	6,985				2,906	396	3,838
1913	3,067,645	73,058	40,827	7,659				2,953	528	3,978
1914	3,153,469	76,761	39,906	7,431				3,113	507	4,395
1915	3,239,293	81,100	40,441	6,943				3,357	488	4,757
1916	3,325,116	87,062	46,047	8,415				3,689	503	5,540
1917	3,410,940	89,419	47,236	7,916				3,550	586	5,627
1918	3,496,764	91,261	54,617	8,197				3,686	709	5,493
1919	3,582,588	84,062	45,636	7,560				3,361	578	7,469
1920	3,668,412	92,245	51,982	8,587				3,770	795	8,679
1921	3,785,799	96,035	44,186	7,584				3,669	605	7,676
1922	3,903,186	90,042	43,817	6,730				3,779	551	7,591
1923	4,020,573	92,956	49,333	7,477				3,657	583	8,745
1924	4,137,960	98,187	47,304	7,088			6,791	3,703	636	9,400
1925	4,255,347	98,983	49,417	7,498	4,119	2,969	6,667	3,670	629	9,650
1926	4,372,734	98,289	54,080	7,620	4,022	3,476	6,773	3,816	631	9,795
1927	4,490,121	99,940	50,600	6,766	4,054	3,566	6,794	3,834	667	10,617
1928	4,607,508	97,462	54,755	6,806	3,915	2,851	6,594	3,701	603	10,615
1929	4,724,895	98,695	56,117	6,605	3,777	2,828	6,613	3,710	617	12,094

¹ 1971-1979 population estimates have been revised by the U.S. Census Bureau.

² For Years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

³ Estimate.

Source: Office of the State Registrar and Center for 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 - 1990
 (Deaths exclusive of fetal deaths. Perinatal deaths include deaths under 1 week and fetal deaths. Divorces include annulments.)

Year	Population ¹	Live Births	Deaths							Marriages	Divorces
			All Ages	Under 1 Year	Under 28 Days ²	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	5,536,856	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

¹ 1971-1979 population estimates have been revised by the U.S. Census Bureau.

² For Years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

³ Estimate.

Source: Office of the State Registrar and Center for 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 - 1990
(Deaths exclusive of fetal deaths. Perinatal deaths include deaths under 1 week and fetal deaths. Divorces include annulments.)

Year	Population ¹	Live Births	Deaths						Marriages	Divorces
			All Ages	Under 1 Year	Under 28 Days ²	28-364 Days	Perinatal	Fetal	Maternal	
1960	7,823,194	195,056	67,912	4,702	3,580	1,122	6,247	3,008	75	16,656
1961	7,903,000	192,825	67,375	4,604	3,475	1,129	5,875	2,735	78	16,219
1962	7,939,000	182,790	70,049	4,367	3,251	1,116	5,669	2,703	56	17,500
1963	8,030,000	178,871	72,438	4,150	3,109	1,041	5,407	2,540	71	17,479
1964	8,100,000	175,103	72,129	4,043	3,071	972	5,293	2,466	62	19,400
1965	8,199,283	166,464	73,665	3,936	2,909	1,027	5,139	2,475	54	20,305
1966	8,314,070	165,794	74,596	3,751	2,830	921	4,909	2,295	54	21,727
1967	8,615,000	162,756	75,360	3,595	2,714	881	4,693	2,195	52	23,620
1968	8,675,000	159,058	76,855	3,438	2,617	821	4,476	2,064	44	25,400
1969	8,734,000	165,760	76,693	3,356	2,550	806	4,488	2,175	27	28,347
1970	8,875,083	171,667	76,321	3,492	2,671	821	4,522	2,060	29	29,934
1971	8,972,000	162,244	77,395	3,157	2,412	745	4,139	1,923	32	31,790
1972	9,025,000	146,854	79,210	2,801	2,115	686	3,700	1,765	35	35,505
1973	9,079,000	141,550	78,522	2,561	1,902	659	3,392	1,682	26	37,128
1974	9,109,000	137,414	76,143	2,387	1,734	653	2,947	1,438	19	39,940
1975	9,108,000	133,931	74,522	2,205	1,563	642	2,673	1,356	16	40,782
1976	9,117,000	131,378	75,801	1,978	1,424	554	2,495	1,264	14	43,101
1977	9,157,000	138,416	74,144	1,945	1,367	578	2,452	1,284	11	43,036
1978	9,202,000	138,802	74,773	1,931	1,281	650	2,302	1,201	15	45,029
1979	9,249,000	144,452	73,480	1,921	1,295	626	2,285	1,175	11	44,242
1980	9,262,078	145,162	74,991	1,851	1,284	567	2,235	1,135	16	45,047
1981	9,270,000	140,579	75,818	1,851	1,281	570	2,151	1,040	7	43,167
1982	9,227,327	137,950	75,536	1,672	1,202	470	1,989	954	11	39,739
1983	9,155,480	133,026	76,639	1,573	1,067	506	1,843	933	6	37,991
1984	9,074,622	135,782	76,401	1,595	1,100	495	1,884	929	4	37,563
1985	9,088,341	138,052	78,635	1,575	1,071	504	1,867	953	9	38,775
1986	9,144,545	137,626	80,177	1,565	1,079	486	1,782	865	11	39,553
1987	9,199,871	140,466	79,795	1,538	1,029	509	1,701	824	8	39,857
1988	9,239,811	139,635	80,075	1,542	1,068	474	1,659	761	11	40,103
1989	9,273,429	148,164	78,566	1,645	1,070	575	1,792	881	13	40,276
1990	9,295,297	153,080	78,501	1,638	1,073	565	1,772	830	10	40,568

¹ 1971-1979 population estimates have been revised by the U.S. Census Bureau.

² For Years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

³ Estimate.

Source: Office of the State Registrar and Center for 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
 Michigan, 1900 - 1990¹
(Birth rate, death rate for all ages, rate of persons married and rate of persons divorced per 1,000 population. 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 10,000 live births. Perinatal mortality rate per 1,000 live births and fetal deaths.)

Year	Live Births	Deaths						Marriages	Divorces
		All Ages	Under 1 Year	Under 28 Days ²	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	16.2	4.6
1929	20.9	11.9	66.9	38.4	31.5	64.6	37.6	15.6	5.1
			38.3	28.7					

¹ 1971-1979 birth, death, marriage and divorce rates have been recalculated using revised population estimates.

² For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

³ Estimate.

Source: Office of the State Registrar and Center for 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 - 1990¹
 (Birth rate for all ages, rate of persons married and rate of persons divorced per 1,000 population. 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 1,000 live births. Perinatal mortality rate per 1,000 live births and fetal deaths.)

Year	Live Births	Deaths							Marriages	Divorces
		All Ages	Under 1 Year	Under 28 Days ²	28-364 Days	Perinatal	Fetal	Maternal		
1930	20.4	10.6	62.8	36.6	26.2	63.5	37.6	60.4	12.2	4.4
1931	18.5	10.1	57.3	34.1	23.2	60.2	35.6	59.5	11.8	3.9
1932	17.3	10.1	54.3	32.8	21.5	59.0	35.0	57.8	11.6	3.2
1933	16.2	9.8	50.9	32.2	18.7	58.9	34.5	55.5	13.3	3.1
1934	16.8	10.1	52.1	32.4	19.8	55.2	31.1	53.6	17.3	4.0
1935	17.3	10.1	47.7	29.2	18.5	53.6	31.1	50.1	17.9	4.3
1936	17.4	10.8	50.6	29.9	20.7	51.9	29.7	48.0	18.5	4.5
1937	17.8	10.4	47.8	29.5	18.3	52.2	29.6	35.6	18.7	4.9
1938	18.7	9.8	44.5	28.2	16.3	50.0	28.2	35.6	11.6	4.1
1939	18.1	10.0	41.8	27.5	14.4	48.5	27.2	29.6	14.5	4.4
1940	18.9	9.9	40.6	26.5	14.1	46.7	26.3	29.5	17.6	4.6
1941	19.8	9.7	38.8	25.0	13.8	45.3	25.8	27.7	18.8	4.9
1942	22.4	9.5	37.1	24.9	12.2	43.9	24.7	21.0	18.6	5.1
1943	23.3	10.6	38.3	23.7	14.5	43.2	25.6	18.9	16.5	5.7
1944	21.1	10.0	38.1	24.5	13.6	44.1	25.3	17.4	15.5	6.8
1945	20.5	9.9	35.9	23.9	12.0	42.9	24.2	14.9	17.8	7.8
1946	24.3	9.6	32.8	24.0	8.8	42.2	22.9	11.8	27.6	10.2
1947	26.4	9.4	31.5	22.9	8.6	40.2	21.4	10.8	23.5	7.1
1948	24.8	9.1	30.0	21.8	8.2	38.0	20.4	7.8	20.0	5.2
1949	24.6	9.0	28.9	20.7	8.2	36.0	19.1	6.7	16.7	5.1
1950	25.1	9.0	26.3	19.0	7.3	35.4	19.3	5.7	18.3	5.0
1951	26.3	9.0	26.1	19.1	7.0	34.7	18.3	5.5	16.3	4.7
1952	26.5	8.8	26.4	19.2	7.2	34.6	18.1	4.6	15.1	4.4
1953	26.7	9.1	25.8	18.5	7.3	33.2	17.4	4.3	15.6	4.8
1954	27.3	8.6	25.0	18.5	6.4	32.8	16.9	4.9	14.6	4.6
1955	27.1	8.7	24.8	18.9	5.9	32.0	15.4	3.1	15.4	4.9
1956	27.4	8.6	24.5	18.4	6.1	31.8	15.7	4.1	15.2	4.3
1957	26.7	8.5	24.4	18.6	5.8	31.5	15.1	3.8	14.1	4.0
1958	25.8	8.4	24.6	18.7	5.9	31.7	15.3	3.4	14.0	3.6
1959	24.9	8.4	24.4	18.5	5.9	31.1	14.8	3.6	14.8	4.1

¹ 1971-1979 birth, death, marriage and divorce rates have been recalculated using revised population estimates.

² For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

³ Estimate.

Source: Office of the State Registrar and Center for 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 - 1990¹

(Birth rate, death rate for all ages, rate of persons married and rate of persons divorced per 1,000 population. 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 10,000 live births. Perinatal mortality rate per 1,000 live births and fetal deaths.)

Year	Live Births	Deaths							Marriages	Divorces
		All Ages	Under 1 Year	Under 28 Days ²	28-364 Days	Perinatal	Fetal	Maternal		
1960	24.9	8.7	24.1	18.4	5.8	31.5	15.4	3.8	15.6	4.3
1961	24.4	8.5	23.9	18.0	5.9	30.0	14.2	4.0	16.0	4.1
1962	23.0	8.8	23.9	17.8	6.1	30.6	14.8	3.1	16.4	4.4
1963	22.3	9.0	23.2	17.4	5.8	29.8	14.2	4.0	17.0	4.4
1964	21.6	8.9	23.1	17.5	5.6	29.8	14.1	3.5	18.2	4.8
1965	20.3	9.0	23.6	17.5	6.2	30.4	14.9	3.2	19.8	5.0
1966	19.9	9.0	23.6	17.1	5.6	29.2	13.8	3.3	20.2	5.2
1967	18.9	8.7	22.1	16.7	5.4	28.4	13.5	3.2	19.6	5.5
1968	18.3	8.9	21.6	16.5	5.2	27.8	13.0	2.8	21.0	5.9
1969	19.0	8.8	20.2	15.4	4.9	26.7	13.1	1.6	21.4	6.5
1970	19.3	8.6	20.3	15.6	4.8	26.0	12.0	1.7	20.7	6.7
1971	18.1	8.6	19.5	14.9	4.6	25.2	11.9	2.0	20.5	7.1
1972	16.3	8.8	19.1	14.4	4.7	24.9	12.0	2.4	20.9	7.9
1973	15.6	8.7	18.1	13.4	4.7	23.7	11.9	1.8	20.8	8.2
1974	15.1	8.4	17.4	12.6	4.8	21.2	10.5	1.4	19.3	8.8 ³
1975	14.7	8.2	16.5	11.7	4.8	19.8	10.1	1.2	18.2	9.0
1976	14.4	8.3	15.1	10.8	4.2	18.8	9.6	1.1	18.2	9.5
1977	15.1	8.1	14.1	9.9	4.2	17.6	9.3	0.8	18.8	9.4
1978	15.1	8.1	13.9	9.2	4.7	16.4	8.7	1.1	19.2	9.8
1979	15.6	7.9	13.3	9.0	4.3	15.7	8.1	0.8	19.3	9.6
1980	15.7	8.1	12.8	8.8	3.9	15.3	7.8	1.1	18.8	9.7
1981	15.2	8.2	13.2	9.1	4.1	15.2	7.4	0.5	18.4	9.3
1982	15.0	8.2	12.1	8.7	3.4	14.3	6.9	0.8	17.9	8.6
1983	14.5	8.4	11.8	8.0	3.8	13.8	7.0	0.5	17.2	8.3
1984	15.0	8.4	11.7	8.1	3.6	13.8	6.8	0.3	17.8	8.3
1985	15.2	8.7	11.4	7.8	3.7	13.4	6.9	0.7	17.4	8.5
1986	15.1	8.8	11.4	7.8	3.5	12.9	6.3	0.8	17.0	8.7
1987	15.3	8.7	10.9	7.3	3.6	12.0	5.7	0.6	16.2	8.7
1988	15.1	8.7	11.0	7.6	3.4	11.9	5.4	0.8	16.3	8.7
1989	16.0	8.5	11.1	7.2	3.9	12.0	5.9	0.9	16.4	8.7
1990	16.5	8.4	10.7	7.0	3.7	11.2	5.4	0.7	16.4	8.7

¹ 1971-1979 birth, death, marriage and divorce rates have been recalculated using revised population estimates.

² For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

³ Estimate.

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

Table 4.3
Number of Live Births by Age of Mother
Michigan Residents, 1920 - 1990

Year	All Ages ¹	Age of Mother						45 +	Age Not Stated
		10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39		
1920	92,740	34	8,129	26,344	26,251	17,521	10,427	3,523	175
1921	96,322	39	8,747	26,583	27,292	18,433	11,150	3,572	169
1922	90,209	28	8,125	24,575	25,154	17,690	10,584	3,485	225
1923	93,066	37	8,725	25,887	25,459	18,072	10,770	3,476	258
1924	98,025	38	9,877	28,000	25,781	18,707	11,395	3,682	224
1925	99,220	62	10,248	28,116	26,204	18,869	11,406	3,695	241
1926	98,781	76	10,496	28,479	25,876	18,444	11,219	3,568	269
1927	100,178	59	10,685	29,302	25,707	18,790	11,287	3,722	294
1928	97,797	54	10,788	28,895	25,003	17,953	10,913	3,558	318
1929	99,134	56	11,312	30,582	25,557	16,957	10,555	3,523	299
1930	99,325	60	11,476	29,956	25,861	17,125	10,684	3,582	290
1931	90,929	61	10,109	27,255	23,806	15,937	9,905	3,317	237
1932	85,736	62	9,297	25,686	22,608	14,988	9,314	3,250	240
1933	80,923	52	8,642	23,874	21,618	14,298	8,795	3,173	210
1934	83,925	48	9,039	25,458	22,507	14,968	8,391	3,050	205
1935	87,446	47	9,808	27,631	22,938	15,026	8,473	3,029	284
1936	88,427	53	9,764	28,681	23,584	14,814	8,194	2,866	197
1937	91,539	54	10,524	30,532	24,366	15,022	7,949	2,653	197
1938	96,963	64	11,024	32,581	26,116	15,690	8,397	2,698	140
1939	94,302	51	10,368	31,036	26,095	15,976	8,021	2,416	130
1940	99,021	51	10,671	32,960	27,860	16,549	8,146	2,390	192
1941	107,458	50	11,309	36,833	31,067	17,132	8,351	2,361	155
1942	123,886	66	12,721	43,947	36,034	19,367	8,985	2,445	200
1943	125,778	67	11,934	41,627	37,773	21,449	9,980	2,615	184
1944	114,700	76	10,113	36,096	33,654	21,094	10,636	2,714	135
1945	112,655	73	9,294	32,790	33,143	22,831	11,185	2,970	140
1946	139,277	72	10,899	45,999	41,985	25,184	11,811	3,002	102
1947	161,085	91	15,594	55,954	47,793	26,296	12,009	3,073	93
1948	154,730	95	16,245	53,520	45,059	25,268	11,391	2,888	173
1949	157,178	117	16,404	53,608	46,363	25,971	11,565	2,906	63

¹ 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 Center for Health Statistics, MDPH

Table 4.3 (continued)
Number of Live Births by Age of Mother
Michigan Residents, 1920 - 1990

Year	All Ages ¹	Age of Mother								Age 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	170,634	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	48,675	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

¹ 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 Center for Health Statistics, MDPH

Table 4.3 (continued)
Number of Live Births by Age of Mother
Michigan Residents, 1920 - 1990

Year	All Ages ¹	Age of Mother								Age Not Stated
		10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 +	
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

¹ Total live births for the years 1920 through 1989 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 Center for Health Statistics, MDPH

Table 4.4
Live Birth Rates by Age of Mother
 Michigan Residents, 1920 - 1990
 (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+ ¹	
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	2,396.5
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

¹ 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 Center for Health Statistics, MDPH

Table 4.4 (continued)
Live Birth Rates by Age of Mother
Michigan Residents, 1920 - 1990

(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 + ¹
1950	0.5	74.6	212.0	175.5	106.5	52.3	13.6	0.9	3,179.5
1951	0.4	79.1	229.0	192.2	114.4	53.9	14.1	0.8	3,419.5
1952	0.5	73.5	233.0	202.5	121.7	56.1	14.4	1.1	3,514.0
1953	0.6	76.8	234.5	207.0	125.5	58.7	14.9	0.9	3,594.5
1954	0.7	82.8	246.8	214.1	133.1	61.8	15.6	1.1	3,780.0
1955	0.6	84.1	253.0	218.6	135.4	63.4	16.4	0.9	3,862.0
1956	0.6	87.2	272.4	228.9	138.0	65.0	17.4	0.8	4,051.5
1957	0.6	88.6	277.1	231.8	137.6	66.4	17.0	0.9	4,100.0
1958	0.6	83.6	273.4	221.5	134.3	65.0	17.2	0.9	3,982.5
1959	0.6	77.6	273.3	217.4	128.6	64.4	17.3	0.9	3,900.5
1960	0.5	79.3	273.1	213.0	121.8	61.4	16.6	0.9	3,833.0
1961	0.6	78.1	252.0	200.7	120.2	61.3	16.8	0.9	3,653.0
1962	0.7	70.7	231.5	183.9	111.4	58.9	16.3	0.9	3,371.5
1963	0.5	64.6	222.5	175.9	107.0	55.9	16.6	0.9	3,219.5
1964	0.6	64.2	210.1	167.0	101.0	54.4	15.8	0.9	3,070.0
1965	0.6	67.4	192.0	149.0	91.2	51.5	14.7	0.8	2,836.0
1966	0.7	75.4	187.9	140.7	82.1	45.8	13.4	0.9	2,734.5
1967	0.7	69.0	182.8	140.8	77.6	41.2	11.5	0.7	2,621.5
1968	0.9	64.3	171.5	143.2	73.4	36.3	10.2	0.6	2,502.0
1969	0.9	66.0	174.2	150.8	73.8	33.1	9.1	0.5	2,542.0
1970	1.0	68.2	176.0	154.0	76.1	32.4	8.3	0.4	2,584.5
1971	1.0	63.7	157.3	142.4	71.2	29.0	7.4	0.4	2,353.0
1972	1.1	61.6	137.4	122.7	60.8	24.2	6.1	0.4	2,071.0
1973	1.2	59.9	128.0	117.3	55.2	21.5	5.1	0.2	1,945.0
1974	1.1	55.3	122.3	113.7	52.4	17.7	4.4	0.2	1,846.5
1975	1.0	52.0	116.8	109.3	49.6	17.5	4.2	0.2	1,771.0
1976	0.9	48.0	111.0	107.5	49.1	16.3	3.4	0.2	1,709.5
1977	1.0	48.4	114.3	112.7	52.9	16.3	3.3	0.2	1,767.0
1978	0.8	46.5	111.5	111.6	54.5	16.8	3.1	0.2	1,739.5
1979	0.9	46.7	114.0	114.9	57.0	16.8	3.0	0.2	1,774.0

¹ 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 Center for Health Statistics, MDPH

Table 4.4 (continued)
Live Birth Rates by Age of Mother
 Michigan Residents, 1920 - 1990
(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+ ¹
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

¹ 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 Center for Health Statistics, MDPH

Table 4.5
Reported Cases of Certain Communicable Diseases
Michigan Residents, 1900 - 1990

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis, All Types	TB ¹ (all forms)	Meningo- coccal Infections	Polio	Syphilis	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	18,291		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	

¹ Meningococcal infections prior to 1952 data were for meningococci meningitis.

² 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.

Source: Bureau of Disease Control and Laboratory Services, Division of Epidemiology, MDPH.

Table 4.5 (continued)
Reported Cases of Certain Communicable Diseases
Michigan Residents, 1900 - 1990

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis, All Types	TB ² (all forms)	Meningo- coccal Infections	Polio	Syphilis	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	

¹ Meningococcal infections prior to 1952 data were for meningococcal meningitis.

² 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.
Source: Bureau of Disease Control and Laboratory Services, Division of Epidemiology, MDPH.

Table 4.5 (continued)
Reported Cases of Certain Communicable Diseases
Michigan Residents, 1900 - 1990

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis, All Types	TB ² (all forms)	Meningo- ¹ coccal Infections	Polio	Syphilis	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	-	2,722	32,067	
1975	1	-	10	98	3,253	2,877	1,271	76	-	1,638	32,583	
1976	-	-	10	70	6,139	2,645	1,349	65	1	1,089	34,836	
1977	-	-	13	73	1,392	2,686	1,290	51	-	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	1	584	37,920	260
1987	-	-	5	54	42	1,610	540	111	-	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

¹ Meningococcal infections prior to 1952 data were for meningococcal meningitis.

² 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.

Source: Bureau of Disease Control and Laboratory Services, Division of Epidemiology, MDPH.

Table 4.6
Case Rates of Certain Reported Communicable Diseases
Michigan Residents, 1900 - 1990 (Rates per 100,000 population)

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis, All Types	TB ² (all forms)	Meningo- ¹ coccal Infections	Polio	Syphilis	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	

¹ Meningococcal infections prior to 1952 data were for meningococcal meningitis.

² 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.

Source: Bureau of Disease Control and Laboratory Services, Division of Epidemiology, MDPH.

Table 4.6 (continued)
Case Rates of Certain Reported Communicable Diseases
Michigan Residents, 1900 - 1990 (Rates per 100,000 population)

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis, All Types	TB ² (all forms)	Meningo- coccal Infections	Polio	Syphilis	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	0.1	1.5	142.2	740.3	0.6	97.2	3.2	19.1	316.2	221.3	
1947	3.9	0.0	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	0.0	-	0.1	37.7	153.7	14.3	59.6	1.8	5.6	43.0	100.9	

¹ Meningococcal infections prior to 1952 data were for meningococcal meningitis.

² 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.

Source: Bureau of Disease Control and Laboratory Services, Division of Epidemiology, MDPH.

Table 4.6 (continued)
Case Rates of Certain Reported Communicable Diseases
Michigan Residents, 1900 - 1990 (Rates per 100,000 population)

Year	Diphtheria	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis, All Types	TB ² (all forms)	Meningo- ¹ coccal Infections	Polio	Syphilis	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	0.0	-	0.1	8.1	371.9	58.3	48.6	3.2	0.5	41.9	120.3	
1962	0.1	-	0.2	22.1	318.7	41.3	43.8	1.8	0.3	54.6	146.8	
1963	0.1	-	0.2	17.6	607.1	33.1	41.1	1.3	0.2	68.6	137.5	
1964	0.0	-	0.2	11.8	381.4	30.5	37.6	1.0	0.0	64.4	148.5	
1965	-	-	0.1	7.5	343.1	32.0	37.4	1.3	0.0	68.8	174.6	
1966	0.0	-	0.1	7.9	183.4	31.1	39.2	1.6	0.0	70.3	185.5	
1967	0.0	-	0.1	12.3	12.2	22.2	34.2	0.9	0.0	64.8	198.4	
1968	-	-	0.0	4.9	4.1	27.2	30.2	1.1	0.0	61.7	209.3	
1969	-	-	0.1	2.2	4.6	38.5	24.4	1.3	0.0	43.6	212.2	
1970	-	-	0.2	2.2	20.7	51.8	22.4	0.8	0.0	44.2	229.4	
1971	0.0	-	0.1	1.6	29.6	53.8	19.9	0.7	-	53.5	248.1	
1972	0.0	-	0.1	1.3	26.1	47.9	18.1	0.6	0.0	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	0.0	29.9	352.0	
1975	0.0	-	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	0.0	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	0.0	12.3	398.3	
1979	-	-	0.2	1.1	9.4	22.0	11.4	0.9	-	13.6	396.0	
1980	0.0	-	0.1	0.4	2.7	19.4	12.6	0.8	0.0	12.6	377.4	
1981	-	-	0.3	0.3	0.4	18.3	10.0	1.0	-	11.4	350.9	0.0
1982	-	-	0.2	0.4	0.7	18.9	9.4	0.9	-	10.0	356.0	0.0
1983	-	-	0.1	0.5	0.1	19.5	8.6	1.0	-	8.0	372.1	0.2
1984	-	-	0.1	0.3	5.1	19.0	7.3	1.0	-	8.3	383.9	0.5
1985	-	-	0.1	0.6	0.7	16.4	5.9	1.2	-	7.2	368.8	0.9
1986	-	-	0.1	0.4	0.2	13.8	6.8	0.9	-	6.4	414.8	1.6
1987	-	-	0.1	0.6	0.5	17.5	5.9	1.2	0.0	6.8	503.8	2.4
1988	-	-	0.1	0.4	0.3	13.0	5.5	1.0	-	11.0	405.1	3.9
1989	-	-	0.1	0.5	3.9	11.3	5.0	0.8	-	17.4	362.6	5.5
1990	-	-	0.1	0.9	5.9	12.0	5.4	0.7	-	28.2	331.1	6.2

¹ Meningococcal infections prior to 1952 data were for meningococci meningitis.

² 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.

Source: Bureau of Disease Control and Laboratory Services, Division of Epidemiology, MDPH.

Table 4.7
Number of Deaths and Death Rates for Certain Communicable Diseases
Michigan Residents, 1900 - 1990 (Rates per 100,000 population)

Year	Diphtheria		Strep. Sore Throat Incl. Scarlet Fever		Smallpox		Typhoid Fever		Whooping Cough		Measles		TB of the Respiratory System		Tuberculosis ² (all forms)		Poliomyelitis		Syphilis		Gonorrhea	
	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	9	0.4	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	27	1.1	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	42	1.7	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	29	1.1	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	26	1.0	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	74	2.8	636	24.3	131	5.0	123	4.7	2,288	87.5	2,732	104.5			89	3.5		
1906	472	17.8	227	8.6	3	0.1	721	27.2	469	17.7	251	9.5	2,303	86.8	2,737	103.1			89	3.4		
1907	421	15.6	159	5.9	8	0.3	594	22.1	223	8.3	256	9.5	2,338	86.8	2,728	101.3			94	3.6		
1908	343	12.6	194	7.1	11	0.4	687	25.1	305	11.2	121	4.4	2,249	82.3	2,706	99.0			118	4.5		
1909	395	14.3	275	9.9	4	0.1	653	23.6	217	7.8	270	9.7	2,237	80.7	2,629	94.9			127	4.8		
1910	495	17.6	297	10.6	121	4.3	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	7	0.2	551	19.0	254	8.8	200	6.9	2,284	78.9	2,766	95.5	55	1.9	104	3.6		
1912	465	15.6	186	6.2	3	0.1	534	17.9	252	8.5	118	4.0	2,289	76.8	2,744	92.0	48	1.7	90	3.1		
1913	676	22.0	283	9.2	5	0.2	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	2	0.1	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	5	0.2	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	2	0.1	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	9	0.3	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	18	0.5	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	10	0.3	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	14	0.4	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	12	0.3	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	20	0.5	192	4.9	322	5.9	232	5.9	2,232	57.2	2,654	68.0	21	0.5	186	4.7	5	0.1
1923	675	16.8	304	7.6	13	0.3	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	226	5.5	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	22	0.5	157	3.7	260	6.1	69	1.6	2,410	56.6	2,830	66.5	31	0.7	282	6.6	13	0.3
1926	677	15.5	235	5.4	4	0.1	119	2.7	355	8.1	577	13.2	2,601	59.5	3,041	69.5	34	0.8	327	7.5	12	0.3
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	16	0.4
1928	384	8.3	178	3.9	2	0.0	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	9	0.2	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

¹ From 1901 through 1920, syphilis includes all other venereal diseases, beginning with 1968 excludes aortic aneurysms not specified as syphilitic.

² 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.

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

Table 4.7 (continued)
Number of Deaths and Death Rates for Certain Communicable Diseases
 Michigan Residents, 1900 - 1990 (Rates per 100,000 population)

Year	Diphtheria		Strep. Sore Throat Incl. Scarlet Fever		Smallpox		Typhoid Fever		Whooping Cough		Measles		TB of the Respiratory System		Tuberculosis ² (all forms)		Poliomyelitis		Syphilis		Gonorrhea	
	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	9	0.2	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	4	0.1	73	1.5	190	3.9	28	0.6	2,263	46.3	2,660	54.5	108	2.2	361	7.4	3	0.1
1932	106	2.2	112	2.3	1	0.0	56	1.1	199	4.0	183	3.7	2,101	42.7	2,463	50.0	23	0.5	377	7.7	2	0.0
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	0.1	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	0.1
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	1	0.0	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	0.1
1940	20	0.4	41	0.8	1	0.0	11	0.2	59	1.1	19	0.4	1,547	29.4	1,752	33.3	72	1.4	591	11.2	3	0.0
1941	18	0.3	32	0.6	1	0.0	14	0.3	91	1.7	65	1.2	1,532	28.2	1,723	31.7	18	0.3	537	9.9	1	0.0
1942	24	0.4	23	0.4	-	-	5	0.1	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	0.0
1944	32	0.6	7	0.1	1	0.0	7	0.1	33	0.6	49	0.9	1,544	28.7	1,748	32.5	45	0.8	543	10.1	2	0.0
1945	46	0.8	9	0.2	-	-	3	0.1	36	0.7	10	0.2	1,591	29.3	1,758	32.3	20	0.4	527	9.7	2	0.0
1946	27	0.5	3	0.1	-	-	6	0.1	44	0.8	47	0.8	1,645	28.8	1,843	32.3	89	1.6	547	9.6	-	-
1947	23	0.4	6	0.1	-	-	5	0.1	63	1.0	5	0.1	1,483	24.4	1,643	27.1	29	0.5	502	8.3	3	0.0
1948	8	0.1	1	0.0	-	-	4	0.1	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	0.1	-	-	1	0.0	22	0.3	33	0.5	1,254	19.7	1,400	22.0	216	3.4	455	7.2	-	-
1950	2	0.0	1	0.0	-	-	5	0.1	28	0.4	28	0.4	1,134	17.8	1,270	19.9	128	2.0	325	5.1	1	0.0
1951	6	0.1	-	-	-	-	1	0.0	21	0.3	11	0.2	1,049	16.0	1,154	17.6	67	1.0	299	4.6	1	0.0
1952	2	0.0	-	-	-	-	-	-	8	0.1	17	0.3	689	10.3	775	11.6	213	3.2	174	2.6	1	0.0
1953	2	0.0	1	0.0	-	-	-	-	11	0.2	16	0.2	536	7.8	607	8.9	108	1.6	182	2.7	2	0.0
1954	3	0.0	3	0.0	-	-	-	-	17	0.2	17	0.2	471	6.7	530	7.5	89	1.3	139	2.0	2	0.0
1955	1	0.0	1	0.0	-	-	1	0.0	8	0.1	10	0.1	435	6.0	477	6.6	32	0.4	115	1.6	1	0.0
1956	6	0.1	3	0.0	-	-	-	-	6	0.1	26	0.3	426	5.7	466	6.2	22	0.3	114	1.5	4	0.1
1957	1	0.0	-	-	-	-	-	-	6	0.1	23	0.3	403	5.2	442	5.7	15	0.2	105	1.3	4	0.1
1958	-	-	-	-	-	-	-	-	1	0.0	18	0.2	357	4.5	395	5.0	37	0.5	84	1.1	8	0.1
1959	1	0.0	2	0.0	-	-	1	0.0	5	0.1	11	0.1	335	4.2	370	4.6	17	0.2	84	1.1	4	0.1

¹ From 1901 through 1920, syphilis includes all other venereal diseases, beginning with 1968 excludes aortic aneurysms not specified as syphilitic.

² 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.

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

Table 4.7 (continued)
 Number of Deaths and Death Rates for Certain Communicable Diseases
 Michigan Residents, 1900 - 1990 (Rates per 100,000 population)

Year	Diphtheria		Strep. Sore Throat Incl. Scarlet Fever		Smallpox		Typhoid Fever		Whooping Cough		Measles		TB of the Respiratory System		Tuberculosis ¹ (all forms)		Poliomyelitis		Syphilis		Gonorrhea	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1960	2	0.0	1	0.0	-	-	-	-	1	0.0	17	0.2	364	4.7	390	5.0	4	0.1	79	1.0	7	0.1
1961	1	0.0	1	0.0	-	-	-	-	2	0.0	13	0.2	307	3.9	332	4.2	-	-	71	0.9	7	0.1
1962	2	0.0	1	0.0	-	-	-	-	2	0.0	8	0.1	307	3.9	331	4.2	2	0.0	94	1.2	3	0.0
1963	-	-	-	-	-	-	-	-	-	-	27	0.3	276	3.4	299	3.7	1	0.0	72	0.9	1	0.0
1964	-	-	-	-	-	-	-	-	2	0.0	11	0.1	288	3.6	315	3.9	1	0.0	66	0.8	3	0.0
1965	-	-	-	-	-	-	-	-	-	-	5	0.1	261	3.2	285	3.5	-	-	65	0.8	2	0.0
1966	1	0.0	-	-	-	-	-	-	-	-	7	0.1	284	3.4	301	3.6	-	-	63	0.8	-	-
1967	-	-	-	-	-	-	-	-	-	-	3	0.0	206	2.4	226	3.0	-	-	44	0.5	1	0.0
1968	-	-	1	0.0	-	-	-	-	-	-	-	-	203	2.3	262	3.0	2	0.0	29	0.3	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	147	1.7	201	2.3	-	-	26	0.3	1	0.0
1970	-	-	2	0.0	-	-	-	-	-	-	1	0.0	134	1.5	180	2.0	-	-	17	0.2	2	0.0
1971	-	-	4	0.0	-	-	-	-	-	-	-	-	122	1.4	173	1.9	-	-	18	0.2	-	-
1972	-	-	1	0.0	-	-	1	0.0	-	-	-	-	111	1.2	157	1.7	1	0.0	12	0.1	-	-
1973	-	-	-	-	-	-	-	-	1	0.0	2	0.0	101	1.1	138	1.5	3	0.0	12	0.1	-	-
1974	-	-	1	0.0	-	-	-	-	2	0.0	-	-	109	1.2	142	1.6	3	0.0	11	0.1	-	-
1975	-	-	-	-	-	-	-	-	1	0.0	1	0.0	81	0.9	110	1.2	5	0.1	10	0.1	1	0.0
1976	-	-	-	-	-	-	-	-	-	-	-	-	80	0.9	102	1.1	6	0.1	11	0.1	-	-
1977	-	-	1	0.0	-	-	-	-	-	-	-	-	67	0.7	97	1.1	6	0.1	3	0.0	-	-
1978	-	-	-	-	-	-	-	-	1	0.0	1	0.0	60	0.7	80	0.9	2	0.0	5	0.1	-	-
1979	-	-	-	-	-	-	-	-	-	-	-	-	47	0.5	62	0.7	2	0.0	9	0.1	-	-
1980	-	-	-	-	-	-	-	-	-	-	-	-	51	0.6	61	0.7	-	-	1	0.0	1	0.0
1981	-	-	-	-	-	-	1	0.0	-	-	-	-	41	0.4	53	0.6	-	-	4	0.0	1	0.0
1982	-	-	-	-	-	-	-	-	-	-	1	0.0	30	0.3	41	0.4	-	-	-	-	-	-
1983	-	-	1	0.0	-	-	-	-	-	-	1	0.0	28	0.3	39	0.4	-	-	3	0.0	-	-
1984	-	-	-	-	-	-	-	-	-	-	-	-	47	0.5	59	0.7	-	-	2	0.0	-	-
1985	-	-	-	-	-	-	-	-	-	-	-	-	37	0.4	46	0.5	-	-	3	0.0	-	-
1986	-	-	-	-	-	-	-	-	-	-	-	-	36	0.4	44	0.5	-	-	2	0.0	-	-
1987	-	-	-	-	-	-	-	-	-	-	-	-	39	0.4	46	0.5	-	-	2	0.0	-	-
1988	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1989	-	-	-	-	-	-	-	-	-	-	-	-	31	0.3	32	0.3	10	0.1	3	0.0	-	-
1990	-	-	1	0.0	-	-	-	-	-	-	-	-	28	0.3	36	0.3	-	-	3	0.0	-	-

¹ From 1901 through 1920, syphilis includes all other venereal diseases, beginning with 1968 excludes aortic aneurysms not specified as syphilitic.

² 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.

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

Table 4.8
Number of Deaths and Death Rates by Specified Causes
Michigan Residents, 1900 - 1990
(Rates per 100,000 population)

Year	Heart Disease		Cancer (all forms) ¹		Cerebrovascular Disease		Accidents (all forms) ³		Motor Vehicle Accidents ⁴		Diabetes		Pneumonia		Chronic Liver Disease & Cirrhosis ⁵		Atherosclerosis ⁶	
	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	3,876	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	5,849	157.9				
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	261	6.9		
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	6.8		
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	4,087	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		

¹ Cancer includes leukemias, aleukemias, and Hodgkin's disease beginning with 1921.

² Cerebrovascular disease was called Vascular Lesions Affecting Central Nervous System prior to 1968.

³ Accidents exclude injuries undetermined whether accidentally or purposely inflicted since 1968.

⁴ Motor vehicle accidents do not include collision with heavier vehicles from 1910 through 1922. Motorcycle accidents are included beginning 1923.

⁵ Chronic liver disease and cirrhosis was called Cirrhosis of the Liver prior to 1979.

⁶ Atherosclerosis was called General Arteriosclerosis prior to 1968 and was called Arteriosclerosis from 1968-1978.

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

Table 4.8 (continued)
 Number of Deaths and Death Rates by Specified Causes
 Michigan Residents, 1900 - 1990
 (Rates per 100,000 population)

Year	Heart Disease		Cancer (all forms) ¹		Cerebrovascular Disease		Accidents (all forms) ³		Motor Vehicle Accidents ⁴		Diabetes		Pneumonia		Chronic Liver Disease & Cirrhosis ⁵		Atherosclerosis ⁶	
	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	1,025	19.1	1,535	28.5	2,931	54.5	518	9.6	1,092	20.3
1944	17,004	316.2	7,277	135.3	4,954	92.1	3,350	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	134.0	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	1,894	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	1,680	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	56.2	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

¹ Cancer includes leukemias, aleukemias, and Hodgkin's disease beginning with 1971.

² Cerebrovascular disease was called Vascular Lesions Affecting Central Nervous System prior to 1968.

³ Accidents exclude injuries undetermined whether accidentally or purposely inflicted since 1968.

⁴ Motor vehicle accidents do not include collision with heavier vehicles from 1910 through 1922. Motorcycle accidents are included beginning 1923.

⁵ Chronic liver disease and cirrhosis was called Cirrhosis of the Liver prior to 1979.

⁶ Atherosclerosis was called General Arteriosclerosis prior to 1968 and was called Arteriosclerosis from 1968-1978.

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

Table 4.8 (continued)
Number of Deaths and Death Rates by Specified Causes
Michigan Residents, 1900 - 1990
(Rates per 100,000 population)

Year	Heart Disease		Cancer (all forms) ¹		Cerebrovascular Disease		Accidents (all forms) ³		Motor Vehicle Accidents ⁴		Diabetes		Pneumonia		Chronic Liver Disease & Cirrhosis ⁵		Atherosclerosis ⁶	
	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	1,621	14.5
1969	29,396	336.6	13,328	152.6	7,705	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	30,865	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	43.9	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	1,387	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

¹ Cancer includes leukemias, aleukemias, and Hodgkin's disease beginning with 1971.

² Cerebrovascular disease was called Vascular Lesions Affecting Central Nervous System prior to 1968.

³ Accidents exclude injuries undetermined whether accidentally or purposely inflicted since 1968.

⁴ Motor vehicle accidents do not include collision with heavier vehicles from 1910 through 1972. Motorcycle accidents are included beginning 1923.

⁵ Chronic liver disease and cirrhosis was called Cirrhosis of the Liver prior to 1979.

⁶ Atherosclerosis was called General Arteriosclerosis prior to 1968 and was called Arteriosclerosis from 1968-1978.

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

Table 4.9
Selected Vital Statistics by County
Michigan Residents, 1990

Area	Population Estimate	Live Births	Low Weight Live Births	Deaths	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages ¹	Divorces ¹
Michigan	9,295,297	153,080	11,608	78,501	1,638	1,073	1,722	830	76,099	40,568
Alcona	10,145	108	3	151	1	-	3	3	79	42
Alger	8,972	105	4	125	-	-	-	-	65	38
Allegan	90,509	1,475	77	678	13	6	11	7	707	415
Alpena	30,605	370	23	289	1	-	-	-	248	130
Antrim	18,185	245	11	190	2	1	-	-	153	81
Arenac	14,931	206	22	182	1	1	1	-	108	52
Baraga	7,954	109	7	111	2	1	2	1	45	30
Barry	50,057	733	36	388	8	6	8	3	408	242
Bay	111,723	1,684	112	939	12	5	13	9	968	425
Benzie	12,200	174	16	126	4	4	3	-	102	63
Berrien	161,378	2,646	208	1,569	41	21	29	12	1,506	720
Branch	41,502	641	43	361	10	5	5	-	378	228
Calhoun	135,982	2,238	171	1,288	26	19	28	11	1,309	793
Cass	49,477	648	43	424	6	2	4	3	373	251
Charlevoix	21,468	339	19	183	3	2	4	2	202	106
Cheboygan	21,398	293	15	231	6	5	8	3	198	90
Chippewa	34,604	417	17	281	3	2	2	-	331	134
Clare	24,952	422	22	314	4	-	2	2	241	132
Clinton	57,883	865	55	359	7	6	6	1	495	242
Crawford	12,260	191	12	120	5	4	4	-	111	58
Delta	37,780	477	18	351	3	-	2	2	353	163
Dickinson	26,831	339	22	294	1	-	2	2	273	145
Eaton	92,879	1,230	82	639	9	2	7	5	766	423
Emmet	25,040	367	12	245	-	-	3	3	267	178
Genesee	430,459	7,653	712	3,552	92	61	91	37	3,712	1,750
Gladwin	21,896	297	20	240	5	3	7	4	173	103
Gogebic	18,052	171	15	254	-	-	-	-	123	62
Grand Traverse	64,273	935	41	481	5	-	1	1	765	336
Gratiot	38,982	559	31	399	1	1	6	5	343	161
Hillsdale	43,431	615	37	391	7	5	6	4	347	233
Houghton	35,446	476	16	398	4	4	9	5	236	100
Huron	34,951	495	28	369	3	3	6	3	248	188
Ingham	281,912	4,595	320	1,757	56	38	67	38	2,692	1,289
Ionia	57,024	824	48	400	9	3	12	10	492	241
Iosco	30,209	586	25	318	2	2	7	5	310	165
Iron	13,175	139	9	198	2	-	-	-	85	45
Isabella	54,624	759	48	326	5	4	5	1	395	202
Jackson	149,756	2,395	180	1,296	25	18	31	13	1,349	744
Kalamazoo	223,411	3,526	235	1,646	29	19	34	20	1,992	1,042
Kalkaska	13,497	199	6	110	2	1	-	-	132	116
Kent	500,631	9,781	567	3,593	86	56	110	66	4,908	2,261
Keweenaw	1,701	17	-	41	-	-	-	-	13	4

¹ By county of occurrence rather than county of residence.

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

Table 4.9 (continued)
Selected Vital Statistics by County
Michigan Residents, 1990

Area	Population Estimate	Live Births	Low Weight Live Births	Deaths	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages ¹	Divorces ¹
Lake	8,583	106	11	145	5	1	1	-	62	27
Lapeer	74,768	1,150	53	500	4	1	7	6	641	377
Leelanau	16,527	222	4	159	-	-	2	2	126	55
Lenawee	91,476	1,362	79	754	11	5	9	4	689	411
Livingston	115,645	1,664	82	704	12	7	10	4	1,003	536
Luce	5,763	75	4	66	-	-	1	1	43	36
Mackinac	10,674	136	3	125	-	-	2	2	171	49
Macomb	717,400	10,499	635	5,716	66	48	85	45	6,803	3,092
Manistee	21,265	235	16	270	-	-	2	2	177	94
Marquette	70,887	1,032	47	501	6	2	6	5	620	303
Mason	25,537	372	21	310	2	1	1	-	269	152
Mecosta	37,308	476	24	282	8	8	8	1	239	139
Menominee	24,920	273	11	232	1	-	-	-	221	113
Midland	75,651	1,218	61	427	9	6	13	7	749	351
Missaukee	12,147	169	9	116	2	2	2	-	105	57
Monroe	133,600	1,572	87	975	8	4	10	7	1,047	659
Montcalm	53,059	869	44	459	7	4	8	4	500	282
Montmorency	8,936	77	3	128	1	-	-	-	60	33
Muskegon	158,983	2,762	192	1,442	24	15	28	14	1,433	841
Newaygo	38,202	686	31	373	3	2	2	-	374	178
Oakland	1,083,592	17,008	1,000	7,690	119	87	159	91	9,570	5,006
Oceana	22,454	401	9	199	3	3	3	-	196	121
Ogemaw	18,681	290	11	253	4	2	1	-	154	34
Ononagon	8,854	96	5	97	-	-	-	-	63	28
Osceola	20,146	297	18	184	3	2	5	4	184	122
Oscoda	7,842	119	4	88	-	-	2	2	72	32
Otsego	17,957	300	18	177	3	3	3	1	180	82
Ottawa	187,768	3,164	131	1,090	21	13	25	16	1,507	564
Presque Isle	13,743	144	10	167	2	2	2	1	82	37
Roscommon	19,776	246	17	260	1	1	2	2	137	76
Saginaw	211,946	3,702	335	1,841	45	30	57	31	1,464	875
St Clair	145,607	2,204	169	1,300	22	15	14	4	1,191	690
St Joseph	58,913	931	61	549	13	11	17	8	455	356
Sanilac	39,928	559	39	426	8	6	7	1	323	142
Schoolcraft	8,302	102	6	101	-	-	-	-	65	36
Shiawassee	69,770	1,063	66	543	6	3	7	4	579	303
Tuscola	55,498	735	39	433	5	2	3	1	448	221
Van Buren	70,060	1,159	75	603	17	9	13	6	628	387
Washtenaw	282,937	4,169	280	1,537	33	23	43	24	2,348	1,254
Wayne	2,111,687	40,680	4,489	21,409	661	443	619	246	12,895	8,035
Wexford	26,360	394	21	248	1	1	3	3	225	159
Co. Not Stated	-	18	-	15	1	1	-	-	-	-

¹ By county of occurrence rather than county of residence.

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

Table 4.10
Selected Vital Statistics Rates by County
Michigan Residents, 1990

Area	Live Births	Low Weight Live Births ¹	Deaths	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages ²	Divorces ²
Michigan	16.5	75.8	8.4	10.7	7.0	11.2	5.4	16.4	8.7
Alcona	10.6	27.8	14.9	9.3	-	27.0	27.0	15.6	8.3
Alger	11.7	38.1	13.9	-	-	-	-	14.5	8.5
Allegan	16.3	52.2	7.5	8.8	4.1	7.4	4.7	15.6	9.2
Alpena	12.1	62.2	9.4	2.7	-	-	-	16.2	8.5
Antrim	13.5	44.9	10.4	8.2	4.1	4.1	-	16.8	8.9
Arenac	13.8	106.8	12.2	4.9	9.2	4.9	-	14.5	7.0
Baraga	13.7	64.2	14.0	18.3	9.2	18.2	9.1	11.3	7.5
Barry	14.6	49.1	7.8	10.9	8.2	10.9	4.1	16.3	9.7
Bay	15.1	66.5	8.4	7.1	3.0	7.7	5.3	17.3	7.6
Benzie	14.3	92.0	10.3	23.0	23.0	17.2	-	16.7	10.3
Berrien	16.4	78.6	9.7	15.5	7.9	10.9	4.5	18.7	8.9
Branch	15.4	67.1	8.7	15.6	7.8	7.8	-	18.2	11.0
Calhoun	16.5	76.4	9.5	11.6	8.5	12.4	4.9	19.3	11.7
Cass	13.1	66.4	8.6	9.3	3.1	6.1	4.6	15.1	10.1
Charlevoix	15.8	56.0	8.5	8.8	5.9	11.7	5.9	18.8	9.9
Cheboygan	13.7	51.2	10.8	20.5	17.1	27.0	10.1	18.5	8.4
Chippewa	12.1	40.8	8.1	7.2	4.8	4.8	-	19.1	7.7
Clare	16.9	52.1	12.6	9.5	-	4.7	4.7	19.3	10.6
Clinton	14.9	63.6	6.2	8.1	6.9	6.9	1.2	17.1	8.4
Crawford	15.6	62.8	9.8	26.2	20.9	20.9	-	18.1	9.5
Delta	12.6	37.7	9.3	6.3	-	4.2	4.2	18.7	8.6
Dickinson	12.6	64.9	11.0	2.9	-	5.9	5.9	20.3	10.8
Eaton	13.2	66.7	6.9	7.3	1.6	5.7	4.0	16.5	9.1
Emmet	14.7	32.7	9.8	-	-	8.1	8.1	21.3	14.2
Genesee	17.8	93.0	8.3	12.0	8.0	11.8	4.8	17.2	8.1
Gladwin	13.6	67.3	11.0	16.8	10.1	23.3	13.3	15.8	9.4
Gogebic	9.5	87.7	14.1	-	-	-	-	13.6	6.9
Grand Traverse	14.5	43.9	7.5	5.3	-	1.1	1.1	23.8	10.5
Gratiot	14.3	55.5	10.2	1.8	1.8	10.6	8.9	17.6	8.3
Hillsdale	14.2	60.2	9.0	11.4	8.1	9.7	6.5	16.0	10.7
Houghton	13.4	33.6	11.2	8.4	8.4	18.7	10.4	13.3	5.6
Huron	14.2	56.6	10.6	6.1	6.1	12.0	6.0	14.2	10.8
Ingham	16.3	69.6	6.2	12.2	8.3	14.5	8.2	19.1	9.1
Ionia	14.5	58.3	7.0	10.9	3.6	14.4	12.0	17.3	8.5
Iosco	19.4	42.7	10.5	3.4	3.4	11.8	8.5	20.5	10.9
Iron	10.6	64.7	15.0	14.4	-	-	-	12.9	6.8
Isabella	13.9	63.2	6.0	6.6	5.3	6.6	1.3	14.5	7.4
Jackson	16.0	75.2	8.7	10.4	7.5	12.9	5.4	18.0	9.9
Kalamazoo	15.8	66.6	7.4	8.2	5.4	9.6	5.6	17.8	9.3
Kalkaska	14.7	30.2	8.1	10.1	5.0	-	-	19.6	17.2
Kent	19.5	58.0	7.2	8.8	5.7	11.2	6.7	19.6	9.0
Keweenaw	10.0	-	24.1	-	-	-	-	15.3	4.7

¹ Ratio per 1,000 live births.

² 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 Center for Health Statistics, MDPH

Table 4.10 (continued)
Selected Vital Statistics Rates by County
Michigan Residents, 1990

Area	Live Births	Low Weight Live Births ¹	Deaths	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages ²	Divorces ²
Lake	12.3	103.8	16.9	47.2	9.4	9.4	-	14.4	6.3
Lapeer	15.4	46.1	6.7	3.5	0.9	6.1	5.2	17.1	10.1
Leelanau	13.4	18.0	9.6	-	-	8.9	8.9	15.2	6.7
Lenawee	14.9	58.0	8.2	8.1	3.7	6.6	2.9	15.1	9.0
Livingston	14.4	49.3	6.1	7.2	4.2	6.0	2.4	17.3	9.3
Luce	13.0	53.3	11.5	-	-	13.2	13.2	14.9	12.5
Mackinac	12.7	22.1	11.7	-	-	14.5	14.5	32.0	9.2
Macomb	14.6	60.5	8.0	6.3	4.6	8.1	4.3	19.0	8.6
Manistee	11.1	68.1	12.7	-	-	8.4	8.4	16.6	8.8
Marquette	14.6	45.5	7.1	5.8	1.9	5.8	4.8	17.5	8.5
Mason	14.6	56.5	12.1	5.4	2.7	2.7	-	21.1	11.9
Mecosta	12.8	50.4	7.6	16.8	16.8	16.8	2.1	12.8	7.5
Menominee	11.0	40.3	9.3	3.7	-	-	-	17.7	9.1
Midland	16.1	50.1	5.6	7.4	4.9	10.6	5.7	19.8	9.3
Missaukee	13.9	53.3	9.5	11.8	11.8	11.8	-	17.3	9.4
Monroe	11.8	55.3	7.3	5.1	2.5	6.3	4.4	15.7	9.9
Montcalm	16.4	50.6	8.7	8.1	4.6	9.2	4.6	18.8	10.6
Montmorency	8.6	39.0	14.3	13.0	-	-	-	13.4	7.4
Muskegon	17.4	69.5	9.1	8.7	5.4	10.1	5.0	18.0	10.6
Newaygo	18.0	45.2	9.8	4.4	2.9	2.9	-	19.6	9.3
Oakland	15.7	58.8	7.1	7.0	5.1	9.3	5.3	17.7	9.2
Oceana	17.9	22.4	8.9	7.5	7.5	7.5	-	17.5	10.8
Ogemaw	15.5	37.9	13.5	13.8	6.9	3.4	-	16.5	3.6
Ontonagon	10.8	52.1	11.0	-	-	-	-	14.2	6.3
Osceola	14.7	60.6	9.1	10.1	6.7	16.6	13.3	18.3	12.1
Oscoda	15.2	33.6	11.2	-	-	16.5	16.5	18.4	8.2
Oshtemo	16.7	60.0	9.9	10.0	10.0	10.0	3.3	20.0	9.1
Ottawa	16.9	41.4	5.8	6.6	4.1	7.9	5.0	16.1	6.0
Presque Isle	10.5	69.4	12.2	13.9	13.9	13.8	6.9	11.9	5.4
Roscommon	12.4	69.1	13.1	4.1	4.1	8.1	8.1	13.9	7.7
Saginaw	17.5	90.5	8.7	12.2	8.1	15.3	8.3	13.8	8.3
St Clair	15.1	76.7	8.9	10.0	6.8	6.3	1.8	16.4	9.5
St Joseph	15.8	65.5	9.3	14.0	11.8	18.1	8.5	15.4	12.1
Sanilac	14.0	69.8	10.7	14.3	10.7	12.5	1.8	16.2	7.1
Schoolcraft	12.3	58.8	12.2	-	-	-	-	15.7	8.7
Shiawassee	15.2	62.1	7.8	5.6	2.8	6.6	3.7	16.6	8.7
Tuscola	13.2	53.1	7.8	6.8	2.7	4.1	1.4	16.1	8.0
Van Buren	16.5	64.7	8.6	14.7	7.8	11.2	5.2	17.9	11.0
Washtenaw	14.7	67.2	5.4	7.9	5.5	10.3	5.7	16.6	8.9
Wayne	19.3	110.3	10.1	16.2	10.9	15.1	6.0	12.2	7.6
Wexford	14.9	53.3	9.4	2.5	2.5	7.6	7.6	17.1	12.1

¹ Ratio per 1,000 live births.

² 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 Center for Health Statistics, MDPH

Table 4.11
Live Births with Selected Risk Factors by County of Residence
Michigan Residents, 1990

Area	Medical Risk Factor Present ¹		Complications of Labor/Delivery ²		Abnormal Conditions of Newborn ³		Mother Smoked While Pregnant		Mother Drank Alcohol While Pregnant		Congenital Anomalies Reported ⁴		Inadequate Prenatal Care ⁵		Mother's Education <12 Grade		Mother <18 Years of Age	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Michigan	30,579	20.0	43,611	28.5	9,807	6.4	33,456	21.9	5,032	3.3	3,327	2.2	10,076	6.6	30,278	19.8	7,411	4.8
Alcona	39	36.1	45	41.7	3	2.8	29	26.9	1	0.9	3	2.8	3	2.8	26	24.1	7	6.5
Alger	13	12.4	28	26.7	6	5.7	28	26.7	4	3.8	-	-	4	3.8	13	12.4	3	2.9
Allegan	284	19.3	421	28.5	93	6.3	350	23.7	39	2.6	33	2.2	72	4.9	274	18.6	59	4.0
Alpena	79	21.4	155	41.9	16	4.3	123	33.2	-	-	12	3.2	9	2.4	76	20.5	18	4.9
Antrim	56	22.9	85	34.7	13	5.3	66	26.9	9	3.7	4	1.6	16	6.5	54	22.0	13	5.3
Arenac	31	15.0	56	27.2	10	4.9	49	23.8	4	1.9	3	1.5	11	5.3	44	21.4	7	3.4
Baraga	18	16.5	37	33.9	4	3.7	47	43.1	14	12.8	3	2.8	7	6.4	27	24.8	5	4.6
Barry	177	24.1	260	35.5	56	7.6	203	27.7	37	5.0	16	2.2	29	4.0	108	14.7	19	2.6
Bay	284	16.9	387	23.0	89	5.3	261	15.5	44	2.6	40	2.4	50	3.0	289	17.2	76	4.5
Benzie	42	24.1	41	23.6	4	2.3	37	21.3	6	3.4	4	2.3	13	7.5	24	13.8	10	5.7
Berrien	594	22.4	772	29.2	153	5.8	561	21.2	55	2.1	34	1.3	207	7.8	707	26.7	221	8.4
Branch	145	22.6	221	34.5	35	5.5	178	27.8	21	3.3	11	1.7	47	7.3	152	23.7	24	3.7
Calhoun	413	18.5	666	29.8	132	5.9	561	25.1	87	3.9	43	1.9	233	10.4	487	21.8	136	6.1
Cass	186	28.7	253	39.0	45	6.9	200	30.9	19	2.9	27	4.2	49	7.6	181	27.9	34	5.2
Charlevoix	72	21.2	108	31.9	18	5.3	82	24.2	8	2.4	10	2.9	15	4.4	52	15.3	7	2.1
Cheboygan	87	29.7	110	37.5	9	3.1	83	28.3	4	1.4	5	1.7	8	2.7	50	17.1	9	3.1
Chippewa	43	10.3	85	20.4	19	4.6	127	30.5	13	3.1	8	1.9	33	7.9	73	17.5	13	3.1
Clare	85	20.1	104	24.6	14	3.3	96	22.7	6	1.4	6	1.4	14	3.3	77	18.2	16	3.8
Clinton	137	15.8	307	35.5	118	13.6	116	13.4	24	2.8	26	3.0	50	5.8	79	9.1	19	2.2
Crawford	45	23.6	73	38.2	21	11.0	78	40.8	19	9.9	9	4.7	11	5.8	68	35.6	20	10.5
Delta	149	31.2	143	30.0	18	3.8	155	32.5	31	6.5	12	2.5	19	4.0	64	13.4	18	3.8
Dickinson	44	13.0	60	17.7	17	5.0	93	27.4	19	5.6	4	1.2	6	1.8	45	13.3	10	2.9
Eaton	221	18.0	396	32.2	156	12.7	200	16.3	50	4.1	18	1.5	76	6.2	130	10.6	37	3.0
Emmet	86	23.4	132	36.0	17	4.6	90	24.5	10	2.7	6	1.6	6	1.6	43	11.7	9	2.5
Genesee	1,016	13.3	1,891	24.7	373	4.9	1,644	21.5	271	3.5	303	4.0	314	4.1	1,835	24.0	482	6.3
Gladwin	66	22.2	81	27.3	12	4.0	72	24.2	3	1.0	4	1.3	27	9.1	82	27.6	16	5.4
Gogebic	88	51.5	100	58.5	26	15.2	73	42.7	15	8.8	4	2.3	14	8.2	24	14.0	5	2.9
Grand Traverse	182	19.5	265	28.3	36	3.9	177	18.9	25	2.7	13	1.4	47	5.0	91	9.7	13	1.4
Gratiot	114	20.4	186	33.3	71	12.7	120	21.5	13	2.3	15	2.7	28	5.0	108	19.3	20	3.6
Hillsdale	133	21.6	233	37.9	29	4.7	182	29.6	23	3.7	10	1.6	54	8.8	125	20.3	29	4.7

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 Center for Health Statistics, MDPH

Table 4.11 (continued)
Live Births with Selected Risk Factors by County of Residence
Michigan Residents, 1990

Area	Medical Risk Factor Present ¹		Complications of Labor/Delivery ²		Abnormal Conditions of Newborn ³		Mother Smoked While Pregnant		Mother Drank Alcohol While Pregnant		Congenital Anomalies Reported ⁴		Inadequate Prenatal Care ⁵		Mother's Education <12 Grade		Mother <18 Years of Age	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Houghton	84	17.6	172	36.1	31	6.5	111	23.3	39	8.2	15	3.2	19	4.0	45	9.5	14	2.9
Huron	97	19.6	144	29.1	37	7.5	115	23.2	15	3.0	12	2.4	19	3.8	58	11.7	8	1.6
Ingham	907	19.7	1,561	34.0	606	13.2	522	11.4	142	3.1	79	1.7	356	7.7	863	18.8	206	4.5
Ionia	198	24.0	260	31.6	108	13.1	239	29.0	29	3.5	34	4.1	48	5.8	173	21.0	31	3.8
Iosco	141	24.1	190	32.4	22	3.8	110	18.8	8	1.4	10	1.7	18	3.1	93	15.9	15	2.6
Iron	27	19.4	42	30.2	9	6.5	43	30.9	14	10.1	5	3.6	6	4.3	30	21.6	5	3.6
Isabella	203	26.7	257	33.9	54	7.1	173	22.8	11	1.4	18	2.4	50	6.6	111	14.6	15	2.0
Jackson	838	35.0	1,136	47.4	120	5.0	663	27.7	36	1.5	25	1.0	270	11.3	449	18.7	145	6.1
Kalamazoo	966	27.4	1,483	42.1	422	12.0	899	25.5	212	6.0	42	1.2	158	4.5	607	17.2	157	4.5
Kalamazoo	45	22.6	48	24.1	7	3.5	65	32.7	11	5.5	3	1.5	15	7.5	55	27.6	9	4.5
Kalamazoo	1,869	19.1	2,699	27.6	637	6.7	1,935	19.8	223	2.3	313	3.2	659	6.7	1,602	16.4	421	4.3
Kalamazoo	2	11.8	5	29.4	-	-	4	23.5	1	5.9	-	-	3	17.6	2	11.8	-	-
Kalamazoo	26	24.5	36	34.0	9	8.5	44	41.5	2	1.9	3	2.8	21	19.8	33	31.1	8	7.5
Kalamazoo	220	19.1	398	34.6	84	7.3	304	26.4	56	4.9	39	3.4	41	3.6	192	16.7	37	3.2
Kalamazoo	49	22.1	72	32.4	9	4.1	33	14.9	5	2.3	3	1.4	12	5.4	23	10.4	7	3.2
Kalamazoo	186	13.7	417	30.6	66	4.8	296	21.7	45	3.3	28	2.1	66	4.8	286	21.0	59	4.3
Kalamazoo	278	16.7	511	30.7	56	3.4	309	18.6	98	5.9	29	1.7	58	3.5	126	7.6	33	2.0
Kalamazoo	16	21.3	24	32.0	3	4.0	27	36.0	3	4.0	1	1.3	3	4.0	22	29.3	8	10.7
Kalamazoo	30	22.1	38	27.9	7	5.1	43	31.6	2	1.5	2	1.5	9	6.6	30	22.1	7	5.1
Kalamazoo	2,283	21.7	3,056	29.1	1,092	10.4	2,411	23.0	381	3.6	324	3.1	578	5.5	1,129	10.8	183	1.7
Kalamazoo	43	18.3	62	26.4	11	4.7	47	20.0	6	2.6	3	1.3	44	18.7	39	16.6	10	4.3
Kalamazoo	199	19.3	319	30.9	67	6.5	181	17.5	19	1.8	24	2.3	20	1.9	79	7.7	27	2.6
Kalamazoo	80	21.5	106	28.5	14	3.8	105	28.2	4	1.1	5	1.3	31	8.3	79	21.2	10	2.7
Kalamazoo	110	23.1	136	28.6	38	8.0	124	26.1	7	1.5	18	3.8	46	9.7	94	19.7	20	4.2
Kalamazoo	111	40.7	108	39.6	34	12.5	83	30.4	11	4.0	4	1.5	15	5.5	43	15.8	13	4.8
Kalamazoo	377	31.0	494	40.6	89	7.3	230	18.9	3	0.2	28	2.3	21	1.7	137	11.2	28	2.3
Kalamazoo	52	30.8	69	40.8	7	4.1	51	30.2	5	3.0	4	2.4	12	7.1	37	21.9	7	4.1
Kalamazoo	332	21.1	501	31.9	114	7.3	412	26.2	49	3.1	26	1.7	78	5.0	302	19.2	77	4.9
Kalamazoo	183	21.1	258	29.7	141	16.2	255	29.3	14	1.6	48	5.5	82	9.4	199	22.9	38	4.4
Kalamazoo	22	28.6	28	36.4	2	2.6	24	31.2	2	2.6	1	1.3	1	1.3	15	19.5	5	6.5

¹ Examples of medical risk factors include: anemia, diabetes, hypertension, edema, 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 Center for Health Statistics, MDH

Table 4.11 (continued)
Live Births with Selected Risk Factors by County of Residence
Michigan Residents, 1990

Area	Medical Risk Factor Present ¹		Complications of Labor/Delivery ²		Abnormal Conditions of Newborn ³		Mother Smoked While Pregnant		Mother Drank Alcohol While Pregnant		Congenital Anomalies Reported ⁴		Inadequate Prenatal Care ⁵		Mother's Education <12 Grade		Mother <18 Years of Age	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Muskegon	387	14.0	468	16.9	53	1.9	836	30.3	104	3.8	44	1.6	218	7.9	567	20.5	181	6.6
Newaygo	186	27.1	214	31.2	48	7.0	183	26.7	17	2.5	8	1.2	42	6.1	154	22.4	30	4.4
Oakland	3,470	20.4	4,757	28.0	1,233	7.2	2,819	16.6	515	3.0	591	3.5	645	3.8	1,908	11.2	417	2.5
Oceana	58	14.5	119	29.7	16	4.0	107	26.7	19	4.7	9	2.2	39	9.7	117	29.2	31	7.7
Ogemaw	46	15.9	62	21.4	7	2.4	88	30.3	3	1.0	7	2.4	13	4.5	70	24.1	10	3.4
Ontonagon	21	21.9	42	43.8	8	8.3	33	34.4	5	5.2	1	1.0	6	6.3	11	11.5	4	4.2
Oscoda	95	32.0	106	35.7	20	6.7	100	33.7	6	2.0	9	3.0	26	8.8	66	22.2	10	3.4
Oscoda	32	26.9	35	29.4	4	3.4	30	25.2	4	3.4	-	-	9	7.6	34	28.6	4	3.4
Oshtemo	78	26.0	118	39.3	24	8.0	91	30.3	10	3.3	4	1.3	12	4.0	47	15.7	13	4.3
Ottawa	486	15.4	763	24.1	98	3.1	368	11.6	46	1.5	53	1.7	103	3.3	392	12.4	83	2.6
Presque Isle	33	22.9	58	40.3	6	4.2	36	25.0	1	0.7	3	2.1	6	4.2	17	11.8	2	1.4
Roscommon	67	27.2	87	35.4	21	8.5	98	39.8	17	6.9	5	2.0	6	2.4	69	28.0	9	3.7
Saginaw	873	23.6	1,067	28.8	126	3.4	655	17.7	188	5.1	55	1.5	257	6.9	823	22.2	255	6.9
St Clair	316	14.3	462	21.0	116	5.3	714	32.4	128	5.8	47	2.1	82	3.7	439	19.9	90	4.1
St Joseph	224	24.1	301	32.3	94	10.1	198	21.3	17	1.8	17	1.8	61	6.6	273	29.3	62	6.7
Sanilac	100	17.9	150	26.8	36	6.4	186	33.3	43	7.7	16	2.9	32	5.7	123	22.0	22	3.9
Schoolcraft	18	17.6	34	33.3	3	2.9	37	36.3	2	2.0	1	1.0	-	-	15	14.7	2	2.0
Shiawassee	176	16.6	301	28.3	67	6.3	264	24.8	54	5.1	28	2.6	46	4.3	205	19.3	49	4.6
Tuscola	126	17.1	227	30.9	26	3.5	178	24.2	17	2.3	11	1.5	38	5.2	138	18.8	33	4.5
Van Buren	279	24.1	421	36.3	88	7.6	301	26.0	43	3.7	28	2.4	84	7.2	352	30.4	63	5.4
Washtenaw	879	21.1	1,367	32.8	104	2.5	627	15.0	154	3.7	90	2.2	207	5.0	449	10.8	150	3.6
Wayne	7,563	18.6	9,931	24.4	2,046	5.0	9,433	23.2	1,295	3.2	458	1.1	3,899	9.6	11,567	28.4	2,916	7.2
Wexford	157	39.8	182	46.2	31	7.9	132	33.5	15	3.8	10	2.5	12	3.0	79	20.1	17	4.3
Unknown	6	33.3	8	44.4	3	16.7	3	16.7	2	11.1	-	-	2	11.1	2	11.1	-	-

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 Center for Health Statistics, MDPH

Table 4.12
Live Births by Age of Mother and County of Residence
Michigan Residents, 1990

Area	Total	Age of Mother										40 and Over	Age Not Stated
		Under 15	15	16	17	18	19	20-24	25-29	30-34	35-39		
Michigan	153,080	426	1,044	2,138	3,803	5,756	7,483	39,992	48,466	32,058	10,421	1,422	71
Alcona	108	1	2	1	3	2	6	33	35	16	7	2	-
Alger	105	-	-	-	3	4	5	12	29	22	4	3	-
Allegan	1,475	1	7	21	30	59	60	398	535	256	96	12	-
Alpena	370	1	2	1	14	18	18	53	130	80	15	1	2
Antrim	245	-	3	1	9	12	14	88	75	46	18	4	-
Arenac	206	-	2	2	3	14	11	32	71	37	5	1	-
Baraga	109	-	-	-	5	4	7	36	28	16	9	3	1
Barry	733	-	5	5	9	36	42	207	240	149	40	-	-
Bay	1,694	3	17	18	38	52	78	461	536	378	94	9	-
Benzie	174	-	1	1	8	8	12	56	35	42	10	1	-
Berrien	2,646	10	40	62	109	138	168	755	790	412	135	25	2
Branch	641	-	1	9	14	32	54	209	184	97	36	5	-
Calhoun	2,238	8	13	41	74	123	134	688	667	348	122	16	4
Cass	648	3	5	12	14	32	41	208	197	94	32	8	2
Charlevoix	339	-	2	2	3	6	18	115	96	72	22	3	-
Cheboygan	293	-	-	4	5	8	15	96	97	50	15	3	-
Chippewa	417	1	3	3	6	17	34	133	131	67	18	3	-
Clare	422	-	1	3	12	19	39	157	117	54	17	3	1
Clinton	865	-	2	2	15	14	20	247	291	207	58	8	1
Crawford	191	1	2	8	9	8	12	59	52	33	5	2	-
Delta	477	-	3	7	8	18	26	115	185	86	27	2	-
Dickinson	339	-	1	5	4	6	15	90	132	65	20	1	-
Eaton	1,230	-	7	8	22	38	53	274	434	294	82	18	-
Emmet	367	-	2	2	5	15	11	85	119	93	31	4	-
Genesee	7,653	30	64	145	243	337	459	2,280	2,228	1,376	439	47	5
Gladwin	297	-	2	6	8	14	18	108	87	36	14	4	-
Gogebic	171	-	1	-	4	9	9	50	50	30	15	3	-
Grand Traverse	935	1	1	5	6	36	48	182	325	232	88	11	-
Gratiot	559	1	2	8	15	26	35	179	175	93	30	1	-
Hillsdale	615	-	3	11	15	25	29	206	181	109	31	4	1
Houghton	476	1	1	3	9	11	24	135	132	112	41	7	-
Huron	495	-	-	4	4	9	13	145	179	106	31	4	-
Ingham	4,595	10	27	67	102	176	204	1,247	1,434	924	351	52	1
Ionia	824	1	5	8	17	50	47	285	245	122	39	5	-
Iosco	586	-	2	3	10	21	25	236	168	88	29	4	-
Iron	139	-	1	1	2	4	8	34	44	32	10	2	-
Isabella	759	1	1	6	7	9	37	250	247	140	46	15	-
Jackson	2,395	10	13	36	86	111	142	693	752	417	121	14	-
Kalamazoo	3,526	7	18	51	81	132	156	845	1,071	858	268	37	2
Kalkaska	199	-	1	3	5	10	19	58	59	33	8	3	-
Kent	9,781	33	65	126	197	313	424	2,468	3,300	2,148	629	77	1
Keweenaw	17	-	-	-	-	-	1	7	4	2	3	-	-

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

Table 4.12 (continued)
Live Births by Age of Mother and County of Residence
Michigan Residents, 1990

Area	Total	Age of Mother										35-39	40 and Over	Age Not Stated
		Under 15	15	16	17	18	19	15-19	20-24	25-29	30-34			
Lake	106	-	-	2	6	4	8	20	32	35	17	2	-	-
Lapeer	1,150	-	-	11	26	33	57	127	327	418	203	66	8	1
Leelanau	222	-	-	1	6	5	7	19	37	85	47	31	3	-
Lenawee	1,362	-	7	14	38	59	86	204	418	434	211	83	11	1
Livingston	1,664	1	3	9	20	26	44	102	307	590	495	147	22	-
Luce	75	1	1	2	4	7	3	17	20	16	16	5	-	-
Mackinac	136	-	-	3	4	1	3	11	39	48	26	10	2	-
Macomb	10,499	10	18	50	105	199	312	684	2,196	3,972	2,765	776	91	5
Manistee	235	-	2	3	5	7	13	30	71	65	51	17	1	-
Marquette	1,032	-	4	4	19	23	53	103	305	331	219	67	7	-
Mason	372	-	2	3	5	16	18	44	125	109	58	29	5	2
Mecosta	476	-	2	8	10	19	23	62	165	136	87	21	5	-
Menominee	273	1	2	3	7	7	24	43	81	90	48	9	1	-
Midland	1,218	1	3	10	14	27	43	97	291	468	270	80	11	-
Missaukee	169	-	1	1	5	10	6	23	57	52	26	8	2	1
Monroe	1,572	4	8	23	42	54	83	210	421	550	301	79	7	-
Montcalm	869	1	2	9	26	52	58	147	310	253	108	45	5	-
Montmorency	77	-	1	1	3	4	5	14	31	19	9	4	-	-
Muskegon	2,762	8	40	48	85	117	173	463	847	800	491	134	17	2
Newaygo	686	5	3	9	13	32	38	95	246	193	99	41	6	1
Oakland	17,008	25	62	115	215	329	509	1,230	3,034	5,735	5,056	1,720	202	6
Oceana	401	2	3	3	23	17	24	70	114	122	65	22	5	1
Ogemaw	290	-	1	1	8	15	24	49	102	77	47	13	2	-
Ontonagon	96	-	-	3	1	8	4	16	36	23	13	6	2	-
Oscoda	297	-	1	2	6	12	27	49	97	91	46	11	3	-
Oscoda	119	1	-	2	1	3	4	10	40	44	15	8	1	-
Otsego	300	1	1	4	7	7	21	40	89	92	68	9	1	-
Ottawa	3,164	2	13	27	41	71	93	245	740	1,204	754	194	24	1
Presque Isle	144	-	-	2	2	4	5	11	38	48	26	19	2	-
Roscommon	246	-	3	2	4	9	15	33	85	78	38	9	2	1
Saginaw	3,702	7	29	72	147	186	223	657	1,019	1,144	645	193	36	1
St Clair	2,204	2	7	21	60	70	97	255	649	742	424	110	21	1
St Joseph	931	2	7	9	44	42	53	155	316	264	142	46	6	-
Sanilac	559	1	-	9	12	18	31	70	182	186	94	22	4	-
Schoolcraft	102	-	1	-	1	3	3	8	28	36	24	6	-	-
Shiawassee	1,063	2	3	15	29	43	45	135	332	340	187	59	8	-
Tuscola	735	1	1	10	21	24	37	93	216	255	126	42	1	1
Van Buren	1,159	2	11	16	34	71	75	207	340	336	202	61	9	2
Washtenaw	4,169	11	25	45	69	119	105	363	758	1,374	1,095	502	66	-
Wayne	40,680	210	449	861	1,396	2,010	2,412	7,128	11,258	11,588	7,501	2,584	393	18
Wexford	394	-	-	5	12	16	26	59	114	130	68	20	3	-

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

Table 4.13
Vital Statistics for Residents of Selected Michigan Cities¹
 1990

Area	Live Births	Deaths	Infant Deaths		Fetal Deaths	
			Number	Rate	Number	Rate
Allen Park	371	341	3	8.1	3	8.0
Ann Arbor	1,467	518	12	8.2	9	6.1
Battle Creek	1,266	623	15	11.8	5	3.9
Bay City	753	417	4	5.3	4	5.3
Burton City	388	250	6	15.5	3	7.7
Dearborn	1,553	912	7	4.5	8	5.1
Dearborn Heights	771	578	5	6.5	4	5.2
Detroit	24,129	11,805	491	20.3	160	6.6
East Detroit	513	378	5	9.7	3	5.8
East Lansing	465	112	4	8.6	5	10.6
Farmington Hills	1,011	504	8	7.9	9	8.8
Ferndale	498	274	6	12.0	4	8.0
Flint	3,811	1,468	56	14.7	16	4.2
Garden City	443	243	6	13.5	2	4.5
Grand Rapids	4,560	1,931	53	11.6	37	8.0
Highland Park	470	352	14	29.8	1	2.1
Holland	647	237	4	6.2	4	6.1
Inkster	593	301	9	15.2	3	5.0
Jackson	1,014	411	11	10.8	7	6.9
Kalamazoo	1,537	729	20	13.0	8	5.2
Kentwood	713	165	6	8.4	4	5.6
Lansing	2,809	1,012	43	15.3	26	9.2
Lincoln Park	661	405	4	6.1	5	7.5
Livonia	1,302	833	20	15.4	3	2.3
Madison Heights	549	271	6	10.9	4	7.2
Midland	577	238	7	12.1	3	5.2
Muskegon	998	477	13	13.0	7	7.0
Oak Park	535	216	5	9.3	2	3.7
Pontiac	1,958	646	26	13.3	17	8.6
Portage	608	229	5	8.2	4	6.5
Port Huron	625	378	9	14.4	1	1.6
Roseville	771	477	2	2.6	1	1.3
Royal Oak	1,002	577	6	6.0	5	5.0
Saginaw	1,848	731	26	14.1	24	12.8
St Clair Shores	900	751	5	5.6	-	-
Southfield	977	762	7	7.2	9	9.1
Southgate	379	284	2	5.3	3	7.9
Sterling Heights	1,496	653	9	6.0	6	4.0
Taylor	1,315	524	15	11.4	3	2.3
Troy	925	403	4	4.3	2	2.2
Warren	2,064	1,425	18	8.7	13	6.3
Westland	1,373	711	12	8.7	6	4.4
Wyandotte	485	313	2	4.1	1	2.1
Wyoming	1,268	344	6	4.7	7	5.5

¹ 25,000 population or over according to the 1980 Census.

² 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 Center for Health Statistics, MDPH

Table 4.14
Number of Deaths by Underlying Cause and County of Residence
Michigan Residents, 1990

Area	All Causes	T.B. All Forms	All Other Infectious and Parasitic Diseases	Malignant Neoplasms							
				Total	Digestive Organs and Peritoneum	Respiratory and Intrathoracic Organs	Breast	Genital Organs	Urinary Organs	Leukemia	Other
Michigan	78,501	43	1,153	18,413	4,433	5,231	1,619	2,001	757	734	3,638
Alcona	151	-	1	36	5	12	2	3	1	1	12
Alger	125	-	1	35	1	16	3	2	2	2	9
Allegan	678	-	8	167	40	40	10	17	8	6	46
Alpena	289	-	4	68	19	20	3	8	2	1	15
Antrim	190	-	-	44	11	13	7	2	-	3	8
Arenac	182	-	1	48	13	13	2	4	5	5	6
Baraga	111	-	2	22	5	8	1	4	1	-	3
Barry	388	-	3	90	26	23	4	7	3	4	23
Bay	939	1	11	243	64	63	23	30	16	10	37
Benzie	126	-	1	26	2	9	5	3	1	-	6
Berrien	1,569	-	20	382	91	114	40	43	16	15	63
Branch	361	-	3	76	16	20	8	7	1	6	18
Calhoun	1,288	1	13	308	80	82	24	30	11	16	65
Cass	424	1	3	107	19	29	6	12	4	2	35
Charlevoix	183	-	2	48	12	19	1	5	-	1	10
Cheboygan	231	-	1	52	8	19	9	5	2	1	8
Chippewa	281	-	3	76	15	18	7	11	3	5	17
Clare	314	-	3	71	21	24	1	6	4	2	13
Clinton	359	-	6	95	16	29	6	6	2	6	30
Crawford	120	-	2	20	7	9	1	1	1	1	-
Delta	351	-	4	80	21	16	4	10	4	5	20
Dickinson	294	-	3	76	22	20	6	8	4	3	13
Eaton	639	-	16	136	23	42	10	14	7	9	31
Emmet	245	-	6	59	14	17	7	4	2	3	12
Genesee	3,552	1	61	800	200	241	52	88	24	25	170
Gladwin	240	-	2	63	13	16	3	9	1	3	18
Gogebic	254	-	3	63	25	11	6	9	2	2	8
Grand Traverse	481	-	4	108	25	24	14	17	3	6	19
Gratiot	399	-	1	84	11	24	5	13	3	4	24
Hillsdale	391	-	5	90	20	27	4	13	7	5	14
Houghton	398	-	2	99	30	28	5	12	5	5	14
Huron	369	-	2	94	28	29	6	9	4	5	13
Ingham	1,757	-	36	386	102	113	23	36	12	13	87
Ionia	400	-	5	109	25	32	11	12	5	3	21
Iosco	318	-	4	95	27	33	10	9	3	3	10
Iron	198	-	2	53	12	11	3	6	4	1	16
Isabella	326	1	4	65	14	15	3	9	1	5	18
Jackson	1,296	1	15	351	64	122	34	35	14	14	68
Kalamazoo	1,646	-	30	371	80	95	41	50	12	15	78
Kalkaska	110	-	2	37	3	13	2	7	2	3	7
Kent	3,593	2	39	823	196	210	82	102	31	33	169

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

Table 4.14 (continued)
Number of Deaths by Underlying Cause and County of Residence
Michigan Residents, 1990

Area	All Causes	T.B. All Forms	All Other Infectious and Parasitic Diseases	Malignant Neoplasms									
				Total	Digestive Organs and Peritoneum	Respiratory and Intrathoracic Organs	Breast	Genital Organs	Urinary Organs	Leukemia	Other		
Keweenaw	41	-	-	9	3	3	1	1	1	-	1	-	1
Lake	145	-	2	37	10	12	1	1	3	4	3	-	7
Lapeer	500	-	5	88	19	25	4	4	10	2	10	6	22
Leelanau	159	-	1	40	10	8	3	3	5	1	5	1	12
Lenawee	754	-	9	177	33	48	20	18	18	9	18	8	41
Livinston	704	-	7	188	44	43	24	19	19	8	19	9	41
Luce	66	-	-	19	3	5	2	3	3	1	3	-	5
Mackinac	125	-	1	34	6	9	3	3	5	1	163	-	10
Macomb	5,716	3	68	1,462	326	439	131	14	14	66	67	5	270
Manistee	270	-	5	78	19	19	3	14	14	-	18	5	18
Marquette	501	-	3	128	33	43	9	14	14	3	1	1	25
Mason	310	-	3	72	19	19	5	9	9	2	1	1	17
Mecosta	282	-	2	63	15	26	1	7	7	-	-	-	14
Menominee	232	-	3	47	17	4	1	10	10	3	2	2	10
Midland	427	-	6	108	27	27	11	12	12	6	2	2	23
Missaukee	116	-	1	18	5	2	1	5	5	-	1	1	4
Monroe	975	-	7	247	61	75	28	23	23	14	9	9	37
Montcalm	459	-	5	110	28	24	6	16	16	3	5	5	28
Montmorency	128	-	1	35	9	9	2	2	3	3	3	-	10
Muskegon	1,442	1	16	331	76	98	26	33	33	14	10	10	74
Newaygo	373	-	1	95	22	25	9	12	12	7	1	1	19
Oakland	7,690	-	109	1,900	454	524	178	186	186	88	84	84	386
Oceana	199	-	-	36	7	14	1	3	3	1	2	2	8
Ogemaw	253	-	1	65	18	22	5	3	3	3	2	2	12
Ontonagon	97	-	2	24	4	9	1	2	2	2	1	1	5
Osceola	184	-	3	36	7	8	1	6	6	7	3	3	4
Oscoda	88	-	-	23	5	10	1	2	2	-	2	2	3
Otsego	177	-	1	44	9	10	2	3	3	-	4	4	3
Ottawa	1,090	-	5	242	63	45	33	28	28	15	15	15	11
Presque Isle	167	-	3	40	19	8	1	1	1	2	1	1	43
Roscommon	260	-	2	68	16	28	3	9	9	1	5	5	8
Saginaw	1,841	1	21	431	97	131	38	44	44	17	18	18	6
St Clair	1,300	-	8	295	77	97	24	29	29	12	6	6	86
St Joseph	549	-	5	124	37	32	14	10	10	5	6	6	50
Sanilac	426	-	1	87	23	21	6	14	14	2	5	5	20
Schoolcraft	101	-	-	17	4	6	-	4	4	2	5	5	16
Shiawassee	543	-	2	126	29	32	9	13	13	11	-	-	16
Tuscola	433	-	7	102	27	26	12	9	9	3	6	6	26
Van Buren	603	-	5	159	37	59	11	16	16	5	1	1	24
Washtenaw	1,537	-	24	365	78	108	40	51	51	9	5	5	26
Wayne	21,409	30	470	4,728	1,198	1,343	452	501	501	185	178	178	71
Wexford	248	-	4	57	13	16	2	5	5	3	2	2	871
Co. Not Stated	15	-	-	2	-	-	-	-	-	-	-	-	2

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

Table 4.14 (continued)
Number of Deaths by Underlying Cause and County of Residence
Michigan Residents, 1990

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 and Cirrhosis
			Total	Diseases of the Heart	Hypertension with or without Renal Disease	Cerebrovascular Disease	Atherosclerosis	Other Diseases of Arteries, Arterioles, and Capillaries				
Michigan	2,009	120	34,631	27,527	260	5,090	807	947	2,863	3,004	233	1,123
Alcona	8	-	66	50	1	14	-	1	5	9	-	1
Alger	1	-	68	52	-	12	-	4	6	4	-	-
Allegan	16	1	283	196	-	51	25	11	36	30	-	6
Alpena	5	1	144	120	-	17	2	5	11	9	-	2
Antrim	5	-	84	63	2	15	1	3	9	6	-	7
Arenac	4	-	84	70	-	10	2	2	4	16	-	3
Baraga	1	-	64	45	-	18	-	1	4	4	-	1
Barry	9	-	160	118	3	30	4	5	15	22	-	2
Bay	33	1	432	345	5	55	11	16	17	43	3	10
Benzie	6	-	67	50	1	11	3	2	2	3	-	2
Berrien	44	7	689	491	7	131	34	26	47	52	6	18
Branch	13	-	169	129	3	26	7	4	16	17	3	3
Calhoun	31	2	564	435	7	84	24	14	57	71	1	16
Cass	4	1	178	133	6	30	5	4	19	16	2	8
Charlevoix	4	-	76	57	2	16	1	-	12	5	-	1
Cheboygan	-	1	111	97	-	12	-	2	10	10	1	3
Chippewa	5	2	119	93	-	18	4	4	8	6	-	2
Clare	13	1	158	129	1	21	-	7	9	16	-	1
Clinton	11	-	157	124	-	28	2	3	14	14	1	3
Crawford	3	-	58	40	-	16	1	1	4	9	-	-
Delta	16	2	151	99	1	39	7	5	21	8	1	5
Dickinson	7	1	151	110	-	30	7	4	4	8	-	2
Eaton	19	4	269	212	1	40	11	5	21	27	-	6
Emmet	8	1	111	84	-	19	4	4	11	14	1	2
Genesee	109	3	1,611	1,295	9	232	38	37	81	124	9	34
Gladwin	4	-	110	93	-	12	1	4	9	11	-	2
Gogebic	6	-	124	88	-	30	2	4	12	7	-	3
Grand Traverse	5	2	222	167	3	39	6	7	15	26	1	3
Gratiot	6	1	204	156	2	31	10	5	40	19	-	1
Hillsdale	13	2	160	120	-	29	6	5	17	23	-	5
Houghton	4	-	173	131	1	32	3	6	32	13	2	4
Huron	10	1	188	136	1	43	1	7	15	13	-	3
Ingham	38	2	711	540	5	121	21	24	84	78	7	24
Ionia	9	3	160	131	-	21	5	3	11	23	1	2
Iosco	6	-	132	104	-	15	12	1	12	18	1	2
Iron	4	-	87	64	1	12	4	6	5	8	1	4
Isabella	8	1	147	111	2	23	4	7	25	11	-	3
Jackson	30	1	528	418	4	77	16	13	51	65	3	15
Kalamazoo	35	1	687	519	8	120	17	23	82	76	5	21
Kalkaska	2	2	50	39	-	3	8	-	2	3	2	2
Kent	73	3	1,570	1,211	10	241	63	45	164	143	10	42

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

Table 4.14 (continued)
Number of Deaths by Underlying Cause and County of Residence
Michigan Residents, 1990

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 and Cirrhosis
			Total	Diseases of the Heart	Hypertension with or without Renal Disease	Cerebrovascular Disease	Atherosclerosis	Other Diseases of Arteries, Arterioles, and Capillaries				
Keweenaw	1	-	21	20	-	1	-	-	-	1	-	2
Lake	2	-	66	51	-	12	1	2	4	8	-	2
Lapeer	26	-	229	175	2	45	2	5	20	26	-	6
Leelanau	3	1	70	53	-	11	2	4	7	7	1	2
Lenawee	19	-	345	264	1	58	14	8	23	35	2	7
Livingston	15	1	295	241	1	34	8	11	22	26	1	10
Luce	1	-	30	22	-	5	1	2	1	1	-	-
Mackinac	3	2	59	49	-	9	-	1	5	-	-	1
Macomb	119	6	2,610	2,107	13	363	68	59	218	211	25	92
Manistee	10	1	118	85	1	21	9	2	9	9	2	3
Marquette	13	3	217	168	-	27	9	13	22	25	3	7
Mason	10	1	148	116	3	20	5	4	18	9	2	2
Mecosta	13	-	124	97	-	18	6	3	17	10	-	1
Menominee	14	-	108	77	-	21	7	3	11	16	-	1
Midland	8	1	182	126	-	40	8	8	14	21	-	6
Missaukee	6	-	62	48	-	12	1	1	7	4	-	1
Monroe	24	1	432	357	5	52	5	13	22	41	4	6
Montcalm	17	2	189	165	1	21	2	-	7	22	3	3
Montmorency	3	-	63	55	-	5	-	-	3	7	-	-
Muskegon	60	2	641	493	6	103	21	18	45	73	3	14
Newaygo	10	1	165	132	-	25	3	5	20	15	1	3
Oakland	179	4	3,502	2,778	13	564	46	101	259	292	19	93
Oceana	7	-	108	92	1	10	2	3	7	10	1	2
Ogemaw	2	-	117	77	1	26	9	4	8	16	-	3
Ontonagon	1	-	45	33	-	7	4	1	3	3	-	1
Osceola	4	-	90	72	-	13	1	4	10	11	1	-
Oscoda	-	-	46	35	-	7	1	3	3	3	-	1
Otsego	4	2	83	54	-	24	-	5	6	6	1	-
Ottawa	31	3	504	381	3	79	25	16	47	40	4	9
Presque Isle	3	-	74	63	-	9	-	2	4	4	-	6
Roscommon	2	-	112	95	1	11	-	5	13	16	-	2
Saginaw	50	1	825	616	7	142	23	37	64	58	4	23
St Clair	20	-	608	499	4	72	10	23	60	69	5	11
St Joseph	11	1	249	198	2	33	8	8	12	25	3	2
Sanilac	13	1	209	170	2	29	3	5	15	19	-	5
Schoolcraft	2	1	49	39	-	8	2	-	3	2	-	4
Shiawassee	10	-	255	172	6	47	22	8	18	24	1	4
Tuscola	16	2	193	157	2	28	3	3	13	16	1	4
Van Buren	15	-	255	195	4	30	17	9	30	19	1	6
Washtenaw	38	1	608	471	6	102	8	21	55	50	5	3
Wayne	593	34	9,133	7,672	89	1,106	73	193	705	663	76	19
Wexford	2	1	108	86	-	15	6	1	13	11	1	483
Co. Not Stated	1	-	7	6	-	1	-	-	1	-	-	5

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

Table 4.14 (continued)
Number of Deaths by Underlying Cause and County of Residence
Michigan Residents, 1990

Area	Nephritis, Nephrotic Syndrome & Nephrosis	Complica- tions of Preg- nancy, Child- birth and the Puerperium	Congenital Anomalies	Certain Conditions Originating in the Per- 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	785	10	504	833	413	6,964	3,137	1,669	1,468	1,068	1,080	115
Alcona	3	-	1	-	1	11	9	5	4	-	-	-
Alger	-	-	-	-	-	8	1	-	1	-	1	-
Allegan	7	-	7	4	4	63	32	21	11	12	2	-
Alpena	5	-	-	-	1	28	7	3	4	3	1	-
Antrim	4	-	2	-	1	19	6	5	1	2	1	-
Arenac	2	-	-	1	-	9	5	5	-	4	1	-
Baraga	-	-	-	1	-	7	5	3	1	1	-	-
Barry	4	-	8	2	4	40	22	12	10	7	-	-
Bay	10	-	2	4	8	67	37	22	15	14	3	-
Benzie	-	-	2	2	-	8	4	3	1	3	-	-
Berrien	20	-	12	21	11	144	61	30	31	17	18	-
Branch	1	-	2	2	3	29	13	5	8	10	1	-
Calhoun	10	-	12	10	9	95	61	34	27	20	6	1
Cass	5	-	3	1	3	39	27	18	9	5	2	-
Charlevoix	1	-	-	2	-	22	9	5	4	1	-	-
Cheboygan	1	-	2	3	1	20	12	3	9	3	-	-
Chippewa	3	-	2	2	-	35	11	6	5	6	1	-
Clare	2	-	1	-	3	22	12	5	7	2	-	-
Clinton	1	-	3	4	3	19	20	14	6	7	1	-
Crawford	1	-	-	4	-	13	4	2	2	2	-	-
Delta	8	-	2	-	2	27	17	9	8	7	-	-
Dickinson	4	-	3	-	-	21	10	6	4	2	2	-
Eaton	7	-	8	-	4	52	48	28	20	20	1	1
Emmet	4	-	1	-	1	14	9	7	2	3	-	-
Genesee	53	1	21	51	22	284	159	85	74	45	78	5
Gladwin	2	-	-	3	2	12	14	7	7	5	1	-
Gogebic	1	-	2	-	-	22	9	4	5	2	-	-
Grand Traverse	3	-	1	1	1	59	21	10	11	8	1	-
Gratiot	1	-	2	-	1	23	15	9	6	7	-	-
Hillsdale	3	-	3	3	2	37	21	7	14	7	-	-
Houghton	3	-	2	3	-	34	19	11	8	7	-	1
Huron	2	-	2	1	-	22	14	6	8	1	1	-
Ingham	21	-	16	27	17	178	84	32	52	36	12	-
Ionia	3	-	3	3	5	41	15	12	3	6	1	-
Iosco	2	-	1	2	1	23	17	8	9	2	-	-
Iron	3	-	1	-	2	18	7	2	5	3	-	-
Isabella	1	-	7	2	-	27	18	7	11	4	2	-
Jackson	17	1	7	17	9	94	52	28	24	29	8	2
Kalamazoo	12	-	18	10	10	170	80	40	40	23	15	-
Kalkaska	-	-	-	-	1	1	4	-	4	2	-	-
Kent	27	-	32	39	21	379	159	91	68	45	19	3

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

Table 4.14 (continued)
 Number of Deaths by Underlying Cause and County of Residence
 Michigan Residents, 1990

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	2	-	-	-	-	2	2	2	-	1	-	-
Lake	2	-	-	1	4	12	5	2	3	-	-	-
Lapeer	4	-	2	1	2	46	28	18	10	11	4	1
Leelanau	1	-	1	-	-	16	6	3	3	4	-	-
Lenawee	5	-	5	2	5	73	37	26	11	9	-	1
Livinston	4	-	8	4	2	52	60	40	20	8	1	-
Luce	-	-	-	-	-	6	7	3	4	-	1	-
Mackinac	1	-	-	-	-	10	7	3	4	2	1	-
Macomb	59	-	28	35	12	496	163	85	78	79	27	3
Manistee	2	-	1	2	2	23	9	6	3	2	-	-
Marquette	-	-	-	-	-	46	14	6	8	12	1	-
Mason	3	-	-	2	-	30	6	4	2	3	1	-
Mecosta	-	-	3	4	-	17	21	16	5	6	1	-
Menominee	-	-	1	1	-	16	10	4	6	4	1	-
Midland	2	-	1	5	2	39	22	13	9	9	-	-
Missaukee	-	-	2	-	-	6	8	6	2	1	-	1
Monroe	13	-	6	1	1	86	61	35	26	16	7	-
Montcalm	5	-	-	3	3	57	24	12	12	6	3	-
Montmorency	2	-	-	-	1	6	6	4	2	1	-	-
Muskegon	14	1	6	10	6	141	53	27	26	16	8	1
Newaygo	1	-	2	-	-	26	31	21	10	2	-	-
Oakland	61	2	49	62	24	681	264	148	116	114	60	16
Oceana	2	-	2	1	-	16	5	1	4	1	1	-
Ogemaw	6	1	1	-	2	23	7	7	-	1	-	-
Ontonagon	1	-	-	-	4	9	2	1	1	1	1	-
Osceola	1	-	1	1	1	15	7	5	2	1	2	-
Oscoda	-	-	-	-	-	4	5	3	2	3	-	-
Otsego	4	-	1	2	-	12	7	4	3	4	-	-
Ottawa	16	-	5	11	7	105	50	26	24	10	1	-
Presque Isle	3	-	1	1	1	18	8	4	4	1	-	-
Roscommon	8	-	1	-	1	16	17	11	6	1	1	-
Saginaw	25	-	10	25	12	141	102	57	45	15	33	-
St Clair	8	-	15	9	1	107	61	38	23	21	2	-
St Joseph	7	-	1	10	1	49	30	15	15	11	3	5
Sanilac	8	-	4	3	1	37	15	7	8	6	2	-
Schoolcraft	1	1	1	-	-	16	2	1	1	2	-	-
Shiawassee	5	-	3	2	1	52	29	21	8	8	2	1
Tuscola	2	-	2	2	4	36	16	10	6	10	5	-
Van Buren	9	-	7	7	7	44	28	14	14	10	4	-
Washtenaw	17	1	11	19	15	188	84	43	41	25	11	-
Wayne	224	2	132	381	134	1,924	659	300	359	248	718	72
Wexford	-	-	-	1	3	27	8	6	2	6	1	-
Co. Not Stated	-	-	-	-	-	2	2	1	1	-	-	-

Source: Office of the State Registrar and Center for Health Statistics, MDH

Table 4.15
Reported Cases of Certain Communicable Diseases by County
Michigan Residents, 1990

Area	Total	Gonorrhea	Chicken Pox	Hepatitis (all types)	Salmonella Infections	Tuberculosis	Syphilis	Mumps	Dysentery Bacillary	Measles	Rubella	Meningococcal Infections	Whooping Cough
Michigan	75,295	30,779	38,024	1,111	1,308	504	2,625	179	32	545	31	69	88
Alcona	-	-	-	-	-	-	-	-	-	-	-	-	-
Alger	55	-	31	-	-	-	1	3	-	20	-	-	-
Allegan	131	23	52	10	9	1	2	3	-	30	-	1	-
Alpena	39	3	28	4	2	1	1	-	-	3	-	1	-
Antrim	34	1	27	4	1	-	-	-	-	-	-	-	-
Arenac	5	-	-	3	-	-	2	-	-	-	-	-	2
Baraga	3	1	-	-	-	-	-	-	-	-	1	1	-
Barry	218	7	187	4	8	1	-	-	-	9	1	1	2
Bay	316	43	245	2	11	-	10	2	-	1	-	-	-
Benzie	38	-	36	-	1	-	-	-	-	-	-	-	-
Berrien	1,842	1,102	599	21	73	18	23	5	-	-	-	1	-
Branch	49	6	27	5	3	4	-	1	-	2	-	4	1
Calhoun	948	567	314	8	25	8	9	8	2	1	2	-	-
Cass	217	57	132	16	2	1	3	1	-	4	1	1	-
Charlevoix	305	3	295	-	4	-	-	1	-	1	1	-	-
Cheboygan	20	-	20	-	-	-	-	-	-	-	-	2	1
Cheboygan	319	6	284	11	5	1	5	1	-	-	3	-	-
Chippewa	10	-	3	1	6	-	-	-	-	-	-	2	-
Clare	150	13	121	5	8	-	-	1	-	-	-	-	-
Clinton	37	2	35	-	-	-	-	-	-	-	-	-	-
Crawford	-	-	-	-	-	-	-	-	-	-	-	-	-
Delta	207	3	194	5	4	-	-	-	-	1	-	-	-
Dickinson	112	1	106	1	2	-	-	1	-	-	-	1	1
Eaton	380	28	323	5	16	4	-	1	-	1	-	1	-
Emmet	23	4	16	-	2	-	-	-	-	1	-	3	3
Genesee	3,737	2,326	1,234	70	64	12	23	1	-	26	-	-	1
Gladwin	60	5	25	-	3	-	1	-	-	-	-	-	-
Gogebic	75	2	71	-	1	-	-	-	-	-	-	2	-
Grand Traverse	304	4	288	2	7	-	-	1	-	-	1	-	-
Grand Traverse	148	5	131	6	4	-	-	1	-	-	1	-	-
Gratiot	282	16	258	1	6	-	-	1	-	-	-	-	-
Hillsdale	-	-	-	-	-	-	-	-	-	-	-	-	-
Houghton	60	3	54	-	1	1	1	-	-	-	-	-	1
Huron	218	4	210	1	1	-	1	-	-	-	-	-	2
Ingham	2,555	1,118	1,281	46	60	18	25	3	1	1	-	-	-
Ionia	143	6	114	5	5	-	8	-	-	5	-	-	-
Iosco	84	7	73	2	2	-	-	-	-	-	-	-	-
Iron	173	1	171	-	-	1	-	-	-	-	-	1	1
Isabella	488	17	398	-	9	2	-	-	2	58	-	1	1
Jackson	520	233	227	14	10	17	10	3	-	-	5	-	3
Kalamazoo	1,708	925	664	43	28	10	14	4	2	10	3	2	-
Kalamazoo	161	-	158	1	1	-	-	1	-	-	-	-	-
Kalkaska	-	-	-	-	-	-	-	-	-	-	-	-	-
Kent	4,715	2,338	2,076	118	66	15	58	1	10	23	-	3	7

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

Table 4.15 (continued)
Reported Cases of Certain Communicable Diseases by County
Michigan Residents, 1990

Area	Total	Gonorrhea	Chicken Pox	Hepatitis (all types)	Salmonella Infections	Tuberculosis	Syphilis	Mumps	Dysentery Bacillary	Measles	Rubella	Meningococcal Infections	Whooping Cough
Keweenaw	2	-	-	1	-	1	-	-	-	-	-	-	-
Lake	12	4	-	2	-	-	-	-	-	5	-	-	-
Lapeer	336	5	306	2	4	-	1	5	1	11	1	-	1
Leelanau	22	-	17	3	1	-	-	-	-	-	-	-	-
Lenawee	440	64	336	12	14	3	4	1	4	2	-	1	-
Livingston	230	20	185	8	10	-	4	2	-	1	-	-	-
Luce	2	2	-	-	-	-	-	-	-	-	-	-	-
Mackinac	6	5	-	-	-	1	-	-	-	-	-	-	-
Macomb	4,094	344	3,498	95	89	10	37	13	1	2	-	2	3
Manistee	35	-	33	-	2	-	-	-	-	-	-	-	-
Marquette	382	14	328	8	26	-	1	2	-	1	-	1	1
Mason	83	2	16	1	3	-	-	-	-	61	-	-	-
Mecosta	124	17	84	4	4	-	-	1	-	13	-	1	-
Menominee	68	-	61	-	1	1	-	-	-	5	-	-	-
Midland	357	20	319	1	15	-	2	-	-	-	-	-	-
Missaukee	58	-	27	-	29	-	-	-	-	-	-	-	-
Monroe	455	51	385	2	7	2	2	5	-	-	-	-	2
Montcalm	181	13	156	-	8	2	-	-	-	1	-	1	1
Montmorency	61	-	56	2	1	1	-	-	-	-	1	-	-
Muskegon	1,253	742	451	24	17	3	11	-	-	-	1	-	-
Newaygo	131	11	110	1	2	2	3	1	-	-	-	1	4
Oakland	8,617	1,603	6,480	144	122	38	114	33	3	53	7	5	15
Oceana	36	3	25	3	2	-	-	-	-	3	-	-	-
Ogemaw	56	2	49	3	1	-	-	-	-	-	1	-	-
Ontonagon	200	-	199	-	-	1	-	-	-	-	-	-	-
Oscoda	56	-	-	-	-	-	-	-	-	51	-	1	4
Oscoda	38	3	-	1	-	-	-	-	-	34	-	-	-
Otsego	114	-	108	-	5	-	1	-	-	-	-	-	-
Ottawa	763	63	629	25	24	6	3	6	1	-	1	-	5
Presque Isle	61	-	57	-	-	-	-	-	-	-	3	1	-
Roscommon	9	1	6	1	-	1	-	-	-	-	-	-	-
Saginaw	2,269	1,220	973	14	22	13	16	1	3	1	-	3	3
St. Clair	620	103	462	19	15	1	9	9	-	-	-	2	-
St. Joseph	245	39	181	5	3	3	1	1	-	10	-	1	1
Sanilac	158	4	141	4	7	1	-	-	-	-	-	1	-
Schoolcraft	7	-	3	-	-	-	-	-	-	-	-	-	-
Shiawassee	323	11	296	6	7	1	-	-	-	4	-	-	-
Tuscola	242	6	169	9	2	2	1	1	-	1	-	-	-
Van Buren	235	70	136	15	6	4	3	-	-	52	-	1	-
Washtenaw	857	606	80	20	48	20	78	2	-	2	-	-	1
Wayne	31,070	16,848	11,063	264	360	271	2,136	53	1	34	-	20	20
Wexford	98	3	91	1	1	1	1	-	-	-	-	-	-

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

Table 4.16
Number of Deaths by Cause
Michigan Residents, 1990

ICD List Number	Cause of Death	Number
I. INFECTIOUS AND PARASITIC DISEASES (001-139)		
3	Other salmonella infections	2
6	Amoebiasis	1
8	Intestinal infections due to other organisms	5
9	Ill-defined intestinal infections	5
11	Pulmonary tuberculosis	36
16	Tuberculosis of genitourinary system	1
17	Tuberculosis of other organs	1
18	Miliary tuberculosis	5
27	Other zoonotic bacterial diseases	2
31	Diseases due to other mycobacteria	5
34	Streptococcal sore throat and scarlatina	1
35	Erysipelas	1
36	Meningococcal infection	5
38	Septicemia	526
39	Actinomycotic infections	3
40	Other bacterial diseases	8
41	Bacterial infection in conditions classified elsewhere and of unspecified site	7
42	Human Immunodeficiency Virus Infection With Specified Conditions	349
43	Human Immunodeficiency Virus Infection Causing Other Specified Conditions	9
44	Other Human Immunodeficiency Virus Infection	15
46	Slow virus infection of central nervous system	8
47	Meningitis due to enterovirus	2
49	Other non-arthropod-borne viral diseases of central nervous system	3
52	Chickenpox	4
53	Herpes zoster	7
54	Herpes simplex	3
55	Measles	1
70	Viral hepatitis	35
72	Mumps	1
75	Infectious mononucleosis	2
78	Other diseases due to viruses and Chlamydiae	9
79	Viral infection in conditions classified elsewhere and of unspecified site	13
90	Congenital syphilis	4
94	Neurosyphilis	1
112	Candidiasis	29
115	Histoplasmosis	3
117	Other mycoses	28
127	Other intestinal helminthiases	1
129	Intestinal parasitism, unspecified	1
130	Toxoplasmosis	1
135	Sarcoidosis	23
136	Other and unspecified infectious and parasitic diseases	21
137	Late effects of tuberculosis	2
138	Late effects of acute poliomyelitis	5
139	Late effects of other infectious and parasitic diseases	2
II. NEOPLASMS (140-239)		
140	Malignant neoplasm of lip	1
141	Malignant neoplasm of tongue	59

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
142	Malignant neoplasm of major salivary glands	31
144	Malignant neoplasm of floor of mouth	18
145	Malignant neoplasm of other and unspecified parts of mouth	49
146	Malignant neoplasm of oropharynx	43
147	Malignant neoplasm of nasopharynx	20
148	Malignant neoplasm of hypopharynx	20
149	Malignant neoplasm of other and ill-defined sites within the lip, oral cavity and pharynx	52
150	Malignant neoplasm of oesophagus	396
151	Malignant neoplasm of stomach	501
152	Malignant neoplasm of small intestine, including duodenum	35
153	Malignant neoplasm of colon	1,747
154	Malignant neoplasm of rectum, rectosigmoid junction and anus	305
155	Malignant neoplasm of liver and intrahepatic bile ducts	291
156	Malignant neoplasm of gallbladder and extrahepatic bile ducts	151
157	Malignant neoplasm of pancreas	905
158	Malignant neoplasm of retroperitoneum and peritoneum	24
159	Malignant neoplasm of other and ill-defined sites within the digestive organs and peritoneum	78
160	Malignant neoplasm of nasal cavities, middle ear and accessory sinuses	10
161	Malignant neoplasm of larynx	156
162	Malignant neoplasm of trachea, bronchus and lung	5,028
163	Malignant neoplasm of pleura	13
164	Malignant neoplasm of thymus, heart and mediastinum	24
170	Malignant neoplasm of bone and articular cartilage	46
171	Malignant neoplasm of connective and other soft tissue	138
172	Malignant melanoma of skin	168
173	Other malignant neoplasm of skin	58
174	Malignant neoplasm of female breast	1,607
175	Malignant neoplasm of male breast	12
179	Malignant neoplasm of uterus, part unspecified	94
180	Malignant neoplasm of cervix uteri	164
182	Malignant neoplasm of body of uterus	99
183	Malignant neoplasm of ovary and other uterine adnexa	443
184	Malignant neoplasm of other and unspecified female genital organs	40
185	Malignant neoplasm of prostate	1,142
186	Malignant neoplasm of testis	12
187	Malignant neoplasm of penis and other male genital organs	7
188	Malignant neoplasm of bladder	394
189	Malignant neoplasm of kidney and other and unspecified urinary organs	363
190	Malignant neoplasm of eye	7
191	Malignant neoplasm of brain	467
192	Malignant neoplasm of other and unspecified parts of nervous system	8
193	Malignant neoplasm of thyroid gland	38
194	Malignant neoplasm of other endocrine glands and related structures	29
195	Malignant neoplasm of other and ill-defined sites	133
199	Malignant neoplasm without specification of site	1,142
200	Lymphosarcoma and reticulosarcoma	73
201	Hodgkin's disease	75
202	Other malignant neoplasm of lymphoid and histiocytic tissue	629
203	Multiple myeloma and immunoproliferative neoplasms	334
204	Lymphoid leukemia	223
205	Myeloid leukemia	307

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
206	Monocytic leukemia	14
207	Other specified leukemia	9
208	Leukemia of unspecified cell type	181
211	Benign neoplasm of other parts of digestive system	6
212	Benign neoplasm of respiratory and intrathoracic organs	6
215	Other benign neoplasm of connective and other soft tissue	2
216	Benign neoplasm of skin	2
218	Uterine leiomyoma	1
220	Benign neoplasm of ovary	1
225	Benign neoplasm of brain and other parts of nervous system	35
227	Benign neoplasm of other endocrine glands and related structures	5
228	Haemangioma and lymphangioma, any site	5
229	Benign neoplasm of other and unspecified sites	1
235	Neoplasm of uncertain behavior of digestive and respiratory systems	4
236	Neoplasm of uncertain behavior of genitourinary organs	1
237	Neoplasm of uncertain behavior of endocrine glands and nervous system	7
238	Neoplasm of uncertain behavior of other and unspecified sites and tissues	53
239	Neoplasm of unspecified nature	56
III. ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES AND IMMUNITY DISORDERS (240-279)		
240	Simple and unspecified goitre	3
242	Thyrotoxicosis with or without goitre	3
244	Acquired hypothyroidism	34
245	Thyroiditis	1
246	Other disorders of thyroid	1
250	Diabetes mellitus	2,009
251	Other disorders of pancreatic internal secretion	7
252	Disorders of parathyroid gland	5
255	Disorders of adrenal glands	7
259	Other endocrine disorders	4
260	Kwashiorkor	4
261	Nutritional marasmus	8
262	Other severe protein-calorie malnutrition	4
263	Other and unspecified protein-calorie malnutrition	101
269	Other nutritional deficiencies	3
270	Disorders of amino-acid transport and metabolism	4
271	Disorders of carbohydrate transport and metabolism	6
272	Disorders of lipid metabolism	71
273	Disorders of plasma protein metabolism	32
274	Gout	3
275	Disorders of mineral metabolism	11
276	Disorders of fluid, electrolyte and acid-base balance	198
277	Other and unspecified disorders of metabolism	53
278	Obesity and other hyperalimentation	66
279	Disorders involving the immune mechanism	34
IV. DISEASES OF BLOOD AND BLOOD-FORMING ORGANS (280-289)		
280	Iron deficiency anemias	5
281	Other deficiency anemias	12
282	Hereditary hemolytic anemias	33
283	Acquired hemolytic anemias	7

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
284	Aplastic anemia	58
285	Other and unspecified anemias	77
286	Coagulation defects	51
287	Purpura and other hemorrhagic conditions	36
288	Diseases of white blood cells	19
289	Other diseases of blood and blood-forming organs	90
V. MENTAL DISORDERS (290-319)		
290	Senile and presenile organic psychotic conditions	234
291	Alcoholic psychoses	15
293	Transient organic psychotic conditions	1
294	Other organic psychotic conditions (chronic)	1
295	Schizophrenic psychoses	9
296	Affective psychosis	1
298	Other nonorganic psychoses	100
299	Psychoses with origin specific to childhood	1
300	Neurotic disorders	9
303	Alcohol dependence syndrome	147
304	Drug dependence	7
305	Nondependent abuse of drugs	165
306	Physiological malfunction arising from mental factors	2
307	Special symptoms or syndromes not elsewhere classified	8
310	Specific nonpsychotic mental disorders following organic brain damage	138
311	Depressive disorder, not elsewhere classified	10
318	Other specified mental retardation	4
319	Unspecified mental retardation	5
VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS (320-389)		
320	Bacterial meningitis	20
322	Meningitis of unspecified cause	21
323	Encephalitis, myelitis and encephalomyelitis	11
324	Intracranial and intraspinal abscess	5
325	Phlebitis and thrombophlebitis of intracranial venous sinuses	3
326	Late effects of intracranial abscess or pyogenic infection	2
330	Cerebral degenerations usually manifest in childhood	8
331	Other cerebral degenerations	404
332	Parkinson's disease	249
333	Other extrapyramidal disease and abnormal movement disorders	24
334	Spinocerebellar disease	9
335	Anterior horn cell disease	135
336	Other diseases of spinal cord	4
340	Multiple sclerosis	79
341	Other demyelinating diseases of central nervous system	6
342	Hemiplegia	4
343	Infantile cerebral palsy	44
344	Other paralytic syndromes	30
345	Epilepsy	122
348	Other conditions of brain	135
349	Other and unspecified disorders of the nervous system	9
352	Unspecified Disorders of Other Cranial Nerves	1
354	Other Mononuer of Upper Limbs and Mononuer Mult	1

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
356	Hereditary and idiopathic peripheral neuropathy	20
357	Inflammatory and toxic neuropathy	9
358	Myoneural disorders	19
359	Muscular dystrophies and other myopathies	39
360	Disorders of the globe	1
369	Blindness and low vision	1
382	Suppurative and unspecified otitis media	1
383	Mastoiditis and related conditions	1
VII. DISEASES OF THE CIRCULATORY SYSTEM (390-459)		
391	Rheumatic fever with heart involvement	2
394	Diseases of mitral valve	102
395	Diseases of aortic valve	7
396	Diseases of mitral and aortic valves	41
397	Diseases of other endocardial structures	15
398	Other rheumatic heart disease	50
401	Essential hypertension	113
402	Hypertensive heart disease	706
403	Hypertensive renal disease	147
404	Hypertensive heart and renal disease	83
410	Acute myocardial infarction	10,193
411	Other acute and subacute form of ischemic heart disease	33
412	Old myocardial infarction	34
413	Angina pectoris	35
414	Other forms of chronic ischemic heart disease	9,072
415	Acute pulmonary heart disease	230
416	Chronic pulmonary heart disease	82
420	Acute pericarditis	6
421	Acute and subacute endocarditis	34
422	Acute myocarditis	13
423	Other diseases of pericardium	13
424	Other diseases of endocardium	454
425	Cardiomyopathy	850
426	Conduction disorders	21
427	Cardiac dysrhythmias	735
428	Heart failure	1,330
429	Ill-defined descriptions and complications of heart disease	3,386
430	Subarachnoid hemorrhage	284
431	Intracerebral hemorrhage	643
432	Other and unspecified intracranial hemorrhage	139
433	Occlusion and stenosis of precerebral arteries	61
434	Occlusion of cerebral arteries	887
435	Transient cerebral ischemia	9
436	Acute but ill-defined cerebrovascular disease	2,403
437	Other and ill-defined cerebrovascular disease	336
438	Late effects of cerebrovascular disease	328
440	Atherosclerosis	807
441	Aortic aneurysm	657
442	Other aneurysm	24
443	Other peripheral vascular disease	132
444	Arterial embolism and thrombosis	47
446	Polyarteritis nodosa and allied conditions	32

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
447	Other disorders of arteries and arterioles	54
448	Diseases of capillaries	1
451	Phlebitis and thrombophlebitis	86
452	Portal vein thrombosis	2
453	Other venous embolism and thrombosis	16
454	Varicose veins of lower extremities	6
456	Varicose veins of other sites	16
458	Hypotension	30
459	Other disorders of circulatory system	23
VIII. DISEASES OF THE RESPIRATORY SYSTEM (460-519)		
461	Acute sinusitis	1
464	Acute laryngitis and tracheitis	6
465	Acute upper respiratory infections of multiple or unspecified sites	5
466	Acute bronchitis and bronchiolitis	17
473	Chronic sinusitis	5
478	Other diseases of upper respiratory tract	3
480	Viral pneumonia	22
481	Pneumococcal pneumonia	67
482	Other bacterial pneumonia	94
483	Pneumonia due to other specified organism	13
485	Bronchopneumonia, organism unspecified	155
486	Pneumonia, organism unspecified	2,446
487	Influenza	66
490	Bronchitis, not specified as acute or chronic	17
491	Chronic bronchitis	116
492	Emphysema	723
493	Asthma	159
494	Bronchiectasis	15
495	Extrinsic allergic alveolitis	5
496	Chronic airways obstruction, not elsewhere classified	1,969
500	Coalworkers' pneumoconiosis	10
501	Asbestosis	4
502	Pneumoconiosis due to other silica or silicates	5
504	Pneumopathy due to inhalation of other dust	1
505	Pneumoconiosis, unspecified	3
507	Pneumonitis due to solids and liquids	201
508	Respiratory conditions due to other and unspecified external agents	3
510	Empyema	13
511	Pleurisy	39
512	Pneumothorax	9
513	Abscess of lung and mediastinum	22
514	Pulmonary congestion and hypostasis	25
515	Postinflammatory pulmonary fibrosis	209
516	Other alveolar and parietoalveolar pneumopathy	39
518	Other diseases of lung	178
519	Other diseases of respiratory system	23
IX. DISEASES OF THE DIGESTIVE SYSTEM (520-579)		
522	Diseases of pulp and periapical tissues	1
523	Gingival and periodontal diseases	1
527	Diseases of the salivary glands	1

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
530	Diseases of oesophagus	59
531	Gastric ulcer	71
532	Duodenal ulcer	70
533	Peptic ulcer, site unspecified	92
534	Gastrojejunal ulcer	2
535	Gastritis and duodenitis	45
536	Disorders of function of stomach	2
537	Other disorders of stomach and duodenum	12
540	Acute appendicitis	10
541	Appendicitis, unqualified	1
550	Inguinal hernia	20
551	Other hernia of abdominal cavity, with gangrene	6
552	Other hernia of abdominal cavity with obstruction, without mention of gangrene	17
553	Other hernia of abdominal cavity without mention of obstruction or gangrene	13
555	Regional enteritis	19
556	Idiopathic proctocolitis	10
557	Vascular insufficiency of intestine	268
558	Other noninfective gastroenteritis and colitis	37
560	Intestinal obstruction without mention of hernia	185
562	Diverticula of intestine	119
564	Functional digestive disorders, not elsewhere classified	11
565	Anal fissure and fistula	2
566	Abscess of anal and rectal regions	7
567	Peritonitis	52
568	Other disorders of peritoneum	8
569	Other disorders of intestine	72
570	Acute and subacute necrosis of liver	14
571	Chronic liver disease and cirrhosis	1,123
572	Liver abscess and sequelae of chronic liver disease	99
573	Other disorders of liver	48
574	Cholelithiasis	53
575	Other disorders of gallbladder	46
576	Other disorders of biliary tract	23
577	Diseases of pancreas	100
578	Gastrointestinal hemorrhage	192
579	Intestinal malabsorption	5
X. DISEASES OF THE GENITOURINARY SYSTEM (580-629)		
580	Acute glomerulonephritis	2
581	Nephrotic syndrome	8
582	Chronic glomerulonephritis	32
583	Nephritis and nephropathy, not specified as acute or chronic	16
584	Acute renal failure	115
585	Chronic renal failure	213
586	Renal failure, unspecified	389
587	Renal sclerosis, unspecified	9
588	Disorders resulting from impaired renal function	1
590	Infections of kidney	32
591	Hydronephrosis	3
592	Calculus of kidney and ureter	5
593	Other disorders of kidney and ureter	92
594	Calculus of lower urinary tract	3

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
595	Cystitis	8
596	Other disorders of bladder	11
598	Urethral stricture	1
599	Other disorders of urethra and urinary tract	421
600	Hyperplasia of prostate	16
602	Other disorders of prostate	10
604	orchitis and epididymitis	1
607	Disorders of penis	1
608	Other disorders of male genital organs	1
611	Other disorders of breast	3
614	Inflammatory disease of ovary, fallopian tube, pelvic cellular tissue and peritoneum	4
615	Inflammatory diseases of uterus, except cervix	3
618	Genital prolapse	2
620	Noninflammatory disorders of ovary, fallopian tube and broad ligament	1
621	Disorders of uterus, not elsewhere classified	1
XI. COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM (630-676)		
634	Spontaneous abortion	1
637	Unspecified abortion	1
641	Antepartum hemorrhage, abruptio placentae, and placenta praevia	2
642	Hypertension complicating pregnancy, childbirth and the puerperium	2
646	Other complications of pregnancy, not elsewhere classified	1
647	Infective and parasitic conditions in the mother classified elsewhere but complicating pregnancy, childbirth and the puerperium	1
669	Other complications of labor and delivery, not elsewhere classified	1
673	Obstetrical pulmonary embolism	1
XII. DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE (680-709)		
682	Other cellulitis and abscess	17
686	Other local infections of skin and subcutaneous tissue	6
693	Dermatitis due to substances taken internally	1
694	Bullous dermatoses	6
695	Erythematous conditions	14
696	Psoriasis and similar disorders	1
701	Other hypertrophic and atrophic conditions of skin	1
707	Chronic ulcer of skin	82
XIII. DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE (710-739)		
710	Diffuse diseases of connective tissue	99
711	Arthropathy associated with infections	5
714	Rheumatoid arthritis and other inflammatory polyarthropathies	53
715	Osteoarthritis and allied disorders	26
716	Other and unspecified arthropathies	7
718	Other derangement of joint	2
720	Ankylosing spondylitis and other inflammatory spondylopathies	1
721	Spondylosis and allied disorders	5
722	Intervertebral disc disorders	1
724	Other and unspecified disorders of back	2

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
725	Polymyalgia rheumatica	1
728	Disorders of muscle, ligament and fascia	7
729	Other disorders of soft tissues	4
730	Osteomyelitis, periostitis and other infections involving bone	24
731	Osteitis deformans and osteopathies associated with other disorders classified elsewhere	2
732	Osteochondropathies	1
733	Other disorders of bone and cartilage	18
737	Curvature of spine	7
738	Other acquired deformity	2
XIV. CONGENITAL ANOMALIES (740-759)		
740	Anencephalus and similar anomalies	13
741	Spina bifida	8
742	Other congenital anomalies of nervous system	39
743	Congenital Anomalies of eye	1
745	Bulbus cordis anomalies and anomalies of cardiac septal closure	56
746	Other congenital anomalies of heart	118
747	Other congenital anomalies of circulatory system	48
748	Congenital anomalies of respiratory system	59
750	Other congenital anomalies of upper alimentary tract	3
751	Other congenital anomalies of digestive system	5
753	Congenital anomalies of urinary system	26
756	Other congenital musculoskeletal anomalies	28
757	Congenital anomalies of the integument	1
758	Chromosomal anomalies	57
759	Other and unspecified congenital anomalies	42
XV. CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD (760-779)		
760	Fetus or newborn affected by maternal conditions which may be unrelated to present pregnancy	3
761	Fetus or newborn affected by maternal complications of pregnancy	108
762	Fetus or newborn affected by complications of placenta, cord and membranes	24
764	Slow fetal growth and fetal malnutrition	1
765	Disorders relating to short gestation and unspecified low birthweight	251
767	Birth trauma	16
768	Intrauterine hypoxia and birth asphyxia	28
769	Respiratory distress syndrome	165
770	Other respiratory conditions of fetus and newborn	124
771	Infections specific to the perinatal period	34
772	Fetal and neonatal hemorrhage	8
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	1
776	Hematological disorders of fetus and newborn	2
777	Perinatal disorders of digestive system	15
778	Conditions involving the integument and temperature regulation of fetus and newborn	6
779	Other and ill-defined conditions originating in the perinatal period	44

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause Of Death	Number
XVI. SYMPTOMS, SIGNS AND ILL-DEFINED CONDITIONS (780-799)		
780	General symptoms	11
785	Symptoms involving cardiovascular system	17
786	Symptoms involving respiratory system and other chest symptoms	4
789	Other symptoms involving abdomen and pelvis	5
790	Nonspecific findings on examination of blood	5
795	Nonspecific abnormal histological and immunological findings	1
797	Senility without mention of psychosis	21
798	Sudden death, cause unknown	270
799	Other ill-defined and unknown causes of morbidity and mortality	79
XVII. EXTERNAL CAUSES OF INJURY AND POISONING (E800-E999)		
E801	Fracture of base of skull	1
E805	Hit by rolling stock	11
E807	Railway accident of unspecified nature	1
E810	Motor vehicle traffic accident involving collision with train	16
E812	Other motor vehicle traffic accident involving collision with another motor vehicle	807
E813	Motor vehicle traffic accident involving collision with other vehicle	21
E814	Motor vehicle traffic accident involving collision with pedestrian	232
E815	Other motor vehicle traffic accident involving collision on the highway	176
E816	Motor vehicle traffic accident due to loss of control, without collision on the highway	271
E818	Other noncollision motor vehicle traffic accident	28
E819	Motor vehicle traffic accident of unspecified nature	88
E820	Nontraffic accident involving motor-driven snow vehicle	7
E821	Nontraffic accident involving other off-road motor vehicle	7
E822	Other motor vehicle nontraffic accident involving collision with moving object	9
E823	Other motor vehicle nontraffic accident involving collision with stationary object	3
E825	Other motor vehicle nontraffic accident of other and unspecified nature	4
E826	Pedal cycle accident	2
E828	Accident involving animal being ridden	2
E830	Accident to watercraft causing submersion	12
E831	Accident to watercraft causing other injury	1
E832	Other accidental submersion or drowning in water transport accident	8
E838	Other and unspecified water transport accident	2
E841	Accident to powered aircraft, other and unspecified	39
E844	Other specified air transport accidents	1
E848	Accidents involving other vehicles not elsewhere classifiable	2
E850	Accidental poisoning by analgesics, antipyretics, antirheumatics	13
E851	Accidental poisoning by barbiturates	1
E853	Accidental poisoning by tranquilizers	1
E854	Accidental poisoning by other psychotropic agents	2
E855	Accidental poisoning by other drugs acting on central and autonomic nervous systems	8
E856	Accidental poisoning by antibiotics	1
E858	Accidental poisoning by other drugs	50
E860	Accidental poisoning by alcohol, not elsewhere classified	6
E862	Accidental poisoning by petroleum products, other solvents and their vapours, not elsewhere classified	5
E864	Accidental poisoning by corrosives and caustics, not elsewhere classified	1
E868	Accidental poisoning by other utility gas and other carbon monoxide	23

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
E869	Accidental poisoning by other gases and vapors	3
E870	Accidental cut, puncture, perforation or hemorrhage during medical care	3
E876	Other and unspecified misadventures during medical care	1
E878	Surgical operation and other surgical procedures as the cause of abnormal reaction of patient, or of later complication, without mention of misadven . .	70
E879	Other procedures, without mention of misadventure at the time of procedure, as the cause of abnormal reaction of patient, or of later complication	19
E880	Fall on or from stairs or steps	47
E881	Fall on or from ladders or scaffolding	13
E882	Fall from or out of building or other structure	18
E883	Fall into hole or other opening in surface	2
E884	Other fall from one level to another	27
E885	Fall on same level from slipping, tripping or stumbling	15
E887	Fracture, cause unspecified	152
E888	Other and unspecified fall	186
E890	Conflagration in private dwelling	158
E891	Conflagration in other and unspecified building or structure	1
E892	Conflagration not in building or structure	3
E893	Accident caused by ignition of clothing	3
E894	Ignition of highly inflammable material	3
E895	Accident caused by controlled fire in private dwelling	1
E897	Accident caused by controlled fire not in building or structure	1
E898	Accident caused by other specified fire and flames	3
E899	Accident caused by unspecified fire	4
E900	Excessive heat	2
E901	Excessive cold	29
E902	High and low air pressure and changes in air pressure	1
E904	Hunger, thirst, exposure, neglect	5
E905	Venomous animals and plants as the cause of poisoning and toxic reactions . .	3
E906	Other injury caused by animals	4
E908	Cataclysmic storms and floods resulting from storms	3
E910	Accidental drowning and submersion	95
E911	Inhalation and ingestion of food causing obstruction of respiratory tract or suffocation	53
E912	Inhalation and ingestion of other object causing obstruction of respiratory tract or suffocation	50
E913	Accidental mechanical suffocation	32
E916	Struck accidentally by falling object	30
E917	Striking against or struck accidentally by objects or persons	7
E918	Caught accidentally in or between objects	8
E919	Accidents caused by machinery	21
E920	Accidents caused by cutting and piercing instruments or objects	5
E921	Accident caused by explosion of pressure vessel	1
E922	Accident caused by firearm missile	32
E923	Accident caused by explosive material	10
E924	Accident caused by hot substance or object, caustic or corrosive material and steam	3
E925	Accident caused by electric current	24
E928	Other and unspecified environmental and accidental causes	85
E929	Late effects of accidental injury	26
E930	Antibiotics	1
E932	Hormones and synthetic substitutes	1

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

Table 4.16 Number of Deaths by Cause Michigan Residents, 1990 (continued)

ICD List Number	Cause of Death	Number
E934	Agents primarily affecting blood constituents	1
E935	Analgesics, antipyretics and antirheumatics	1
E936	Anticonvulsants and anti-parkinsonism drugs	1
E947	Other and unspecified drugs and medicaments	8
E950	Suicide and selfinflicted poisoning by solid or liquid substances	96
E951	Suicide and selfinflicted poisoning by gases in domestic use	1
E952	Suicide and selfinflicted poisoning by other gases and vapors	103
E953	Suicide and selfinflicted injury by hanging, strangulation and suffocation	182
E954	Suicide and selfinflicted injury by submersion [drowning]	18
E955	Suicide and selfinflicted injury by firearms and explosives	628
E956	Suicide and selfinflicted injury by cutting and piercing instruments	15
E957	Suicide and selfinflicted injuries by jumping from high place	5
E958	Suicide and selfinflicted injury by other and unspecified means	19
E959	Late effects of selfinflicted injury	1
E960	Fight, brawl, rape	5
E962	Assault by poisoning	1
E963	Assault by hanging and strangulation	19
E964	Assault by submersion [drowning]	1
E965	Assault by firearms and explosives	732
E966	Assault by cutting and piercing instrument	177
E967	Child battering and other maltreatment	22
E968	Assault by other and unspecified means	108
E969	Late effects of injury purposely inflicted by other person	3
E970	Injury due to legal intervention by firearms	12
E980	Poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted	69
E982	Poisoning by other gases, undetermined whether accidentally or purposely inflicted	11
E983	Hanging, strangulation or suffocation, undetermined whether accidentally or purposely inflicted	4
E984	Submersion [drowning], undetermined whether accidentally or purposely inflicted	8
E985	Injury by firearms and explosives, undetermined whether accidentally or purposely inflicted	10
E986	Injury by cutting and piercing instruments, undetermined whether accidentally or purposely inflicted	1
E987	Falling from high place, undetermined whether accidentally or purposely inflicted	1
E988	Injury by other and unspecified means, undetermined whether accidentally or purposely inflicted	11

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

Table 4.17
Population Changes by County
Michigan, 1980 and 1990

Area	Population Estimate July 1, 1980	Population Estimate July 1, 1990	Net Change	Percent Change	Natural Increase	Estimated Net Migration
Michigan	9,262,078	9,295,297	33,219	0.4	623,126	-589,907
Alcona	9,740	10,145	405	4.2	-262	667
Alger	9,225	8,972	-253	-2.7	101	-354
Allegan	81,555	90,509	8,954	11.0	7,426	1,528
Alpena	32,315	30,605	-1,710	-5.3	1,322	-3,032
Antrim	16,194	18,185	1,991	12.3	472	1,519
Arenac	14,706	14,931	225	1.5	510	-285
Baraga	8,484	7,954	-530	-6.2	71	-601
Barry	45,781	50,057	4,276	9.3	3,188	1,088
Bay	119,881	111,723	-8,158	-6.8	7,139	-15,297
Benzie	11,205	12,200	995	8.9	368	627
Berrien	171,276	161,378	-9,898	-5.8	10,362	-20,260
Branch	40,188	41,502	1,314	3.3	2,540	-1,226
Calhoun	141,557	135,982	-5,575	-3.9	7,550	-13,125
Cass	49,499	49,477	-22	-0.0	2,269	-2,291
Charlevoix	19,907	21,468	1,561	7.8	1,272	289
Cheboygan	20,649	21,398	749	3.6	817	-68
Chippewa	29,029	34,604	5,575	19.2	1,061	4,514
Clare	23,822	24,952	1,130	4.7	717	413
Clinton	55,893	57,883	1,990	3.6	4,969	-2,979
Crawford	9,465	12,260	2,795	29.5	681	2,114
Delta	38,947	37,780	-1,167	-3.0	1,711	-2,878
Dickinson	25,341	26,831	1,490	5.9	592	898
Eaton	88,337	92,879	4,542	5.1	6,420	-1,878
Emmet	22,992	25,040	2,048	8.9	1,297	751
Genesee	450,449	430,459	-19,990	-4.4	35,448	-55,438
Gladwin	19,957	21,896	1,939	9.7	746	1,193
Gogebic	19,686	18,052	-1,634	-8.3	-664	-970
Grand Traverse	54,899	64,273	9,374	17.1	4,701	4,673
Gratiot	40,448	38,982	-1,466	-3.6	1,751	-3,217
Hillsdale	42,071	43,431	1,360	3.2	2,542	-1,182
Houghton	37,872	35,446	-2,426	-6.4	546	-2,972
Huron	36,459	34,951	-1,508	-4.1	1,416	-2,924
Ingham	275,520	281,912	6,392	2.3	27,424	-21,032
Ionia	51,815	57,024	5,209	10.1	4,682	527
Iosco	28,349	30,209	1,860	6.6	2,783	-923
Iron	13,635	13,175	-460	-3.4	-520	60
Isabella	54,110	54,624	514	0.9	3,866	-3,352
Jackson	151,495	149,756	-1,739	-1.1	8,650	-10,389
Kalamazoo	212,378	223,411	11,033	5.2	17,186	-6,153
Kalkaska	10,952	13,497	2,545	23.2	1,046	1,499

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

Table 4.17 (continued)
Population Changes by County
Michigan, 1980 and 1990

Area	Population Estimate July 1, 1980	Population Estimate July 1, 1990	Net Change	Percent Change	Natural Increase	Estimated Net Migration
Kent	444,506	500,631	56,125	12.6	52,147	3,978
Keweenaw	1,963	1,701	-262	-13.3	-168	-94
Lake	7,711	8,583	872	11.3	-119	991
Lapeer	70,038	74,768	4,730	6.8	5,764	-1,034
Leelanau	14,007	16,527	2,520	18.0	813	1,707
Lenawee	89,948	91,476	1,528	1.7	5,769	-4,241
Livingston	100,289	115,645	15,356	15.3	8,348	7,008
Luce	6,659	5,763	-896	-13.5	106	-1,002
Mackinac	10,178	10,674	496	4.9	212	284
Macomb	694,600	717,400	22,800	3.3	42,528	-19,728
Manistee	23,019	21,265	-1,754	-7.6	64	-1,818
Marquette	74,101	70,887	-3,214	-4.3	6,410	-9,624
Mason	26,365	25,537	-828	-3.1	821	-1,649
Mecosta	36,961	37,308	347	0.9	1,945	-1,598
Menominee	26,201	24,920	-1,281	-4.9	643	-1,924
Midland	73,578	75,651	2,073	2.8	6,559	-4,486
Missaukee	10,009	12,147	2,138	21.4	830	1,308
Monroe	134,659	133,600	-1,059	-0.8	9,310	-10,369
Montcalm	47,555	53,059	5,504	11.6	3,532	1,972
Montmorency	7,492	8,936	1,444	19.3	-178	1,622
Muskegon	157,589	158,983	1,394	0.9	11,806	-10,412
Newaygo	34,917	38,202	3,285	9.4	2,660	625
Oakland	1,011,793	1,083,592	71,799	7.1	70,700	1,099
Oceana	22,002	22,454	452	2.1	1,630	-1,178
Ogemaw	16,436	18,681	2,245	13.7	497	1,748
Ontonagon	9,861	8,854	-1,007	-10.2	-53	-954
Osceola	18,928	20,146	1,218	6.4	1,182	36
Oscoda	6,858	7,842	984	14.3	132	852
Otsego	14,993	17,957	2,964	19.8	1,094	1,870
Ottawa	157,174	187,768	30,594	19.5	18,445	12,149
Presque Isle	14,267	13,743	-524	-3.7	237	-761
Roscommon	16,374	19,776	3,402	20.8	-282	3,684
Saginaw	228,059	211,946	-16,113	-7.1	16,935	-33,048
St. Clair	138,802	145,607	6,805	4.9	8,131	-1,326
St. Joseph	56,083	58,913	2,830	5.0	4,053	-1,223
Sanilac	40,789	39,928	-861	-2.1	1,728	-2,589
Schoolcraft	8,575	8,302	-273	-3.2	75	-348
Shiawassee	71,140	69,770	-1,370	-1.9	5,135	-6,505
Tuscola	56,961	55,498	-1,463	-2.6	3,556	-5,019
Van Buren	66,814	70,060	3,246	4.9	4,456	-1,210
Washtenaw	264,748	282,937	18,189	6.9	24,432	-6,243
Wayne	2,337,891	2,111,687	-226,204	-9.7	125,631	-351,835
Wexford	25,102	26,360	1,258	5.0	1,513	-255

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

Table 4.18
Population by Age, Race and Sex
Michigan Residents, 1990

Age in Years	All Races			White			Black			All Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
< 1	151,264	77,293	73,971	117,554	60,148	57,406	30,509	15,485	15,024	3,201	1,660	1,541
1 - 4	562,314	287,431	274,883	451,685	231,530	220,155	97,872	49,425	48,447	12,757	6,476	6,281
5 - 9	690,138	353,390	336,748	563,744	289,687	274,057	110,882	55,907	54,975	15,512	7,796	7,716
10 - 14	665,572	340,578	324,994	538,400	276,544	261,856	112,536	56,705	55,831	14,636	7,329	7,307
15 - 19	700,201	355,970	344,231	559,748	285,917	273,831	124,685	61,948	62,737	15,768	8,105	7,663
20 - 24	706,575	350,511	356,064	582,768	291,766	291,002	108,740	51,000	57,740	15,067	7,745	7,322
25 - 29	764,264	376,664	387,600	643,267	321,201	322,066	105,333	47,685	57,648	15,664	7,778	7,886
30 - 34	810,420	396,830	413,590	684,362	339,708	344,654	110,752	49,548	61,204	15,306	7,574	7,732
35 - 39	744,802	365,839	378,963	629,710	314,084	315,626	101,410	45,263	56,147	13,682	6,492	7,190
40 - 44	657,391	323,122	334,269	559,969	278,811	281,158	85,094	38,684	46,410	12,328	5,627	6,701
45 - 49	520,093	255,767	264,326	449,915	223,189	226,726	61,234	28,210	33,024	8,944	4,368	4,576
50 - 54	424,090	206,548	217,542	370,209	182,001	188,208	47,415	21,225	26,190	6,466	3,322	3,144
55 - 59	391,190	187,237	203,953	341,312	164,924	176,388	45,439	20,173	25,266	4,439	2,140	2,299
60 - 64	402,882	190,640	212,242	354,333	169,056	185,277	44,987	20,025	24,962	3,562	1,559	2,003
65 - 69	367,805	165,700	202,105	324,623	146,694	177,929	40,537	17,845	22,692	2,645	1,161	1,484
70 - 74	286,418	121,055	165,363	255,812	108,354	147,458	28,886	12,012	16,874	1,720	689	1,031
75 - 79	211,919	82,719	129,200	189,989	74,292	115,697	20,784	7,968	12,816	1,146	459	687
80 - 84	132,789	45,870	86,919	120,528	41,357	79,171	11,628	4,223	7,405	633	290	343
85 +	105,170	29,566	75,604	95,138	26,289	68,849	9,643	3,125	6,518	389	152	237
Total	9,295,297	4,512,730	4,782,567	7,833,066	3,825,552	4,007,514	1,298,366	606,456	691,910	163,865	80,722	83,143

Source: The estimate of the total state population was provided by the Department of Management and Budget, Office of Revenue and Tax Analysis. The breakdown of the total population by age, race and sex was prepared by the Department of Public Health, Office of the State Registrar and Center for Health Statistics. See Technical Notes.

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

Table 4.19
Abridged Life Table
Michigan Residents, 1990

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
00-01	0.01083	100,000	1,083	99,044	7,497,805	74.978
01-05	0.00178	9,8917	176	395,252	7,398,762	74.798
05-10	0.00113	9,8741	111	493,402	7,003,510	70.928
10-15	0.00127	9,8631	125	492,909	6,510,108	66.005
15-20	0.00452	9,8505	444	491,500	6,017,198	61.085
20-25	0.00539	9,8061	528	489,006	5,525,698	56.350
25-30	0.00560	9,7533	545	486,327	5,036,692	51.641
30-35	0.00672	9,6988	651	483,380	4,550,365	46.917
35-40	0.00918	9,6336	883	479,577	4,066,985	42.217
40-45	0.01208	9,5453	1,152	474,562	3,587,409	37.583
45-50	0.01849	9,4301	1,743	467,454	3,112,846	33.010
50-55	0.02845	9,2558	2,633	456,724	2,645,392	28.581
55-60	0.04706	8,9925	4,232	439,777	2,188,667	24.339
60-65	0.07184	8,5693	6,156	413,962	1,748,890	20.409
65-70	0.10680	7,9537	8,494	377,486	1,334,928	16.784
70-75	0.15675	7,1043	11,136	328,464	957,441	13.477
75-80	0.22911	5,9907	13,725	266,077	628,978	10.499
80-85	0.32999	4,6182	15,239	192,717	362,901	7.858
85+	1.00000	30,943	30,943	170,184	170,184	5.500

¹ Definitions of life table values are contained in the Technical Notes.

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

Table 4.20
Abridged Life Table for Males
Michigan Residents, 1990

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
00-01	0.01215	100,000	1215	98,925	7,173,403	71.734
01-05	0.00192	98,785	190	394,690	7,074,477	71.615
05-10	0.00121	98,596	118	492,652	6,679,787	67.749
10-15	0.00128	98,477	126	492,185	6,187,135	62.828
15-20	0.00677	98,351	665	490,239	5,694,949	57.904
20-25	0.00843	97,686	823	486,398	5,204,710	53.280
25-30	0.00808	96,863	783	482,380	4,718,312	48.711
30-35	0.00955	96,081	917	478,195	4,235,933	44.087
35-40	0.01246	95,164	1,186	472,976	3,757,737	39.487
40-45	0.01598	93,978	1,501	466,342	3,284,761	34.952
45-50	0.02340	92,477	2,164	457,324	2,818,419	30.477
50-55	0.03506	90,314	3,166	444,266	2,361,096	26.143
55-60	0.05863	87,147	5,109	423,857	1,916,830	21.995
60-65	0.09090	82,038	7,457	392,595	1,492,973	18.199
65-70	0.13595	74,581	10,139	348,764	1,100,378	14.754
70-75	0.20568	64,442	13,254	290,084	751,614	11.663
75-80	0.29291	51,188	14,993	218,807	461,530	9.016
80-85	0.41296	36,194	14,946	142,858	242,723	6.706
85+	1.00000	21,248	21,248	99,865	99,865	4.700

¹ Definitions of life table values are contained in the Technical Notes.
Source: Office of the State Registrar and Center for Health Statistics, MDPH

Table 4.21
Abridged Life Table for Females
Michigan Residents, 1990

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
00-01	0.00945	100,000	945	99,169	7,806,831	78.068
01-05	0.00163	99,055	161	395,839	7,707,663	77.812
05-10	0.00104	98,894	103	494,186	7,311,824	73.936
10-15	0.00127	98,791	125	493,667	6,817,638	69.011
15-20	0.00218	98,666	215	492,818	6,323,971	64.094
20-25	0.00239	98,452	235	491,691	5,831,153	59.229
25-30	0.00317	98,217	311	490,339	5,339,462	54.364
30-35	0.00400	97,906	391	488,607	4,849,123	49.529
35-40	0.00599	97,515	584	486,199	4,360,516	44.717
40-45	0.00829	96,931	803	482,799	3,874,316	39.970
45-50	0.01371	96,128	1,317	477,615	3,391,517	35.281
50-55	0.02214	94,810	2,099	469,232	2,913,902	30.734
55-60	0.03633	92,712	3,367	455,715	2,444,670	26.369
60-65	0.05441	89,344	4,861	435,314	1,988,955	22.262
65-70	0.08225	84,483	6,948	405,957	1,553,642	18.390
70-75	0.11923	77,535	9,244	365,757	1,147,684	14.802
75-80	0.18559	68,291	12,674	311,113	781,928	11.450
80-85	0.28218	55,617	15,694	239,261	470,814	8.465
85+	1.00000	39,923	39,923	231,554	231,554	5.800

¹ Definitions of life table values are contained in the Technical Notes.
Source: Office of the State Registrar and Center for Health Statistics, MDPH

Table 4.22
Abridged Life Table for Whites
Michigan Residents, 1990

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
00-01	0.00792	100,000	792	99,306	7,609,669	76.097
01-05	0.00148	99,208	147	396,497	7,510,363	75.703
05-10	0.00106	99,061	104	495,020	7,113,867	71.813
10-15	0.00120	98,957	118	494,537	6,618,847	66.886
15-20	0.00342	98,838	338	493,411	6,124,310	61.963
20-25	0.00428	98,501	421	491,471	5,630,899	57.166
25-30	0.00440	98,080	431	489,348	5,139,427	52.400
30-35	0.00553	97,649	539	486,949	4,650,079	47.620
35-40	0.00692	97,110	672	483,953	4,163,130	42.870
40-45	0.00966	96,438	931	480,032	3,679,178	38.151
45-50	0.01546	95,507	1,477	474,155	3,199,146	33.496
50-55	0.02570	94,031	2,416	464,635	2,724,991	28.980
55-60	0.04338	91,615	3,974	448,853	2,260,356	24.672
60-65	0.06671	87,641	5,846	424,493	1,811,503	20.670
65-70	0.10178	81,794	8,325	389,270	1,387,010	16.957
70-75	0.15213	73,470	11,177	340,608	997,740	13.580
75-80	0.22621	62,293	14,091	277,193	657,132	10.549
80-85	0.32706	48,202	15,765	201,535	379,939	7.882
85+	1.00000	32,437	32,437	178,404	178,404	5.500

¹ Definitions of life table values are contained in the Technical Notes.
Source: Office of the State Registrar and Center for Health Statistics, MDPH

Table 4.23
Abridged Life Table for White Males
Michigan Residents, 1990

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
00-01	0.00918	100,000	918	99,198	7,306,241	73.062
01-05	0.00166	99,082	164	395,947	7,207,043	72.738
05-10	0.00113	98,918	111	494,285	6,811,095	68.856
10-15	0.00118	98,807	116	493,820	6,316,810	63.931
15-20	0.00472	98,691	465	492,403	5,822,990	59.002
20-25	0.00656	98,226	644	489,549	5,330,587	54.269
25-30	0.00621	97,582	606	486,420	4,841,038	49.610
30-35	0.00789	96,976	765	483,029	4,354,618	44.904
35-40	0.00937	96,211	901	478,897	3,871,589	40.241
40-45	0.01277	95,310	1,216	473,691	3,392,692	35.596
45-50	0.01890	94,094	1,778	466,371	2,919,001	31.022
50-55	0.03131	92,315	2,890	454,984	2,452,630	26.568
55-60	0.05384	89,425	4,814	435,981	1,997,646	22.339
60-65	0.08456	84,612	7,154	406,274	1,561,665	18.457
65-70	0.13047	77,457	10,106	363,347	1,155,391	14.917
70-75	0.20069	67,351	13,517	304,104	792,044	11.760
75-80	0.28923	53,835	15,571	230,708	487,939	9.064
80-85	0.41088	38,264	15,722	151,282	257,232	6.722
85+	1.00000	22,543	22,543	105,950	105,950	4.700

¹ Definitions of life table values are contained in the Technical Notes.
Source: Office of the State Registrar and Center for Health Statistics, MDPH

Table 4.24
Abridged Life Table for White Females
 Michigan Residents, 1990

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
00-01	0.00660	100,000	660	99,418	7,895,395	78.954
01-05	0.00129	99,340	128	397,073	7,795,977	78.478
05-10	0.00099	99,212	98	495,790	7,398,905	74.577
10-15	0.00123	99,114	121	495,290	6,903,115	69.648
15-20	0.00207	98,993	204	494,470	6,407,825	64.730
20-25	0.00198	98,789	195	493,467	5,913,355	59.858
25-30	0.00258	98,594	254	492,360	5,419,888	54.972
30-35	0.00319	98,340	313	490,956	4,927,528	50.107
35-40	0.00448	98,027	439	489,105	4,436,573	45.259
40-45	0.00657	97,588	640	486,492	3,947,467	40.450
45-50	0.01207	96,948	1,169	482,086	3,460,975	35.699
50-55	0.02025	95,778	1,939	474,457	2,978,889	31.102
55-60	0.03352	93,840	3,145	461,880	2,504,432	26.688
60-65	0.05016	90,695	4,549	442,838	2,042,551	22.521
65-70	0.07749	86,146	6,675	414,995	1,599,713	18.570
70-75	0.11476	79,471	9,120	375,847	1,184,718	14.908
75-80	0.18315	70,351	12,885	320,986	808,871	11.498
80-85	0.27926	57,466	16,048	247,659	487,885	8.490
85+	1.00000	41,418	41,418	240,226	240,226	5.800

¹ Definitions of life table values are contained in the Technical Notes.
 Source: Office of the State Registrar and Center for Health Statistics, MDPH

Table 4.25
Abridged Life Table for Blacks
 Michigan Residents, 1990

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
00-01	0.02258	100,000	2,258	97,966	6,855,519	68.555
01-05	0.00327	97,742	319	390,142	6,757,552	69.137
05-10	0.00136	97,423	132	486,752	6,367,411	65.359
10-15	0.00165	97,291	160	486,219	5,880,659	60.444
15-20	0.00943	97,131	915	483,564	5,394,440	55.538
20-25	0.01144	96,216	1,100	478,401	4,910,877	51.040
25-30	0.01321	95,116	1,256	472,498	4,432,476	46.601
30-35	0.01467	93,860	1,376	466,053	3,959,978	42.190
35-40	0.02360	92,484	2,182	457,206	3,493,925	37.779
40-45	0.02806	90,302	2,534	445,466	3,036,719	33.629
45-50	0.04075	87,768	3,576	430,236	2,591,253	29.524
50-55	0.04923	84,192	4,144	411,091	2,161,018	25.668
55-60	0.07423	80,048	5,942	386,242	1,749,926	21.861
60-65	0.11150	74,106	8,262	350,650	1,363,685	18.402
65-70	0.14680	65,844	9,666	305,631	1,013,035	15.385
70-75	0.19636	56,178	11,031	253,693	707,403	12.592
75-80	0.25454	45,147	11,491	197,225	453,710	10.050
80-85	0.35879	33,656	12,075	137,793	256,485	7.621
85+	1.00000	21,580	21,580	118,692	118,692	5.500

¹ Definitions of life table values are contained in the Technical Notes.
 Source: Office of the State Registrar and Center for Health Statistics, MDPH

Table 4.26
Abridged Life Table for Black Males
 Michigan Residents, 1990

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
00-01	0.02454	100,000	2,454	97,790	6,383,770	63.838
01-05	0.00340	97,546	331	389,348	6,285,980	64.441
05-10	0.00161	97,215	156	485,646	5,896,632	60.655
10-15	0.00177	97,059	171	485,163	5,410,986	55.750
15-20	0.01635	96,888	1,583	480,832	4,925,822	50.841
20-25	0.01952	95,304	1,860	471,951	4,444,991	46.640
25-30	0.02107	93,444	1,968	462,328	3,973,039	42.518
30-35	0.02178	91,476	1,991	452,629	3,510,711	38.378
35-40	0.03423	89,485	3,063	440,060	3,058,082	34.174
40-45	0.03932	86,422	3,398	423,994	2,618,022	30.293
45-50	0.05873	83,024	4,875	403,320	2,194,029	26.426
50-55	0.06724	78,149	5,254	378,055	1,790,709	22.914
55-60	0.09626	72,895	7,017	347,788	1,412,654	19.379
60-65	0.14225	65,878	9,371	306,627	1,064,865	16.164
65-70	0.18078	56,507	10,215	257,462	758,238	13.419
70-75	0.25077	46,292	11,608	202,673	500,776	10.818
75-80	0.32692	34,684	11,338	144,784	298,103	8.595
80-85	0.43808	23,345	10,227	90,352	153,319	6.568
85+	1.00000	13,118	13,118	62,967	62,967	4.800

¹ Definitions of life table values are contained in the Technical Notes.
 Source: Office of the State Registrar and Center for Health Statistics, MDPH

Table 4.27
Abridged Life Table for Black Females
 Michigan Residents, 1990

Age	$nx(1)^1$	$lx(2)^1$	$ndx(3)^1$	$nLx(4)^1$	$Tx(5)^1$	$ex(6)^1$
00-01	0.02057	100,000	2,057	98,199	7,317,109	73.171
01-05	0.00314	97,943	307	390,960	7,218,910	73.705
05-10	0.00110	97,637	106	487,890	6,827,950	69.932
10-15	0.00153	97,530	148	487,309	6,340,059	65.006
15-20	0.00255	97,382	248	486,343	5,852,750	60.101
20-25	0.00424	97,134	411	484,723	5,366,407	55.248
25-30	0.00666	96,722	644	482,094	4,881,684	50.471
30-35	0.00887	96,078	852	478,424	4,399,591	45.792
35-40	0.01495	95,226	1,423	472,760	3,921,166	41.177
40-45	0.01858	93,803	1,743	464,845	3,448,406	36.762
45-50	0.02514	92,061	2,314	454,799	2,983,561	32.409
50-55	0.03438	89,747	3,085	441,555	2,528,762	28.177
55-60	0.05627	86,662	4,876	421,941	2,087,207	24.085
60-65	0.08606	81,785	7,038	392,170	1,665,266	20.361
65-70	0.11917	74,747	8,907	352,133	1,273,096	17.032
70-75	0.15550	65,840	10,238	304,135	920,964	13.988
75-80	0.20601	55,602	11,454	250,084	616,829	11.094
80-85	0.30912	44,148	13,647	186,789	366,745	8.307
85+	1.00000	30,501	30,501	179,956	179,956	5.900

¹ Definitions of life table values are contained in the Technical Notes.
 Source: Office of the State Registrar and Center for Health Statistics, MDPH

Figure 4.2

FORM Alignment

PLEASE TYPEWRITE OR PRINT - EXCEPT SIGNATURES
ALL COPIES MUST BE LEGIBLE - USE ONLY BLACK INK

FORM Alignment

STATE OF MICHIGAN
DEPARTMENT OF PUBLIC HEALTH 49

CERTIFICATE OF
LIVE BIRTH

121 - STATE FILE NUMBER
0416925

LF _____

CF _____

1 CHILD - NAME (FIRST) (MIDDLE) (LAST)

2 SEX 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

5a HOSPITAL NAME - (IF NOT HOSPITAL GIVE STREET AND NUMBER) 5b CITY, VILLAGE OR TOWNSHIP OF BIRTH 5c COUNTY OF BIRTH

6a I CERTIFY THAT THE ABOVE NAMED CHILD WAS BORN ALIVE AT THE PLACE AND TIME AND ON THE DATE STATED ABOVE

6b NAME AND TITLE OF ATTENDANT IF OTHER THAN CERTIFIED MIDWIFE ADDRESS OF ATTENDANT (STREET NO., CITY OR VILLAGE, STATE, ZIP)

7a REGISTRAR'S SIGNATURE 7b DATE RECEIVED BY LOCAL REGISTRAR (Month Day Year)

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) 8g COUNTY 8h STATE

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)

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 ADMINISTRATION FOR ISSUANCE OF A SOCIAL SECURITY NUMBER AND CARD

SIGNATURE (PARENT OR OTHER INFORMANT) YES NO

CONFIDENTIAL INFORMATION FOR PUBLIC HEALTH USE ONLY

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 more)

11a 11b 11c 11d 11e 11f 11g 11h 11i 11j 11k 11l 11m 11n 11o 11p 11q 11r 11s 11t 11u 11v 11w 11x 11y 11z

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

20a LIVE BIRTHS (Do not include this child) 20b OTHER TERMINATIONS (Spontaneous and induced at any time after conception) 21a MOTHER TRANSFERRED PRIOR TO DELIVERY (If yes enter name of facility transferred) 22 ATTENDANT AT BIRTH MD MD/DO NURSE NURSE MIDWIFE OTHER

20c DATE OF LAST LIVE BIRTH (Mo Year) 20d DATE OF LAST OTHER TERMINATION (Mo Year) 21b INFANT TRANSFERRED TO NICU? YES NO 23 INFANT ADMITTED TO NICU? YES NO

24 BIRTHWEIGHT (Specify unit) 25 ESTIMATED WEIGHT AT BIRTH (Specify unit) 26 Apgar Score 1 2 3 4 5 MIN 27 PLACE OF BIRTH Free-standing Birth Center Home Other (Specify)

28 MEDICAL RISK FACTORS FOR THIS PREGNANCY (Check all that apply) Anemia (Hct < 30; Hgb < 10) Carotid disease Arterio-venous leg disease Diabetes Gestational diabetes Hydatidiform mole Hemorrhagic disease Hypertension - chronic Hypertension - pregnancy associated Iliac artery aneurysm Previous intrauterine growth retardation Previous preterm or small for gestational age infant Renal disease Rh sensitization Urinary bleeding Vaginal bleeding Other (Specify)

29 OTHER RISK FACTORS FOR THIS PREGNANCY Tobacco use during pregnancy Yes No Average number cigarettes per day Alcohol use during pregnancy Yes No Average number of drinks per week Weight gained during pregnancy lbs

30 OBSTETRIC PROCEDURES (Check all that apply) Amniocentesis Chorionic villus sampling External fetal monitoring Induction of labor Instrumental delivery Forceps Vacuum None

31 COMPLICATIONS OF LABOR AND OR DELIVERY (Check all that apply) Fetal distress (100°F or 38°C) Meconium - moderate/heavy Prolapsed umbilical cord (12 hours) Abruptio placentae Placenta previa Other excessive bleeding Seizures during labor Precipitate labor (< 3 hours) Prolonged labor (> 20 hours) Dysfunctional labor Breech/Malpresentation Cephalopelvic disproportion Cord prolapse Anesthetic complications Fetal distress None

32 METHOD OF DELIVERY (Check all that apply) Vaginal Vaginal birth after previous C-section Primary C-section Repeat C-section Forceps Vacuum

33 ABNORMAL CONDITIONS OF THE NEWBORN (Check all that apply) Anemia (Hct < 39; Hgb < 13) Birth injury Fetal alcohol syndrome Hyaline membrane disease/RDS Marfan's syndrome/skin condition Assisted ventilation > 30 min Assisted ventilation > 30 min Seizures None

34 APPARENT CONGENITAL ANOMALIES OF NEWBORN (Check all that apply) Anencephalus Spina Bifida/Meningocele Hydrocephalus Microphthalmos Other central nervous system anomalies (Specify) Heart malformations Other circulatory/respiratory anomalies (Specify) Rectal atresia/stenosis Tracheo-esophageal fistula/Esophageal atresia Omphalocele/Gastroschisis Other gastrointestinal anomalies (Specify) Malformed genitalia Renal agenesis Other urogenital anomalies (Specify) Club foot Polydactyly Syndactyly/Adactyly Club foot Diaphragmatic hernia Other musculoskeletal/integumental anomalies (Specify) Down's syndrome Other chromosomal anomalies (Specify) None

Figure 4.3

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
REPORT OF FETAL DEATH
 (TYPE OR PRINT IN INK)

FETUS	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)
MOTHER	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
MOTHER	3 ANCESTRY (American, Puerto Rican, Cuban, Central or South American, Chinese, other, Mexican, Afro-American, Arab, English, French, Finnish, etc. (Specify below))	4 RACE (American Indian, Black, White, etc. If Asian give nationality i.e. Chinese, Japanese, Asian Indian, etc. (Specify below))	5 EDUCATION (Specify only highest grade completed) Elementary, Secondary (0-12) College (14 or 15+)		6 OCCUPATION AND BUSINESS INDUSTRY (Worked during last year) Occupation Business Industry	7 AGE (At Time of Delivery)
FATHER	3a	4a	5a	6a	7a	
FATHER	3b	4b	5b	6b	7b	
MEDICAL AND PREGNANCY HISTORY INFORMATION	8 EXPECTED SOURCE OF PAYMENT FOR MEDICAL SERVICES (Private Insurance, Medicaid, etc.)		9 MOTHER TRANSFERRED PRIOR TO DELIVERY (Specify name of facility transferred from:)			
	10 PREGNANCY HISTORY (Complete each section)		11 DATE LAST NORMAL MENSTRUATION BEGAN (Month, Day, Year)			
	LIVE BIRTHS		12 PLURALITY - Single, Twin, Triplet, etc. (Specify)			
	10a NOW LIVING		13 IF NOT SINGLE BIRTH - Born First, Second, Third, etc. (Specify)			
	10b NOW DEAD		14a MONTH OF PREGNANCY PRENATAL CARE BEGAN - First, Second, Third, etc. (Specify)			
	10c DATE OF LAST LIVE BIRTH (Mo, Year)		14b PRENATAL VISITS - Total Number (If none so state)			
	10d DATE OF LAST OTHER TERMINATION (Mo, Year)					
	15a MEDICAL RISK FACTORS FOR THIS PREGNANCY (Check all that apply)		16 OBSTETRIC PROCEDURES (Check all that apply)			
	15b OTHER RISK FACTORS FOR THIS PREGNANCY (Complete all items)		17 COMPLICATIONS OF LABOR AND/OR DELIVERY (Check all that apply)			
	15c MEDICAL RISK FACTORS FOR THIS PREGNANCY (Check all that apply)		18 APPARENT CONGENITAL ANOMALIES IN FETUS (Check all that apply)			
20 PART I: Fetus or maternal condition directly causing fetal death. Enter only one cause per line for a, b, and c.						
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)						

Figure 4.4

STATE OF MICHIGAN
DEPARTMENT OF PUBLIC HEALTH
CERTIFICATE OF DEATH

LF _____ CF _____

STATE FILE NUMBER
No 0187597

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 MONTHS DAYS	4c. UNDER 1 DAY HOURS MINUTES	5. DATE OF BIRTH (Month, Day, Year)
7a. LOCATION OF DEATH (Enter place officially pronounced dead in 7a, 7b, 7c.) HOSPITAL OR OTHER INSTITUTION - Name (If not in center, give street and number)		7b. IF HOSP OR INST. Institution Co. - Enter Room, QGA (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) <input type="checkbox"/> INSIDE CITY OR VILLAGE OF <input type="checkbox"/> TWP OF	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 married, give name and address) Name, Address, City, State, ZIP Code
15. ANCESTRY - Mexican, Puerto Rican, Cuban, Central or South American, Chinese, other Hispanic, Afro-American, Arab, English, French, Finnish, etc. (Specify descent)		16. RACE - American Indian, Alaska Native, Native Hawaiian or Other Pacific Islander, White, Black, Asian, etc. (Specify race)	17. DECEDENT'S EDUCATION (Specify and highest grade completed) Elementary/Secondary (0-12) College (14 or 15+)
18. FATHER'S NAME (First, Middle, Last)		19. MOTHER'S NAME (First, Middle, Surname before first married)	
20a. INFORMANT'S NAME (Type-Print)		20b. ADDRESS (Street and Number or Rural Route Number, City or Village, State, ZIP Code)	
21. METHOD OF DISPOSITION - Burial, Cremation, Removal, Donation, Other (Specify)		22a. PLACE OF DISPOSITION (Name of Cemetery, Crematory, or other place)	22b. LOCATION - City or Village, State
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. IMMEDIATE CAUSE (Final disease or condition resulting in death) a. _____ b. _____ c. _____ d. _____ e. _____ f. _____ g. _____ h. _____ i. _____ j. _____ k. _____ l. _____ m. _____ n. _____ o. _____ p. _____ q. _____ r. _____ s. _____ t. _____ u. _____ v. _____ w. _____ x. _____ y. _____ z. _____ AA. _____ AB. _____ AC. _____ AD. _____ AE. _____ AF. _____ AG. _____ AH. _____ AI. _____ AJ. _____ AK. _____ AL. _____ AM. _____ AN. _____ AO. _____ AP. _____ AQ. _____ AR. _____ AS. _____ AT. _____ AU. _____ AV. _____ AW. _____ AX. _____ AY. _____ AZ. _____ BA. _____ BB. _____ BC. _____ BD. _____ BE. _____ BF. _____ BG. _____ BH. _____ BI. _____ BJ. _____ BK. _____ BL. _____ BM. _____ BN. _____ BO. _____ BP. _____ BQ. _____ BR. _____ BS. _____ BT. _____ BU. _____ BV. _____ BW. _____ BX. _____ BY. _____ BZ. _____ CA. _____ CB. _____ CC. _____ CD. _____ CE. _____ CF. _____ CG. _____ CH. _____ CI. _____ CJ. _____ CK. _____ CL. _____ CM. _____ CN. _____ CO. _____ CP. _____ CQ. _____ CR. _____ CS. _____ CT. _____ CU. _____ CV. _____ CW. _____ CX. _____ CY. _____ CZ. _____ DA. _____ DB. _____ DC. _____ DD. _____ DE. _____ DF. _____ DG. _____ DH. _____ DI. _____ DJ. _____ DK. _____ DL. _____ DM. _____ DN. _____ DO. _____ DP. _____ DQ. _____ DR. _____ DS. _____ DT. _____ DU. _____ DV. _____ DW. _____ DX. _____ DY. _____ DZ. _____ EA. _____ EB. _____ EC. _____ ED. _____ EE. _____ EF. _____ EG. _____ EH. _____ EI. _____ EJ. _____ EK. _____ EL. _____ EM. _____ EN. _____ EO. _____ EP. _____ EQ. _____ ER. _____ ES. _____ ET. _____ EU. _____ EV. _____ EW. _____ EX. _____ EY. _____ EZ. _____ FA. _____ FB. _____ FC. _____ FD. _____ FE. _____ FF. _____ FG. _____ FH. _____ FI. _____ FJ. _____ FK. _____ FL. _____ FM. _____ FN. _____ FO. _____ FP. _____ FQ. _____ FR. _____ FS. _____ FT. _____ FU. _____ FV. _____ FW. _____ FX. _____ FY. _____ FZ. _____ GA. _____ GB. _____ GC. _____ GD. _____ GE. _____ GF. _____ GG. _____ GH. _____ GI. _____ GJ. _____ GK. _____ GL. _____ GM. _____ GN. _____ GO. _____ GP. _____ GQ. _____ GR. _____ GS. _____ GT. _____ GU. _____ GV. _____ GW. _____ GX. _____ GY. _____ GZ. _____ HA. _____ HB. _____ HC. _____ HD. _____ HE. _____ HF. _____ HG. _____ HH. _____ HI. _____ HJ. _____ HK. _____ HL. _____ HM. _____ HN. _____ HO. _____ HP. _____ HQ. _____ HR. _____ HS. _____ HT. _____ HU. _____ HV. _____ HW. _____ HX. _____ HY. _____ HZ. _____ IA. _____ IB. _____ IC. _____ ID. _____ IE. _____ IF. _____ IG. _____ IH. _____ II. _____ IJ. _____ IK. _____ IL. _____ IM. _____ IN. _____ IO. _____ IP. _____ IQ. _____ IR. _____ IS. _____ IT. _____ IU. _____ IV. _____ IW. _____ IX. _____ IY. _____ IZ. _____ JA. _____ JB. _____ JC. _____ JD. _____ JE. _____ JF. _____ JG. _____ JH. _____ JI. _____ JJ. _____ JK. _____ JL. _____ JM. _____ JN. _____ JO. _____ JP. _____ JQ. _____ JR. _____ JS. _____ JT. _____ JU. _____ JV. _____ JW. _____ JX. _____ JY. _____ JZ. _____ KA. _____ KB. _____ KC. _____ KD. _____ KE. _____ KF. _____ KG. _____ KH. _____ KI. _____ KJ. _____ KK. _____ KL. _____ KM. _____ KN. _____ KO. _____ KP. _____ KQ. _____ KR. _____ KS. _____ KT. _____ KU. _____ KV. _____ KW. _____ KX. _____ KY. _____ KZ. _____ LA. _____ LB. _____ LC. _____ LD. _____ LE. _____ LF. _____ LG. _____ LH. _____ LI. _____ LJ. _____ LK. _____ LL. _____ LM. _____ LN. _____ LO. _____ LP. _____ LQ. _____ LR. _____ LS. _____ LT. _____ LU. _____ LV. _____ LW. _____ LX. _____ LY. _____ LZ. _____ MA. _____ MB. _____ MC. _____ MD. _____ ME. _____ MF. _____ MG. _____ MH. _____ MI. _____ MJ. _____ MK. _____ ML. _____ MM. _____ MN. _____ MO. _____ MP. _____ MQ. _____ MR. _____ MS. _____ MT. _____ MU. _____ MV. _____ MW. _____ MX. _____ MY. _____ MZ. _____ NA. _____ NB. _____ NC. _____ ND. _____ NE. _____ NF. _____ NG. _____ NH. _____ NI. _____ NJ. _____ NK. _____ NL. _____ NM. _____ NO. _____ NP. _____ NQ. _____ NR. _____ NS. _____ NT. _____ NU. _____ NV. _____ NW. _____ NX. _____ NY. _____ NZ. _____ OA. _____ OB. _____ OC. _____ OD. _____ OE. _____ OF. _____ OG. _____ OH. _____ OI. _____ OJ. _____ OK. _____ OL. _____ OM. _____ ON. _____ OO. _____ OP. _____ OQ. _____ OR. _____ OS. _____ OT. _____ OU. _____ OV. _____ OW. _____ OX. _____ OY. _____ OZ. _____ PA. _____ PB. _____ PC. _____ PD. _____ PE. _____ PF. _____ PG. _____ PH. _____ PI. _____ PJ. _____ PK. _____ PL. _____ PM. _____ PN. _____ PO. _____ PP. _____ PQ. _____ PR. _____ PS. _____ PT. _____ PU. _____ PV. _____ PW. _____ PX. _____ PY. _____ PZ. _____ QA. _____ QB. _____ QC. _____ QD. _____ QE. _____ QF. _____ QG. _____ QH. _____ QI. _____ QJ. _____ QK. _____ QL. _____ QM. _____ QN. _____ QO. _____ QP. _____ QQ. _____ QR. _____ QS. _____ QT. _____ QU. _____ QV. _____ QW. _____ QX. _____ QY. _____ QZ. _____ RA. _____ RB. _____ RC. _____ RD. _____ RE. _____ RF. _____ RG. _____ RH. _____ RI. _____ RJ. _____ RK. _____ RL. _____ RM. _____ RN. _____ RO. _____ RP. _____ RQ. _____ RR. _____ RS. _____ RT. _____ RU. _____ RV. _____ RW. _____ RX. _____ RY. _____ RZ. _____ SA. _____ SB. _____ SC. _____ SD. _____ SE. _____ SF. _____ SG. _____ SH. _____ SI. _____ SJ. _____ SK. _____ SL. _____ SM. _____ SN. _____ SO. _____ SP. _____ SQ. _____ SR. _____ SS. _____ ST. _____ SU. _____ SV. _____ SW. _____ SX. _____ SY. _____ SZ. _____ TA. _____ TB. _____ TC. _____ TD. _____ TE. _____ TF. _____ TG. _____ TH. _____ TI. _____ TJ. _____ TK. _____ TL. _____ TM. _____ TN. _____ TO. _____ TP. _____ TQ. _____ TR. _____ TS. _____ TT. _____ TU. _____ TV. _____ TW. _____ TX. _____ TY. _____ TZ. _____ UA. _____ UB. _____ UC. _____ UD. _____ UE. _____ UF. _____ UG. _____ UH. _____ UI. _____ UJ. _____ UK. _____ UL. _____ UM. _____ UN. _____ UO. _____ UP. _____ UQ. _____ UR. _____ US. _____ UT. _____ UY. _____ UZ. _____ VA. _____ VB. _____ VC. _____ VD. _____ VE. _____ VF. _____ VG. _____ VH. _____ VI. _____ VJ. _____ VK. _____ VL. _____ VM. _____ VN. _____ VO. _____ VP. _____ VQ. _____ VR. _____ VS. _____ VT. _____ VU. _____ VV. _____ VW. _____ VX. _____ VY. _____ VZ. _____ WA. _____ WB. _____ WC. _____ WD. _____ WE. _____ WF. _____ WG. _____ WH. _____ WI. _____ WJ. _____ WK. _____ WL. _____ WM. _____ WN. _____ WO. _____ WP. _____ WQ. _____ WR. _____ WS. _____ WT. _____ WU. _____ WV. _____ WW. _____ WX. _____ WY. _____ WZ. _____ XA. _____ XB. _____ XC. _____ XD. _____ XE. _____ XF. _____ XG. _____ XH. _____ XI. _____ XJ. _____ XK. _____ XL. _____ XM. _____ XN. _____ XO. _____ XP. _____ XQ. _____ XR. _____ XS. _____ XT. _____ XU. _____ XV. _____ XW. _____ XX. _____ XY. _____ XZ. _____ YA. _____ YB. _____ YC. _____ YD. _____ YE. _____ YF. _____ YG. _____ YH. _____ YI. _____ YJ. _____ YK. _____ YL. _____ YM. _____ YN. _____ YO. _____ YP. _____ YQ. _____ YR. _____ YS. _____ YT. _____ YU. _____ YV. _____ YW. _____ YX. _____ YY. _____ YZ. _____ ZA. _____ ZB. _____ ZC. _____ ZD. _____ ZE. _____ ZF. _____ ZG. _____ ZH. _____ ZI. _____ ZJ. _____ ZK. _____ ZL. _____ ZM. _____ ZN. _____ ZO. _____ ZP. _____ ZQ. _____ ZR. _____ ZS. _____ ZT. _____ ZU. _____ ZV. _____ ZW. _____ ZX. _____ ZY. _____ ZZ. _____			

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 causes stated.
(Signature and Title)
30b. DATE SIGNED (Mo, Day, Yr)

30c. TIME OF DEATH

30d. NAME OF ATTENDING PHYSICIAN IF OTHER THAN CERTIFIER (Type or Print)

31a. ☐ The case reviewed and determined not to be a medical examiner's case.
☐ On the basis of examination and of investigation, in my opinion death occurred at the time, date and place and due to the causes and manner stated.
(Signature and Title)
31b. DATE SIGNED (Mo, Day, Yr)

31c. CASE NUMBER

31d. PRI/PRO/NOU/DEAD (Mo, Day, Yr)

31e. TIME OF DEATH

32a. NAME AND ADDRESS OF PERSON WHO COMPLETED CAUSE OF DEATH (ITEM 28) (Type or Print)

32b. LICENSE NUMBER

33a. ACC. SUICIDE, HOW, NATURAL OR PENDING INQUEST (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, Shopping, etc. (Specify)

33g. LOCATION - Street or RFD No. City, Village or Twp. State

34a. REGISTRAR'S SIGNATURE

34b. DATE FILED (Month, Day, Year)

B 34
Rev. 1-99

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 3 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

DATE OF APPLICATION _____
 DATE CERTIFICATE FILED _____
 STATE FILE NO. _____
 LOCAL FILE NO. _____
0166087

Marriage License
 State of Michigan

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 _____ CITY, STATE, AND ZIP CODE _____
 RESIDENCE NO. _____ STREET _____ CITY, STATE, AND ZIP CODE _____
 NUMBER OF TIMES PREVIOUSLY MARRIED _____ 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 BIRTHPLACE _____
 FATHER'S BIRTHPLACE _____ MOTHER'S BIRTHPLACE _____

An affidavit has been filed in the 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 CLERK _____
 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 _____ CITY, VILLAGE, OR TOWNSHIP _____, county of _____, MICHIGAN, 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.

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

ORIGINAL*

No. _____ 19 _____
**LICENSE AND CERTIFICATE
 OF MARRIAGE**

and

CLERK'S OFFICE

County of _____

Received for record the _____ day of _____

A. D. 19 _____ and recorded

in _____ of marriages, on page _____

Clerk _____
 *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. THE DUPLICATE must be delivered to one of the parties joined in marriage.

Figure 4.6

RECORD OF DIVORCE OR ANNULMENT MICHIGAN DEPARTMENT OF PUBLIC HEALTH By authority of MCL 333.2813.			
State File Number _____		Court Case Number _____	
County Circuit Court _____			
1. Husband's Name _____ <small>First, Middle, Last</small>		2. Husband's Birthdate _____ <small>Month, Day, Year</small>	
3. Husband's Residence _____ <small>City, Village or Township County State</small>			
4. Husband's Birthplace _____ <small>State or Foreign Country</small>		5. Number of this Marriage _____ <small>First, Second, etc. (Specify)</small>	
6. Wife's Name _____ <small>First, Middle, Last</small>		7. Wife's Birthdate _____ <small>Month, Day, Year</small>	
8. Wife's Last Name Before First Married _____			
9. Wife's Residence _____ <small>City, Village or Township County State</small>			
10. Wife's Birthplace _____ <small>State or Foreign Country</small>		11. Number of this Marriage _____ <small>First, Second, etc. (Specify)</small>	
12. Place of this Marriage _____ <small>City, Village or Township County State or Foreign Country</small>			
13. Date of this Marriage _____ <small>Month, Day, Year</small>		14. Date Couple Last Resided in Same Household <input type="checkbox"/> Check if Not Separated _____ <small>Month, Day, Year</small>	
15. Number of Minor Children in Household at Separation Date (Filing Date if Not Separated)		<input type="checkbox"/> Check if None _____ <small>Number</small>	
16. Plaintiff <input type="checkbox"/> Husband <input type="checkbox"/> Wife <input type="checkbox"/> Other		17. Plaintiff's Attorney _____ <small>Name (Type or Print) Bar Number</small>	
18. Attorney's Address _____ <small>Number and Street City State ZIP Code</small>			
19. Judgement of _____ <small>Divorce Annulment (Specify)</small>		20. Number of Minor Children whose Physical Custody was Awarded to: Husband _____ Wife _____ Joint _____ Other _____ <small>Number Number Number Number</small> <input type="checkbox"/> No Children	
21. Judgement Recorded on _____ <small>Month, Day, Year</small>		22. I certify that this Divorce was granted on _____ <small>Month, Day, Year</small>	
23. Certifying Official _____ <small>Signature Title Date Signed</small>			

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.

0010950

